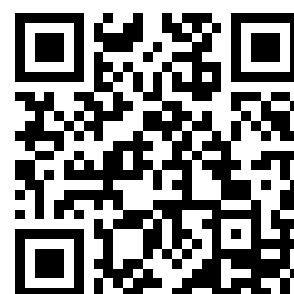

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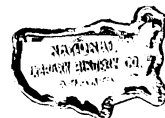
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The Small House Service Bureau
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FREDERICK L. ACKERMAN

Housing in New York City
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Volume X

JANUARY, 1922

Number 1

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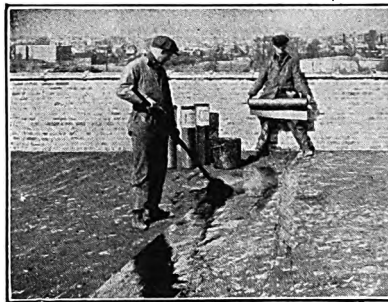


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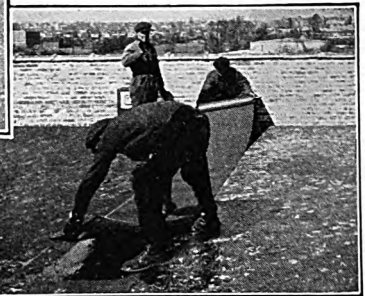


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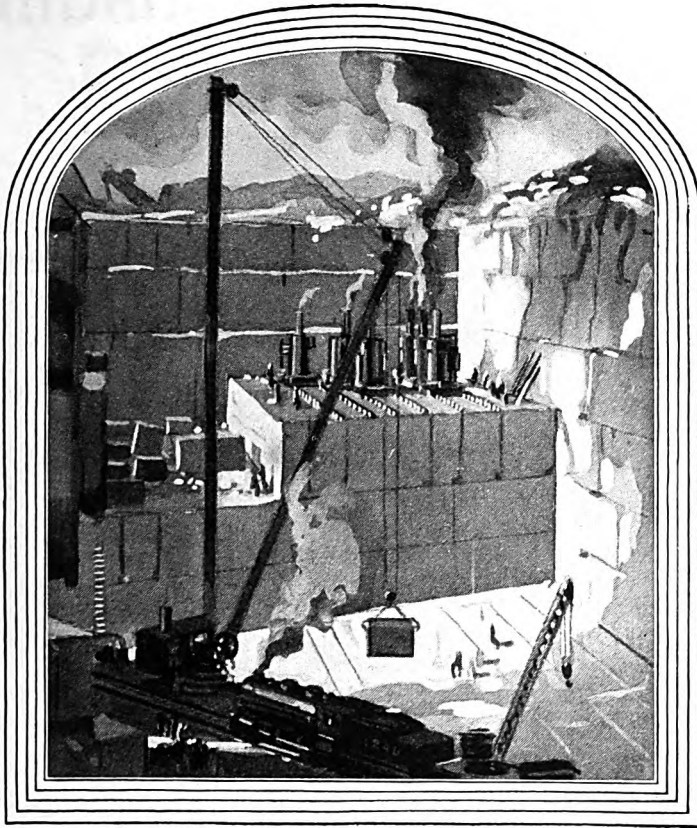
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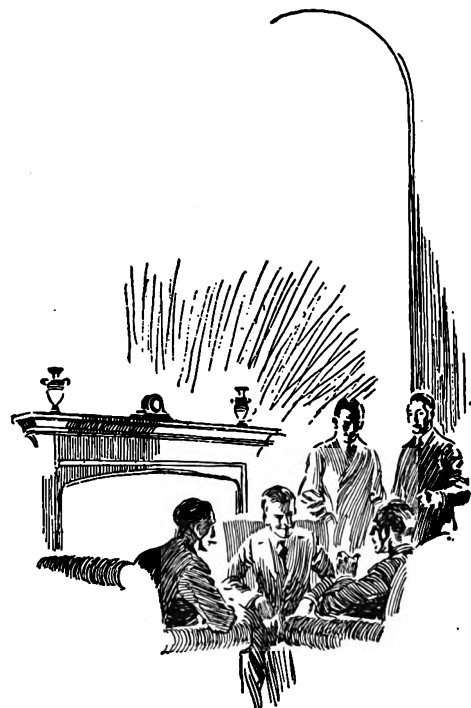
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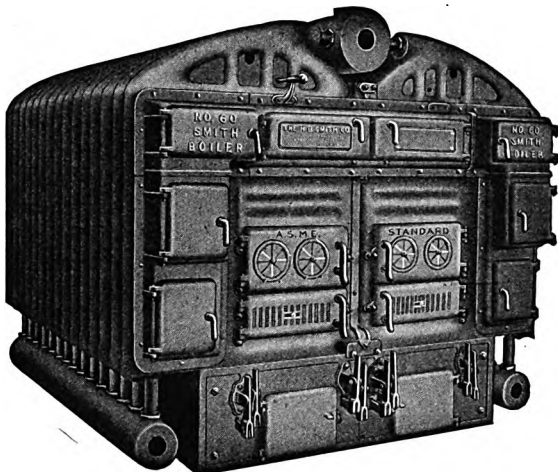
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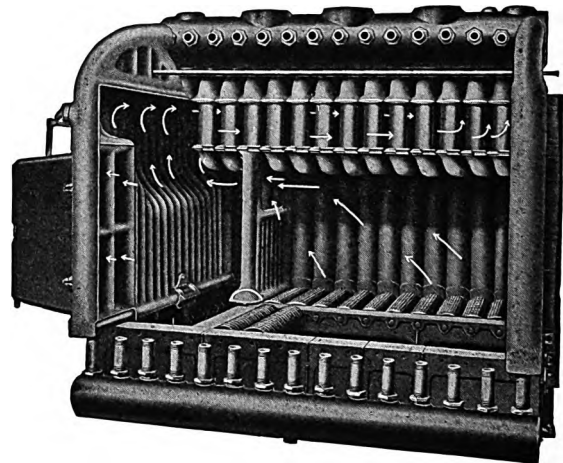
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WASHINGTON HEIGHTS, NEW YORK CITY

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Shadows and Straws

FROM ENGLAND comes much food for thought. The Institute's Committee on Registration, for example, might perhaps have its attention directed to the recent statement of Lady Astor, as chronicled in current press reports. "No architect," says she, "ought to be permitted to build a family house until he has married and has had three children, and then he should first submit his plans to his wife." We are reminded, in this connection, of the lady who called on an architect and submitted a drawing of a bungalow she proposed to build. The space was laid out quite intelligently, and her opinion was that the need for an architect was more or less slight and that his compensation ought therefore to be considerably reduced.

The architect, noticing that the cellar stairs descended from the parlor, modestly inquired whether that was her expressed desire. "Well," she replied, "I don't see where else to put them."

EDUCATION, on the meaning of which there is so great divergence, is greatly to the fore among our English brethren. An interesting episode in the controversy relates to the theatrical performances of Shakespeare arranged by the London County Council for the benefit of elementary school children. The legality of the expenditure involved was challenged. As a result, the Lord Chief Justice has given the finding that the court "could not see that a theatre was a place of educational interest." This, says a critic, "hits the modern idea of education full in the face, and with no apology to follow." He likewise points out that while it is still legal to take the children to the Tower of London as an aid to the teaching of history, the ruling out of one art from school curricula may very properly be regarded as a precedent for the suppression of the rest. We are still badly in need of an understanding as to what an educated person is, it seems.

POSSIBLY some light has been shed by the report of the Committee appointed to inquire into the teaching of English in the land of its nativity. It has aroused the keenest interest, is widely commented upon, and seems to be esteemed as a very worth-

while statement on the subject. The report insists, says Mr. Clutton-Brock, the distinguished essayist, "upon two things so obvious that they have been forgotten—namely, that we are not educated at all unless we learn to use our own language, and that we do not learn to use it by nature; that is to say, by talking alone. . . . Croce has pointed out that the unit of language is not the word but the sentence; words have no real existence, no precise meaning, except in sentences, and because most of us at present cannot find the language for the thought our thought does not exist. We have a process which we call thought, but which consists in finding reasons for believing what we want to believe."

What a truism! The world blunders on by a process of rationalisation,—by cheating itself in both thought and language. "We must cheat ourselves in the process of thought," says Mr. Clutton-Brock, "and this we are able to do just because we allow our language to cheat us. . . . What is worse, we not only cheat ourselves but allow others to cheat us, because, having no command of language, we do not see that they are misusing it." In somewhat vulgar terms, but with beautiful precision, the process in America has been called "chewing the news-print cud."

YET IF CLUTTON-BROCK sheds light, we are at once plunged into fresh obscurity. Lord Robert Cecil, by many considered as the coming statesman of England, speaking recently on the subject of the workingman's education, said: "Broadly speaking, things have been managed by educated people. But there seems to be required something more than education for managing the affairs of a great country." This is a stinger, as one might say, for it is tantamount to a confession that our so-called educated people are quite impotent to prescribe or conduct a process of education. To be sure, Lord Robert added that "the acquisition of education was not real education. Education was only valuable if it taught people to think." But this leaves small food to gloat over. A civilization which has allowed propaganda to pass as thought, and to accept the

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currency while lying down supinely, will have to shake itself roundly if it really wishes to make education the means of extricating us from the present condition of things. And nothing but education—not the old kind—will do the trick. No wonder that optimism is showing signs of fatigue.

FOLLOWING upon precedent now somewhat firmly established in this country—and perhaps elsewhere; we do not know—the Royal Institute of British Architects is considering the award of a medal for the “best street building” erected in London during the coming year. The press takes up the proposal and speculates on the fact that “while music, painting, sculpture, and literature have to face the full battery of criticism in the journals devoted to these subjects, architecture alone is secluded from all critical shocks. The impression the layman gets is that all buildings are equal in the sight of the editor.” There is more than a modicum of truth in that statement. And yet, we wonder, what is the use of the flood of public criticism? What proportion of it is of the slightest value? What share of it is based upon real culture? And of what influence is it, in the final analysis. When art is alive, people talk about it. When it is dead, they write about it, using the poorest language we have in which to try to explain the better one we have forgotten—or lost.

YET THE TRAIL of business runs here as ever. The word language has been taken over, lock, stock, and barrel, as an accessory to the traffic of barter and sale. No word is sacred. No word meaning endures. All is distorted, magnified, superlatived, and crammed down our paralyzed gateways to the brain like wadding into a barrel. But nothing ever goes off. There are no explosions. It is just a stuffing process, and of that process, criticism pretends to occupy an exalted and useful share. Perhaps! But the power of appreciation is a personal matter. Beauty has a million messages. Few get all of them. Hardly a being who does not get some of them. How many have been helped to get more by reading what someone else believed to be the one and only true message revealed, or by reading why the one and only true message was not revealed? We think very few, for criticism has become a trade like the rest, and thrives not upon the instinct for creating things but by dissecting and often mangling beyond recovery, the creator in embryo. We speak here of public criticism only, as distinguished from the wise counsel extended by the master to the pupil. That’s a different question. There we see art still alive, or in process of becoming alive through creation. In the other field—words, words, words—and what comes alive? Really alive to completeness?

IS THE REMEDY sought one of building up or of tearing away? Both, very likely. The tale of the “ivy green” seems a *propos*. For years its foliage

has been revered as an adornment to architecture. The “ivy mantled” wall is almost as stock in language, as money in a bank. But Oxford, under wise guidance and somewhat goaded to the effort by a group of architects, has found that buildings dug out from under the ivy were much more beautiful than had been thought. Of course, in tearing down the insidious thing, whose tendrils will eventually bring down the stoutest wall, one has to be careful. Much ivy serves a very useful purpose. It had better be left to complete its work of destruction. But this merely serves to remind us that it is easier to tear down than to know what to tear down. And then, if we tore down all that was thought to be ugly, even though we took no more than a census among architects, there would not be so many buildings left! Most of our cities would disappear. What then? Should we repeat? Most people so affirm, which leaves life a desperate tragedy. Can we think in better terms? If so, we can change it all. Only that is impossible which cannot be imagined. Perhaps imagination—“creative thought”—is the key.

IMAGINATION! And yet! How far we still lag behind the dream out of which the shape emerges.

How small the social impact of even the boldest or the loveliest of dreams. How untranslatable are so many of our desires, though the picture lures us on with feet unflagging, even straight to meet the shrapnel splinter or to breathe the lethal cloud. Man’s thirst for beauty—his longing for truth, justice, call it what you will—outstrip, with ever flying feet, his blundering plodding pace. Well was it said by Lord Robert Cecil that we need a new sort of education, since it is the educated who have left us in the desert of business. Nature, ever alert with her checks and balances, has remained silent. Against business, which lives off the fruits of industry, no check has yet come. Education, instead of understanding business and the chaos into which it has plunged a large part of the world, still thinks of it as synonymous with industry. Yet the people who live by business multiply faster than those who live by productive work. Has education something to do with that?

MR. ARTHUR POUND’S exceedingly interesting articles on the sociological effect of the automatic tool, in recent issues of the *Atlantic* are of unusual significance. We quite agree that the ultimate result will be direr in its consequences than anything we have yet imagined as human punishment, unless men bestir themselves. But our whole educational machinery is at present so incapable of being of the slightest assistance that well may Mr. Pound give open vent to his fears. For our part, we would like to point out that in the building trades, where the automatic tool has made no such inroads upon hand work as in the automobile business, the same sociological effects are quite apparent. The

SHADOWS AND STRAWS

decline in numbers of workers—the breakdown, steady and deadly, in the quality of workmanship, are two vital questions which have been wholly overlooked in the pseudo-economic propaganda which has stultified our press and been echoed about by leading citizens. Mr. Pound sees the consequences of this clearly—and says so with brutal frankness—and we imagine that architects are beginning to glimpse it as they pursue the vanishing plasterer and the evanescent mason. Yes—we think that education has failed here quite as signally as elsewhere.

BUT FOR SHEER stupidity—for a failure so monstrous as to be barely short of criminal—whatever that means in non-legalistic verbiage—consider the case of a somewhat prominent “city planner” who was about to deliver, in one of our large cities, an address on “The American City of the Future.” An hour or two before the event, it was suggested that some questions be prepared in order that they might be addressed to him at the close of the lecture. One of the questions written down was this: “What will be the effect on the American City of the Future of the private capitalization of site value of land, and inasmuch as this process has produced our present cities, how can we accomplish anything without a change in point of view?”

The lecturer confessed at once that he had never given this question any thought and that he would prefer not to have it asked. Now imagine an audience in Stockholm or Copenhagen or Rotterdam or Ulm or in any European city where city planning dreams have been accompanied with an economic analysis—imagine such an audience entertaining a lecturer who could not answer them such a question! He would be roundly hissed off the stage, as he would deserve. Yet in America our professional dreamers can pursue their plan of completely deceiving and misleading the inhabitants of our cities by making them believe that city planning can give them a cure for their ills without in any way disturbing the business method of producing cities. What abominable fraud! Has education failed here? Indeed, where has it succeeded in averting the social consequences of the individual lust for conquest? Can it succeed in that connection? With Mr. Pound, we hope that it can, but we think it will have to hurry up just a little, and that all of us will have to look not at the automatic tool but at the motive that controls it. We also, will have to seek the difference between business and the productive process—between the pyramiding of capital and the releasing and unshackling of public credit. Can education teach the difference between “industrialism” and business? Shall we be able, some day, to distinguish between the building business and the building industry? Will such eager searchers and thinkers as Mr. Pound go on, or will they stop off at the point beyond which editors do not commonly allow them to go?

THE NOBEL Prize in literature to Anatole France! It pleases a great deal, for in literature he stands quite alone. There have been others who combined many of his qualities, but none who combined quite all of them. If it is true, as report has it, that Thomas Hardy was at first thought to be destined for the honor, it may well be that architecture has lost a near chance. Hardy was an architect who went over to literature, for which we think the world may be most thankful. At times, as in “Under the Greenwood Tree” and the “Woodlanders,” Hardy came close to the subtle humor of France—yet nothing of Hardy’s ever approached “La Rotisserie de la Reine Pédauque.” Nor do “Life’s Little Ironies” quite equal that collection of tales in “L’Etui de Nacre.” And then, when Hardy sat himself down to do “The Dynasts,” Anatole France poured out “Pierre Nozière,” “Le Livre de mon Ami,” “Le Petit Pierre”—those amazing bits of biography in which, through the lips of a child, he gives forth the ripened wisdom and philosophy of one who has touched life seemingly with such gentleness and yet with what vitality, what eager seeking, what patience, what calm, what penetrating gaze. In limpid phrase and exquisitely molded thought he lets the clear stream flow. He has his turbid moments as in “Les Dieux on Soif” or as in “Le Lys Rouge,” but these, after all, are pools that soon settle, and we may always turn to the cycle of Monsieur Bergeret for instant delight. Hardy was much like him in clarity and limpidity, and perhaps the difference between them is that Hardy painted as he saw, leaving the reader to weave his own philosophy of cause and effect in the affairs of men, (Hardy has denied the charge of being fatalistic) while France interpreted in terms of philosophy, satire, ridicule, and humor, touching all things to that very quick where laughter and tears hang in the balance, laying all things bare, yet holding life sacred ever. To read and know Anatole France seems better than to have been graduated from any institutionalized educational process that we have yet evolved, though one would not wish to give up “Tess,” or “The Mayor of Casterbridge,” or “The Return of the Native,” or “Far From the Madding Crowd.” In all of these we guess the architect Hardy might have been. We feel to our very depths the rich pattern of his art—the delicate shadowy brush strokes tracing night winds on the heath—the spots of color in his hills, now noble, now tragic—the living design of road and field and tree, where joy and majesty and sorrow and pain took their everlasting way and found their everlasting rest. Indeed, in his hands, all nature became a crowd of living personalities with destined parts to play. Yet his men and women were never heroic. If architecture here lost, then literature as surely won. And even though Hardy had to give way, the trustees have at last given a literary honor and distinction to the Nobel prize.

C. H. W.

Thatch—II

By CHARLES G. HARPER

IN the case of thatch-renewal, not often is the old covering stripped, but new is laid on the old; and the merest casual wayfarer may readily see with what thoroughness, or lack of it, the work has been performed; not only by the difference in colour, but by the varying thicknesses with which the roofs are covered. Here an attic window looks out immediately open-eyed upon the sunlight, there another peers forth, blinkingly, as from behind beetling eyebrows, from half a yard's depth of straw, shading off from a coal-black substratum to a coffee-coloured layer, and thence to the amber top-coating of the latest addition. Thus, when Thomas Hardy describes Bere Regis as a "blinking little place," he fits it with an exact epithet.

house much older than the tablet inscribed "W. M. P. 1708," on its frontage would imply. It was restored probably at that date by one of the Mansell-Pleydells, owners of considerable properties in these parts.

To come nearer to Dorchester, the older part of Piddletown is very largely thatched. It is not that part of this considerable village which you see in passing along the main road between Bere Regis and Dorchester, but the parallel street behind the church. Along the highway, Piddletown (the "Weatherbury" of the Wessex novels) was rebuilt some forty or more years ago, in a kind of rigid unsympathetic domestic Gothic, and in a cold limestone; so that this part of the place is not a little repellent. It is, in fact, an importation,



CHIVELSTONE—A Rainy Day.

There is much thatch also at Shillingstone, a village anciently styled "Shilling-Okeford," near Blandford; and it is additionally interesting from its imposing and lofty maypole, rising to a hundred and ten feet, and dressed with garlands every spring. Not far distant, along the same valley of the Stour, is Sturminster Newton, often marked on maps "Sturminster Newton Castle." Although this galaxy of names is highly impressive, it should be said that there is neither minster nor castle here; nor, indeed, is it a "new town." Time long since abated anything new about it. Here is a heavily-thatched inn, the "White Hart," obviously a

and has no sort of link with Dorset style or local building materials. But in that back street, with the pinnacles of the church-tower peering over at the end of a long perspective, you have an interesting survival. A very pleasing little note of distinction is made by an old addition to one of the cottages, apparently done about 1720, in the bay-window supported on pillars, shown in the accompanying illustration. It is a distinctly piquant urban touch in a thoroughly rural setting.

In Dorchester town we do not expect to find thatch. The place was in the eighteenth century so rebuilt and made so modish that it is not in general to be looked

THATCH



LYCH GATE—Long Compton.

for. But a walk into the byways of the town, along Glydepath Lane, will presently discover, in a fine damp situation close to the river, a tiny group of cottages heavily thatched. They are built of grouted flint and chalk-lump, faced here and there, and patched with red brick, and held together by iron ties, so that in this, their old age, they shall not some night altogether collapse. Prominent among these cottages, is that called "the Hangman's Cottage." Here, in former times, when the penal laws of England were altogether as savage as they are now lenient, Dorchester had its own hangman, in receipt of a regular salary.

Leaving Dorchester, there will be found beyond the south-eastern outskirts of the town the hamlet of Upper Bockhampton, and the birthplace there of Thomas Hardy, the novelist. Appropriately enough, it is a thatched cottage, and the back of it looks out immediately upon the very edge of the wild: those woodlands and healthy spaces which, with a fine freedom of choice, are variously called Bockhampton or Piddletown Heath, or Thorneycombe and Ilsington Woods. "Ilsington" is a place-name found over all the country, appearing sometimes, in a sort of literary aphasia, as "Islington."

Bockhampton is on or near the verge of all those many-named heaths which Hardy merges together in his novel, "The Return of the Native," as "Egdon Heath." The heaths are untameable. They stretch forth and bid defiance to the best efforts of the cultivator; but down at the hamlet of Hurst, where water is plentiful, and the thirsty heath is subdued in an oasis of cultivation, there is an old red-brick farm of superior aspect, and yet with a thatched roof. Thatch, rightly or wrongly, generally has implied a more humble residential status than that of a manor-house type of residence, to which obviously this farm belongs, for the old gate-piers are still surmounted with stone globes,

which the rustics, observant enough, perceive to be the signs of class-distinction. The country folk, therefore, style them "gentility balls."

Well, then; there stands the farmhouse, encircled by the glooming heath—a very fine mass, with a good effect of skyline. But there is, you cannot help feeling, a whimsical air about it. It is the thatch that evokes this feeling—an effect, oddly, such as might be produced by a gentleman wearing a harvester's hat. Such gentility, in the region of wild, uncanny Egdon, wears, as Mr. Hardy would express it, "an anomalous look."

There is probably more thatch in Dorset than in any other county. Away up in the remote valleys, where tourists rarely penetrate, past broken-down and decaying Cerne Abbas, that anæmic survival of a little town once dependent upon a great Abbey, to Alton Pancras; and again along the valley of the Stour and in Blackmore Vale, this ancient, natural roof-covering is plentiful. Some years ago, when it seemed that thatching was almost to die out as a trade, Lord Alington had the new post office at Witchampton, adjoining his seat of More Crichel, thatched, and very handsome it looks.

But scarcely in the Isle of Portland, that stony, wind-swept outer limb of Dorset, do we expect to find anything save very heavy roof-coverings, against tempests. Yet, in perhaps one of the most exposed positions there, at the village of Chesil, at the foot of the cliffs, and on the actual Chesil Beach itself, there stands an extraordinary dilapidated old cottage of strange contrasts. It is apparently of sixteenth-century date, built of enormous blocks of stone, in an obvious effort at extreme solidity; and yet it is thatched. Do you not remember those drawing-copies of old school days, after Harding and other romantic draughtsmen, which had for their subjects cottages of a picturesqueness that seemed almost impossible? You have never expected with confidence to behold the like of them in actual



OLD COTTAGE—Lustleigh, South Devon.

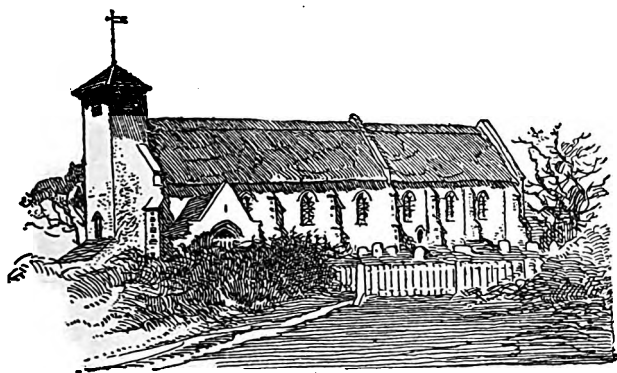


THATCHED CHURCH—Ingworth, Norfolk.



OLD COTTAGE ON THE BEACH—Chesil, Isle of Portland.

THATCH



PAKEFIELD CHURCH.

existence. Yet here, only a few feet above high-water mark, is the realisation of those copies. There are not any other cottages on Portland of this quality, and this is in ruins.

I can point to other old thatched cottages facing the sea in Dorset: at West Bay, Bridport, and at Ringstead Bay, near Weymouth. But they are not quite of this romantic quality. There is, however, one almost as good at Penberth Cove, near Land's End in Cornwall—a county in which we do not seek for thatch with much chance of reward. But here, dramatically planted by a rugged shore, and sometimes with great boulders slung on to the thatch to keep it from being blown away by Atlantic gales, is this specimen. And, at the western end of Penzance town, in the suburbanised outskirts of Alverton, remains the Devonian—rather than Cornish-looking long, low cottage, now the “Alverton Dairy”—the house in which Edward Pellew, afterwards Admiral, and created Viscount Exmouth, spent his early years. It is thatched, and built partly of “cob.” The building is not really quite so low as it appears to be in the illustration, for the reason that the road and pathway have been raised at some time subsequent to its building, some one hundred and sixty years ago.

Of course, thatch has ever been the farmer's line of least resistance. It forms an obvious use for much of his straw, alike in covering the roofs of his farmstead, his labourers' cottages, his ricks, and—often enough, in Hampshire, Dorset, and Devon—his garden walls. In the heaths around Wimborne and Woodyates there yet remain numerous old so-called “mud cottages” and garden walls, built of the peculiar clay and sandy soil of the locality, which would speedily be dissolved by the weather, were it not for the thatch. It is not quite the thorough-going “cob” of Devon; but the Devon saying of cob walls, “Give 'en a hat an' a good pair of butes, an' her'll last for ever,” meaning by “hat” a good thatch; and by “boots” a good foundation and a few courses of masonry or brick, equally applies.

Thatched and weather-boarded barns are themselves

things of an especial beauty in the rustic landscape: taking “beauty” in this connection to mean the appropriate use of native materials. No more charming scene, in the rustic way, is to be found in Wiltshire than that to be found at Coombe Bissett, on the main Exeter road between Salisbury and Blandford, where the little river Ebele crosses the highway, and an old black-boarded barn, at the outpost of a farmyard, stands with its feet actually in the water, the floor supported on those squat stone pillars which the farmers call “staddles,” using them as a protection against rats.

In the northern part of Wilts, on the Bath Road, immediately after passing that mysterious mound of a prehistoric age, Silbury Hill, you come to Beckhampton, a hamlet once busy enough, in the coaching way. There stands, at the fork of roads, where the several routes through Calne and Devizes part company, the stately “Beckhampton Inn,” now become the home of a trainer of racehorses; and near by is the far older “Waggon and Horses” inn, the resort in those days of humbler folk. Ironically enough, while the stately inn has long since retired from business, the humbler house of refreshment still carries on. It is a stone and plastered house, with one of the most eloquent and thorough of thatched roofs that I know of. Some rugged old stones built against the front make it fairly obvious that the house was erected partly from spoil extracted from the neighbouring stone circle at Avebury. It is the “Waggon and Horses” that most closely realises of anything in the neighbourhood the description given by Dickens in Chapter XIV of the “Pickwick Papers,” in the “Bagman's Story” of “the inn on Marlborough Downs.” There can be no doubt that it is the house indicated, “a roadside inn on the right-hand side of the way, about a quarter of a mile from the end of the downs.”

There is a spacious quality about the entire building which is so admirably in touch with the wide spaces of those downs and the mystic hill of Silbury, that “largest artificial mound in Europe,” which you perceive indicated in the distance in the illustration, as to seem almost a touch of genius.



IXWORTH THORPE CHURCH.

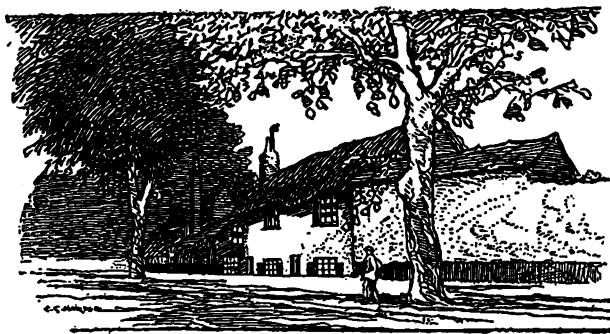


HAYES BARTON—Birthplace of Sir Walter Raleigh.



BLANDFORD.

THATCH



OLD HOUSE AT ELVERTON—Penzance.

A peculiar fashion in thatch is a very noticeable feature of the Porlock district of Somerset. It is a local "school," so to speak, in the phraseology of art. The outstanding feature of it is the quaintly peaked comb of the roof-ridge at the gable-ends: combs often preposterously exaggerated, as seen in the thatched roof of the lodge of Ashley Combe, on the way between Porlock Weir and Culbone, and, indeed, at Porlock Weir itself, that curiously old-world, amphibious, half-farming, half-seafaring place, where a raised beach forms the "weir" of a salt-water inlet, and where, on the road down to the sea from Porlock village the weirdly thatched cottages illustrated here are to be found, picturesque alike in their roof-coverings and their chimneys, fitted with wind-breakers. The pretty old "Ship" inn at Porlock is itself thatched, and has one of the odd cylindrical chimneys of this locality; but the thatch of the "Ship" is, exceptionally, not extravagantly combed, although the cottage opposite is.

The "Cat and Fiddle" wayside inn, at Hinton Admiral, in the generally suburbanised district around Bournemouth, is a survival of a simpler age, with a plain thatch, but thought a good deal of in that neighbourhood.

In Devonshire and Dorset the thatcher's employment was generally an itinerant one, concerned largely with the timely covering of the farmers' ricks against bad weather; and of late years almost exclusively in this branch of the art. Autumn is the thatcher's busy time in this difficult and highly technical art. Some years ago, when pursuing inquiries in South Devon on the subject of thatching, I found farmers were generally of opinion that if the County Council's Technical Instruction Committees would institute classes for instruction in the then obsolescent art of thatching, it would be a better work than some of the things they had done. A skilled thatcher could then (I speak of pre-war times) earn ten shillings a day, and there was much competition for his services. A square yard of thatch would then cost 4s. for labour. For thatching ricks in harvest-time the work was calculated at 6d.

an acre; not, of course, the area to be covered, but the contents of the rick viewed *vis-à-vis* the field whence the corn had been reaped. An average rick contains ten acres of corn. In Devonshire, wheat-straw is generally sold for thatching in "nitches" (i. e., bundles of 28 lb.). The price used to be 1s. a niche.

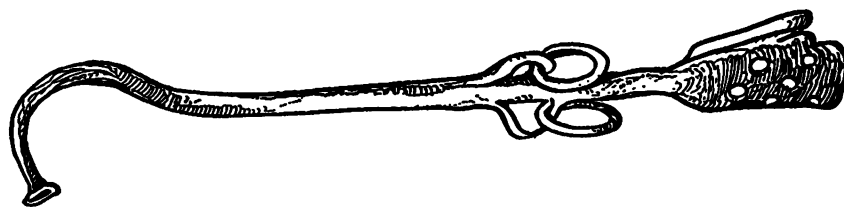
Just as there are local styles of building, so also there are differences in style and methods of thatching. The Hants and Dorset stick or gad, with which the thatch is transfixed and tied, is straight, with cord tied at one end and fastened in. Devonshire sticks, of hazel, are shaped in bent form, like a pair of sugar-tongs.

Cob and thatch are almost inseparable in South Devon. Together, they produce that "warm in winter, cool in summer" interior of which mention has already been made. Those cottages are cosy fortresses against the climate, whether it be winter's rigours, summer's blazing skies, or those moist "zoggy" days of warmth and soft rain so common in those parts, which I have endeavoured to picture in the illustration of Chivelstone. A charming example of Devonshire thatch is found at East Budleigh, at Hayes Barton, the birthplace of Sir Walter Raleigh, where he was born in 1552; traditionally in the room over the porch.

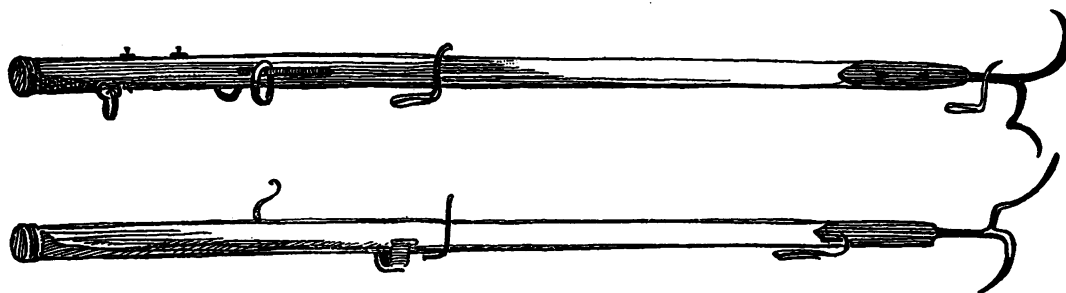
Porches are indeed a frequent item in Devon cottages. In that village of thatch, Lustleigh, in South Devon, there is an exceptionally charming old thatched cottage, with a granite-built porch, with simply but effectively chamfered archway. A curious, humble, and quite undistinguished cottage, but with a somewhat ornate thatch, is to be found in a remote situation on Dartmoor, near the hamlet of Hexworthy, seven miles north-west of Ashburton. It is called "Jolly Lane Cot," and stands on the Duchy lands. It has a quaint history; having been built by a rustic of that neighbourhood, for his father and mother, in one day; relying on the tradition that the encroachment of building upon common land could be maintained and the freehold claimed if a dwelling were built between sunrise and sunset and occupied and a fire burning on the hearth in that time. After seeking in vain for accommodation for the old people, this man waited an opportunity in June, when the farmers were all away at market, and, enlisting the



MARKBY CHURCH—Lincolnshire.



FIRE HOOK—St. Benet's, Cambridge.



FIRE HOOKS—Linton.

services of friends, built the cottage and installed his parents, with the fire burning, within the specified time. There was much talk of evicting them; but the matter was compromised by payment of a small quit-rent for cottage, paddock, and garden.

The fires that some seven years ago so greatly devastated the largely thatched villages of Chesterford, near Saffron Walden, and Melbourn, in Cambridgeshire, serve to show that, whatever may be said to the contrary by enthusiasts for thatched roofs, there remains that risk. The heavier premiums on fire insurance in respect of thatch recognise this danger. Thatch has indeed been in the past the source of much havoc, notably in the history of Blandford and Marlborough, to name but those two places. Directly to the great fires at Marlborough in 1553, 1679 and 1690 is due the rather striking architectural appearance of that town. Before those disasters it had been a town of the usual Wiltshire rustic village type. From its ashes it arose in a newer and more urban dignity, and so it remains exceptional. Most things in the town of Blandford date back to "the fire," which forms the great incident in the story of the place. Not that this was the only fire here. The town was several times burnt. In Camden's time it was destroyed, but was rebuilt; and the like happened again in 1677 and 1713. But the conflagration of 1731 was at once the last and the greatest. It began at a soap-boiler's. How this event impressed the people of Blandford we may yet readily learn from a pump under the churchyard wall in midst of the High Street. Incidentally, we may notice the exquisitely appropriate idea of making a pump the memorial of a fire. It stands in a kind of shrine, and bears this inscription recording that terrible happening:—

In Remembrance
Of God's dreadful visitation by Fire,
Which broke out on the 4th of June, 1731,
And in a few hours not only reduced the
Church, but almost the whole Town, to Ashes.
Wherein 14 Inhabitants perished
But also two adjacent Villages;
And
In grateful Acknowledgment of the
Divine Mercy,
That has since raised this Town
To its present flourishing and beautiful state;
and to prevent,
By a timely supply of water,
(With God's Blessing) the fatal
Consequences of Fire hereafter;
This Monument
Of that dire Disaster, and Provision
Against the like is humbly erected
By
John Bastard,
A Considerable Sharer
In the great Calamity,
1760.

As a result of the rebuilding, Blandford is a town of unusual stateliness among small English market towns. The work was done at the time when the classic idea prevailed. It matters little in the general effect if, indeed, the details are coarse and debased. The culminating dignity resides in the tall church tower, which, with the body of the church, is advanced beyond the general building line. It is, however, built of a stone with a rather unpleasant greenish tint.

THATCH

To cope with the terrible dangers of burning thatch some curious olden devices were brought into use. These were the old "fire-hooks" or "thatch-anchors," as they were variously styled, which may yet be found here and there in rural England, relics of the past. They survive rather as curiosities than as practical engines for subduing fire. These were, in general, stout and extremely heavy oaken poles, from 20 feet to 40 feet in length, furnished with strong iron grappling-hooks. They were used for pulling off the entire roof-covering, and were formidable appliances, possible to be used only by the united efforts of several men, aided in the case of exceptionally large and heavy examples by horses. Such are the "thatch-anchors" preserved at Banwell, near Weston-super-Mare. These are 20 feet in length and are headed like the flukes of an anchor, with four iron rings at the head of the pole and two at the butt, intended for the passing through them of ropes, to enable a larger number of men to help. These Banwell "thatch-anchors" hung in one of the church aisles until 1812, and were then placed in the tower. In 1887 they were removed to a shed behind the fire station. They are fine examples, and are dated 1610, being thus perhaps the earliest in existence. Here is also a fire engine of the same date.

It seems at first strange how often the church was used as the place of storage for these old fire-hooks; but on reflection it will be obvious that the reason lay in the church being the only building long enough conveniently to house these cumbrous contrivances, which, if their efficiency was to be maintained, could scarcely be exposed to the weather. Now that they are never likely again to be used, they have been expelled. Thus, at Ivinghoe, in Buckinghamshire, the old fire-hooks, removed from the church, are to be found on the churchyard-wall, at the west end of the building, under a sort of pent-house roof. Others of this type are to be discovered at Ashford, Kent, in possession of the fire brigade; at Melbourn, Cambridgeshire; at Welwyn, Herts, on the wall of an old cottage in the churchyard; there are two which for long years have hung on the side wall of a house at Linton, Cambridgeshire, which until 1903 was the "Race Horse" inn. They are oddly pronged. The iron-ringed hook end of a very large and clumsy specimen is preserved in the ancient church of St. Benet, Cambridge. It was used last in the Market Hill fire of September 1849. A photograph on view in the church from an old etching displays the scene, with the fire-hook in action. Other hooks of the same kind are yet in the church of St. Bartholomew, Great Gransden, Huntingdonshire, and others at St. Ives and Long Stanton.

A fire-hook, formerly kept in the church of Burgh St. Peter, on the Waveney, in Norfolk, seems to have disappeared. That, as already mentioned, is a thatched church; but it is even more remarkable for its freak

tower, chiefly of brick, in eccentric diminishing stages.

Fire was indeed an ever-present terror in the old days. An ancient fire-bell hung in the belfry of the west-country Abbey of Sherborne, in Dorset, is dated 1652, and bears the initials "J. W. T. C.," with the piteous rhyme:—

Lord, quench this furious flame;
Arise, run, help put out the same.

The choice of a rhyme by a versifier obviously very hard beset for one makes quaint reading, but the frantic state of the rustic mind in the presence of fire appears eloquently pictured in this singular couplet. There has always, of course, been abundant historic reason at Sherborne for dreading fire, a great conflagration having almost wholly destroyed the Abbey in 1437, while numerous later fires have devastated the picturesque little town. The bell itself is alike of unusual shape and of uncanny sound. The rim is incurved; producing, as no doubt was intended, a most distinctive and individual note.

Although we cannot declare that in olden times thatch was a more common roofing in any one part of England than another, yet it will be found that in Cambridgeshire and Huntingdonshire more exact measures were taken for dealing with thatched roofs in case of fire than are to be discovered elsewhere. What special means were adopted, if any, for pulling off burning roofs with fire-hooks in other regions does not appear, but in those parts it was the custom to build into the wall-plates under the eaves a series of iron rings. These are extremely interesting to the inquirer into old methods of fire-quelling. The rings, or "ringles," as the rustics name them, are to this day frequently to be seen under the eaves of old houses and cottages in and around Cambridge and Huntingdon. I have not observed them in other districts of England. They were provided for the purpose of affording a hold to the fire-hooks. They represented the maximum of efficiency, for, instead of laboriously seeking a grip upon the burning thatch, by this means the entire roof could be pulled off at once (and probably the careful critic may be allowed to add a great deal of the walling destroyed at the same time). These rings were to be noted, and may yet be, in some cases, at the "Lion," Petty Cury, the "Globe" inn, Newmarket Road, Stourbridge Chapel, the "Hoop" Hotel, Nos. 48 and 60 Bridge Street, 27 Trinity Street, 22 Sidney Street, 5 Benet Street, all in Cambridge, and the Master's Lodge, Peterhouse, which Cambridge men, ever irreverent, call "Pothouse" or "Pots," and ignorant outsiders "Peterhouse College." Other rings may be remarked at Trumpington and at Newmarket. They are not very noticeable by the casual wayfarer, being little larger than the rings on domestic curtain-poles, and, usually, very much overhung by the eaves, they inhabit a kind



BURGH ST. PETER CHURCH—Norfolk.



GALLOPS HOMESTEAD.



OVER WALLOP.

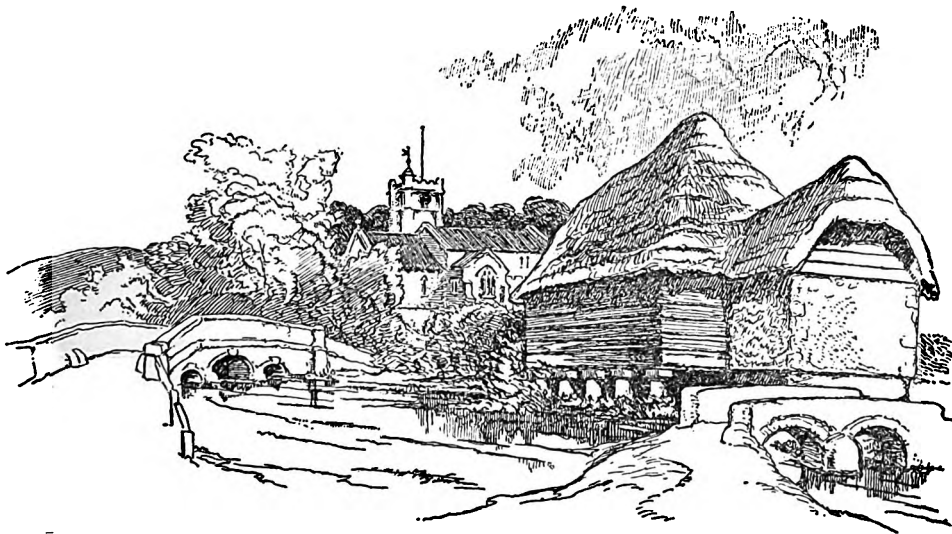
THATCH

of continual twilight. Sometimes it is seen that a house is provided with several of these rings. For example, there are no fewer than five under the eaves of a house and shop at Linton, opposite where the old fire-hooks still hang. These features some years ago attracted the attention of another observer, who read a paper on the subject before the Cambridgeshire Antiquarian Society. It was reported in the "Cambridge Chronicle," in the statement that "Communications were made by Mr. G. Wherry upon 'The rings under the eaves of old houses.'"

"Rings under the Eaves of Old Houses"; an antiquarian rather than an entomological title, was the true matter of the discourse. The misprint makes a choice

companion with the famous "battle-scared veteran" and the almost equally famed "See the pale martyr with his shirt on fire," instead of "of fire." Lest I be suspected of telling a vain tale, I bid you, as Mr. Kipling says, "seek it in the files." There, in due course, the report will be found, under date February 28, 1908.

The revival of thatch, whatever the causes, partly artistic and in part economic, is to be welcomed by all who have at heart grace and beauty. Among the earliest of modern country houses to be designed for thatch was, I suppose, Gallops Homestead, the residence of Mr. S. F. Edge, near Ditchling, Sussex. It would seem to have been completed some twenty years ago.



COOMBE BISSETT.

Committee on Small Houses

EDWIN H. BROWN, *Chairman*

At the meeting of the Board of Directors of the American Institute of Architects at Indianapolis, 11 and 12 November, the Committee on Small Houses presented a report of progress. The Report was adopted by the Board together with the following resolutions:

That the President be authorized to appoint three Directors to represent the Institute on the Board of Directors of the Architects' Small House Service Bureau of the United States. (The President appointed Messrs. William Stanley Parker, of Boston; Charles H. Alden, of Seattle; and Charles A. Favrot, of New Orleans. Mr. Parker is the Secretary of the Institute and Messrs. Alden and Favrot are members of the Board of Directors.)

That the Institute approves the issuance of a mat service to the newspapers.

That the Secretary be requested to write to the Chapters of the Institute asking them to consider the formation of new Bureaus, and advising them of the approval of the Department of Commerce and the work of the Committee.

The following excerpts from the report of the Committee on Small Houses are presented as of interest to the membership generally:

1. One new division of the Bureau has been formed—the Mountain Division, with headquarters at Denver, Colorado, Mr. William E. Fisher, President; Mr. H. W. J. Edbrooke, Vice-President; Mr. T. Robert Wieger, Secretary and Mr. W. N. Bowman, Treasurer. This makes a total of two out of the thirteen ultimate divisions.

2. A policy for more rapid expansion of the membership in the Service Bureau has been adopted pending the actual formation of different divisions.

3. The endorsement of the American Institute of Architects and the Bureau idea by the Department of Commerce as given us by Mr. Hoover is felt by the committee to be one of the most important things that has happened in its history. It also puts upon the Bureau, to say nothing of the Board of Directors of the Institute, the necessity for making good on the program which they have announced and laid down.

4. That the Department of Commerce is serious in its offer of cooperation is shown by the fact that inquiries are coming to the Bureau office at Minneapolis which have been directed there from the Department. Further the Department, through Mr. John M. Gries, Chief of the Division of Building and Housing, conducted an afternoon session for the American Civic Federation at Chicago on November 15th, and the Chairman of the Small House Committee made an address there to put before the Convention the Service Bureau idea and what it can do for the country.

5. The Architects' Small House Service Bureau of the United States has begun a mat service for the newspapers, one paper in every city in the country, to spread the Bureau idea before the reading public. Several newspapers in

different parts of the country have already contracted for this and it is hoped that the matter will spread more or less rapidly. The Service Bureau is already planning to get out a small service bulletin which will be issued every month and will be sent to those people who have purchased books of plans or made inquiries showing that they are really prospective clients.

7. The resolution adopted at the last convention in regard to the Service Bureau directed the Board of Directors of the American Institute of Architects to "follow the work of the Bureau in detail, and, at its discretion, to take such active part in the management and control of the Bureau as it may seem advisable." (The three Directors were appointed as has already been stated.)

8. The resolution adopted at the last Convention of the Institute, carried as its last clause, the recommendation that the Institute "suggest to its chapters that they take an active part in the formation of regional and branch bureaus, and do all in their power to make the work of the Bureau a complete success." Many individual architects have written the Bureau to know how they could take an interest in the work of the Bureau. These inquiries come from all parts of the United States.

Opposite is a reproduction of the first issue of the mat service as it appeared in the Minneapolis Sunday Journal. Although the service has barely begun it has already been taken by the following additional newspapers: Duluth (Minn.) News-Tribune, Providence (R. I.) Journal, Youngstown (Ohio) Vindicator, Syracuse (N. Y.) Post-Standard, Meriden (Conn.) Journal.

A plan service, slightly different in character, is also appearing in the following national magazines: The Woman's World; The Woman's Weekly, The National Builder.

EDWIN H. BROWN.

American Academy in Rome

PRIZES OF ROME IN ARCHITECTURE, SCULPTURE AND PAINTING ANNOUNCED

The American Academy in Rome announces its annual competitions for Fellowships in Architecture, Sculpture and Painting. Each Fellowship is for a term of three years with a stipend of \$3,000 and opportunity for travel. Studio and residence at the Academy are provided free of charge. The competitions, which will be held in various institutions throughout the country and will probably begin in late March or early April, are open to all unmarried men, citizens of the United States. Entries will be received until March 1st. Any one interested should apply for application blank and circular of information to Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York City.

HELP FOR THE MAN WHO WANTS TO BUILD

HOW MUCH CAN YOU AFFORD TO PUT IN A HOME?

An easy and direct way of answering the question, "How expensive a home can I afford to build?" is to consider the rent you have been accustomed to paying as a basis for estimating the probable amount of money you can afford for a new home.

Budget experts say you are justified in paying from one-fourth to one-fifth of your income in rent. On this basis it is entirely probable you can afford to invest one-fourth, perhaps more, of your income in payments on a new home, for which you would some time have a warranty deed and complete ownership.

The percentage of your income which you are justified in putting into your home depends upon two things. First, the amount of your income; second, the amount which your experience proves you can consistently lay aside or save each month after deducting living expenses.

What Experts Say You Should Invest

Consider the rent you have been paying as a basis. Can you lay aside any more than the rent money for home payments each month? If so, how much?

Don't make the mistake of trying to finance a home too expensive for your pocketbook. You may encounter grief in making payments. Experts on home financing say you are justified in building a home for which you can complete payment in about 15 years. If you have saved one-fifth the value of your home, you should be able to pay the balance in about 12 years.

For example, a home costing \$5,000, on which \$1,000 has been paid down, should be paid for complete in 12 years. That is to say, the balance, \$4,000, can be met in 144 equal monthly payments. To determine the monthly payments necessary to reduce the principal during this period, divide the balance, \$4,000, by 144. This makes the monthly payment on the principal nearly \$28 a month.

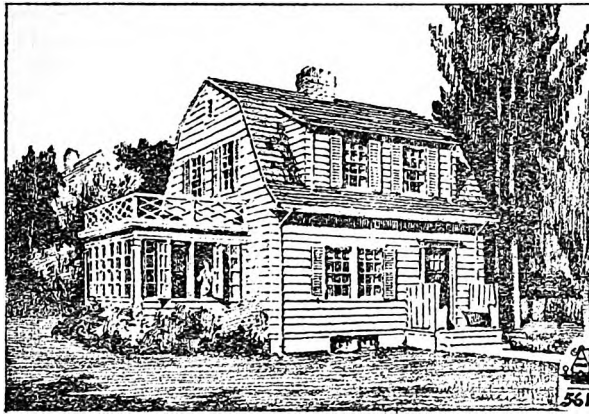
Why Not Pay Rent to Yourself

Figuring interest at 6 per cent, the first payment is \$29. Add about \$14 a month for insurance, taxes and upkeep and you have a total of \$43 a month. Thus you can estimate for yourself whether a \$5,000 home is too expensive for you to build or whether you can afford a larger dwelling.

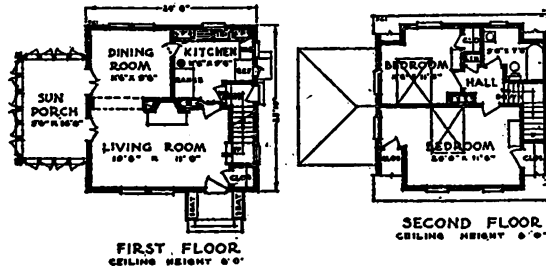
Considering home building from a business investment point of view, it is easy to see that if the landlord makes money on the rent he charges you for the privilege of living in his house, you certainly should be able to make money on a home of your own, provided you erect your dwelling economically and from the point of view of safe investment and wise financing.

After you have decided how expensive a home you can afford to build, your next proposition is financing. This will be discussed in future articles to appear in this column.

DUTCH COLONIAL—MANY FEATURES



Copyright, 1922, by the Architects' Small House Service Bureau, Northwest Division, Inc., Minneapolis, Minn.



The roomy sun porch will prove a most practical and pleasing feature of this five room home. It is a 12-month-a-year porch. In summer the casement windows can be swung open to catch the breeze from three directions. In winter, if the porch has a south exposure, it will be warmed by the sun, even so, it is advisable to have the porch warmed by the heating plant. The sun room opens immediately into the living and dining rooms by means of glazed French doors, thus giving additional width to the house.

This home is a type which people invariably describe as homelike because it has such an inviting, comfortable atmosphere. Features that add charm to the exterior are the gambrel roof with wide dormers, front and back, and a handsome entrance doorway with two side benches.

This home is of frame construction with sided exterior, shingle roof, brick base and brick chimney. Stock sizes of lumber, millwork and standardized materials wherever possible are used. This eliminates waste in labor, materials and lowers building costs.

Study of the plan will show how impressively the living room, dining room and sun porch open up into what really is one big room. The living room has two features—the open stairway and fireplace. The fireplace, topped by a wide wood mantel shelf, is so located that one chimney serves fireplace, range and furnace.

The coat closet at the entrance serves as a convenient repository for wraps. The kitchen is planned to economize steps and to speed up house-keeping. Outside icing is provided. Bedrooms on the second floor offer cross ventilation and splendid closet space. A linen closet in the hall and painstaking planning of bathroom fixtures provide features sometimes overlooked in small homes.

As the house stands it contains 15,000 cubic feet and should be built for approximately \$5,500. This cost will be increased by using elaborate or expensive finish. It can be decreased by using simple finish which will not affect the substantial construction. It is what might be called a \$5,000 home.

WHATEVER YOU WANT TO KNOW ABOUT BUILDING

Questions addressed to this paper will be answered by the Architects' Small House Service Bureau of the United States, approved by the American Institute of Architects, endorsed by the Department of Commerce, United States Government. Enclose self-addressed stamped envelope for reply.

Q—Please tell me how I can distinguish between various grades of flooring to be used in my new home.

A—Flooring is graded by expert inspectors and is usually supplied in the grades that have been specified. If you have any doubt about the quality of material your contractor is supplying, we suggest that you consult with your lumber dealer, or better still with your local architect. Very refined distinctions are made between some of the grades of flooring.

Q—What is the difference between "No. 1," "No. 2," "selected" and "clear" stock?

A—The differences are matters of quality. The distinctions are made on the basis of the number and extent of faults in the pieces and in the case of some, on the basis of color and grain decay. In any quantity of wood supplied, there are sure to be pieces which lie on the border line of two adjacent grades. Whether these pieces should be in the lower or upper grade, is a matter of individual judgment. If you are interested in the exact differences, we refer you to the grading rules which have been published for each of the commercial woods. These may be obtained free from the National Lumbermen's Manufacturing Association.

Q—On the working drawings for my house I find that there is a device which is marked "louver opening." Please advise me as to what this is and the purpose of it.

A—A louver is a slatted opening employed mainly for ventilation. It is commonly placed on the roof to insure ventilation of the attic space.

Q—Can I stucco my house in cold weather successfully or do you advise waiting until weather conditions are warmer?

A—It is not advisable to attempt to stucco in cold weather. The stucco sheet is very thin and does not hold heat long enough, even where the materials are heated before being mixed, so as to allow them to set before freezing takes place. In consequence, the completed work may be very inferior in quality. We strongly advise you to delay this operation until you have a continued period of warm weather.

Q—In a home we previously built, we had difficulty with our fireplace draft. Will you be good enough to tell us how to construct a fireplace so it will not smoke and will you recommend a damper that can be used successfully?

A—The fire should be straight, of proper size and fired with fine fire. If it is not possible to build the fire straight, then there should be no reduction in cross sectional area where the bend occurs. The fireplace opening should not be more than one and one-half times the depth of the fireplace. Smoky fireplaces are sometimes improved or reduced in draft by the opening through laying on or more courses of brick over the back hearth. A mechanical throat and damper placed as directed by the architect will insure you satisfaction. If the fire and fireplace are constructed as they should be, a number of most types of mechanical throats are on the market. The principle of each is to provide an opening for the smoke at the top of the fireplace, which can be adjusted to conditions of the fire. The distinction between the various types lies generally in the method of operating the shutter which regulates the size of the smoke aperture. We suggest that you select one which is simple and convenient in operation.

Q—Can you tell us why radiators knock?

A—There are a great many faults which may be responsible for this. The most common is faulty drainage of the piping system. If the pipes are pitched so that water cannot drain from them directly to the main drain, it will be through which the steam will be driven with explosive force. The contractor who installed your heating system should locate the source of trouble and adjust the piping without expense to you.

A reproduction in miniature of one of the matrices distributed to newspapers by the Architects' Small House Service Bureau and described in the article on the opposite page. As Mr. Brown narrates, it is already being used by a number of newspapers scattered throughout the United States.

American Architecture in England

THE exhibit of the work of American architects now being held in London under the auspices of the Royal Institute of British Architects, to which reference was made in our last issue, gave occasion to a meeting late in November at which two addresses were delivered by Messrs Bertram G. Goodhue and Donn Barber. Sir Edwin Lutyens, R. A., presided at the meeting, and Mr. Goodhue spoke as follows:

Mr. Chairman, Ladies and Gentlemen—I would like at the outset to say that I am not a speaker. I love the practice of Architecture and, with all its difficulties, it is one of the most pleasant of lives, but talking about it is quite another matter. I am not at all used to doing it.

It is a very great honour to be asked to explain the purpose and tendencies of what we are trying to do in the United States, but I ask you who have looked over the drawings and photographs here if the task of explaining them is an easy one? You will bear with me if I do not succeed in making things clear. To tell the truth, things are not so very clear to me.

Here in England you have traditions, varying, to be sure, in various localities, but all very definite. In America there is scarcely anything of the sort. Here your climate has no great extremes, while with us Florida and Southern California are as different from New England—the Scotland of America—and from the North-Western States of Washington and Oregon as can well be imagined. Furthermore, we have a number of ethnic backgrounds to consider—Puritan New England, French Louisiana, Spanish California, and Florida. So, if you wonder at seeing such a stylistic jumble on the walls here, make more allowances for us than you would, or should, for yourselves. It is true, I think, that we use rather more styles than we are entitled to, but clients—especially lady clients, as Lady Astor hinted the other day—have very decided ideas; and woman is more powerful, more strongly entrenched in the United States than anywhere else, except, they tell me, in Burmah. So when a lady client, backed by her husband's wealth, comes into one's office and says she wants a Jacobean, a Georgian, an Italian, a French, or a Tudor house, we do what she tells us, only asking, in fear and trembling, about the path of the sun, the prevailing breezes, the general average of temperature, and such things, that really are more important than the style of the house.

It must be remembered that we American architects are divided into camps—very opposing camps, too. Mr. Barber here, my great friend and capital, though rather strenuous, travelling companion, is a graduate of the Ecole des Beaux-Arts in Paris, an institution with whose works some of us are not quite in sympathy—I for one.

Let me present myself with a little nosegay at this point. All my life I have upheld as staunchly as I could the British tradition, and shall continue to do so. It is a melancholy fact, and one that I wish could for ever be kept in the background of the future, that the British element, now forming, perhaps, half of our population, is constantly dwindling, and that the other and—am I right?—less desirable breeds are increasing by leaps and bounds; so that we

British—and I am just as British as any of you—will in time lose our supremacy and even, with an unrestricted franchise, our rights. To me England will always be “this sceptred isle, this precious stone set in the silver sea,” but there are others—some five million of them—who have no such sentimental allegiance, no such ancestral bond, to keep them straight.

Here are all sorts of conditions of buildings to look at—State Capitols, churches, schools and houses. I am sorry the plans are not here, too, because, with all my love and admiration for you, I do think that in practical planning we have set a pace—forgive me this—a little faster and a little better—in certain directions, at any rate. Take country houses, for instance. Why, in so many cases here, should the service between kitchen and dining room be made to cross the entrance or staircase hall? It is easy to be too practical, but why do you do this thing? And, too, it does seem to me that our Classic work is better than yours in that it is simpler, more direct and, as a rule, untroubled by pavilions, turrets, rustications and what not. There are exceptions on both sides of that statement. I wrote that rather hurriedly. As soon as my friend Mr. Barber gets up, he will probably tell you that my knowledge of the Classic is of no consequence; that I am a Gothicismist—which I strenuously deny—and that you must, therefore, discount whatever I may say about the Classic work. But take such magnificent things as Pope's Scottish Rite Temple in Washington, or McKim, Mead and White's New York Post Office. Take these two: are they not quieter, more in the “grand manner” than anything here in London? Is it fair to interrupt myself at this point and except the Cenotaph? I do dislike modern Classic architecture or any architecture where the style is provided by the detail. The “Orders”—or so I think—are now nothing but a veneer, and columns are the surest way of shutting light and air from the windows that come between. Have not we, all of us, everywhere come to regard architecture not as beautiful building, or, as my friend Professor Lethaby says, “building touched with emotion,” but merely forms and details, foreign to the purpose of the building they are supposed to adorn and quite foreign to the characteristic and needs of those dwelling or working within?

The other day, landing at Cherbourg, our train ran past any number of the most charming buildings; some big, some little, all utterly devoid of Architecture with a capital “A.” They were beautifully constructed of the stone of the neighborhood, with beautifully tiled roofs and beautifully shaped windows where such were needed, and that was all. Of course, the same thing is true of large sections of England, but it is *not* true of the things we architects are doing to-day in France, or England, or America, and this is largely due, I think, to our clients and their taste—their invariable good taste. I call you to witness that taste, good or bad, was a thing unknown until the Renaissance. But if you look carefully—they are rather ineffective in an exhibition—you will find some buildings of this right sort here, I trust. Take the Rogers' House at Southampton, Long Island, by Walker and

AMERICAN ARCHITECTURE IN ENGLAND

Gillette—a trifle more southern in character perhaps than its situation warrants, but surely most desirable to look at or to live in. There are lots of others, too, unfortunately not here. For instance, my friend Barber has a lovely little village community house up in Westminster county that I should have liked you to see—simple, homely and altogether charming, in which he forgot all about his Paris training.

There are not any very little houses in this exhibition, unfortunately, for all the world nowadays is working out its housing problem, and I am sure you would be interested in seeing what America has contributed to the solution. Unfortunately for us, there is too much wood in our country. Where you and the French are using permanent masonry, we use clap-boards—siding, I think you call it—or shingles, and, in certain parts of the country, patented materials, which certainly may be more durable than these but are rather dubious. I cannot name them for fear of libel suits, but everything that looks like heavy masonry, stuccoed or whitewashed, is not what it looks like by a long way. Even here, some pictures may deceive you. Our little houses are growing simpler and simpler; so, for that matter, are our big houses, but they are never quite so simple as on this side of the ocean. We have no peasantry in America. Everybody, no matter to what condition it has pleased God to call him, is everybody else's equal—and usually superior! The small cottager has to have a parlour as well as a dining-room, which is unfortunate for his pocket; but note this: he would rather have both of them in flimsy wood than a proper combination affair in more enduring material. Shingles, instead of slates or tiles, are the usual American roofing, and are due to the same causes; but we are slowly improving, or seem to be, and the little cottager has his bath that he does not any longer use to store fuel in. He used, in the tenements of the great cities at any rate, to cut out his plumbing to buy beer. Now, as you know, the Prohibitionists have changed all that, so he may as well let the pipes stay "put."

As for Gothic—I suppose I am expected to act as devil's advocate for this much-despised "style"—or let me call it rather principle of construction. While some of us are trying hard to succeed—(look at the work of my old partners, Cram and Ferguson, or that of Day and Klauder, for the most manifold results)—we are really not "in it" with you. There are so many lovely Gothic churches in England that date not only from the fourteenth, fifteenth or sixteenth centuries, but from our own time, that on purely sordid and unworthy grounds I hope my possible clerical clients will never make pilgrimage to these modern churches of yours. Let me say that no modern, and but very few ancient, churches even approach the dignity and wonder and loveliness of the new Liverpool Cathedral. I have not seen it for a number of years, and cannot this time, for I am sailing on Wednesday from Southampton, but I am promising myself to bring my family over in the spring, and to land at Liverpool.

American architecture is better than it was. There is no doubt in practical matters we are vastly in advance of what used to be done when I first went to New York as a young draughtsman. The tendencies and purposes I have not dealt with, and cannot tell you much about. You can see them for yourselves. Some of us

dream of a time to come when architecture, as we understand the word, will cease to exist, and when such ornament as is used will be as instinctive and inevitable as it used to be. This will mean, of course, a radical change in the world's civilisation, perhaps even in its government; but old as I am, I still cannot help believing that some day, somehow, the time will come when we shall have a style so ductile as to lend itself to all our extremes of climate and all our needs, from the tiniest cottage to the greatest public building.

Mr. Goodhue was followed by Mr. Barber who said:

The very subtle little paper which Mr. Goodhue has written in his inimitable manner may furnish food for discussion—I hope it will—but he has done what is usual with him: he knows a lot, but never commits himself. And so, if I ramble along in my own way, making blunders, it is only the difference between him and me: the difference between the nervous though careful artist and what we call the Captain of Industry. Fortunately, in America we are not divided into camps as he says we are. If we do not love each other, we try to respect each other. And while, of course, in the profession of architecture we find the stumbling stones of jealousy and all the little things that come by way of interest and competition in the rush of progress, yet on the whole we get along pretty well. The fact that we are beginning to understand each other now, after twenty years of struggle with different ideas, and are coming closer together, augurs well for the future of our country in its architectural expression. I have been sitting here looking at these photographs and pictures and wondering if you who are here, and are thereby, I hope, evincing an interest in architecture, realise that we are a young country; whether you with your traditions realise that perhaps everything on these walls—which is only a small part of what we might show, because we are a voluminous people—dates probably no farther back than ten or, at the most, fifteen years. All the architecture in America—and what we call architecture is that which brings to our country the interest of study in that craft—really has been produced over a period of two generations. Up to fifty years ago we had a great deal of building in our country, but there were no monuments worthy of the name of architecture, except certain isolated buildings such as the City Hall in New York, which was designed by a foreigner; while Grace Church, Trinity Church, and other buildings which we looked upon as being worthy of the name of architecture, were also mostly designed by foreigners. Of course, we have our Colonial work, which started in the South at Jamestown with the early Pilgrims. It consisted of a scheme of very simple buildings built of bricks, a lot of them having been brought from this country. In New England there is the Colony of Salem, where we have wooden architecture based on what was then the *Louis Seize* in wood; and there is the so-called Georgian architecture. Our cities were jumbles of cast-iron fronts, which were cheaper to cast than to make in stone, and, as used in New York and many of our other cities, very unlovely. The Century Exhibition in 1876 in Philadelphia, the first industrial exhibition we had in our country, was merely a collection of sheds made to cover the mechanical and other exhibits of the products of the material side of our country. In 1893, when the World's Fair came round,

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it was through the genius of men like McKim, Burnham and Hunt that we decided to do something to impress the people; something large and simple; so that for the first time we had what Mr. Goodhue would say was foolish: our *Beaux-Arts* plan, our *Cour d'Honneur*. Perhaps some of you remember many of those interesting buildings. At any rate, that exhibition was visited by Americans generally. As it was in the centre of the country, at Chicago, those who lived East and West, North and South all came; and the American, for the first time, carried back to his own home a feeling of something architectural. I think it was a very wise proceeding that these men should have produced a classic *ensemble*. We in our country at that time, you must remember, were not familiar, either through books or cheap prints, as we are to-day with architectural details and examples. Most of the people knew nothing about columns in architecture, or size, scale or schemes. Therefore they took back with them from the exhibition something of the dream city; some inspiration perhaps which became reflected in the awakening desires of the public. From that time things began to change. We had a further exhibition in Buffalo some years later, also more or less classic, but a little more free in the scheme of design, into which colour was introduced, thereby making another object lesson. Then in California there was an exhibition at San Francisco, where the combination of the climate, the verdure of the city, and the wonderful situation on the water made it the great Exhibition of America.

Consider the changes that have taken place during the life of one man (I am thinking of the late Mr. George B. Post—whom I feel honoured to count one of my friends, and whom I looked up to tremendously as a younger man). He began the practice of architecture when there was nothing higher than a three-storey house, when plumbing was practically unheard of, and when there was no central heating, and he lived to see, and to build himself, some very high buildings. He saw in his lifetime of over a period of fifty years of practice this tremendous growth from nothing to what might be called everything in the way of architectural effort. Of course, when Mr. Hunt began to practise, having come back from the *Ecole des Beaux-Arts* practically the first trained architect, he brought with him the traditions and the things that he loved most in the châteaux of the Loire and in French architecture, and he began doing real monuments in America. But Mr. Hunt's work, outside the enthusiasm he brought to it and the friends he made and students that he interested in it, did not stand for much in a constructive way; no more, perhaps, to use an extreme example, than Garnier, with his Opera House at Paris, or Michael Angelo with his personal work, or Raphael. Owing to the influence of Mr. Hunt, a great many younger men began to go to Paris to learn something of architecture. We had no Schools of Architecture in our country, but certain architectural courses in Universities which were very fragmentary, very elementary, and very stupid. When these pilgrims to the *Ecole des Beaux-Arts* came back they arrived in great numbers. They began, of course, to do so-called French architecture; they were young and enthusiastic, and they imported into America illogical and stupid forms which they had come to love during their dreams abroad. And so we had a sort of influx of the French millinery art. For every building

designed by an architect there were hundreds designed by contractors. French books came into the libraries, and forms were copied without any sense or knowledge of their reason, and we got a tremendous taste—I may say a very bad taste—for very stupid work, and I think it was that to which Mr. Goodhue referred—and quite rightly. But these men came back with a certain knowledge of the theory and essentials of planning which I think has done more than anything else to solve the difficulties of the growing building industry of America. And, therefore, I am proud of being a *Beaux-Arts* man, just as I am of being a friend of Mr. Goodhue. I do not see why the one should preclude me from the other.

In our city architecture the streets are all built on the gridiron plan. Our forefathers had no imagination, and so we have avenues going North and South and little streets going East and West. The lots were divided into 25-foot lengths of frontage, and therefore our street architecture, particularly in regard to our business buildings, was really the architecture of the façade, the side walls and the backs being neglected. That of course spoilt the appearance of our buildings.

I understand that you are now beginning to think something of sky-scrapers in London. Sky-scrapers are high buildings which had an American reason in New York, and certainly a New York reason. The reason was this: that in the Southern part of the city, which was the business centre and the part in which was situated the Stock Exchange and banking locality, property was in very small freeholds, held at very high prices. Someone conceived the idea of building very high buildings on the very small lots, and with the advent of steel for supporting members of our buildings these skyscrapers began to grow. Of course they grew so rapidly that, to use an architectural expression, these things seemed to lie behind. The skyscraper began to be known as an American invention. It has no place anywhere else, and it really has no place to-day in America. Since that time, during the last twenty years, we have developed our transit facilities to such an extent that we no longer have to huddle together. However, these buildings were growing up like a field of asparagus plants, vying with each other, cutting out light and air, and making the lower storeys near the streets practically uninhabitable. So something had to be done.

I am now coming to a point at which I may be able to offer a suggestion that may be worth your thought. Something had to be done in New York, and so a Zoning Law was passed a year or two ago which was the result of very careful study. We had to face the condition of existing things; we could not make such a law retroactive; we could not tear down the sky-scrapers already built. Some scheme had to be devised to let them remain, but at the same time control those that should come after. So a scheme was devised to preserve the light and air in the street, and the city was divided into zones. The height of the buildings already existing in the lower part of the city which was given over entirely to business buildings governed the zone in the district, which was known as the "two-and-a-half district." This meant that in that particular district you could build vertically on the street line of your building two and a half times the width of the street in which the building was to be erected. From that

THE PROFESSOR PROVES THERE WAS NO HOUSING EMERGENCY

point you go a step back; one in three, or back within a plane which starts from the middle of the street, touches the limit of height to which you can go and then recedes. That pushes the higher portions of the building back on the lot, and if the lots are large the mass of the construction is in the middle. This has already begun to show that instead of damaging the plan of the building, instead of dwarfing the imaginations of the designers, it is bringing forward schemes of towers and turrets, and for the first time we are getting our towers and turrets treated on all four sides. The Woolworth Building, which, of course, is our great pride and which is perhaps the most extraordinary building in the world, is a different problem. The Woolworth Building is a block by itself; its turret tower is on the Broadway side, and being quite isolated, it can stand by itself. So can buildings such as the building of the Bankers' Trust, the Singer Building, and other buildings on smaller lots. Something had to be done, and what has been done has been a very good lesson. So that if you are thinking of sky-scrapers in London, before you build any why do not you take our Zoning Law and look it over, and then dilute it by at least 100 per cent.? Then arrange, as you can here, that you are going to start to keep your towers far apart, large at the base, and let them go up as high as they like. There is a certain advantage in a high building. The elevator made these high buildings possible, and without the present traction elevator, we could not have buildings such as the Singer Building, the Metropolitan or the Woolworth Buildings. The advantage of a sky-scraper is that your elevator shafts become very good corridors, and you can travel at the rate of 500 feet a minute instead of walking at the rate of two miles an hour horizontally. So far as hotels are concerned, there is no question but that a reasonably high building is more economical. It enables service to be brought more direct and makes the whole thing a more practicable affair. But in our hotel districts, and in those zones in which private property is situated, we have what we call the one-and-a-half times district. As our streets are mostly 60 feet or 75 feet wide, that gives us practically a maximum of twelve storeys, or at most fourteen, in some of the wider streets; which is not a high building with us, and is not a high building anywhere if properly planned and erected.

One other word I want to say about American architecture is that I think it is extraordinary for you to be interested in it. I feel that the men over there are working hard, and I think that perhaps the most interesting thing that has developed is what we have come to see as a consensus of opinion on the matter of scale. Scale, of course, is very important in architecture, and I was struck, here and in France, with the scale of things. By scale I mean the relation and size of the parts of the building to the people who use it. Those little houses at Cherbourg, to which Mr. Goodhue referred, at once impressed me with their charm; they seemed cosy and caressing to the occupants who were in them. We had in America a period of doing things too big. Twenty years ago everyone was doing things in a large way and on a big scale; trying to make their work impressive, to make the money of their client count as well as his position in the world. And then suddenly we all began to realise that there ought to be some connection between all these things; some reason for them.

And with all that came the study of steel for structures, and finally through the engineer and from economical reasons we have found that the best spacing for steel is somewhere between sixteen and twenty feet columns on the average, and that our storey heights should run somewhere between ten and twelve and not over fourteen feet. All our high buildings are divided into sections, and with a minimum sized window, say four feet by seven, coupled with bays, you get a sort of gridiron arrangement which immediately determines the scale of your openings and of your wall surface and of the applied columns that Mr. Goodhue says are useless. That has done more, I think, to invite the expression of our architecture than anything else. One of the most marvellous things is the foresight of Charles McKim, who thought out in his very wonderful mind the fact that perhaps Italian Renaissance in architecture was more adaptable to use in our building areas than any other architecture. Therefore he brought frankly Italian monuments into our country; he made no bones about it, or excuses; he simply copied and adapted well-known types of buildings and placed them in the city which was fortunate enough to employ him as object lessons of monumentality. And so he changed the scale of things. When University Club was built on Fifth Avenue with the old three-storey houses and churches round it, it looked very large and simple and heavy. But since the University Club and the Forum Building near it and the apartment house have become absorbed in the surrounding architecture of modern New York, they take their place and hold their own, and so Mr. McKim was all we believe and what we now know him to be.

There is one more thing I should like to say, and that is that when all the stress and confusion of war has died away we are going to get one benefit to architecture, and that is from the pilgrimage of our American troops to this country and Europe. I find in my own office that the young men who came under me have an extraordinary love for architecture and art and the loveliness of Europe which they have got on their trip over here. You will remember we sent some two million men over, and they were taken from every class of life: some were Americans, some of foreign descent. They all came over and saw the destruction of things, which, apart from the horror of the destruction, seemed to them to be cruel in the sense of a destruction of beauty. They brought back with them inspiration for the fine things which we are beginning to see coming out in the sentiment of our country. As these young men grow up and have their own homes and use their own buildings, they are going to try and get something of that tradition and charm which you have over here, which we envy, and which we come over as often as we can to see.

The Professor Proves That There Was No Housing Emergency

Figures never lie! So I thought until I read the large collection of statistics brought together by a learned professor to prove that the emergency rent legislation was unjustified because there had been no shortage of housing in New York in 1920. There are so many figures and he is so very wise that you must believe him unless—unless you

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have lived in New York and actually witnessed the suffering that has resulted from the lack of sufficient decent homes. The professor's tale seems like telling a boy back from the trenches that you have calculated it out with care and precision and there has been no war. Samuel McCune Lindsay, Professor of Social Legislation at Columbia University says, "No physical shortage of housing existed in 1920 according to the accustomed standards." All I can answer is—I was there!

Apartment Figures

Professor Lindsay arrives at his surprising conclusions on the basis of figures which show that the increased population 1910-1920 was less than the increased space in apartments (calculated at 4 persons per apartment). He does not consider the fact that an apartment's usefulness is not permanent. In 1900 most of the apartments were antiquated according to standards fixed at that time. In 1909 there were still 645,403 apartments in old law tenements (those erected before 1900) of a total of 840,101 apartments in all. Battleships are destroyed when they are obsolete. Apartments remain even after they are antiquated—even after their existence becomes a real danger. Over half the apartments in use at present in New York were built more than 20 years ago. Most of these are far below the standard set by the present law for new apartments. The Municipality has not destroyed them and replaced them—as has been done in London with certain of the old slums. Owners have not rebuilt them. As long as they could get a small return from their tenements, they have been unwilling to make the investment that would have been necessary to replace them with new dwellings. But the older and worst houses in the past were left vacant.

Vacancy Figures

After all the vacancy figures tell the tale. There were 67,847 vacant apartments in 1909; there were 53,541 in 1916, and in 1921 there were only 1,510 vacancies out of a total of almost a million apartments in New York tenements. Professor Lindsay's statistical tables show that the number of apartments increased so much quicker than did the population between 1910 and 1920 that there should have been an excess of 90,415 persons provided for. Yet we find some 66,000 more apartments in use in 1919 than in 1909.

Rent Figures

However, we do not need figures to prove to us that there was an insufficiency of dwelling places. Rents were going up in 1919—that is the best housing barometer. Landlords' expenses were increased it is true—but if there had been houses enough and to spare—it is the landlord who would have suffered and not the tenant. In the past when New York has been overbuilt, owners have received an insufficient return. This was perhaps unjust, but they could not change this condition. They could not increase their rentals—there were too many vacancies. When all landlords begin to increase their rents all the statistics in the world will not make us believe that there are more than enough apartments.

Pay Figures

But the Professor argues that the workman was receiving big pay—he was expanding, he was moving into larger quarters. If that is so, who was being pushed down into the abominable hovels that had been vacant? There were 39,166 vacancies in old law houses in 1916—and in 1921 there were only 915. These are the outstanding figures. If the workingman had gone up the ladder (which is doubtful) some one else had gone down. Who was it! The evil conditions of our slums have existed for a long time, but it was a more articulate class that was being made to suffer.

Prof. Lindsay apparently fears that his statistics may not prove a sufficiency of homes in 1920, for he says: "Some overcrowding, undesirable as it may be while it lasts, does not necessarily create a danger to public health and morals and constitutes an emergency justifying drastic use of the police power." But why Prof. Lindsay wishes to prove that which we have seen does not exist? I do not know. But I do know that the real estate men who wish to break down the rent legislation are making much use of his book.

Professor Lindsay's conclusions are that no physical shortage of housing existed in 1920 according to accustomed standards, and that if rentals had been permitted to increase, building would have been stimulated. But has the Professor considered what would have happened if building or housing on a large scale had started without governmental intervention of any kind? Building costs were out of proportion to general costs for reasons that we need not go into (the Lockwood Committee has)—building materials had risen 224% between 1913 and 1920 whereas all materials had only gone up 141%. If building had been stimulated sufficiently to decrease rents, the results would have been disastrous to builders—would have meant bankruptcy and foreclosures. Until this time rentals in old as well as new apartments would have rocketed up to the point where they would have been unbearable to much of the population. There was no chance to build in the old competitive way. Meanwhile the tenant had to be protected. Professor Lindsay quotes the City Club as saying, "Indeed there seems to be little hope at any time of private capital unaided supplying decent housing to the average workman at a rate he can afford to pay." It certainly could not be done in 1920. Foreign governments saw this—but as long as our government was unwilling to accept a constructive housing policy, it was forced to the only other available means of protecting the tenant—rent restriction.

CLARENCE S. STEIN.

NOTE: According to the New York World's version of the hearing before the Lockwood Committee on 5 January, Professor Lindsay admitted having "received \$500 from the Real Estate Board of New York City for preparing a treatise on the housing situation which the Board has submitted to the United States Supreme Court in its effort to upset the existing rent laws, and which the Board (until the hearing) had expected to circulate broadcast as an 'impartial' survey tending to show that there never has been a genuine emergency in the housing situation here (New York City)."—*Editor*.

Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

Milwaukee Squarely Faces the Housing Problem

The First Copartnership Housing Venture in the United States

How shall the city or state help meet the housing emergency in a constructive way? New York has answered by offering a bonus in the form of ten years tax exemption on buildings put under way before April 1922. As a result we have increased construction—but mostly of buildings of as poor a standard as the existing laws will permit. The city is helping to pay the bill, through non-collection of taxes, but it is demanding nothing from the builder, neither better-planned buildings nor easier terms for the tenant. Milwaukee is also participating in housing, but more directly and in a manner that will eliminate speculative profit and in which the participation of the city should not be a burden on tax payers—for the tax-exemption granted on new houses in New York City means that heavier tax burdens fall on the rest.

The Milwaukee plan is a direct outgrowth of the 1918 Report of The Housing Committee of that city. We believe that it more clearly and truthfully stated the essentials of the problem that was puzzling most of the communities of the country than has any other report published in this country when it said:

"The solution of the Housing problem involves—

(a) The elimination of speculative land values in some residential districts.

(b) Zoning of the city to safeguard all residential districts.

(c) Economical and adequate planning of streets, transportation, sewage, disposal, water supply, lighting, planting of trees, etc.

(d) Elimination of waste in construction of homes.

(e) Acquiring for wage earners the benefits of ownership without interfering with labor mobility.

(f) Legislation aiming to stimulate the erection of wage-earners' homes.

(g) Public instruction as to the possibilities of housing betterment."

The practical outcome of the report was described by William H. Schuchardt, F. A. I. A., the then Chairman of the Commission, and now President of the Public Land Commission of the City of Milwaukee, in a recent address from which we quote:

"In the Spring of 1919 the Mayor of Milwaukee, the Health Commissioner, the Building Inspector and members of the Commission appeared before the legislature and successfully urged the passage of a bill empowering municipalities and counties to purchase stock in co-partnership housing enterprises. Then followed a campaign of persuasion for the scheme was often times termed stupid, paternalistic, socialistic, or communistic. It was opposed by many of our leading manufacturers, by the real estate board and by other so-called practical, hard headed business people. The men who sponsored the scheme or who

¹See the JOURNAL for February, 1919.

approved of it were condemned as being visionary, mere impractical dreamers. They had no precedent in this country to point to and European experiences were easily discounted because conditions on the other side of the Atlantic are too dissimilar to those which obtain in this country. But little by little the circle of friends increased. The opposition grew less insistent and last spring it was deemed possible to organize the Garden Homes Corporation. The City of Milwaukee, by vote of the Common Council, purchased \$50,000.00 worth of stock, the County of Milwaukee purchased a block of \$50,000.00 of stock and various manufacturers have so far subscribed to about \$80,000.00 worth of stock. The Association of Commerce has gone on record as approving the scheme and has pledged itself to raise \$350,000.00 more to invest in the enterprise.

"All sails are now set. About thirty acres of splendid land were purchased, architects were employed to draw plans of houses, the city planning board and city engineer designed the street layout and in September last some two or three hundred people witnessed the turning of the first spadefull of sod by Mayor Hoan. Some fifty houses are now under construction and more will be erected as soon as sufficient funds are in hand.

"The co-partnership scheme of ownership was developed in England some twenty years ago and has met with considerable success. It is designed primarily to mitigate the burdens of ownership and at the same time secure for the occupant practically all of the advantages of individual ownership. It aims to do away with all speculative values and as you will see, to make the wage-earner's investment both safe and liquid.

"Let me cite a concrete example: We are assured that we can build a six room house for about \$3,800.00 and we know that the land, a 40 x 100 foot lot will cost with street, sewer and water improvements another \$700.00, making a total investment of \$4,500.00. The prospective occupant subscribes for \$4,500.00 worth of common stock and pays in cash as a first installment, let us say \$400.00. His charges will then be as follows:

Taxes \$30 per thousand.....	\$132.00
Fire insurance.....	5.00
Repair charge.....	60.00
Contingent fund.....	20.00
Administration fund.....	20.00
Life and disability insurance.....	30.00

or \$22.25 per month, a total of..... \$267.00

5% on \$4,100.00..... 205.00

Payment toward stock..... 120.00

\$592.00

"His first year's total charges will therefore be \$49.33 per month, of which \$27.08 is investment and interest. At the beginning of the eleventh year he will have paid toward his stock subscription \$1,600.00 and his charges would be as follows:

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Taxes and other expenses.....	\$267.00
Payment toward stock.....	120.00
5% interest on \$2,900.00.....	145.00

a total of..... \$532.00

or \$44.33 per month, of which \$22.08 is investment and interest. At the beginning of the sixteenth year he will have paid in \$2,200.00 toward his stock and the total charges will be \$452.00 for the year or \$37.50 per month and so on until all his stock is paid for when as before stated his monthly charge is only \$22.25.

"While these charges may seem high for the first years it must be seen that there are no items other than contingent fund and administration charges which the occupant would escape as an individual owner. These two items costing a trifle over \$3.00 per month assure him against serious loss should he find it necessary to move to another locality. For in that event he does not need to sell out at a sacrifice in a buyer's market. Should circumstances require his separation from the company he merely sells to the company his stock at a surrender value which varies with the length of occupancy as does the cash surrender value of a life insurance policy. The company in turn sells this stock to another prospective occupant.

"It must also be borne in mind that his investment of \$4,500.00 gives him a home which he could not possibly buy at such a price elsewhere for no profit whatever is charged in arriving at that figure. Yet it must be admitted that a monthly outlay of \$50.00 a month, whatever it may include, is beyond the reach of the unskilled laborer. We can not here discuss that phase of the problem. We must for the moment accept what appears to be inevitable, namely, that the unskilled laborer can not buy a home equipped with all the improvements required by ordinance or by standards of living which certainly are an improvement on those of our forebears.

"The question has often been asked why the occupant does not receive title to the property he occupies when he has paid for all his stock. I wish to emphasize that he does not purchase property, but common stock. It is not the purpose of the company to procure homes at rock bottom prices, sell them at cost to the occupant and then permit him to profit in a sale to another wage earner. The company, in its effort to eliminate all speculative profits must control the title to land and buildings. The so-called unearned increment of land value shall benefit no individual unless the stockholders are ready to disband and sell the entire estate when all will share and share alike in proportion to their actual holdings. The company aims to protect its occupants against exploitation and it can not sanction or make possible their exploitation of others.

"In the matter of control it is proposed that a committee of occupants, elected by the common stockholders will determine on the fitness of applicants to become members of the community, or on the fitness of occupants to remain such. Such a committee may perhaps be empowered to recommend to the directors as to the degree of leniency to be shown a delinquent or make suggestions of all kinds for the betterment of living conditions. It is the aim of the company that restrictions shall interfere as little as possible with individual freedom. They will be imposed only where it is necessary to protect the common good so

that the benefits to be derived will not be offset by annoying interference. In as much as the common stockholders, that is the occupants, will gradually supersede the preferred stockholders in control, because the preferred stock is retired as the subscribed for common stock is paid for, it is to their own interest to so guard their common possession that the advantages gained may not be lost.

"It has been predicted that it will be difficult to find a sufficient number of families who can be induced to subscribe to common stock under a scheme such as has been outlined. We are more optimistic than to believe that, for the idea has been well advertised and although we can now build only about fifty houses we have received over five hundred applications to date. I think that our embarrassment will lie in the selection of occupants rather than having empty houses on our hands."

Letters to the Editor Misled—By What?

SIR:

In "The Labor Situation and the Landis Building Trade Agreements" in the November JOURNAL, Mr. Holsman covers the main points in the arbitration proceedings before Judge Landis and the judicial point of view with reference thereto. But he also, in parenthetical observations, presents his own opinion which I think coincides with the run of current opinion with respect to the labor situation and what had best be done about it. I refer here to opinion outside the ranks of trade unionism, of course.

This proceeding in arbitration before Judge Landis was, I gather from the various reports of it, an examination into the practices of trade unions in the building trades. It may have set out to amount to more than this; but the nature of the proceeding and the conclusions arrived at certainly justify the remark that it was so limited. Apparently it was assumed that what makes for the present labor situation could be discovered by scrutinizing the acts of trade unionists.

And it seems safe enough to say that the point of departure from which the inquiry proceeded was a certain point of view which underlies all of Mr. Holsman's observations and which is epitomized in his remark: "Union laborers have been misled into the belief that little production and much waste, coupled with enforced monopoly and high wages would somehow inure to their advantage."

In view of the evidence contained in trade union rules and the consequent action by trade unionists there appears to be good grounds for assuming that trade unionists have been actuated by such a belief. But that trade unionists have been actuated by such a belief does not account for the rise of trade unionism; nor does it cover the question as to why they act as they do. To attempt here to account for the rise of trade unions and the strategy employed by them would take us a little afield of the point of our immediate interest.

For the point of immediate interest is how to answer to a question which follows upon the heels of the assertion that trade unionists have been "misled." If they have been misled—what has misled them?

Now, it may be that the curtailment of output, price fixing and a friendly regard for monopolistic advantage are

CORRESPONDENCE

characteristics peculiar to the working out of trade unionism. And again it may be, as Mr. Holsman remarks, that "the farsighted, patriotic, cultured citizens of high integrity of character enjoy work well done and would build the best buildings; but citizens of that character abhor connivance in monopolistic price fixing or curtailment of skill or productivity." It may be so. But it may also be that this attitude toward trade unionism and that attitude toward "farsighted, public spirited citizens" is merely a manner of expressing one's preferences or one's preconceptions. This also may be so.

But the world of reality most certainly reveals no such clean cut division of opinion or attitude between its citizens. In view of what is set forth daily in the financial columns of our press and in our market journals concerning the market, loan credits, tariffs, money rates, prices of commodities, and what our farsighted, public spirited citizens are doing in their own behalf, it seems very much like a denial of the facts to assert that these same citizens abhor connivance in monopolistic price fixing or curtailment of output.

In recent years laborers have developed a certain outlook toward the work which they do and toward those who employ them. And employers at the same time have acquired a certain outlook toward their work and toward those whom they employ. In broad outlines, the outlook of both toward the work which they do exhibits the same characteristic features. Both laborer and employer are guided by the rules of business traffic in that in both cases the matter of price rules over all other considerations. The goal of endeavor is higher prices; and the most certain way toward this end is the control of supply or the restriction of output.

The control of supply or the restriction of output is not a matter which falls within the field of choice or of voluntary action. Under the price system restriction of output is ordinarily a matter of necessity among those who have goods or services to dispose of. It is true, as the present case of the Western World indicates, that the necessity of restricting output in order to sustain prices may work out to the detriment of the common welfare; it may mean shortage, hardship, famine, or war. But under the price system there is no help for it.

But in the case of such procedure as reported by Mr. Holsman the matter is never so viewed. The question is approached under the assumption that one group—the trade unionists, go about their affairs under guidance of a predatory outlook, while the rest, the farsighted public citizens, go to their work in the interest of the common welfare. Which, of course, is to leave entirely on one side the all important factor which is that under the present institutional scheme, a shortage of labor or a shortage of goods is highly advantageous to those who have labor or goods to sell at a price.

But there is more to this matter than the restriction of output enforced upon labor and producers alike by the price system. Men no longer look upon the matter of living as a condition which turns upon materially productive work. Ownership—a vested interest, is viewed as that which will exempt men from engaging in the act of producing what they consume. Maintaining this condition of exemption from industrial employment is conceived

by the farsighted, public spirited citizens as the first function of the state. To this end are most of our laws framed; and within the little world of farsighted citizens the right to live without working—the right to live upon a vested interest is never questioned. It is the foundation of all things.

But the advantages of vested interests to those who hold them are to be clearly seen by those who do not. And the right to live without working is a right which may be aspired to by anyone.

So that it should not occasion surprise to find that the workman, he who is supposed to look after the materially productive work which must needs be done, is giving heed to what is going on. It should occasion no surprise to find him engaged in laying plans looking toward creating a vested interest in his job—and in making it secure. And I think that among other things, this is what he is doing.

Now of course he may be all wrong about the matter. It may be that a vested interest in a job may be substituted for materially productive work; but I doubt it. No doubt he has been misled—but again, what has misled him?

He is certainly going about his affairs in a very business-like manner, doing all that he can to render secure his vested interest. He also may develop his vested interest that he may live without engaging in materially productive work—who knows?

It looks as if he had come to his present ways by following in the footsteps of his betters. So that it is not merely a question as to what has misled the workman. I think that it is a case of finding out what has misled our farsighted, patriotic, cultured citizens of high integrity who have got Western civilization into its present mess.

FREDERICK LEE ACKERMAN.

The Fee-Plus-Cost System

SIR:

The technical press has recently been very active in comment upon the architect's alleged deficiencies in business methods. As far as these deficiencies refer to the carrying out of his work and his attention to his clients' interest, I think they are 99% unwarranted and the result of propaganda by building managers, contractors and others who wish to assimilate his profession.

But as far as the architects' own affairs are concerned, if the discussions in *THE JOURNAL* are any criterion, he certainly should have a guardian appointed to look after him.

We have no sooner got the 6% basis generally and universally accepted than we are confronted with a proposal to have the architect placed upon a salary basis. Had this proposal emanated from the building manager or the contractor, probably we need not have been surprised, but coming from the architectural profession itself, it is simply asinine.

Supposing the system were to be universally adopted, how long would it be before every client would be butting into the methods of the office, the number of men employed on his job, the wages paid them and the time expended? How long would it take him to say "your salary is too high, I can get lots of men to work for less?" The only result of this method—and that would be a very speedy one—would

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be to eliminate all respect the public has for our profession and place us on a par with the janitor from the building manager's point of view, or the time-clerk from the contractor's.

While I have no desire to place our profession in a mercenary light, still the outward and visible sign of success in the business world is money, and unless we place our profession in a position where architects can make money, we will merely sink to the position of head draftsman in some organization for the construction of buildings and that organization will finance, plan, construct and dispose of the product of its skill.

Yours very truly,

JOHN GRAHAM.

NOTE: Members of the Institute will recall A. I. A. Document, Series A, No. 129 (it appears in the "Handbook" as Appendix P), in which the Institute offers the Fee-Plus-Cost System of charging for professional charges for consideration and use whenever desired. Mr. Kohn and Mr. Sturgis, who use a modified form of the document in question, have reported their experience in THE JOURNAL.—*Editor*.

From Our Book Shelf

On Building Churches

The Judson Press of Philadelphia has recently issued another of its series of Training Manuals called "Planning Church Buildings" by Henry Edward Tralle, M. A. It is intended as a guide and instruction book for those who in our protestant churches may be called upon to take part in the planning and erection of churches and church schools in connection with them. Dr. Tralle has given many years of study and practical service to the solution of these problems, and this little book embodies the wisdom gathered in cooperating with architects and building committees in all parts of the country.

In presenting this he has had the assistance and professional help of a trained architect, Mrs. George Ernest Merrill, who is Architect Secretary of the Department of Architecture recently established by the Baptist denomination whose headquarters are in New York City.

The author presents the requirements for churches of varying sizes, to illustrate certain solutions of these problems and certain important rules which should govern the planning and development of the program. The advice given is sane and practical. It does not assume to supplant the architect, but to educate the committee to a point where it can intelligently place its problem before the architect with some definite knowledge of what it ought to have, and thus simplify the problem for both parties. Even the skilled architect may find here a mass of information and data which will help him materially in his work.

The plans are well drawn, illustrate the text and suggest appropriate solutions which can not fail to be helpful, while not attempting to dictate as to the style or type of building to be used in any particular case.

The Chapter (X) on the Architect as artist by Joseph Hudnut, A. I. A., is full of sound reasoning for the profes-

sional man; while Mr. Merrill's contribution on Standards, a check list for committees and architects, fills a real need and is a practical glossary and specification.

Not all its items will be wanted in any individual case, but a perusal of the list will prevent omissions inconvenient to be without and expensive to add to the completed structure.

H. H. KENDALL.

News Notes

MR. WILLIAM J. DILTHEY announces removal from 1 Union Square West to 120 Liberty St., New York City.

MR. JOHN T. COMES, Renshaw Building, Pittsburgh, announces the formation of a partnership with two of his former associates, Messrs. Will R. Perry and Leo A. McMullen, under the firm name of Comes, Perry & McMullen.

THE next conference of the International Garden Cities and Town Planning will be held in London on 14, 15, 16 March next. A special exhibit of town planning schemes is being arranged. On 16 March the delegates will be entertained at the new garden city of Welwyn.

THE Philadelphia Chapter has held a number of meetings devoted to a discussion of the work of the Congress of the Building Industry, and the Executive Committee now has under consideration the question of leading in the formation of a local Congress similar to those already established in New York and Boston.

COMMENTING on the recent change in the Landis Awards in Chicago, in respect to some trades, Mr. Henry K. Holsman writes us as follows:

"The machinery movers' new working rules contained none of the wasteful rules formerly insisted upon and the wage was increased from 85 cents an hour to 92½ cents an hour. The marble setters changed their rules—permitting employers to work on their jobs. Their agreement also contains a clause guaranteeing the quality of workmanship, to the effect that if the workmanship is not up to standard in the judgment of the employer, the journeyman will take down and re-set the marble at his own expense, subject to appeal to the Arbitration Board, consisting of an equal number of employers and employees, whose decision shall be final and binding. The wage was raised from 87½ cents an hour to 97½ cents an hour.

"This last clause, guaranteeing workmanship, as nearly as I can make it out, estimating from a calculation of the difference between the wage award of Sept. 7th and the usual standard differential for wages of this trade, less 12½ per cent, amounts to about 2½ cents an hour for this guarantee clause. This is only an estimate, however, and not a positive statement of what may have been allowed by the arbiter for this clause.

"I may say further that it appears that only two trades have such a clause in their working agreements. Manifestly a trade union that will insist upon a rule guaranteeing the workmanship of its members to be first-class deserves a higher wage for its members than it would otherwise be entitled to."

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Committee Activities

More Information on Conduit in Cinders. (31b1.)—In the November, 1921, issue of THE JOURNAL (S. S. D.) there was published the report of a special committee of the Electrical Committee appointed to survey national experience with electrical conduit placed in cinder fill and cinder concrete. The publication of that report has been helpful in that it has precipitated discussion and brought to light additional information. The report referred to seemed to indicate that experience with conduit, no matter how treated, embedded in cinders was unsatisfactory. The following letter from Mr. Bassett Jones of Meyer, Strong & Jones, Inc., consulting engineers, apparently establish the fact that conduit can be and has been so manufactured as to give satisfactory service under conditions which are destructive of the ordinary commercial conduit.

"Some few years ago the writer gave a great deal of attention to the question of conduit in cinder fill, carrying on extensive and careful chemical and physical tests, both in the laboratory and on the building site for the purpose of determining what sort of protective coating could be applied to steel pipe that would protect it from the action of the sulphurous acid set free by dampness in the cinders.

These tests originated in the discovery that practically every form of rust protection applied to conduits then on the market disintegrated very rapidly in cinder fill. We had records of numerous cases where the conduit had been completely destroyed in a comparatively short time. An investigation of the old Manhattan Trust Company building, at the corner of Wall and Nassau Streets in New York, at the time of its destruction, as well as an investigation of the old Pabst Building which stood on the site of the present Times Building, together with numerous other cases showed one interesting fact, that all hot galvanized pipe that had lain in the fill had remained intact, and the writer then suggested to conduit manufacturers that a hot galvanized protection be used on electrical conduit.

This however did not seem to quite fill the bill as at the time a large amount of electro-galvanized conduit was being placed upon the market. The writer therefore undertook to carry out experiments and tests to find out whether or not electro-galvanizing could be applied to conduit in such a manner that it would not disintegrate when buried in cinder fill.

Much work was done on this phase of the subject and eventually we discovered by a series of long tests in buildings under construction that if electro-galvanized conduit was used in which the galvanizing would meet the standard American T & T four dip test for hot galvanizing, that such conduit resisted the effect of the cinder fill equally as well as the hot galvanized pipe.

It was found that in order to make the electro-galvanized conduit meet the above mentioned test that it was necessary to leave the conduit in the electro-galvanizing bath for an additional period of time, generally about half an hour, and that when this was done the conduit met the test and stood up under job conditions when buried in cinder fill. Such conduit has been taken out of the cinder fill by the writer for various periods after its installation up to 10 years, and it has proved in every case to be practically as good at the end of 10 years as it was the day it was installed.

At these tests samples of practically every make of conduit on the market were used under actual building conditions and with

the exception of the conduit meeting the four dip test the results when the building was completed, was a collection of badly rusted pipes.

This office has therefore made it a practice for a number of years to specify that all electro-galvanized or hot galvanized conduit shall meet the standard American T & T four dip test for hot galvanizing, and the difficulty brought about by the corrosion of conduit by the sulphurous acid in the cinder fill on the writer's installations according to these specifications, has ceased.

The standard American T & T four dip test for hot galvanizing is a simple test to carry out and for the benefit of your magazine we are attaching a copy of this test as embodied in our specifications. Originally we made the tests ourselves, but for some years past, have had them made by a laboratory of good standing.

Our experience shows that a considerable portion of the damage caused by corrosion is due to the mechanical abrasion of the conduit before the cinder fill is laid. The conduits are laid on the floor slabs and walked over by workmen, building material is dumped upon them from wheel barrows, wheel barrows are wheeled over them and the pipe thus receives probably as hard treatment as it is possible to give it without crushing the pipe. Indeed, in some cases we have found pipe crushed due to this cause.

I mention this because there is no question in our minds that the best rust protection for conduit is acid proof enameling, black or otherwise, but actual measurements at buildings have shown that in many cases at least one third of the enameling has been removed from the pipe by mechanical abrasion before the fill is placed. This left one-third of the bare steel open to the immediate attack of the acids in the water used in the fill.

I should draw your attention to the fact that the American T & T four dip test for hot galvanizing which is applicable as mentioned above to electro-galvanizing does not apply to Sherardized products, for the zinc applied by the Sherardizing process is mixed with iron particles which prevent the test from operating properly. The amount of zinc deposited per unit of area by the Sherardizing process may vary considerably in any given piece of pipe unless the Sherardizing process is carried out with extreme care. We found this difficulty to exist when Sherardized products first came on the market, and volumetric analyses of the zinc so deposited showed variations of 1 to 12 in weight of zinc per unit of area. This difficulty we believe, has been largely, if not entirely eliminated by changes in the Sherardizing process.

The only known suitable test for the protective value of the Sherardized coating is the salt spray test which must be carefully carried out and is not easy to use, but such tests as well as other chemical and physical tests of Sherardized products indicate that this form of protection, if the Sherardizing is properly executed and the coating contains at least 200 milligrams of zinc per sq. inch of surface, is equally as good as that required in the cases of electro-galvanizing or hot galvanizing by the Standard American T & T four dip test.

My experience has led me to believe that the deleterious action of the cinders ceases after a reasonable time unless of course water is more or less continuously added to them. In other words, the action of the cinders on the conduit exists only during the time the cinders retain their moisture. If there is enough zinc deposited on the pipe so that the amount removed by the action of the sulphurous acid in the moisture contained in the cinders can not remove all of the zinc before the cinders have become dry, the pipe will remain intact indefinitely. It is of course probable

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that if through leakage of other pipes the cinders remain moist no matter how much zinc is applied to the pipe it will eventually become corroded.

It may be of interest to add that in tropical climates where the air is more or less charged with sulphurated hydrogen from decaying vegetation, the zinc, even on hot-galvanized pipe is disintegrated with extreme rapidity by the air alone. In this case, the only resource is to paint the pipe with asphaltum as soon as it is received. At Panama the hot galvanizing on pipe kept under a shed disintegrated to a white powder in ten days. Other forms of galvanizing, except high grade Sherardizing, disintegrated with greater rapidity.

To sum up I might say that provided the proper amount of zinc per unit of area is properly applied to the pipe, either by the electro galvanizing process, the hot dip process, or Sherardizing process, the pipe will not be corroded in any reasonable length of time in cinder fill, unless the fill remains damp.

I am a little surprised that the report of the N. F. P. A. Electrical Committee did not mention these facts, as the conduit manufacturers are thoroughly familiar with them."

Tests for electro-galvanizing or hot galvanizing. The galvanizing shall be applied in a smooth heavy uniform coating of pure zinc, and shall stand the following tests, all samples being taken from stock or from the job.

The samples shall be cleaned before testing, first with carbona, benzine or turpentine, and cotton waste (not with a brush) and then thoroughly rinsed in clean water and wiped dry with clean cotton waste. The samples shall be clean and dry before each immersion in the solution. All samples tested for galvanizing shall be free from enamel or other coating. (Note: Enameling can be removed by immersing the samples in carbon bi-sulphide. The enameling can then be wiped off.)

The standard solution of copper sulphate shall consist of commercial copper sulphate crystals dissolved in cold water, about in the proportion of 36 parts, by weight, of crystals to 100 parts, by weight, of water. The solution shall be neutralized by the addition of an excess of chemically pure cupric oxide (Cu O). The presence of an excess of cupric oxide will be shown by the sediment of this reagent at the bottom of the containing vessel.

The neutralized solution shall be filtered before using by passing through filter paper. The filtered solution shall have a specific gravity of 1.186 at 65 deg. F. (reading the scale at the level of the solution) at the beginning of each test. In case the filtered solution is high in specific gravity, clean water shall be added to reduce the specific gravity to 1.186 at 65 deg. F. In case the filtered solution is low in specific gravity, filtered solution of a higher specific gravity shall be added to make the specific gravity 1.186 at 65 deg. F.

As soon as the stronger solution is taken from the vessel containing the unfiltered neutralized stock solution, additional crystals and water must be added to the stock solution. An excess of cupric oxide shall always be kept in the unfiltered stock solution.

Samples shall be tested in a glass jar of at least four inches inside diameter. The jar without the samples shall be filled with standard solution to a depth of at least four inches. Box samples (out-let boxes, etc.) shall be tested in a glass or earthenware jar containing at least one quart of standard solution for each sample.

Solution shall not be used for more than one series of four immersions.

Clean and dry samples shall be immersed in the required quantity of standard solution in accordance with the following cycle of immersions.

- First—Immerse for one minute, wash and wipe dry.
- Second—Immerse for one minute, wash and wipe dry.
- Third—Immerse for one minute, wash and wipe dry.
- Fourth—Immerse for one minute, wash and wipe dry.

After each immersion the samples shall be immediately washed

in clean water having a temperature between 62 deg. and 68 deg. F. and wiped dry with cotton waste.

If after the test described there should be a bright metallic copper deposit upon the samples, the lot represented by the samples shall be rejected.

Joint Conference on Advertising. *Meeting of Executive Committee.*—The Executive Committee of 5 of the Continuing Committee of 30 created by the November, 1921, Indianapolis Joint Conference on Better Advertising to Architects met in New York on December 16th.

The Committee made a careful study of the personnel of the Continuing Committee with respect to interests represented and it was found that many important groups had no spokesmen on the Continuing Committee. The feeling was that the Continuing Committee should be enlarged to provide for representation from those interests not now represented. A list was prepared and the chairman was authorized to invite the various manufacturers' associations to designate representatives. Certain leading companies in unorganized industries will be asked to agree among themselves upon suitable representation.

The cost of publishing and distributing the proceedings of the Indianapolis Conference was closely approximated, and it was agreed that a charge of \$1.00 per copy should be made. The suggestion that the Press of the A. I. A. Inc., publish the proceedings was adopted.

Further consideration of the recommendations made by the Indianapolis Conference in regard to standard sizes, character of advertising copy, and segregation of subject matter was postponed until the Continuing Committee is enlarged and reorganized.

It was felt that the work with which the Committee was charged by the Indianapolis Conference should be more finally divided and assigned to a larger number of sub-committees than now exist.

The chairman was authorized to discuss with a specified list of manufacturers the production of filing equipment, after the standard classification has been so revised as to embody any valuable features that might be turned up by answers to the questionnaire sent to a select list of 150 architects.

Standardization of Size of Paving Brick. (3g4).—The Institute, through the Structural Service Committee, was represented at the conference held in Washington, November 15th, under the auspices of the U. S. Department of Commerce to consider the standardization of size of paving brick. In attendance at the conference were representatives of various paving brick manufacturers, the National Paving Brick Manufacturers' Association, the Bureau of Standards, the A. S. T. M., Department of Public Roads, the Army and Navy, and representative engineering societies interested in the use of paving brick.

A report, submitted by the National Paving Brick Manufacturers' Association, indicated that during the past eight years paving brick of 66 varieties had been manufactured in commercial quantities in this country. After a general discussion and expression of opinion on the practicability of eliminating a large number of these varieties a committee was appointed to consider the various recommendations and suggestions made and to report at the afternoon session.

This committee recommended that the following sizes of paving brick be regarded as standard and after a detailed discussion of the various recommendations, the report of the committee was unanimously adopted:

Plain wire-cut brick (vert. fib. lugless) 3" x 4" x 8½" and 3½" x 4" x 8½"; repressed lug brick 3½" x 3½" x 8½" and 4" x 3½" x 8½"; vertical fiber lug brick 3" x 4" x 8½" and 3½" x 4" x 8½"; wire-cut lug brick (Dunn patent) 3" x 3½" x 8½", 3½" x 3½" x 8½" and 4" x 3½" x 8½"; hillside brick (Dunn patent) 4" x 3½" x 8½"; hillside brick (repressed) 4" x 3½" x 8½"

In each instance the first dimension given is the vertical dimension of the brick as laid.

STRUCTURAL SERVICE DEPARTMENT

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Asbestos. (30c3).—(*University of Arizona. Mineral Technology Series No. 24. Bulletin No. 24. "Asbestos" by M. A. Allen and G. M. Butler. Pages 31, Size 6" x 9".*) Among the more important substances included under the general trade name of asbestos are chrysotile (serpentine asbestos), amphibole, anthophyllite, crocidolite, and amosite. Chrysotile asbestos is the only variety that is known to occur in commercially important deposits in Arizona; in its production, Arizona leads all the other states. An important difference between the chemical composition of Arizona chrysotile asbestos and that of the Canadian chrysotile is the small quantity of iron oxide the former contains. On account of this small quantity of iron oxide (about one half that carried by the Canadian variety) it has been suggested that Arizona asbestos might be the better variety to use for electric insulation.

Grades and Specifications.—There is no standard classification of asbestos in general use in Canada, but the Department of Mines of the Province of Quebec recognizes the following five grades:

<i>Approximate Length of Fiber.</i>	<i>Commercial Name.</i>
Crude No. 1..... Over 3/4 of an inch.....	Crude No. 1
Crude No. 2..... 5/16 to 3/4 of an inch.....	Crude No. 2
Mill Stock No. 1... 5/16 of an inch and over.....	Spinning fiber
Mill Stock No. 2... 1/32 to 5/16 of an inch.....	Shingle fiber
Mill Stock No. 3... Up to 1/32 of an inch.....	Paper stock and others
Asbestic..... Very short fibers mixed with powdered serpentine.....	Asbestos for wall plaster

Different producers, however, follow different practices, and separate their products into grades of different fiber lengths, so that the above table is not absolute, but should serve as a guide. While the length of the fibers is a very important factor in determining the grade and market price of asbestos, the value is also dependent upon the fineness of the fibers, the temperature at which they fuse, their flexibility, and their tensile strength.

Uses.—The fibrous structure, toughness, incombustibility, and low heat conductivity are the properties that make asbestos valuable. The most important way in which asbestos is utilized is as yarn or thread used in the manufacture of many types of steam packing, fireproof cloth, rope, and brake linings. No known substance can be satisfactorily substituted for asbestos in the manufacture of better qualities of these articles, and only the highest grades of Nos. 1 and 2 Crude can be used for such purposes. Material consisting of shorter or less flexible fibers is used very extensively in the manufacture of insulating material to cover steam pipes, boilers, etc.; asbestos paper and millboard for high pressure gaskets and packings; stove linings; air-cell pipe coverings; shingles and other roofing material; wall plaster; "Bitulithic" paving; "85% magnesia;" acid- and corrosive-proof pipe, wall tile, and desk coverings; filters; asbestos paint, etc. Large quantities of such asbestos is also used in refrigeration and cold storage plants.

Demand and Market Value.—Only a small proportion of the asbestos mined in most places is of high grade—the materials

chiefly sought and most widely used. In attempting to meet the demand for the higher grades, an over-supply of low grade asbestos is produced. This fact explains the striking difference in value of the various grades prevailing F. O. B. Canadian mines, February 26, 1921, which, according to the Engineering and Mining Journal, were:

<i>Grade.</i>	<i>Price Per Ton.</i>
Crude No. 1.....	\$2,000 to \$3,000
Crude No. 2.....	1,400 to 2,000
Spinning fiber.....	400 to 1,000
Magnesia and compressed sheet fiber.....	325 to 500
Shingle stock.....	110 to 150
Paper stock.....	60 to 75
Cement stock.....	17.50 to 30
Floats.....	8.50 to 15

Fire Stopping. (46). (*Structural Defects Influencing the Spread of Fire. National Fire Protection Association. Pages 18, size 6x9 inches. Illustrated.*) The suggestions and details, in this booklet, are designed primarily to cover defects in buildings of ordinary construction, but the same principles may be applied to like faults which are often found in fire resistive buildings. Precautionary measures are given for preventing the rapid spread of fire in connection with sheathing and plastering, boxed cornices, attics, stairways, elevators, floor and wall openings and skylights.

Creosoted Wood Silos. (35z5). (*Technical Note No. 144. Forest Products Laboratory.*) The wood-preservation studies at the Forest Products Laboratory have shown that the value of wooden silos can be greatly increased by proper treatment with coal-tar creosote. A good creosote treatment will not only increase the durability of the wood, but will reduce the tendency of the staves to shrink when the silo is empty. A creosoted silo can not be painted afterwards; however, it does not need painting, for the creosote protects the wood, and its color is pleasing.

Highly durable woods, such as heart cypress or redwood, do not need protection against decay so much as the non-durable woods, but a thorough creosote treatment will make the non-durable woods, such as sap pine, last longer than durable species will without treatment.

Contamination of the silage by creosote from the staves need not be feared. This is borne out by experiments and by careful inquiry among the many farmers who have used creosoted silos. In order to be quite sure, it is well to allow the creosoted staves or the finished silo to stand a few weeks before filling.

The most thorough creosote treatment can be given by pressure methods. If pressure-treated wood is not available, very good results can be obtained by the hot and cold bath treatment. If a good penetration of coal-tar creosote is obtained by either of these processes it is not too much to expect the silo staves to resist decay 25 or 30 years.

Other methods of creosoting, such as painting, spraying, or dipping can be used. They are less costly than the pressure treatment, but they are also less effective. They will probably add several years to the life of the silo and thus pay for themselves, but the more thorough treatments should be used wherever possible. Instructions for treating silo staves by these various processes may be obtained from the Forest Products Laboratory, Madison, Wisconsin.

Graphite. (25a).—(*"Graphite in 1920" by L. M. Beach. Reprint from Mineral Resources of the U. S. by the Geological Survey. Pages 6 Size 6" x 9".*) This publication gives tables of production of crystalline and amorphous graphite, manufactured graphite, imports and exports and prices.

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Copper. (15b)—("Copper in 1919." *General Report by H. A. C. Jenison. Reprint from Mineral Resources of the U. S. by the Geological Survey. Pages 123. Size 6" x 9".*) This publication gives tables and data on production, imports, exports, consumption, and prices of copper. It does not discuss the physical properties of copper nor its technical uses.

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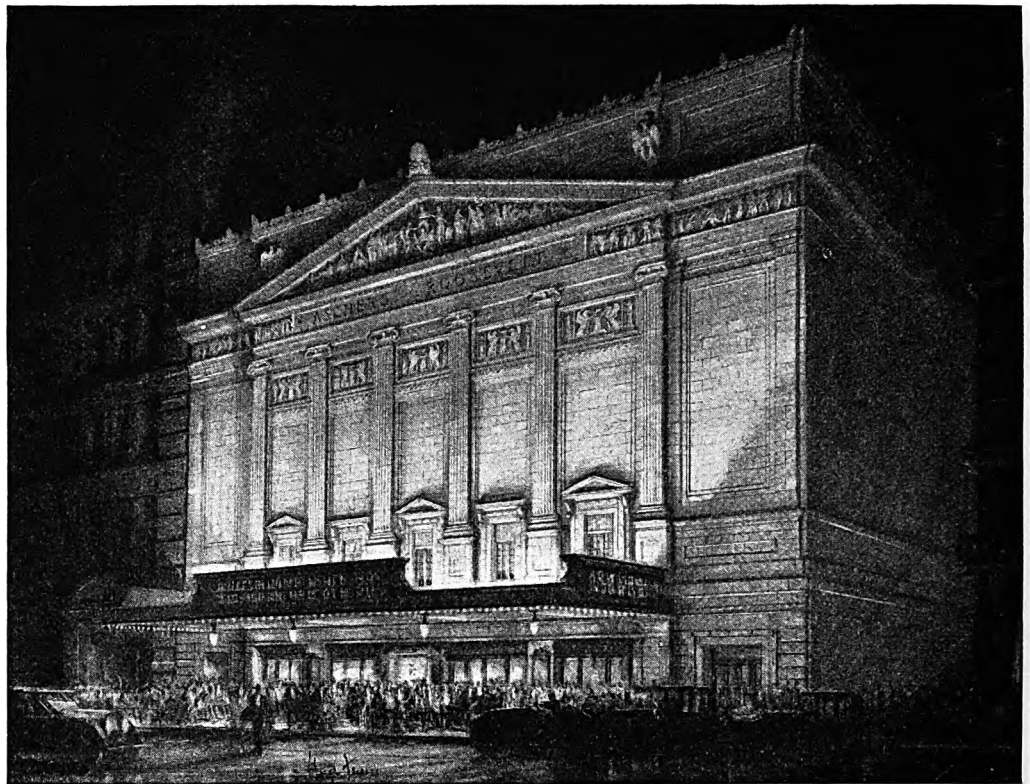
DENVER

ASCHER'S ROOSEVELT
THEATRE
CHICAGO, ILLINOIS



C. HOWARD CRANE
Architect

Black spotted cream
glazed Terra Cotta with
polychrome ornament



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Vanished Limitations of DRAMA and ARCHITECTURE

FROM its early beginnings in Ancient Greece, the drama has had a steady development through the ages. Advance has been apparent with each succeeding century. One by one the early hindrances to realistic portrayal have disappeared. But not until the development of the motion picture have the limitations of time, place and motion been entirely swept away.

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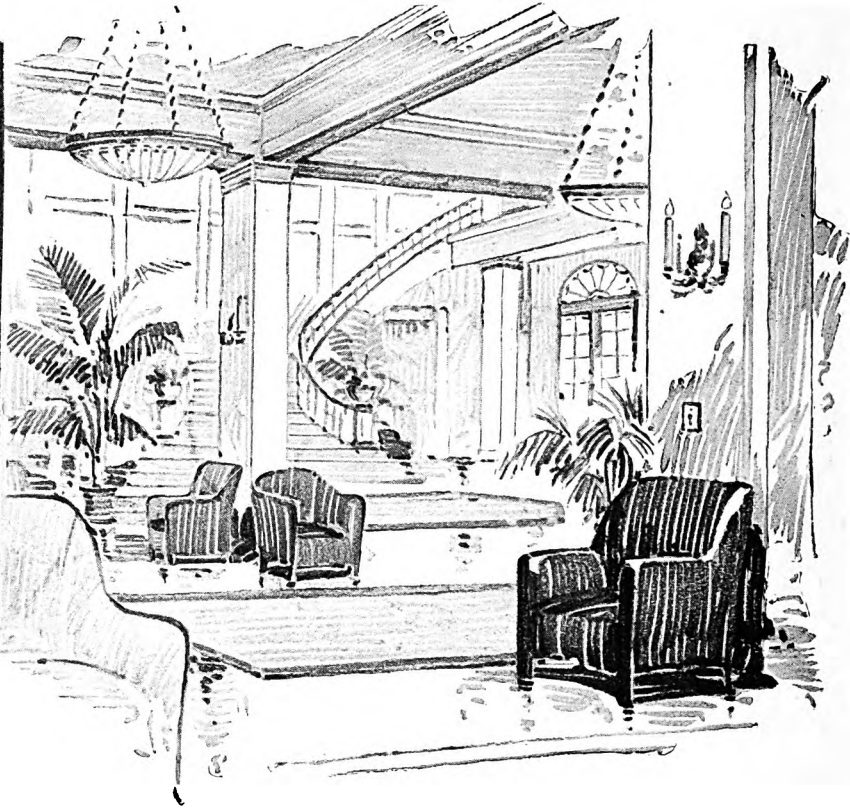
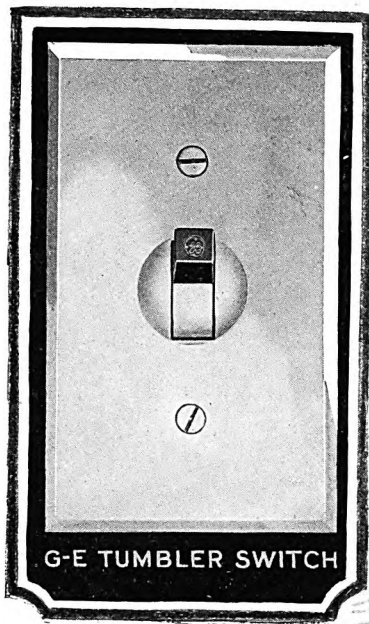
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G-E Tumbler Switches are made in either flush or surface types, suitable for homes, apartments, churches, hotels, factories or other buildings.

The General Electric Company will be pleased to send a sample of the G-E Tumbler Switch to any architect. Address Supply Department, Schenectady, N. Y.

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Schenectady, N.Y. **Company** Sales Offices in
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NORTHWESTERN
is a short form of
specification for archi-
tectural Terra Cotta
of superior quality.

THE Webster Hotel, Webster Avenue and Lincoln Park West, Chicago, Illinois, Fridstein & Company, Engineers.

"Northwestern" enamel terra cotta of a light pink granite shade was selected for facing of the lower and upper stories and trim of this building, harmonizing in color with the brick facing of the intermediate stories.

Hotel exteriors should be clean and inviting in appearance. To insure this, no building material is quite so effective as "Northwestern" terra cotta, which is backed by a half-century of progressive experience; during which time this company has earned a reputation for quality that has been the chief factor in its splendid growth.

THE NORTHWESTERN TERRA COTTA CO.
CHICAGO

Economical Construction

A Department of Practical Information

2nd YEAR

JANUARY 1922

Edited by William Carver, Architect

Ideal Walls are Economical and Satisfactory say Users

Architects, Engineers and Contractors
Prove by Actual Experience that Ideal Construction
Justifies Favorable Claims

Frank C. Vitson, Mechanical Engineer, San Francisco, says:

"The idea of the Ideal Wall is the finest thing that has come to lovers of brick construction in years. Now we can have our long wished for brick-work at the cost of frame construction.

"I have tried it out thoroughly merely to satisfy myself and now that the trial is over am more of an enthusiast."

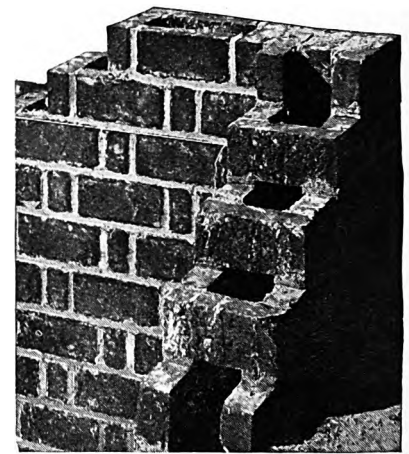
The foregoing is typical of numerous letters of endorsement constantly being received from all parts of the country.

Economical—cutting $\frac{1}{3}$ from brick-work cost—beautiful, dry and satisfactory in every way, the Ideal wall gains friends wherever used. It has all the advantages of solid and hollow construction for residential buildings, at a cost lower than any other type of construction, not even excluding frame.

Soundly Built Permanent Homes
Better Investment for Clients

Not only is Ideal construction satisfactory to the architect but it brings enduring satisfaction to owners. The public is now well aware that when buying an automobile the first cost is not the only cost and is now learning this truth with respect to houses. Non-permanent construction implies constant tinkering and expensive hand labor in making repairs—which are not only annoying but costly. Permanent brick construction requires little or no repair.

The U. S. Bureau of Internal Revenue allows a "life" of twenty-five years on frame building in figuring real estate items in income tax returns. Therefore, for a frame house costing \$10,000, there should be set aside each year, \$400 to cover obsolescence, this being in addition to the annual expense of painting and repairs.



An 8-inch Ideal All-Rolok Brick Wall section.

Architects Find This Brick
Manual of Great Value

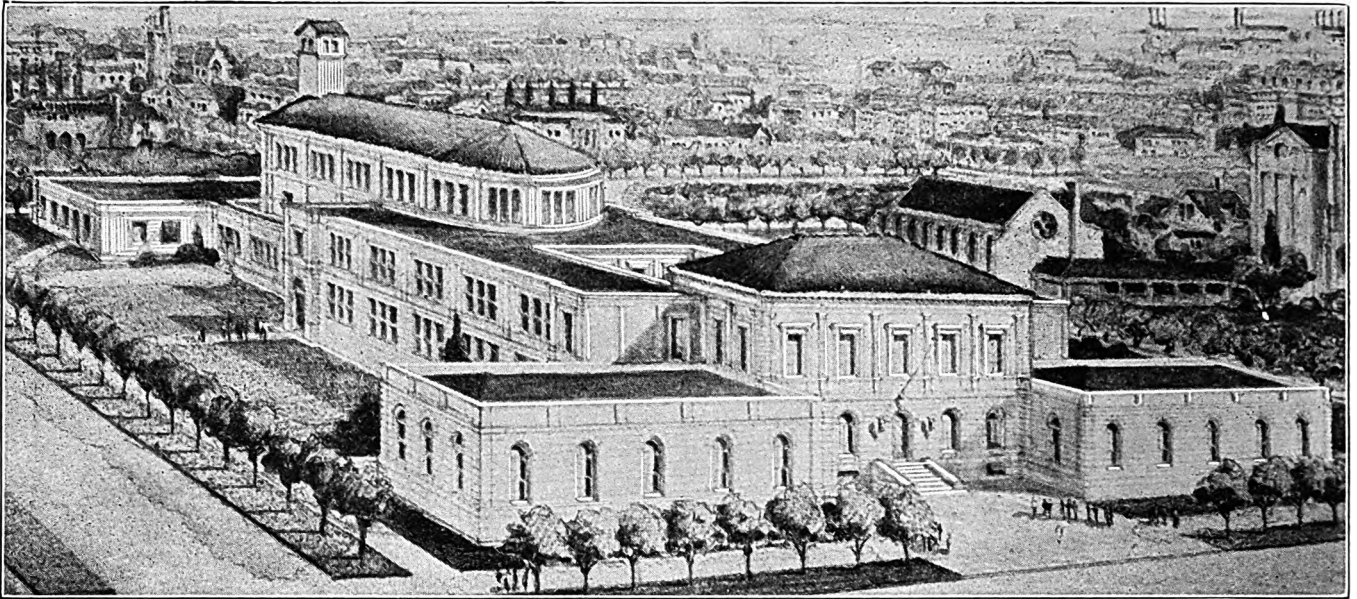
For 25 cents only, we will gladly send this 72-page construction manual—"Brick, How to Build and Estimate." Some of the subjects covered are: The Ideal wall, brick in fire-resistive and slow burning construction; brick in fire and party walls; compressive strength of brick; fire-resistiveness of column coverings; cement and limes; sand; mortar; colors; selection and preparation of mortar; bonds; joints; fireplaces and chimneys; brick construction in freezing weather; and many other topics. If your local brick manufacturer cannot supply you, write The Common Brick Industry of America, 1327 Schofield Building, Cleveland, Ohio.



Ideal Wall home
at Alton, Ill.

The Ideal wall combines all the advantages of solid brick construction—for the cost of frame.

For data on Ideal wall and other information on brick, see Sweet's Catalog, 1921, pages 107-114.



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\$700,000.00 Denver High School

34,500 square feet of Carey Roofing will be applied according to architect's specifications calling for the use of two layers of fifteen pound asphalt saturated felt, three moppings of asphalt, and a top sheet of three-ply roofing.

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Arch. 1-22





ATLANTIC Terra Cotta, always desirable for the exterior elevations of a building, is a practical necessity when the design calls for modeled detail in color.

The walls of the building illustrated are Atlantic Terra Cotta, conglomerate in color. The Studebaker trademarks, and the sign over the right elevation, are white Terra Cotta against black.

Architectural flexibility, expressed in little details of this kind, is characteristic of Atlantic Terra Cotta.

*Studebaker Building, Brooklyn, N. Y.
Tooker & Marsh, Architects. Moody
Construction Co., Builders*



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Southern Factory:

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*The Hotel Biltmore, New York.
Warren & Wetmore, Architects.
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MINNEAPOLIS 708 Builders Exchange
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PITTSBURGH 945 Oliver Bldg.

DALLAS Southwestern Life Bldg.
DETROIT 1772 Lafayette Boul.
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CLEVELAND 706 Rose Bldg.
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SAN FRANCISCO 72 Fremont St.

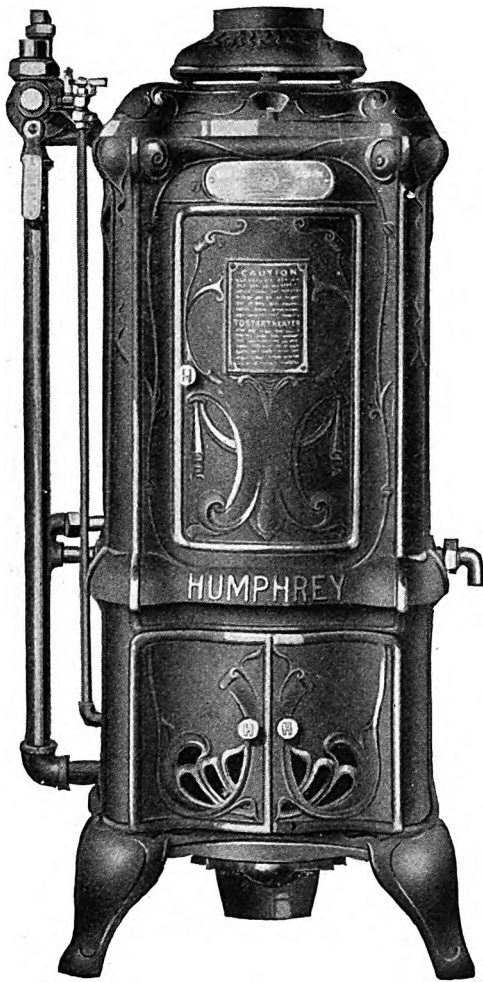
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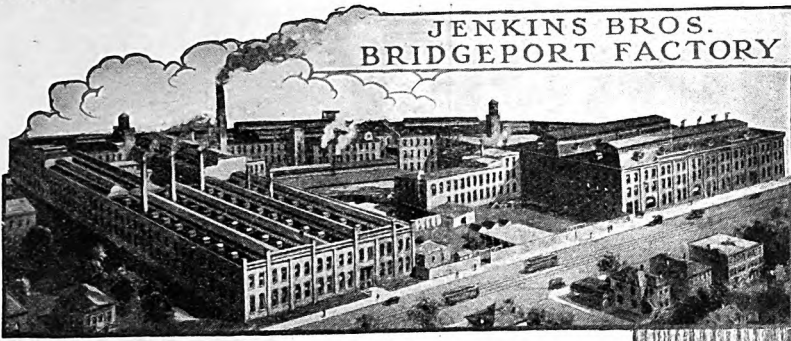
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At the Turn of a Faucet

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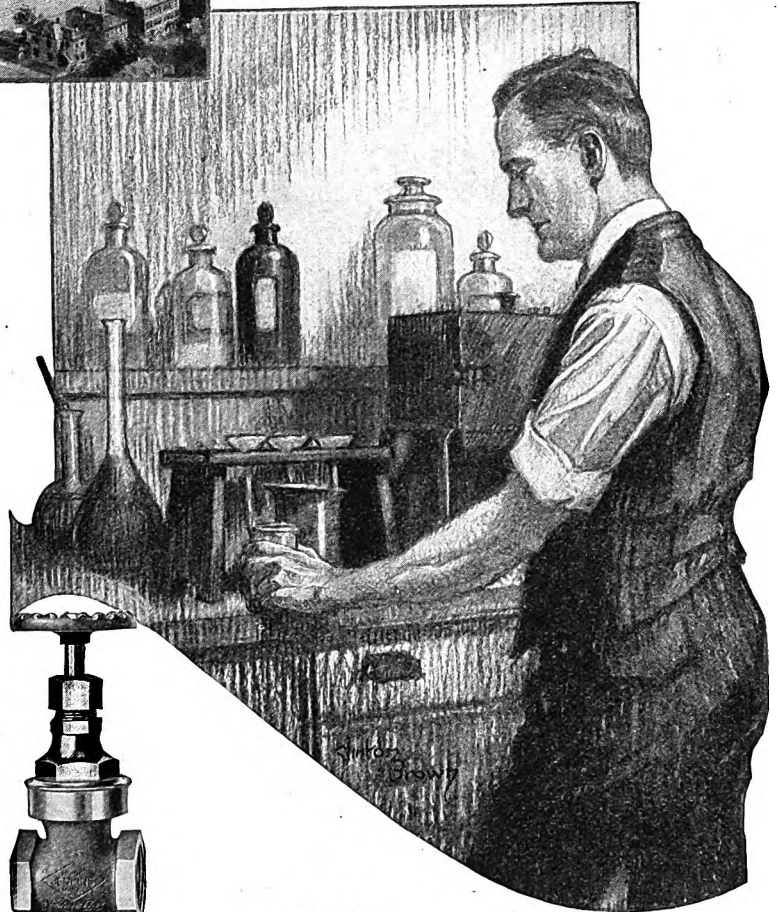
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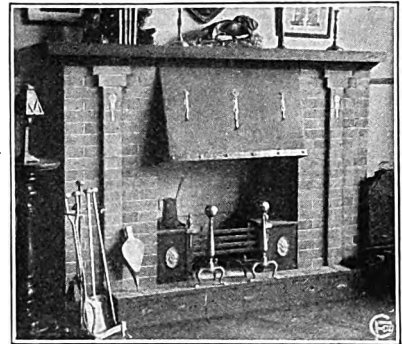
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Insures proper construction at the vital part of the Fireplace; saves heat and fuel and often prevents a smoky fireplace.

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The knuckle of this hinge is a copy of the popular French "Olive-Knuckle" Hinge, which was sold at about \$3.50 per pair in iron, and on account of the high price, was used only in the better class of residences and apartments. We are now able to offer this hinge in iron (malleable)—at a price which makes its use possible in competition with ordinary butts.

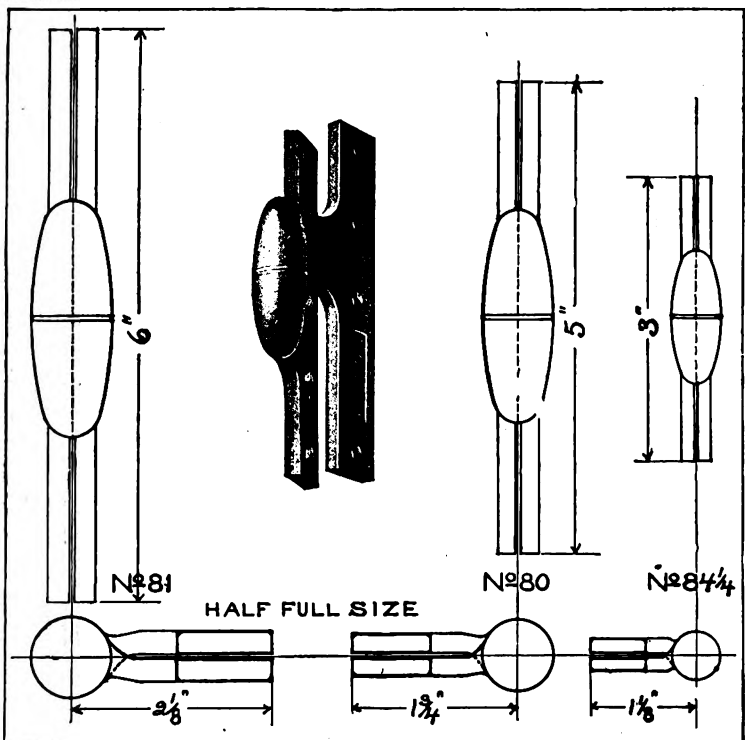
THIS HINGE IS FURNISHED in malleable irons, sand-blasted or electro-galvanized—either finish takes paint or stain perfectly, and in brass or bronze metal.

No plated iron hinges made and no cast iron hinges.

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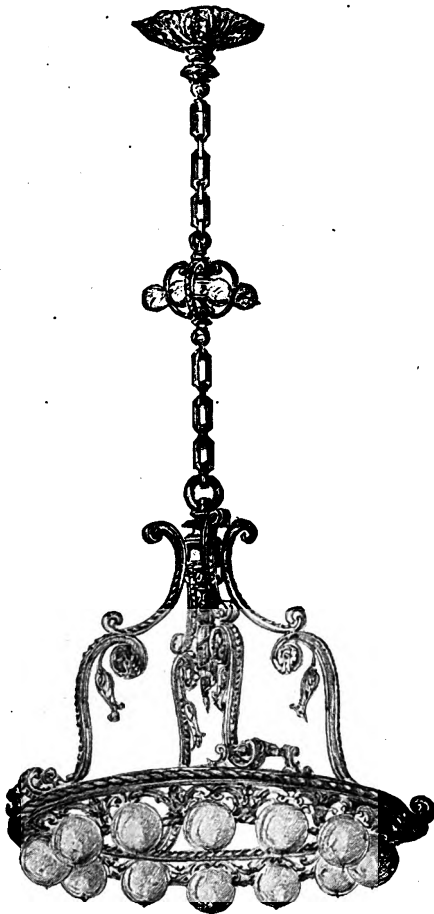
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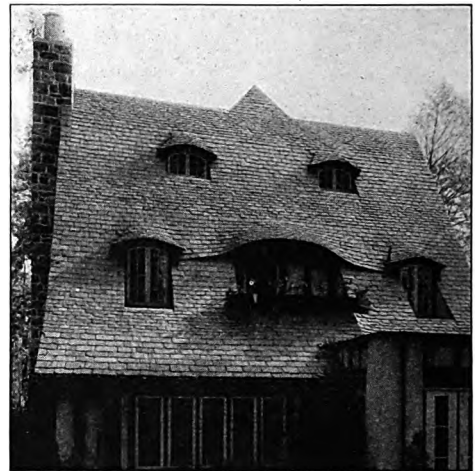


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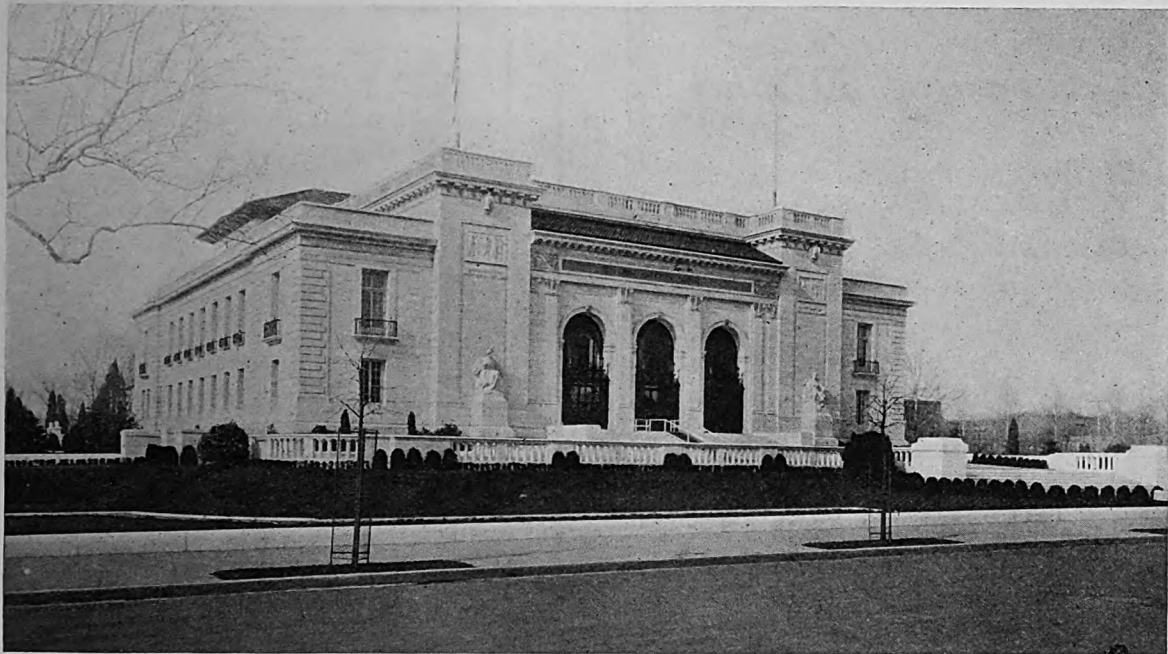
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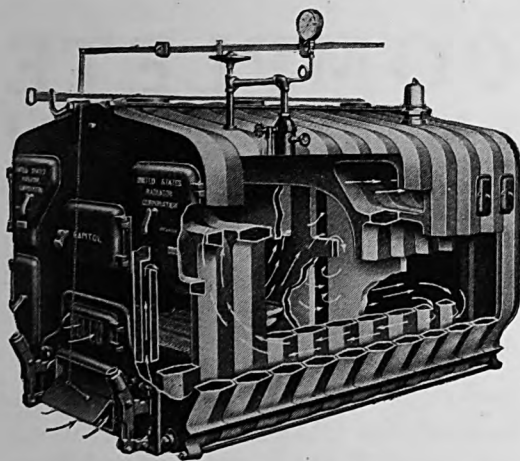


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Paul Cret, Architect

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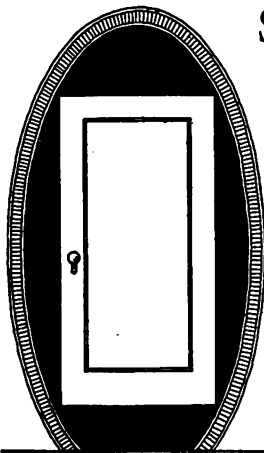
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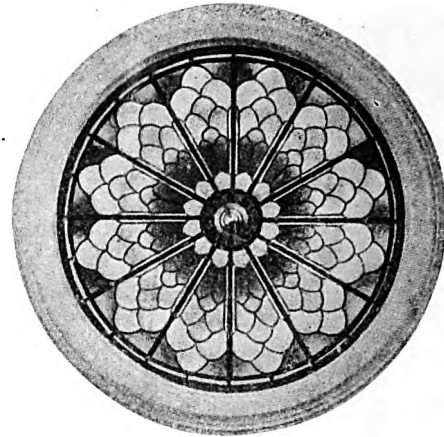
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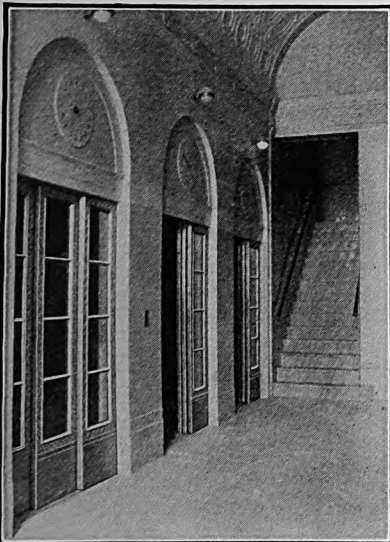
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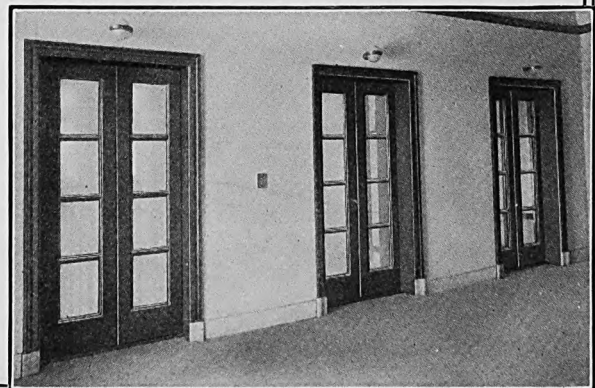
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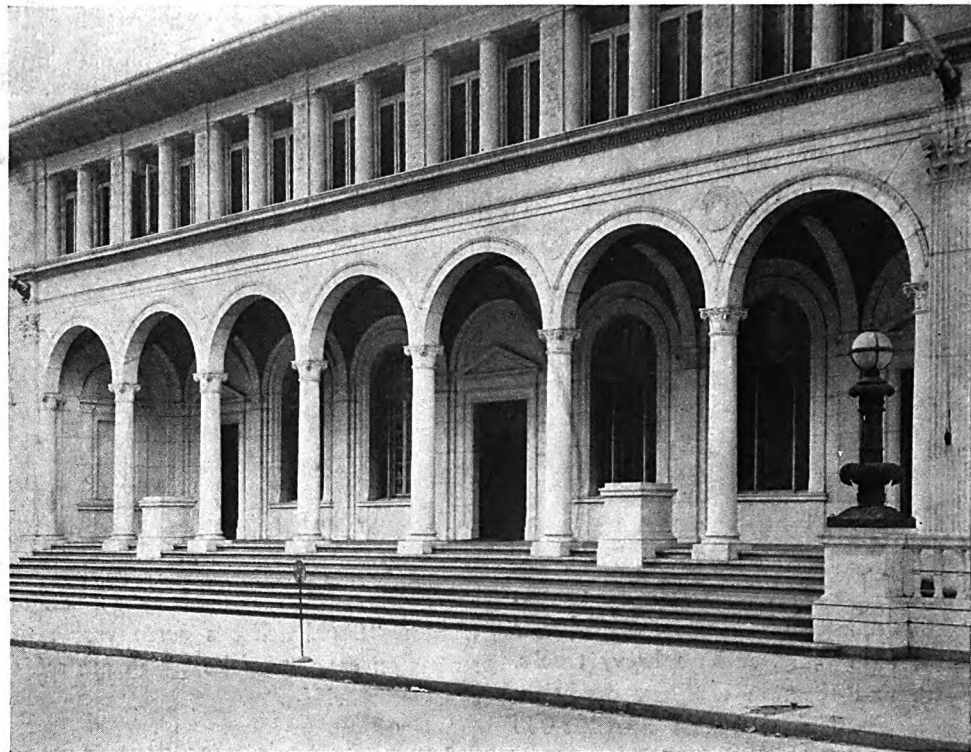
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A Department of Practical Information

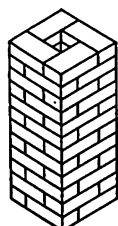
2nd YEAR

FEBRUARY 1922

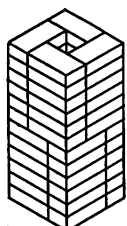
Edited by William Carver, Architect

Why Not Load Brick Walls To Safe Bearing Capacity?

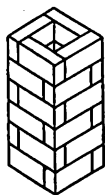
Tests, about to start, are expected to show that higher unit loads may safely be placed on brickwork.



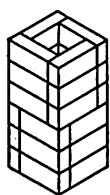
(a.)
BRICK LAID FLAT
JOINTS BROKEN
EVERY COURSE



(b.)
BRICK LAID FLAT
JOINTS BROKEN
EVERY 6TH COURSE



(c.)
BRICK ON EDGE
JOINTS BROKEN
EVERY COURSE



(d.)
BRICK ON EDGE
JOINTS BROKEN
EVERY 3RD COURSE

As soon as the 42 panels (story height) of solid and Ideal brick walls, now under construction at the Bureau of Standards Laboratory, 40th and Butler Streets, Pittsburgh, Pa., are 60 days old, testing will begin. Architects, engineers and contractors are cordially invited. Further particulars will be gladly given upon request.

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Comparative Strength of Brick Piers Brick Laid Flat and On Edge

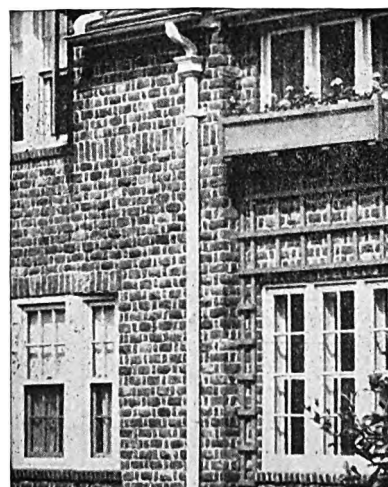
(All piers with hollow core, 2½ months old, 8 ft. high, laid in 1:1 portland cement mortar)

Size		Ultimate Strength (tons)	Ultimate Strength (pounds)	Unit Strength of Net Area (pounds per square inch)	Percentage Gain in Unit Strength of Net Area
12" x 12"	Fig. (a)	216.5	433,000	3,217	0.
12" x 12"	Fig. (b)	231.5	463,000	3,451	7.2
11" x 11"	Fig. (c)	181.75	363,500	4,622	43.6
11" x 11"	Fig. (d)	190.5	381,000	5,055	57.1

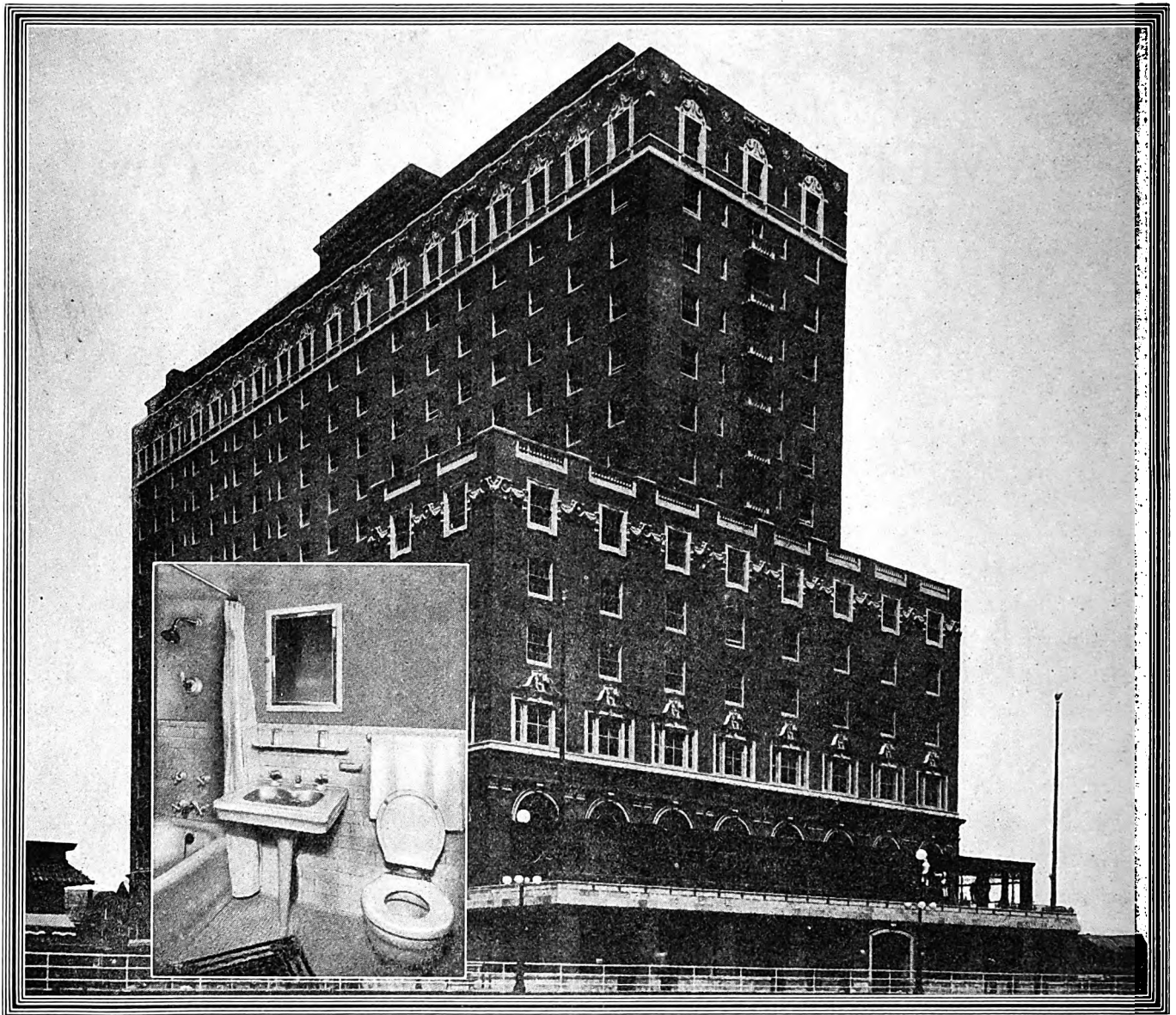
Official Publication Gives Test Data Summary

Previous tests of brickwork are summarized in the third edition of "Brick, How to Build and Estimate," the official brick construction manual of the Common Brick Manufacturers' Association. Among other subjects covered are: Ideal wall—all data to date including weights, height by courses, material, etc. required per square foot; solid brick walls—selection of bonds and joints; composition and strength of various mortars; notes on mortar colors; tables of weights; height by courses, etc. A 72-page manual for the purely nominal sum of 25 cents, pre-paid. If your nearest brick manufacturer cannot supply you, write The Common Brick Manufacturers' Association, 1327 Schofield Building, Cleveland, Ohio.

For data on Ideal wall and other information on brick, see Sweet's Catalog, 1921, pages 107-114.



An interesting detail. Note the attractive Flemish bond of Ideal Wall Construction



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Volume X

FEBRUARY, 1922

Number 2

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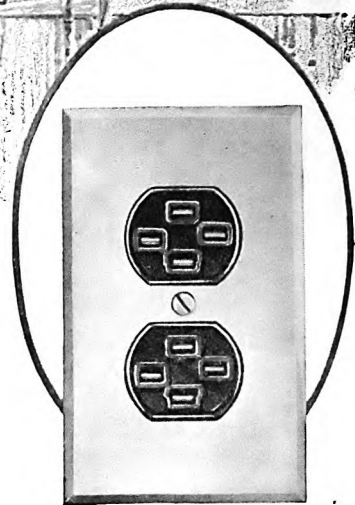
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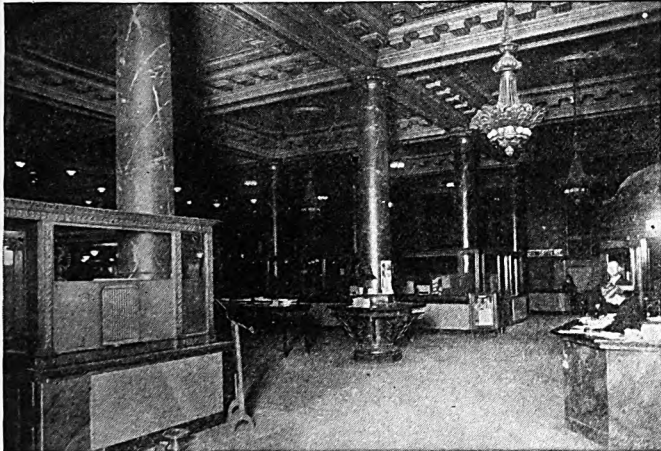
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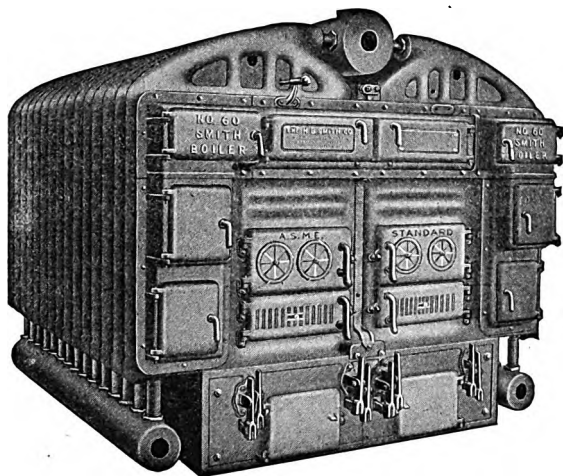
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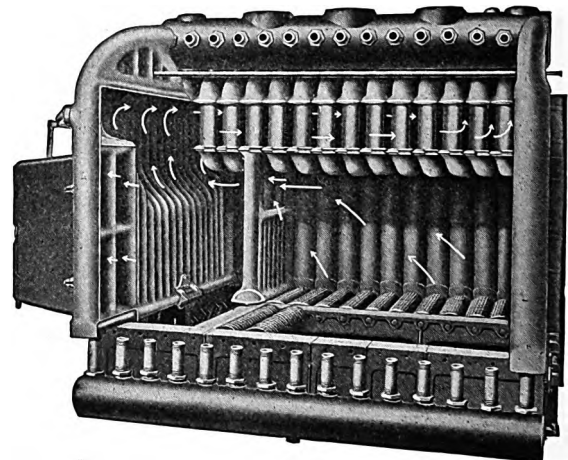
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Shadows and Straws

THE DISCUSSION over the form of war memorials should be considerably stimulated by the report of the Sub-committee on the Form of Memorial to Soldiers, Sailors, and Marines to be erected by the City of Boston, an illustration of which appears elsewhere. From the report of the Committee we quote as follows:

"Your committee gave much consideration to the question that goes to the root of the whole matter,—should a memorial be a utility or a thing of the spirit. It received many suggestions of utilitarian objects; for instance, a boulevard through the tenement districts of the city or radiating from the center to the suburbs; a City Hall with incidental buildings; and buildings,—and these were many—for semi-private institutions dedicated to public use.

"The committee was entirely prepared to admit that these and similar utilitarian objects are important civic institutions and should be built by those particularly interested in such objects. But it thought that such buildings would not themselves be memorials at all. . . .

"Nor could such structures be made memorials merely by a name or dedicatory inscription. The meaning of a name is soon forgotten, a dedication is soon unnoticed. Thousands have trod Washington Street this day. How many have thought of Washington? Thousands have passed buildings over whose doorways dedications have been carved. How many have noticed them? How many can repeat accurately a single dedication in one of our great cities?

"If these utilitarian institutions are not memorials in themselves, and cannot be made so by name or dedication, they should not be foisted on the great emotional desire of the public to contribute to suitable memorials."

As the illustrations indicate the committee therefore proposes an island development in the Charles River basin, with a tower, an auditorium, a great carillon, and supports its recommendations by pointing out the spiritual significance of such things as the music of chimes drifts over the city where thoughts are "dwelling on vastly different things."

The report is a well reasoned document, yet one cannot but feel that its writers were really very conscious of the tremendous difficulty of memorializing anything or anybody in an age where the emotional nature of man is appealed to as never before, and to a point where nothing hits very deep or leaves any very lasting impression. Of course the plain truth is that the only real memorials are those which lie in the hearts

of men and so far as modern times go, it is difficult to believe that any message can be carried far in this direction by any of the arts. It is a pathetic conclusion, yet what other is possible as one contemplates the endless appeal of and for everything under the sun from starving refugees in Syria to Debs in Leavenworth. It is a never ending flood either of carefully sharpened lancets by which to prick the pockets of our sympathy, seductive opiates through which to lull us into tacit acquiescence, or clarion calls designed to arouse active support, all of which it is the object of propaganda to secure. And, in the last resort, a memorial is a form of propaganda—of the very highest and noblest kind to be sure. It is designed to be and to bear a message. Yet how to make it compete spiritually with the endless other messages that are being devised and circulated, in very spite of our wish to heed them, is a task almost if not quite beyond the reach of men.

THE CHICAGO TRIBUNE has suggested a citizens' commission to which designs for important public buildings might be submitted in the interest of architectural harmony and civic esthetics. Mr. George Maher, Chairman of the Municipal Art, Zoning and Town Planning Committee of the Illinois Chapter sponsors the proposal in a letter from which we quote as follows:

"The singling out of a structure yet in its tentative stages of sketch development might be questioned, yet the principle involved, affecting the right of the public to protect itself against unsightly structures, is all-important, especially where such structures are to be erected on a great public thoroughfare.

"The editorial (in the Tribune) rightly states that an 'autocratic government could act promptly and effectually, whereas a democracy finds no way to exercise its will in such matters, even when it has critical judgment to protect itself. But public opinion, if it is aroused by men and women whose interest in the creation of a beautiful city is active and whose taste is cultivated, may accomplish a great deal.'

"The architectural profession welcomes this sane and very practical attitude. It is strange, indeed, that the importance of this publicity has been so neglected in the past and, as a result, great buildings, viaducts, monuments, and permanent bridges, have been permitted to be erected that have permanently hindered the artistic aspirations of a great metro-

polis. However, with the exercising of the new zoning law that experts are compiling, and when the law is put into effect, Chicago may hope for an improvement of this problem.

"Standards of taste may or may not be enforceable by law. But if not, it is the responsibility of the public to evolve methods of procedure for their protection, since we know that no matter how broad and comprehensive a city is planned topographically the ultimate result in city beautification cannot be successful unless the structures that line the streets and avenues are reasonably harmonious in design and architecture. As a suggestion that might be of value, a citizen's committee of broad and cultured tastes and proven record as regards disinterestedness in public affairs might be commissioned and clothed with legal authority to undertake the supervision of general building designs. At least an attempt should be made to give proper authority to some commission to see to it that Chicago develops according to accepted standards of taste and architecture."

We imagine that Mr. Maher's opinions will be warmly challenged in many quarters. Democracy is indeed in a desperate plight, in many ways, yet much

as we have given up to the autocratic regulation of our public lives and conduct, we doubt whether we are yet ready to take the step he suggests. "Accepted standards" would require an autocratic definition, to begin with, and is in itself a point upon which neither the enlightened public nor the architectural profession could ever agree. We think it is best so, and that ample room for the development of harmonious architecture is still to be found without the application of autocratic control, even were such a thing likely to obtain. The Commission of Fine Arts has only an advisory power, and the various city Art Commissions have very little power, if any, over private building activities. Is there not here a lesson that really must be learned by a democracy, which, after all, can do what it wills and which very likely cannot survive unless it wills to do better than it has done?

C. H. W.

The Architect and Social Reconstruction

By THOMAS ADAMS

Lack of Creative Force in Governments

PROBABLY every country suffers from inability to get creative force applied through Government agencies in social problems. Such poverty of constructive initiative as there is in American political leadership may be due to the fact that most of the leaders have exhausted their creative powers in building up individual wealth and position before they achieve prominence as politicians. In older countries the absence of such powers is probably due to the same cause, but in a lesser degree, and there are other causes that operate in these countries that do not touch American life.

In England there is for instance the glamour of imperialism that attracts and holds the minds of men of great creative resources. Such men consequently have only an academic interest left for the upbuilding of the social life of their own country. They spend much money and brains in adjusting the relations of widely scattered regions and they keep themselves fully employed in giving or withholding freedom to the constituent nations of the Empire as expediency dictates.

Whatever may be achieved as a result of the Washington Conference and of the belated granting of more freedom to Ireland will be of immense value in lessening the pre-occupation of British statesmen with problems of imperialism and armaments, although new problems of international or imperial scope will probably attract and hold their attention.

Except in respect of the false economy that consists of spending vast sums of money on schemes for the extension of British influence over alien peoples, while starving industrial enterprise and means of promoting

healthy living conditions at home—one may dismiss the cry for economy as a selfish excuse for neglecting certain important forms of social reconstruction. Much of the reconstruction that is needed consists only of freeing the channels of enterprise from obstructions caused by antiquated laws—for instance, in regard to land; of boldly removing the impediments to free trading and productive labour, and of applying more science to civic development—such as can be accomplished by town planning.

With less resort to expediency and more regard for sound principles politicians in England would soon bring about an improvement in financial conditions. The giving of doles and subsidies may be necessary as palliatives for political errors of the past, but they are not a proper substitute for preventive measures that deal with the removal of causes. What is more needed is the application of creative force to procure the reconstruction of industrial, financial and social conditions in accordance with modern needs.

"Life lies before us as a huge quarry before the architect," says Goethe:—"he deserves not the name of architect except out of this fortuitous mass he can combine, with the greatest economy, suitability and durability, some form the pattern of which originated in his own soul."

Goethe speaks of the problems of life which confront us individually. The problem of social life confronts the statesman in the same form. He can either act as the policeman and content himself with imposing and enforcing the regulations under which the operations of social life are carried on, according to precedent, or he may act as architect and help to plan the building of an enduring civilization. When he disclaims re-

THE ARCHITECT AND SOCIAL RECONSTRUCTION

sponsibility for social reconstruction on the plea that it is his duty to govern and not plan and create, and that any guidance he might give to social improvement would be an interference with private enterprise, he forgets that every law and regulation he imposes either helps or retards social progress. Is there a shortage of dwellings? Then has the Government helped to create the shortage by defective land laws and by extracting private capital for political needs? Are houses crowded and insanitary? Then is it practicable to correct the evil by private enterprise or to alleviate it to a material extent by police regulations after the evil is perpetuated? Is not the duty of the true statesman to prevent social evils by constructive policies?

The Architect and Public Life

Architects are trained to use their creative powers in directions more closely identified with social life than any other group of individuals. Engineers should be similarly trained but their education needs broadening in the cultivation of initiative. Both architects and engineers should take a larger share in public life. Their creative qualities are needed to offset the deadening influence of the lawyer in relation to constructive social work or the detachment of the international diplomatist from social problems.

There is talk in England about the architectural profession being overcrowded, and that too many men are being trained for the work which needs to be done. In a narrow sense of professional practice this may be true. In the wider sense of public need and professional opportunity it is far from true. More men are needed to be trained to influence public life and thought along constructive lines. If the profession becomes too overcrowded for "bread and butter" purposes may it not be because its members have too restricted an idea of their power and opportunity? It is certainly true of England that there is lack of creative force in the public life of the country and also that the architect is too much the hewer of wood and the drawer of water for the lawyer-politician.

Some progress is being made in enlarging the responsibilities of architects. When the writer went to the Local Government Board (now the Ministry of Health) ten years ago the Board had one architect to advise on building by-laws. It still has the same architect and in addition several others in charge of divisions.

Increasing numbers of cities have official architects. It is being recognized that all cities should have architects as permanent officers and there are some who regard this as a misfortune to the profession. If we think of the contribution that the official architect makes in the form of constructive ability and imagination to the public bodies by whom he is employed, we must look upon his growing public connections with

favour. It may not be a misfortune to the profession that he is so employed so long as he is strong enough to exercise his proper influence.

In the more prominent fields of public life—in Parliament and in public bodies generally the architect has not taken much part. It is against his nature to do so if he be a true artist. He detests the showy vulgarities of political life. He hates the demagogue—beloved of the mob. He has no desire to swallow his principles for the sake of power. Yet he is needed in public life to counteract these very things.

After all the art of public speech is not an unworthy art. Through it the man of creative skill has the power to make his special qualities felt in the framing of public policies. As an artist and, at the same time, a man of action he may be the greater orator, if he seeks to cultivate the power of vocal expression. May there not be more hope of getting men of the active and creative professions to become politicians than of getting men who are politicians *ab initio* to become men of imagination?

It is admittedly easy to put forward abstract ideas about the need for enlarged architectural responsibility in social and political matters and difficult to suggest concrete proposals. It may be, however, that by appreciating the fact that both public and business life are so much in need of the kind of qualities possessed by the trained architect, that we need not fear that too many men are having the qualities developed. Many students in architectural colleges should never pursue the profession of architecture, but that does not mean that their time is being wasted. What they are learning will be of more practical use to them in other occupations and especially in public life than other things they are taught as a part of their general education. They are getting the kind of training that is needed to make up for the deficiencies of the ordinary school instruction. They are being made to cultivate imagination and to learn how to create things.

Perhaps we may yet learn that instruction in or cultivation of any art, and especially of civic art, is more important in the education of the young than the memorising of dead languages. What a power of good would exist if much of the time given in a country like England to learning latin grammar and historical data, that are not retained long in the memory, were devoted to training the child to make things and to understand and enjoy structural and natural beauty! The worst condemnation of our systems of education is the fact that we have such low social ideals and such a lack of cultural appreciation amongst the multitude who have been educated according to existing standards.

In addition to creative leaders, therefore, England needs a better and differently educated population before she can achieve any great advance in social reconstruction.—*London, January, 1922.*

Competitive Bidding on "Cost Plus" Contracts

By F. W. LORD

In COMPETITIVE BIDDING ON "COST PLUS" CONTRACTS, submitted herewith, a fee is to be quoted as the profit to be charged on the work, over and above the net cost, plus overhead: if anything is saved on the net cost, the contractor is allowed a bonus, and if the cost is exceeded, the fee is reduced. This form of contract has been frequently followed and with marked success.

Now there are considerations other than price which should determine the acceptability of a contractor. Some contractors are especially fitted to do all kinds of work, while others have narrow limitations, which, besides applying to the nature of the work and its location, also often apply to the quantity of work which can be handled efficiently. Most owners insist on competition, and quite properly so. But in judging the bidders on price alone, the easiest and most convenient way, many other considerations are lost to sight.

Among these may be mentioned: cost of work as affected by the overhead charges; years in the business as an indication of general experience, and efficiency of the working force depending on the average length of service; experience in handling certain highly specialized kinds of work; reputation as to general business methods, and fair charges; reputation as to quality of work; financial rating and credit—affecting not only the cost of work, but prompt deliveries; stockroom with supply of materials, workshop, amount of plant and labor-saving tools; proven ability to do work at high speed, depending on engineering training; ability to anticipate requirements.

Assuming, for the sake of argument, that all the prices submitted by the competing contractors on an important piece of work are identical, obviously the work would be let to the concern which had the best reputation and the most experience. This is advanced as a convincing way of bringing out the fact that there is often a great difference in contractors, and that it is therefore against the best interests of the owner to consider all bidders on the same plane and judge their proposals by the price alone.

Every architect has had sad experiences as the result of letting contracts to contractors merely because the price was low. If the architect would pay more attention to the other considerations just pointed out, the owner's interests would be better conserved. The difficulty lies in not being able to show in a convincing way the money value of service. Most owners think an architect can make a poor contractor live up to the spirit of the contract by enforcing the letter of the plans and specifications. But if a contractor thinks of his profits more than he does of his reputation, in nine cases out of ten the owner suffers.

There is nothing to be gained however by criticizing the usual method of awarding contracts unless some better way is suggested.

Now in letting "cost plus" contracts in the manner described herewith, real competition is provided, but of a much broader kind than under usual conditions. The system affords a scientific method of appraising service, and an

intelligent way of measuring the reputation, efficiency and experience of the competing firms. By this system the owner is reliably informed as to his commitment, and the incentive to the contractor to obtain extra work and so increase the cost is discouraged.

Finally, and most important of all, the tendency is to make the contractor function as partner of the owner, and look after his interests instead of trying to run up as big a bill as possible. This may sound like an extravagant statement, and altogether too Utopian to be true. A careful analysis of the following description will show, however, that not only is the temptation of the contractor to exploit the job eliminated, but a premium is held out that makes for business idealism together with the assurance of a fair price for the work done.

Description of the System

In the selection of a contractor under this system, each one is required to submit not a lump sum bid, but his complete itemized estimate sheets, showing net cost of labor and materials; and to fill out a questionnaire; also to state the percentage of overhead expense he will charge, and his fees for doing the work, it being understood that this fee will be increased if a saving on the cost is effected, and decreased, if exceeded. The details of this increase or decrease depend on circumstances.

There are several reasons for submitting the itemized estimates, as will be explained. First of all, one of the qualifying considerations in judging contractors would be the accuracy of their estimates. The method of appraising each contractor under this heading is explained below.

The chief reason for sending in itemized estimates is to give the owner a correct idea of the probable cost of the work. Obviously, the accuracy of these estimates will be a most important factor in determining preference, and also it is evident, from the explanation of this system, that it will be possible for the architect to obtain extremely reliable information as to the total cost of any piece of work, by thus getting the individual, careful, unbiased estimates of different expert estimators. Furthermore, it will be understood that these estimates will be turned over to the architect in order to give the owner the advantage of the combined purchasing knowledge of all the bidders. The owner will thus learn the lowest bid obtained by each contractor for each item, it being understood that the contractor to whom the work is let will be governed by such information and prices in carrying out the work.

It is realized that this is asking a good deal from contractors, to request them to divulge their purchasing power and experience. It is however fair to suppose that this information will be given, in view of the mutually advantageous features involved in this system of letting contracts.

An additional advantage to the owner in having the itemized estimates thus submitted is the protection from collusion in bidding afforded by the absence of incentive thereto. If collusion does creep in it can easily be detected by comparing the itemized bids. Protection against

COMPETITIVE BIDDING ON COST PLUS CONTRACTS

fictional competition is a very real advantage offered by this system.

In comparing bidders the various qualifying factors are taken into consideration and appraised as described below. The order of importance and the maximum points allowed for each have been tentatively determined on the basis of a consensus of opinion of intelligent experts to whom this system of letting contracts has been explained. The list consisted of various prominent architects, engineers, bankers, contractors, and owners who have had experience in building. If this system of competitive bidding on "cost-plus" contracts is adopted a wide canvass of opinion should be taken in order to obtain an unassailable basis of appraising the qualifying considerations. The tentative order and number of points allowed are:

<i>Qualifying Considerations.</i>	<i>Maximum Points Allowed.</i>
1. Reputation.....	190 points or 19% of the total
2. Experience.....	160 " " 16% " "
3. Organization.....	150 " " 15% " "
4. Financial Rating.....	120 " " 12% " "
5. Accuracy of Estimate .	110 " " 11% " "
6. Overhead Expenses . .	100 " " 10% " "
7. Fee.....	90 " " 9% " "
8. Plant.....	80 " " 8% " "
	1000 100%

The method employed of appraising each contractor under the several headings follows by captions.

1. Reputation *Maximum Points Allowed—190*

Under this heading the different bidders would be marked in accordance with the architect's opinion as to their reputation for quality of work and general business methods, fairness of charges, ability to do work quickly.

The reputation factor is of course flexible, being more or less one of opinion, and differing with different architects. The contractor who had satisfactorily carried out a great many successive pieces of work for the same architect would of course be better rated under this heading than a man not so well known.

For example, in appraising their reputation the points allowed to the different bidders might be as follows: A, 160; B, 140; C, 150; D, 180; E, 100.

2. Experience *Maximum Points Allowed—160*

The experience rating would be determined by individual appraisals or opinions of the architect with help of references and other data submitted by the different contractors, or as the result of previous dealings with them.

In many cases, such as a simple loft building, or mill work, there might be very little difference in the rating of different contractors as each one might be sufficiently capable; but in the case of fine residences, bank buildings, or similar structures, special experience would necessarily be considered.

Assume that the architect, basing his judgment on years of experience with the work done by the contractors in question, and on the references submitted, would award under this heading; A, 150 points; B, 160; C, 125; D, 90; E, 100.

3. Organization *Maximum Points Allowed—150*

Here a similar appraisal of the different bidders would be made. In many cases a one-man concern would do just as well as a firm with a highly departmentalized organization. But under other circumstances, where the work is of magnitude, the time factor very important, and where mistakes and delays would be especially expensive, amplitude of organization should certainly be taken into account. Therefore each contractor would be asked to submit a brief description of his available force, stress being naturally given to the number of years he had employed in the organization of his foremen, superintendents, and principal mechanics; it being well understood that a nucleus of steady men will show greater productivity than men especially hired (known as the "floating class") for a job.

We will assume that the points allowed to the different contractors under this heading are as follows: A, 150; B, 160; C, 90; D, 100; E, 110.

4. Financial Rating *Maximum Points Allowed—120*

Whether or not each contractor, pays his bills promptly and gives cash discounts is of considerable importance, as financial rating not only affects cost of the work, but often explains why some contractors get much better deliveries of materials than others.

Under this heading the architect would have in his file ratings, from Dun's and Bradstreet's, of the various contractors, or if not, satisfactory references. For relatively unimportant contracts all bidders might be rated equally, but for large operations this point would have to be considered very carefully.

Let us assume that different contractors would be allowed A, 100 points; B, 90; C, 105; D, 80; E, 70.

5. Accuracy of Estimate *Maximum Points Allowed—110*

Under this heading each estimate would be compared to the average of all estimates submitted, and the bidder nearest this average cost, after elimination of any obviously wide or inaccurate estimate, would get the highest number of points; the others less in proportion.

For instance, assuming the cost of the work as determined by such average of bids submitted to be \$100.00 and that the individual estimates submitted were as follows:

If A's estimate were \$110, it would indicate a 10% error	
" B's " " 93, " " 7% "	
" C's " " 102, " " 2% "	
" D's " " 99, " " 1% "	
" E's " " 96, " " 4% "	

It will thus be seen that:

A	would be allowed 90% of 110 points or 99 points
B	" " " 93% " " " 102 "
C	" " " 98% " " " 108 "
D	" " " 99% " " " 109 "
E	" " " 96% " " " 106 "

6. Overhead Expenses *Maximum Points Allowed—100*

In this case, similarly with the fee charged, bidders quoting the lowest overhead generally would be allowed

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the greatest number of points, with others less in proportion. For instance,

A	quoting	8%	overhead,	allow	92%	of	100	pts.	or	92	pts.
B	"	7%	"	"	93%	"	"	"	"	93	"
C	"	10%	"	"	90%	"	"	"	"	90	"
D	"	15%	"	"	85%	"	"	"	"	85	"
E	"	20%	"	"	80%	"	"	"	"	80	"

A high overhead of a thoroughly proven organization would not necessarily receive a low rating, as it is well known that in certain efficient concerns much of the overhead expense results in a direct saving on the cost of the work. There are many instances when a dollar's worth of high priced time will save fifty or a hundred dollars in materials and payrolls. Under this heading, the rating given will depend on the previous experience the architect has had with the contractor.

7. Fee Maximum Points Allowed—90

In comparing fees charged by the contractors, the higher the fee charged, the fewer would be the points given here. If the fee, for instance, were 10% of the estimated cost, 90 points would be allowed, but if the fee were 20% only 80 points would be given, etc.

Assuming there were five bidders and that A quoted a 15% fee (equalling 15% of cost); B, 10%; C, 12%; D, 20%, and E, 5%.

In which case:

A	would	be	allowed	15%	less	than	90	points	or	76	points
B	"	"	"	10%	"	"	"	"	"	81	"
C	"	"	"	12%	"	"	"	"	"	79	"
D	"	"	"	20%	"	"	"	"	"	72	"
E	"	"	"	5%	"	"	"	"	"	85	"

8. Plant Maximum Points Allowed—80

Under this heading would be considered the plant, tools, workshop facilities, store house of materials, auto tracks, and other facilities available for the prompt and economical carrying out of the work.

The contractor would submit a brief description of such facilities for the intelligent guidance of the architect. As in other possible cases, there would be times when the architect might allow all the different contractors the same number of points, but in other instances there would be a considerable variation.

We will assume that: A is allowed 65 points; B, 50; C, 40; D, 60; and E, 55.

Recapitulation

	Max.	A	B	C	D	E
1. Reputation.....	190	160	140	150	180	100
2. Experience.....	160	150	160	90	100	110
3. Organization.....	150	150	160	125	90	100
4. Financial Rating.....	120	100	90	105	80	70
5. Accuracy of Estimate....	110	99	102	108	109	106
6. Overhead Expenses.....	100	92	93	90	85	80
7. Fee.....	90	76	81	79	72	85
8. Plant.....	80	65	50	40	60	55
	1000	892	876	787	776	706

From which it is apparent that A would be recommended for the contract.

It is not to be supposed that this system would be iron-clad in its application.

It will be noticed that the amount of the fee is put as of less importance than anything else except plant. This is on the theory that a concern with a high reputation would not ask an exorbitant fee. If however it were desired to award a contract to a firm whose fee were too high, it would be possible and in no way improper to discuss the matter and agree upon a fee mutually satisfactory.

In concluding, it may be said that this system of awarding contracts would make for fairness and satisfaction to all persons concerned, not only diminishing fraud by eliminating so much of opportunity for it, but also making everyone feel that essential justice was the aim. Thus the whole morale of the contracting industry would be raised—and in this the public has the most at stake.

The Standard Documents

The Institute has, during the past twenty years, given considerable attention to contract forms, and having finally issued its third edition of the Standard Documents some fours ago, it may well have uttered a sign of relief and satisfaction as it settled down to at least a decade of peace and practical standardization. But a still more inclusive effort to standardize contract forms has recently been inaugurated and has inevitably drawn the Institute into its vortex.

The Associated General Contractors of America, under the leadership of General R. C. Marshall, Jr., its General Manager, recently initiated a conference of national organizations related to the construction industry, for the purpose of discussing the possibility of developing a standard contract form or forms applicable to all types of construction, not merely buildings, but railroads, bridges, docks, highways, and all other types of construction. This meeting was held in Washington on December 15th and 16th and was attended by representatives of the following national organizations:

- American Association of State Highway Officials
- American Engineering Council
- American Institute of Architects
- American Railway Engineering Association
- American Society of Civil Engineers
- American Waterworks Association
- Associated General Contractors of America
- National Association of Builders Exchanges
- Western Society of Engineers

There was presented to this conference a tentative draft of a contract form embodying all general conditions that appeared to be capable of standardization for all types of work and three supplementary forms covering the further general conditions applicable to the building industry, to railroad work and to highway construction, intended for use in each case in conjunction with the general contract form.

The meeting was held at the Department of Commerce Building by the courtesy of this department, which is taking such a practical and helpful interest in all matters

RECENT ZONE AND EXCESS CONDEMNATION LAWS IN FRANCE

that look to improved methods and elimination of waste in industry. Secretary Hoover opened the Conference with a few words of approval of its purpose and a pledge of the cooperation of his Department in bringing improved methods into effect.

The Institute has helped very materially through its standard Documents to improve contractual relations in the Building Industry, and the constantly growing use of these documents attests their sound construction and their general acceptance.

The American Railway Engineering Association has also adopted a standard form of contract, which, while apparently not used to any great extent verbatim, is accepted as a general guide and is approximated in the contract forms of the principal railways. These appear to be the only national documents in practical use.

The Institute will of course agree that the principles underlying its Standard Documents could with advantage be made applicable to all forms of construction work. There are however some fundamental differences involved

in the different types of construction represented at this conference, and as a result different methods of administration have been developed in practice which are logical and at the same time incompatible. The development of a single standard contract document suitable to all types of work involves the overcoming of many such differences.

The Institute can be counted on to cooperate freely in this attempt but it approaches the work without any illusions as to its difficulties. The experience of many years of effort to standardize contract conditions in its own branch of the construction industry furnishes a clear understanding of the complexities of the problem of standardizing procedure for the entire industry. Furthermore, it must move with caution in any effort that appears to involve the substitution of some new forms for those already in such general use in its own branch of the industry. The Building Industry has made definite progress. When a further step is taken it is essential that we be sure it is a step in advance.

WILLIAM STANLEY PARKER.

Recent Zone and Excess Condemnation Laws in France¹

It was in France that the first statute of excess condemnation was passed, and in France the latest and broadest statutes for these purposes have recently been enacted.

Excess and zone condemnation, closely related in their development, have had a long history. To this development many countries have contributed. Condemnation may be defined as the regulated taking of property for public use. From time immemorial governments have seized private property; and, more and more as governments became just and free, compensation followed. The regulation of such taking, however, came only with the modern conception of government as the rule of law. In France it first appeared during the revolution; excess, and later zone condemnation followed.

Long before excess and zone condemnation, or even condemnation itself, properly so called, came into being, France was obtaining many of the results of excess and zone condemnation by somewhat different methods. For centuries France has endeavored to make its capital beautiful, and in so doing has seen the need of harmony in the development of public and neighboring private property. A method of obtaining this harmony, early adopted in Paris, was to sell this neighboring land subject to a covenant, entered into by the purchaser to erect buildings on it within a few years, in accordance with plans furnished by the state. In this way Henry IV in 1605 created what is now known as the Place des Vosges in Paris; many other beautiful squares and streets in France and other countries of Europe were planned and constructed under similar contracts.

In 1789 France, in the Declaration of the Rights of Man, laid the foundation for a modern condemnation law by providing that: "Art 17. Property is an inviolable and sacred right; none shall be deprived of it unless a public necessity, legally established, requires it, upon the previous payment

¹This article is taken from a book, shortly to be published by the Macmillan Co., entitled "The Law of City Planning and Zoning." All rights reserved.

of just compensation." For a time taking for public use continued to be arbitrary for lack of statutory regulation, but in 1810 a statute (now superceded by the statute of 1841) was passed setting up the necessary procedure.

The principle of excess condemnation, however, was introduced into the law of France by a statute passed 16 Sept., 1807. That statute (Sec. 53) gives the land owner the right, on payment, to take remnants left by the relocation of street lines which cut him off from the new street, and authorizes the public authorities to expropriate his entire lot if he does not do so. The conditional right given by this statute to the authorities to take land outside the lines of the street, is a limited right of excess condemnation. Excess condemnation, thus made a part of the law of France, has remained so ever since.

For many years excess condemnation, which had meanwhile found a place in the legal systems of other countries in Europe and in the United States, remained undeveloped in France. The movement which resulted in the growth of excess condemnation and the rise of zone condemnation in France originated in the desire of Napoleon III to improve Paris, in consequence of which two statutes were passed in aid one of the sanitation, the other of the beautification of the city.

The statute in aid of the sanitation of Paris was enacted 13 April, 1850. It provides that where the unhealthfulness of a dwelling for hire is the result of causes outside that building, and permanent, or where the causes cannot be removed except by an improvement embracing both dwelling and outside causes, the commune may expropriate the entire property under the general expropriation law of the state. This statute was little used because of its narrow application and because under the general expropriation law the taking of slum property proved altogether too expensive. After one or two abortive amendments, this statute was finally, on 17 June, 1915, repealed and a new statute passed in its place. This statute applies not

merely to property for hire, but to all realty, giving the commune the power to take groups of unsanitary lots, and in addition lots in themselves sanitary, when necessary for the success of the undertaking—a provision copied from the English law. The procedure in condemnation in such cases is also much simplified, to save time and expense. Most interesting, however, is the provision with regard to the compensation to be paid. The price of the insanitary real estate is fixed at its market value, less the cost of making it sanitary; or, if this cannot be done, at the value of the land cleared of buildings, plus the value of the materials of the buildings. The future use of lots not put to public use, and the conditions subject to which they shall be sold, are also fixed. In no case shall the value put upon a piece of real estate expropriated be less than the value of the land without buildings. In no case shall compensation be increased because dispossession is involuntary. If any tenant deprived of his property is carrying on an offensive industry, under special license, and that industry is the cause of the existing bad sanitation, his damages shall be reduced by a sum equal to the profits obtained at the expense of the public health. This is the first zone condemnation law capable, as interpreted, of effective use, ever passed in France. It is not, however, known in France as a zone condemnation law, that name being applied to the taking of a zone or belt of land outside the line of a new street, which we call excess condemnation. The provision with regard to damages may seem radical to some in this country, but a similar provision is contained in the Dutch Housing Law of 1901, and England, in the amendment of 1919 to her housing laws, has adopted a rule in such cases which is still more severe in its treatment of the owner of slum property.

Broader, however, than the zone condemnation law of 1915, is the later excess condemnation statute. The beginning of the broadening of the right of excess condemnation as it existed in 1807, was the statute, passed by Napoleon III, 26 March, 1852, to aid him in the beautification of Paris. That statute provides that in laying out streets, Paris and such other cities as ask to have the provisions of the statute extended to them, may take the whole of a lot any part of which is within the lines of the new street, if in its opinion the remnant is not of a size or form to permit the erection on it of a sanitary structure. Originally the city itself was the judge of the expediency and propriety of appropriating remnants, but a decree of 27 December, 1858, provided that if the person to be expropriated objected, a decree from the state authorities, holding that taking was for the public interest in the suppression of a remnant too small for proper independent use, was necessary; and on 14 June, 1876 a second decree made the same requirement even if there was no objection to the taking on the part of the owner.

As originally interpreted by the city authorities in their own favor, the law of 1852 gave them a fairly ample authority; and under it large tracts of land were taken on the alleged ground that they were remnants upon which sanitary structures could not be built. In this way, also, the policy of taking land for resale at a profit was followed with some success. It was during this period that practically all the applications by other cities for the extension

of the Paris law to them were made. The decisions of the state authorities under the decrees of 1858 and 1876, however, greatly restricted these powers. The maximum size of the remnants that could now be condemned, as compared to those that were formerly taken, became very small, and resale at a profit, never a legal ground for expropriation, became also in practice impossible. In consequence, of late years, a demand for the revision of the statute of 1852 arose, and the law of 10 April, 1912 was passed. Under it, cities could condemn remnants not only when they were not of a size or form permitting the erection of sanitary buildings, but when these buildings would not be in keeping with the importance of the highway on which they would abut, or with the principles of aesthetics; remnants in any case could be taken compulsorily up to 150 square metres in size and whenever the public works occupied more than half the lot; with the consent of the owner, remnants of any size could be acquired. Nevertheless, except for the greater latitude when the owner was willing, the statute of 1912 was merely a meager enlargement of the previous right—all that France, in law ever had possessed—to condemn remnants on the ground that they were not suitable sites for buildings.

The recent statute of excess condemnation, passed 18 Nov., 1918, transforms a power which in France was less than that of most European nations, to one that is greater than that to be found in any other country. Under the new statute "not only the area within the lines of proposed public works but all those areas which are necessary to assure to these works their full value, present or future" may be condemned, including areas outside the lines of a new city street interfering with a rational subdivision into lots or not susceptible of use as the site of buildings in accord with the general plan of the public works, contemplated; and also "land which by reason of its proximity to a proposed public work should increase in value more than 15%." The owner of such land, however, may keep the land by paying a sum equal to the estimated increase. Under such a law, which allows cities to take neighboring land in connection with any public enterprise, for any gain that the city may obtain thereby, without limit as to area and sell any of it that the immediate enterprise does not require, excess condemnation would seem to have attained its greatest possible expansion.

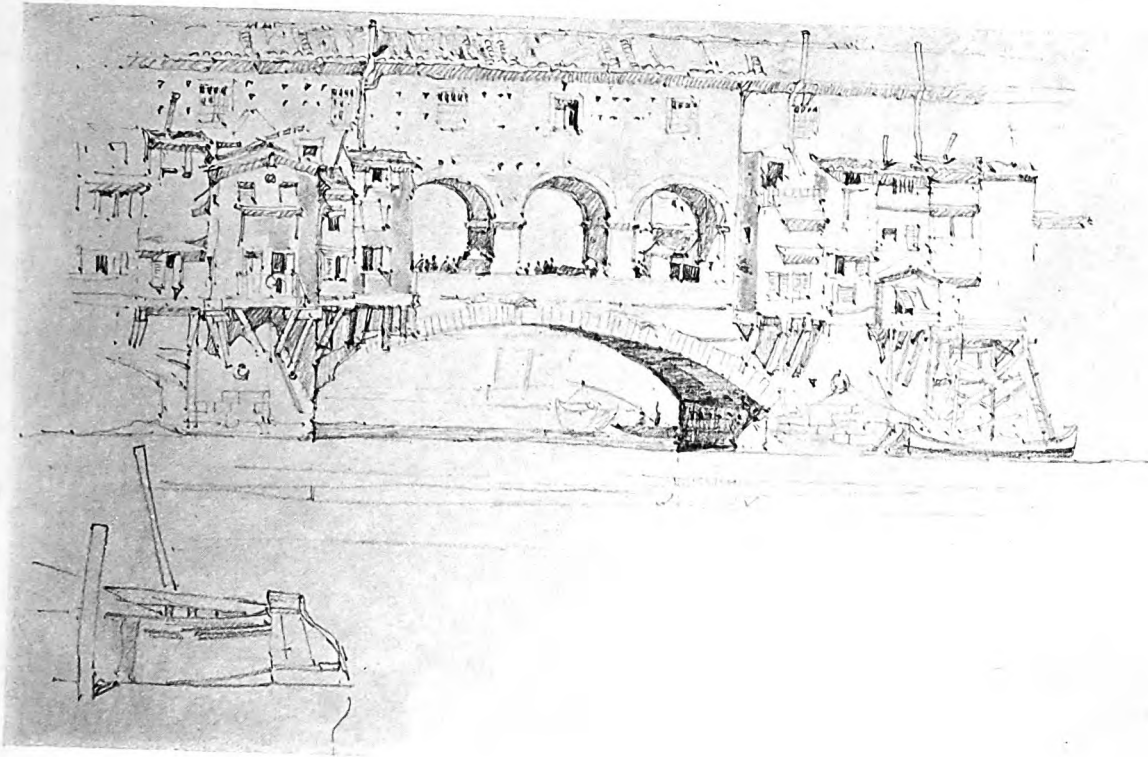
FRANK B. WILLIAMS.

Index and Bound Volumes

Arrangements have been completed for binding the 1921 Volume of THE JOURNAL. Numbers may be sent to THE JOURNAL Office, 313 East 23rd Street, New York City. The prices are: Buckram, \$3.50; Half Morocco, \$5.25. An Index has been printed and will be sent to subscribers of record on request.

The Next Convention

The date for the next Convention at Chicago has definitely been fixed for 7, 8, 9 June. The headquarters and meeting places will be announced in ample season.

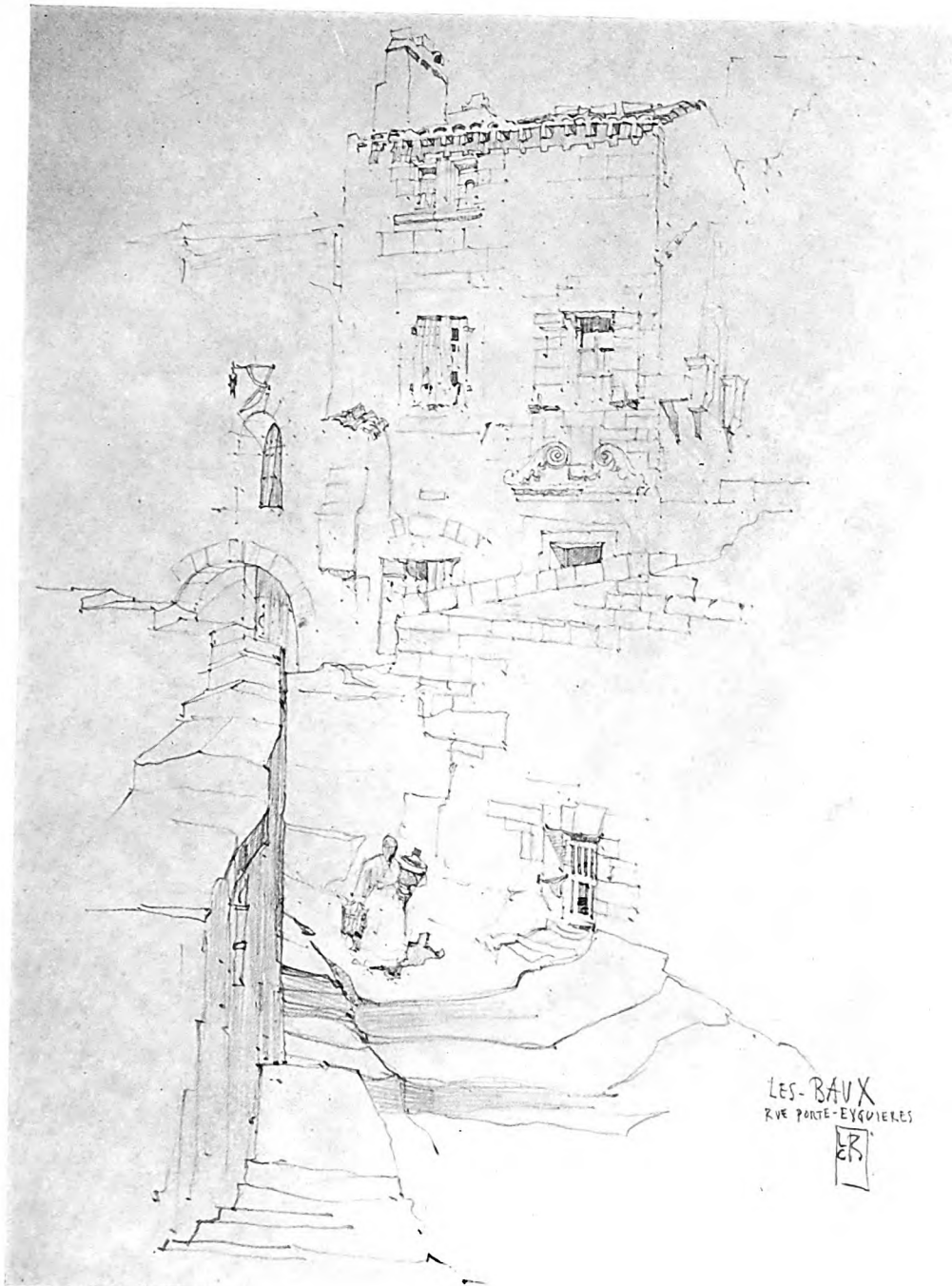


Six Drawings
by
LOUIS C. ROSENBERG

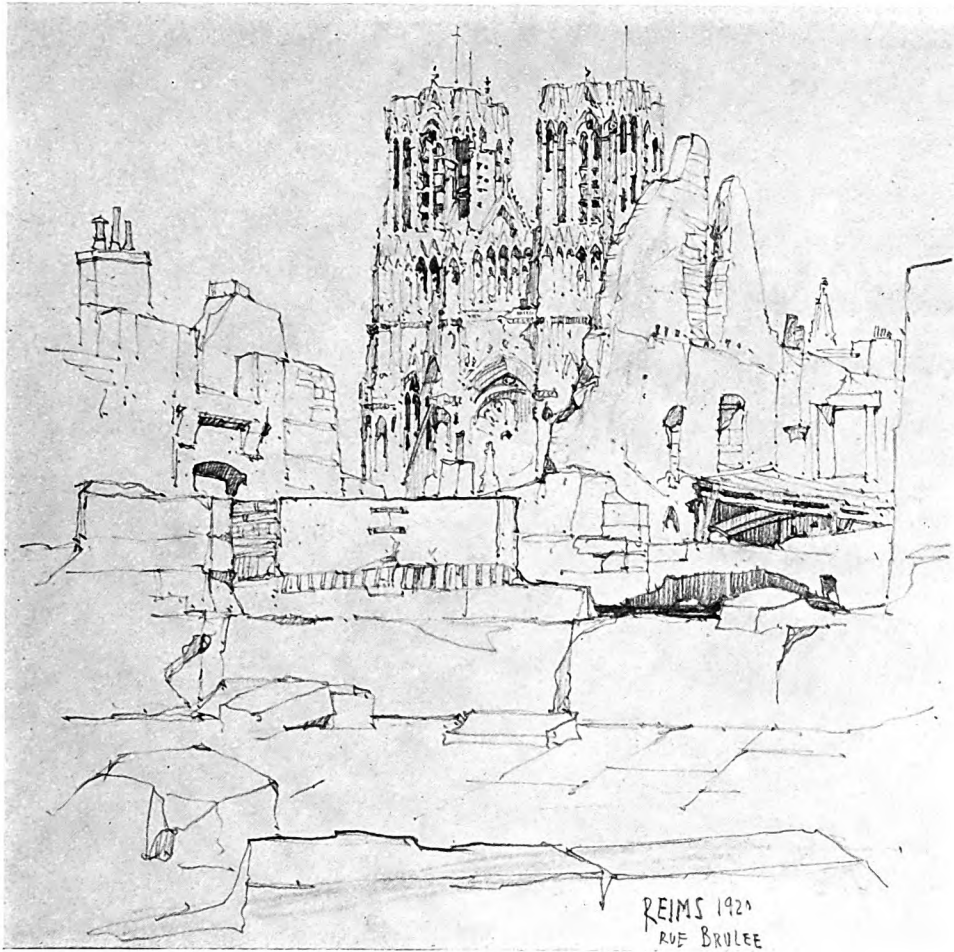
FIRENZE—PONTE VECCHIO



MONTICELLO
Louis C. Rosenberg



LES BAUX
Louis C. Rosenberg



REIMS
Louis C. Rosenberg



ROUEN
RUE DE L'ÉPICÉRIE
Louis C. Rosenberg



Houses Built for Factory Operatives

Prettiness and Discomfort— With Some Sociological Implications

By GEORGIANA GODDARD KING

Photographs by E. H. Lowber

The writer and the photographer, taking a holiday in Central Pennsylvania last summer, and hearing of an Industrial Suburb thereabouts, went out of their way twenty-five miles to visit it. No one in the town seemed to have heard of the thing, but they found at last a group of streets on a hill-side above a factory.

It was very charming. The streets turned and wound, fitting the steepish flank of the hill; with pretty vistas, triangular corners, and curving thoroughfares. The blocks of houses were never twice alike, and among the types of house the difference was great. Some were of plaster, some of brick; and along with the warmish tones of the walls green as well as red entered into the decoration. The colouring was delicious, the effects were quaint, the massing and the forms were satisfying. Anyone would like to live in such a cottage with gay flower boxes; anyone would be lucky to have the chance to live so pleasantly.

When we conversed with a householder rocking on her

front porch in a lace cap, and asked leave to go indoors, we learned several things. Some were unforeseen and perhaps unavoidable; for some the architect was accountable.

In the first place: the houses were not occupied by the factory workers, but by *impiegati*, not wage-earners but men with small salaries. Whether the rents were too high for operatives from the beginning, or whether the inflow of the other class had automatically raised them, did not appear. In the former case, the architect might be to blame for spending too much; but we doubted it, remembering how the same thing happened in New York when Model Tenements filled up instantly with artists and journalists. It is a pity, for various reasons; it is hard to see how to prevent it, except by building for the other class.

In the second place, the tenants were not pleased. They said the houses were uncomfortable. They are very hard to heat, and impossible to keep cool. The one we inspected thoroughly had a good cellar and furnace, a



A Row of Houses in Central Pennsylvania

kitchen and two other rooms on the ground floor, two bed-rooms and a bath room, with one closet, on the next; and a room in the roof, plastered but not heated. Between the dining-room and the sitting-room there was little wall and no door; nor any partition between the latter and the stairs, which went up directly from the front door. In winter the wind chilled all downstairs and went up to all the bed-rooms. The windows were very small, as indeed the photographs show, and sunken deep in the thick wall; it is a part of the picturesque exterior; in hot weather, as we observed, the bed-rooms were suffocating. In short, while cellar, kitchen and bath were admirable, the planning of the rest was unintelligent.

Apart from the waste of fuel, in setting the front door where at every opening it would blow through the house, the lack of privacy downstairs is a great discomfort. No one could converse without the entire household joining in; the elders if they sat round the dining table were practically in one room with the juniors in the parlour; and neither generation relishes that propinquity. What the lesser *borghesia* does in like circumstances we do not know, for we know that they suffer equally, and that most of the little houses built for renting along the Main Line have the same fault; but the labourer certainly objects. The plan drives youngsters to moving-pictures and dance-halls because they cannot talk privately in the girl's house. That is something to think about.

Thirdly; these houses were not only planned unwisely, the detail was bad. The pretty casement windows were so arranged that no wire netting could be adjusted, inside or outside; this in the Atlantic States! It is possible to have

fixtures that accommodate themselves to netting screens. we use them; but the architect was apparently indifferent; He was also indifferent to the woodwork inside, which was entirely incongruous with the style of architecture, and was common sham-carving; very alien to the distinguished good looks of the exteriors. It is such a pity to have wasted a happy invention and a good opportunity, when something really ideal was intended.

Really the hideous labourers' houses of the type here shown are decenter to live in; for the windows are large, the porches are airy and easily netted, and the three bed-rooms, kitchen and living-room give privacy, warmth, and ventilation. They are only quite ugly and sordid.



A Laborer's House in a Row

An epilogue may be permitted here. Last winter we found that a patch of vacant lots in our village had been turned into three horrible little streets of tiny houses, without heat except a stove in the cellar and a hole in the dining-room floor, without chimney or gas connection except at the kitchen stove; with back porches so close that opposite neighbours could borrow soap or overhear each other's table-talk. Going over them with the builder,

and asking why the end houses, which abutted on a wide, pretty road, should turn only a blank wall to the full south, we were answered: "But if I put in windows at the ends, the houses would not be all alike!" and thereafter (but it was honestly an afterthought), "Then I should need different specifications for them."

This attitude is of course very common and as bad as possible; but where, as in our Industrial Suburb, the situation is as good as possible why could not the achievement be as good as the chance?

The Guilds—Old and New

By STEWART F. CAMPBELL¹

It is difficult to say whether the motive force that brought into being the Guilds of England, is a direct outcome of the Great War, in the wake of which has followed such an economic disturbance, or whether it is a revival in the minds of men of a spirit of idealism which found its abode in the Guilds of the Middle Ages. Undoubtedly both of these influences have contributed, in no small measure, towards the re-establishment of a system which, in spite of many shortcomings and defects preserved for so long and to so great an extent the highest standards of creative genius in workmanship. In these days when business, like a huge octopus, is thrusting out its arms in an effort to encircle the whole of modern civilization, it is a satisfaction to know that the founders of these modern industrial Guilds have behind them the traditions of hundreds of years of community service, and the development of the Crafts spirit in which the industrial life of the Middle Ages was so completely immersed.

Guild Origins

The origin of the Mediaeval Guilds is a subject of wide divergence of opinion. One belief is that those of the south of France, which are among the earliest, were of Roman or Byzantine origin, and had their derivation in the fraternities of the poorer classes and, during the latter years of the Empire, seemed to have been chiefly concerned with funeral rites and ceremonies. On the other hand, there are others who hold that the guilds were a separate entity, born into the world with little or no association with the past, but because of a necessity which the weak found to unite in a common cause against the industrial evils and abuses to which they had become subjected. Thus it was, that these early craftsmen established themselves, in the different parts of each town, where the Guilds had been started, choosing the location which should best suit each craft, and soon acquired the necessary rights for various sorts of combination as well as permission to regulate their Guilds according to their own dictation.

Ancient Guild Organisation

By no means were all of the merchants or craftsmen in any region united under the Guild System, for during the earlier years, those who lived in the rural districts, not only very rarely had membership in the Guild, but usually knew nothing of this method of organisation, and even in the cities there were many trades that remained outside. Nevertheless, the Guilds enjoyed many privileges and soon became what might well be termed the Aristocracy of Labour.

As in the days of the feudal system when men passed successively from page to esquire, and from esquire to knight, rising step by step from one rank to another to complete their military service and education, a similar process took place in the old Guilds when the applicant

¹Mr. Campbell is an American, now living in England, and his observations upon the Building Guilds have the merit of being based upon personal contact and observation.—Editor.

was admitted first as apprentice, then passed to journeyman and finally became a master.

In the advancement from one to the other of these grades the Guildsman's time of service was an element, but not one of primary importance, for far more was his progress dependent upon his artisanship. But from the very earliest years mastership tended to become hereditary, and in some of the Guilds this was a fact which became a contributing element in the general decadence of the entire system.

The Mediaeval Guilds had a predominating desire to raise the standard of industrial integrity. The sale of a product was as carefully regulated as its manufacture. We see, for example, that in the Florentine Guilds not only was the "iron ruler" used as a compulsory standard for measuring woollen goods and the most minute directions given for measuring cloth of all kinds, but prescribed methods were observed for filling a bushel with vegetables by placing the arms around the edge of the basket in order to give the fullest good measure.

Secrecy as to the process employed by the various crafts in the Guilds came very early and infinite care was taken to prevent those outside of this very exclusive alliance from approaching on their domain. In 1454 a law was passed in Venice which provided that "If a workman carry into another country any art or craft to the detriment of the Republic, he will be ordered to return; if he disobeys, his nearest relatives will be imprisoned, in order that the solidarity of the family may persuade him to return: if he persists in his disobedience, secret measures will be taken to have him killed wherever he may be."

The Modern Guilds

The story of the formation and development of the Building Guilds has been told at length in *THE JOURNAL*, and it is not necessary for me to supplement the accounts that have been given. These bring the story up to the time of the scheme for the amalgamation of the guilds in one National Guild of Builders and their entrance into the field of building enterprise in open competition with the old contract system.

The more or less revolutionary character of the plans and purposes of the Guild of Builders is one that invites interest. Those who dictate the policy of the system must harness this new idealism to practical operation efficiency if they are to bring about an institution which will be of value to the world at large. If any one supposes that the spirit of Guild idealism and craftsmanship is one that will come in some miraculous way to the Guildsman upon his enrollment, he is doomed to disappointment. It will be done, and only be done, by a process of education the burden of which will be to plant in the mind of the newly enrolled Guildsman, "line upon line, precept upon precept," new ideas which must gradually replace his old conception of the function of organized labour which has come to him as a heritage of the last hundred years.

No one who has given any thought to modern economic conditions, especially as they reveal themselves in the

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form of unemployment and consequent industrial unrest, can fail to realise that we stand today at the threshold of a new era, so far as labour is concerned, in which it is probable that changes will occur, so far reaching in their influence as to affect the most remote parts of our economic life, and leave their impress upon the commercial and industrial history of the world. Not only are employers alive to this fact, but it is quite evident that, to the building industry in Great Britain a new vision has come; a vision of creative service which has found its expression in the modern Guilds.

It would seem that the great Trade Unions of builders and affiliated trades are awakening to a new conception not only of their rights, but their responsibility for the proper and complete functioning of their constructive powers in relation to organized service to the community, instead of procuring profits for the individual members. This fact, in itself, is one that should come with strong appeal to the best element of the Trades Unions and it should arrest the attention of the finer reasonings and creative impulses of Union men.

The essence of the Guild spirit is to give service rather than to receive it, and in that fact we find a bold challenge to the history and traditions of organized labour during the last century, as in the past, nearly all industrial systems have been organized primarily for the attainment of their rights, while the Guilds of today are based upon an exact sense of duty.

Therefore, the great trial to which the Builders' Guild will be put is whether they will preserve their integrity of purpose and continue to guard jealousy their ideals for the development of the highest type of industrial achievement. The success of the Guilds or their ultimate decadence depends solely upon the workers in the building trades and of their clearness of vision. Seldom has such an opportunity offered itself to any industrial combination as that presented to the Guilds to demonstrate their ability to carry on an industry which shall be entirely controlled and regulated by the workers themselves.

Two questions come into the mind of any one who is studying Guild Systems with a view of obtaining an opinion which shall be both unbiased and impartial.

First: In view of the exigencies of the housing situation in England, will Guild Organization be the means of actually producing more houses than can be produced under contracts where Guild ideals do not exist?

Second: Because of this idealism, will the quality of the work be better by reason of a consciousness, on the part of the Guildsman, of the necessity to give his best efforts to every smallest detail of his job?

The answer to both of these questions I believe I have found by spending some time in careful examination of the houses built under the two London Builders' Guild Contracts, one of which is at Greenwich and the other at Higham Hill, Walthamstow. (Both of these places are within easy access by omnibus from London.)

In regard to the first question as to whether Guild organization is actually able to increase production, the following facts taken by both personal interview and the weekly report of the Manager of the Works, Walthamstow Contract, during the first week in June, 1921, indicate an affirmative answer.

Here, the London Guild of Builders have now built some four hundred houses for the Local Authorities at a cost of approximately \$4,500 each. The contract has been divided into two parts which, for the sake of convenience, let us call them part (a) and part (b).

Part (a), representing about two hundred houses, was started on November 1st, 1920. At that time, not a stick or stone which might have been used as material was on the premises, nor had any of the necessary wood-working machinery or brick and concrete moulds been delivered.

Seven months later the following condition was found to apply to part (a) of the contract:

Houses.	Houses.
Houses practically complete 12	Floors laid..... 44
In damp course (or 6" above ground)..... 110	Plastered outside..... 40
Up to first floor joist..... 80	Plastered inside..... 32
Completely roofed in.... 70	Plumbing finished..... 20
	Drains laid..... 48

This was all accomplished in a period of seven months. The number of men employed on this contract as of June 7th was three hundred and forty-five, about half of whom were enrolled Guildsmen.

Guild bricklayers are laying on the average about 520 bricks per day. This, of course, is a rather difficult figure to arrive at with great accuracy, as much depends upon the part of a house the bricklayer is at work. A man working on a chimney-breast, for example, where much fitting and cutting is necessary, will be able to lay fewer bricks per day, by reason of the character of the work, than a man who is working straight outside wall surfaces. Still, the average 520 bricks per day appears to be higher than that produced outside of Guild Contracts. The second half or part (b) of the Contract, representing the erection of an additional 200 houses was begun on June 1st, 1921, and granting them good weather the London Guild of Builders should, on this part of the Contract, equal, if not excel, their former record.

In answer to the second question, as to the quality of the work, it may be said that from time to time, inspections of the work done have been made by the Council, and many outsiders, and the opinion seems to be unanimous that the work is satisfactory and gives evidence of a real understanding of the Guild Spirit of Craftsmanship by the men employed. Though, as has been said before, it is not supposed that this spirit is coming at once to all alike but must come by gradual development.

From the foregoing comparative analysis of the old and new Guild systems, it is at once apparent that, in many instances, the ideals and responsibilities of the two are remarkably similar. If the modern Guildsmen by means of their retrospective powers, keep ever before them the history of their brothers of the Middle Ages, emulating their good example and avoiding the pitfalls which were so costly in former times, they will have done a service to the industrial world that is well worth while.

Is it too much to hope at this time when materialism seems to be shattering so many long-cherished ideals, that after nineteen centuries, the principles of brotherhood and service to mankind taught by the Carpenter of Nazareth may be the guilding inspiration for the re-establishment of Guilds throughout the world?

The Secretary's Table

BY THE SECRETARY

THE SECRETARY: We have had a somewhat extended discussion of Convention procedure and we are doubtless confident that the Convention Committee has gained great profit from our discussions. However, as there were opposite opinions on almost every point, perhaps they are not much better off after all, though we may feel reasonably sure that, while they will find it necessary to steer a course of normal compromise, we have marked certain shoals and rocky reefs of individual opinion that they will be glad to avoid.

But it is not alone on account of Conventions that the Secretary must know the pulse of the Institute. The morning mail hardly ever fails to lay before him some problem of the profession on which your combined judgment and advice is needed.

Just now he is concerned with the apparent strong differences of opinion that seem to exist among architects as to the relation that should exist between the architect and the various problems of the industry that are more or less intimately connected with labor organization, or disorganization, in the numerous trades connected with building operations.

Architects have not been active in the past in the settlement of these problems. Should they now take a hand? How do you feel, Mr. Ackerman?

MR. ACKERMAN: That is a rather delicate question. One's opinion is very apt to become involved in the matter of one's bread and butter. They say that the matter of bread and butter has been known to deflect even judicial opinion in rare instances.

THE SECRETARY: Yes, and it is my interest in my bread and butter that seems to lead me to the conclusion that it is time for me to get into the game; and it has been a good deal of a cut-throat poker game in the past. The mechanics and their direct employers have dealt the cards, occasionally from the bottom of the pack seemingly, and have played them with such skill as they could command for the purpose of pulling to their side of the board a controlling share of the chips. It has finally become evident, however, that the chips involve, to a very considerable extent, the interests of a third party who has not been holding any cards, or given any opportunity to deal them, or determine the rules of the game. His interests are fundamentally my interests. Why shouldn't I sit in, if only to see that the rules of the game are enforced?

MR. STEIN: I assume that in referring to the problems of the industry which are involved in the various trade agreements between contractors and labor, you mean to imply the whole organization of the industry in as far as labor is concerned.

THE SECRETARY: Exactly.

MR. STEIN: My answer would be emphatically "yes." The architect must take a part. As a part of the industry, he cannot, if he would, sit in his office and turn out drawings with the hope that the builder will take care of the construction. The public employs the architect to produce, not drawings, but buildings; buildings cannot be constructed unless there is cooperation in the industry.

MR. ACKERMAN: There is also, of course, the matter of competency. One hesitates to question the competency of the architect to deal with this problem, but it is a factor in the case which cannot be ignored.

MR. SCHMIDT: There is no person or body better qualified by experience or otherwise to represent the unorganized investors than the Architect. Inasmuch as the Architects' services are professional, his attitude and viewpoint are impartial and his desires are to serve the public for its best immediate and ultimate interest and welfare.

MR. ACKERMAN: It is not exactly a question of his occupying a theoretically ideal position, nor is it exactly a question of integrity. It is merely a matter of looking at the facts of the case. In reality the architect stands on one side, and observes the industrial bouts which take place between laborers and laborers, and between laborers and their employers. Apparently he is willing to referee the bouts between the former; but he prefers a position in the grandstand when the latter clinch. A keen observer noting the applause might draw the conclusion that the grandstand was not exactly neutral.

THE SECRETARY: The clamor of the approving majority should not convict the ever-present silent minority of agreement with the verdict. I wonder if our presence in your grandstand has been dictated by a definitely conscious selfish interest, or has been due to the fact that while we were compelled to be spectators, we were unaware that we had any right to a pass at the stage entrance. Your statement seems to indict the architect of a biased point of view.

MR. ACKERMAN: Well, have it so if you like; but I am more charitable. It is a matter of bread and butter. We go in for cleaning up the matter of jurisdictional disputes: none of our immediate interests are involved. But as a rule we do not go in for clearing up the disputes between laborers and their employers. I suspect—of course, I do not know—that the extent to which our interests are involved accounts for our choice in the matter of policy concerning what we do.

THE SECRETARY: Your alternative explanation does seem to suggest a bias due to selfish interest. We are, of course, interested in our bread and butter, but I don't believe that the reason we have kept aloof from these disputes has been from a belief that such aloofness rendered the bread end of living more secure. However, it is not now so much a question of why we have not taken a part in these matters heretofore as of whether we should take an active part in the future. The present situation is about as unstable and unsatisfactory as it well could be. The question is what ought to be done, and can the architectural profession be of help.

MR. STEIN: When we speak of labor agreements, I do not think only of understandings in regard to wages and hours. In as far as disagreement in regard to these may hold up work the architect is, of course, immensely interested; but these are much less important to him than are the agreements that have to do with the development of the industry.

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We may produce the foremost architects of the world, both as to knowledge of design or the technique of construction, but they are useless unless we have sufficient craftsmen who are both skilled in their trade and sympathetic to the purposes of the architect. The skilled building trades are quite insufficiently manned even for this period of relatively slight activity.

MR. ACKERMAN: Well, I am not so much concerned, for the moment, with what had best be done as I am with this matter of the competency of the architect to do it. The question is—what will the architect bring to this discussion? What experience has he had which fits him to render a decision in the matter? Does he really understand the nature of the issues involved?

THE SECRETARY: I am wondering if the chances aren't fair that he understands the issues involved at least as well as the mechanics and their employers, the contractors, have understood them, judging from the results of their past negotiations.

MR. DAVIDSON: Our experience in Chicago has shown conclusively that the public cannot rely upon the good faith and fair dealing of either contractors or unions, and as a matter of cold fact it is utterly immaterial to the contractor what the working rules are, or what the wage scale may be fixed at. He, as a contractor, simply figures his job accordingly. Heretofore the public has never been represented or even been consulted, and in my humble opinion, the time has come for a new deal all around, and I do not know of any factor in society that more properly should be called upon to represent the public than the architectural profession. Certainly our supposedly judicial training and trend of thought should equip us to deal fairly with these large questions.

MR. ACKERMAN: I am inclined to think that he is pretty well acquainted with the employer's point of view, but that he is less intimate with the viewpoint of the workman. Taken as a whole, he lives well within that frontier of opinion regarding "labor," and industrial matters which surrounds business men, employers, bankers, financiers, professional men, clerks, artists and dilettanti.

THE SECRETARY: That seems to me inevitable. The architect is and will remain an employer, a director of the labor of others from the top to the bottom of the industry. That however cannot be considered as adequate proof of his inability to participate effectively in the organization of the industry, else we would be forced to admit that no organization of the conflicting elements involved is possible. Doubtless he has the prejudices of his own environment like everyone else, including the laborer.

MR. CARLSON: I think one of the troubles with architecture is the fact that the profession has lived in a world by itself, dreaming dreams that were not true and unwilling to face the hard realities of life. The sooner we get over this the sooner we shall be of use to the community.

MR. ACKERMAN: I agree that he is day-dreaming about this industrial matter. To him "labor" is still an individual, "employer" is also an individual, and from his own view point the relationship between the laborer and the employer is an individual relationship. But as a matter of fact, the laborer as an individual, the employer as an individual and the personal relationship between laborers and employers passed out of existence some

hundred and fifty years ago. We are dealing with a situation in which this concept is no more than a myth.

THE SECRETARY: That seems to me a somewhat over-drawn picture. I should say there were few architects in the larger communities to whom that would apply.

MR. ACKERMAN: I admit that there are a goodly number of architects and engineers who do not look at it in this light and who apparently see through the present muddled state of affairs. But taken in the aggregate, judging by Convention Proceedings, articles and editorials in architectural journals, and what we say among ourselves, the profession views the modern laborer and his organizations as something distinctly alien and as disturbing factors in the case; whereas unionism may be viewed as "big business" applied to working.

THE SECRETARY: I think it is the very fact that architects do so view unionism in the building trades that leads them to recognize them, as at present operated, as distinctly disturbing factors in the case, just as they view the various material producing organizations, operating under a highly developed form of big-business, as equally disturbing.

It is not the existence of the unions that architects object to and distrust but the war-fare basis of settlement of disputes that seems to have developed with them. I believe most architects would agree that this was the result of the way they have been organized and administered and the surrounding influences attending their development rather than the inevitable result of their existence.

MR. HOLSMAN: The existence of strikes and lockouts, with their attendant system of intimidation, graft and frightfulness in the building industry, deters the best of us from engaging in building or owning buildings stained by such a hellish spirit of war. Only those who can not work well and prefer to cheat or who enjoy a fight or who are willing to spend much of their time at destructive and submersive practices and little at increasing skill and facility, will eventually be engaged in any industry conducted in such a manner.

MR. ACKERMAN: Well, I hold that labor and labor organizations, are in the nature of effects—consequences. To treat them as the principal causal factors making for the present disturbance in the industrial world is to bark up the wrong tree.

THE SECRETARY: Agreed. There is no question that there are many elements involved and that it is as futile to attempt to assign the chief blame for our present difficulties as to attempt to settle which of the Allies won the World War. There are labor unions, and they are potent powers either for good or ill according to how they are treated, and how they function. The question is—should architects become an active factor in organizing the industry or should they retain their old seat on the side lines, or, as Mr. Ackerman would have it, in the grandstand.

MR. SCHMIDT: I am of the opinion that the architect should be active in negotiations for collective bargaining agreements between organized labor and contractors. Obviously such agreements primarily affect the investor more than they do the profit of the contractor, and it is equally obvious that the investors should be represented in matters affecting his investment.

THE SECRETARY: I think that is quite true, but our pity

THE SECRETARY'S TABLE

for the investor may well be tempered by his failure in the past to protect his own fundamental interests. When occasionally he has been faced with a general strike, he has developed quite a deal of class solidarity and has backed up contractors in opposing what they believed to be the oppressive demands of labor. But in days of "guerrilla warfare," when a single building was involved, how often has the contractor's opposition to the demands made upon him been neutralized and defeated by the owner's instructions to settle the strike somehow or other, and get the building built on time.

MR. RANKIN: In my opinion, it is well for the architect, individually and collectively, to steer a straight course with regard to such questions as the closed or open shop. As long as it remains the general custom to erect buildings by contract, labor problems are to my mind matters for the contractor to take care of, and I do not believe he should be hampered by the architect. It seems to me that interference on the part of the architect in questions of the unionism or non-unionism of workers would be somewhat similar to his interference in such matters as their race or religion.

THE SECRETARY: I wonder if there isn't a fundamental difference between the question of union or non-union labor and the question of wages, working-conditions, apprentices, and all the other questions that relate to the quality and productivity of labor and which should apply equally to union or non-union labor. In all those, it seems to me, the architect has a legitimate interest and a right, if not indeed a responsibility, to concern himself. As to the question of dealing with organized or unorganized labor as a means of securing men for a given piece of work, that is part of the administration work of the contractor, and possibly need not concern others. That is perhaps a peculiarly local problem.

MR. ALDEN: Your last statement refers, I think, to a very important matter. The situation I believe is serious. It should have careful study nationally, and as it exists in each locality. I believe a certain responsibility and an important opportunity for usefulness rests with the architect to investigate and take thoughtful action thereon.

Local conditions are so different I feel it is most important that architects in each locality be governed by the condition of the local problem, and be careful in forming opinions as to what should be done in other localities, not basing their opinions on inadequate knowledge of those other conditions which may be very different from their own.

THE SECRETARY: I quite agree with you. It seems to me impossible for us to take any national action. I believe, however, it is entirely reasonable for our local groups to take as decisive action as they may want to in view of local conditions.

MR. ACKERMAN: If all that the architect has to offer is a truce,—that is, a working agreement between employer and worker—between "capital and labor"—then I think that he might as well stay out—because in such a case he will have exactly nothing to contribute.

THE SECRETARY: I hardly think it safe to say in advance what the architect has to offer in the way of a solution. What he should be able to offer is a well trained mind and as disinterested a point of view as can well be found within

the industry. That *ought* to be of some help. Otherwise there would seem to be no course except to "let bad enough alone," a rather hopeless and helpless attitude.

MR. ACKERMAN: Well, true enough. Staying out of it will not change the situation, that I frankly admit. And as matters now stand, it looks as if something had better be done soon, so I am willing to have it that it is really best for the architect to go in. If he steps warily, it is likely that going in will do him no harm; and it is certain that it will do no harm to any one else. The experience, however, of going in might count; it might count for a great deal. Those who participate might discover that what we speak of as the "labor problem" is just a little slice out of that problem which the price system has thrust upon the whole of Christendom. I am not sure that he would discover all this tomorrow; but he might learn that the tactics and policies of trade unions are merely characteristic tactics and policies enforced upon everybody by our modern system of credit economy or the price system. That is to say, the architect might discover that, after all, "everybody is doing it"; and this would better fit him to judge. So I say, let's go in.

MR. STEIN: It's only through cooperation in the industry that we are likely to reach a solution of these problems. At the present time of unemployment, it is almost impossible to get sufficient plasterers in the New York region;—the number of apprentices both here and I believe in Philadelphia, is quite inadequate.

THE SECRETARY: The same reports reach us from Los Angeles and England. That situation seems to be world-wide.

MR. STEIN: The building trades have practically no trade schools. If our work is to be properly executed: if when we are really busy again, much of our work is not to be left undone, the members of the profession must be willing to take a part in labor affairs. It seems apparent that without some leadership the industry is not going to be sufficiently manned with skilled workers.

MR. DAVIDSON: The apprenticeship question is a most vital one. In the Chicago territory we find that the average age of building mechanics is over forty years. That few apprentices in any trade are now engaged due to the operation of the by-laws of the various unions.

Today with no building boom in operation, but only a small number of apartments being constructed, practically every building mechanic belonging to the Chicago Building Trades Council is employed. In some lines the demand is greatly in excess of the supply.

The whole subject is very involved, and will require reforms within as well as without union organizations to rehabilitate union labor in the esteem of the building industry.

Is it not possible that if the profession would act as a unit in these matters that it could force the observance of more ethical practice in the industry than has been the rule for many years?

MR. SCHMIDT: The profession has been remiss in holding itself aloof from such negotiations and should consider it a duty to be active and notify organized labor and contractors' organizations of its opinion and insist on being requested to be present at all meetings and represented on all committees which deal with the subject.

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MR. LLEWELLYN: Any move which will bring the employer and employee into closer sympathy should be encouraged. The welfare of business is necessary to the welfare of the employee—they go together or should. As I see it, so-called collective bargaining does not recognize individual merit but seeks to impose an equal wage for all men of a class irrespective of relative merit. From my association with workmen, I believe that the great majority would prefer to do an honest day's work and do it in the spirit of true craftsmanship, were they only permitted to do so. I do not believe in collective bargaining as at present understood.

MR. HOLSMAN: Nothing is so fundamental to the economic adjustment of labor problems as that the rank and file of the labor element should be well and truly informed as to the fundamental principles that involve them in their necessary strife for a fair share in the returns from common productivity. Good associations and unions would be a blessing, but bad ones are a terrible curse upon society.

MR. STEIN: The architect is vitally interested in these problems; the success of his work depends on their solution. He cannot stand on the side lines and leave them to be solved by others. It is because I believe this that I am so deeply interested in the success of the Congress of the Building Industry, and in the experiments that are being tried by the Building Guild in Great Britain.

MR. CARLSON: I believe that the architect is first a citizen, and that he should be interested in all civic questions and especially those where his special training gives him an advantage over others in possibilities of service.

THE SECRETARY: It seems to me the Institute has pretty definitely indicated our duty through its inauguration of the Building Congress idea which is now in active operation on both the Atlantic and Pacific coasts and several places in between. It is not a question of the architect intruding himself into the conferences of contractor and labor; it is a question of helping to bring all the various elements of the industry together for a better understanding of each other's problems and so to learn again of each other's real desire to play the game of life decently and according to fair rules, a desire that gets deadened by lack of contact and understanding and the lack of faith in the other fellow that results. There is a vast deal to be done, and the architect should do his share.

Letters to the Editor

COST-PLUS CONTRACTS

SIR:

The article by F. W. Lord entitled "Competitive Bidding on Cost-Plus Contracts" is timely, and touches a problem in which there is a growing interest among those who are responsible for the placing and the carrying out of contracts for construction work. Much prejudice against any cost-plus form of contract has been developed through action taken in connection with war contracts handled on this basis. The actual accomplishments of these war contracts under this system have been blanketed by the smoke screen of criticism by those destroyers of public confidence who are neither able nor interested to give constructive criticism.

The fact that the war work was impossible of accomplishment on any other basis, and that the extent of malfeasance in such contracts was unquestionably relatively small, did not prevent a sweeping condemnation of the cost-plus system of contract. It

is time that we took up the gauntlet thrown down by these critics, and entered the lists in opposition to the price system of competition which is responsible for many, if not most, of our present difficulties in the building industry.

I hope that the publication of Mr. Lord's concrete suggestion will lead to comment and contribution from others.

WILLIAM STANLEY PARKER,
Secretary.

THE FEE-PLUS-COST SYSTEM

SIR:

We have read the interesting articles on "Working on Cost Plus Professional Charges" by Mr. Kohn and Mr. Sturgis, appearing in recent numbers of THE JOURNAL. Their scheme of reasoning, we believe, is justly warranted, and we wish to compliment them on the excellency of the articles and for approaching the subject in the public press.

For sometime this office has been advocating the very system of charging fees that Mr. Kohn and Mr. Sturgis propose, but it seems that very few Architects care to turn from the old method, due no doubt to their neglect in keeping accurate costs. In comparing figures given by Mr. Kohn with our own we find a wide divergence, especially in the matter of profit—however, this item is variable and we believe it was necessarily large in 1921 on account of the great amount of factory work done by us.

In the year 1921, our cost rates were as follows:

Average Rate of Overhead per Productive Hour . . .	1.07½
Average Rate of Draftsmen per Productive Hour . . .	1.25

Average Cost of Production per Productive Hour . .	2.32½
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Converting our figures to Mr. Kohn's method of cost finding (that is charging the principal's time directly to a job and loading it with 100% overhead) we get the following result:

Average rate of Overhead Cost per Productive Hour .	.80
Average Rate of Draftsmen Cost per Productive Hour .	1.52

Average Cost of Production per Productive Hour . .	2.32
--	------

Mr. Kohn's figure of 66¾% added for overhead to direct cost is in excess of our own, which figures slightly over 52% when we use his method of calculation. Difference in locality, no doubt, would account for this. From a thorough study of his method of calculation we cannot find that his system is essentially different from our own, except as to profit, and we do believe a larger percentage than 33¾% should be added to the cost of production. Our experience relative to drafting and overhead more nearly approaches Mr. Sturgis's calculations, that is, drafting and overhead are 50-50.

The system of cost finding used in this office was designed by our Mr. H. P. VanArsdall, who recently wrote an article on Cost Accounting for Architects, for the National Association of Cost Accountants, which will shortly appear in pamphlet form. His views regarding the charging of fees are very similar to Mr. Kohn's and Mr. Sturgis's in a marked degree. We are thoroughly concerned in what these gentlemen are doing and will be glad to aid in any way possible to change the unreasonable method of fee charging now employed by the Institute members.

Respectfully,
SAMUEL HANNAFORD & SONS.

HPV-HT

"UNFORTUNATE," SAYS HE!

SIR:

Shortly before Christmas I bought, for one of my draftsmen, a copy of "Colonial Homes" published by David McKay & Co. of Philadelphia and purporting to be an authentic account of the most famous of our colonial houses with illustrations by a Mr. Preston. On looking it over after purchase I found that Mt.

LETTERS TO THE EDITOR

Vernon was depicted as being built of rough field stone. I wrote the publishers a very courteous letter pointing out this mistake, stating that our profession considered Mt. Vernon one of the most perfect of our wooden houses and that if their book was to be of any real value these historical buildings should be shown as they are.

From them I received the following letter which explains itself:

"DEAR SIR:

Your letter of January 4th addressed to the David McKay Company, in reference to the illustration of Mt. Vernon in their publication 'Colonial Homes,' has been handed to me for reply, as I was responsible for the artist who made the pictures for this book.

"The illustrations were not made with any thought to faithfulness to the originals, in so far as the color or material used in their construction is concerned. If you purchased the book having this in mind, it is unfortunate. Mr. Preston has made illustrations for a number of books along this same line, and he has taken liberties with all of them without any thought as to the material used in the construction of the buildings.

"Very truly yours,

THE BECK ENGRAVING COMPANY,
CHARLES W. BECK, JR.,
Secretary and Treasurer."

If such practices are common, as this letter indicates, I think the Institute should step in and notify these people that such practices are immoral if not illegal. Please let me know how you feel about it.

ALFRED GRANGER.

TO THINK—OR TO "REVIEW"

SIR:

In a "Review of Recent Architectural Magazines" in the *American Architect and the Architectural Review*, Mr. Swartwout wonders, in characteristic fashion, "what the little group of earnest thinkers will do next." What will they spread on "the background of pessimistic socialism?" Which is Mr. Swartwout's way of suggesting the character of the A. I. A. JOURNAL and the outlook of the "earnest thinkers."

Precisely what "pessimistic socialism" is I do not know. Changes are not ordinarily launched under the auspices of a dubious outlook. But I take it that the expression refers to a questioning attitude; that apparently is sufficient to characterize it as pessimistic. And no doubt "socialism" is sufficiently accurate as descriptive of a questioning attitude, since to question implies an open mind; and an open mind on matters social and economic (which I believe have some relation to architecture) is socialism. That, I think, is what is meant by the term.

Which suggests that it might not be entirely out of place as contributing to that background to spread thereon the remarks of President Harding as reported in his address before the National Agricultural Conference of 23 January. It is true, he was not speaking in direct reference to architecture; he was speaking in reference to the production and distribution of farm products. But his observations may be recalled, since, after all, he was dealing with production and distribution—a matter quite as much involved in the production and the use of buildings as in the production and use of wheat and cotton:

"The disastrous effects which arise from overproduction are notorious. The Congressional Joint Committee on Agricultural Conditions, in the valuable report which it has recently issued,

declares that a deficiency of one-tenth in the production of a particular staple means an increase of three-tenths in the price, while a deficit of two-tenths in production will mean an increase of eight-tenths in the price.

"The converse of this is just as emphatically true. In a recent address to the Congress, I stated this situation thus:

"It is rather shocking to be told, and to have the statement strongly supported, that 9,000,000 bales of cotton, raised on American plantations in a given year, will actually be worth more to the producers than 13,000,000 would have been. Equally shocking is the statement that 700,000,000 bushels of wheat, raised by American farmers, would bring them more money than a billion bushels. Yet these are not exaggerated statements. In a world where there are tens of millions who need food and clothing which they can not get, such a condition is sure to indict the social system which makes it possible."

Had he added shelter to his last sentence, he would have voiced the point of view of the "little group of earnest thinkers." Not that they would have used the term "over production" to describe a normal crop or a normal volume of goods which could not be made use of by tens of millions. They would have been more precise in the choice of words. But there is nothing to be gained by finding fault in the case of such a little matter; for President Harding has summed up the case as viewed by the "little group of earnest thinkers" very neatly indeed. And if he has given voice to thoughts of "pessimistic socialism," it is a pity!

F. L. ACKERMAN.

Obituary

Will A. Stevens

Elected to the Institute in 1918
Died at Chicago, Illinois, 18 December, 1921.

Will A. Stevens was born in 1863, and was graduated from the Cornell University Department of Architecture in 1890. For eleven years he was draughtsman with E. O. Fallis, Architect, of Toledo, and in 1901 entered the firm of D. H. Burnham and Company, remaining with Graham, Anderson, Probst and White until his death. Much of the last five years was spent in Toronto as manager of their Canadian office. Most of his work was consummated in his home town in Huntington, Indiana. Here he was the architect of the Presbyterian Church, the Reformed Church, and the Huntington Light and Fuel Company's office building. He was engaged at the time of his death on plans for the Hotel La Fontaine, to be erected in Huntington.

Austin W. Lord

Elected to the Institute in 1901; to Fellowship in 1903
Died at New York City, 26 January, 1922

(Further notice later.)

Evarts Tracy

Elected to the Institute in 1909
Died at Paris, France, 1 February, 1922

(Further notice later.)

Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

Current Notes

Zoning and Excess Condemnation in France

Attention is called to the article on zoning and excess condemnation law in France, in this issue. It is one chapter from a book on City Planning by Frank Backus Williams, long associated with the legal phases of city planning in the United States.

Housing in Louisiana

The report of the Louisiana Housing Commission of which Moise H. Goldstein, a member of the Committee on Community Planning is secretary, has submitted to the state legislature the following recommendations in regard to the housing situation in Louisiana:

1. Appointment of City Committees on Housing.
2. And the election from these bodies of a State Committee on Housing.
3. Local Committees to act as an Arbitration Board on rents.
4. The passage of enactments granting partial exemption from taxation by cities, as permitted by the new Constitution.
5. Revising and standardizing Building Codes.
6. Incorporating sanitary and tenement house regulations in Building Codes.
7. The study and adoption by cities of a "City Plan"—and "Zoning" ordinances.
8. Improvement in planning small houses and group planning in congested districts.
9. Extending time of eviction notices to tenants (except for non-payment of rent).
10. Co-operative efforts in the building industry to reduce cost of construction and the teaching of trades in the primary grades of the Public Schools, to reduce inefficiency in the trades.
11. Encouragement of investment in Homestead Stock to enlarge this most important and serviceable home-building agency.

Also, that the Governor provide for the study and improvement of housing by the appointment of a committee of Five for each City of the State with a population of over ten thousand. The members shall serve without compensation.

A Definition of Garden Cities

In a memorandum drafted by the Garden Cities and Town Planning Association, recently, the following was determined as the definition of Garden Cities:

1. The creation and development of garden cities is required.
 - (a) to overcome the shortage of houses on a large scale;
 - (b) to supply better equipped sites for industry and provide improved factory conditions;
 - (c) to relieve the industrial congestion and traffic difficulties of London and other large centres, and avoid the waste of time and social disadvantages of the daily journeys by masses of the population and the resulting separation from homelife;
 - (d) to bring agriculture and town development into closer relation and increase the food supply of the country.
2. Garden cities are to be understood as self-contained towns, each with
 - (a) a town centre;
 - (b) an industrial area;
 - (c) a residential area;
 - (d) an agricultural belt.
3. It is an essential element in the financial basis of the garden city that the whole of the land should be either in public ownership

or held in trust for the community. The control of land values which this form of ownership gives provides the superior economic advantage of the garden city to that of all other towns.

4. The sites for garden cities could be found:
 - (a) in rural districts a clear distance of from five to thirty miles from large towns;
 - (b) as a development of existing villages or small urban districts;
 - (c) in areas adjacent to new electric power stations and in new industrial, port and mining areas.
5. The means required to carry out workable schemes are:
 - (a) statutory recognition of garden city enterprises;
 - (b) acquisition of land at agricultural value;
 - (c) suitable forms of local organizations;
 - (d) finance.
6. Statutory recognition of garden cities has already been given in the Housing Additional (Powers) Act, 1919 (Sec. 10), and the Housing Act, 1921 (Sec. 7), but further powers, which are set out in the draft Garden Cities General Powers Bill, printed here, p. 269, would greatly facilitate development.
7. The land should be acquired by the State by means of a rent charge, as in the case of land settlements, or by the issue of land bonds to the owners, avoiding the necessity for raising a large amount of capital. The land should be on a good line of railway and a main highway, and it is important that it should be a site which could be made into an industrial and commercial centre.
8. In order to provide for official business management and to carry schemes out free from bureaucratic delay:
 - (a) a special corporation should be formed under the Companies Acts, or by Act of Parliament, to act as a central body to initiate and supervise the carrying out of local schemes. This body should act under Treasury regulations and should be appointed by the Treasury, the Ministry of Health, and perhaps other Government Departments but should not consist of members of Government Departments;
 - (b) local companies should be formed under the Companies Acts to prepare and execute schemes and to raise capital for specific garden cities. By this means private initiative and enterprise would be encouraged, local interest secured, and the danger of stereotyped schemes avoided. The local company to be supervised by the Central Corporation, and the Board of Management to contain representatives of the County Council and the local authority.
9. The capital required for the purchase of land, the construction of roads, drainage, water supply, and other works of development to be raised by the local companies on a State guarantee of interest and principal to be secured through the Central Corporation. The Central Corporation to be allowed to issue capital on a similar guarantee for lending to local companies.
10. The garden city companies in each case would be primarily concerned with the planning of the towns, their development and management. Houses for the working classes could be built either by the Company or by the Local Authorities, Public Utility Societies, or other bodies under whatever national scheme was in operation.

English Housing Progress

The Garden Cities and Town Planning Magazine announces the following in connection with English housing:

We are informed by the Ministry of Health that the position

FROM OUR BOOK SHELF

on December 9th, 1921, with regard to the building of houses under the National Housing Scheme, was as follows:

Tenders for 165,000 houses have been approved.
Contracts signed for 159,400 houses.
Houses commenced, 141,500.
Houses completed, 70,110.

It will be observed that these figures are unchanged from those given in our last issue, except that the number of houses completed shows an increase of 8,000.

The position with regard to public utility societies is unchanged.

From Our Book Shelf

Infinitum

It is impossible to travel through any section of France, especially its provinces richest in history and tradition, without coming upon many surprising and delightful architectural groups and fragments. In "Small French Buildings" (Scribner's), Messrs. Lewis A. Coffin, Jr., Henry M. Polhemus and Addison F. Worthington have assembled a goodly number of examples of such work, many of them of striking picturesqueness and charm. Beyond this modest accomplishment, however, they have achieved little worthy of note.

The book possesses neither plan nor arrangement, save of the sketchiest variety. It is but one more of those "scrap-books" which are born in alarming number of the too-efficient presses of our facile publishers, defying strikes and strikers, and which breed their legion of incompetent practitioners, those ingenious devisers of the paste-board doll's house for young married couples, chief adornment of our suburbs. It speaks knowingly of "masses" and "composition" and "detail," but it fails to touch upon the reality of which this architecture is but the outward shell—the peasant life of France—which has been, and still is, its real beauty and vitality, and has enabled it to weather many storms, including the latest and greatest of them all. Some qualification, however, is necessary. Mention is made of "songs and laughter,"—important elements of life, indeed, but what of the patience, the will to endure, to build permanently in defiance of time's inevitable ravages, of which the minor architecture of France is so legible an expression? Might we not learn more in our haste, we who are devoted to quick success, to the "good-enough" that stops a small gap in the long span of time, if we paused to consider the spirit that inspired the builders of these small houses, rather than to gaze on gable ends and chimney-pots? You may ask whether such things are any part of architecture—perhaps not, but without them good architecture is impossible.

As technical criticism of the work one might well ask why, in several instances, views of the same building, under the same chapter heading, are separated by many pages—vide "Manor at Arqus la Bataille" (plates 97 and 156), and "Farmhouse near St. Cyprien" (plates 81 and 146). There may be other instances. Furthermore, the individual subjects are inadequately treated, the only two plans given are incomprehensible, and it is impossible to make a serious study of any building presented.

As the text is quite superfluous no further mention need be made of it.

"The Books!"—With what reverence we utter those

two syllables in this country dedicated to universal education. One more has been added to their number.—G. H.

Inspirational

The friends of a man who evidently possessed an engaging and endearing personality, a man who was interesting enough to have immensely interested so keen a student of human nature as Arnold Bennett, have made a collection of E. A. Rickards' architectural designs, sketches of detail, outdoor sketches in pencil and pen and ink and in water color and of his amusing and extremely clever caricatures; many of the aquarelles are excellently reproduced in color.¹

The collection, to one not acquainted with the man himself, indicates a genial versatility, stronger by far on the side of presentation, on the lighter and what one must, perhaps a trifle portentously, call the less "serious" side, than in the larger qualities of design. Rickards' work in architecture has most of the faults of the modern English school, weighed down as it is by the burden of the Palladian tradition, the influence of the late sixteenth century in Italy, with a dash of what Wren brought back with him and translated into English from the work that was going on in Paris in his day, and to which he had the genius to give a strong personal accent. As a draughtsman Rickards renders these compositions with gusto, overladen though they be with rustifications and pilasters and square domes and the usual lumber of most modern English design.

The caricatures and the water colors are distinctly the most amusing items of the collection; the latter are painter-like in their choice of subject and in their broad craftsmanship; one feels in them the joyous escape of the architectural draughtsman from the trammels of composition and rendition in right lines. One may imagine his doing them with the glad cry "To Hell with the T-square." The caricatures cut thick and fat with an unctuous humor and an extraordinary grasp of the essential line.

The book falls into the category of inspirational books like Walcot's etchings and water colors, which are far more necessary to an office library than collections of "useful" plates—useful meaning something that might, could, would or should be cribbed.

H. VAN BUREN MAGONIGLE.

Shorter Notes

Early in the nineteenth century numerous books were published with such names as "The Carpenter's New Guide," "A Guide for the Builder and Architect," "A Treatise on the Five Orders with a Complete Book of Lines for the Carpenter and Joiner." They usually contained some practical geometry, something on the strength of materials, some elementary material on shades and shadows and perspective. They were a composite of an embryo of Vignola, Kidder and a correspondence school encyclopedia of building and construction, but withal they were delightful books, the older ones on hand-made paper and with engraved illustrations. I still treasure three of them in my library not because they are particularly useful, but because they are quaint and good to look upon and

¹"The Art of E. A. Rickards." Comprising a collection of his Architectural Drawings, Paintings and Sketches, with a Personal Sketch by Arnold Bennett, an Appreciation by H. V. Lanchester and Technical Notes by Amor Fenn. Technical Journals, Ltd., London, 1920.

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News Notes

to handle. Now comes this modern¹ book covering about the same field, unattractive in typography, illustrations and make-up—not mathematical enough for the mathematician but certainly too much so for the builder, the American builder I mean, for conditions may be different in England and this is an English book. The book is one of the D-U Technical Series, D-U meaning directly useful. It does not seem to me to fill any American want, the information in its gathering of abridged text-books is much better available in other forms.

Books are sometimes of intimate kin. Here are two well printed and lavishly illustrated.² Both contain much material descriptive of that best in English work of which we in America are so fond and so admire, and both contain much about which we care very little. In both there is abundant, valuable, historical matter. The illustrations are not only plentiful but excellent in quality and presentation. "The English Interior" seems the better book for study; it is logically arranged for the architect. There are four general divisions: "Tudor and Early Stuart Interiors"; "Late Stuart Interiors"; "Georgian Interiors"; "Principal Features of all Periods in Detail." There are ninety-five quarto size page plates and many text cuts.

"English Homes" (Vol. I) covers the late Stuart period only, but includes exteriors and gardens as well as interiors. Its illustrations are likewise numerous and of excellent quality, and the text is quite illuminating. It is difficult to decide which book one would rather have, the right decision would probably be that one would rather have both, although it might be difficult just now to find many architects who could afford even one.

The text matter of this recent work³ on Westminster Abbey is contained in but a few pages and is composed mostly of historical notes on the Abbey itself and the monuments it houses. Of greater interest, however, are the one hundred and fifty-two large phototype—I think we should call them photogravure—plates. As photographs, these are technically perfect and they seem to cover every detail. Why some of these details are illustrated, we are not quite sure, yet as a whole the book is one of great beauty. The edition is limited to four hundred copies.

Here is an extremely interesting little book on the subject containing 134 fairly good illustrations.⁴ It is an unpretentious and inexpensive volume, but comprehensive and useful. It should prove interesting to designers and architects and to laymen desiring some knowledge of the great Italian period. The text, which is well supplemented by the illustrations, covers briefly the history and characteristics of various articles of furniture in Florence, Tuscany, Venice, The Mainland and The Northwest of Italy. The book deserves a place in every designer's library for its own sake as well as an introduction to the study of the more pretentious and voluminous works on the subject.

B. J. L.

¹"Practical Geometry for Builders and Architects." By J. E. Paynter. Chapman and Hall, Ltd., London.

²"English Homes—Period IV—Vol. I. Late Stuart 1649-1714." By H. Avray Tipping. Country Life, London. Chas. Scribner's Sons, New York.

³"The English Interior." By Arthur Stratton, Architect. B. T. Batford, London. Chas. Scribner's Sons, New York.

⁴"Westminster Abbey and St. Margaret's Church." Volumes I and II, bound together. Historical and Descriptive Preface by Albert Edward Bullock, A. R. I. B. A. J. Tiranti & Co., London.

"Italian Renaissance Furniture." By Wilhelm von Bode, translated by Mary E. Herrick. William Helburn, Inc., New York.

A VERY notable affair was the dinner tendered to Mr. Ernest J. Russell, of Mauran, Russell & Crowell, on 19 January last, in recognition of his long and devoted service as Chairman of the City Planning Commission. Four hundred citizens, from all ranks of life, sat down to express their appreciation of Mr. Russell's faithful contribution to the better development of St. Louis.

SAMUEL Hannaford & Sons announce their removal from the Hulbert Block, where they have been for 32 years, to the Dixie Terminal Building, Cincinnati.

APPARENTLY the old New York City post office is to be demolished and the site be restored as a part of the old park from which it was once borrowed. The House Committee on Public Buildings and Grounds has reported favorably the bill of Representative Rosedale of the Bronx authorizing the appointment of a Committee to conduct the negotiations with the city of New York.

PHILADELPHIA Chapter, discussing the question of delegate representations to Conventions, voted unanimously to appropriate nothing toward the expenses of delegates this year but that the Institute refund, when received, be distributed pro rata among the delegates.

THE first annual architectural exhibition of the Iowa Chapter closed on 28 January. It was held in the galleries of the Des Moines Public Library and enjoyed the cooperation of the Fine Arts Association.

CLEVELAND Chapter resolved, at its last meeting, that "owing to changed conditions since the beginning of the work on the Criminal Courts and Jail Building, and also to the fact that the public has declined to furnish funds for carrying out the plans suggested by the County Building Commission, the Chapter thinks it wise to have a thorough investigation and report made by a disinterested committee as to the requirements of the city and the county for the Criminal Courts and Jail, before the commission again presents to the public a bond issue for the amount of money required to carry out the work in accordance with the present plans."

LOUIS C. ROSENBERG, one of whose sketches are reproduced in this issue, is well known to our readers. Other sketches of his were printed last year and more are to come. Mr. Rosenberg is in Europe under a scholarship from the Massachusetts Institute of Technology, having at one time been connected with the School of Architecture at the University of Oregon.

Nebraska Chapter has been informed of an apparent construction which in that State is placed upon the Institute's subdivision of the Schedule of Charges, in that under Nebraska law, were the Institute schedule not referred to, a contract for architectural services would be enforceable, in case of abandoned work, to the extent of the whole fee less the cost of completing the unrendered service. Counsel has been employed to prepare a contract that will protect the architect in his rights under Nebraska law.

To the new Indiana Chapter there have been transferred from the Illinois Chapter, the following: E. R. Austin, G. W. Allen, O. D. Bohlen, H. L. Bass, F. S. Cannon, R. F. Daggett, H. W. Foltz, J. W. Gaddis, M. Harrison, A. B. Hinywell, W. E. Russ, D'A. B. Shourds, E. H. Turnock, Byron De Witt Day.

To the new Central Illinois Chapter there have been transferred from the Illinois Chapter Messrs. G. H. Davis, W. W. Day, F. N. Emerson, H. E. Hewitt, B. L. Hulsebus, C. W. Bullard, M. H. Whitmeyer.

FROM information at hand it seems apparent that a new Chapter in New York State, to be known as the WESTCHESTER Chapter, will shortly be announced.

A memorandum presented to the Illinois Chapter by Mr. Holabird, in which was pointed out the effect that the Fordney Tariff Law would have in increasing the price of imported architectural books, has been made the basis of Chapter representation to Senators in Congress.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

A Tentative Specification for Concrete and Reinforced Concrete. (4).—In 1916 the American Concrete Institute, the American Society for Testing Materials, the American Society of Civil Engineers, the American Railway Engineering Association and the Portland Cement Association organized a "Joint Committee" to draft specifications for concrete and reinforced concrete.

The work of this Joint Committee was interrupted by the war, but during the last year a tentative draft of this specification has been prepared and printed. This draft was submitted for discussion and criticism to a representative meeting of the Civil Engineers on Dec. 8th and 9th at the United Engineering Building, New York City.

In the course of the discussion, the members of the Committee explained the provisions of the proposed specifications, when it became apparent that the intent was not clear, but the Committee made no attempt to defend its work and resisted all attempts to cross swords with its critics. The meeting, in reality, was a sort of probing expedition by the Committee. The proposed specification was held up to be shot at and the hits recorded for the benefit of the Committee in its future work. In view of the rough treatment the specification received at the hand of the large number of critics, it will be interesting to see how closely the revised document resembles this first draft.

One question which was put repeatedly but not answered by the Committee, related to the status of the finished document. Was it to be a standard specification; and if so, how would it be promulgated? Or was it to be issued merely as recommended practice? Or again, was it to be published as a handbook, a reference work on concrete engineering practices?

If the Committee has any purpose in this regard, that purpose was not revealed. The draft under discussion deals with the raw materials, proportioning, mixing, placing, forms, reinforcements, design, inspection and tests. It is a most comprehensive and exhaustive document, and altogether the most ambitious and creditable effort that has yet been made at specification standardization in the construction industry.

While it has only reached a tentative stage in its development, the whole matter is of very great importance and interest to the architect. We can not here publish the lengthy document in question or even a brief resume of it, but to give the architectural profession some small idea of its character and the kind of criticism that was leveled at it, we publish below—and are fortunate in being able to publish it—a brief discussion by an eminent engineer who sat through the meeting and whose voice was frequently heard in the discussion. The following comments were prepared for THE JOURNAL by Mr. Elwyn E. Seelye, New York.

"There are a good many reasons, it seems to me, why the American Institute of Architects should be represented on this Joint

Committee on Standard Specifications for Concrete and Reinforced Concrete.¹ The architect is the largest purchasing agent of reinforced concrete in the country. He knows, as Mr. Jones pointed out in the discussion, that increasing the size of a concrete column not only increases the cost of the work, but also, which is of greater importance, it decreases the yieldable floor area in a commercial building.

The architect is the sole superintendent of an enormous quantity of miscellaneous concrete construction, large and small, and it is very necessary that the specifications he uses be explicit and practicable in so far, at least, as they define and describe methods of construction. He knows, if anyone does, how easy it is to theorize on practice and how difficult it is to practice theory in the hurried indifferent building world.

The architect is particularly well qualified, through experience and interest, to contribute advice on the use of decorative finishes, floor treatments, waterproofing, dampproofing and chemical admixtures.

Effect on Cost.—Structural engineers and architects who are at all familiar with tests of reinforced concrete construction, would be well satisfied with the safety factor obtained under present practice in design and methods of construction, if there were some assurance that this safety factor would not be reduced or eliminated by the abuses.

Architects like engineers are vitally interested in the specification as an agency for reconciling economy and safety and as the means of insuring both. Specifications as drafted by the Joint Committee materially increase the cost of reinforced concrete construction. If adopted in their present form, the construction of the fireproof school, for instance, may be deferred, because the difference in cost between the reinforced concrete school structure and the frame school will have been stretched beyond the elastic limit of appropriation. This increase in cost is due mainly to the fact that what is now considered good concrete design is discarded under the proposed specifications because of the higher work stress therein provided for. A flat slab design under the new specification will contain more concrete than is required under the Chicago law, and considerably more than the same slab design in accordance with New York City ordinance. Columns also will be generally larger, especially those of the spiral hooped type.

Abuses Common in Concrete Construction.—The real test for adequacy of any proposed specification for concrete, is the extent to which it eliminates present abuses of the material, or at least puts the superintendent on his guard against them. The specifications in question do not give such warning in relation to many present abuses which are the causes of defects and even failures. Such warnings are not always properly a part of the specification, but in a document of this kind, especially if it is to be a reference work on recommended standard practice, which modifies present practice, and in some cases suggests radical departures, certainly there should be explanatory notes or stated reasons. To make this more specific, the writer will attempt to enumerate some of the most common causes of defects and briefly point out in connection with them the deficiencies of the proposed specifications.

Form Design.—The specification contains some excellent generalities in regard to form design but it does not bring out the fact

¹The American Institute of Architects was invited to cooperate in the work of this Committee. But at the time the Committee was organized, the Institute had no Committee on Structural Service, and no Agency for carrying on such cooperative work. The Institute therefore found itself in a position where it had to decline the invitation.

that form design cannot always be safely left in the hands of the practical man. Safe form design involves a knowledge of the theory of hydraulic pressure, long column action, strength of materials and dead load computation.

Hardening Concrete.—In the case of a building collapse caused by the concrete not having hardened sufficiently to bear its load, we naturally look to the specification for proportioning, mixing and placing of concrete. The proposed specifications are adequate, but not sufficiently clear and practicable. The usual causes for concrete not hardening properly are: insufficient quantity of cement, defective cement, the presence of impurities in the fine aggregate, and freezing.

The specifications cover the amount of cement to be used, but do not touch on practical methods of measuring the aggregate. The prevailing method, on small jobs, of measuring by wheel barrows is neither accepted nor definitely rejected. General recommendations are made in regard to forbidding the presence of deleterious material in the fine aggregate, but the recommendations are too technical and would mean nothing to a contractor or architect's superintendent if such specifications, as they stand, were incorporated in the architect's specification. The recommendations in regard to protection of concrete in freezing weather are good but so rigorous that they will be difficult to enforce.

The writer believes that forbidding the use of all set accelerators will work an injury on the concrete industry. There is authoritative data that indicates that calcium chloride is not injurious to reinforcing steel where the concrete is not exposed to moisture and that it may not be injurious even where it is so exposed. Calcium Chloride products not only lower the freezing point of concrete but also accelerate the set, thereby reducing the length of time that the forms must be kept in place.

Corrosion of Steel.—The specifications, in regard to sea water, cover this phase of work in accordance with our best present knowledge. The writer, however, suggests an investigation of the use of galvanized steel.

Faulty Floor Surfacing.—This important subject is covered in a very meagre fashion. Nothing is said about floor hardeners, and other materials for rendering a floor dustproof, waterproof and increasing its resistance to wear. Nor is anything said about paints for coloring purposes. The subject of chemical products is one in connection with which definite information is very much needed. At the present time both the architect and the engineer are very largely dependent upon manufacturer's claims.

Defective Reinforcing Steel.—Cases of high carbon and intermediate grade steel bars being weakened at the bends have been frequent and it is questionable if the minimum radius of bending should not be specified. The reliability of "re-rolled" steel is a question of common apprehension. It was brought out in the discussion that this grade undergoes a heat treatment and hence is safe from crystallization or defects developed by wear. It is also made originally under the most rigid specifications and is free from pipes or segregation sometimes found in new billet steel. The Committee does not explain why it reduced the working stress for this material below that of new billet high carbon steel.

Waterproofing.—The writer criticises the Committee's ruling that integral compounds shall not be used, without presenting any of the data upon which they rejected this whole class of materials. Integral water proofing is in very wide general use and there appears to be considerable difference of opinion among engineers as to its efficiency. The engineering and architectural professions, therefore, could not reasonably be expected to accept, without proof, a definite ruling, prohibiting the use of all integral compounds.

The plaster coat method of waterproofing does not appear to have been recognized and yet it is in very general and successful use. It has an advantage over the membrane method in that leaks are more easily located and remedied, and there are special cases where it would be impractical to attempt to use the membrane method."

Whiting. (25a). (*U. S. Geological Survey. "Stone in 1918" by G. F. Loughlin and A. T. Coons.*) On account of war restrictions the use of pulverized marble and limestone as a substitute for imported whiting or chalk largely increased.

Consumers of imported whiting claimed that it was "amorphous"—a term which, to judge from microscopic examination, implied extremely fine crystalline particles accompanied by colloidal matter—whereas domestic whittings were "crystalline" that is, of coarser grain and deficient in colloidal matter. Some domestic producers in 1918, however, claimed to be producing material of excellent physical properties, including pure white color, economical absorption of oil, good stretching power (in putty), and ability to take up more marble dust than English whiting. The increased use of domestic whiting tends to confirm these claims, although full confirmation will depend upon the demand after the removal of restrictions on imports.

A few producers have been very secret about their raw material and process of manufacture, but others have been very willing to give any information requested. That made as a by-product from the pure white marble of the Georgia Marble Co., at Tate, Ga., contains between 98 and 99 per cent of calcium carbonate, the remainder being chiefly lime-magnesia silicate. The finest grade produced passes 100 per cent through a screen of 300 meshes to the inch and was used in 1918 chiefly as a rubber filler. In contrast to this, whiting manufactured by the Metro-nite Co., Milwaukee, Wis., contains 44.62 per cent of calcium carbonate, 35.65 per cent of magnesium carbonate, 19.58 per cent of calcium-magnesium silicate, and 0.15 per cent of moisture. Its finest grade will pass 100 per cent through a 225 mesh screen. Domestic whiting manufactured by P. W. Nelson (Inc.), Brooklyn, N. Y., contains 98.50 per cent of calcium carbonate, 0.10 per cent of magnesium carbonate, 0.18 per cent of silica, 0.79 per cent of iron oxides, 0.02 per cent of alumina, and 0.07 per cent of organic matter.

The requirements of whiting for most uses depend on its physical properties, chiefly color, extreme fineness of grain, and the presence of considerable colloidal matter, but no exact specifications for any use except in the ceramic industries have been reported to the Survey. According to P. H. Bates, of the Bureau of Standards, whiting for the ceramic industries must be very low in iron oxides, preferably not more than 0.05 per cent; its content of calcium carbonate should be about 99 per cent, although it may be as low as 98 per cent if the impurities are only silica and alumina; it must be very fine grained so that practically 100 per cent will pass a 150-mesh sieve. The fineness of whiting must be such that it will not settle instantaneously in water, but that part of it, about 30 per cent, will remain suspended for some time. The chemical requirements will rule out most of the limestones and even some of the white marbles of this country, but some of the white marbles of Vermont, which have proved suitable for the manufacture of optical glass, and some from Georgia and Alabama, are quite satisfactory in chemical composition.

Mr. Bates also states that it is perfectly possible to prepare whiting from marble if the grinding is carried far enough and conducted with wet material. Perfectly satisfactory material has been produced in this way at the Bureau of Standards. Cost and care to reduce the material to suitable fineness without introducing impurities, particularly iron oxide, are the determining features.

Chemically precipitated calcium carbonate has also been suggested as a substitute for English whiting. Considerable quantities of such calcium carbonate have been made as a by-product from the manufacture of basic magnesium car-

STRUCTURAL SERVICE DEPARTMENT

bonate, but, at least prior to the war, the cost of drying it and keeping it free from impurities has prevented its competition for the whiting market. It doubtless contains considerable colloidal matter; in fact, one manufacturer stated that its absorption of oil, caused probably by the colloidal matter, was too high. A mixture of this chemically precipitated calcium carbonate with finely ground marble, however, should closely approximate English whiting in physical and chemical properties.

Structural Slate. (22b)—(*U. S. Geological Survey. Slate in 1920 by G. F. Loughlin and A. T. Coons. Size 6" x 9". Pages 8.*)—While the purpose of this publication is primarily to give tables of production and consumption of slate the following quotation from a general description of conditions in the industry is of especial interest.

"The slate quarrymen realize more and more that much of the success of their business, especially in structural slate, lies in the standardization of the sizes of the products. The method of procedure usually followed has been to quarry and prepare structural slate in sizes specified by builders and architects. The lack of uniformity in design or size prevents the production of material in advance. This condition has led to enforced unemployment in mills and quarries and in serious delays to builders, as the slate quarries can not always produce stock at the time orders are received. To improve these conditions the Structural Slate Co., of Pen Argyl, Pa., which represents several producers of structural slate in the Pennsylvania district, has, through the Structural Service Bureau, proposed standard specifications for structural slate products and has issued illustrated pamphlets showing sizes and shapes of standard parts for structural work. It is hoped that the acceptance of these specifications by associations of architects and builders will aid materially in stabilizing the slate industry."

The pamphlets referred to include the following chapters: 1. Origin and Geologic Data; 2. Basic Specifications; 3. Stairways; 4. Fittings; 5. Toilet Enclosures; 6. Urinal Stalls; 7. Shower Stalls; 8. Laundry Tubs, Sinks and Sink Tops; 9. Caps, Bases, Wainscots and Floors; 10. Architectural Uses of Slate; 11. Miscellaneous Uses of Slate—Natural Slate for Blackboards.

This series of chapters not only includes valuable data on slate and its uses but the material is assembled and presented so as to be readily available for reference use.

A Paint That Will Not Reflect Ultra Violet Rays. (25b25)—(*By W. S. Andrews in the General Electric Review, October 1921.*)—The dangerous invisible rays of ultra-violet light, as produced by the electric arc in welding iron or steel, can be reflected in the same way as visible light, and almost all surfaces that reflect visible light will also reflect the invisible ultra-violet rays to a greater or less extent. There is, however, at least one material which, although pure white, absorbs these rays completely. This material is zinc oxide or Chinese white.

It is evidently desirable that the walls and ceilings of shops where electric arc welding work is done should be covered with a paint that will absorb the ultra-violet radiations. Paint made from zinc oxide will answer this end, but as a pure white paint would produce too dazzling an effect, it is best to tone it down to a light gray with lampblack, which only slightly affects its ultra-violet absorbing quality. Also the paint must be mixed so as to produce a dead surface, as even Chinese white, when made so that it dries with a glossy surface will reflect the dangerous rays. Perhaps the best adhesive medium is glue water, such as is used with lime for kalsomining, as it is cheaper than oil, and the paint so made will dry with a smooth unglazed surface.

Handbook for Architects and Builders. (*Published under the auspices of the Illinois Society of Architects. Twenty-fourth edition. Pages 576. Size 6" x 9".*)—Many changes have been made in this edition to increase the value of the publication. It con-

tains a list of Secretaries of the Chapters of the A. I. A., the States requiring architectural registration, rules and regulations for registration of architects in Illinois and requirements of the National Council of Architectural Registration Boards. It also contains many new articles by men who stand high in the various lines on the subjects treated by them, and many new specifications and much technical data.

Among the contributions of general interest to the profession are the following: *Proper Lighting Fixtures and Their Relation to the Home Beautiful* (31f3) by C. G. Everson, President Lighting Fixture Council. 2 pages. *Structural Building Steel* (13h) by Frank J. Llewellyn, A. S. C. E. 6 pages. This article is a revision of the discussion published in the twenty-third edition of the handbook. *Steel Lumber Construction* (13f) by Stanley Macomber, A. S. C. E. 5 pages. *Revised Specifications for Plain Concrete Floors* (4b3) by Wm. M. Kinney, M. E. 3 pages. *Heating and Ventilation* (30). Edited by Fred. J. Postel, Mech. Eng. 9 pages. *Measuring Ventilation* (30d) by E. Vernon Hill, Aerologist. 1 page. *Furnace Design with Special Reference to Hand Fired Boilers and Limitations of Each Design* (30c1) by Frank A. Chambers of the Smoke Prevention Association of America. 3 pages. *Modern Sanitation of Buildings* (29a) by Leo H. Pleins, Architect and Sanitary Engineer. 10 pages. *Plumbing Design in Tall Buildings* (29a) by Thomas J. Claeys. 1¼ pages. *Varnishes, Stains and Fillers* (25b1) by R. W. Lindsay, Chemist. 6 pages. *Protective, Preservative and Decorative Coverings* (25). 5 pages. *Glass and Glazing* (26). 4 pages.

Magnesite Stucco. (21e2)—(*Specifications Published by the U. S. Geological Survey in "Magnesite in 1920." Size 6" x 9". Pages 16.*)

Per cent by weight.

Magnesium oxide..... 10-15
Silica, fine ground..... 20-25
Sand..... 70-80

This material is mixed dry and then brought to a working consistency with magnesium chloride of about 22 degrees Baume. Asbestos, not exceeding 30%, may replace part of the sand.

The following specifications for magnesite stucco were proposed at a conference of the War Industries Board, October 17, 1918:

MAGNESITE STUCCO.

Base Coat.	Pounds.	Finish Coat.	Pounds.
Magnesium oxide....	335	Magnesium oxide....	335
Asbestos fiber.....	40	Asbestos fiber.....	40
Granite-marble flour	150	Ground silica.....	100
Sand.....	1,475	Sand-Ottawa.....	1,525
	2,000		2,000
Magnesium chloride	320	Magnesium chloride.	320

Average specification:

Magnesium oxide.....	<i>Pounds.</i> 335
Asbestos fiber.....	40
Granite-marble flour.....	150
Ground silica.....	50
Sand-Ottawa.....	1,425
	2,000
Magnesium chloride.....	320

Magnesium oxide to be not less than 85 per cent of magnesia, calcined to show loss by weight at ignition of not less than 2 per

cent and not more than 6 per cent; ground so that not more than 3 per cent is held on a 100 mesh screen. Magnesium chloride to be 97 per cent pure, not more than 1 per cent CaCl.

This publication also contains tables of production and descriptions of conditions in the magnesite industry.

Magnesite Composition Flooring. (24a)—(Specifications by P. H. Bates of the Bureau of Standards. Published by the U. S. Geological Survey in "Magnesite in 1920." Size 6" x 9". Pages 16.)

MAGNESITE FLOORING COMPOSITION.

	Per cent by weight.	
	Top coat.	Under coat.
Magnesium oxide.....	45	40
Wood flour.....	15	25
Asbestos.....	5	0
Color.....	10	10
Kaolin, talc, or kieselguhr.....	10	10
Silica.....	15	15

Of this mixture 90 per cent should pass a 100-mesh sieve, and 85 per cent of magnesium oxide and 90 per cent of silica should pass a 200-mesh sieve. After thoroughly mixing this dry material it should be brought to a working consistency with a 22 degree Baume solution of magnesium chloride. Kaolin, talc, or kieselguhr may be replaced with silica.

Fundamentals of Illumination Design. (31a1)—(Bulletin 7C, Engineering Department, National Lamp Works, Size 6" x 9". Pages 44.)—This bulletin presents the principles of lightness-measurement, its control and distribution—together with scientific relations have been avoided and the presentation has been made in a manner calculated to require the least effort on the part of the reader to obtain a working knowledge of illuminating engineering.

The Table of Contents is divided into three parts as follows: Part I, Fundamental Concepts—units of measurement, photometry, and candlepower distribution curves; Part II, Reflectors and Enclosing Glassware; Part III, Illumination Design Essentials—diffusion of light, choice of lighting system, modern illumination standards.

Illumination Design Data. (31a1)—(Bulletin 41, Engineering Department, National Lamp Works. Size 6" x 9". Pages 32.)—This bulletin presents a simple method of illumination design adapted to general lighting systems where standard equipment is used. Charts and tables simplify the work and make for accuracy in the design. A color chart is included showing 32 colored paint samples giving a comparison of the light reflection factors for different colors and shades. This shows the important bearing which the colors of walls and ceiling have on both natural and artificial lighting.

The material and data included are summarized under the following heads: 1. Foot-Candle Illumination; 2. Selection of Type of Lighting Unit; 3. Location of Outlets, Mounting Height, and Number of Lighting Units; 4. Size of Mazda Lamps and Illustrative Example.

Outdoor Tennis Court Lighting. (31a11)—(Bulletin 24, Engineering Department, National Lamp Works. Size 6" x 9". Pages 10.)—The lighting of an outdoor tennis court presents a problem which is in several respects unique. The conditions to be met differ from those in other forms of outdoor lighting in that there is no fixed working plane which may be used as a basis for illumination calculations. The light must cover not only the court and the ground in the immediate vicinity but it must fill the whole space

through which a ball is likely to travel while in play. Since there are no walls or roof to reflect the light, it is necessary to depend, to a great extent, upon the direct illumination of the units; and furthermore, since the blinding effect of a brilliant source is greatly intensified when the source is viewed against a black background, it becomes extremely important to locate the units outside the normal visual field. The action on a tennis court is unusually rapid and the illumination must be steady and uniform or otherwise swift motion will appear jerky and irregular. All sharp shadows which might cause a player to misjudge either the ball or the ground must be avoided by supplying light from several angles. It is not necessary to provide direct illumination above 20 to 25 feet from the ground, for balls which rise above this height travel comparatively slowly and are sufficiently illuminated by the light reflected from the court, which becomes, under average conditions, a source of an intensity of the order of 2,000 candle-power. The units must not interfere with the play of the ball and their supports must in no way hinder the movements of the players.

There are two systems, the side lighting system and the overhead lighting system, which are applicable to tennis court lighting. In the former, the lighting units are mounted at a moderate height along both sides of the court; in the latter, the units are mounted high above the court, sometimes directly over the court and sometimes between adjacent courts. Many installations are in use today and a number of different varieties of the two systems are employed. However, the requirements of the majority of tennis courts are identical, and a type of installation which has proved itself satisfactory may be applied generally with the certainty that good results will be obtained and with a definite knowledge of the expenditure involved. A thorough study of the best systems has, therefore, been carried on and selections made of those which at the present time give the greatest measure of satisfaction. Plans are given in the bulletin for both side lighting and overhead lighting system. The side lighting systems, described first, is particularly adapted to one court. The overhead lighting system, described second, is less expensive to install and is of particular merit when a number of adjacent courts are to be equipped. With certain alterations this system also may be adapted to one court.

The Lighting of Shoe Factories. (31a13)—(Bulletin L. D. 124, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 32.)—In this bulletin the following subjects are discussed: General Lighting Requirements, Leather Shoe Factories, Sole Leather Dept., Upper Leather Dept., Stitching Dept., Making Dept., Finishing Room, Packing and Shipping Department; Rubber Shoe Factories.

The Lighting of Show Windows and Show Cases. (31a14)—(Bulletin L. D. 103, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 29.)—In this bulletin the following subjects are discussed: Reasons for Show Window Lighting, General Considerations, Lamps and Reflectors, Intensity of Illumination, Color of Light, Direction of Light, Trimming and Background, Special Considerations, Present Practice in Show Window Lighting, Show and Wall Cases, Layout for a Demonstration Window.

Bibliography. The following list indicates some of the leading articles on the subject of show window lighting which have appeared in the technical magazines during the last few years.

"Show Window Lighting," J. G. Henniger, Transactions Illuminating Engineering Society, Vol. 7, p. 178. "Show Window and Show Case Lighting," A. L. Powell, Lighting Journal, July, 1913. "The Lighting of Show Windows," H. B. Wheeler, Transactions Illuminating Engineering Society, Vol. 8, p. 555. "Illumination of Small Show Windows," H. B. Wheeler and J. A. Hoeveler, Electrical World, August 15, 1914. "Effective Show Window Lighting," H. W. Mateer, Electrical Review, May 12, 1917. "A Few Points on Modern Window Lighting," A. L. Powell, Signs of the Times, Aug., 1915. "Color of Light in the Show Window," A. L. Powell, Signs of the Times, May, 1917. "The Lighting of Small Show Windows," J. A. Hoeveler, National Electrical Contractor, April, 1917.

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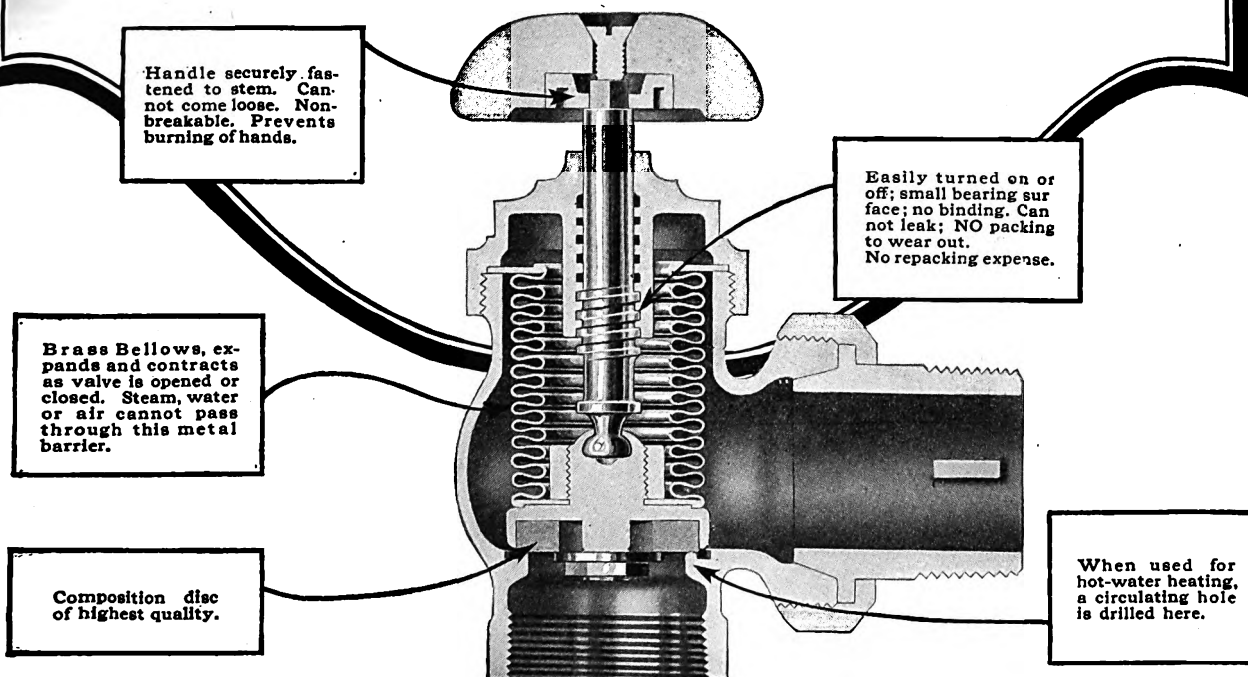
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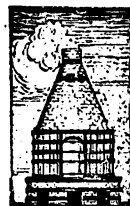
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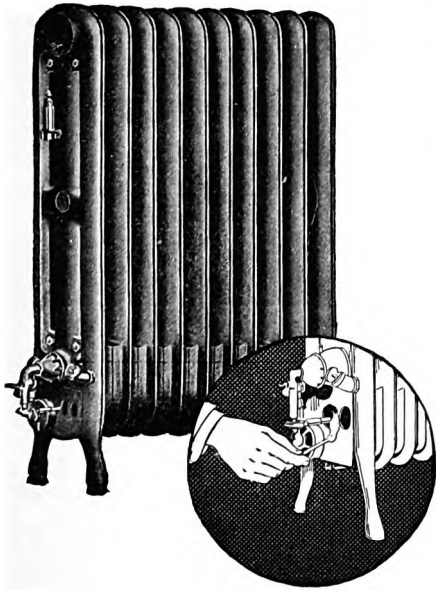
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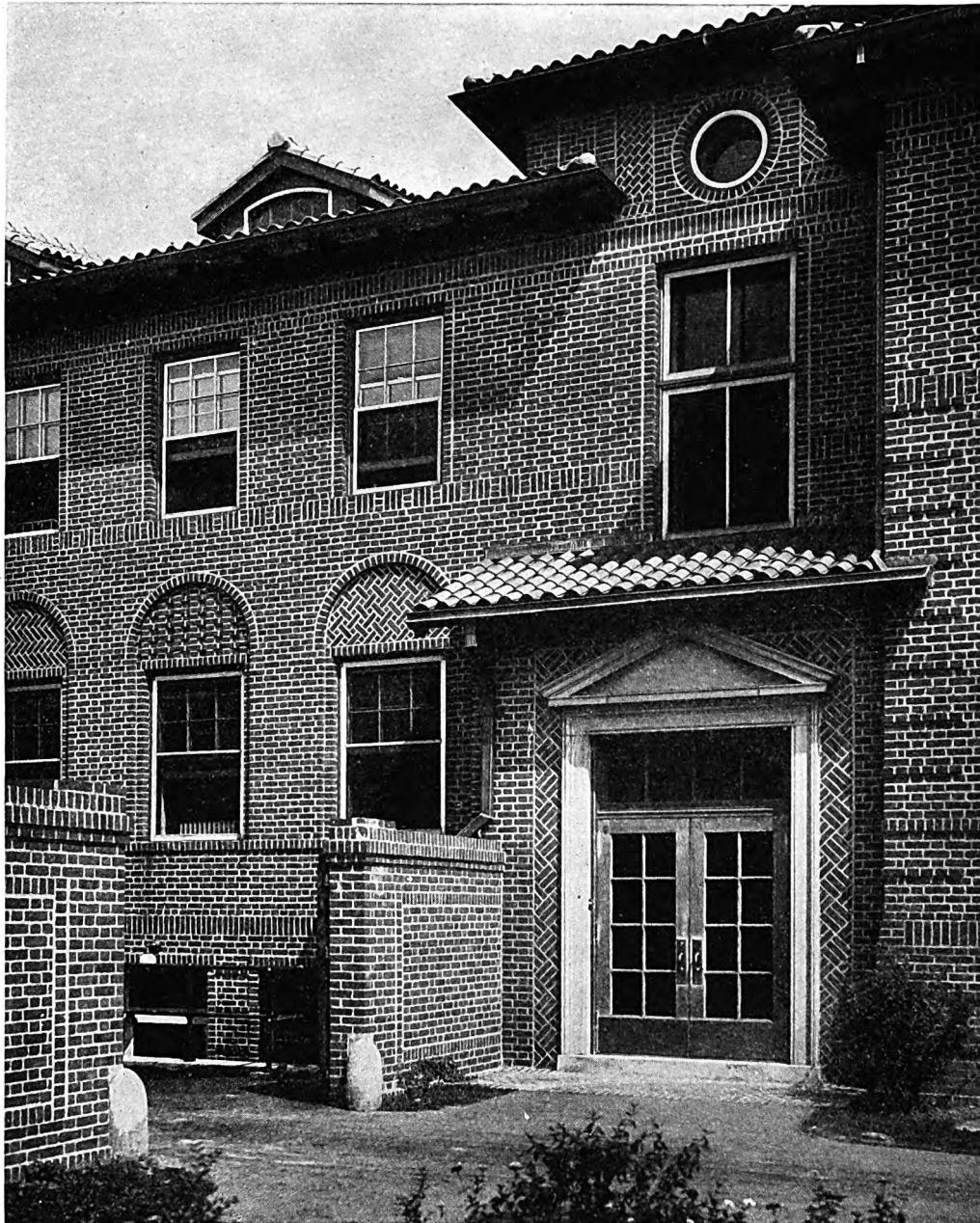
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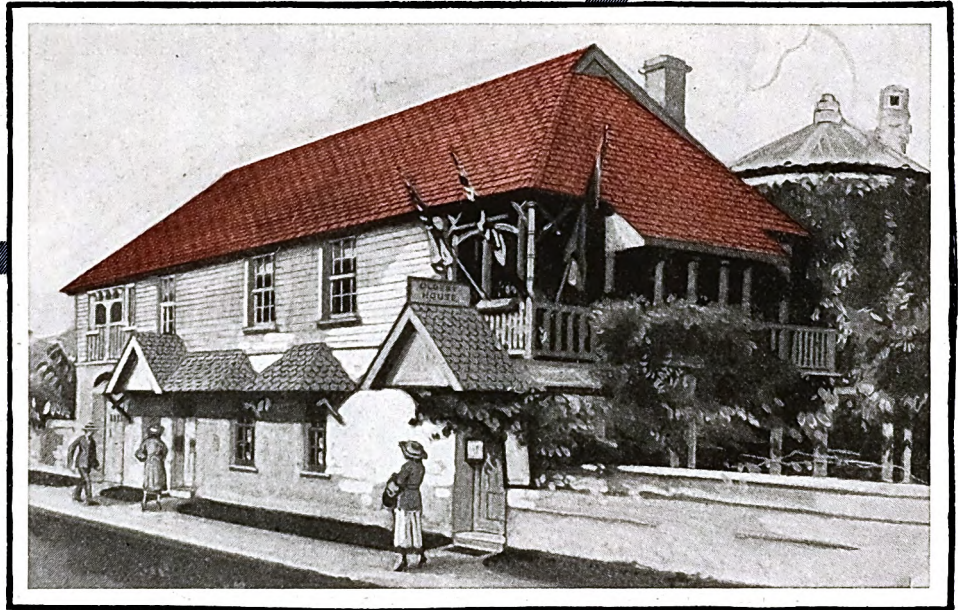
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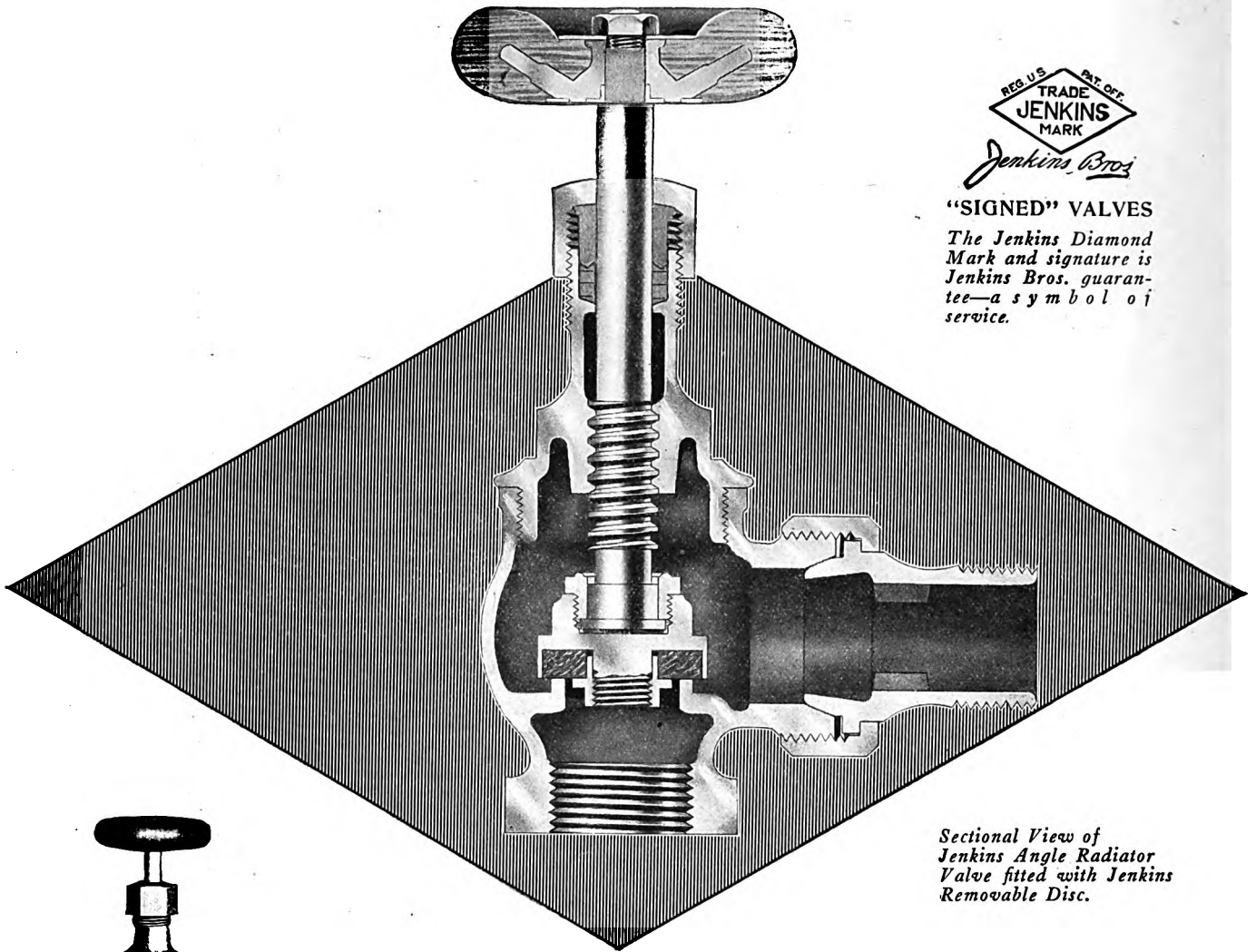
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Sectional View of Jenkins Angle Radiator Valve fitted with Jenkins Removable Disc.

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Fig. 168

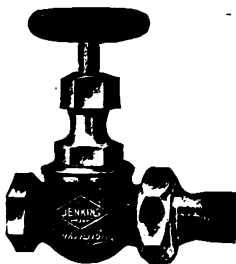


Fig. 167

A Heating system, no matter how good can be no better than its valves. Trouble is frequently traceable to cheap light weight valves. Assure valve service by specifying genuine Jenkins "Diamond Marked" Valves—valves that have been long and widely known as a standard of dependability.

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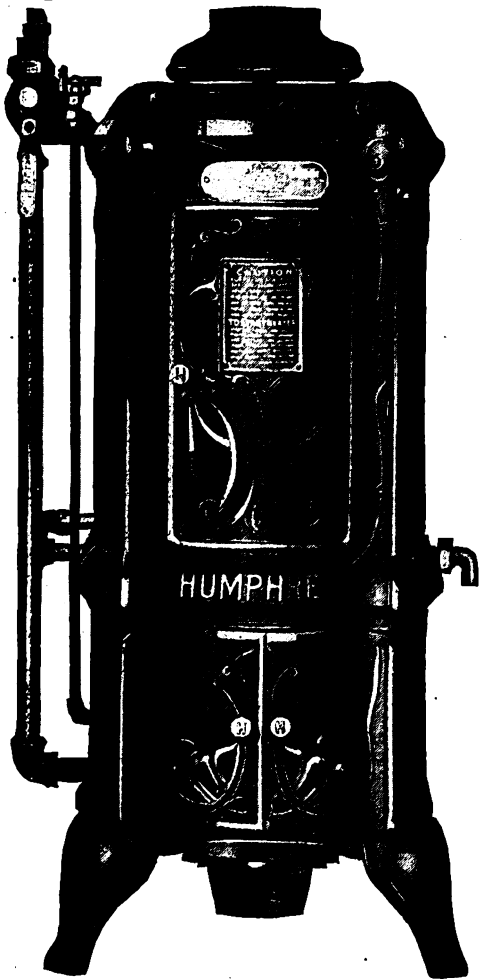


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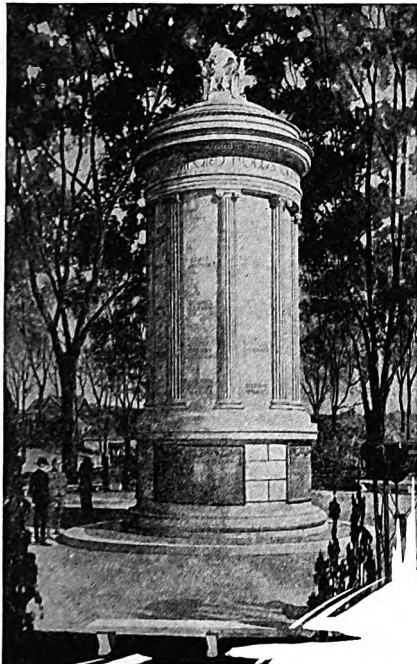
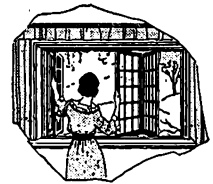


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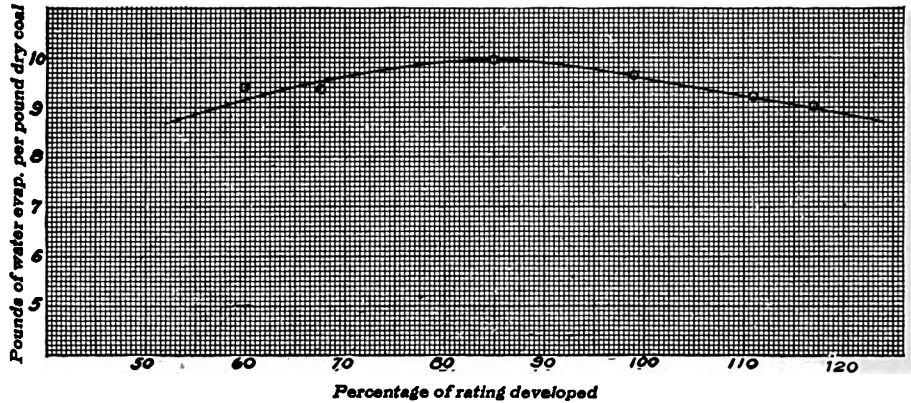
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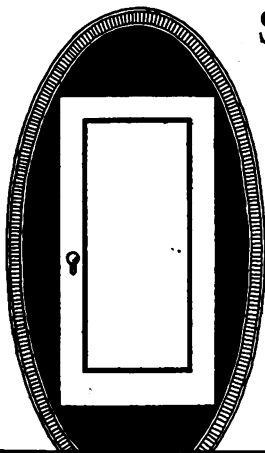
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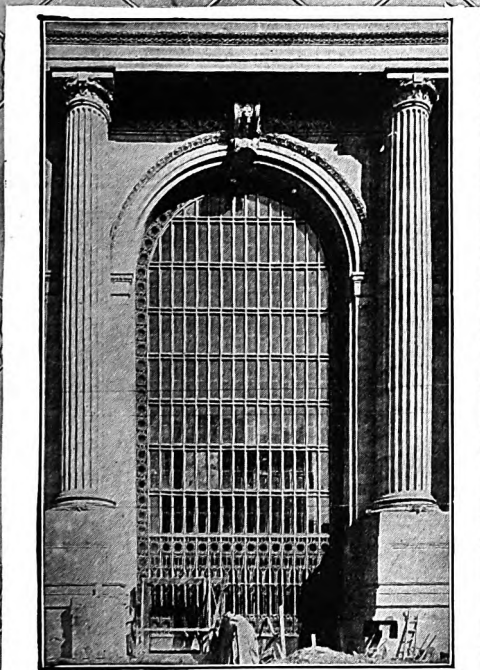
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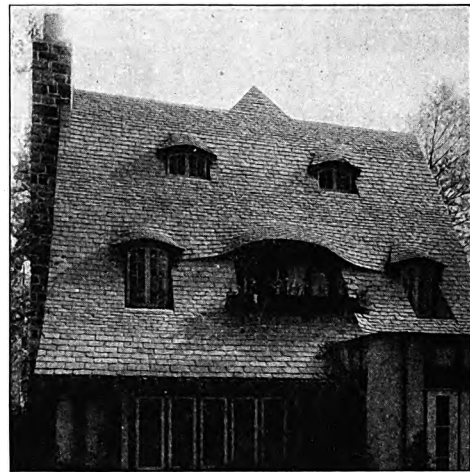
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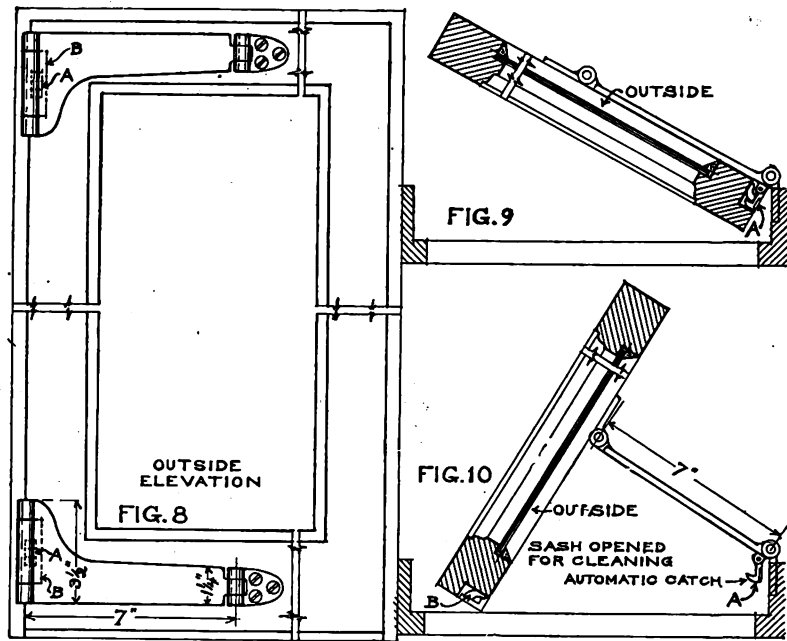
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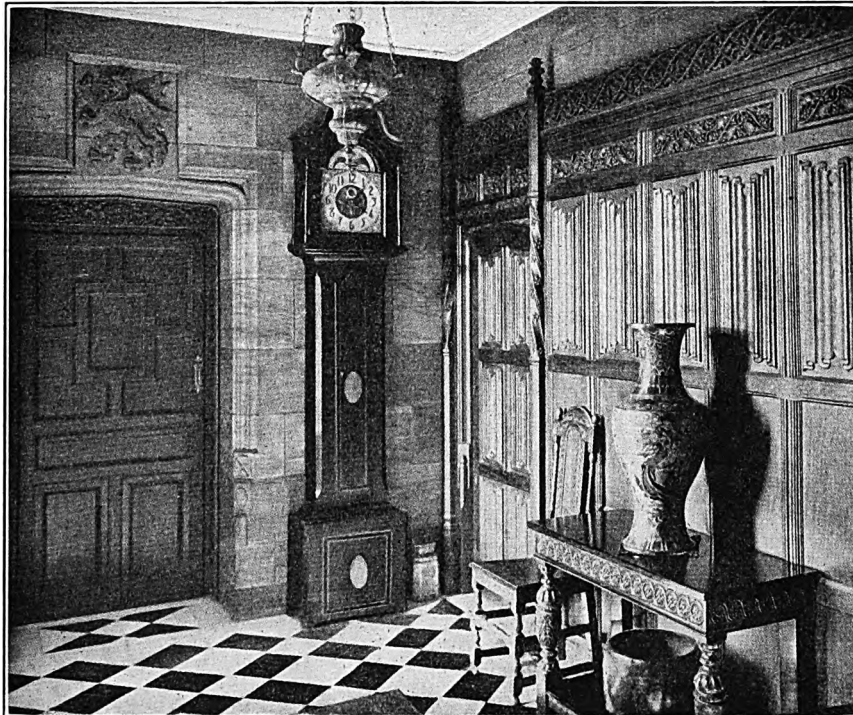
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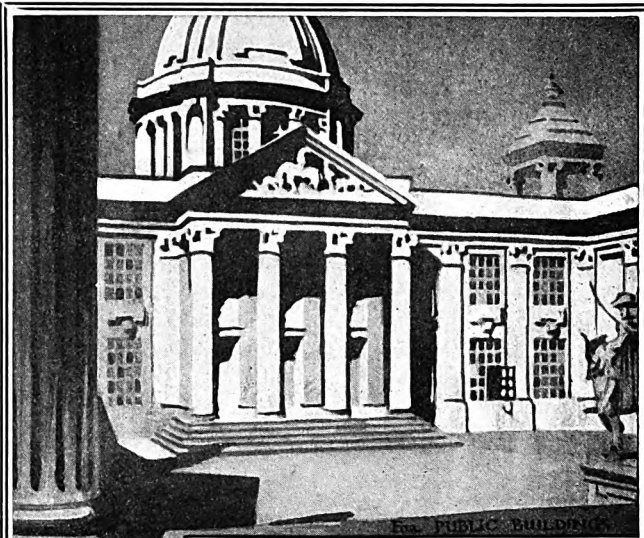
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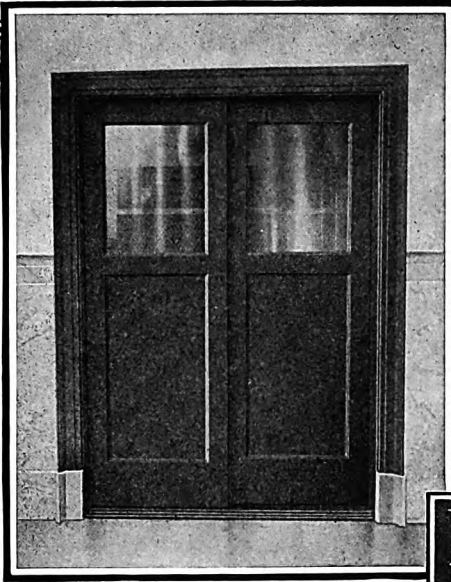


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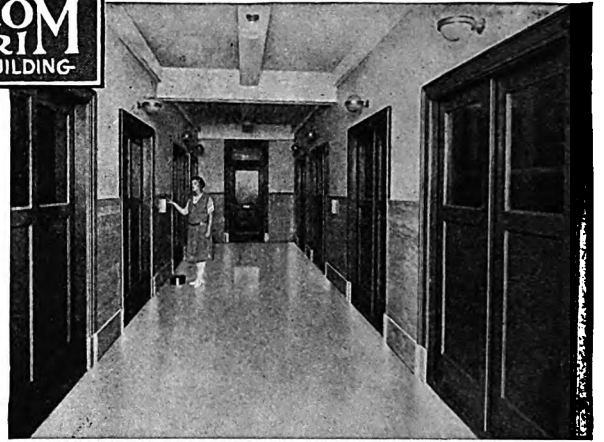
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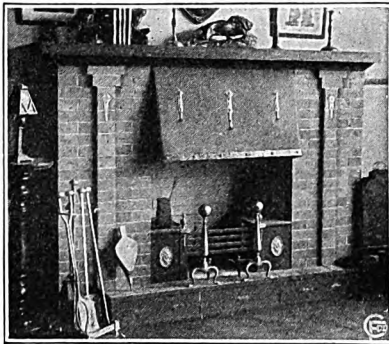
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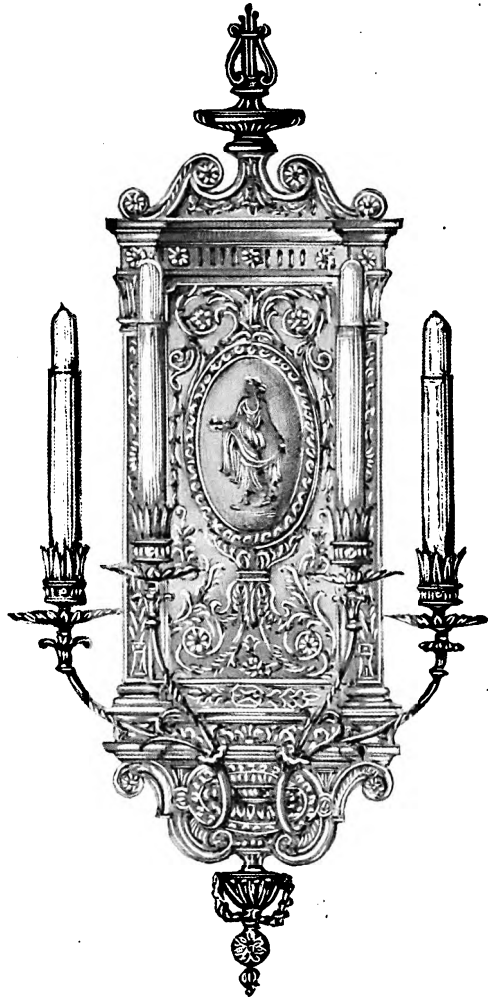
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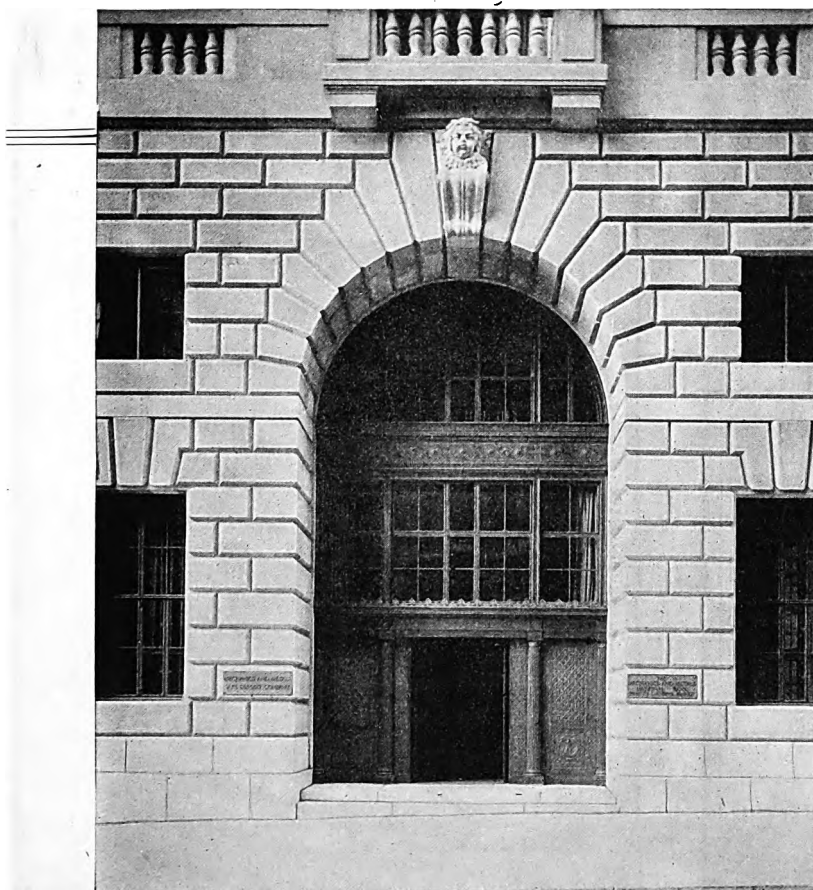
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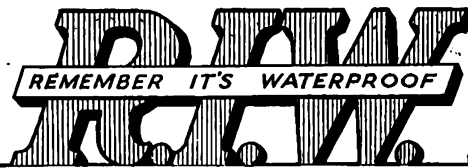
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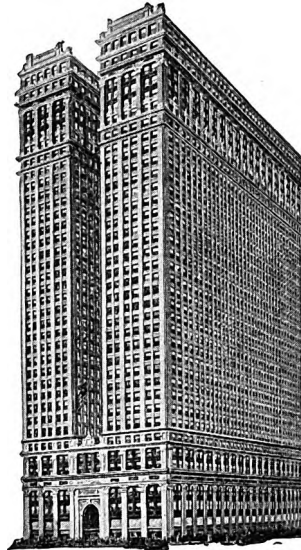
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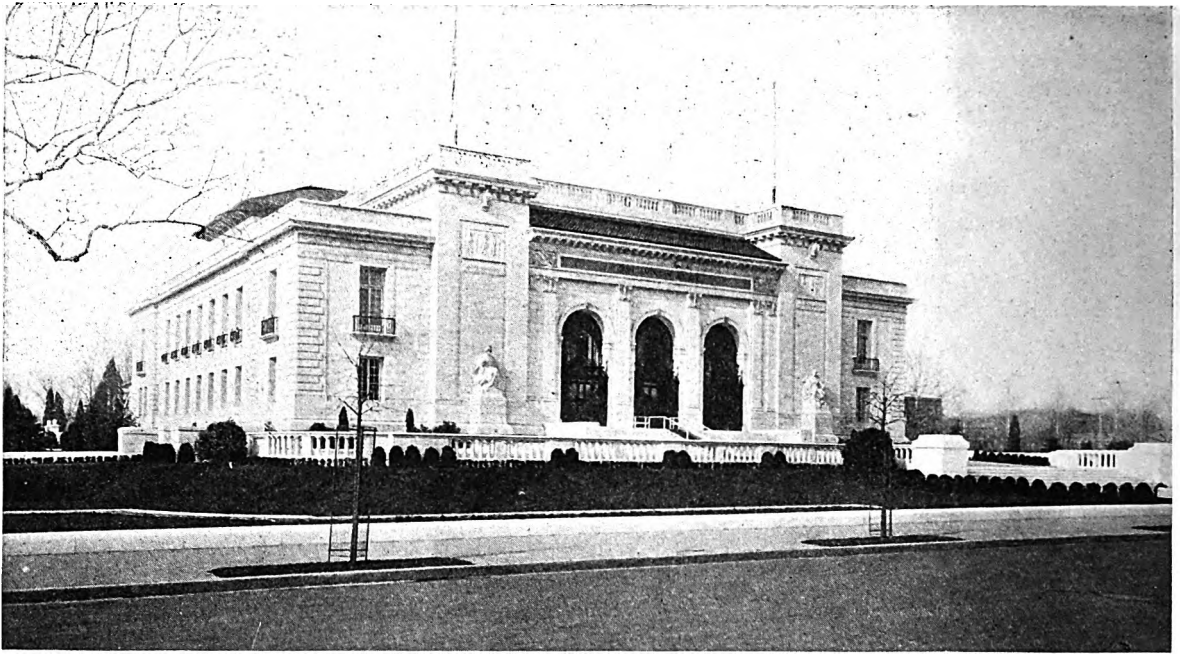
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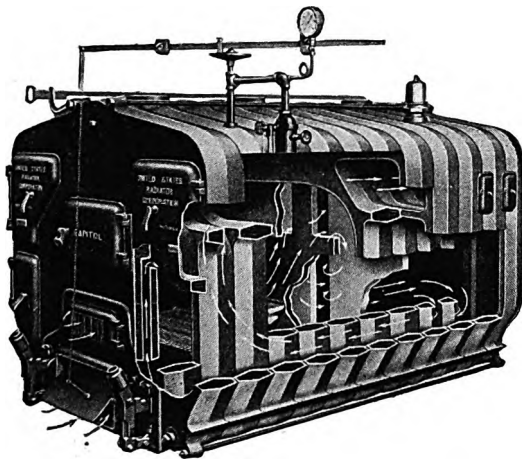


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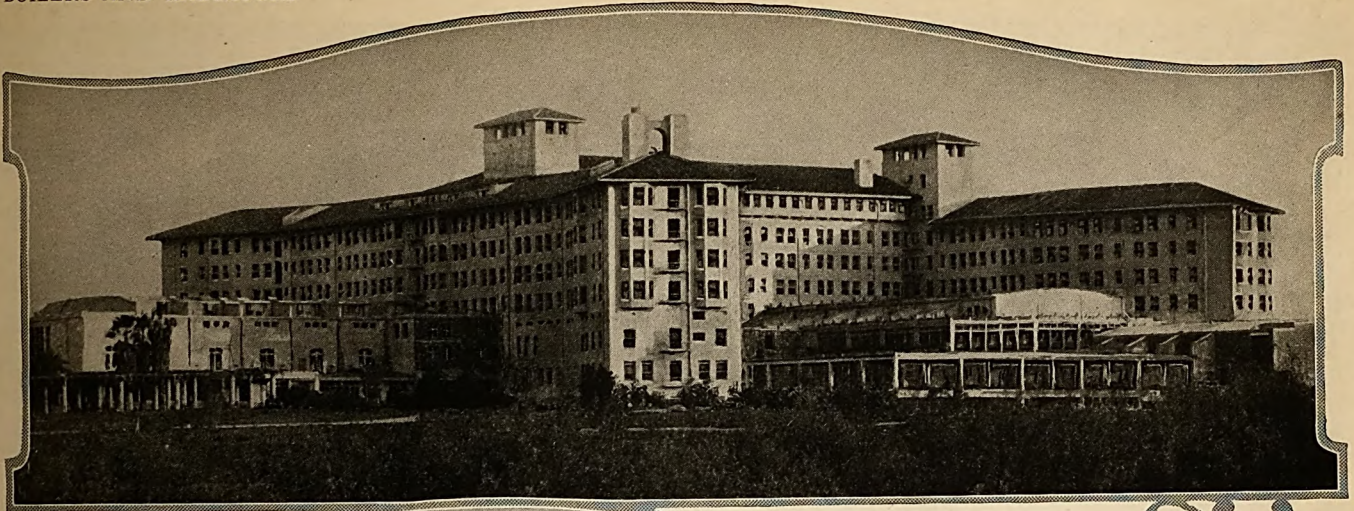
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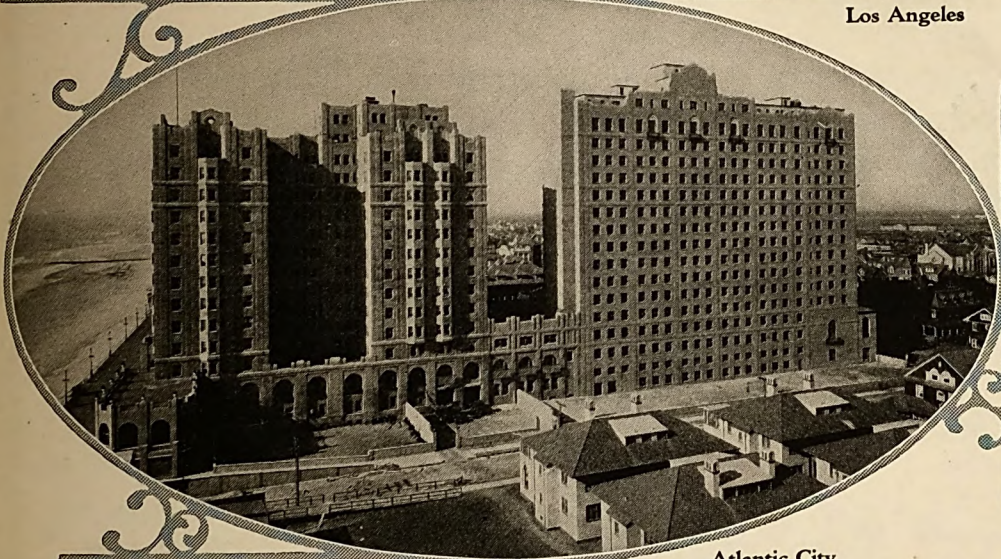
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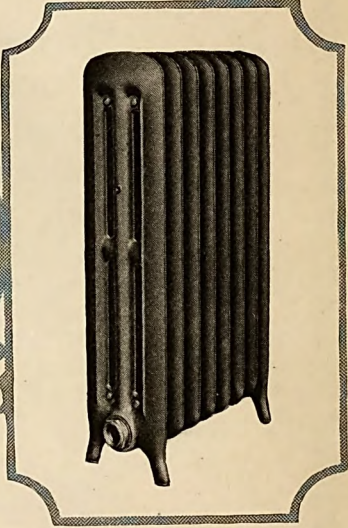




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JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Volume X

MARCH, 1922

Number 3

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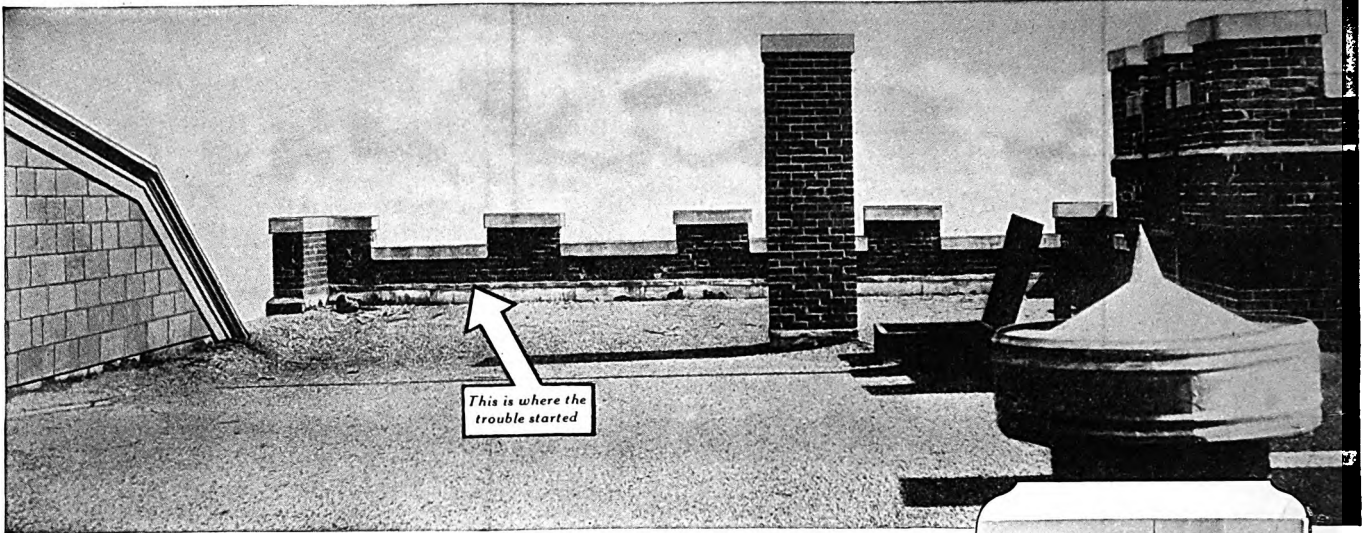
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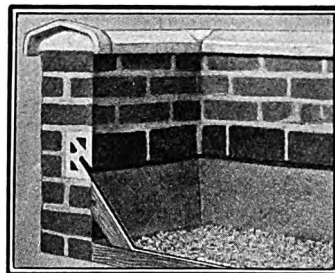
The architect immediately investigated the trouble at St. Johnsbury. What he found there is shown by the illustrations. The roof itself was in perfect condition.

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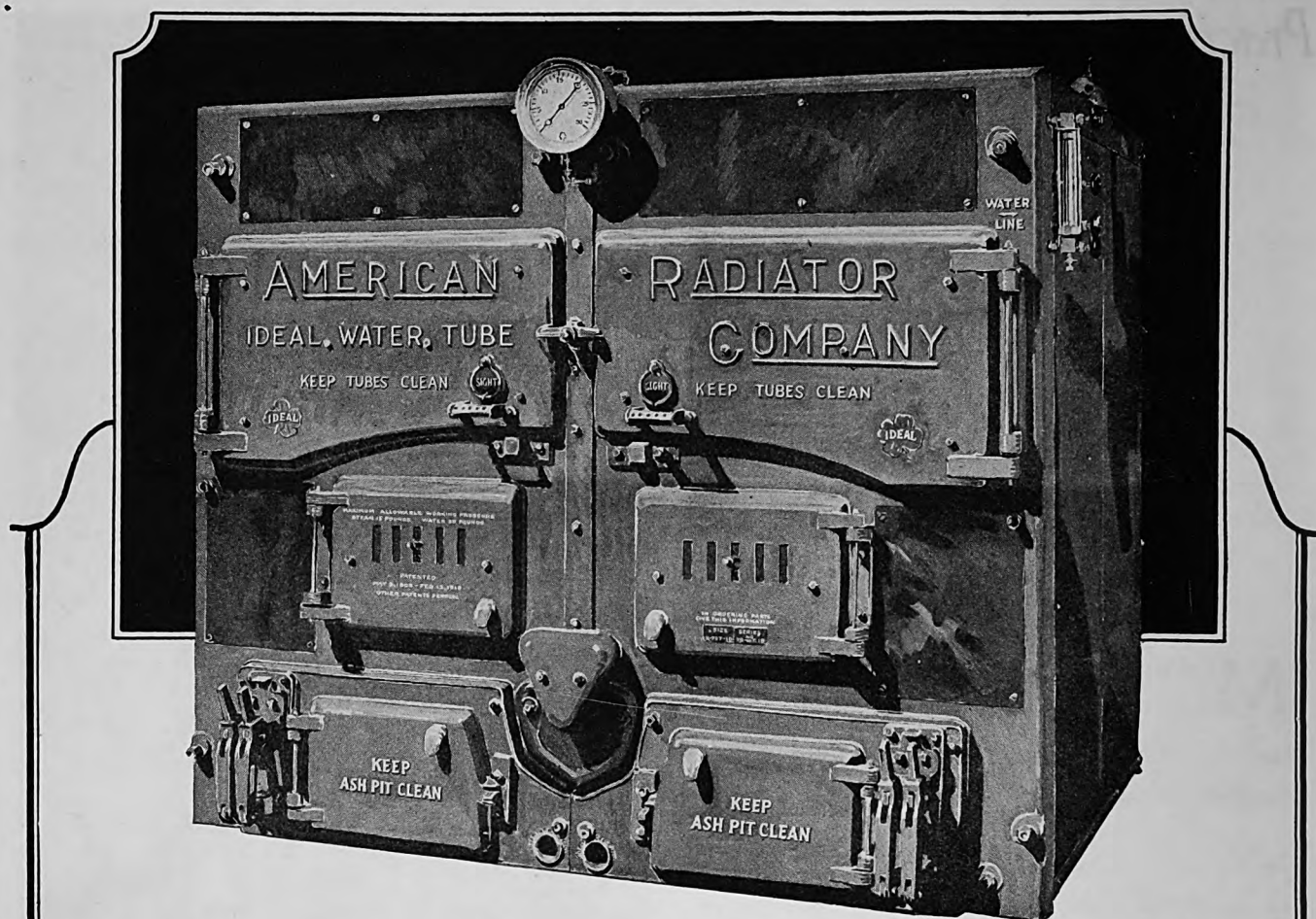
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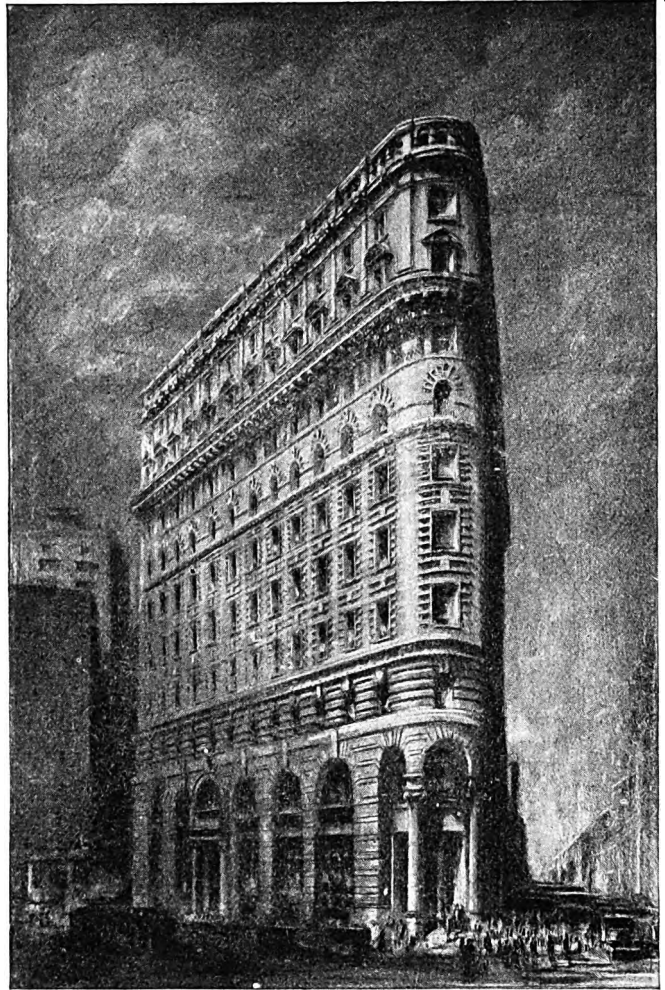
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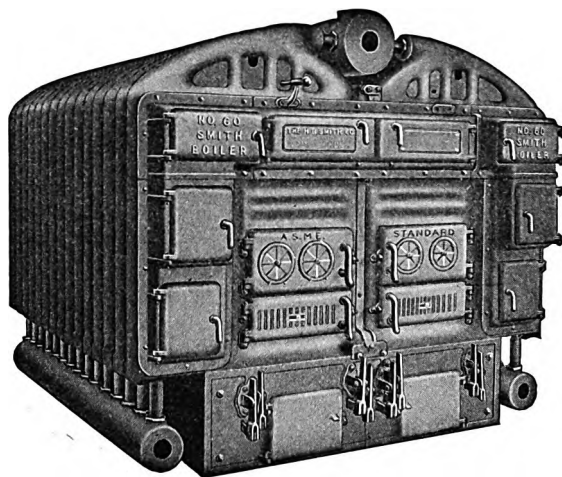
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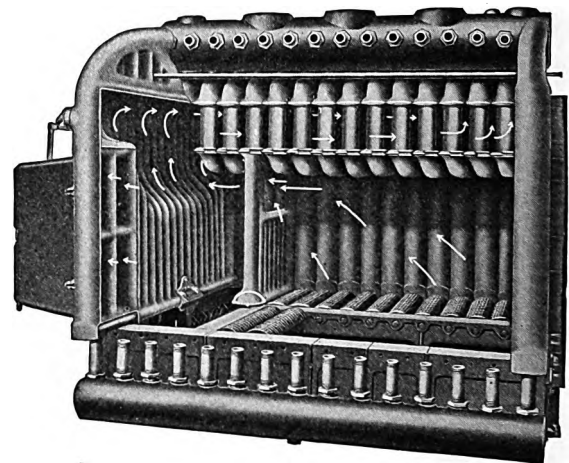
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(See page 67)

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No. 3

Shadows and Straws

THE ANCIENT ARCHITECTURE of England is fast nearing what almost might be called a crisis. Very many old buildings are in urgent need of difficult and costly repairs. Westminster Abbey has needed a large sum of money which, though raised and spent, promises still be to inadequate. St. Paul's is asking for thousands of pounds. St. George's at Windsor is reported to be in imminent danger, while Lincoln, Ely, and Peterborough are all confronted with grave problems of preservation. Ultimately it seems likely that the question will have to be considered as a problem of national finance and even of taxation. While it is true that on a recent appeal there seems to have been raised £50,000 for preserving the old home of the Society of Arts in the Adelphi, London (designed by Robert Adam in 1775), the fact also remains that it is becoming more and more impossible to rely upon such contributions from private sources. Indeed, the question is already being asked in the English press as to whether the State, confronted with the apathy of the average taxpayer in these matters, has the right to compel him to contribute toward the maintenance of ancient and historic buildings in structural safety, at least.

INDEED, it is not at all unusual to read, nowadays, the words of pre-parting addresses delivered by the land-owning nobility of England to the assembled tenants. Even the Duke of Portland, reputed of great wealth, spoke solemnly to the tenants of Welbeck. "It may or it may not be possible for me and my family to continue to reside at Welbeck," said he, "but I fear there can be but little doubt that those who come after me will not be able to do so." Now as it was largely this class who supported so many of the innumerable private funds such as those for the preservation of old buildings, one may well understand why the question is likely, at no far distant date, to become a State matter. Actually, of course, it is the people who really support all of these things. The way of the present order has been to allow the collection and disbursement of the money through

private hands. Why should not the State collect and distribute it with less waste and greater benefit?

It is quite true, as the *Guardian* remarks editorially, that commissions for great English country houses will be rare in the land hereafter. The days of Haddon, Montacute, Longleat, and Knole are gone. It seems impossible to believe that they will return. Yet, if we deplore the happening, in remembering certain unmistakable charms, shall we not on the other hand look forward to the vastly greater architectural problems that are everywhere confronting us. Never was there a time with such possibilities. Never was the world more ready to achieve a magnificent architectural flowering. What we fail to see is the kind of flower that is waiting to bloom. It will not be the old kind, born in princely vanity or aristocratic ostentation. It will be a newer kind, more closely related to our modern life with its vaster scale. Planning must advance from the narrow limits of the individual and generally selfish use of land, to the point where it will see communities as living organisms, possessing equally the germs of life and the real basis of architecture.

"ART for art's sake" is a truism that we have covered with ridicule. It does not pay, we have cried, and our art reformers, in return, have cried to heaven that art will pay if only we will use it in our business. All of which is something very like what it is thought impolite to call a lie. Art never was meant to pay, in the sense of conferring a money benefit under a profit-making system of life, commonly called and commonly mistaken for civilization. "Wherever art has flourished securely," says Mr. Clutton-Brock, whose writings are now coming to be known in our own *Atlantic*, "there has been no question of making it pay. The Greek Drama was not expected to pay, nor was the Parthenon, nor were the Gothic cathedrals, nor the paintings of Raphael and Michelangelo. Certainly, if we are to have any great and secure art, we must expect it not to pay. The fact is, not that we can not

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afford art, but that we prefer to spend our spare money and energy, and more than we can spare, on nonsense for nonsense' sake; and that, not our poverty nor our stern common sense, is the reason why art does not flourish among us.

"Stern common sense, if we had it, would lead us at least to the beginnings of art, to those conditions without which it cannot flourish at all. Take, for instance, Manchester. Was it common sense to allow it to be built anyhow and to suffer anyone who chose to darken the sky with smoke at noonday? A people that cared for art, and was ready to make a common and individual sacrifice for it, would have built cities better to live in and better to work in, and would have saved incalculable millions by doing so. But here I will confess that I do not believe any people can be led to this far-seeing wisdom by common sense alone. Human nature is such that it can attain to common sense only as a by-product of the high disinterested passions, such as the passion for beauty. If we aimed at beauty, we should also achieve cities that were good to live and work in; by trusting in our common sense we have achieved the slovenly muddle and dirt and discomfort of our big towns.

"That is why I would preach the doctrine of art for art's sake. Love beauty, and many other things shall be added unto you; be indifferent to it, because it does not seem to pay, and you will find that the common sense you trust in is common nonsense. And, after all, are we famous in history because of our merchanting and engineering and the like? Victor Hugo said that it was Shakespeare made the difference between England and Carthage. Carthage was destroyed because she would not fight for herself but left Hannibal to fight for her; but we were not destroyed in the war, because we had something in our past to fight for besides merchanting. This something meant to the common man of today whatever in the past Englishmen had done disinterestedly and for the love of it; it meant, though he would never use those words, art for art's sake. And if, now that we have won, we are content to live lives only of business and what we are pleased to call pleasure, our minds may be slow, but they will not be logical. We shall make an England not worth living in or fighting for; and sooner or later it will go down, like Carthage, through the weary indifference of Englishmen.

"The great problem of our society, different from the problems of any former societies and even more urgent, is this. We have, through our mechanical contrivances, far more superfluous energy than any former society; but we have not learned yet how to turn that energy to the activities that are called spiritual. It is, however, becoming more and more clear that if men use all their superfluous energies for material purposes they poison themselves with those energies, as we poison ourselves with food if we eat too much of it. The war itself came of energies turned to material purposes which should have been turned to spiritual. Instead of spending our money on art and science, we armed ourselves like lobsters or rhinoceri; and then the most armoured rhinoceros of them all attacked the others, trusting in its triple hide. And, because we were so heavily armoured, we almost destroyed our whole society before we had finished. That is one example of the poison of superfluous energies applied to material purposes; and as for the others, they are everywhere. We might now refuse to spend money on art with some reason if we were living stern ascetic lives like Puritans. But we are not; and nothing will make us live them except a passion for spiritual activities, and among them art for art's sake, whether it be music or buildings or the drama. So long as we trust in our common sense we shall waste our superfluous energies on material pleasures and defences and poison our minds and bodies with that waste."

QUITE in a similar vein were the remarks of Lord Crawford, speaking recently at the Manchester Art

Gallery. "In art," said he, "ocular criticism ought to be restored to the status it used to enjoy in the earlier days. We should let the eye tell its story to the brain, and let it take the initiative in visual criticism as against purely intellectual criticism. We ought to trust more to the eye and less to the intellect in the criticism of art. A work of art once preached its own gospel, and public opinion used its eyes and pronounced its verdict without external help. The old masters knew no criticism beyond comparison with the truth. The public ought not to lean too much upon the professional critic. It ought to begin to criticise for itself and realise that criticism was not the sole province of the professional."

Wise words. Yet how difficult to apply the counsel they contain. Education does not, as at present conducted, invite initiative. It is based upon the process of molding young minds into certain ruts and grooves, and, as a consequence, the average person is utterly afraid of speaking his mind on any question of art. Rather does he seek to fortify himself behind what he thinks is the accepted verdict or the going opinion. And the exceptions,—well, of course, they have a hard time, until the old rut happens to be abandoned. Then, they seem quite natural and respectable people. In the meantime, the professional and amateur critic does a thriving business in supplying mental fortifications and in feeding the opinionated vanity of the group, which, after all, has to consider the eternal problem of bread and butter. Even so, by the way, it seems a dreadful fall from the days when architecture was publicly discussed only by those who had seen the building about which they talked, to the present time when anyone having some facility with words,—to which is frequently added a vitriolic or sarcastic pen,—criticises half-tone plates of photographs of buildings, sometimes even before the buildings are built,—when the criticism is often based upon half-tone plates of photographs of wash drawings of buildings! And always with the grand manner and that flourish of trumpets which, like the fanning of the vampire's wings, prepares the victim for the painless insertion of the proboscis through which the sapping is to be done. The vampire sucks blood,—the critic saps something more precious,—the will to think and to know those values in beauty which alone have an abiding meaning, because they have been found—alone.

THE BILL for registering architects in the District of Columbia, to which much impetus has been given by the dreadful fatality attending upon the Knickerbocker Theater disaster, has received the tentative sanction of the Executive Committee of the Board of Directors, and will undoubtedly be approved by the full Board, even though it puts

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the Institute squarely on record as favoring registration,—a thing which the Institute has so far declined to approve except in principle and as deemed expedient by local authorities.

It is time, much as we may doubt the value of registration as an instrument for directly improving the esthetics of architecture, that the marvelous myth about architects in this country was put to death. There are many interests which seek to keep alive the belief that there are thousands of architects in the United States, and to flatter the veriest tyros and amateurs into the proud thought that they belong in the class and are entitled to professional consideration. There are, as a fact, perhaps 4,000 men in the United States who can possibly deserve the title of architect and who can safely be entrusted with the design and supervision of a building. There are some thousands of others who masquerade. There are some hundreds of others who are really deserving men, struggling to meet the honest needs of their clients in many small and trifling commissions. But a study of the effect of the registration laws in the United States will convince any disinterested person that public policy demands the speedy enactment of such laws in every State in the Union, to the end that standards of practice may be raised to a level insuring the minimum of fatalities and dangers to the public at large. In the course of not many years we shall then be quite astonished to discover what a fiction has prevailed, as to the number of architects in the United States, and very likely we shall also witness a considerable architectural development, the moment we begin to cease the making of architects by means of pictorial methods. The so-called architects,—and their name is legion,—remain in practice only because of their ability to live off the brains of their fellows. And, through vanity and nothing else, the competent lend their brains to the incompetents, who fill the land with their bastard spawn, often as dangerous to life as it is insulting to the senses. Registration, in time, will put an end to a great deal of incompetence, and the recent theater disasters demand action by the real architects in the profession.

The Boomerang

One day he came into my office; said he knew well enough that I would not go into a wildcat competition. But they were agitating a new school in his home town; he wanted to get in on it; and would I mind if he associated with a young firm who was doing that sort of thing.

Of course I did not mind his associating with someone else; but I had no sympathy with such a procedure; and I repeated the time-worn arguments against wildcat competitions; pointed out how it ordinarily worked out and all that sort of thing. But it was no use for me to argue; I was old (which I reject most emphatically) and well

established (which is not at all the case in these days of architectural mirages); I could afford to let opportunities slip by like the hours if they made no appeal to my fancy. But he was young and had just returned from the Conflict; the cost of living was bearing down upon him and time was fleeting. How could he gain a footing if opportunities were not seized?

My argument made no appeal; it was useless to argue. So the association was formed for the project and competition drawings were submitted to the School Board.

Some time elapsed. He had been home; had talked with the School Committee; the prospects were not at all promising; most of the members of the Committee had fallen for a most inferior design—one much more expensive and not well adapted to the conditions of the site.

Some more time elapsed. A letter came one day from the chairman of another committee of another project in his home town,—a project upon which we had been working in association for several months. In this case a contract had been executed covering our work and defining the terms of payment, fixing a limited fee for preliminary sketches. For at the outset the cost of the project could not even be guessed at; the requirements were at first most indefinite. But they became definite soon after work had started. We thoroughly threshed out the approximate cost of the building, using the then current prices which had grievously shocked the committee. Altogether, three sets of sketches had been prepared for schemes gradually shrinking in volume until at last it appeared that it was possible to provide what was needed within the cost limit. And it appeared that all were satisfied. Certainly we had gone into the matter thoroughly; statements of cost had been made with each of the three sets of sketches; and we had spent somewhere more than the limit of our remuneration set by the terms of our agreement.

A letter came one day from the chairman of this committee. He had gone into the matter thoroughly and had come to the conclusion that the building as finally designed was most unsatisfactory; it would cost altogether too much; we had proved to be expensive architects. In view of all this, would we settle for a sum approximating one-third the amount then due us?

This was somewhat puzzling. My associate had just been home. He had gone not as my associate but as that of the young firm who go into wildcat competitions. He had gone as the anxious competitors go to look after the judgment of designs in wildcat competitions. At this time everyone had appeared satisfied so far as our project was concerned. It was a matter of raising more money and smoothing out some differences between those who would call it a memorial and those who would call it something else.

So an inquiry was made as to what had occasioned this change of attitude. And this is what we found: it had been noised about that the committee in charge of our work had entered into a contract with us and had agreed to spend real money—a considerable sum, it had been stated—to engage a firm of city architects. This was an unheard of procedure—a case of having “put over” something. Was it not plain that such an expenditure was entirely without provocation? Had not the School Board been able to get any number of sketches by simply

letting it be known that the community at some time in the future might possibly build a school? Certainly the committee in the case of the other building had not been very astute. It had plainly been bamboozled by the oily words of a good talker. And to have it said of a committee and its chairman that they have been bamboozled does not add to one's dignity if one is on a committee.

So, there is the chance that he will lose out upon the project on which we are associated, and the chances of his winning out in connection with the school are not as good as they might be. The agreement, which in the case of our project had appeared as a perfectly fair proposition, became over night a perfectly obvious case of "putting one over." And while "putting one over" is not ordinarily treated as an act to be censured, it carries its penalty all the same. One must watch out for those who so view the matter.

So, said he, what had best be done?

But I did not know. Had he been hit a crack in the jaw, I might know what to suggest. He might hit back or he might run off and get a policeman. There were many things he might do under such circumstances. But

to be hit by a boomerang flung by his own hand—that was different. I really did not know what he had best do.
R. W. T.

Registration

The West Virginia bill for the registration of Architects is so closely framed on the principles laid down in the "Model Law" adopted by the American Institute of Architects and is so just in its general provisions that it is not likely to involve the profession in any annoying technicalities. The only provision which may disturb is that relating to the fee for registration or renewal. If you are unfortunate enough not to be a legal resident of that state you have to pay a fee of \$50 to obtain the right to practice. If you carelessly fail to renew your certificate at the end of the year you must pay a fee of \$10 for renewal. You have to pay \$10 for a renewal even though you have in mind the necessity. This requirement of the law may be criticised but the bill shows such careful thought in its preparation that it is to be presumed that the financial conditions were well considered.
W. P. B.

The Architect and the Engineer

By WILLIAM L. STEELE

Differentiations

The architect has always had to do with buildings and their surroundings and equipment. His field may and frequently does extend to groups of buildings and, so to city planning. He may be capable also of designing and directing the decoration and furnishing of a building down to the last detail.

The engineer may also have to do with buildings and their surroundings and equipment, more particularly those of commercial or factory type. His field may and frequently does extend, to groups of buildings, and so to city planning. He may be capable also of designing and directing the mechanical equipment of buildings down to the last detail.

This very general outline seems to indicate many points of contact between the two professions and only one difference. Hardly ever does an engineer assume to design and direct the decoration of buildings. There is, however, a deeper difference,—a finer distinction. There are architects who specialize in particular types of buildings, who do nothing but design and supervise the building of banks, churches, schools or theatres. There are men who have been trained to be architects who narrow their field to mere details of design, arrangement, or decoration. There are architects who devote all their time to quantity surveying, who do a great deal of landscape work,—who are students and practitioners of city planning. Some have even gone into contracting and building.

In the field of engineering, for the purpose of this article, we ignore the many branches of service not concerned with building, yet we still have left a number of interesting specialties. The structural engineer deals with problems of construction but does not ordinarily plan the building.

The architect usually does that and when the design is fairly well articulated, the structural engineer may criticize it in its relation to economy in the use of material; he may suggest the best methods of fire-proofing, the type of foundation, wall, column, or floor construction, and then he figures and designs the footings, columns and all other structural members. For heating, plumbing and wiring a building there is an engineer expert qualified to determine the most economical and efficient equipment. Nor should the civil engineer be forgotten for he must survey the property, establish the "metes and bounds," lay out the contours, and often, as in the case of intricate trackage problems, his advice has a great deal to do with the final form of the building.

The Mold

The architect is working with all this engineering talent, coordinating it, molding it into the fabric of his design. Often compromises have to be made, sometimes in the interest of utility, convenience, or appearance on the one hand or for economy and efficiency on the other. It will not suffice to design a building solely from the structural point of view, any more than to design it solely from the esthetic or from any single point of view. The finished building must satisfactorily fulfill the main essential requirements and exactions of all points of view as well as those of him for whom the building is built. We may go farther, for the real needs of the man who wants a building may be quite different from those he admits and proclaims,—the difference between what he thinks he wants and what he ought to have. Too often these needs are not supplied, and after the building is finished and its weak points in design, its superficial and short-sighted planning begin to be manifest, the owner may then in some

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measure realize how far his building is short of what it should have been.

The Form

Who is to supply this sagacity, this far-sightedness? Either the architect or the engineer may, but I think I may safely say that this peculiar talent belongs more naturally in the architectural than in the engineering field.

Go still farther. A man who builds a building of his own likes to believe that he has a good looking building. So it may seem, in a sense, for a time, yet later on it may become successively a thing to be tolerated, endured, and then abominated. Or it may be a building which grows with the passing years. It may be anything between these two extremes, but the ideal is surely the latter. Along with the increasing joy in its fairness to the eye should go a kindred pride and pleasure in its use and occupancy. Things that were passing fads of the moment have had no part in it. It fits, and is easily adaptable to those changes in conditions of occupancy which the years so surely bring. Its honesty and fine quality of construction make the up-keep light. Its scientific plan has made possible efficient and economical administration. Its first cost, however high it might have seemed, is forgotten in the satisfaction which the serviceableness and winsomeness of the building have produced in the owner's mind.

What wisdom will secure these desiderata, and who is to supply it? So far as I know engineers do not claim very much in this particular field. It requires a faculty of a creative nature. It is not a dream faculty. It exists. We find it unmistakably in all the great architecture of the past. It belongs historically to the architect. "Why then," you say, "does he not claim it and exercise it? It is the one thing since the beginning of building that he alone may do—that is his own especial divinely appointed faculty." To answer that question adequately would require an entire essay. Let us pass it for the moment. The personal element looms large in all of this because we are talking about *men* who practice either the "*profession*" of architecture or engineering, or both.

The Men

What is a profession? I do not know, in the last analysis, unless it be one of such walks in life in which the service rendered is not measured in terms of money, but in terms of the very best endeavor of the trained practitioner. How, then, shall we recognize as professional the many who, in both architecture and engineering, do their work on a strictly commercial basis? We will not discuss the lower forms of graft and dishonesty which here and there are indulged in by members of our professions. The relations of architect and engineer, however, when studied into, reveal many dishonest conditions which ought to be rectified. It is hard to see how a man can be honest with his neighbor if he is dishonest with himself. No engineer and no architect who is honest with himself, can seriously entertain a belief that he is sufficient unto himself, that he knows all there is to know, or even all that he ought to know about his profession. And yet there are architects and engineers who talk and act as if they so believed. There are architects who claim that they can handle their building problems without the aid of

the engineer. There are engineers, likewise, who claim that they can take ample care of their building problems without the aid of the architect. Their works prove them both wrong. There are architects who are consistent in this and who actually do such work as they have without assistance, but by far the majority of those who claim self-sufficiency, secretly conspire against their clients, as well as the honest men of both professions, by making use of so-called "free engineering service." This is offered by a great many manufacturers and jobbers of building materials, because it gives them the best possible "approach" for a sale unhindered by real competition.

There are other architects who frankly admit that they need engineering help, and who still can not see the wrong they do to themselves, their clients and their profession by using this mis-named "free" service. There are still other architects who admit the need, and who ally themselves on an equitable financial basis with such structural and mechanical engineers as the work in hand requires. All these cases can be reversed and put with equal force for the engineers, although those who are practicing "architecture" are comparatively few.

Assuming a relationship that is open and above-board, that is fair and equitable between architect and engineer on a building problem, it is easy to see how a strong architect may dominate a weaker engineer, or a strong engineer may dominate a weaker architect, or, again, men of equal character, ability and brain-power may lock horns and mess things up by the unyielding impact of equal and opposing forces. The ideal relationship is reached when each unselfishly devotes his best effort to a harmonious and happy solution, having in mind first: The interest of the man who is spending the money, and second: The ideals of the profession which each represents. (I am here speaking of things as they are and not of things as they should be, when the needs and the welfare of the community shall take precedence of all.)

The Leader

We tread upon dangerous ground when we begin to discuss the question of priority as between engineering and architecture. The point is sometimes raised, and let us consider it, fairly and generously. There is surely no question about it when we discuss statics, hydraulics, physics, chemistry. The engineer is supreme in the practical application of these sciences. In the vast fields of machine design, thermo-dynamics, electricity, standardization and testing of materials, bridge building, reservoirs and water supply, power development, sewage disposal, public utilities, railroad engineering, mining engineering, practically all the problems which have to do with applied science, the engineer has all the best of it. He sits in the "Seats of the Mighty" and has it all his own way.

The question of precedence between architect and engineer would never come up were it not that both are interested and engaged in the design and the supervision of the construction of buildings. Here they may and sometimes do clash; the engineer may and sometimes does regard the architect as one who has concern only for floors and furbelows; and here the architect may and sometimes does regard the engineer as a coarse person who would just as soon run a steam pipe across a bay-window as not,

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if by so doing he could save ten feet of pipe. As a matter of fact, each is necessary to the other. Neither one could well be spared.

But the question still persists: Which comes first? The engineer has a vast patrimony upon which the architect scarcely ever ventures to set foot. Need he then be jealous of the architect in the comparatively restricted field of building? Should he not recognize as good business and common sense that agreement must be made as to which is to have the final word, which is to be at the head of that complicated, sensitive, changeful organization, which must be assembled in order to design and build a successful piece of architecture?

When Craftsmen Knew

In the Middle Ages and at the time of the so-called Renaissance the comparisons we are making and the questions we are raising could hardly have been proposed for discussion. In those times, men highly skilled in statics worked out the problems of vaulted roofs, flying buttresses, and concentrated load, to a wonderful exactness. They had no stiff ribs of steel on which to depend, but were forced to transmit their stresses joint by joint from one carefully designed block of stone to another. But these men were either the architects themselves or their assistants and employees. Sometimes the architect was a priest or a bishop, sometimes he was a nobleman or knight, but we are forced to conclude that he was always a poet or an artist. Nor is there any evidence that would lead us to assume that men saw anything strange or unusual in that. The spirit of art was very much at large in those days. Men possessed it with the same common freedom and the same absence of self-consciousness as the air they breathed. It came from a happy religious and economic condition which we English-speaking people have not been taught to understand and appreciate. Appreciation of art was practically universal. Talent was common. High proficiency in craftsmanship was the rule, and was the key which opened the doors for admission to the "Guilds" which were the labor unions of those times. Out of such a background genius frequently emerged. Michael Angelo was a famous architect and a greater painter and sculptor. Raphael was an architect and a sculptor, too, although his fame as a painter of Madonnas has overshadowed his work in other fields.

In those days men recognized the real value of beauty in life. Their buildings were beautiful. There was no argument about the money value of a beautiful piece of work as compared with what was ugly. They were full of faith in a religion which taught them beautiful truths. They lived—in the main—in harmony with those teachings. They saw the beauty which exists in Nature, and tried to translate it into terms of brick and stone and marble. They told the same story in most delicate and elaborate metal work. They illustrated it in glowing colors upon their walls. There was poverty—yes; and injustice—yes; and violent passion—yes; but the big resultant of all the play and counterplay of the forces of that age which is written large in the records that are left to us is that it was a deeply religious age and it was an age of art.

Unity and Variety

The architect was the Master Builder and he was the Master Artist. He knew how to encourage initiative in the artist-craftsmen who worked under him, and how to restrain and guide his subordinates so that the final result was harmonious. In all the great buildings of those days we find the same basic unity underlying dazzling variety as they exist in Nature. To make myself clear consider the basic unity in design illustrated by a group of trees of the same kind. In a general way they all look alike. Each one has the same component parts. All have like roots, trunks, limbs, branches, leaves, blossoms; but no two of the trees will have exactly the same form and so at once is introduced variety. The markings of the bark of these trees vary as much as do the thumb-prints of human beings. Furthermore, no two of all the countless leaves are exactly alike. In much the same way the buildings of that age have none of the machine-made regularity that makes our modern structures so monotonous. There are easily recognized types in plan, general construction and form, but the bewildering variations in the working out of the details have been the despair of students who have tried to classify and label.

When Expression Counted

So much for the past glories of architecture. It was great but it was not greater than the civilization that produced it. "The stream can not rise higher than its source." The reason that we can not produce great architecture now is chiefly because of our habits of thought and desire. In these days men have lost their sense of real values. Just as they have lost faith in religion, while admitting its value as an influence on the side of law and order so they have lost faith in art, while admitting that it is a pretty and beguiling accomplishment. The ancient art-gallery was merely a part of a vast program. Art was everywhere, and only such masterpieces that could not with safety be displayed anywhere else were on view in the galleries. The picture galleries began as the result of the patronage of art by the prosperous and wealthy. Rival nobles bid against each other for the possession of a work of art. It became a matter of civic pride to own pictures or statues that were the envy of rival cities. It wasn't done to "uplift the masses" or to "educate" anybody. Everybody loved the work of the artists and those who could afford to possess it did so for the love of it. It was a great stimulus to artistic effort, and a new star in the firmament is not more gladly acclaimed by astronomers than was the appearance of a new possessor of the divine gift of artistic genius. Nowadays it is the hardest thing in the world for an artist to obtain recognition as such. He must either starve, or paint pictures of girls in transparent hosiery for the advertisements in the Saturday Evening Post. There are private picture galleries among the wealthy now as there always have been, but a great deal of the so-called "art" which they house is spurious. As for the public picture galleries, cities indulge in them mainly because they are considered "the proper thing." The modern art-gallery usually seems as out of place in the midst of our ugly commercial cities as an Italian

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"contadina" would seem sitting in native costume in an office pounding a typewriter.

Ours is an age of machinery and commerce. Modern industrialism has eliminated art as a necessity and made it a luxury. The modern ideal of education is to make a child self-supporting. The ancient ideal seems to have been to make the child self-expressing. The modern thought is: Do nothing yourself that you can pay someone else to do for you. The ancient thought was: Be zealous in doing everything yourself for which the Lord gave you talent for only so may you be able to develop a broader, richer, deeper life.

Pillage

I can imagine my readers growing restive in being asked to consider a by-gone time which most of us were taught was an age of ignorance and superstition. Nothing could be more untrue and unjust than that idea and it is my belief that a true understanding of the art of building can never be gained without some earnest study of the historic background out of which it has come. We are all products of our own age, but we are also children of the past. We have been taught architecture from a commercial point of view, and the result is in evidence. We have used our inheritance from the past, not with any depth of understanding and reverence, but superficially and impudently as though the past were a vast storehouse of plunder. We do not actually dismember the historic monuments and use the wreckage in our buildings, but we copy them and imitate them and have practically ceased to design in the sense in which the ancient architects designed. Architecture in its modern aspect is presented to us as a course of study which is a mere side show in a College of Engineering. The impression among the engineering students is that the fellows who take the architectural course do so to avoid calculus. From the earliest days of our technical schools the professors of engineering have been better equipped to teach and inspire than the teachers of architecture. There have been, of course, shining exceptions but I am speaking generally. Young men began to go to France to study architecture. The French welcomed them with open arms and extended palm. The French mind is one of the most versatile in the world. It has wonderfully keen perception and uncanny intuition. It sensed the American desire for tabloid information, its impatience with philosophy, its eagerness to get quick results. So they filled up our young men with French tricks, tricks of draftsmanship, tricks of "style." They made fine draftsmen, and the most skilled adapters, "fakers" and copyists that the world had ever seen. These young Americans became our successful architects in our large eastern cities. Their influence has spread like ragweed in August. They saw to it that French teachers were imported into our American colleges. As they themselves grew rich and lazy they brought Frenchmen into their own offices to do their "designing." They have developed as fashionable and acceptable in polite circles a kind of architecture in which a certain mode of appearance is insisted upon regardless of anything less. And by the same token they have weakened their own cause, and they have inflicted immeasurable damage to Art. Why?

The Mask

They have weakened their own cause because the American mind is keen enough to see that architecture does not consist in wearing a smock and using French phrases and dwelling in an expensive suite of offices. As the product of these offices is made public property in the finished buildings the engineer and even the contractor looks it over and says: "I can do that kind of stuff myself." And he can, and he does. Of course there is a certain finish and sophistication lacking in his work, but he "gets by." He makes a hit with the public on equal terms with the architect, because in the work of neither is there any of that creative thrill which the public can feel. The works of both are dead—hundreds of years dead and they all look alike to the man in the street.

They have inflicted damage upon Art because they have catered to the lost faith in Art to which I have referred. They have said unto themselves: "The people do not know the difference. Why should I worry and slave trying to express my own interpretation of a client's desire for a building when I can get him to feel happy over an ingenious 'crib' from something over which architects with consciences sweat blood in the long ago?" And so they have established themselves in a perversion which has become so wide-spread as to be well nigh universal. Any man who dare lift his voice against it feels as lonesome as must have John the Baptist. They have encouraged the thought that Art belongs to the drawing room and the long-haired and the high-brow. That it is purely a matter of emotion and sentimentality, to titillate the susceptible at pink teas! Nothing could be falsier. Art is clear eyed and wise. Art is based upon common sense. It supplies a fundamental need of human nature. It tells you that you must not sacrifice the basic for the accidental. You must study your own problem.

The great buildings of the past were all solutions each of a separate and definite problem. One can not use them as answers to our modern questions. If you start out with the idea that you must design a bank to look like a Roman temple you have handicapped yourself at the start. You have imposed an arbitrary condition that really does not exist.

You are a portrait painter, let us say, and you have a commission to paint a portrait of a man who fancies that he resembles some celebrated character of history. If you are a real artist you will try to paint him as he really is. If he has a wart you will paint the wart, but you will also give his eyes the expression of the best thought that he owns. If you are a quack and a time-server you will flatter him. You will paint him with the fancied resemblance to Napoleon or Byron strongly emphasized. You will please his vanity, but you will have betrayed your Art. Behind his back his clear sighted friends will say that the picture is not a good likeness. Our modern architecture has become very largely just such an insincere study of ancient history. The trouble is that so wide-spread is the delusion that people have accepted it as orthodox. Men no longer recognize an honest and a vital building when they see it. It disturbs them unless it be dressed up in the old clothes of a bygone civilization. The sad fact that this masquerading possesses no appeal and no inspiration does not worry them at all.

The Face

The problems of the engineer have not been camouflaged for him. He lives in the present and is not concerned with the past. So modern are practically all of his materials, tools and appliances that he does not have to study what the Greeks and Romans did unless he happens to be fond of history. He cheerfully gets into architecture without any background at all. He makes neither the correct nor the incorrect use of the inheritance of the past. He lays out his plan and his construction together. He may overlook some refinements in arrangement, and he does not usually worry about how the thing will look. And now we come to what is perhaps the real reason why the engineer cherishes in his heart a disdain for the architect "and all his work and all his pomps." More than a few of the engineers' buildings do look better than most of our so-called modern architecture. The engineer may have made a monotonous looking building, but he has refused to introduce a lot of meaningless ornamentation. The bareness of a poorly articulated plan is only emphasized by piling on a lot of superfluous and silly arbitrary forms. Nothing more clearly shows the lack of continuity in the thought of the designer, than the attempt to conceal the structural members of a building by unmeaning "belt courses," "string courses," "dadoes," "friezes," applied colonnades and all that.

"Why then, O Socrates, would you say that the two professions are necessary one unto the other? It would seem from your discursive talk that Architecture is in a very bad way indeed, and that we engineers can get along very nicely without it or you . . ."

Again and Anew

Well, the point of it all is that we do need each other. The architect needs the untrammelled directness of the engineer, his scientific habits of accuracy. On the other hand, the engineer needs the architect's background and splendid tradition. Because he is temporarily overcome by an attack of acute indigestion is no sign that he won't recover. The engineer can help him to recover. It doesn't matter what we call ourselves. If we love architecture and want to build in the same spirit in which the masters built we will ultimately be architects whether we carry a diploma to that effect or not. Times change, customs change, manners change, habits of thought change, but art does not change its meaning. The lessons for the future are to be found in the story of the past. Our present industrial system is in great distress. We do not know what the outcome will be, but sooner or later the fundamental needs of the human heart will find expression. The Great War came out of Commercialism.

A hell's broth of avarice, jealousy, injustice, mixed with the "divine right of kings" and a fanatical idea of ruling the world. It was all founded in commercial war and commercial avarice, jealousy and injustice. It was commercial supremacy that was aimed at. What defeated Germany? I like to think that however nasty and sordid the job the motive was right. The higher ideals of Humanity triumphed. They have not been rightly translated into the terms of peace as yet. Our faith is still in the God of Battles rather than the Prince of Peace. But as mankind gets back to sanity and the nightmare of the war and all the evil and iniquity that preceded it recede farther and farther into the past, we will study anew the art of Life. If we know how to live well we will know how to express ourselves or at least know enough to give highest honor to the gifted few who know how to bring forth that which is inarticulate for most men into the clear light of poetry, music, sculpture, painting, architecture. We will no longer compel our poets, our singers and our builders to tickle our jaded fancies or to pander to our sensualism. We will demand of them that they share with us that larger vision of Truth which is their birthright. Now we applaud a man who invents anything from a new mechanical device to an Eskimo Pie, and we crown him with highest honor if he has thereby made a lot of money. Of the happier future I like to imagine that just as Raphael was acclaimed when he painted a new picture, our laurel wreaths will be bestowed on those who help to restore the world's lost beauty.

The engineer will have respect for the architect when architects are ready to prove by their works that they believe in the basic utilities of a building. Nobody denies the truth of Louis Sullivan's axiom that "Form follows function," but only too few practice it. The architect must not be satisfied with a building that is superficially "good looking." It must be a building which can stand the most searching analysis. The real conditions of the problem must have been met logically and sincerely. The issue must not have been confused by arbitrary exactions. The building must have been designed from the inside *out* and *not* from the outside *in*.

It seems to me that with such principles established there can be no real conflict between architects and engineer. Conflict there will be, and conflict there must be, between him who loves architecture and him who does not. They who love architecture will be the architects of the future whether they call themselves one thing or another. He who with the greatest love, and the deepest insight, and the clearest understanding will be able to interpret the needs and aspirations of the American people in terms of building will be the Master and we will all gladly yield to him the highest place.

Glastonbury

By S. F. AND F. S. CAMPBELL

TO a pilgrim, wandering through England and coming at last to a certain quaint village in Somersetshire, there came of a sudden a feeling of reverent awe as he looked upon the scarred and broken remains of the once glorious Abbey of Glastonbury. Beyond lay the moorlands, mist veiled and still; above, that solitary hill, surmounted by the gaunt old Tor, and over all, the rose and gold of the setting sun. Violet shadows lay over the shattered walls of the noble clerestory, but the springing spandrels of the great arch were pink with a glow that seemed like a promise of new life, and through the roofless ruins sailed the slender sickle of the harvest moon.

Standing on that thrice holy ground, once the most splendid nave in Christendom, one can not but feel its mystic influence, and a flood of memories comes rushing over one, memories of half forgotten legends, of lightly heard traditions and of half read histories, all testifying to the glory and peculiar holiness of this, England's Mecca. Here was true building done. Here was work accomplished that fulfilled true ideals. Here was truth expressed in stone.

The story of Glastonbury is the reward of the inquirer and its study carries our thoughts and imaginations back through the centuries dim with age, to apostolic times, in which we find a well recognized tradition concerning the establishment of a church that was destined to become later one of the most honored sanctuaries of the Christian world.

For, from the days immediately following those in which Our Lord Himself was here on earth until about the middle of the sixteenth century, when the hand of man was laid upon it to wreck and destroy, Glastonbury was a centre of religious thought and teaching from which there came a light of lasting brilliancy whose rays have shone through centuries—a light that has influenced in no small measure the ecclesiastical history of later years. So, to those to whom the progress and development of the church of God on earth is a living interest, the Abbey and its history, so rich in glorious achievement and so replete with romantic traditions, can not fail in its appeal nor can even the casual observer be oblivious to the architectural marvels wrought through a devoted and reverent effort by the simple brethren to make their Abbey a physical manifestation of their faith in God.

It was here, in spite of the many foreign invasions suffered by Britain during the first thousand years of the Christian era, that the sacred traditions of the

early church were safeguarded and held intact that they might be passed down from century to century as a worthy inheritance to all mankind. But, to the student of early history, no more wise counsel can be given than that he should use great care in arranging the results of his research under the classification of history, tradition, and legend. As to the first, little need be said, but greater care should be used in differentiating between legend and tradition. Legend is a fabulous narrative which may or may not be true and which has an element of haziness in its make up, interesting but not necessarily accurate. Tradition, on the other hand, is quite different, for in it we have the oral recounting from time to time of the actual history of the past and while there may be frequent inconsistencies or exaggerations, it is in the main founded upon facts which are so clear in their expression and in many cases so completely capable of substantiation that it would seem little short of recorded history itself. In those ages in which writing was little used save by the most learned and the news of the day was passed from mouth to mouth by travelling leeches and minstrels, visitors from other lands and troubadours, history and tradition must naturally have merged. Unfortunate indeed is he who is so incredulous as to be unable to see in many of our so-called traditions real truths which have come down to us through the ages.

And so, with this in mind, we find a link in the chain that binds our thoughts to the past when we read:

“That Joseph came of old to Glastonbury
And there the heathen prince Arviragus
Gave him an isle whereon to build,
And there he built, with wattles from the marsh,
A little lonely church in days of yore.”

Thus runs the poetic expression of an old tradition, the truth of which has been fairly well borne out by subsequent research, throwing an interesting light upon the early establishment of Christianity in the Western world.

Early Tradition and History

When, according then to this well founded tradition, Joseph of Arimathea was sent in 63 A. D. by Saint Philip as first Missionary of the Gospel to Britain, he with his son, also called Joseph, and a small band of early Christians came around the south coast, evidently with the intention of landing in Wales; but the conditions there appear to have been not to his liking for he soon retraced his way, finally landing near Bridgewater in Somersetshire, and from



there travelled eastward, along what was then the new Roman road, up the Vale of Avalon until he came to Glastonbury, halting just outside the town close to the Wirrall Hill. It was on this hill that Joseph is supposed to have thrust his thorn staff into the ground, and it, having been left there, rooted and blossomed each year at Christmas time, in honor of Our Lord. The legend seems to rest, to some extent, upon a botanical foundation, for it is very evidently a species of Mediterranean thorn and this variety is possessed of an unaccountable vitality; at any rate, certain it is that *to this day* the descendants of the Holy Thorn whose site on Wirrall Hill is now marked only by a plate, still hand down the miraculous story by blooming each Christmas, and though the snow may lie deep about the tree, its blossoms come to deck the altar of the old parish church.

Nor should we pass by another legend which has made a deep imprint upon history; it is that the Cup used by our Lord at the last supper was seized by the Roman soldiers and given to Pilate who in turn handed it to Joseph of Arimathea, and that it was one of the vessels used to wash the sacred body before it was laid away in the tomb. With a reverence that he alone could feel who had known and loved Our Lord and been with Him during the last sad months of His life on earth it was guarded with

a holy fear, and borne by him to Britain. By it he was preserved from all evils, delivered from imprisonment and to it he owed his very existence. When, as an old man, Saint Joseph died, it was buried in Chalice Hill nearby and immediately there sprang from the spot a great stream of living water, which ever since has flowed for the cleansing and healing of all mankind.¹ By way of linking tradition and history we might say that it is well known that for hundreds of years pilgrims journeyed to this holy well, still called Chalice Well, to drink its health giving and purifying water, that a monastery was here built with a Hospice for the accommodation of pilgrims, that this Hospice is the same from which I write and that in the garden the beautiful Chalice Well is now supplying the whole township as, since the great drought all the city supply has gone dry. The solid masonry about the well is undoubtedly very ancient and over it is a cover, new but most beautiful, of heavy oak and symbolic iron work, given by the united offerings of the Nonconformist, Roman Catholic and Anglican Churches of the district.

Upon their arrival at Glastonbury, Saint Joseph and his band of followers were met by the British

¹The officially attested records of all the wonderful cures effected by this spring in the XVIII century are preserved in the Library of the Incorporated Law Society in London, in a bound volume of Glastonbury MSS.—F. B. B.

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chief Arviragus, who, seeing that their purpose was not conquest and that their strength was far spent, gave them a small portion of land upon which to settle (one "hide" to each of the twelve disciples, and to this day called the Twelve Hides of Glastonbury) and no sooner had these early missionary pilgrims been given an opportunity than they started to build the first Christian church certainly in England and probably in all the world. This they built with wattles or flat reeds from the marshes, woven in basketry form, the interstices packed with clay which, hardened by the sun, made a wall of remarkable durability. It was doubtless circular, with low walls supporting a cone shaped roof thatched with reeds, and measured less than twenty feet in diameter, and its site was the centre of what is now Saint Joseph's Chapel. This we know from the records of William of Malmesbury who was employed in the twelfth century in collecting evidences of early histories.

The reverence with which this little church was guarded, not alone by the early Christians but later by the invading Saxons and Normans, who were ever desirous of tearing down relentlessly what already existed and rebuilding larger and finer places of worship, is extraordinary, but it was in all likeli-

hood due to a rather curious condition. In the early part of the seventh century, Paulinus, Archbishop of York, visited the old church which by this time was in need of restoration, and holding it to be a highly sacred place caused it to be encased in wood and covered with a roof of lead. Yet again, at a date the exactness of which is in doubt, a stone church was built over the two already standing, making in all what might be called three churches, one within the other. This it was then which marked the place as one to command the utmost veneration and stay even the ruthless hand of successive pagan hordes, and so the original wattle hut was still standing, in part at least, when in 1184 the whole was completely swept away by a devastating fire.¹

While William of Malmesbury was engaged in his survey of Glastonbury he was shown by the monks there the original grant made by Gwrgan, King of Damnonia, to the old church in 601 A. D. conveying to it the land of Ynyswitrin, as that part of the Vale

¹It was in August and September of this year that a most unusual circumstance led to the discovery of much valuable evidence in connection with these early edifices. While the writers have had the opportunity of examining this evidence and of being actually present at its discovery, they are not at liberty at this time to disclose its nature. Suffice it to say that it is in itself remarkable and when published, as it will be shortly by Mr. Frederick Bligh Bond, F. R. I. B. A., the Director of excavations at Glastonbury, it will be of enthralling interest to both architects and archeologists.

of Avalon was then called. In spite of the fact that the parchment was almost illegible from age and contained many archaic characters making it most difficult to read, he considered it, as did the monks, a most valuable document. It alone seems to have been the only evidence of a documentary nature which the Abbey possessed dating back to Celtic times, and is the first bit of actual history, quite apart from tradition, that has come down to us concerning the old wooden church built by Paulinus, and as this grant was coeval with the coming of Saint Augustine and his Benedictine missionary monks, it marks the beginning of the monastic order in Britain.

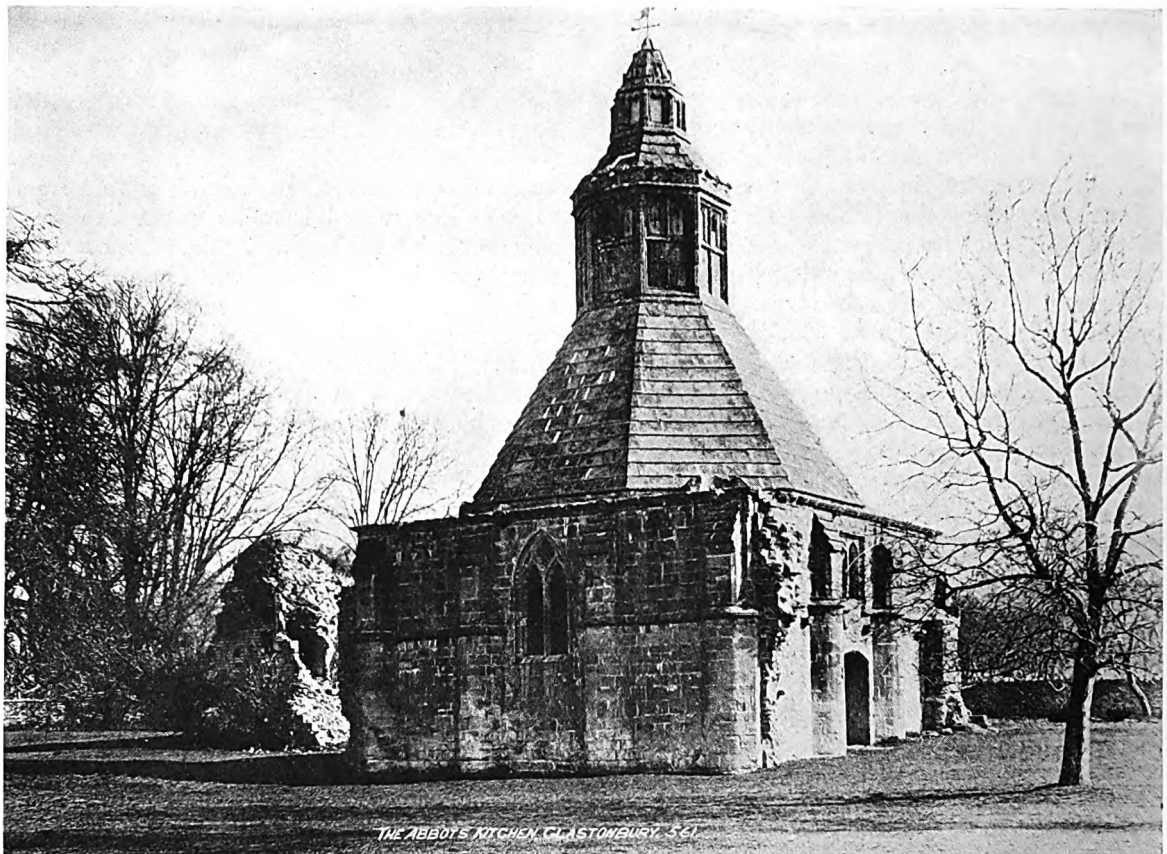
The years which witnessed the erection of the three early churches also saw, immediately to the east on what was later the site of the nave of the great Abbey itself, another church begun by Ine, King of the West Saxons in 708. This was altered, added to, torn down and rebuilt time and again during the successive abbacies of Saint Dunstan, Turstin,—wretched monster—Herlewin, Henry de Blois and Robert; unfortunately, there is very little evidence to guide us in picturing to ourselves what this church was like and its existence, in addition to the church immediately to the west, is accounted for by the fact that, whenever we find the monastic system existing at

that time in England, the monks lived and worshipped in small units rather than in large communities as did the Benedictines in other countries.

Progress and Development

On the 25th of May, 1184, the fire, already referred to, swept before it all the Abbey buildings, both religious, and secular. Still, notwithstanding the fact that the loss was great, especially because of the destruction of many records of value, it was not an unmixed evil.

The Abbey was at this time in the custody of Henry the Second and it was under his guidance and that of his Chamberlain Fitzstephen, that the great scheme was laid which resulted in the building of a church the present ruins of which give eloquent testimony to the creative genius of the Benedictine brothers. But, had this genius been the master element in the building much that was done would never have been conceived. Only great love and a divine fervor could have inspired that noble proportion, that glorious sweep that must have lifted the soul with the eye, from portal to high altar, and everywhere, from the bases of the great piers with their carefully fitted parts to the smallest detail of exquisite carving, we see the patient, skilful hand of an artisan who prayed as he labored on towards



THE ABBOTS KITCHEN, CLASTONEY, SEI

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the ultimate perfection of his ideal. Even the ruins of the Abbey are far too vast and too rich in detail to admit any consideration of them in their entirety within the space of a short article. If we are to see them with an unconfused vision each part demands careful study, but to the student who approaches in a reverent spirit the mutilated but still glorious fragments which remain, there comes a rich reward.

No sooner had the shock of the great fire passed than rebuilding was commenced. It is probable that the foundations of the Chapel of Saint Joseph were laid no later than the very year of the fire, for according to Adam de Domerham, the chapel, though not completed, was dedicated by Reginald, Bishop of Bath, in 1186 or 7. It is at the extreme west end of the Abbey and a direct line from its west wall through the great nave to the eastern or apsidal foundation of the Edgar Chapel measures a distance of 592 feet—an unequaled vista!

For a short time St. Joseph's Chapel stood as an isolated building but was later connected with the main structure by a continuation known as the Galilee, part of which, a splendid fragment, still stands. That the "ecclesia major" or Great Abbey church was started about the same time as the above chapel is proven by a charter of Henry the Second signed in 1184, but no sooner had the work been well

started than misfortune once more overtook it, in the deaths at almost the same time, of Henry and the able Fitzstephen, bringing, through lack of funds as well of change of government, an almost complete suspension of all building, painful and irksome though it was to the pious brethren. However, in 1235 work was once more in full swing under Abbot Michael de Ambresbury, who is accredited with the completion of the choir and transepts as well as many of the secular buildings. From these last, once an important part of the Abbey foundation, we are able to form some idea of the activity that existed within its walls. It is natural to think of the Abbeys of medieval times as centers of religious teaching where no more secular work was done than that which had to do with the beautifying of the church and its services. This however is far from correct as most of the larger Abbeys, notably St. Edmund's and Glastonbury, were great industrial centres in the times in which they flourished. According to St. Edgar's law it was required of each priest that he learn some handicraft, consequently each Abbey had its own smiths, stonemasons, carpenters, masons, fishermen, huntsmen, and farmers as well as artists, writers, and musicians; and it is not unreasonable to believe that this communal living was directly responsible not only for the great



service that the Abbey gave to the world but for the existence of the splendid church itself.

Nowhere, perhaps, do we find a more complete fulfillment of St. Paul's injunction that the followers of Christ be "given to hospitality, distributing to the necessity of the saints," for it was here that the pilgrim was ever sure of aid, both temporal and spiritual, if he but made his wants known. However, it was not alone the casual wayfarer who availed himself of the privilege of the Abbey's hospitality, and we read repeatedly of the visits of kings and queens, nobles and gentlemen with vast retinues, all requiring housing in one of the guest-houses attached to the monastery. History tells us that in 1278 King Edward and Queen Eleanor spent Easter there and the following week under his direction the bodies of King Arthur and of Guinevere his Queen were removed from the south side of St. Joseph's Chapel and reinterred in the choir of the Abbey close to the high altar. (NOTE—Mr. Bligh Bond is disposed to believe that their bodies were interred at this spot, which he has located with some precision, by the discovery of what appears to be the foundation of the more westerly of the two "Pyramids" between which, as old chroniclers aver, their remains were laid, and in a public lecture on the 17th of September, 1921, he asked those present to witness that he had so marked the spot.)¹ In other parts of the Abbey were the tombs of the two Kings Edmund, and of Saints Dunstan, David, Patric, and of that Edgar who was both King and Saint. No wonder that to a place so endowed with holy relics the rich poured out their treasure and the poor their love, so that in the three hundred years that followed the Abbey became more and more majestic, more and more glorious, until it stood the most beautiful religious edifice, perhaps, in Europe, as well as the richest, both in relics and in treasure. From Saint Joseph's Chapel on the west to the Edgar Chapel at the east end of the splendid vista nothing was spared that could beautify and adorn, and yet all was so well applied and with such nice judgment that nowhere was there given an impression of over-abundance of detail. Under the next-to-the-last Abbot, the famous Richard Beere, were built the superb inverted arches, like those still to be seen at Wells, and he it was that began the Edgar Chapel as well as the Loretto, the result of a vow taken upon his deliverance from danger while on a pilgrimage to Rome. These two chapels have an especial interest to us today owing to the recent discovery of their foundations by Mr. Bligh Bond under most extraordinary circumstances, references to which will be made presently.

In 1524 Beere died and was succeeded by the last

¹It has been suggested by some writers that the "discovery" of Arthur's bones was a good stroke of Royal policy, inasmuch as it tended to set at rest the myth of Arthur's predicted return, which was disturbing to the reigning dynasty.—F. B. B.

Abbot, Richard Whitting, whose martyrdom was the sad ending of a great chapter in ecclesiastical history. Under Whitting, who had formerly been a master in the Abbey school, the educational work begun by Beere was carried on, no less than 300 sons of the nobility and gentry coming under his influence and teaching during their training for the priesthood. However, in 1539, the greedy eye of Henry the Eighth fell upon him with displeasure and since the royal coffers needed replenishing and the riches of the Abbey were great, he and all that he stood for were marked for destruction. We read, in Thomas Cromwell's notebook for the day, "Try, convict and execute Abbot Whitting."

The patriarchal old man, in company with his two treasurers, was tried, then, at Wells and being condemned to death, was dragged on a hurdle from Wells to Glastonbury, a distance of about six miles, and next day hung, drawn and quartered. Over the Abbey gate the venerable head of the old Abbot was set and parts of his body sent to Bath, Wells, Ilchester and Bridgewater, there to be displayed, so that all might see what the royal displeasure meant to one who held his God above his King.

No sooner had its last Abbot passed to his reward than the Abbey, with all its buildings, was seized by the King, who sold the property bit by bit, after letting who would wreck and pillage. The pendulum of reform had swung and, swinging, had become so violent that before it had resumed its normal position such damage had been wrought that it is impossible now to look at the poor battered ruins without a sense of deep humiliation because of the wanton destructiveness of man and of his merciless sacrilege.

Many buildings in Glastonbury town have been made of the stone taken from the walls of this venerable House of God; what seems even worse, load after load not only of the masonry of the church itself but most beautifully carved bosses, corbel heads and gargoyles, were thrown, as so much debris, into the roads, where they were broken and rolled down into paving. So was made the road between Wells and Glastonbury! This process went on, under successive tenants, for over 200 years. An old villager to whom we spoke had paid a shilling a load for as much as he cared to cart away.

In the reign of King Edward the Sixth, the property still being under state control, was in the custody of the Duke of Somerset, protector to the young King, but neither could he stay his relentless hand for it was then that the leaden roof of the great Abbey was stripped off and sent to the Island of Jersey to make a covering for the Castle of Mont Orgueil. Marson in his history of Glastonbury tells us that "the furniture, locks, doors, glass windows, iron and timber were sold at nominal prices. The carved

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wood hacked to pieces . . . the stones were sold in cheap cartloads for all purposes. Worst of all, the books and manuscripts of the matchless library were sold by weight to binders and grocers; torn up and used for parcels, fires and every dishonest purpose. The poor stole handfuls and the rich filched farms and manors."

It is not without gratification that we learn that the scarred and wounded remains of this sometime glorious Abbey have recently passed into the possession of the Church of England, there to find, let us hope, a guardianship which shall be safe both from the marauding hand of man and the rapacity of the souvenir-hunting tourist. Nor is this all, for during recent years, architects and archeologists have made many conscientious efforts to procure a sufficient amount of information as to the exact location of the foundations of the missing walls and chapels of the Abbey and by study and inference to obtain a reconstructed plan and elevation of the church as it was in the sixteenth century. However, the results of this research proved to be contradictory and in many cases contained so many misleading discrepancies that it was not until 1908 when Mr. Bligh Bond began his study and consequent excavations that much information was to be had of unquestioned reliability.

While in this narrative we are chiefly concerned with the history of Glastonbury, an extraordinary chapter of circumstances which led to the establishment and verification of many facts, concerning which there had long been much uncertainty, may justify what would seem to be a departure from our subject. But, in view of the results, these circumstances have a valid claim for our consideration in any account of Glastonbury, however brief and imperfect. It is not the intention of the writers to enter into any discussion as to the psychic whys and wherefores; it is for them to tell the reader the facts and leave him to form his own conclusions.

The exact size and shape of both the body and the east end of the Edgar Chapel, as well as its true position, have been the subject of much speculation on the part of archeologists, architects, and writers for many years, and widely divergent opinions have been advanced, some showing one plan, some another, but *all* of which subsequent developments have proved to be incorrect. It was with this baffling and unsatisfactory information that Mr. Bligh Bond, as Director of Excavations, approached his work, and it seemed that if any premises worth having were to be got, they would have to come from some other source than those meagre and conflicting ones already recorded. It was at this point that he suggested to his friend John Alleyne that the appeal to the psychic power latent but still existing in the mind of man, if he but be in harmony with the world

of spiritual phenomena, might be productive of information that would reveal some of the hidden treasures which for so long a time had been obscured because of a thinking principle so material as to be unable to lay hold of the higher functions of which it was capable. But as to the best method to pursue in readjusting their habit of thought from mere logical deduction, based upon what had already proved to be rather doubtful evidence, to the employment of a psychic principle, was a difficulty that must be met.

It occurred to F. B. B. (Mr. Bligh Bond) at this time, that the faculty of automatism which J. A. (Mr. Alleyne) was believed to possess might be the means of solving many of the problems and eventually prove to be the key which would unlock a door leading to many hitherto closed channels of information. It was not, however, during any of their first endeavors, at which they thought they might perhaps receive communications from outside forces by means of automatically written messages, that anything of value was obtained, and, had it not been for the unbounded patience of these two men, the last chapters in the history of Glastonbury would have been vastly different from what they are. Those who wish to follow more in detail the story of this practical application of a psychic phenomenon, which is beginning to be recognized by many undoubtedly sincere scientists, can do so by reading the report of it in F. B. B.'s book, "The Gate of Remembrance," the fourth edition of which is just out. Within the limits of a magazine article we must content ourselves with a very scanty outline of the extraordinary results obtained.

In order that there might be a complete isolation between a material mental activity and any psychic force that might exert itself, and to leave the latter the most complete freedom, F. B. B. either engaged his friend in general conversation, or else read aloud an absorbing novel or, at one time, a history of Japan, holding the book in one hand, while the fingers of his other rested lightly on the hand of J. A. The only physical force used was when at the end of each line F. B. B. lifted J. A.'s hand back to the left side of the paper. At the end of each sitting the reader questioned J. A. carefully about what he had read so that each might be assured that his mind was wholly centered on the reading to the absolute exclusion of the script.

It became evident before many meetings such as those described, that there were those in a spiritual existence, entirely apart from the material world, who not only had an intimate knowledge of and a great love for the Abbey, but were as anxious to communicate their information and offer their assistance as were F. B. B. and J. A. to receive it. Much of the script produced was in what F. B. B. himself calls "ragbag Latin" of a monkish sort, sometimes a



ST. JOSEPH'S CHAPEL, GLASTONBURY, 225.

curious mixture of Latin, early English and even old Norman. The first message of importance was a tracing of the ground plan of the Abbey, showing a rectangle projecting from the east end, which was at once recognized as part of the Edgar Chapel. It had all the marks of a drawing that might be made by one blindfolded, done in one continuous line and ending with the signature "Gulielmus monachus" across the face of the sketch. This, while important, did not give sufficiently definite information. F. B. B. accordingly asked:

"Please give us a more careful drawing of the chapel at the east end of the church."

In answer a new sketch appeared of the rectangular part of the chapel, also indicating in a labored way two smaller chapels on the north. Below, in cramped characters and most difficult to read was:

"Capella St. Edgar. Abbas Beere fecit hanc capellam . . . Martyri et hic edificavit vel fecit voltam . . . fecit voltam petriam quod vocatur quadripartus, sed Abbas Whitting . . . destruxit . . . et restoravit eam cum nov . . . multipart . . . nescimus eam quod vocatur. Portus introitus post reredos post altarium quinque passum et capella extensit 30 virgas ad orientem et viginti in latitudine cum fen (?) . . ."

F. B. B. "Please give length again."

Answer. "300 virgas . . . et fenestrae (cum) lapide horizontali quod vocatur transome et vitrea azurea; et fecit altarium ornat (um) cum auro et argento et . . . et tumba ante altarium gloriosa aedificavit ad memoriam Sanct . . . Edgar . . ."

F. B. B. "Which Abbot did this?"

Answer. "Ricardus Whitting . . . Ego Johannes Bryant Monachus et Lapidator."

So intimately has "Johannes" become associated with the recent excavations that his name has been a curious inspiration both to those actively engaged in the work of discovery and to those who are only interested observers. Not only of a technical or informative nature have been the communications from him for at times they have led us through by-paths into charming philosophical fields. The following, quoted in part, was in answer to a question as to when the work of excavation should be begun:

"Wait, and the course will open in the spring. You will learn as you proceed. We have much to do this season . . . For greater things will rise into being—great nations and great ideals. We work for it. Be willing, and strive not against the tide. Up on the crest and prosper. All will work for the best . . . The spark will live through the rains and re-light dead fires, fire which is still fire but with

THE AUTOBIOGRAPHY OF AN IDEA

purser flame. We can not hasten this time but it is sure and is not delayed . . . Keep open ears for spiritual help and whisperings. Assimilate and combine both forces. Stand in the market-place and cry your wares but listen for the still small voice in the silence of your chamber. Work in the sun. Listen in the starlight . . .”

The following, quoted in part, was received several months before any work of excavation had been begun:

“And beyond rose a Capella of Edgar ye sainte, faire and high with grete windows with transomes and between ye windows were pillars as panellae the whych did holde ye roofo of stone vaulted very faire in panellae which were fanwise very fine much like carven ivorie . . . And ye chamber was in length seventy feet in four bayes¹ . . . and ye walls were thin and all of squared stone and new carven . . . and yt was ybutressed with faire buttresses and walls slantwise at ye corners.”

These facts, unusually thin walls, heavy buttresses and walls set at an angle have been found to be exactly as stated, although nothing existed to testify to these facts. Later messages on the whereabouts of the Loretto Chapel have been confirmed in this new edition of the book, the excavations of this year having completely proven the veridical nature of the communications received years before. But what was to the writers the most important discovery of all was made in September of 1921, when we had the great good fortune to watch something uncovered,

¹Given with greater precision in a later script as 72 feet, which is stated to be the length of the part which Beere built—the further extension being Whitting's work. All this is new to history, and cannot be inferred from any existing document. All has been verified by excavation, and the writing was given some months before discovery.—F. B. B.

exactly in accordance with a script previously received and shown us, which when published, as it will be shortly, will prove as far as such a thing is possible that there is a storehouse of forgotten things that can be made to yield its treasure to those who have a right to know.

In this case, during a period of nearly thirteen years, the net result has been a deal of remarkable information, some philosophical or metaphysical, but that which concerns us for the moment pertaining to life in the monastery, to which is added much that is technical and a good deal historical. By dint of careful translation and putting together of the fragmentary parts we now have a fairly accurate knowledge of the life in and history of the great Abbey and when one weighs the evidence in the light of what has actually been accomplished, one can not pass by what has been done by these two men in an effort that is honest and sincere.

At no time during the writing of these notes has it been the intention of the writers to hold any brief for or against the psychic element that enters into this narrative; they simply aim at bringing to the attention of the reader such facts of a veridical nature as seem irrefutable.

The result of the exhaustive study and of the excavation carried on during recent years has been something of far greater value than the mere strengthening of many traditions and legends: it has established in no uncertain way numberless hitherto cloudy conceptions of church and secular history which can not but be of great value in times to come.

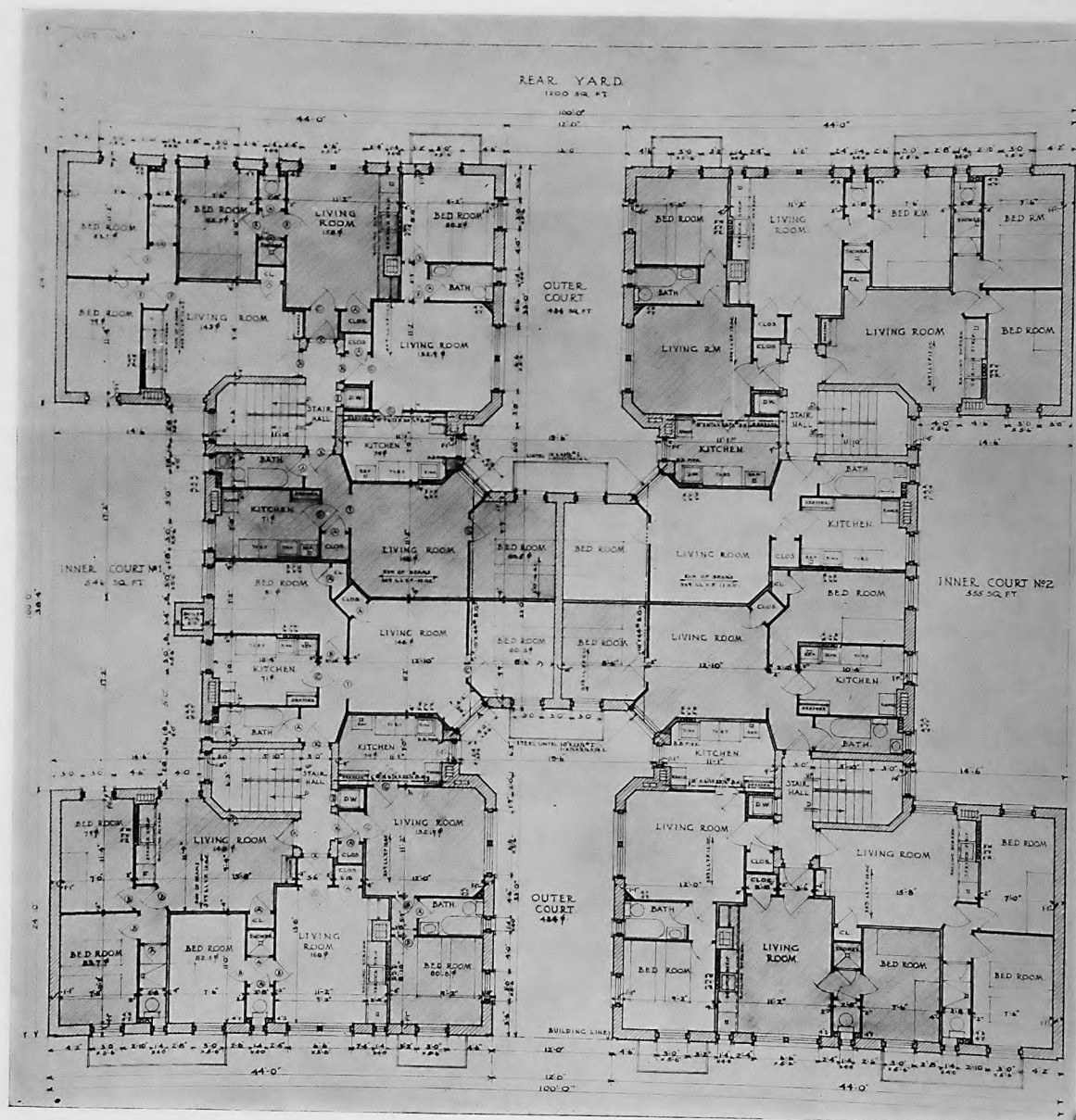
Announcing:

“The Autobiography of an Idea”

By LOUIS H. SULLIVAN

It is our proud and happy privilege to announce that beginning in a very near issue THE JOURNAL will begin the serial publication of a work by Louis H. Sullivan. In the “Autobiography of an Idea” as Mr. Sullivan has elected to entitle his work, which promises to run through twelve or more numbers of THE JOURNAL, he will develop that idea out of which grew the architectural achievements which have given Mr. Sullivan's name a unique place in the

annals of American architecture. We doubt very much whether an architect has ever before set out to elucidate a theory or idea or visualisation of architecture by an autobiographical process. Whether our premise is correct or not matters little however. Mr. Sullivan has a tale to tell and a manner of telling it such as will mark an eventful circumstance in the literature of architecture in America.



FIRST PRIZE—Sibley and Fetherston, Architects

The Phelps-Stokes Fund Tenement House Competition

BY FREDERICK L. ACKERMAN

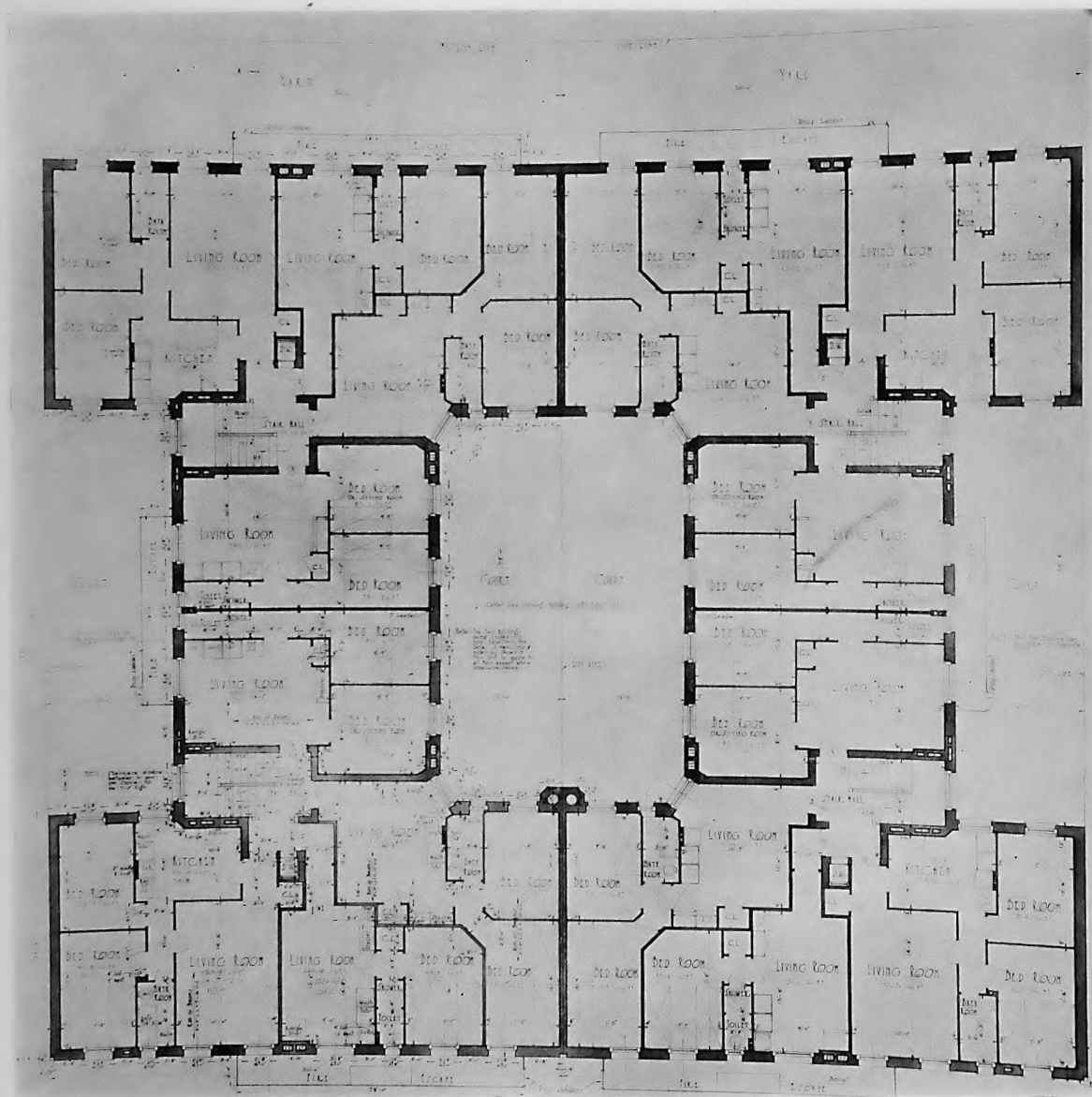
The final Competition for Plans of Model Tenements, made possible by the Trustees of the Phelps-Stokes Fund, resulted in the award of first prize to Sibley & Fetherston, who become as a consequence the architects of the first 100' unit to be erected by the Trustees. Frank J. Shefcik won the second prize of \$1,500; John Tompkins the third prize of \$1,000; Raymond M. Hood was awarded \$100 for his plans in the preliminary competition, which showed certain interesting features.

This is the fifth Tenement House Competition of note held in New York. Our first tenement house competition

was held in 1879, for buildings to cover approximately 75 per cent of a lot 25 feet by 100; four apartments of three rooms each per floor; no baths; two public toilets. One hundred and ninety architects were in the competition. The first prize was won by a well known architect with a plan later known as the "dumb bell." His design came into general use in New York and has been extensively copied elsewhere. Out of the wretched conditions caused by the use of this type came the long campaign which resulted in the passage of the tenement-house law.

A second competition was held in 1896, a third in 1900.

THE PHELPS-STOKES FUND TENEMENT HOUSE COMPETITION



SECOND PRIZE—Frank J. Shefcik, Architect

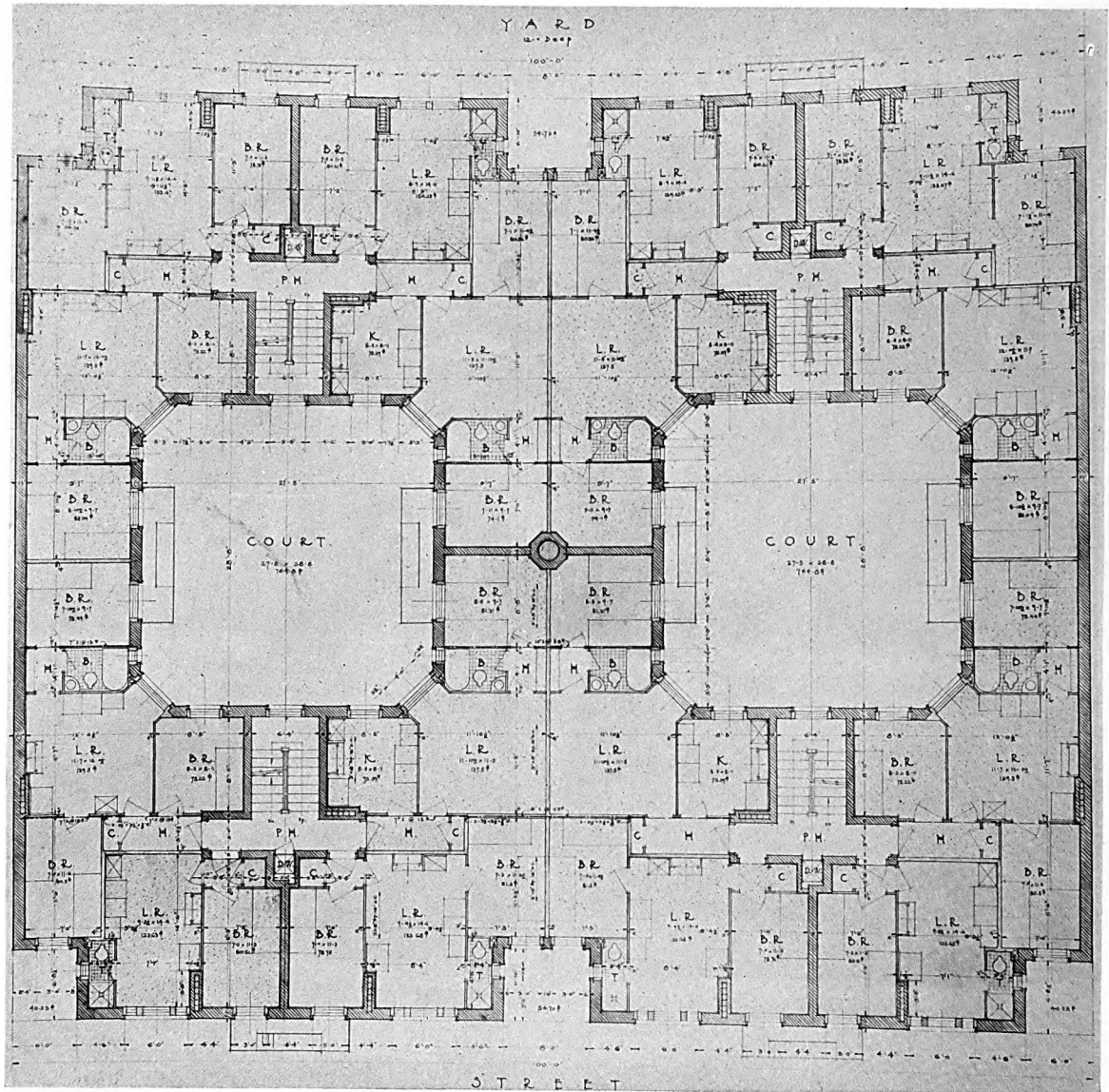
In the latter, buildings were to cover approximately 70 per cent of inside lots, 25, 50, 75 and 100 feet wide by 100 feet deep. The first-prize design, for a lot 100 feet wide, contained six four-room and four five-room apartments, or forty-four rooms per floor; no baths; a toilet in each apartment.

“The competition of 1920 had as its object an attempt to undo the result which came from general use of the premiated design of 1879, also, of course, the work that had preceded it. The problem was how to remodel and show a profit. From this competition no action resulted.”

So much history is recalled since it is of importance to check at this time what progress has been made over half a century. Concerning this point it may be said that the generally accepted standard of what is viewed as tolerable congestion now stands about where it stood thirty years

ago. There has, in fact, been but slight change in half a century. This is said of the programs: and a comparison of the designs of twenty years ago with those of 1922 bears out the statement that the art of planning as revealed by these competitions has not advanced appreciably in twenty years. From the terms of the programs and the drawings in competition we see plainly that the point of view as to what constitutes the “Problem” has not shifted at all. Now as ever before, it is a case of fixing a limit to the area of the building in terms of per cent of area of lot which approximates that established by law (70%) and which is rigidly adhered to by speculative builders. The “Problem” is always confined to the arrangement of rooms, etc., within a given area.

But this competition was ushered in under circumstances which differed from those which occasioned former com-



THIRD PRIZE—John Tompkins, Architect

petitions. As a consequence of studies made by A. J. Thomas¹ it was felt by some that there were financial as well as social gains to be had from building over a smaller percentage of the lot than in the usual case. The point was discussed at a meeting of the New York Chapter; a committee was appointed for the purpose of checking up this theory. If it were found that it was financially advantageous to build over a smaller percentage of the lot, then the matter was to be laid before the loaning institutions in the hope that they would give preference to superior plans.²

But the outcome of the effort was not precisely what had been anticipated. The outcome was the competition first referred to which called for the usual thing—designs covering approximately 70% of the lot. The problem again was the arrangement of rooms.

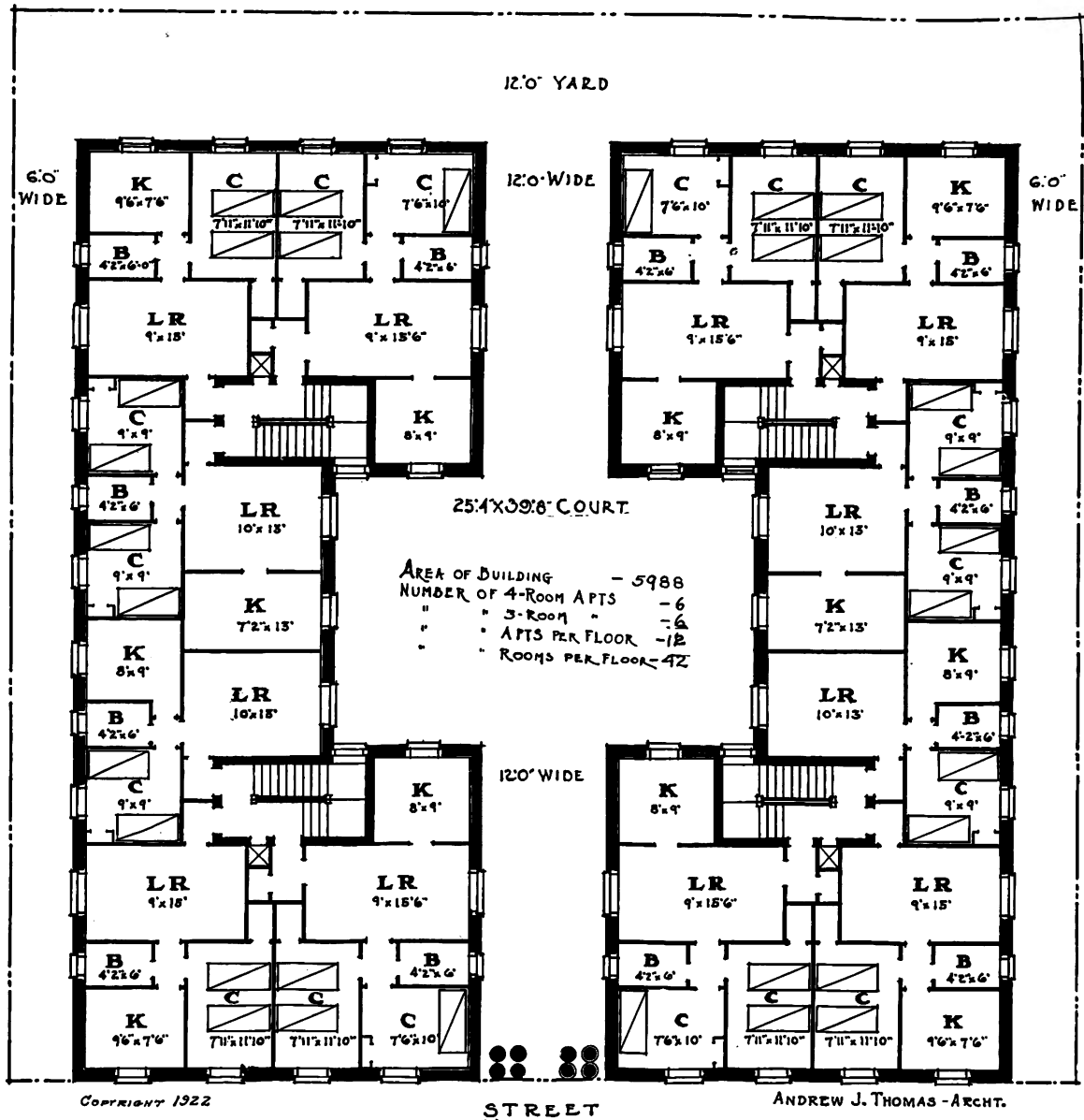
¹See previous articles in JOURNAL.
²See A. I. A. JOURNAL of November, 1921.

And the purpose of that clause in the Program which asked for the submission of alternate plans suggesting modifications in the Tenement House law was clearly expressed by Mr. Stokes in an interview published in the *Evening World* of 14 February.

“‘The most radical change, and the one I suggested twenty-one years ago,’ he said, ‘is the elimination of the limit of 70 per cent placed upon the percentage of the lot upon which the man may build. It is absurd to place any limit to the area to be covered by the building when the law provides that every room should be lighted and receive air from proper sized courts. Further restrictions are unnecessary. They serve to restrict the ingenuity of the man who can get these same conditions and still use the land more economically.’”

But suggestions of this sort were not forthcoming. Evidently there were difficulties in covering 70%.

The writer discussed the question in “The Survey,”



presented in the competition but which contains four fewer rooms than required by the competition program. In the following calculations I use the current assumptions. Cost of land, \$10,000 per lot of 25 ft. Buildings, six story "walk up," 70 ft. high at 35 cents per cu. ft. Average rental per room \$8.00 per month. For simplification, the first floor is treated as typical. Sundry additional costs are not included.

Comparing the Prize Plan with the Hood Plan we have the following:

Prize—Area	6,831 sq. ft.	46 rooms per floor
Hood—	6,355	48
Difference	476	2

Prize—Building Cost	\$167,359.00
“ Land	40,000.00
“ Total	\$207,359.00
Hood—Building	\$155,697.50
“ Land	40,000.00
“ Total	\$195,697.50

Difference in favor of Hood, \$11,662.00.

But the Hood plan has 2 x 6 or 12 more rooms which at \$8.00 per month produce an income of \$1,152. This income capitalized at 12½% amounts to \$9,216.

This suggests that one might add another 25 ft. lot at \$11,762.00 and so open up the plan while still retaining the advantage of the income from the 12 extra rooms.

THE PHELPS-STOKES FUND TENEMENT HOUSE COMPETITION

While this may not appeal to the speculative builder, there is surely something in it for the co-operative group who are interested in light and air. Or if one wished to open up the plan upon the same plot it would be possible to do so by eliminating rooms.

Let us cut a 4 room apartment with its proportionate area, leaving the gross area of such a modified plan at 5,823 sq. ft.

Following the same methods of calculating as above, we have:

Prize—Land and Building.....	\$207,359.00
Hood (reduced) and Land Building.....	182,663.50

Prize building containing 276 rooms at \$96.00 per year produces an income of \$26,496.00.

Hood building (reduced) contains 264 rooms at \$96.00 per year produces an income of \$25,344.

We therefore see that the Prize Design produces 12.7% gross income while the Hood design (reduced to 58.23% of lot) produces 13.8% income.

Before drawing conclusions let us see how it works out with a design by A. J. Thomas. The plan referred to here was not in the competition. It is the same scheme as was submitted in the preliminary competition but with 42 instead of 46 rooms per floor. If used in a block development the side courts open up to 12 feet between buildings. It is here used in comparison with the Prize Design, since when the two isolated units are reversed in position we have a form which compares with the Prize Design, but with this important difference: all courts extend through from front to rear. The area of this plan is 5,988 sq. ft. per floor of 42 rooms. Comparing this with the Prize Plan we have:

Prize—Land and Building.....	\$207,359.00
Thomas " " "	186,706.00
Difference.....	\$20,653.00

But the Thomas Plan contains 4 less rooms than the Prize, which would reduce his income by \$2,304.00 per year.

This deduction leaves a margin in his favor as the following tabulation shows:

	<i>Land and Bldg.</i>	<i>Gross Income.</i>	<i>Per Cent.</i>
Prize.....	\$207,359.00	\$26,496.00	12.7
Hood.....	195,697.50	27,648.00	14.1
Thomas.....	186,706.00	24,192.00	12.9

In the above comparisons no account has been taken of equally important matters. No more than the most superficial study of the several types will disclose that the Prize Design is the most expensive type to build. In this respect a comparison of the Prize Design and the Thomas Plan is startling. In the Prize Plan the exterior walls and partitions twist and turn like an irregular coast line; walls turn at 45 degrees, partitions at odd angles. Stair enclosures are extended into little hallways; steel beams, resting in turn upon lintels over windows, carry the joist. The length of walls and partitions is beyond all reason in relation to the areas enclosed by them. In fact, there are few areas and volumes within the plan which are not surrounded with complex construction. And the Prize Plan

is too "tight." Dimensions for stairs and rooms in too many cases permit of no errors in laying out the lines of construction; any variation reduces the space below that allowed by the law. Any plan, to be executed economically, must take into account the inaccuracies of actual building and allow for the same. It is in respect of straight-away construction that the Thomas plan points out what should be the aim of the designer in planning buildings of this sort. At no point in his plan does he impose a structural problem. A simple plan means lower cost; much lower where the differences are so obvious and striking as in the case of the two last referred to. This is not debatable.

While no account has been taken of the location of stairways, one may not ignore the advantages of so locating them as to retain the typical arrangement on the ground floor. Here again the Thomas plan is superior; no rooms are lost; no variations are imposed upon the process of erection.

Where to locate the unoccupied area—the open spaces—is not so easily disposed of. The solution is bound to turn in a given case upon what stands adjacent to the plot. It also turns upon whether we are dealing with a single plot or a block development.

The Thomas plan in the preliminary competition came in for harsh criticism because of his 6' side courts. But it was apparently completely overlooked that by reversing his units in the case of walls on the building lines on either side, we have a form of plan similar to the Prize Design but with this important difference: the courts all carry through from front to rear; there are no confined inner courts, no dead end pockets. A through circulation of air is secured every 50 feet.

One can not possible ignore the value of this. As a scheme for plot development it would produce a far more satisfactory condition than would be the case with the Prize Design. As a block development plan it is certainly superior. Again I think that the Thomas plan points the direction for further study.

There is no space here to extend the discussion of details; but the reader should compare such conditions as shape and size of rooms; location, type and arrangement of bath rooms. In no case does Thomas fail in providing the desirable articulation of bath, sleeping rooms and living rooms. In the same way a comparison with respect to maintenance, insurance and fire risk points to the conclusion that simplicity and lower covered area scores.

The outcome of this analysis should not mislead the reader to the conclusion that I am an advocate of any of these designs as a "solution." The purpose was to analyze the outcome of the Phelps-Stokes Fund Model Tenement House Competition in the light of the knowledge now available and applicable to the use of those who for one reason or another erect tenement houses on land which costs from \$4.00 per sq. ft. or \$175,000 per acre up.

Fifty years ago we tried to turn the trick on 75% of the lot. What followed our effort in twenty years was the great American slum. Then we tried 70% of the lot. From the results obtained then, from what followed and from what we did yesterday it looks very much as if we had missed the point. For it looks as if the complications in construction, the waste labor and materials, which appar-

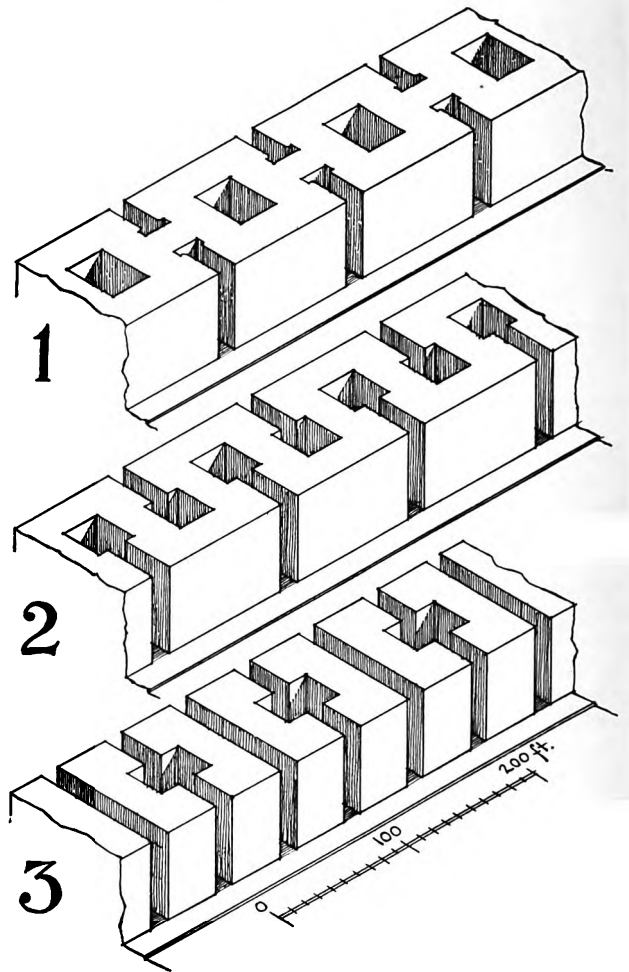
ently follow upon the heels of every effort to cover so great a percentage as 70% can not be avoided. It suggests that we should look into whether it pays to cover so much land regardless of its price. Apparently it does not.

A glance at the isometric block suggests the sub-title under it. But then I realize that a large percentage of one-half of our entire population must find their houses in habitations of this sort. And knowing something of the actual circumstances and the point of view of those who so have to live, I move over to a liberal position. I say to myself, under the conditions of land values—one hundred, one hundred fifty, two hundred thousand dollars per acre, the architects can provide more light and air if they were but given the opportunity. Will they be given the opportunity? That is the point.

And if they are given the opportunity, what then? I am not fooled by my own calculations for I know that, unless these building ventures are completely co-operative the gains made in terms of light and air will be charged for and capitalized in terms of price. The gains made, though they cost nothing, may be secured by those who live in the better designed buildings only upon one condition, viz., that they have the ability to pay more.

Which is a radical way of viewing the matter. But how else can one view it? For it is merely stating the facts of the case. Twenty years ago the "problem" of housing in congested areas of Manhattan was discussed in terms of 25 ft. lots at \$5,000 to \$7,500 per lot. Now it is ten, twelve, fifteen thousand dollars per lot. In what terms will we be dealing twenty years hence? This is a question we must face.

But I am told that all this falls outside the province of the architect; that it is a matter of economics. I do not follow. If the habitations of a large percent of one-half the population falls outside the concern of the architect, then it follows that architecture is not so vital a matter after all. Which perhaps is the proper view to take. All depends upon what we do; action and not dialectic discussion will settle the question and place the profession where it belongs in the ever changing scheme of life.



The three types as they would appear in block development.—1. The Prize Plan. 2. Mr. Hood's Plan. 3. Mr. Thomas's Plan. After many thousand years of progress man has gained such mastery over the material world that a large percentage of one-half of the population may choose circumstances permitting between these several types as his place of abode

Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

Big Cities

This is the age of immense cities. Yet future generations will be stunned and dismayed that these most gigantic productions of our time came into being without plan. And that is not because we are technically unable to plan,—for, in America, architects have excelled in planning convenient and beautiful houses, efficient factories, well and economically arranged schools, libraries, railroad stations. But we have not planned cities. They have grown to fit the whims and conveniences of individual owners of small parcels of the underlying land. It is as though, as the result of the separate arrangement of each department of a factory, the parts of the manufactured article were shipped back and forth and up and down, instead of following a systematic course through the building. The factory, in such a case, would be filled with

elevators, aisles, and passages, just as our cities are filled with unnecessary traffic thoroughfares and transit lines. If our cities were laid out as well as our factories, workers would walk to their work and the cost of subways would be saved; if our cities were planned as intelligently as a well arranged home, we would have sunlight and spaciousness everywhere. We would eliminate unnecessary streets and railroads. Every building,—every street,—would be located where it would best serve.

Why Cities?

Best serve! What do we mean? What is the function of a city? Is it not to simplify, as far as possible, our all too complicated life? To create a place in which to cooperate toward living happily and fully, in both work and in play? But such a supposition does not describe

COMMUNITY PLANNING AND HOUSING

our great centers of population. New York City, for example, to most of those who exist within it is the place where one battles with mobs at subway stations; where one hangs crushed from a strap inside crowded cars; where one lives in indecently crowded tenements without air or light or the sight of green; where long lines of trucks stand idle along the wharves while waiting to move our food and the material for our work,—industry blocked by congestion; where even on Fifth Avenue with its traffic police and flashing signals one can walk quicker than one can travel in a cab.

Such is New York. The other great cities differ only in degree.

Symptoms and Palliatives

The symptoms of our disease are so apparent. They are reflected everywhere in congestion. In humans crammed, jammed, crushed, huddled, and finally deadened to the realization that a way of escape must be found, and yet, like prisoners forgotten in a dungeon, groping for some way out. Thus, with pathetic stupidity, we spend millions on palliatives. No sooner is one subway finished than it is more congested than the last. The crowds that struggle to and from the center of action increase faster than do means of transit. Each year the length of a passenger's journey increases as does the cost of that journey. Ultimately the city or the individual must pay that cost, out of production of something or other. Subways do not alleviate the disease of our cities,—they spread it. They are the insidious tentacles that shoot out in the guise of blessings. Toward the life-giving green, they point with their lure of escape, but alas! they merely enlarge the area of chaos. New tenements and slums arise to rival the desperate congeries from which it is hoped that they will lead away. They are the monstrous illusions of the blind game of palliation. They contribute directly to the chief curses of New York City,—congested housing and clogged transit,—yet the Transit Commission now asks for fifty-five million dollars to sink into more subways. The day will come when instead of building these holes in the ground we shall see the wisdom of scrapping many of those now existent,—just as some day we shall scrap all of our slums. But how?

New York has had two competitions during the last few years. They attempted to find a way of replacing the worst and most antiquated housing. The first was the competition of the Reconstruction Commission of the State of New York for the purpose of "remodelling a characteristic old tenement block in the city of New York so as to make it a decent place to live in." The program stated that: "Two methods have been suggested as a practical means of replacing the old tenement districts with decent living places. One is to tear down the present structures and replace them with new buildings. The second is to alter the existing structures in such a way as to make them wholesome, light, airy, sanitary places to live in. With the present costs of building it is impracticable to attempt the first method on a large scale if the same end can be attained by remodeling the old buildings."

But the Jury, after receiving estimates for the reconstruction of the block as contemplated in the winning designs, concluded that such a solution was impracticable

and said: "The Jury finds that no one of the competitors has submitted plans that give satisfactory living conditions at costs that would make the alteration of the whole block commercially possible."

But hope never deserts the reformer. So, we have another competition,—this time an attempt to build anew in the crowded parts of the city. But these new houses must pay a return on capital,—a limited return, it is true,—and land is costly in the crowded parts of town near working places. Thus, perforce, all hope of decent living conditions was abandoned by the writer of the program of this last competition: Congest as many rooms on this limited and prescribed space as your ingenuity will allow,—this is the problem,—was what the program said. Is it any wonder that the results were such as are described by Mr. Ackerman elsewhere in this issue of *THE JOURNAL*? Will we never learn that the trouble is not with the planning of the details of our living or working place but with the conception of the city as a whole?

Yet more transit and "model" housing are not the only palliatives held out to our overgrown cities. There is also the patent medicine of zoning. As a sure cure, zoning is permitted by law under the police power because of its relation to health, safety, moral order and the general welfare of the community. Only, as Mr. Thomas Adams points out in the pages of this issue, it is stupid to urge zoning in advance of a basic plan premised on land control. Yet zoning is "sold," to quote our advertising friends,—not because of its advantages to the community as a whole but because it protects and increases the value of property held by individual owners of those small parts of the city called lots or parcels. Such is not a value expressed in terms of better and healthier men, women, and children, but value expressed in terms of money. Otherwise, zoning would be likely to come up against a stone wall.

Zoning in Philadelphia

Listen to the tale of zoning in Philadelphia, as narrated by Mr. Medary, a member of the Zoning Commission:

"A semi-official Zoning Commission for Philadelphia was appointed by a recent Administration about four years ago. This Commission prepared a Zoning Ordinance with maps of the City, and submitted it to the City Council shortly before the expiration of the Administration then in office. The proposed Ordinance was discussed in Councilmanic Committee but failed to receive favorable action before the adjournment of that Council.

"The following Administration came into office under a new charter, which contained provisions for the appointment of both a Zoning Commission and a City Planning Commission. After some delay the Zoning Commission was appointed, but the City Planning Commission has not yet been appointed.

"The result of the labors of this new Zoning Commission was an Ordinance with maps, submitted to the City Council, toward the end of 1921. The Ordinance was referred to a Committee, which Committee appointed certain days in January of this year for public hearings. At the first hearing a violent opposition to the proposal of zoning Philadelphia developed from several very large interests in the center of the business district. The discussions, which lasted through several hearings, were devoted almost

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entirely to the regulations restricting the height of buildings in this district. No serious discussion of either area or use was reached in any of the public hearings. The arguments against zoning were largely appeals to the prejudice of so-called 'practical' minds, such as calling zoning 'socialistic,' 'German,' and 'city beautiful' propaganda. The Commission insisted that zoning was socialistic in so far as it placed the interests of society above the interests of the individual and insisted that the claim of the individual to complete independence regardless of the effect of his actions on society was Anarchy, and that while our political institutions are regulated by some basic plan in the interests of society as a whole, our physical development progresses today without regulation, and at the whim of the individual.

"It was apparent at the first hearing that the Councilmanic Committee had a majority opposed to zoning, and after three hearings it was moved that the entire central section of the City be eliminated from the provisions of any Zoning Ordinance, and the rest of the Ordinance be returned to the Zoning Commission for revision.

"The Commission has had one meeting since the above action was taken, the result of which was to request the City Council to make an appropriation sufficient to carry on public meetings in the different parts of the City, and also to request from the City Solicitor an opinion upon the legality of any Ordinance which excluded any part of the City. The appropriation has been denied, but we shall go on."

Plan for the Comprehensive Development of the Port of New York

The Port of New York Authority is an attempt to solve the difficulties that arise from over-centralization. In this case the cure proposed is neither transit, housing, nor zoning, though all of these are affected by the plans for a thorough reorganization of the transportation of materials in the port district. The comprehensive plan approved by the legislatures of New York and New Jersey is the result of over four years joint study by the New York and New Jersey Port and Harbor Development Commission, and the Port of New York Authority. It is a regional plan for the vast area known as the Port of New York with a population of about 8 millions and a water front of 800 miles. The natural advantages of the site have gained for New York a predominance which has survived its woeful un-economic operation. In 1914, the latest year not materially affected by the war, 76 million tons of freight moved into New York by rail; 45 million tons by water; 100 million tons of grain are exported annually; add 38 million tons of fuel and 4 million tons of food and the total is sufficiently startling.

But this prodigious unco-ordinated development has cut off the island of Manhattan from the commerce and industry of the other portions of the Port. The Upper Bay, the Hudson and Harlem Rivers flow between. Only to the east are there any bridges. Connection to the west is by three railroad tunnels carrying passengers only. Thus the whole west shore of the Hudson for a hundred and fifty miles to the northward is cut off from Manhattan, but on this western shore terminate the majority of the railroads which serve New York City. Nine of the twelve have their terminals in New Jersey, yet they bring in prac-

tically all the products from the south and west, which in turn are distributed on the island of Manhattan,—it matters not whether for consumption or manufacture in the most congested parts of the district. Food and other things received in New Jersey are carried over to Manhattan by lighters or more often on car floats, and then transferred to the pier rail stations which occupy a large part of the lower Hudson and East River shores of the island. The streets outside these piers are so congested with trucks that more time is spent in waiting for freight than in hauling it. Thus it is not strange that the freight cost from Buffalo to the New Jersey shore opposite New York City is less than the cost of moving goods from that point to its Manhattan destination. This incredible congestion is aggravated by the fact that food, destined for the Bronx, Brooklyn, or even Newark must first pass through the primary markets around Washington Street. (Food may pass through Newark to Jersey City or Hoboken, be floated across the Hudson, trucked to the markets, and then take the same identical back track for Newark.) Thus is the Port of New York operated at the present time. The comprehensive plan of the Port Authority attempts to eliminate some of this waste. The problem is one in regional planning. It is proposed by means of tunnels and new connecting railroads to accomplish freight distribution at the minimum of cost. This rationalization of transportation in the Port will lead, it is believed, to a considerable decentralization of industry. Some of Manhattan's superfluous load may be taken elsewhere. But if the project is merely to build fresh centres of congestion in New Jersey and Long Island,—what is the use? If outlying land values are to be increased and capitalized, little will be gained through the development of a large area around New York. It is not a bigger city, but a saner type of city that we need,—a well functioning city,—the first requisite for which is the decentralization of industry. The Port Authority Plan may help to make that possible, but it can only be by imposing a limitation on the size of working and living units, accessible not only to each other but to adequate agricultural and recreational areas.

Does the Architect Fit?

Mr. Raymond Unwin, the eminent English planning authority, speaking recently at the exhibition of American architecture in London, said:

"Modern large towns appear to have outgrown their organization, and we citizens have to make up our minds whether we can wisely or even safely allow them to continue indefinitely to expand without some fundamental change, without introducing a new general form, a fresh arrangement of the parts. Green girdles, detached suburbs, satellite cities, or the founding of colony towns to provide for expanding industry and population are being considered as possible alternatives.

"The economic life of most of our great cities is based on manufacture, and often requires the local concentration of many industries upon a suitable area, where raw materials and finished products can be brought in and despatched with the minimum amount of handling and expense and where power and other facilities can be provided. These areas need to be selected and preserved, and to enable this to be done properly, the conditions regulating their position, their size and their distribution in relation to

London Letter

An Architectural Squabble

the city need to be determined. The great markets are also important to the distribution of the citizens' food.

"We have further to consider the question of the distribution of population. We have to decide how best to guide this distribution to provide the easiest access to commercial centres and industrial areas for those who work there; and further how to combine with this distribution the greatest possible localisation of the lives, activities, and enjoyments of these redistributed populations, a matter which is of the greatest importance in the interests of economy of transport, reduction of congestion in the central areas, and also in the interests of that greater development of local community life on which the maintenance of an adequate standard of character in modern city populations largely depends.

"These are problems in which the architect may take the greatest interest, but we do not pretend that they are architectural problems, and we recognise that their solution must take precedence of that particular aspect of town planning with which we are primarily concerned. When once these general questions of distribution have been determined and the community and their governors have made up their minds what is the nature of the development for which an orderly plan is sought, at this stage it does appear to me that the creation of a design which shall fulfill these requirements, and give definite form to the vague aspirations of the people, which shall satisfy the various needs in their proper order and proportion, neglecting none of the utilities, but so disposing and grouping the various necessary parts in relation to the particular site, its hills or its valleys, that in the natural order there will grow up upon this plan a beautiful city, satellite town, or suburb,—this, I maintain, is an architectural problem, one of the greatest of such problems, calling for the fullest exercise of that particular power of planning in which the architect is trained throughout his life. It is the trained capacity for design which should enable the architect to seize upon a mass of requirements and conditions, and by the exercise of his imagination to select the essentials, to subordinate the details, and to weave them all into an orderly and beautiful whole."

But, as Mr. Thomas Adams so wisely points out in his London Letter to which we have already referred, means must first be sought and found for a plan of land control under which the socially created use values of land shall not be appropriated and capitalized for private profit. Such a plan is basic. On no other structure can any beneficent city plan be erected.

City Air Stations

Plainly pointing to the impending addition of new factors in transit and transport is the report that the Air Ministry of England are proposing the establishment of an air station on the Thames, probably in the neighborhood of Westminster Bridge. Experimental trials of hydroplanes on the Thames and the Seine have demonstrated the practicability of using the rivers both for take-offs and for landings. Three quarters of an hour would thus be saved in the London-Paris air journey, while it is probable that the Thames air station would provide a service to Dublin and Queenstown, thus sparing Atlantic passengers any railway journey over the London-New York route.

Sir Charles T. Ruthen, F. R. I. B. A., occupies the dual position of President of the Society of Architects and Director of Housing of the Ministry of Health. In the former capacity he has just delivered an address to the Society of Architects in which he blamed the architects for the financial failure of the State Housing scheme. It is needless to say that this indictment of the profession has created a wave of indignation among his brother craftsmen. It will be remembered that a real estate member of the staff of the United States Housing Corporation charged certain town planners and architects with the responsibility for the high costs of housing in America during the war on the ground that they gave too much attention to obtaining aesthetic and too little to obtaining practical results. That was perhaps a natural attitude for one to take whose view point had been developed along strictly commercial and unimaginative lines. Sir Charles Ruthen however is himself an architect and has indicted his own profession.

There is a curious parallel between the charges made against the town planners and architects of the Housing Corporation and those now made against the English architects who have been engaged in designing houses under the Government Housing scheme in England. The statement of Sir Charles according to authentic report is that the architects were obsessed by art and overlooked financial considerations. They allowed their pencil to "run wild in the dream of the artistic home."

He went so far as to condemn architects as profiteers in their art and as the leaders of the other profiteers. The result he said was that they contributed to a capital loss of two hundred million pounds.

There may be a germ of truth in these charges and some architects may have failed to submerge the claims of their art in favour of the claims of economy at a time of peculiar national stress. Even so their faults leaned to virtue's side, and they have a right to repudiate any responsibility for seeking after cheapness for the sake of cheapness.

The Ministry of Health had a staff of architects engaged to overlook housing schemes and an expensive regional organization scattered over the country supervising the local schemes of all architects employed by the municipalities. If there was any fault in the matter of neglect of supervision of costs or indifference to profiteering of builders it must be charged against these officials of whom Sir Charles Ruthen is now a colleague.

Architects have done much to raise the standards of municipal housing and their remuneration has been fixed on the usual percentage basis. Many of them are suffering serious loss as a result of having prepared plans for extensive housing schemes which the Ministry of Health has ordered to be abandoned. A predecessor in the Chair of the Society of Architects, Mr. E. J. Sadgrove, describes Sir Charles' criticism as nothing more than a political stunt and accuses the Ministry of Health as the responsible body for indulging first in a policy of squandermania and of now trying to get out from under by getting back to brick box styles of dwellings and whittling down architects' fees to less than what is paid to the road sweeper.

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It is an unfortunate quarrel and shows that there are cases in which the official architect may suffer in his outlook by association with politicians. There is a tendency among many government officials at the present time to play to the gallery, which is always ready to applaud any sentiment in favour of cheapness. It is a natural reaction against excessive prices and profiteering. Professional men, no matter how free of blame, have to suffer in common with those who are responsible. Part of the personnel of the bureaucratic machine created by the war is fighting for its life and part of its method is to condemn others for its own sins, and to discredit what were its own ideals because of its failure to adapt them to practical needs.

EDITOR'S NOTE: Sir Charles Ruthen has resigned as President of the Society of Architects, following the action of the Council of that body in expressing its dissenting opinion, and the R. I. B. A. has, through its Council, challenged Sir Charles Ruthen to prove his statements.

Heights of Buildings in London

Since 1894 the London County Council has had power to prevent buildings from being erected in London of a greater height than 80 ft. Prior to 1894 it was 90 ft. They have discretionary power to permit buildings of a greater height but the 80 ft. is the standard they follow. Above the 80 ft. two stories may be added in the roof and thus the height of buildings in London is practically limited to 100 ft. There is a further provision in the by-laws preventing the erection of buildings on streets less than 50 ft. to a greater height than the width of the street, and another limiting the space on any one compartment of a building to 250,000 cubic feet.

The last provision affects large department stores but only to the extent of requiring the interior of the building to be sub-divided into compartments of not more than 250,000 cubic feet.

There is a movement among a group of architects in the R. I. B. A. to get permission to erect higher buildings. Those who are engaged in the agitation repudiate any suggestion that they favour skyscrapers. They want the present height limit of 80 ft. raised by 20 or 30 ft. For the present the Institute as a body has opposed the proposal, but the question has not been finally settled by the members. The Town Planning Institute is giving the matter consideration and their probable attitude will be that no greater heights should be permitted till a proper plan of London has been prepared so as to have the question of heights settled in proper relation to width of streets, bulk of buildings on lots, and traffic problems. London is not as well provided as New York with wide streets. Its traffic ways are narrow and tortuous and many of the sidewalks in its business thoroughfares are totally inadequate to accommodate pedestrian traffic even in the slack hours of the day. With the present heights of buildings traffic congestion of all kinds is creating serious problems. The L. C. C. has decided as a result of the agitation to send its chief architect to New York to make a study of high buildings.

Zoning

Little has been done in England in zoning on the lines so fashionable in American cities. In some town planning

schemes, notably the Ruislip and some Birmingham schemes, limits have been imposed in respect of height, use and occupancy (or density). As applied to buildings to be erected in the future so far as existing built upon areas are concerned, no zoning has been done, and the present legislation is not favourable to its being done. For instance, little encouragement is given under the law to the inclusion of fully developed land in the areas of town planning schemes, and, unless such land is included no effective regulation is practicable. The revised town planning act of 1919 makes the inclusion of buildings in town planning areas easier but the procedure to be gone through in serving notices on each separate owner and leaseholder makes the task of delimiting the height and character of buildings already erected very cumbersome and expensive. As a result of the American example much interest is being taken in the question of zoning, but it will be a misfortune if zoning schemes are introduced as a substitute for comprehensive town planning schemes in which adequate provision is made for the control of land development.

Meanwhile there is a good deal of activity in promoting town planning schemes. Local authorities are anticipating the coming into force of the compulsory clauses of the act of 1919. Under that act all urban districts having a population of over 20,000 must prepare schemes within 3 years after January 1923. Over 300 authorities will be affected and, if the scheme is not vetoed because of the cry of "economy first," Britain will shortly enter upon an active period of town planning.

The creation of the Irish Free State and the setting up of a Government for Ulster is causing attention to be given in Ireland to the desirability of town planning. We may witness great activity in that country to revive the prosperity of cities and towns that have been suffering from decay for generations in spite of great natural advantages. Ireland may go far in the direction of social reconstruction under the new regime.

Housing

The Ministry of Health is steadily cutting down the housing programme. One municipality that intended to build 400 houses has built 50 and is not permitted to proceed further although it has brought the land and constructed the roads and sewers for the purpose.

Meanwhile unemployment continues to be serious and the housing shortage is as acute as ever. Prices of materials are beginning to drop but owing to the fictitious schemes given to them under government control of production they are still too high to command a ready market. The consequence is that there are heavy accumulations of stock. More than 30,000,000 bricks are stacked in yards of Peterborough brickmakers.

With falling prices there is sure to be a revival of building in the near future. One local authority has had new estimates for the erection of 5 roomed houses and these represent a saving of \$1,500 per house as compared with a year ago. A high authority expresses the view that the cost of houses in another year will not be greater than 50% above pre-war costs.

All the ideals regarding reconstruction, all the hopes regarding getting an ample supply of homes "fit for heroes

THE SECRETARY'S TABLE

to live in," and maintaining high wages have vanished. We have passed in England from the stage of expectancy of a better world for the wage-earner as a result of the war. Unemployment and ruinous taxation are creating a bitterness of spirit and a philosophic acceptance of pre-war standards, as the only attainable ideal.

One hears some echo of Emerson's declaration that the less government we have the better—the less confided power. It will be a misfortune for England if this state

of feeling is used to push forward a gospel of economy at all costs. What is really wanted, as Frederick Harrison says in *The Times*, is a new religion of human duty to supersede the passions, jealousies, and obscurantism that made the war and still survives it. "Until," says Harrison, "our people—all peoples—can be trained to feel in their souls a religion of social duty, there is no hope of much good coming from makeshifts of practical policy."

London, February, 1922.

THOMAS ADAMS.

Around the Secretary's Table

BY THE SECRETARY

THE SECRETARY: I am struck frequently with the extent to which it appears necessary for the Architect to have a legal turn of mind, if indeed not also a large amount of knowledge of the law and its cases. I am frequently in receipt of requests from lawyers and architects for information as to cases bearing on some particular point. It is of course necessary to reiterate that the Institute can not attempt to keep a complete file of cases arising out of building contracts. There are regular channels by which lawyers reach such information and it seems wiser to leave this responsibility with them. Anything short of an absolutely complete file would be a waste of time and money, and a complete file would certainly involve considerable expense. Recently, I was asked to say whether drawings and specifications, as instruments of service, were the property of the Architect. Now, of course, we have not any legal data in the form of a file of cases bearing on this matter, but merely such information as is readily at hand in books like Blake's "Law of Architecture and Building" and T. M. Clark's earlier work entitled, "Architect, Owner and Builder before the Law."

Blake states on page 90—"as a matter of fact, however, unless there be a specific provision in the contract whereby it is agreed that the plans are to be and remain the property of the Architect, they must be legally considered, it seems, as the property of the Employer who has ordered, accepted, and paid for them." He goes on to cite cases bearing out this assertion. He refers to Article 7 of the present A. I. A. Standard Documents, which provides that "the drawings are the property of the Architect, as indicative of a realization of the necessity of a definite agreement in regard to the plans, if the rights of the Architect therein are to be properly protected."

MR. KENDALL: I believe the English law has conceded ownership of plans to the Architect. An exception to this was the case of *Barry vs. Houses of Parliament*. My impression is that the courts in this country have almost always decided for the owner.

THE SECRETARY: Mr. Clark, in his book just mentioned, refers to the Schedule of Charges of the Institute which contained the clause, as it still does, that "drawings, as instruments of service, are the property of the Architect," and adds that "although this clause expresses what Architects, without exception, believe to be the natural and proper arrangements, it finds little sanction in courts."

Blake's later work seems to conclude differently when the provision is definitely made in the contract. He states, however that it is hardly sufficient that this provision should be only in the contract between the Owner and Contractor as the Architect is not a party to it. He says on page 92, ". . . it is advisable that a memorandum of agreement in this connection be entered into direct between the Architect and the Owner. Under such circumstances no such technicality could be urged to defeat the interest of the parties as outlined in the agreement between them."

He certainly conveys the impression that if such an agreement is a matter of record it will hold in court.

MR. MUELLER: In Article 2 of the General Conditions of the Contract, A. I. A. Standard Documents, the last sentence states, "even though the signature of the Owner and the Contractor may have been attested by witnesses they may be proved by any competent evidence." I can not satisfactorily interpret this sentence. Is it possible that the word "not" has been omitted between the words "may" and "have"?

THE SECRETARY: No. The phraseology is intended to be as printed. The idea is that generally when a signature is attested by witnesses it is legally necessary to secure these witnesses in order to prove the signature, and this is frequently difficult. The clause was devised as written so as to permit in such cases any competent evidence in proof of the signature. When the third edition of the Standard Documents was developed the words "In presence of" and the lines for the signatures of witnesses, which had always theretofore appeared at the end of the Form of Agreement, were omitted, our legal advisers stating that the witnessing of signatures was much less frequently done in recent years and quite unnecessary.

MR. MUELLER: One other point. Article 21 provides that the Owner shall maintain fire insurance upon the entire structure. In a recent general condition on some State of Ohio work, the following clause was used instead. "Fire insurance will not be maintained by the Owner, but the Contractor may carry such fire insurance as he may desire to protect his own work or property." I would like to have your opinion on this latter clause, whether the Institute deems it sufficient for every day purposes or whether this clause may have been used with particular reference to Government work only.

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THE SECRETARY: Of course a State or Municipality may have an established policy by which it never takes out any fire insurance on its property. In such a case it, of course, assumes responsibility in case of loss and the permissive clause quoted would conform to its policy. For ordinary private work, however, I believe such a clause is highly undesirable in every way. The Owner is primarily interested in the matter as his interest always far exceeds the interest of the Contractor, whose interest is only for such portion of the work as may be in excess of the amount already paid him by the Owner, and for his equipment. As the work nears completion the Owner has almost full value involved and it is to his interest that it be protected by full insurance.

It is for this reason that the Standard Documents provide that the Owner shall take out insurance to protect everybody's interest. This covers all interests adequately by a single policy, the responsibility for maintaining which being placed upon the man who has the greatest interest involved.

THE SECRETARY: The rapid rise of building costs in 1920 has been a source of a good deal of trouble to Architects as well as Owners. Many a building has been projected and when the Owner's requirements, or perhaps his desires, have been developed into plans, and estimates secured, the cost has been so much in excess of the Owner's purse that the work has of necessity been abandoned. A rather typical case was presented to me by an Owner late in 1920. He was acting with the consent of his Architect, who was a friend, and they joined in asking my opinion on the facts in the case. They stated the case briefly as follows:

"The Client suggests to the Architects that he would like to have a house that could be built inside of \$20,000.00, covering certain stated requirements. The Architects submit rough general ideas, they are discussed, and finally a complete set of plans and specifications are made by the Architect. Upon submission of the plans and specifications to builders for estimates, the lowest figure received proves to be \$60,000. The Client declines to proceed further in the matter and the Architect claims that he is entitled to his fees, provided by the practices of the American Institute of Architects, of 6% on the estimated costs.

"Question: Is the Client liable to any extent, to the Architect, and if so, to what extent?"

Such an inquiry is somewhat embarrassing. The Secretary of the Institute is not only not omniscient, but is given the very barest outline of the facts. All those essential details of conferences and statements by both Owner and Architect, that are of prime importance in making a fair decision, are lacking, and yet the Institute should try to be of some service when such appeals are made. In the hope of doing so and yet refraining from any appearance of making a decision on the insufficient evidence submitted, I wrote the following letter, which I quote *in extenso* in the thought that if it puts the case fairly, it may serve to suggest procedure to others in similar trying circumstances, and if it does not seem to some an appropriate reply the Secretary will hope to receive their comments for his assistance in the future.

"It is very unsafe, and unwise therefore, to presume to give a verdict on a definite case with such incomplete information as

must necessarily be involved in a brief correspondence. Personal interviews and careful study of all the facts, which involve in every case the conversations that have occurred at various interviews between Client and Architect, as well as documentary evidence, can alone fit one to pass definite judgment.

It seems evident to me that you and your Architect are mutually desirous of determining the right and customary action under the circumstances and I am glad to suggest some lines of thought involving questions to which you both can undoubtedly give the correct answers, after which the just settlement of your obligations will, I believe and hope, be readily determined.

(1) An owner arranges with his professional adviser to perform certain service, originally contemplated to be complete. Clearly then he owes him remuneration according to common practice for such portion of that service as he performs in good faith and with that degree of skill reasonably to be expected of such a professional man.

(2) Paragraph 1 of the A. I. A. Schedule of Proper Minimum Charges, Document 124, establishes 6% as a reasonable standard minimum charge for full professional services, except for such cases as are outlined in paragraph 2 as justifying a higher charge.

(3) At a certain stage the Owner decides, as he always has a right to do, to abandon the undertaking.

(4) Paragraph 8 of the above document establishes the Architect's right to recover for such partial service and paragraph 9 determines a basis for arriving at the approximate remuneration under certain fixed conditions of abandonment. Upon completion of 'specifications and general working drawings' (exclusive of details) 60% of the appropriate total fee being computed on a reasonable estimated cost of the work as drawn, or upon the lowest bona fide bid.

(5) If the drawings as estimated have not been approved by the Owner as representing what he desires, or if he has given the Architect a definite limit of cost as a fixed condition and the bids are widely at variance therewith, it will be necessary to make some adjustment, according to the specific facts of the case. Under present day conditions bids of different contractors are widely different themselves, and a more generous leeway must be allowed for the Architect's judgment of estimated costs. Just what is reasonable must be determined to fit the special conditions of each case.

Sometimes an Owner gives a limit of cost that is inconsistent with the demands for accommodations in the structure, which he also lays down. The Architect may or may not make clear or attempt to make clear to him this inconsistency, which, if marked, should be noted by him and reported to the client. This element involves frequently many complications in settlement for abandoned work, and the fullest scrutiny of the acts and implications of both Architect and Owner is needed to arrive at a just decision.

I suggest that you analyze your problem along the general lines indicated and if you do not find readily a mutually satisfactory answer and desire further general information on phases of your problem, I will be glad to have you write me further.

I am glad to be of any assistance I can so long as I am not placed in the position of assuming to decide at long distance a specific problem that is always complicated and needs the closest inquiry."

The following month a similar case was reported by an Architect substantially as follows:

In the spring of 1918 plans for a building were begun and the building was almost completed in the fall of 1920. The Owner told his Architect to design a building to cost \$50,000. So much was desired in this building that the estimate was \$60,000. They delayed starting then for some time, but finally started it in the spring of 1920 (just when prices started on their spectacular hill climbing contest, it may be noted) and spent about \$95,000.

COMPETITIVE BIDDING ON COST-PLUS CONTRACTS

The Building Committee refused to pay the Architect his commission on a basis of 6% of \$95,000 and demanded that he send them a bill in full for 6% of \$50,000, which was the amount they had said they wished to put into the building.

He asked for advice.

Here the facts seemed to indicate a perfectly normal course, in view of the trend of building costs during the period involved. Was I justified in writing him as follows?

"I beg to acknowledge your letter of the 16th. The present high cost of building has brought several problems like yours to my attention quite recently, one being a case where the Owner has been shocked at the final cost of the work, and has endeavored to relieve himself of the necessity of paying the Architect percentage on the full amount. In one case, as the facts were presented to me briefly in correspondence, the excess was so great that it seemed to me to indicate laxity on the part of the Architect in handling the situation. The general results stated in your letter indicate a perfectly normal condition, and appear entirely reasonable under the most skillful handling of the situation by the Architect.

Conditions would seem to indicate a rise of at least fifty per cent in the cost of building since early in 1918. The problem is one of the problems connected with the percentage method of charging, and the reasonableness of charging full percentage on the higher cost comes back to the general increase in the cost of living, for which the Architect must find compensation in his fees. On this basis the application of a fixed percentage to the increased cost operated automatically to meet his own increased cost of living. Whether or not the Architect can insist upon full percentage for actual cost in any given case depends on all the facts in the case regarding his service, and the acts of himself and the owner throughout the progress of the undertaking. Assuming that he has rendered full and conscientious service, and that increased costs are due to causes beyond his control, even they may be also beyond the control of the Owner, then I believe that the Institute's schedule of charges indicates clearly that he is entitled to percentage on the total final cost of the work.

You indicate that the Owner delayed starting construction but finally started it last spring, and has spent about \$95,000, which indicates it was done on some sort of cost basis. Such a basis of contract generally involves the Architect in extra service which justifies a charge above the normal percentage, unless the method of procedure is specially designed to relieve him of this extra burden.

As always in such cases it is impossible for me to judge with any accurate application to the particular case in point, the full details of which it is impossible for me to know. I can only indicate what I believe the Institute documents will support under certain assumptions, and must necessarily leave wide scope to the persons involved for the application of my suggestions to their specific problem based upon actual, full knowledge of all the conditions."

Certainly the whole question of charges is a most interesting and complex one and worthy of very careful study and the Secretary will welcome any comment that will help to develop sound practice.

Building Obsolescence

Deductions for obsolescence now permitted under the Income Tax Law have raised questions too long ignored by architects and investors in buildings. We hope to have an important contribution to make on this subject in our next issue, for building depreciation has both a social and a financial aspect.

Competitive Bidding on Cost-Plus Contracts

Anyone familiar with the details of the Building Trade feels enthusiasm for any proposal that emphasizes the possibility of appraising the value of builders' services. The same enthusiasm holds for any proposal to open the detail estimate to the examination of the designer of any architectural or engineering work. The resultant economies of such procedure are too obvious to need discussion.

Mr. Lord, in his article in the February JOURNAL, has done a good service in suggesting even the possibility of these things. I believe the principles that Mr. Lord has laid down are valuable. I am not satisfied that any equation is workable in selecting a bidder. The principal difficulty, it seems to me, will arise not when the estimates are identical, but when the estimates vary, as they commonly do.

However much theoretical emphasis is placed upon other factors, price is likely to become prominent, and I fear that the engineer or architect who has received varying estimates will have a recurrence of present day difficulties if he tries to persuade the owner to accept a middle rather than a low figure as correct. It also seems probable that the various items of the bids are likely to be compared, and that there will be an attempt to combine the low items of all the bids in the lowest one. The constantly recurring and ever human belief that the low bidder is right, it seems to me, will upset any theoretical equating of values which may be accepted academically.

After all, the value of Mr. Lord's scheme to the Building Trade as a whole lies in the proposal that the designer should be supplied with two things,—a method of determining the value of building organizations and that he should be equipped with a detail estimate of his design. In the past few years a number of the leading architectural offices have recognized the necessity of detail estimates of their design. Both for the sake of their own economy and for the saving of time and expense for their client it has appeared desirable that these estimates should be made as the designs progressed rather than after the designs have been completed. Some few builders have recognized the tremendous economy offered by a combination of the estimator and designer and have organized themselves in such a way as to be able to place skilled estimators in the designing room of the architects. Accordingly as the various features of the design develop and as alternate materials are considered for the different elements of the work the price of the alternates has been laid before the designer, who thus has been able to balance price against quality and to assure himself that the cost of his design will not exceed the client's appropriation.

Genuinely skilled estimating service of this sort is very rare, but where it has been conscientiously applied the results have been most satisfactory, both to the client and to the architect. Some few building concerns who have been farsighted enough to see the coming demand for this sort of service have already succeeded in creating a very large and profitable business. One large concern now under the management of the third generation has so far succeeded in this way that it has had its choice of business and even during the depression was handling many millions of dollars worth of the highest grade construction.

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This firm is selected not by any competitive method, but because of the proved ability to add its experience to that of the architect on any problem this firm agrees to touch. Long experience has demonstrated that the buildings handled by this firm are better built, sooner finished, and offer better investment value than buildings handled in other ways.

It seems to me that buyers of buildings naturally divide themselves into the classes of those who consider that the builder is bidding on a commodity, and those who recognize the fact that the bidder is actually offering a bid for service rather than a bid for a commodity. Once it is understood that the builder is largely a broker it seems entirely possible that he should be engaged to work with the architect in developing a design, the price of which design he may very well in the end guarantee.

I am far more impressed with the idea of selecting the builder before the design is developed than I am with selecting him after the design is complete. It is probably a fact that intelligent cooperation,—I wish again to say that this is very rare,—will result in far greater savings in total cost than can be obtained by close competition in total price.

It seems reasonable to hope that the next few years will develop a demand for a high standard of service from honest, capable builders and at the same time create a fuller appreciation by the architects of the strength that a combination with such builders can add to them. When success follows the men possessing the imagination and power to cooperate under new arrangements then their methods will be studied and followed. The chance of improvement is in the hands of the few who grasp possibilities and intelligently apply them.

MORTON C. TUTTLE.

Boston, March, 1922.

Committee on Small Houses

EDWIN H. BROWN, *Chairman*

Since the announcement of the work of the Small House Service Bureau in the January JOURNAL it may be of interest to know that the following additional newspapers have taken over the mat service:

Cincinnati (Ohio) *Times-Star*.

Poughkeepsie (New York) *Sunday Courier*.

Winona (Minnesota) *Morning Leader*.

Chicago (Illinois) *Daily News*.

Lancaster (Pennsylvania) *Intelligencer and News Journal*.

Rockford (Illinois) *Register-Gazette*.

The Bureau is endeavoring to standardize the heading used with the mat service as follows: "HOME BUILDERS' CLINIC."

The Minneapolis *Journal* has become so interested in the possibilities of this service that it has decided to become a model client of the Bureau. It is going to prove to small home builders that, with limited sums of money, small attractive homes can be built for reasonable cost. The *Journal* has bought a lot and is going to build, on the lot, under the supervision of the Northwestern Division of the Architects' Small House Service Bureau, House No.

654. The operation will be carried on in exactly the way an owner would have to proceed. It is hoped that other papers throughout the country will see the possibilities of such a service to their community and do likewise.

The Northwestern Division has prepared a travelling exhibition which is being routed to a number of the Chapters of the Institute which are co-operating with home building expositions. Included in this exhibit are advance sheets from the book being prepared by the Mountain Division of the Bureau, headquarters at Denver, Colorado. Many inquiries are coming in to the office of the Northwestern Division for exhibit material. Colored photostatic enlargements of pages of the book, "How to Plan, Finance and Build Your Home," have been made and, with photographic illustrations of houses actually built, will form the background of the exhibits.

The United States Bureau, the National controlling body of the Bureau, is issuing a monthly Bulletin, devoted to the work of the Bureau. The first copy of this will be out by the time these notes appear. The first issue will have a circulation of 5000 copies and the subscription price is \$1.50 a year. The Bulletin will illustrate the work of the different Bureaus, show houses erected from Bureau plans, state costs, and generally give the small home builder accurate and valuable information.

The Mountain Division of the Small House Bureau has issued advance sheets on about 30 different houses which will be a part of its finished book. The balance of the plans for the book are about finished and the book itself will be out shortly. A number of houses from their plans are now under construction and the promise for a successful season seems very bright. The office of the Mountain Division is at 318-319 Chamber of Commerce Building, Denver, Colorado. Mr. William E. Fisher, A. I. A., is president, and Mr. Donald O. Wiese is Director of Service. The advance pages received promise a very interesting and delightful book.

From Our Book Shelf

Rents, Rights, and Realities¹

A useful compilation of the recent so-called "Emergency Housing or Rent Laws" of the State of New York. Contains the text of the laws, a general history and survey of the housing problem, a history of the "Anti-rent Wars" in the State of New York, and apparently all decisions, both reported and unreported, which have been rendered, construing the recent rent laws. So far as the writer knows, it is the only book of its kind in the field and it is encouraging that it contains an unequivocal recognition by a judge administering the rent laws, of the absolute failure to reach the root of the evil at which the laws were aimed, and also because it recognizes the unsatisfactory method of dealing even with the question of the adjustment of rents. In this connection Judge Lauer says, "It would

¹THE TENANT AND HIS LANDLORD.—A treatise on the rights and liabilities of landlords and tenants under recent "Emergency Housing Laws" of the State of New York, with the latest decisions thereunder, together with some historical facts of interest, copies of the laws, and local New York City ordinances and forms, by Hon. Edgar J. Lauer, Justice of the Municipal Court of the City of New York, and Victor House, of the New York Bar, Assistant United States Attorney for the Southern District of New York, published by Baker, Voorhis & Company, 45 John Street, New York City.

FROM OUR BOOK SHELF

seem as though with a little additional consideration and thought by the Legislature, some more satisfactory method might have been devised for the adjustment of differences between tenants and their landlords" (page XIII).

The historical matter is interesting but not comprehensive. It seems to be confined to conditions in Japan, Rome and under the Hebraic law. Of course, it is sufficient for all practical purposes, but does not cover the field sufficiently for a person investigating the field scientifically. A much more comprehensive treatment is found in the briefs in support of the law submitted in the Rent Cases in the Court of Appeals and the United States Supreme Court. Judge Lauer states that, "Housing is, therefore, a necessity of life" (page I) and that, "Only the 'speculative builder' has hitherto shouldered the burden of the large proportion of housing projects." Here we have a statement in unequivocal language by one who certainly is in a position to know, that a large proportion of housing, a necessity of life, has been "shouldered" by speculators. It certainly presents forcibly the question as to whether or not speculation in a necessity of life should be permitted, and it seems that if speculation in the necessity of life has been a failure, it should certainly not be permitted. A study of the reports of the various Commissions of the State of New York appointed to study what has heretofore been called the tenement house problem, would convince almost any person that the attempt by the Legislature to regulate the private control of building has been a failure, and that it is time to discontinue the "widespread call to the government for relief and a general resort to legislation for palliatives" (page VII).

The statement by Judge Lauer that the conclusion is everywhere arrived at that private initiative has proved inadequate to deal with the problem and that systematic government regulation, encouragement and financial aid must be given (page VII) should have considerable weight, as should also the statement that, "In a general way, it may be said that these 'Housing Laws,' enacted under the circumstances described in the last chapter, concern themselves primarily with the needs of the moment. Rents were being raised; tenants were being evicted. This had to be stopped. Only secondarily did the Legislature address itself to the fundamental need: a plan that would encourage house construction. So secondary in importance has this phase of the emergency legislation been quite generally regarded, that many real estate men are still of the opinion that the net effect of these laws will be practically to halt residential building" (page 33).

The conclusion apparent would seem to be that there is still need for a real, thoroughgoing housing reform—for a plan that will reach the root of the evil and thus obviate any further necessity for palliatives such as our present rent legislation.

CLARENCE M. LEWIS.

The Volute

"The Volute in Architecture and Architectural Decoration"¹ by Professor Rexford Newcomb, is the first of an architectural series of bulletins published by the Engineering Experiment Station of the University of Illinois. "It is the purpose of the Station," we read, "to conduct

¹"The Volute in Architecture and Architectural Decoration," by Rexford Newcomb, Bulletin No. 121, Engineering Experiment Station, University of Illinois, Urbana, 1901.

investigations and make studies of importance to the engineering, manufacturing, railway, mining and other industrial interests of the State." The publication of a study of this nature without special comment may therefore cause some surprise to those who are accustomed to thinking that the engineering profession has little sympathy for the ideals of architecture, or that the genesis of the volute should be regarded by it as of value to the State's industrial interests. However that may be, the fact is a significant indication of the breadth of view of those who are concerned with directing the activities of the Research Corps in that University, and a promise fraught with hope that other studies of like nature may be forthcoming.

With the painstaking industry of the serious investigator, Professor Newcomb has collected evidence from every available source bearing on the origin and use of the volute, and has produced a study by far the most exhaustive yet attempted. It is doubtful whether future discoveries or conclusions will add much evidence of value to that here presented.

As to the origin of the volute, the author is of the opinion that it would seem reasonable "to conclude that this curve entered art like most other forms from nature-inspired beginnings" rather than "in connection with the manipulation of materials;" a point of view in which we should prefer to concur, even though the evidence were on the other side, which is not the case. Passing over a discussion of the occurrence of the volute as a feature of the capitals of columns in the different epochs of design, we find our interest centering on the division of the subject treating of the "Early Use of the Volute in Architecture." It is here—especially where conjecture touches on the settlement of the question of the origin of the Ionic capital—that theorizing becomes most interesting and conclusions most important. Rejecting the theory that decoration preceded structure, the author concludes after weighing all the available evidence that "it appears probable that there was little or no Assyrian influence in the development of the Ionic order, but that the spiral motif as found in Ionic art is a product of Aegean culture, and did not come from the East." Bearing in mind the general laws of architectural development he seeks to establish for the Ionic capital an origin in primitive wooden architecture. While there can be no doubt that the membering of entablatures goes back to a wooden origin, one would be inclined to question this theory for the volute form of the capital. The conjectural genesis of the Ionic capital from log ends placed side by side, although ingeniously conceived, does not seem altogether plausible. We should be inclined to limit the analogy here given to the wooden bolster-cap-transformed-into-stone theory of Hitorff and Viollet-le-Duc. Becoming a stone bolster-cap, the rounded-off ends characteristic of the Ionic form follow at once, since otherwise the slightest unequal settlement would cause the stone to crack at its upper, outer edges. Decoration with spiral ornament, first painted, then scratched-in, then sculptured, also follows logically enough for this form as for any other to which it is adapted.

Illustrated with some fifty-five beautifully reproduced figures and supplemented with a complete bibliography, Professor Newcomb's study takes its place as a valuable historical document. Studies of the origins and develop-

ment of the forms of architecture, when presented as here, are of great interest and undoubted value, and while one is tempted to reflect that the conclusions of the investigator would probably in many cases be very different from what they are if he could see all that has disappeared, one would not therefore seek to minimize the importance of the fruits of scholarly research.

N. C. C.

Mr. Flagg's Small Houses

We may not care for Mr. Flagg's little houses, charming as some of them are; we may not agree with him about all the virtues of the module system in designing and planning; we may not care for all his economies in construction, although their reasonableness and practicality are demonstrated in houses already built on Mr. Flagg's Staten Island estate, but we cannot help considering with admiration, his attitude towards the small-house problem, his earnestness and enthusiasm, his efforts to eliminate all that is sham, wasteful, meaningless and ugly. I opened Mr. Flagg's book¹ with considerable skepticism; I closed it with profound respect. A visit to his estate, showed that he practised what he preached, and in the few experimental houses already built, that he had succeeded in constructing small houses of durable materials, devoid of sham and make-believe, honest in construction and unique in arrangement, for comparatively much less than houses of inferior quality. The following quotations give a fair brief of Mr. Flagg's house-building creed as expressed in his book and confirmed by the actual buildings:

"Man is for the most part a creature of habit who follows custom without question. When he does make inquiry he sees many of the commonest things of daily life done in ways which are not the best, it is not surprising, therefore, to find methods used in design and construction which can be improved upon."

"One excellent way to save money in building is to tell the truth: that is, to let things show for what they are, and save the cost of making them appear to be what they are not."

"One of the best ways to economize in building is to economize on ugliness."

"The older one grows, and the more he learns, the greater the value he places on simplicity in all things."

A few basic principles underlie Mr. Flagg's small house designs. He himself places the module system first. In this, every dimension is a multiple or simple fraction of an established convenient dimension. This of course tends towards a simplification, harmony and standardization of parts. It has many virtues and many faults, especially in a world full of mechanics who persist in measuring in feet and inches.

Of greater importance, it seems to me, is the utilization of roof spaces and the elimination of cellars. These houses are built with stone walls, ingeniously laid up against a form, mosaic fashion, and backed with concrete. The side walls and eaves are kept quite low so as to offer stable resistance to the thrust of the rafters, which are without ties or collar beams. "Ridge dormers," unique ventilators, are provided, and roof spaces usually hot, gloomy, dirty and wasted are turned into picturesque, light, airy

¹Small Houses, Their Economic Design and Construction. By Ernest Flagg. Charles Scribner's Sons, New York.

rooms. Storage rooms in lieu of cellars are built above ground as "dependencies," giving the houses more importance and character, but requiring rather extended ground area for the size of the house. The houses certainly utilize the maximum cubage for living purposes, and all the space utilized is highly desirable.

Other features are the elimination of all casings and trim. Practically all the woodwork is solid and structural; the ceilings are the underside of the underfloors above on exposed beams, a little heavier than usual and farther apart; partitions are of solid plaster, quite simple construction, thin, inexpensive and remarkably strong; the roofing is cheap composition material, effectively laid; the windows are simple weatherproof casements; the hardware is much simplified and unbelievably inexpensive. Many of the devices are of Continental origin adapted to American use.

Fortunately Mr. Flagg owned an estate, a stone quarry, and had himself for a client, and every move he made and every experiment he tried as architect under these favorable circumstances, shows serious thought. For this reason alone, be the results what they may, the effort is a valuable contribution to the profession. I have always believed that the influence of art should begin with the every-day teacup and kitchen utensil; thus these houses, the book about them, and the principles of the man who designed them, were revelations.

Typographically, "Small Houses" is admirable. There are fifty-one essays and as many plates admirably drawn by the author and his daughter, with numerous other illustrations. The essays and the descriptive matter pertaining to the plates are unfortunately too often intimately connected when they would much better be independent. This intimacy and the tone of the descriptive matter in many places give the book an undeserved mask of promotion or plan sales propaganda. This is unfortunate. I believe anyone may learn something and gain some inspiration from its pages. The spirit behind it is certainly commendable.

BEN J. LUBSCHEZ.

Politics and Poetry

On the "thorny island," as it was then known,—with Londinium hard by to the south-west,—where travelers took their way by ford to Kent, men built a church, some eighteen centuries ago. Roman it was, or so the later found walls seem to say, as the tale of the successive fabrics comes slowly to light. Now, where once lay a rough, wild, marshy strip of land,—islanded by the Thames and nameless waters flowing sluggishly,—rise the tall towers of Church and State,—of Lords and Commons and Westminster. They are not without significance in their impressive juxtaposition, even as Politics and Poetry bear their lesson to the school-children, who coming into the Abbey on their solemn adventure, must pass by Chatham, Beaconsfield, Gladstone, ere they come silently to the Poets' Corner. Of that, we say no more than this, that it has significance, both in its relation to the tombs of statesmen, and because it is in the Abbey at all; and it is hard to say which is the greater significance.

Mary Spurgeon's tale of Westminster Abbey¹ is a sheaf

¹Westminster Abbey. By Mary Spurgeon. Frederick A. Stokes Co., New York.

NEWS NOTES

of the kind it is pleasant both to garner and to keep. It is of kings and things, of royalty and reverence,—of money basely wrung from high and low that temporal thrones might make their architectural peace with God,—of Craftsmen toiling well and truly and with that skill born only of men free at their labor. A running tale of history it is, of history scrivined and carved, painted and beaten, hewn and blown, and weaving always the legend of a world that made history alive with the color of Gold, with the shadow of short shrift to the weak and much power to the strong,—not such a far cry, it seems, to the tale of our own time. Only the color is gone.

Once again, architecture seems to come alive under the affectionate hand of one who plainly loves and understands it. Not pedantically alive, or dogmatically alive, but alive as something which had a purpose so far above our present helplessness in the hands of Profit and Dividend, that we turn back to it, even though we know all its weaknesses and its slaveries, with something like a sigh. Unfortunately the book is illustrated, of which the less said the better, but one need not look at the pictures. The tale itself is enough.

C. H. W.

News Notes

CENTRAL heating and hot water supply for small houses and apartments has long been a dream of housing reformers. It seems principally to have failed of materialization because of the narrow economic view which can not yet envisage the vast savings to be effected. A great part of these savings would appear in indirect benefits, such as the saving in coal transportation and ash collection. Individual distribution and collection now costs an enormous sum, but how to translate the saving that would be effected by centralization into a benefit that would be apparent to the householder is a problem that has baffled all effort. The economic system under which we struggle has surely the very grave defect of preventing any equitable distribution of the savings possible through centralization. These gains are discreetly absorbed by some occult process with which we have not yet become familiar. But the city of Glasgow (Scotland), is considering the installation of a central hot water supply in its municipal housing. It has been carefully computed that 1,200 houses can be supplied with 25 gallons of hot water (150°), all the year round, at a cost of less than sixty cents a week.

ARCHIVES are not regarded as precious, in Washington. Congress has again declined to sanction the appropriation of half a million dollars for a site and the beginning of work on the long needed Archives Building. This time the blame falls to the House, but the pity is no smaller because of that. Our national records are shamefully housed. Hardly a fragment of them is sheltered in anything resembling fire-proof structures, while a great part of them are kept in veritable fire-traps.

AFTER eighteen years as Professor of Design in the Royal College of Arts, Professor W. R. Lethaby, well and favorably known to the architectural profession in the United

States, has retired. At a meeting of the Art Workers' Guild, his portrait by Rothenstein was presented to Mrs. Lethaby, and Mr. W. J. Mackail spoke in appreciation of his long service. In reply, Professor Lethaby said that he was born to read Ruskin and to look at Morris and Philip Webb. The kind of architecture he loved was that of buildings "honest and human," with hearts in them, and he summarised his belief of a lifetime in the faith that "art is rooted essentially in sound work," that "great discovery" of Morris.

FURNITURE Guilds, following after the Building Guilds, are said to be gaining a secure foothold in Manchester, England. Opinion seems to agree that the furniture is not any better made by the furniture guildsmen but that the prices are below those asked for similar articles made in industrial establishments of the usual order. As to the effect of the guild upon the worker, which is after all the important question, there is every indication from reports that the men are greatly influenced in their life and their craft by the industrial liberty to which they have won. Whether they can retain it is of course a matter of speculation. The Building Guilds report contracts of £2,000,000 in hand. They have begun the regular issue of their publication called "The Building Guildsman."

OPINION seems to be united on the success of the International Theatre Exhibition at Amsterdam, where are shown the works of theatre designers in America, Austria, England, France, Germany, Holland, Switzerland and other countries. If American exhibitors were inadequately represented,—due no doubt to the difficulties of distance and transportation,—it seems to be agreed that with Germany, we share the honors that go to an effort directed to a more dynamic, vivid, and complete expression. The work of Robert Edmund Jones comes in for sincere praise, while that of Lee Simonson, Joseph Urban, Mordecai Gozeliik, and Ernest de Weerth attracts a not unfavorable comment. From Hermon Ould, the English critic, Gozeliik's setting for Tolstoi's "Powers of Darkness," evokes more than passing appreciation.

The exhibition occupies eight large rooms of the Municipal Museum. It consists of designs for theatres; plans, elevations, sections for scenes; costumes, curtains, masks, as well as models of both theatres and settings. Great praise is given to the Dutch organisers of the exhibition, H. Th. Wijdevelt, and Frits Lausvelt, and to W. Buning, who has collaborated. The exhibition was opened with an address by Gordon Craig, to whose work three sides of the principal room are devoted. The other side is given to the showings of Adolphe Appia, the Swiss artist, who has, with Craig, so greatly influenced the modern stage. Generally, the exposition seems to mark a decided tendency to the greatest architectural simplicity, with more and more reliance for effect upon lighting.

IN the housing competition in New York City held under the auspices of the Chamber of Commerce, Merchants' Association, Real Estate Board, and the Phelps-Stokes Fund, the awards were as follows: First Prize, the commission to erect a house on a 100 x 100 lot, to Sibley & Fetherston. Second Prize, \$1,500, Frank J. Shefcik.

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Third Prize, \$1,000, John Tompkins. A supplementary prize of \$100 was awarded to Raymond M. Hood.

WHY more young men do not enter the draughting vocation and what can be done to secure more draughtsmen is to be the subject of study for a committee of the Wisconsin Chapter.

IN OREGON, the Commission handling the State Bonus Bill has received 7,000 applications for funds for building homes for returned soldiers, under the provisions of the Act creating the Commission. Loans of this kind are limited, it is reported, to \$3,000; they must be amortized in 20 years and will bear 4% interest. The Commission is interested in the work of the Architects' Small House Service Bureau, Northwestern Division, the members of which are preparing actively to co-operate in seeing that the soldiers get the best possible homes for the money.

SAN DIEGO is likely soon to be headquarters of a new Chapter of the Institute, according to the report made by Mr. Bergstrom to the Southern California Chapter. This will give the Institute an even fifty Chapters, including the new Westchester Chapter of New York.

MOUNTAIN Division, Architects' Small House Service Bureau, is distributing advance sheets from the catalogue soon to be issued by the Bureau. The designs cover a wide range of types, carefully studied in their adaptability to conditions such as are found within the territory of the Bureau. Those desiring further information as to the activities of the Bureau are referred to the Secretary, 415 Chamber of Commerce Building, Denver, Colorado.

MOLIERE's three hundredth anniversary (he died in 1622) was observed by the Department of Drama, College of Fine Arts, Carnegie Institute of Technology, by the presentation of two plays, "Les Femmes Savantes," and "Don Juan." During the same period, when seven performances were given, the Faculty of the College gave an exhibition of their work in the Galleries of the Institute. The Department of Music gave a symphony concert, including Goldmark's "Sakuntala," Symphonic Variations by Franck, and a Cello Concerto by Lalo. The exhibition remained open through the greater part of February, and afforded another indication of the great value of the collaborative work organized by Professor Bossange, who is Dean of the College, which includes the Department of Architecture, of which Professor Harry Sternfeld is the head.

THE last meeting of the Wisconsin Chapter was much taken up with a discussion, inaugurated by Mr. Rotier, on the subject of a Bureau of the Architects' Small House Service. Mr. Rotier offered the following resolution, which was adopted:

"Resolved, That the Wisconsin Chapter, A. I. A., approves of the formation of the proposed North Central Regional Bureau of the Architects' Small House Service Bureau of the United States, Inc., and encourages it to carry on its program with all dispatch and energy."

New Members Elected

ALABAMA: Jacob E. Salie, *Birmingham*. CENTRAL ILLINOIS: Harry J. Reiger, *Springfield*. CENTRAL NEW YORK: L. J. Kaley, *Binghamton*. CLEVELAND:

Harry A. Fulton. ERIE: William F. Frank. FLORIDA: M. Leo Elliott, *Tampa*. ILLINOIS: James R. M. Morrison, Walcott S. Russell, *Chicago*. INDIANA: A. Frank Wickes, *Gary*. NEW YORK: Bevan Jones, Eugene Henry Klaber, *New York City*. PITTSBURGH: William R. Lewis, *Bluefield, W. Va.* TENNESSEE: Richard L. Seig, *Memphis*. TEXAS: Guy Lewis Frazer, H. C. Trost, *El Paso*; George Willis, *San Antonio*. WASHINGTON, D. C.: Alexander H. Sonnemann.

Obituary

Evarts Tracy

Lieutenant Colonel Evarts Tracy, D. S. C., died on Tuesday, 31 January, after a short illness in Paris, while engaged in reconstruction work in the devastated regions around Rheims. A graduate of Yale in the Class of 1890, he studied for three years at the École des Beaux Arts and after a short time in the office of McKim, Mead & White commenced independent practice of his profession in 1896, and formed the firm of Tracy & Swartwout four years later. The work done was extremely varied in character,—some domestic and commercial, but the bulk of it monumental. The Hotel Webster and the Home Club in New York were early examples and of the later work won in competition, the Denver Post Office, the Missouri State Capitol and the Milford Town Hall were the most prominent. The Victory Memorial Building for the George Washington Memorial Association, the cornerstone of which has just been laid, was won in competition in 1914.

Tracy had always a great interest in military affairs, was at Plattsburg for two years and on the outbreak of the war was commissioned Major of Engineers. He served with distinction here and abroad and was in charge of the Camouflage Section and an instructor in camouflage, and has written many articles on that subject. He was promoted to the rank of Lieutenant Colonel and was recently awarded the Distinguished Service Cross. Personally, Tracy was a very lovable character. At college he was the most popular man in his class and in his profession and in the Army he was the friend of everyone who knew him, and he knew everybody. He was at home everywhere and was vitally interested in everything that went on. His specialty, as he often said, was miscellaneous information. There was not a subject on which he could not converse intelligently: with the medical profession he talked like a doctor and among lawyers he would pass as a lawyer, and when he entered the Army it seemed as if he had been a soldier all his life. He liked it and he looked it, and he gave his life to it, for the fatal attack of heart disease which carried him off in the midst of his reconstruction work was directly attributable to an accident in a trench at the Front. He lived his life to the full and he enjoyed every minute of it. He died as he would have wished to die, in the vigor of life and in the midst of the work he had loved. He was a man and a lovable man, and the fact of having known him is a pleasant memory. E. S.

Lowell A. Lamoreaux

Elected to the Institute in 1907
Died at Minneapolis, Minnesota, 1 February, 1922.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Committee Activities

Paint-On-Wood Research.—The A. I. A. has been invited by the National Research Council and the Engineering Foundation to join with them and the U. S. Forest Products Laboratories in carrying out a program for national research to develop fundamental knowledge of paints and varnishes as protective coatings for wood.

In carrying out this program, the purpose is to secure the cooperation of the lumber, wood-working and paint industries, the A. S. T. M. and other national technical bodies and interest Government Departments and Bureaus.

Through laboratory study and field experimentation it is proposed to determine the best materials for various purposes, conditions and woods, and the most effective methods of application; to establish probable relative costs, durability and appearance; and the means by which to determine the dimensional changes in wood due to absorption and loss of moisture.

Specifications for Glazing Glass.—In August, 1921, the U. S. Bureau of Standards, communicated to the A. I. A. its purpose of writing specifications for glass for glazing, and asked for A. I. A. cooperation.

On October 12th a conference was held at the Bureau of Standards, attended by representatives of the Bureau, sheet and plate glass manufacturers, glass distributors and the A. I. A. The Conference decided to invite the cooperation of the sash and door manufacturers. A Committee on Classification and Nomenclature was appointed which will meet in Washington on March 6th. The Bureau has made a large collection of glass samples which have been under test to determine strengths.

Simplified Practice.—Within the U. S. Bureau of Standards there has been created a Division of Building and Housing. Among the activities of this Division there are two which are of peculiar interest to the architects. A basic building code for dwellings is being prepared by a Committee on which the A. I. A. has two representatives. Another activity is directed toward the elimination of unnecessary and uneconomic dimensional variations and of styles and types of products utilized in construction.

The first accomplishment recorded in the field of simplified practice is a reduction in the number of sizes and types of paving brick from sixty-six to eleven.

On Feb. 13th a Committee of representative structural engineers, contractors and architects, the last as representatives of the A. I. A., met in Washington on the invitation of the Department of Commerce to consider the need and advantages of simplified practice in connection with construction generally and to list those materials or classes of material and devices now produced in wide and useless variety of size and character, in connection with the production of which economy would result from simplification.

The Conference declared in favor of the general principles of simplified practice and recommended that immediate consideration be given to the following:

Mill-work, plumbing (roughing dimensions and fixtures), heating, interior wall construction, hardware, lighting fixtures.

At the request of the Division of Simplified Practice the Conference resolved itself into a Continuing Advisory body and appointed an Executive Committee consisting of Noble F. Hoggson, W. H. Ham, and S. W. Jones.

Weather Strips.—There are no criteria with which to measure and compare the infiltration of air through windows and doors of various types or the relative efficiencies of the several weather

strips manufactured. Several years ago a series of tests were conducted to determine the weathering efficiency of a series of windows. The results of these tests were reported in a paper prepared by Mr. S. F. Voorhees and H. C. Meyer, Jr., and published in the January 1916 Journal of the American Society of Heating and Ventilating Engineers.

There is a very urgent need first for a standard method of testing to determine air infiltration, and second, for definite knowledge as to the causes and of the means of checking infiltration of air through windows. To the end of satisfying that need the A. I. A. has decided to call a conference of weather strip manufacturers, representatives of the American Society of Heating and Ventilating Engineers and the A. I. A. to organize and sponsor the necessary research work which will be conducted by the research laboratory of the American Society of Heating and Ventilating Engineers located at the Bureau of Mines Experiment Station, Pittsburgh, Pa.

The Slate Industry Organizes.—At the instance of the National Federation of Construction Industries there was held in New York on Feb. 8th a meeting of representatives of the producers of structural and roofing slate, the U. S. Geological Survey and the A. I. A. A Committee of representatives from five of the slate producing districts was appointed to prepare a Constitution and By-Laws for a National Association of Slate Producers. The Committee will make its recommendations to a future conference.

Barrett Roofs.—During January and February there were a series of discussions between a representative of the Barrett Company, the Barrett Company's Advertising Agency and the Chairman and Technical Secretary of the Committee on Structural Service to the end of establishing the difference between "Black Diamond" pitch and felt and "Specification" pitch and felt and to determine whether, when one buys a twenty year bonded roof, one buys a bonded guarantee or a roof that will actually last twenty years, and again what assurance aside from the bond, there is that the roof will last twenty years.

To secure a record of experience with Barrett bonded roofs, a questionnaire has been sent to the members of the Committee on Structural Service. The Committee will be glad to receive from A. I. A. members any information on the following points:

Do roofing contractors quote lower prices on "Barrett Specification Roofs" when a bond is not called for than when a bond is required?

What has been the experience with Barrett inspection on bonded roofs?

Are there any cases of a roofing contractor's inability to accept a contract for a bonded roof because he was not on the Barrett approved list and was refused approval?

American Standard Specification for Portland Cement.—The American Engineering Standards Committee has adopted an "American Standard" Specification for Portland Cement, designated as American Engineering Standard Specification No. 1. The A. I. A. membership in the Standards Committee and its vote as a member for the adoption of this standard carry automatically the A. I. A. approval of the standard.

In this connection it is noteworthy that at its January 1922 convention the Portland Cement Association, by an amendment to its Constitution, made membership in the Association contingent upon the members product meeting the standard specification.

Bureau of K-V Standards.—An organization so designated and operated by Philip Kobbe Co., Inc., advertising agency, has been

circularizing the architectural profession in the East offering a service consisting of a method and its application by which the best material for a given purpose may be "unerringly" selected. The Committee on Structural Service has undertaken an investigation to determine the character and value of the service offered.

Depreciation and Obsolescence.—The Committee on Structural Service has received several inquiries for information on methods or formula for computing the depreciation of buildings. This matter of depreciation necessarily entails the whole problem of obsolescence. The conclusions drawn from the Committee's effort to secure information on depreciation and obsolescence are that there is no recognized method or formula for establishing depreciation and that there is very little understanding of the whole problem of obsolescence. In its quest for information the Committee got into communication with the National Association of Building Owners and Managers and found that this Association had a Tax Committee at work on the problems of depreciation and obsolescence and another Committee on Accounting and Exchange.

The building owners and managers seem to be anxious to establish a cooperative connection with the architects to the end that experiences may be exchanged and that architects may be furnished with accurate figures on the costs of operating various types of commercial buildings. The Committee on Structural Service will shortly send out a questionnaire to secure information on some specific points which the National Association of Building Owners and Managers is anxious to get.

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Effect of Moisture Content upon the Expansion and Contraction of Plain and Reinforced Concrete. (4a)—*University of Illinois. Engineering Experiment Station. Bulletin No. 126, by Torata Matsumoto. Size 6" x 9". Pages 29.*—Aside from the action of direct load, deformations are produced in concrete by changes in temperature and in moisture content. With reference to temperature changes in reinforced concrete, it is well known that, regardless of differences in the mixture, concrete has practically the same coefficient of expansion as steel, so that the two materials contract or expand together. Moisture content, on the other hand, has the undesirable property of affecting concrete alone. Concrete, like wood, clay, and some other materials, expands when it absorbs moisture and contracts when it is dried; steel has no such action. After the concrete is poured the steel remains unchanged with changes in moisture conditions, while concrete ordinarily shrinks a considerable amount. Aside from the stresses set up in steel and concrete by the shrinkage of the latter, the resulting formation of cracks large or small will produce a condition which may be favorable to the corrosion of the steel or the disintegration of the concrete after repeated changes from dry to wet condition.

The tests which are described were made to investigate the amount of shrinkage which may be expected in a mortar or a concrete, the relation between the change of moisture content and the change of length of these materials, the difference in shrinkage of plain and reinforced concrete, and the internal stresses set up in the latter. For purposes of comparison with the results obtained with concrete, a few tests were made on the effect of the absorption of water by sandstone and limestone.

Detailed descriptions are given of the materials used in test

specimens, of the effect of moisture content on length of specimen and of the shrinkage stresses in reinforced concrete.

Conclusions.—1. Concrete expands when it absorbs moisture and contracts as it is dried. Concrete of a 1:2:4 mixture is likely to contract during hardening as much as 0.05 per cent in an ordinary structure.

2. Contraction of concrete by the loss of moisture causes stress in the concrete when it is restrained by an external force. The amount of this stress is not as small as is generally supposed.

3. The shrinkage stress caused in the steel in reinforced concrete may reach the usually accepted working stress of steel when the amount of reinforcement is less than 1.5 per cent.

4. The shrinkage stress developed in 1:2:4 concrete may reach the ultimate tensile strength of the concrete when the amount of reinforcement is greater than 1.5 per cent. With richer mixtures the increase in shrinkage stress may be relatively greater than the increase in ultimate strength.

5. The greater the percentage of reinforcement the greater the tensile stress that may develop in the concrete, and concrete having a higher percentage of reinforcement than 1.5 per cent is likely to have cracks formed unless proper provision is made.

6. In reinforced concrete out of doors, subject to alternate wet and dry conditions, cracks may readily be formed under the repeated stress which is nearly equal to the tensile strength of the concrete.

7. Reinforced concrete does not appear likely to be a durable material in a place where a corrosive influence on steel, such as sea air, is active, unless proper protection against the formation of shrinkage cracks is made.

8. It is suggested that the prevention of shrinkage stress in concrete might be accomplished in two ways, either by finding a cement giving less expansion and contraction, or by the use of a perfect waterproofing treatment.

9. It may be expected that an integral waterproofing compound might lessen the change of volume for a short time, but it would not prevent the final diffusion of moisture with consequent change in volume.

Bond Between Concrete and Steel. (4a2)—*Technologic Paper of the Bureau of Standards No. 173. "Tests of Bond Resistance Between Concrete and Steel," by W. A. Slater, Engineer Physicist, F. E. Richart and G. G. Scofield, Structural Engineers. Pages 66. Size 7" x 10'.*—This paper embodies the results of three somewhat dissimilar investigations which were made by the concrete ship section of the Emergency Fleet Corporation. First the effect on bond resistance of the application of various anticorrosive coatings on reinforcement. Second the length of lap required for effective splicing of reinforcing bars in regions of high tensile stress. Third, the relative merits of different methods of anchoring the ends of stirrups to meet certain conditions which arise in concrete ship construction.

Effect of Application of Anticorrosive Coatings.—For these tests one-half inch steel reinforcing bars, both plain and deformed, were used. Eighteen kinds of protective coatings were investigated. These included various preparations of coal tar, asphalt, red lead, iron oxide and various kinds of metal coating. The bars were embedded in cement mortar, mixed in the following proportion by weight: 1 part portland cement, 2 parts sand and 0.485 parts water.

Nature of Bond Resistance of a Coated Bar.—A study of bond between concrete and uncoated steel has indicated that bond resistance is made up of two parts, adhesive resistance and sliding resistance. Adhesive resistance comes into play before the bar begins to slip. Sliding resistance is evidently due to friction between the concrete and the surface of the reinforcing bar, which may be, comparatively speaking, rough and irregular in form.

With the deformed bar the projecting lugs provide additional resistance after slipping has begun. It is believed that the adhesive resistance between the concrete and the longitudinal surfaces of the bar is destroyed before there is enough movement

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to develop much compressive stress between the beveled surface of the lug and the concrete in contact with it.

The action of a coated bar embedded in concrete is undoubtedly of a different nature from that of an uncoated bar. With the more plastic coatings especially, slipping may be due to three possible causes, as follows: (1) Slip between the coating and the concrete; (2) flowing or shearing deformation in the coating in the direction of motion; and (3) slip between the coating and the bar.

A very soft paint may act merely as a lubricant tending to facilitate slipping of the bar, while a hard, brittle paint may crumble when acted upon by shearing forces. Although the resistance of these paints to distortion is not known, it seems likely that the shearing strength of a paint is less than its adhesion to steel or concrete. On the other hand, a metallic coating, such as zinc, is elastic and has a comparatively high shearing strength, so that failure might be expected to occur through slipping of the zinc on the concrete.

Summary.—Results of this series of tests have shown a wide variation in the behavior of different coatings. A few of the results may be summarized here for convenient reference.

(a) The maximum bond stress developed by bars which had been painted was generally considerably less than for unpainted bars, but the reduction in maximum bond stress due to galvanizing and some similar processes was less than that due to painting.

(b) With the exception of certain metallic coatings, the maximum bond stress for plain coated bars was reached after considerably greater slip than with uncoated bars. The amount of slip of coated bars at maximum stress was often 0.02 to 0.03 inch. Furthermore, the bond resistance did not decrease as rapidly as with uncoated bars with continued slip after the maximum load had been reached. Certain metallic coatings, however, reached maximum bond resistance with very small slip, followed by a sudden decrease in bond load with increasing slip. In a reinforced concrete beam under a constant load, such a yielding of the bond resistance might cause failure without warning.

(c) Coated deformed bars apparently slipped considerably before the corrugations or lugs reached a firm bearing. After this had taken place, the increase of resistance with increase of slip was similar to that in uncoated deformed bars.

(d) The bond resistance at a slip of 0.001 inch was a much smaller proportion of the maximum bond resistance for coated bars than for uncoated bars. A slip of 0.001 inch has been considered by some to produce critical conditions of bond stress in a beam.

(e) For pull-out specimens employing coated bars, continuous and intermittent storage in artificial sea water resulted in bond strength averaging about three-fourths as great as from storage in air.

(f) Sanding of painted bars tended to increase the bond resistance in a number of cases; also dipping bars in paint often resulted in a lower maximum bond stress than was found for bars painted with a brush. However, the effectiveness of the manner in which a coating is applied seemed to depend upon the nature of the paint, and should be determined by test in every case in which it is important to have this information.

Length of Lap Required for Effective Splicing.—For this investigation, tests were made on four beams, 10 feet 8 inches long, 10 inches wide, and 12 inches deep. In three of the beams the tension reinforcement consisted of 6 plain round bars, extending the full length of the beam, and 2 short bars extending from opposite ends of the beam to a point $20\frac{1}{2}$ inches beyond the center of the span. This gave the short bars a lap of 41 inches, which was symmetrical about the center line of the span. In the fourth beam no through bars were present, but the lapped bars were placed in the same relative positions as in the other 3 beams. All lapped bars were one-half inch plain round. The through bars were $\frac{1}{2}$ inch round in one beam, $\frac{3}{8}$ inch round in a second and $\frac{3}{4}$ inch round in the third. All bars were anchored at the ends of the beams by means of semicircular hooks. The lapped bars had no mechanical anchorage at the ends of the laps.

The concrete was mixed in the approximate proportion of 1:1:1 by volume. The fine aggregate was of two sizes: (1) a bank sand, all of which passed a one-eighth inch screen; and (2) screenings from the gravel varying from one-eighth to one-fourth inch. The coarse aggregate consisted of pebbles from one-fourth to one-half inch in size. Lehigh portland cement was used.

Summary.—The following statements summarize the results of the beam tests referred to above:

(a) Proceeding along a lapped bar toward its unanchored end from the point where the stress in it begins to diminish, the stress lost is picked up by the other bars of the beam. In a majority of cases a larger amount of the stress lost by the lapped bar was picked up by bars immediately adjacent than by the other bars of the beam.

(b) The maximum bond stress developed by the lapped bars was about 75 per cent of that reported for pull-out tests of uncoated plain square bars. The maximum bond stress occurred at a smaller amount of slip of bar for the beams than for the pull-out tests.

(c) The average bond stress in the lapped bars was practically independent of the tensile stress in the bars, but the length over which it was effective varied with the magnitude of the tensile stress.

(d) For the purpose of design the minimum safe length of lap may be taken as the distance from the unanchored end of the lapped bar to a point on the bar where the bond stress is zero, when the tensile stress in the steel is at the yield point. With this assumption the tests indicate that using steel which has a yield point stress of 40,000 pounds per square inch, and with continuous bars adjacent to the lapped bars and with concrete of the grade here used (average compressive strength 5,020 lbs. per sq. in. at 27 days), the lap should be about 48 diameters. Care should be used in applying this relation under other conditions.

(e) The tests of beams with through bars do not show that differences in the ratio of the area of the through bars to the total area cause any variation in the length of lap required. The test of the beam with no through bars indicated that when all the bars are lapped, a longer lap is needed than when through bars are present. Further investigation is needed on this phase of the subject.

(f) A shearing stress of 465 pounds per square inch was developed in one of the beams without sign of approaching failure by diagonal tension.

Anchoring Ends of Stirrups.—Stirrups were made from $\frac{1}{2}$ inch round steel bars, bent into U shape with hooked ends. Three types were tested. Type I had the hooked ends bent perpendicular to the plane of the legs. Type II had the ends bent into loops through an angle of 270 degrees in which the planes of the loops were perpendicular to the plane of the legs. Type III had the ends bent outward at 90 degrees from the legs and in the same plane.

The tests show that Type II stirrups were much more effective when the loops were filled with concrete than when they were empty and under such conditions were stronger than either Type I or Type III. Even when the loops were not filled with concrete the stirrups of Type II were better on the average than those of Type I. In general the stirrups which had the deepest embedment of the hooked and looped ends showed the greatest strength. An embedment of not less than 2 inch is apparently desirable.

Linoleum. (2811)—(*U. S. Department of Agriculture. Farmers Bulletin 1219. Floors and Floor Coverings. Pages 36. Size 6" x 9".*)—Linoleum is made by mixing together ground cork, oxidized linseed oil, and various gums into a plastic mass, and pressing, or "keying," as the manufacturers say, this onto a backing of jute burlap. "Green" linoleum is the term used for it at this stage, and in order to season it it is sent to drying rooms for from 1 to 6 weeks, depending on the thickness.

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There are three general types of linoleum on the market: Plain, inlaid, and printed. The plain, as the name implies, has no design and the coloring matter is added to the plastic mass, or "mix," as it is technically called, before it is applied to the burlap backing. It is made in a variety of colors—browns, grays, greens, and even dull blue and old rose—as well as combinations of two tones of one color, which break the severely plain effect and make footprints and such marks less conspicuous. Having no pattern to match, it is easier and more economical to lay than the figured kinds.

Inlaid linoleum is so made that the color in each part of the design extends to the backing, as can be seen by examining the edge. The pattern, therefore, will last as long as the linoleum itself. In straight-line inlaid the design is more sharply defined than in the other kind known as granulated, in which the edges of the various parts of the design blend slightly into each other. There is little, if any, difference in the wearing quality of these two kinds when the relative cost is considered.

Printed linoleum is made by stamping with oil paint, a design on a thin grade of plain. A greater variety of colorings and designs is thus obtainable at less expense than in the case of the inlaid kinds, but because the design is only painted on the surface and does not go through to the base, printed linoleums can not be expected to give such lasting service. They are, however, relatively inexpensive and are satisfactory in places where the wear is not excessive.

In general, the quality or grade of all linoleum depends on the proper seasoning and the thickness. Naturally, the thicker the material the more wear it will give, and where traffic is heavy the thicker will be found more economical in the long run. Smoothness of finish, which can be judged by the touch with a fair degree of accuracy, is another characteristic worth considering because it affects cleaning. The dirt does not grind into the smoother finished linoleums, and they are easier to clean than those with a rougher surface.

Plain linoleum is usually made in strips 6 feet wide, and inlaid and printed in strips 2, 2½, 3, and 4 yards wide, though the 2 and 4 yard widths are most common. The price of linoleum is generally given by the square yard.

Laying Linoleum.—The floor under it should be level, smooth, tight and dry. On rough floors linoleum will wear unevenly, and moisture will cause the burlap backing to deteriorate and may attract water bugs and other household pests. Cement and composition floors may need special treatment before linoleum is laid.

In cold weather linoleum should be placed in a warm room for at least 48 hours before it is unrolled. If this precaution is not taken, the linoleum is likely to crack, because cold makes it brittle. There are two ways of fastening linoleum to wood floors—tacking and cementing. The first is the simpler method, but by the second the seams and edges are made water-tight and the linoleum is said to give longer service. The linoleum should be cut in strips running crosswise of the floor boards if possible. If it is to be tacked, the strips should be fitted snugly together along the seams but should not be fastened for 3 or 4 weeks, for linoleum usually expands when laid on a floor and if tacked down at once will buckle. To give plenty of room for this expansion, it is a good plan to trim the edges next the baseboard for ¼ or ½ inch, or just enough so that the molding will cover the edge. The molding should then be nailed directly to the baseboard, leaving the linoleum free to expand and to be trimmed more next to the baseboard if necessary. The linoleum may be so perfectly held in place that it will not need to be tacked, but if it does, brads should be set ½ to ¾ inch from the edge about 3 or 4 inches apart and driven well below the surface.

Linoleum may be cemented at the seams and edges directly to a wood floor or permanently cemented down firmly over a layer of deadening felt paper that has itself been pasted to the floor. The cement used should be waterproof and contain no silicate of soda (water glass) because this is injurious to the linoleum when moisture comes in contact with it.

Floor Oilcloth.—Printed linoleum has largely replaced floor oilcloth, though the latter is still used where investment in the more expensive material would not be justified. It also has a foundation of canvas, burlap, or similar material to which successive coats of waterproof paint are applied. The design is stamped on after the last coat of paint has dried and been rubbed smooth. Floor oilcloth should not be confused with enameled oilcloth used for covering tables and shelves; the latter is made of other materials and by an entirely different process. Oilcloth is generally tacked to the floor and should be cleaned and cared for like printed linoleum.

Artificial Daylight for Merchandising and Industry. (31a1—) (*Bulletin L. D. 104, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 15.*)—In this bulletin the following subjects are discussed: Color of Natural Light, Demands for White Light, Method of Modifying Artificial Light, Accurate Color Matching Units, The Daylight Mazda Lamp, Color Modifying Globes and Specific Applications of Modified Light.

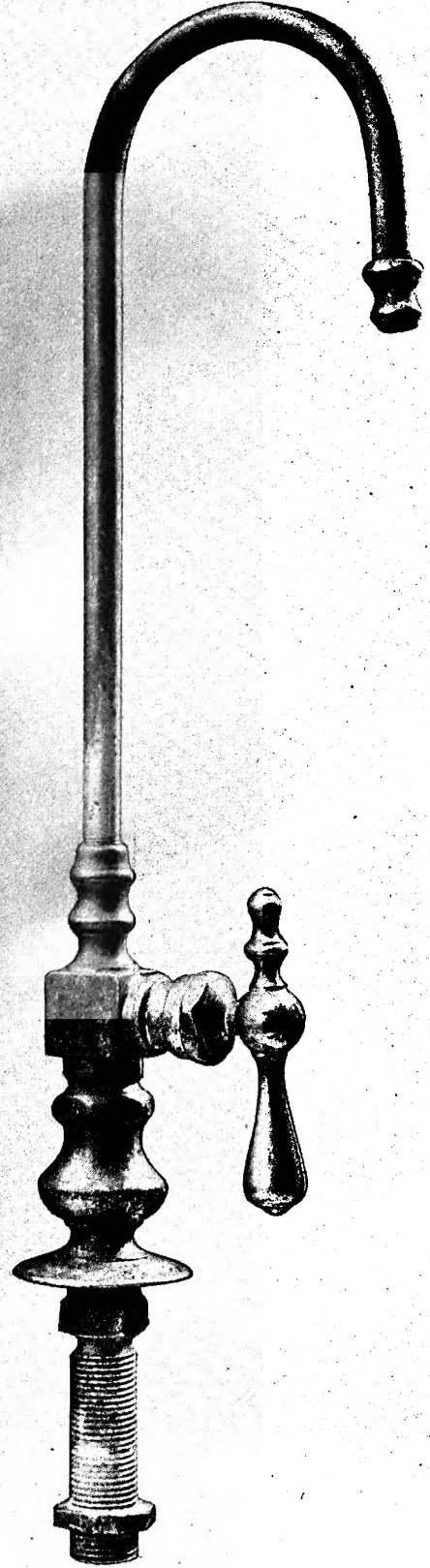
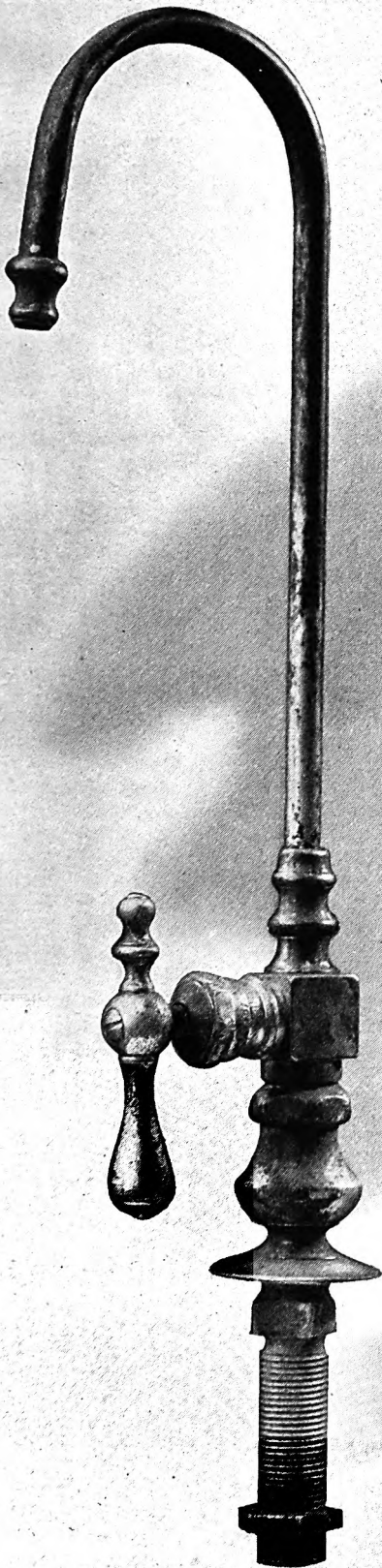
The following list indicates some of the leading articles on the general question of artificial daylight and kindred subjects which have appeared in the technical magazines during the past few years: "Color Values of Light from Electric Lamps," G. H. Stickney, *Trans. I. E. S.*, Vol. 5, p. 431. "Daylight and Artificial Light," E. L. Nicols, *Trans. I. E. S.*, Vol. 3, p. 301. "Daylight Efficiency of Artificial Illuminants," H. E. Ives, *Bulletin Bureau of Standards*, Vol. 6, p. 231. "The Subtractive Production of Artificial Daylight," H. E. Ives and M. Luckiesh, *Electrical World*, May 4, 1911. "The Relation Between the Color of the Illuminant and the Illuminated Object," H. E. Ives, *Trans. I. E. S.*, Vol. 7, p. 62. "Color of Illuminants," L. A. Jones, *Trans. I. E. S.*, Vol. 9, p. 687. "Artificial Daylight: Its Production and Uses," M. Luckiesh and F. E. Cady, *Trans. I. E. S.*, Vol. 9, p. 839. "Development of Daylight Glass," E. J. Brady, *Trans. I. E. S.*, Vol. 9, p. 937. "Some Data on Artificial Daylight Units," C. H. Sharp, *Trans. I. E. S.*, Vol. 10, p. 219. "A Gaseous Conductor Lamp for Color Matching," D. McFarlan Moore, *Trans. I. E. S.*, Vol. 11, p. 192. "Colored Glass in Illuminating Engineering," H. P. Gage, *Trans. I. E. S.*, Vol. 11, p. 1050. "Commercial Uses of Filtered Light," C. E. Clewell, *Electrical Review*, April 7 and 14, 1917. "Mazda C-2 Lamps and their Applications," A. S. Turner, Jr., *National Electrical Contractor*, October, 1917. "The Color of Artificial Light in the Medical Profession," A. L. Powell, *Medical Times*, October, 1917. "Mazda C-2 Lamp and Its Applications," A. L. Powell, *Electrical Engineering*, December, 1917. "Artificial Daylight in the Industries," M. Luckiesh, *Electrical World*, Sept. 28, 1918. "A Color Symposium," *Trans. I. E. S.*, Vol. 13, p. 1. "A Symposium on Camouflage," *Trans. I. E. S.*, Vol. 14, p. 216. "The Daylight Mazda Lamp in the Psychological Laboratory," G. J. Rich, *American Journal of Psychology*, July, 1919.

Industrial Lighting. (31a13)—(*Bulletin 20A Engineering Department, National Lamp Works. Size 6" x 9". Pages 95.*)—The contents of the bulletin fall under five main divisions: Part I. Requirements of Good Illumination, Working Intensities of Daylight Illumination in Foot-candles, Illumination of Surrounding Surfaces, Color Quality of Light, Glare, Specular Reflection, Shadows; Part II. Mazda Lamps,—Power-Factor, Performance, Technical Data for Various Voltages, Position of Burning for Mazda C Lamps, Ventilation, Voltage Fluctuation, 110-125 Volt Lamps on 220-250 Volt Circuits, Technical Data on 110-125 Mazda C Lamps for Flood-lighting Service, Separation of Lighting and Power Circuits; Part III. Reflecting and Diffusing Accessories; Part IV. Exterior Lighting for Industrial Plants; Part V. Illumination Design, Choice of a System, Design of General Lighting System, Selection of Unit, Selection of Intensity, Present Standards of Intensity, Determination of Coefficient of Utilization, Determination of Total Light Flux, Location of Light Sources, Determination of Size of Lamps, Analysis of Operating Costs, Total Annual Operating Costs;—Appendix.

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INDUSTRIAL SECTION

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

March, 1922



Entrance Detail, Bohemian Club, San Francisco. George W. Kelham, Architect

A charming bit of renaissance in which the light-colored, smooth brick admirably harmonize with the terra cotta trim, producing an effect of clean and simple elegance. The pattern work in the attic story is delightfully designed and treated.

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be made from standard sizes. In this way he will secure the effect he desires at the least expense.

The Portfolio of Architectural Details in Brickwork will be added to from time to time, with further examples, with data on brick and its uses, and with monographs on the treatment of the mortar joint in connection with the blending of the brick color tones.

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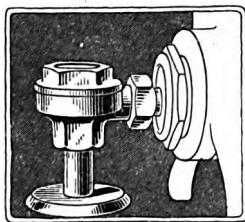
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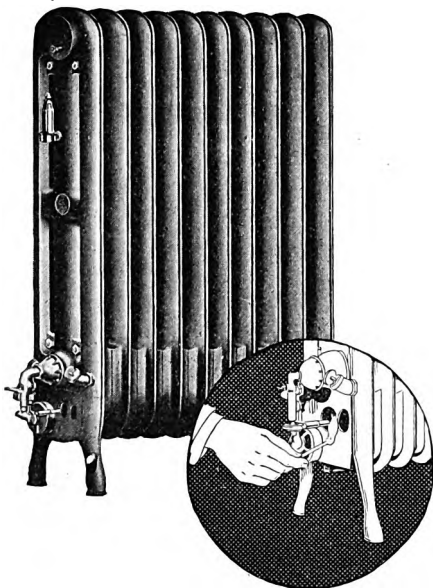
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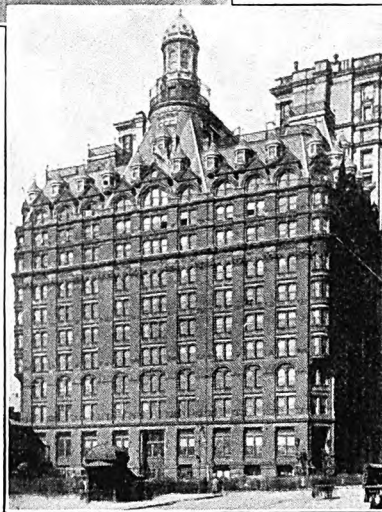
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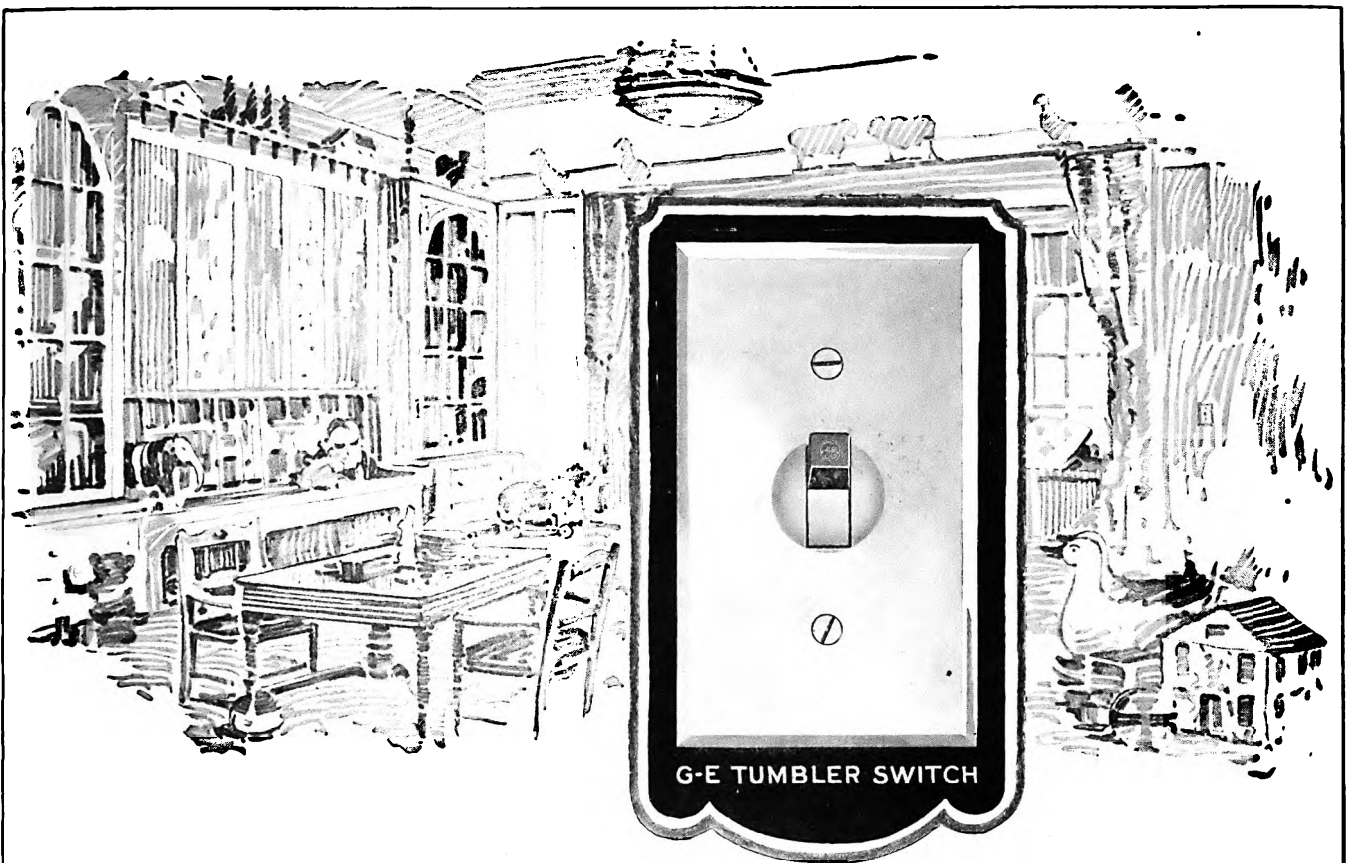
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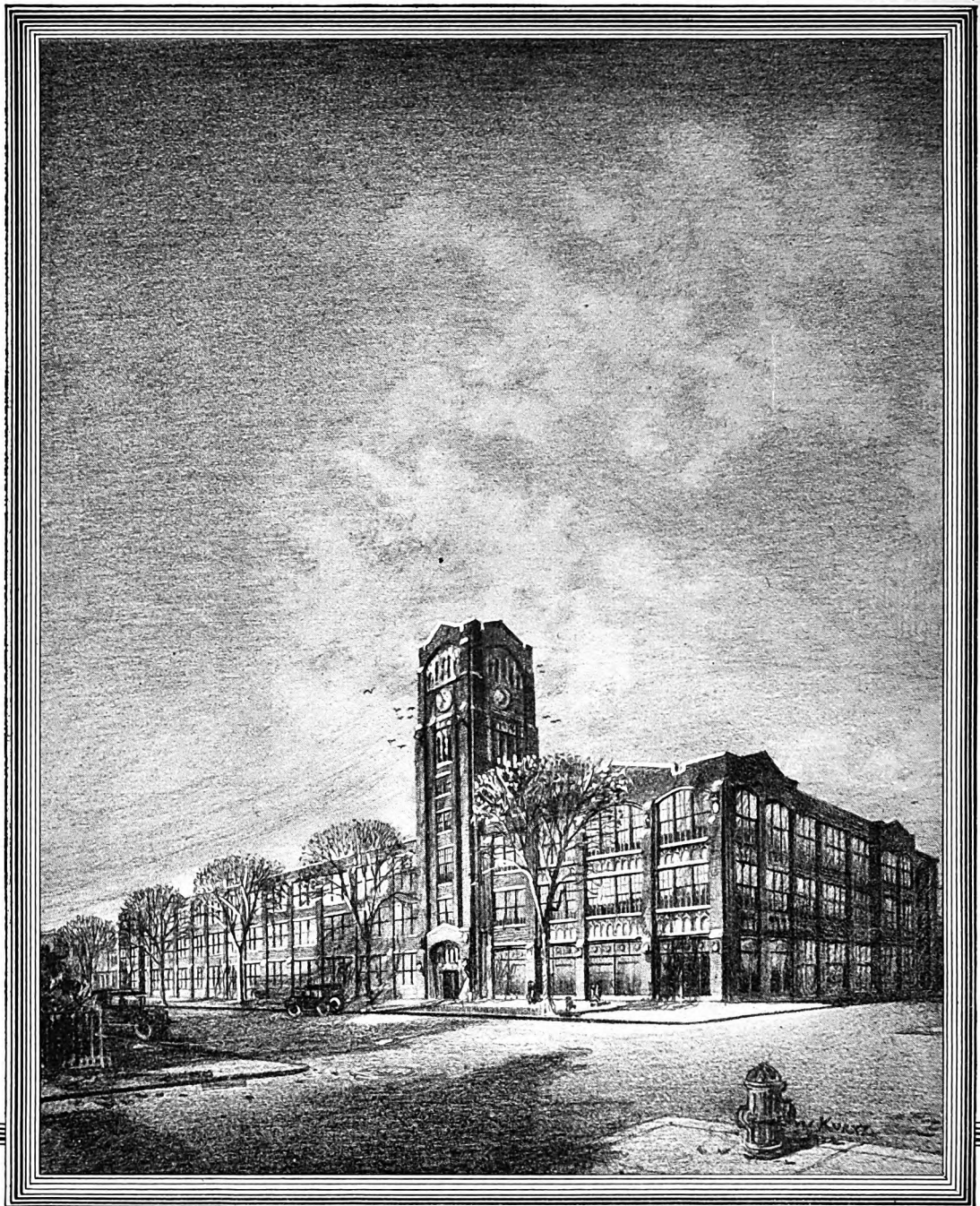
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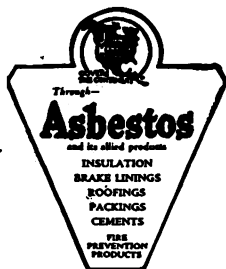
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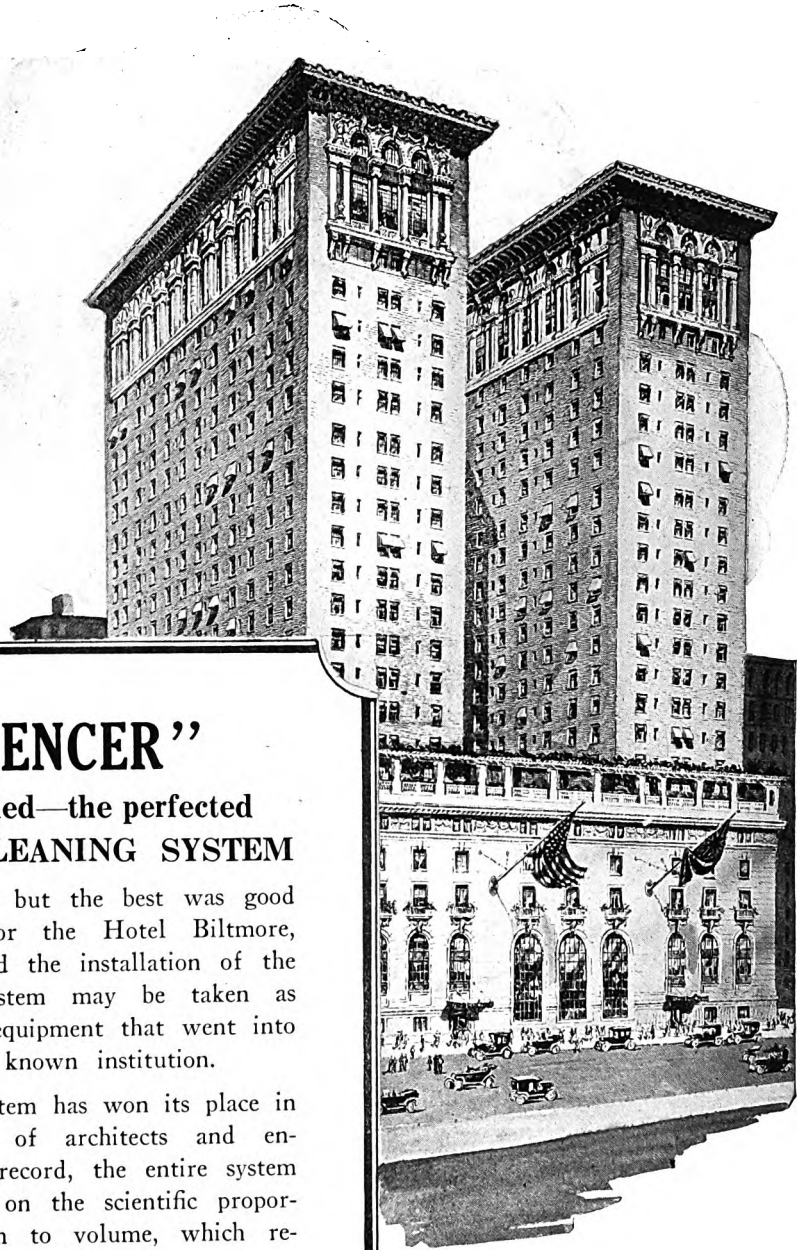
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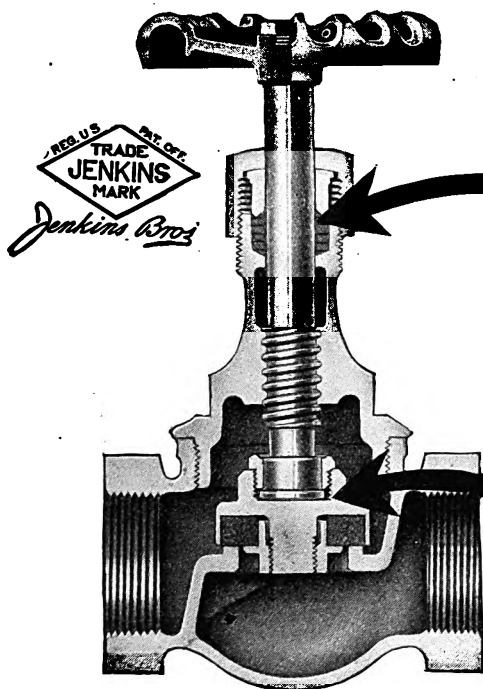
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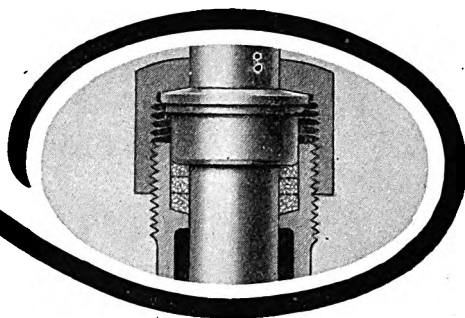
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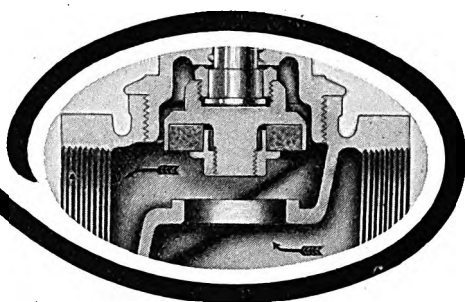
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Sectional view, Fig. 106, Jenkins Standard Brass Globe Valve.



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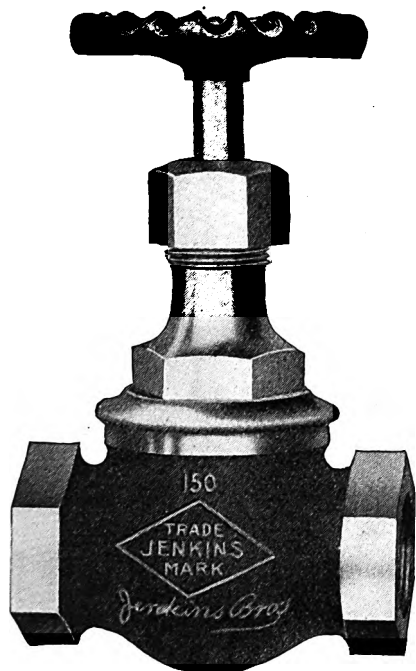


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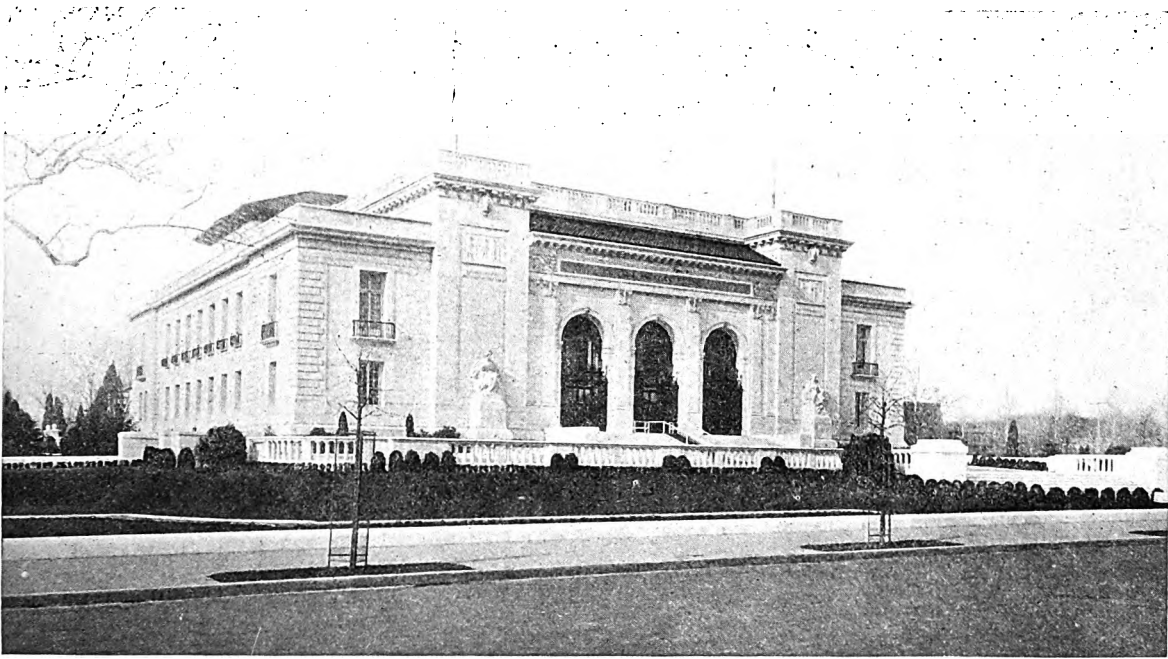
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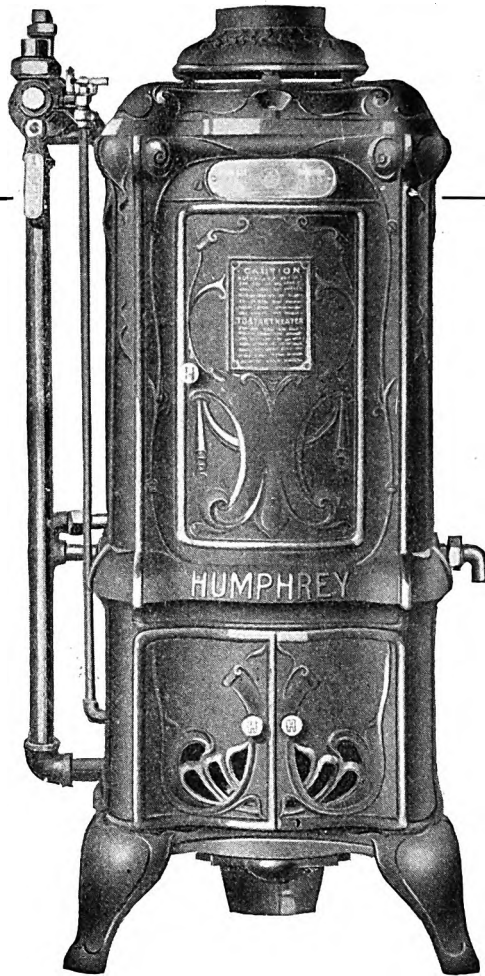
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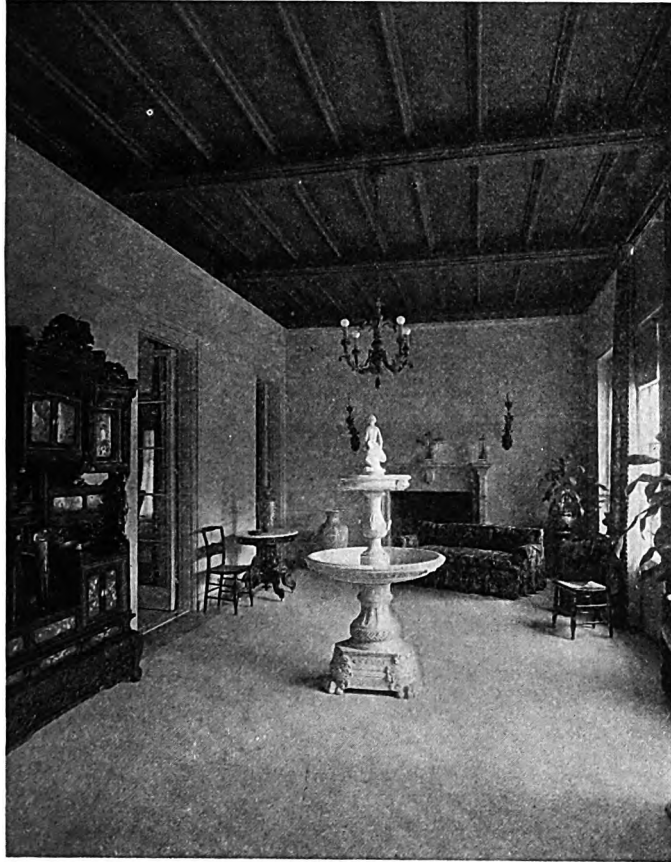
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Edited by William Carver, Architect

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Litigation and trouble avoided by selection of the most appropriate type of construction

A party wall is a separating wall between two buildings with different owners and occupants. The party line generally occurs at its center.

In many places an adjoining owner can legally trespass upon his neighbor's property and center the wall on the party line, one-half the cost of this wall being recoverable from the neighbor when the latter erects his building.

Each adjoining owner is clearly entitled to a wall of such character that it can be used for the requirements of construction of the building last erected, and also for the alterations to the buildings on either side, should a change of owners or occupants, increase of business or enlargement of the building make it necessary to cut out portions of the wall for the introduction of joists, beams, etc., to bond new chimneys or walls into it or to make other changes.

Each owner has the clear right to a party wall of material which can be cut out at any

desired height and at any desired interval and to no greater depth than required, into which new masonry can easily be bonded; and which, when cut into, will form a solid bearing surface for new structural members. In addition, it must have the very highest degree of fire resistiveness.

For these and other reasons, the state laws of Pennsylvania have, since 1855, provided *that no other materials than brick or stone in solid construction may be used for party walls.*

Brickwork is, in fact, the only form of construction which fully meets the foregoing requirements.

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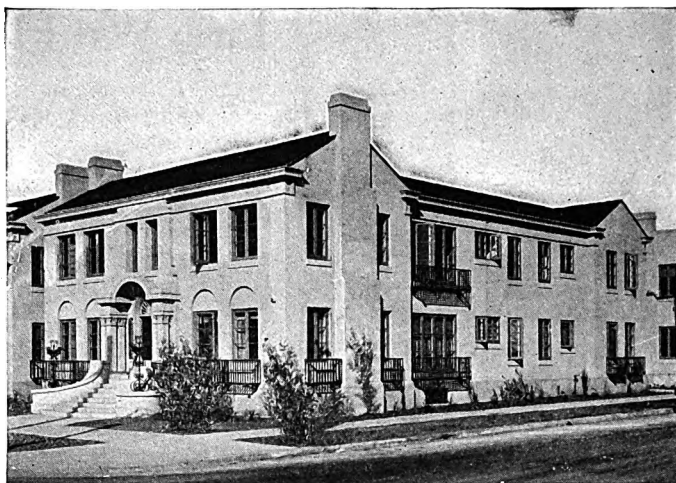


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For data on Ideal wall and other information on brick, see Sweet's Catalog, 1921, pages 107-114.

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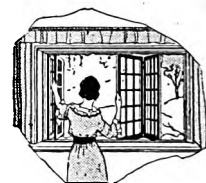


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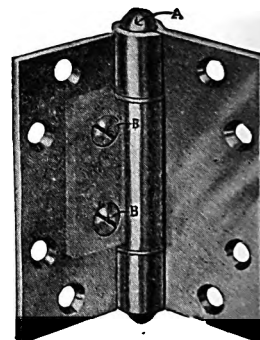
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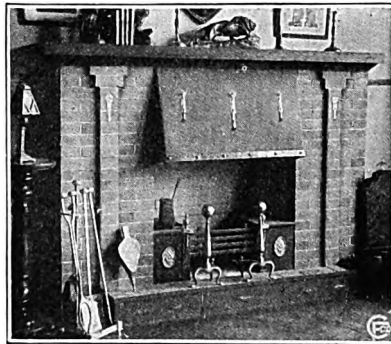
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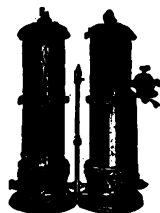
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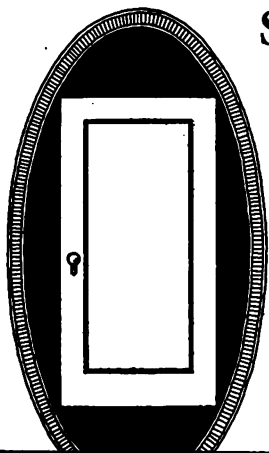
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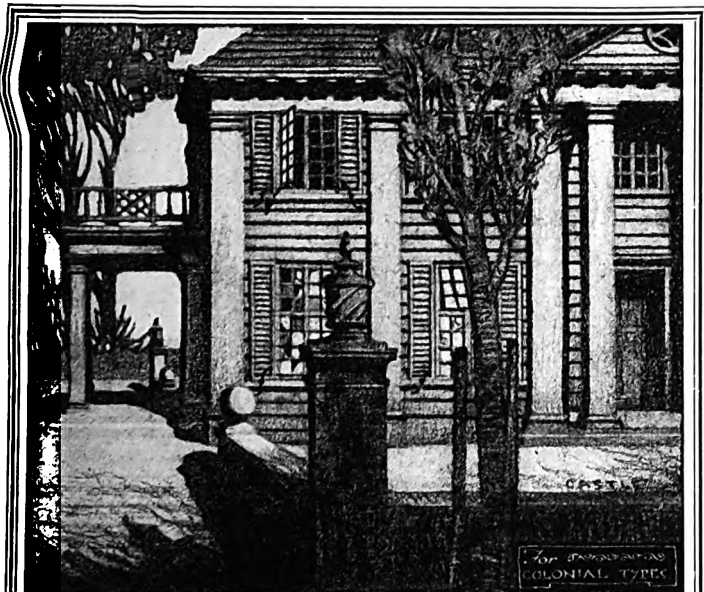
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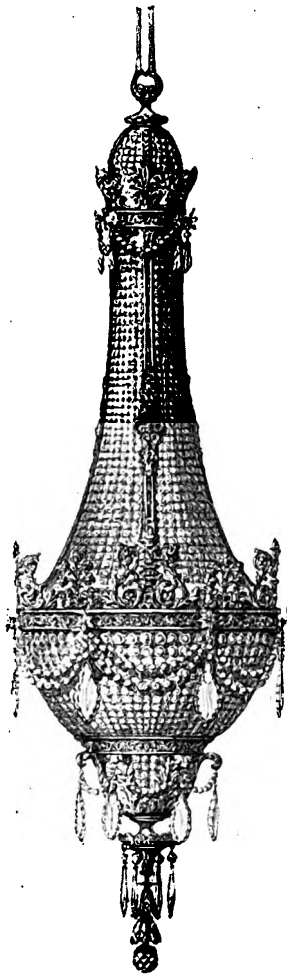
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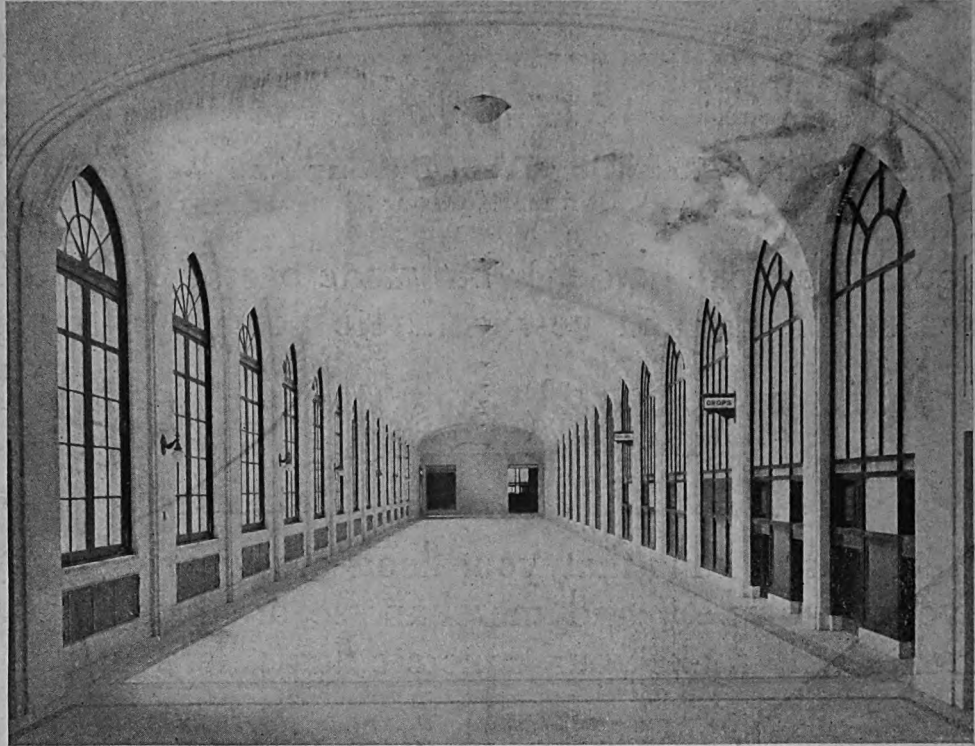
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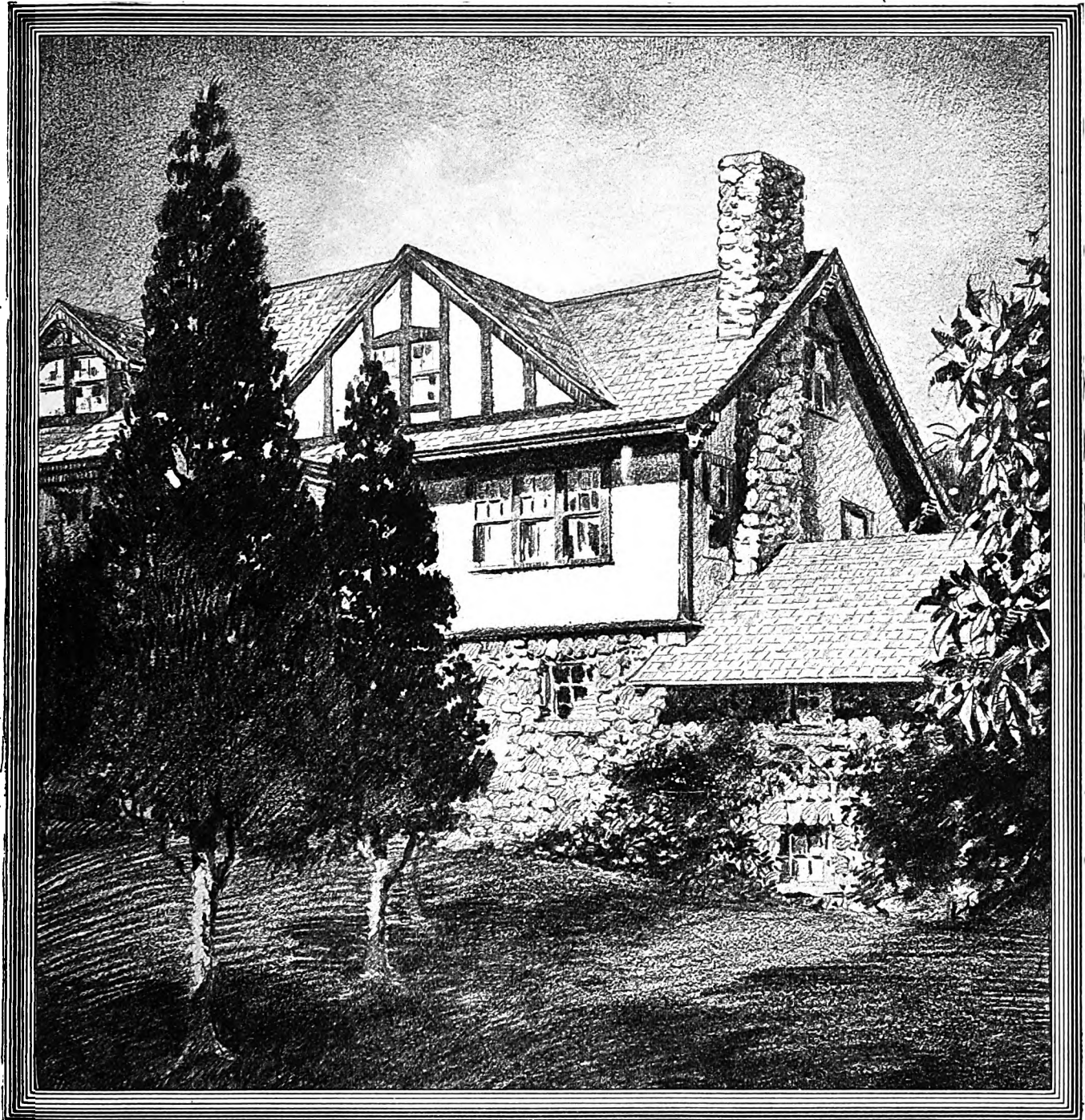
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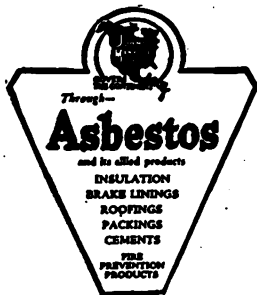
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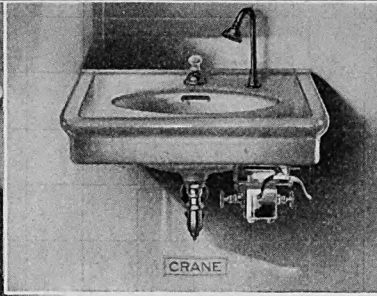
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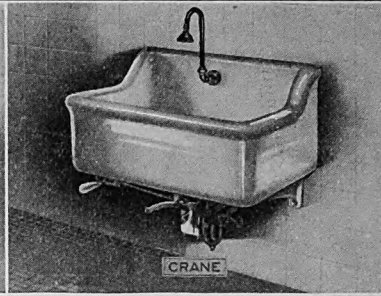
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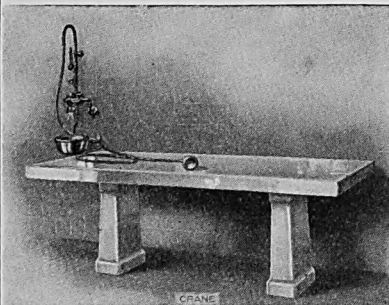
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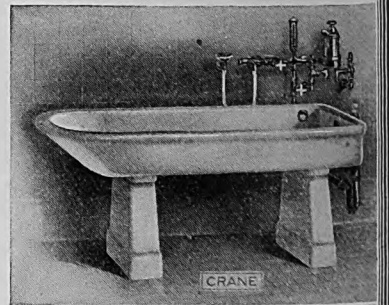
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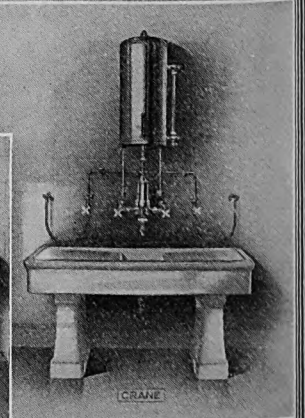
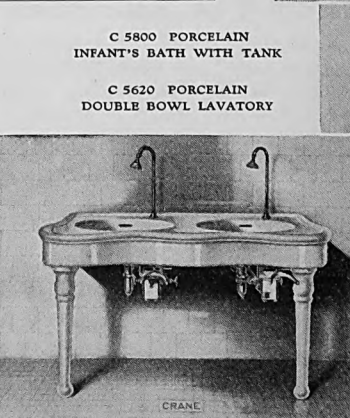
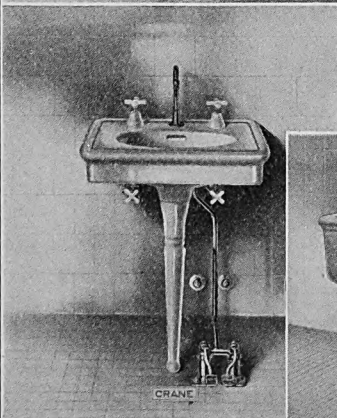
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JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Volume X

APRIL, 1922

Number 4

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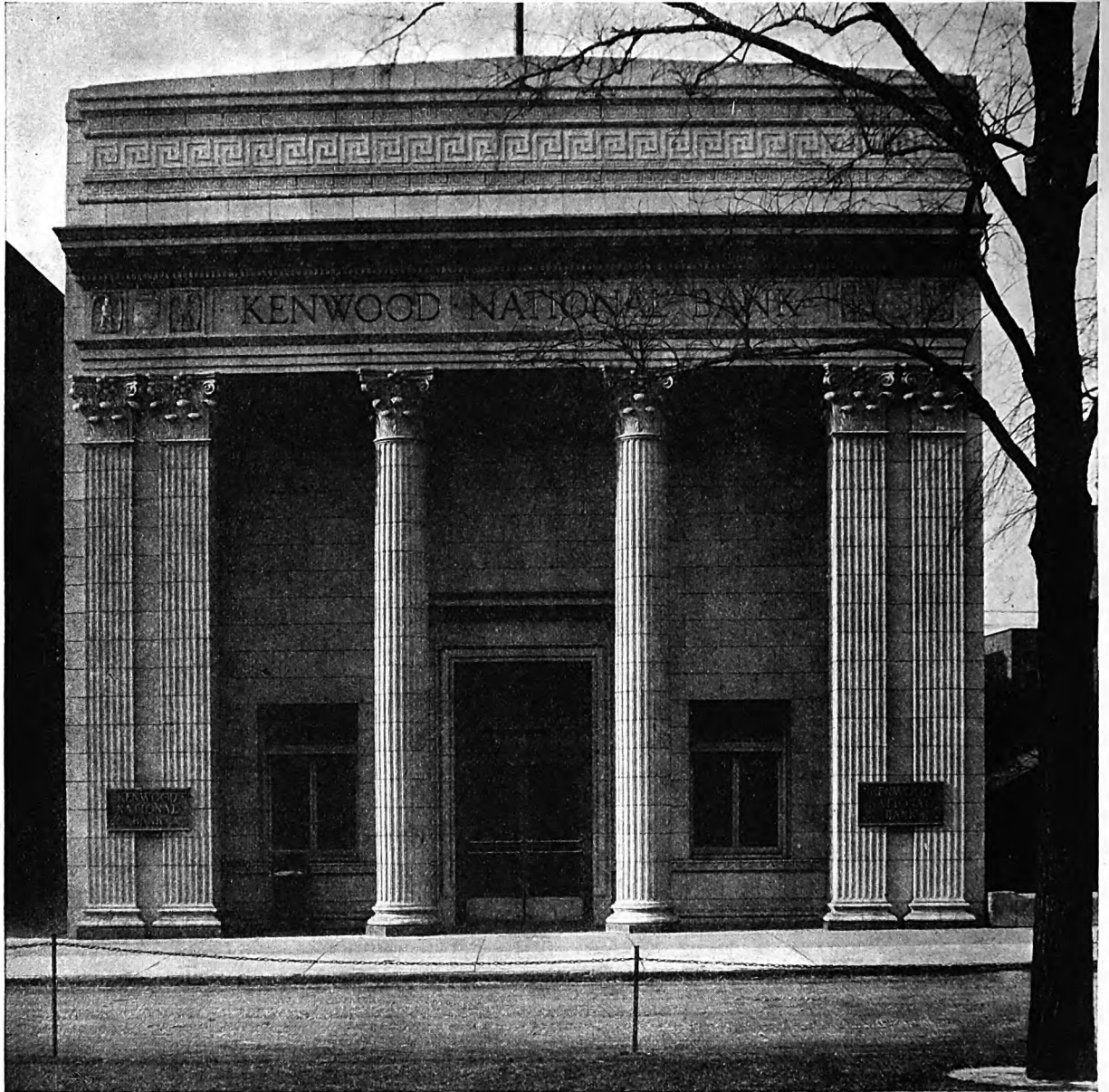
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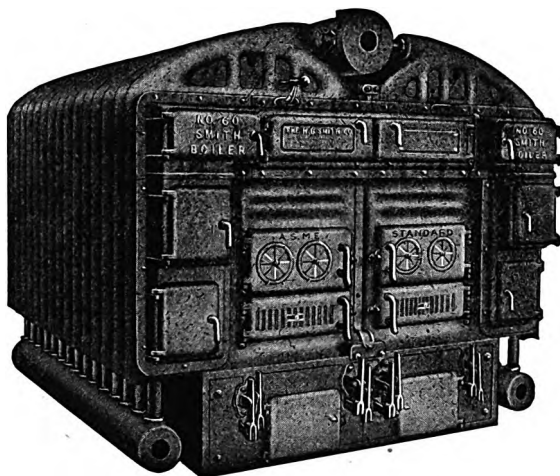
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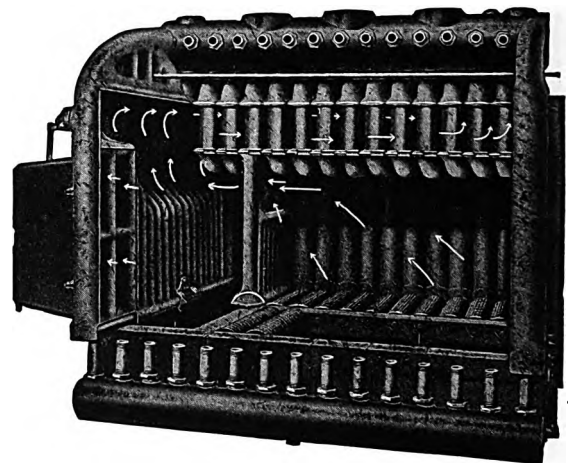


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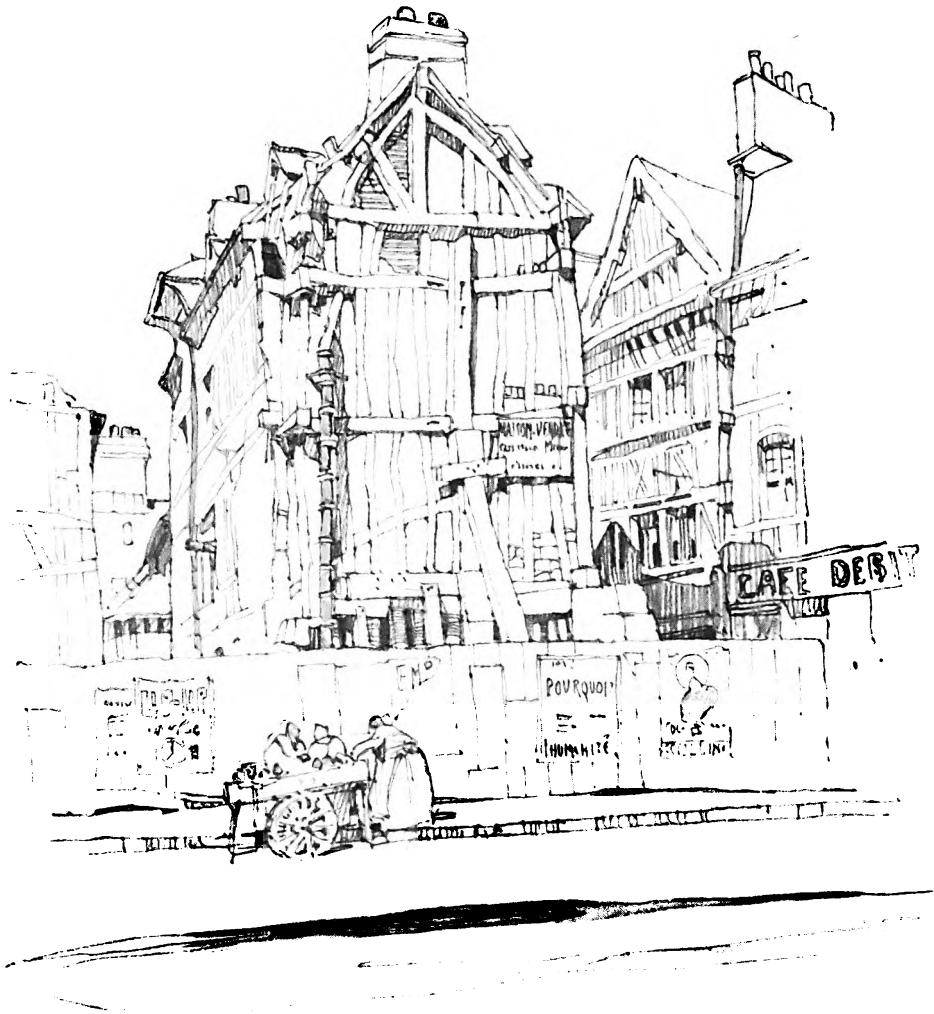
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ROUEN
Louis C. Rosemberg

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Vol. X

APRIL, 1922

No. 4

Shadows and Straws

NO MORE deserving tribute has ever been paid to an architect than that which Mr. Walter Stabler, Comptroller of the Metropolitan Life Insurance Company bestowed upon Mr. Andrew J. Thomas, when, speaking recently at a meeting of the Woman's Municipal League in reference to the housing situation, he said:

"What are we going to do to relieve that terrible situation? The only thing that can be done, in my opinion, is to build new houses where the ground is cheaper, and build them on the plan that Mr. Ackerman has so interestingly shown us. Don't aim to cover the full percentage of the ground permitted by the present tenement house law, but, as we express it, 'throw away some of the ground,' throw it away for two reasons: first, because of the good that will come to the people who will live in those houses,—they will have more room, more sunlight, more ventilation, they will be better off in every respect than they would be in the old houses; and second, in the interest of the investors in these houses, and those who lend money on such houses. My practice in examining plans for new tenement houses is to insist upon it that some of the ground be thrown away, that we put less building on the lot, for the reason that as time goes on and pressure for housing is diminished, those houses that are best planned, those that have the best light and ventilation, are the houses that will always hold their tenants—possibly even at the expense of those houses that are more badly planned.

"Mr. Ackerman has referred to Mr. Thomas—Andrew J. Thomas—an architect, and I say to you that no man has struggled more unselfishly and more capably to solve this problem than Andrew J. Thomas. (Applause.) In my opinion, he deserves a place in the Hall of Fame, because he was distinctly far in advance of anybody else in this field. He had the courage to do what I have said—"throw away the ground.' He has taught us all, even those who thought we knew a great deal about it. I might even say that he has taught us that we did not know anything about it, from the angle which I have been presenting. He has opened our eyes to something that will be, as years go on, of more benefit to the people of New York than any one thing that has ever been done in housing—more benefit than can come from the work of the Tenement House Department, and I hope that Mr. Thomas will sometime derive material benefit from it, for he has not done so up to this time; he has been unselfishly giving his time and strength to exploiting this idea of his which means so much to the people of the City of New York."

Incidentally, the JOURNAL takes some pride in the fact that in presenting a point of view on housing which was about as popular as a mouse at a dinner party, it has been able to change the current attitude to a considerable degree and to persuade many of its readers that certain fundamental aspects will have to be studied ere we know where we are and what to do,—and that a Tenement House Law is one of the worst iniquities ever offered as a remedy for conditions which we now know to have been merely the forerunners of problems steadily becoming graver.

"YOU'RE ALL WRONG on the question of Registration," said a member of the Institute recently. He was commenting on our statement in the last issue regarding the Knickerbocker Theatre disaster and the need for a further extension of the principle of registration. "What we need," said he, "is a rigid building code providing for structural safety. Then let anyone build who wills. We might get some real architecture that way, and make some real architects. But we shall do neither of those things with registration laws."

Amen, say we, for the sake of argument, provided we may observe that we shall never accomplish anything by making laws. The further we go in that direction the more lamentable will be our end. Every stroke of a legislative pen is another lesion in the moral fibre of the nation. Steadily we proceed on the theory of crime and punishment. And the registration of architects is nothing more than an effort to swim with the tide, because we simply do not know how to stem it. Yet every effort to substitute the fear of the law for the motive of personal righteousness is no more than a heightening of the tide that will wash everything away.

We ought to recognize that when we discuss any legal enactment designed to make people act differently. We ought to explore the dark caverns of our mind and begin to realize that something very fundamental must be the matter when we are continually being stampeded from one law to another. Laws do not change motives, nor do they curb them to any

THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

appreciable degree. What is the motive which leads men to be willing to care nothing for human life if only they can succeed with their enterprise? The answer ought to be easy, but who can tell us how to find a remedy?

Registration laws will not make architects, nor produce great architecture. But that is not the aim which we seek as a nation. Another aim takes first place, and in its pursuit we find men willing to jeopardize life to any degree so long as they are left free to gain profits. All our laws are aimed either to prevent them from making an unjust profit or from gaining what we prescribe as a "legitimate profit" through the sacrifice of human life and needs. A national building code absolutely enforced might be a better answer to our problem, but experience teaches us that we are totally incapable under our political system of enforcing any such law, even if the cost of it could be borne by the consumers of buildings. In the race to thwart men by threatening them with law, registration seems the best gesture that architects can make. It is a feeble one, but that is not their fault, except as they are a part of the collectivity upon which the fault rests.

THE DECISION of the Supreme Court sustaining the right of the State of New York to fix rents for housing property will give rise to many emotions. Those who believe that the law will some day make men good will dilate upon the sweeping character of a decision that puts the rights of property in a secondary place, although it must be remembered that the Court sustains that position merely in the face of what it calls a grave social emergency. But the apostles of law will thus acclaim the decision the more, for they will point out that if the Supreme Court will recognize such a mundane thing as a "grave social emergency," it may very likely be inclined, as time goes on, to envisage many other permanent conditions which bear on humans quite as sorely as a housing shortage. Deliberate price-fixing, for example; deliberate sabotage, by which the necessities of life are held out of the market in order to raise their price. And yet, the Government has but recently granted a charter to farmers' co-operatives, under which price-raising will very likely come to be the main objective.

But then, what of the fact that in fixing rents, all encouragement to speculative building is destroyed in a land which has put its entire faith in speculative building as the method of providing sufficient structures that could be passed off as houses? Here the authorities intervene again and in order to undo the evils of rent-fixing they exempt new houses from taxation. This means that the owners of old houses have their profits fixed and that they must also bear the increase in taxation caused by the growth of parts of the city where houses are exempt. Could anything be more unjust? The highest court of the State of New Jersey

has invalidated the tax exemption laws of that state on the plain ground of their unconstitutionality. Very likely, on the grounds of a "grave social emergency," the Supreme Court of the United States may reverse the decision. But none of these things will produce decent houses, and if any citizen of the United States can make head or tail out of the legal spree in which the legislatures and the courts are indulging, we would be thankful for light. Looking backward as far as the first tenement house competition in New York, an account of which appears elsewhere in this issue, the need for light seems to be something resembling what Mr. Stabler calls a "terrible situation."

What folly, for example, we must now acknowledge as we look back at the housing competition of 1879, illustrated further on. Fancy having the seal of architecture placed upon windowless rooms and upon the diabolical Tenement House Law that legalized the human squeezing now seen to be no more than the coalition of greed and stupidity. And done in the name of "Light, Air and Health," and "Ut Prosim"!

APPRENTICESHIP, a factor in the building industry to which our attention is being forced by the steadily declining number of skilled workers, is the subject of a very promising program inaugurated in New York City, under the auspices of the Congress of the Building Industry and described in this number by Mr. Burt L. Fenner who is the chairman of the general committee entrusted with the program. The movement is significant indeed of the larger part being played by architects in the pressing problems that beset the industry everywhere, and eloquently does it indicate that growing appreciation of a solidarity of interest upon which we must depend ever more and more.

CITY PLANNING students will be impressed with Mr. Adams's opportune statement on the qualifications that make for a real planner of cities, and the necessity for developing here, as in all other problems, that same solidarity of interest to which we have just alluded. Particularly does he impress upon us the futility of attempting to apply zoning laws except as they are secondary to an adopted plan which envisages not only present problems but future ones as well. The advocates of zoning, as a measure to be applied by itself, have already done immeasurable harm. In many cases they have apparently done no more than to fix existing conditions as standards. Planning has to come first, and on a scale that will grow larger and larger. If we fail to appreciate scale in the future, as we have done so completely in the past, we shall have no right to be considered as even passably intelligent. At present, a stranger from some far corner of the universe, might well assume that we were a race of lunatics, if he examined any one of our large cities. We dare to imagine, of course, that they must manage these things better in Aldebaran. C. H. W.

Architects and Landscape Architects as Town Planners

By THOMAS ADAMS

THE appointment of a special visiting committee of the School of Landscape Architecture at Harvard may lead to interesting developments in connection with the teaching of town planning which, in Massachusetts, includes city planning. The appointment of the committee should promote further co-operation between the schools of architecture and landscape architecture rather than tend to create any line of cleavage between them. That is agreed to be highly desirable. Both the architect and the landscape architect who intend to specialize in town planning need a higher degree of training in the principles and methods of civic design and more understanding of the reciprocal relations of all the factors in city and town development. The landscape architect *per se* is no more a town planner than the architect, or the architect than the engineer—and no member of any of the three professions has a claim to be a town planner in a more comprehensive sense than the other.

A member of each profession has the knowledge and qualifications needed as a foundation for making the town planner, but specialized training is needed to be superimposed upon that foundation to make either the architect town planner, the landscape architect town planner or the engineer town planner. The relative degree of importance of either in town planning will be a matter of personality. Until recently the field of modern town planning in America has appeared to be the specialty of the landscape architect, and no one will question the fact that some distinguished landscape men have given reality to any special claims their group may have appeared to have for the cultivation of that field. Moreover, in Harvard and elsewhere, special teaching in phases of town planning to landscape students has given further stability to these claims. Similar teaching has not been given, or at any rate, to anything like the same extent, to architects and engineers.

Dominance of the Landscape Architect

Apart from these facts, and the zeal of the landscape architect in connection with the meetings of the National City Planning Conference, there is no logical reason for giving the landscape architect any special claims to practice as a town planner. The fact that he deals in landscape design, thinks more of topography in relation to buildings, and is more concerned with the natural settings, scenic beauty and outdoor recreational facilities of the city or town, is not a reason for any dominance he may have over the architect, trained in ex-

pressing himself in the design, composition and arrangement of buildings, or the engineer whose special knowledge and experience give him the best claim to advise on transportation problems, street systems in relation to traffic, or sewerage problems. Such dominance as the former may have will be due to specialized training over and above his landscape training and to personality. That he has sought to obtain and has obtained some dominance in the past does not make him blameworthy. It is rather the absence of zeal to pursue the same field by the architect and engineer that places them open to blame. Generally speaking this appears to be so—in spite of the exceptions.

This needs to be said because there is a natural, but in the circumstances an unreasonable, feeling on the part of some architects and engineers that the landscape man has given himself an importance in town planning that does not belong to his profession.

The adjustment of the balance between the professions in this regard is to be found in broadening the education and strengthening the experience of the architect and engineer rather than in undermining the position of the landscape architect. As town planning grows in importance it will be found necessary for schemes to be prepared by groups representing all three professions. No one man can make a satisfactory plan of a city or town and where he attempts to do so his skill in one direction will be offset by his failure to apply skill in another direction.

What Is a Town Planner?

The successful town planner is the man belonging to one of the above three professions who has the power of bringing together and co-ordinating his own technical skill and that of colleagues of the other two professions. That man may be an architect, a landscape architect or an engineer. Christopher Wren and Evelyn should have combined to replan London in 1666 rather than have prepared separate plans. L'Enfant should not have acted alone in Washington. When the time came to reconsider the Washington plan, two architects and a landscape architect were appointed as the commission. Olmsted's contribution to the World's Fair was perhaps as great as Burnham's, but Burnham was the organizer. He was also the organizer of the Chicago plan but was not indifferent to the contribution of others.

Hausmann was merely an organizer. The commission appointed to plan Delhi comprised an administrator, an architect, and an engineer, with the administra-

tor as chairman. The architect (Sir Edwin Lutyens) was the dominant personality in this case and remains so. It would have been better in this case if a landscape architect had acted in place of the administrator, with the architect as chairman.

Notwithstanding the enormous amount of good work accomplished by landscape architects in the field of town planning in recent years they have still to find the opportunity to achieve anything as great as has been achieved by the architects who have been given the opportunity. When their day comes success will depend on co-operative action with the other professions.

The U. S. Housing Schemes

During the war the housing schemes of the United States Housing Corporation and the Shipping Board were planned by groups usually of three persons designated as the town planner, the architect and the engineer. The designation should have been the architect, the landscape architect and the engineer, and in such schemes the architect, other things being equal, should be the chief executive. The work under these boards was, in the main, "site" planning rather than town planning and in site planning the chief responsibility for success depends on the work of the architect. The best plan of a site prepared by a landscape architect may be spoiled by unsympathetic or bad treatment of the buildings, just as the worst site plan may be redeemed by good building design and arrangement. The controlling factor in the composition of a local building scheme is the structural development, although the landscape and engineering treatment are each of great importance.

Different Problems Need Different Men

Apart from personality which will always count in sorting out a leader among a group of men entrusted with the solution of a specific problem, there is the obvious distinction created among such a group by reason of the precise nature of the task. For instance: Is the chief problem a civic center, or a group of university buildings, or a colony of dwellings? Then should not the architect be the town planner subject to the aid of the landscape architect and engineer? Is it a park system, or the general planning of a town or region in which the park system is a prominent feature? Then is it not the landscape architect who should be dominant? Is it limited to an arterial system of highways or a street plan to facilitate traffic circulation, or a plan to fit in with the peculiar needs of a district as regards drainage? Then is it not the engineer who should be in charge?

Of course no city should be studied and planned in separate compartments. It should be dealt with comprehensively both as to area and function. In the preparation of a comprehensive plan the landscape architect may by reason of greater experience be the one to

give general leadership, but he will naturally fail in his responsibility if he tries to maintain that leadership in connection with those phases of the plan that are architectural or engineering in their character.

The Field of Zoning

As has been said before, zoning is an incident in the town plan and so far as it is being treated separately from the general plan, prepared in collaboration with the architect and the engineer, it is likely to end in futility as a means of securing proper development of a city or town. The popularity of zoning at the present time will lead to unfortunate results if it is going to end in limiting town planning to the negative form of dealing with use, height and density of buildings, without studied relation of these things to transportation, street and park systems and numerous architectural and engineering problems which together constitute the field for the exercise of the art of the town planner. It will be unfortunate to the town planning movement as it will make it a materialistic, deadening thing solely concerned with "stabilizing real estate values." It will also be unfortunate to the profession of town planning. What art is needed to create zones for various uses and purposes without regard to all the other reciprocal factors in town development? One need not question the great social value of the zoning that has been done in spite of the materialistic basis on which it is conceived in most cases, by expressing a sense of danger which all interested in town planning as an art and science must feel. Nor need one ignore the fact that some good indirect results have been obtained as in the case of the opportunity given for better treatment of the elevations of high buildings in New York. The success thus obtained has been due to the architect who took advantage of the opportunity and zoning has been of enormous value in that respect.

It is not the architect or the landscape architect or the engineer, however, who is the technical authority to control the preparation of schemes that are limited to zoning. That is the function of the lawyer and the statistician. They it is who are the dominant figures in zoning, although men of other professions may specialize in it and attain the necessary legal knowledge. And here it may be admitted, with generous recognition of the great value of lawyers in all phases of town planning, that there is a fourth estate in the town planning profession. In zoning especially the members of that estate must maintain leadership, because the character, scope and limitations of zoning under the law belong primarily to the field of the lawyer. Such leadership as may have been given in preparing zoning regulations and plans by those who are not lawyers, does not mean that they can long maintain that leadership. As time goes on the lawyer will be the controlling personality, as he now is in New York. Every change and every complexity that arises as a result of

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change, will entrench the lawyer as the supreme "Zonist." But when zoning is kept in its proper place as a part of the town plan, we shall have the co-operation of the lawyer as a member of the town planning group, but not the subordination of the artist or the engineer to the legal adviser.

It is not too much to say that the future of city and town planning depends on the provision of specialized

training and the opening up of opportunities for experience, for all four professions that have been alluded to. The high place that the architect must take in all forms of civic design and his essential leadership in some forms, demands that more attention be given to the study of city and town planning in the Schools of Architecture. That leads to the discussion of a matter which must be left for another article.

To a Certain Contemptuous Architect

By CHARLES HARRIS WHITAKER

QUITE recently, a well known manufacturer asked an architect of some prominence for his opinion of advertising to architects. "I don't believe that any of it is worth a damn," was the reply.

Almost at the same moment a citizen of some note asked a manufacturer why the Knickerbocker Theater roof collapsed. "Another one of those damned architects," was the answer.

Now both of these episodes illustrate that loose generalization of minds which either do not work at all or which work in the fixed grooves of blind conservatism. I can well understand such an accumulation of irritation as would lead many building owners to express their disgust with architects just as I can understand why many architects, disgusted with that glib spewing of copy hacks which insults their intelligence, give vent to their feelings about advertising. But this disgust, in both cases, merely proves the existence of incompetence and nothing more. Architects will continue to practise and will either justify their existence by their ability or they will be replaced. Advertising will continue to be done because it is a function with which we cannot at present dispense. But cocksure architects and grouchy manufacturers will have to do more thinking and less damning.

Now it is precisely that very significance which attaches to the *Proceedings of the Joint Conference for Better Advertising to Architects*. They are published as a Supplement to this issue of the JOURNAL and are being distributed as generally in the building industry as the resources at the command of the Joint Committee will permit.

They mark another important step, in one particular field, of a movement to use thought instead of damns,—to put an end to the vast waste now engendered in the blind struggle to gain business,—to bring architects and manufacturers nearer together in a more intelligent understanding—and finally, to lay the piers and footings for some kind of a structure upon which the consumers of building materials may rely for sound and dependable information.

The Folly of Contempt

To those architects who have a contempt for all advertising,—for there are others beside the one I am addressing,—let me call their attention to Mr. Harn's striking observation in the Proceedings to which I refer, that the sale of an article is equally as important to the buyer as to the seller. Indeed, is it not much more so? What Mr. Harn sees very clearly, however, is that the buyer of building materials has more at stake than the seller. He will perhaps have to live in the building or do business in it; or he may rent it and thus have to bear the cost of upkeep and repairs, in which case he is dependent upon it for an income, or even a livelihood.

(Unfortunately, in that class of building called speculative, the original buyer of materials has very little or no interest in the quality of work or materials used; the social loss resulting from this condition and the damage done to the building industry in the constant and inevitable forcing down, ever down,—of standards of work and materials used is colossal.)

What Every Architect Knows

But my friend the architect knows these things by experience. He knows that he has been too often misled, that he has made many mistakes because he lacked information—that he has used materials which, proven to be right for one purpose, soon showed that they were not right for another,—and that, far too often, he has had to depend upon scanty or even no information,—but upon his unfortified judgment,—as a guide to his choice. He knows,—and knows very well,—of the high cost of maintenance and repairs that result from all of these factors, and it is therefore just as stupid for him to express his contempt for advertising as it was for a manufacturer to express his contempt for architects.

Substitute the word "Information" for "Advertising," and most of the contempt would vanish. The architect would pretty generally admit his need for

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information, and just as fast as he could be assured of its dependability, he would resort to it with avidity.

Where It Began

The beginnings of the present energetic movement to make advertising more useful to architects rest with the Structural Service Department of the JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS. They go back to 1915, when Mr. D. Knickerbocker Boyd and the Editor of the JOURNAL laid the plans for organizing a source of dependable information for architects. Three years later the work was further extended and placed in the hands of the Committee on Structural Service of the A. I. A. Its work has now attained to proportions of which the building industry is all too uninformed. But, in the prosecution of its work, the Committee on Structural Service came into instant and intimate contact with the whole subject of advertising, and out of that contact and the accompanying experience there finally emerged the Joint Conference of which we write, and the proceedings which are now before the reader.

Where It Seems Headed

What is the outstanding aspect of that conference? The very evident idea of establishing, by means which are now the subject of study by the Continuing Committee, a Research Bureau which shall correspond in its functions and its independence to that established by the New Jersey Chamber of Commerce. A Bureau which cannot be coerced or intimidated by any branch of the building industry, but which shall discharge a scientifically dispassionate function in the interest of the users and consumers of building materials,—because it is only by putting that interest first,—ahead of all others,—that such a Bureau could render any permanent service to those who gain their livelihood in producing or assembling the materials that go into a building.

Restoring Public Confidence

What the building industry needs more than all else is to regain Public Confidence. It needs to demonstrate that buildings, as supplying one of the prime needs of man, can be so built as to be within the present economic requirements of the investment, and its research in this direction will ultimately take it into such fields as those of taxation, use of credit, control of land, and all that group of factors which are now having their evident repercussion everywhere. But, as a beginning, it must learn to know itself as a whole, just as the Congress of the Building Industry in New York, for example, has begun to know itself locally and to give evidence of that broader knowledge by issuing its *Code of Ethics for the Building Industry*.

What does all this mean specifically to architects, advertisers and manufacturers? It means that by the operation of the inexorable law of progress, or change, or evolution,—for we live in a dynamic world in spite of all our effort to keep it merely static,—they will have to survey their machinery and equipment anew. They will have to take account of stock. They will have to examine the function of advertising, for example—as one which, even in its dual capacity of giving information and exciting desire, must be based upon a sincere effort to know and tell the truth.

Incompetent Architects

Is it not incompetence which heads the building industry's problems? There is architectural incompetence to begin with,—largely due to the fact that the practice of architecture in the United States has been free to all,—an incompetence encouraged by the flattering attentions bestowed upon the thousands of pseudo-architects by various interests,—an incompetence fostered by the weakness of those architects who sell their services at less than cost,—an incompetence manifested in a hundred ways too well known to require description—an incompetence too little discouraged by methods of education, and too greatly stimulated by the ability to borrow elements of plan and design from the far too numerous sources available and thus, leaning upon a contractor who fawns, or a manufacturer who makes plans (always in collusion against the interest of the owner), to avoid the acquisition of competence by that sweat of the brow which alone leads to its possession. (Note that in New York State alone, during 1921, some 500 so-called architects were denied registration through failure to pass the test for competency prescribed by law.) Then there is that incompetence born of studied aloofness on the part of a small section of the profession which boasts a pride in its splendid isolation, craves exemption from the social obligations of the common herd, and looks down from its esthetic heights in plain contempt upon those who seek, for instance, to deal with those problems which, until they are dealt with, keep architecture well out of its heritage.

Incompetent Advertisers

In advertising there is far too much incompetence,—from beginning to end. There is the incompetence of the man who does not know the truth about his own product,—of the man who knows nothing of architects and their ways and who makes the fatal mistake of regarding them as consumers when they are really trustees,—of the man who has no background in the building industry itself and who is forever at sea as he tries to fathom it,—of the man who is continually spending his money to produce more incompetence

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by scattering his publicity and his offers of free service where they seem to bring a quick and easy response,—of the man who coddles the thousands of fake architects in the United States because he is too lazy or too dull or has too poor a product to find his way into the offices of the competent,—of the man who seeks to break down what he calls the opposition of the architect by appealing to the public, forgetting, as he does, that with all its failings and all its incompetence, the architectural profession is the one safeguard of the manufacturer who makes good materials commanding a higher price; (once the sale of building materials is brought to a point where the client buys, price alone will be the determining factor, and then what?) and, then, by the incompetence of those advertising agents who, working on a basis which cannot offer adequate remuneration for intelligent service, buy space on circulation, line rates, inquiries produced, and the general hard and fast rules which are absolutely inapplicable as related to competent architects and worthy materials,—and then, there is the amusing, but pathetic incompetence of those advertisers and advertising agents who seek by insinuation and innuendo to get a reading notice, a “puff,” or any sort of free publicity,—either as the price of an advertising contract or as the bait for one,—trying thus to destroy the only factor that can make any journal a worth while medium. And last of all there is that colossal and collective incompetence which exaggerates and overstates, insults the intelligence of every practised architect and thus creates and fosters and increases that condition which causes the high cost and low efficiency of advertising,—the distrust engendered by its abuse and misuse.

This incompetence in advertising could be no better illustrated than by the experiences of the Structural Service Department, when, for example, on applying to several advertisers for information as to a certain product, advertised and made by all and substantially uniform in character, replies were received absolutely at variance one with another, indicating that not one of the advertisers knew the answer scientifically, or that, if he did, he would not tell it. Where could my friend the contemptuous architect get his information in such a case?

Incompetent Manufacturers

Then, is there not a general incompetence of American manufacturers, engendered no doubt, by the very ease with which one can enter business and by the facility with which our abnormal growth has made it possible to support the terrific waste of our industrial establishment. We do not economically utilize our productive machinery,—a fifth of what we have would give us all that we are at present consuming, but having played for the bigness of things rather than for soundness and stability,—we now find that the era of

waste which resulted from that game has come to a halt,—very likely to an end.

What is the next step?

Facts,—that's all,—facts made the basis for working out the problems not alone of the building industry or of American industry, but of the United States of America as an experiment in government,—for it is still an experiment, however great our faith in it may be. In that experiment the building industry is a vital factor, for it deals with the indispensable element known as shelter, of which we have far too little in quantity, and far too poor a quality.

The Fear of the Shadow

These are the plain facts, even though they be stated in general terms. Their meaning is that the building industry must examine itself, in all parts, and without being afraid of its own shadow. It is suggested as a beginning, that you read the Proceedings of the Joint Conference, and that you think about what was done and what remains to be done,—and I offer this suggestion particularly to all contemptuous architects.

Obsolescence in Buildings

The Federal Income Tax Law allows deductions for obsolescence in the case of office buildings, and the National Association of Building Owners and Managers has issued a preliminary circular on the subject. As the questions involved will demand more consideration than they have ever before received in the history of building for investment, architects will give eager attention to the statements of the association. These are no more than tentative conclusions, at present, since an inquiry is being conducted to determine their validity, but they all strike most people acquainted with investment building as being not difficult to substantiate.

“Obsolescence,” says the circular, “may be considered from two standpoints. First, its causes, and second, its effects.” Some of the causes of obsolescence in an office building are as follows:

“1. The erection of new buildings of a different type and style that are better equipped than the old buildings. An office building gives its tenants several things of great value beyond the mere space which they occupy. First of all it gives them a certain amount of advertising, which is dependent upon the size, character, reputation and publicity of the building. One of the greatest elements contributing to the publicity value of a building is its newness. This value lives, of course, but a few years and is immediately destroyed upon the erection of newer buildings. The element of size also has a distinct advertising value, so that tenants prefer to be in the largest building in the city if possible. This factor of advertising is something that every tenant recognizes by a willingness to pay a higher rental to secure space in a building that will give it to him than he would pay in other buildings equally as good physically, but lacking in publicity.

“2. Service is another value which an office building offers to its tenants. This consists not only of a good quality

of ordinary services, such as cleaning, heating, elevator service, etc., but also of many additional services, such as towel supply, ice and water, clock service, restaurant and club service, etc. These extra services are continually being added to, and each new building that is erected endeavors to feature some new form of service which helps to attract tenants from other buildings. The older buildings, in order to meet this competition, must adopt these extra service features, often at considerable investment expense.

"3. The newer buildings are also usually planned with a greater efficiency of layout that benefits both the tenant and the building. The tenant, because it gives him a better office, and the building, because it obtains a greater number of rentable square feet per \$1,000.00 of investment. A new and more efficiently designed building can therefore not only attract tenants, but being more efficiently designed, can operate its space at less cost and rent it more cheaply than the older buildings. The older buildings are thus forced, in many cases, to reduce their rents to hold their tenants, thereby cutting down the return on their investment.

"4. A fourth cause of obsolescence is a shifting in the character and value of the location of the building. Rents are, in the last analysis, based almost wholly upon traffic, and a building well located, as regards the business traffic of a city, can obtain better rents than an exactly similar building not so well situated. Such shifting of business centers is taking place in every city in the country and is brought about primarily by the growth of the city. An examination of the growth of business throughout the country in proportion to the growth in population reveals the fact that business grows much more rapidly than the population. For example, the average population of the United States for the five-year period ending 1880 was 48,837,000 and the average bank clearings outside of New York for the same period was \$117,000,000, while in 1920 the population was 103,504,000 and the bank clearings \$155,150,000,000.00. In other words, while the increase in population was 114 per cent, the increase in the business of the country was 1525 per cent. In Chicago the increase in population for the same period has been 437 per cent and the increase in clearings 1405 per cent. The effect of this increase in business is reflected in the increase of land values in the cities. Since 1880 land tax values of Chicago have increased 1235 per cent, corresponding to a 437 per cent increase in population. In order to take care of this terrific increase in business which comes as the result of increase in population, the business centers of all large cities must inevitably either expand greatly in capacity or shift into new locations.

"One of the immediate causes of such a shifting of business centers is a change in the flow of traffic brought about by the rerouting of street car lines or principal through streets (such as the North Michigan Avenue development in Chicago brought about by the opening of the Boulevard Link), or of the building of new types of urban transportation, such as elevated roads, subways or new steam suburban facilities (such as the Forty-second Street district in New York City brought about by the opening of the Grand Central and Pennsylvania Terminals). Another of the immediate causes of shifts in business centers is the tendency of correlated lines of industry to get together in local centers. For instance, brokerage and banking houses tend to collect in one section of the business district, while retail stores will occupy another. In order to accomplish these segregations, it is very often necessary to move from the old center of business. Movements of this sort have taken place, for instance, in San Francisco and in Cleveland.

"5. A fifth cause of obsolescence is the increase in the value of the land on which the building is placed. As already stated, when the population and consequently the business

of a city increases, the value of its land also very materially increases with the result that a building, which was an adequate improvement of the low value of land existing at the building of the building, is no longer an adequate improvement of the land at its now higher value. It therefore becomes necessary for the building to be torn down and replaced with a new building capable of paying a return on the new value of the land. This condition grows more acute the larger the city.

"6. Another cause of obsolescence is the damage to an office building through new and larger buildings adjoining it, so cutting off the light and air of the older building as to diminish the value of its space and consequently its earning power."

The circular then describes the effects which are of course a falling off in earning power. But what the circular does not consider is the Social Consequence of all this unplanned growth, its frightful waste, its brutal and inhuman congestion, its blind pursuit of individual benefits at the sake of social welfare as cause and effect pursue each other endlessly. Seldom has there been such an admission on the part of any industry as this plain statement of the evils arising from lack of planning, lack of land control, lack of any understanding or consideration of the future disasters that await us if we do not find some way to discourage the centralization of population by offering human beings a physical scheme which they will prefer to the one with which we are now so hopelessly struggling. What is to be feared in the commendable activities of the National Association of Building Owners and Managers is that the search for individual ends will obscure the true cause of the difficulties. Until these are dealt with they will seek the answer in vain.

Exhibitions and Scholarships

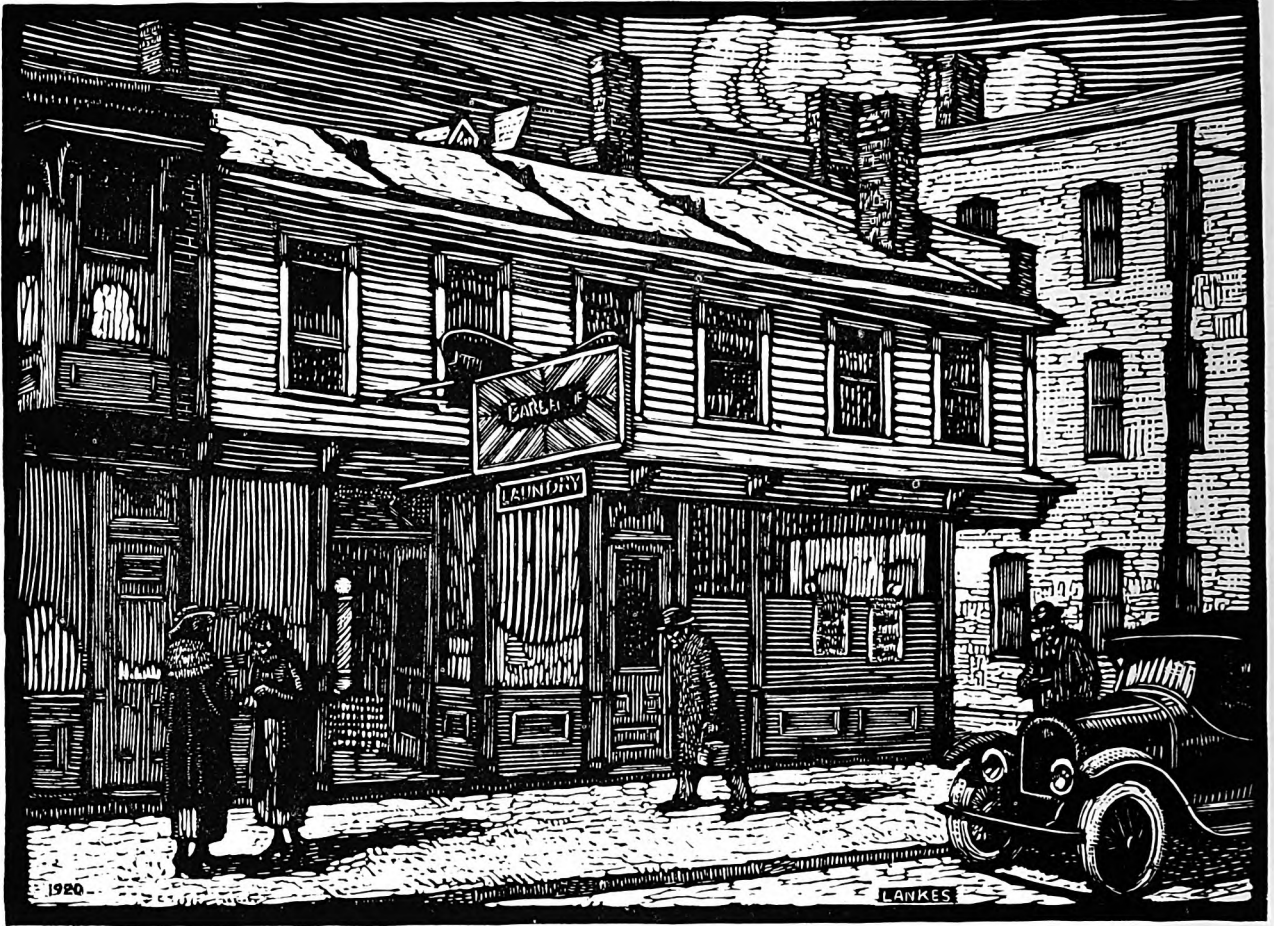
AMERICAN architecture seems to be exceedingly popular in Europe. The Loan Exhibit first sent to the Paris Salon last year was transferred to the rooms of the Royal Institute of British Architects, numerous other requests having been received from continental centres. Now the R. I. B. A. asks that the exhibit be left in England for some time longer in order that it may be sent to the larger English cities. There is also a possibility that it may go to Rome. Undoubtedly, from the experience of the Institute Committee in charge, the exhibit might remain in Europe for many months to come, so keen is the manifest interest in the work of American architects.

THE Le Brun Travelling Scholarship, founded by Mr. Pierre Le Brun in 1910 and awarded annually by the New York Chapter of the American Institute of Architects, has been won this year by Mr. Lionel H. Pries of Philadelphia, who receives \$1,400 for travel abroad. The following competitors received mentions: first mention, George K. Trautwein, Philadelphia; second mention, John O. Veggezzi, New York; third mention, Paul Hyde Harbach, Buffalo. Mentions not placed: Roy Walling Cheesman, Cleveland; Louis Fentnor, New York; Gerald K. Geerlings, Philadelphia; Roy F. Larson, Philadelphia; Frederick R. Lorenz, New York; George N. Pauly, Pittsburgh.

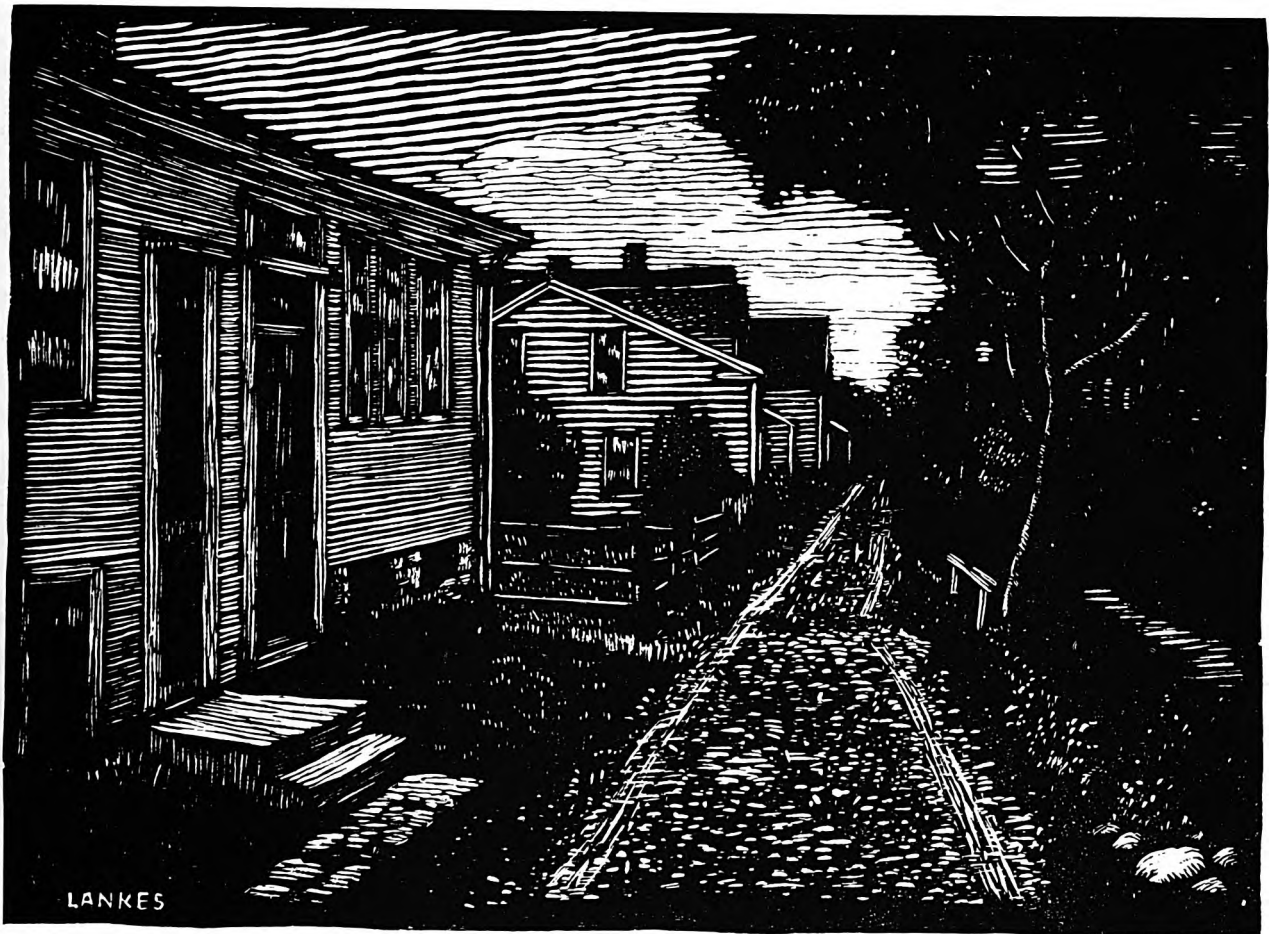


Four Wood-cuts
J. J. LANKES

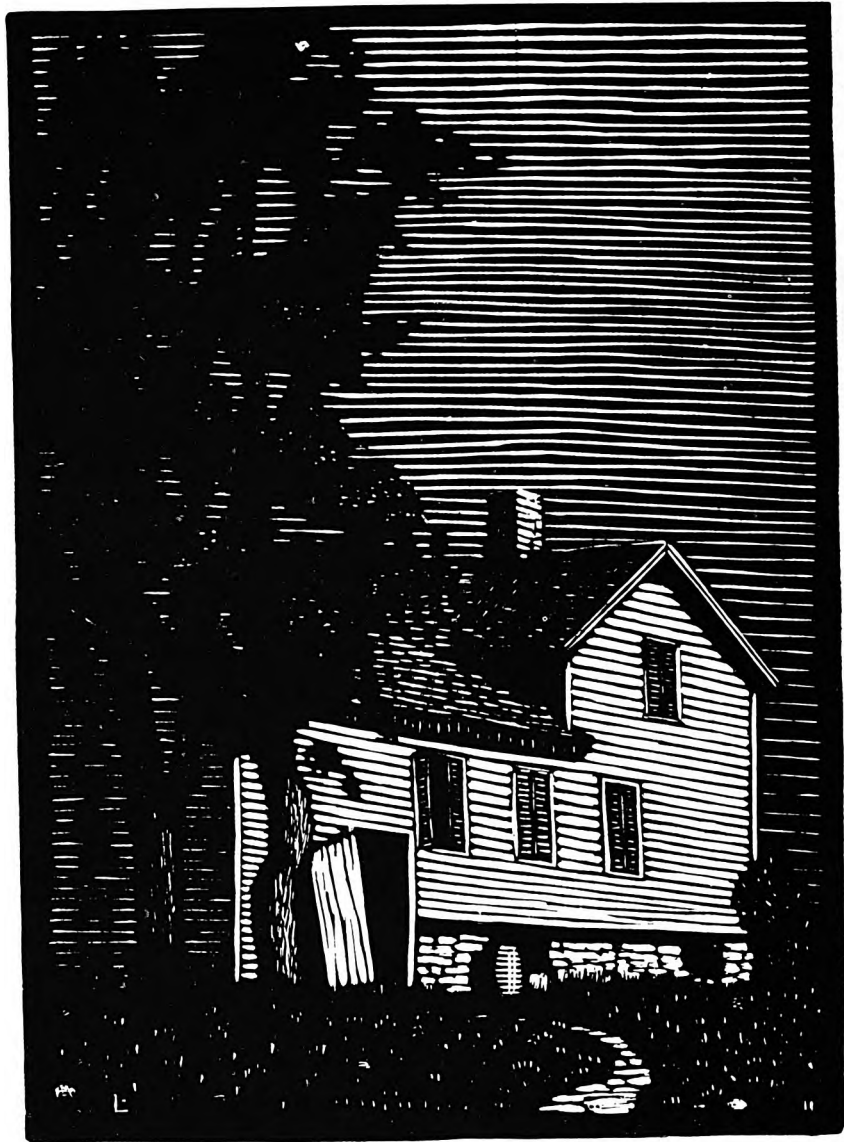
THE MOWER



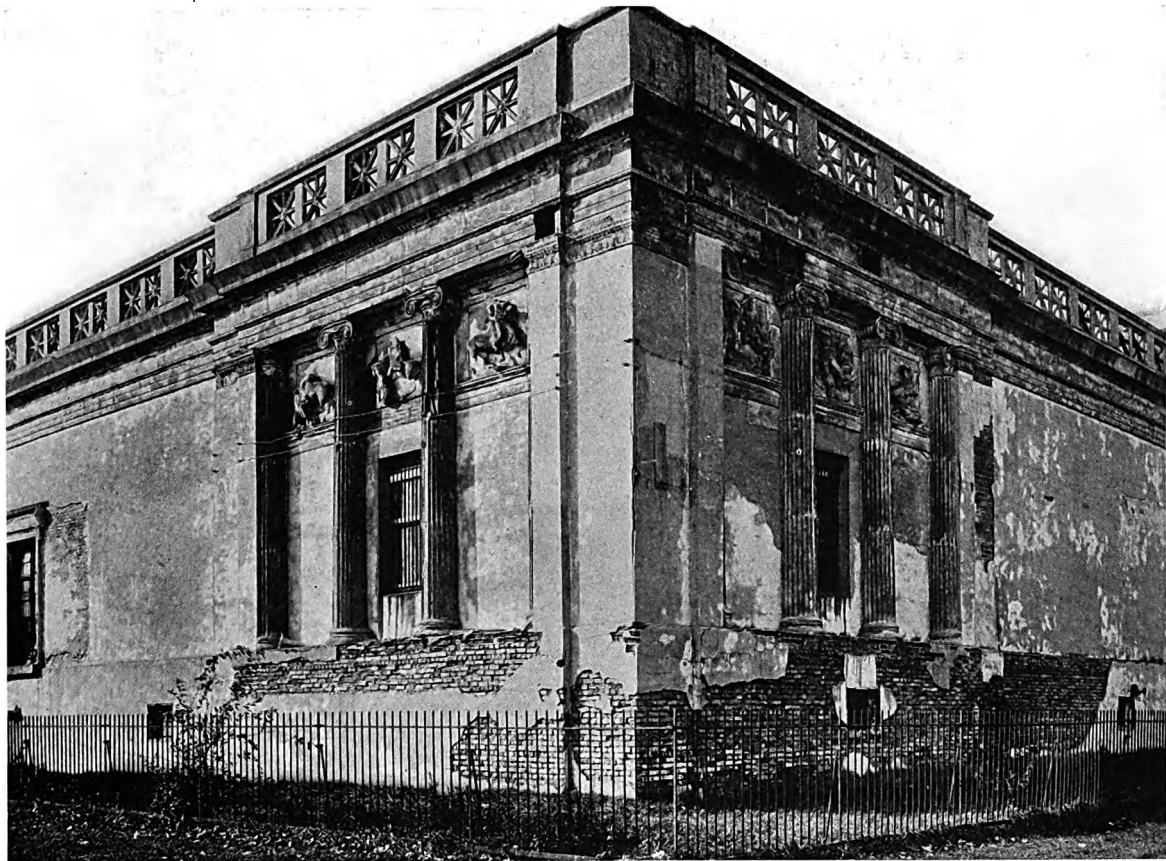
ST. MARY'S INN
J. J. Lankes



MILL RACE ROAD
J. J. Lankes



DESERTED HOUSE
J. J. Lankes



THE FINE ARTS BUILDING—CHICAGO

EAST WING

Restoring the Fine Arts Building---Chicago

One year ago the Municipal Art and Town Planning Committee of the A. I. A. (Illinois Chapter), and the Illinois Society of Architects, submitted to the South Park Commissioners, a carefully detailed estimate of the cost to restore the Old Fine Arts Building in Jackson Park, built for the World's Columbian Exposition. The Commissioners have agreed to defer wrecking the building, but no action has yet been taken toward its restoration.

This building, says the Committee, is perhaps the best known structure in Chicago, loved and revered by tens of thousands of people, not only from the city but also from the entire country and abroad. Even in its present condition it is desirable to save it, since it possesses historic significance and a sentiment that appeals to the entire community. It is a cultural asset that any city should be proud to possess. The following are a few suggestions for utilizing the building:

(a) For the housing of a great model of the entire Columbian Exposition in Replica, which could be beautifully illuminated and which would be appropriate in this particular historic building and of interest and educational value to the student and public.

(b) For a branch museum of sculptural casts for the Art Institute which needs additional space.

(c) For a collection of large current architectural and sculptural exhibits that might otherwise be destroyed for lack of storage space.

(d) For space for loan exhibits of Chicago artists. This would also create opportunity for the sale of paintings and works of art.

(e) For the display of unusual drop curtains of artistic merit from the theatre or opera company that otherwise might be destroyed.

(f) For an appropriate place to start a school in industrial art.

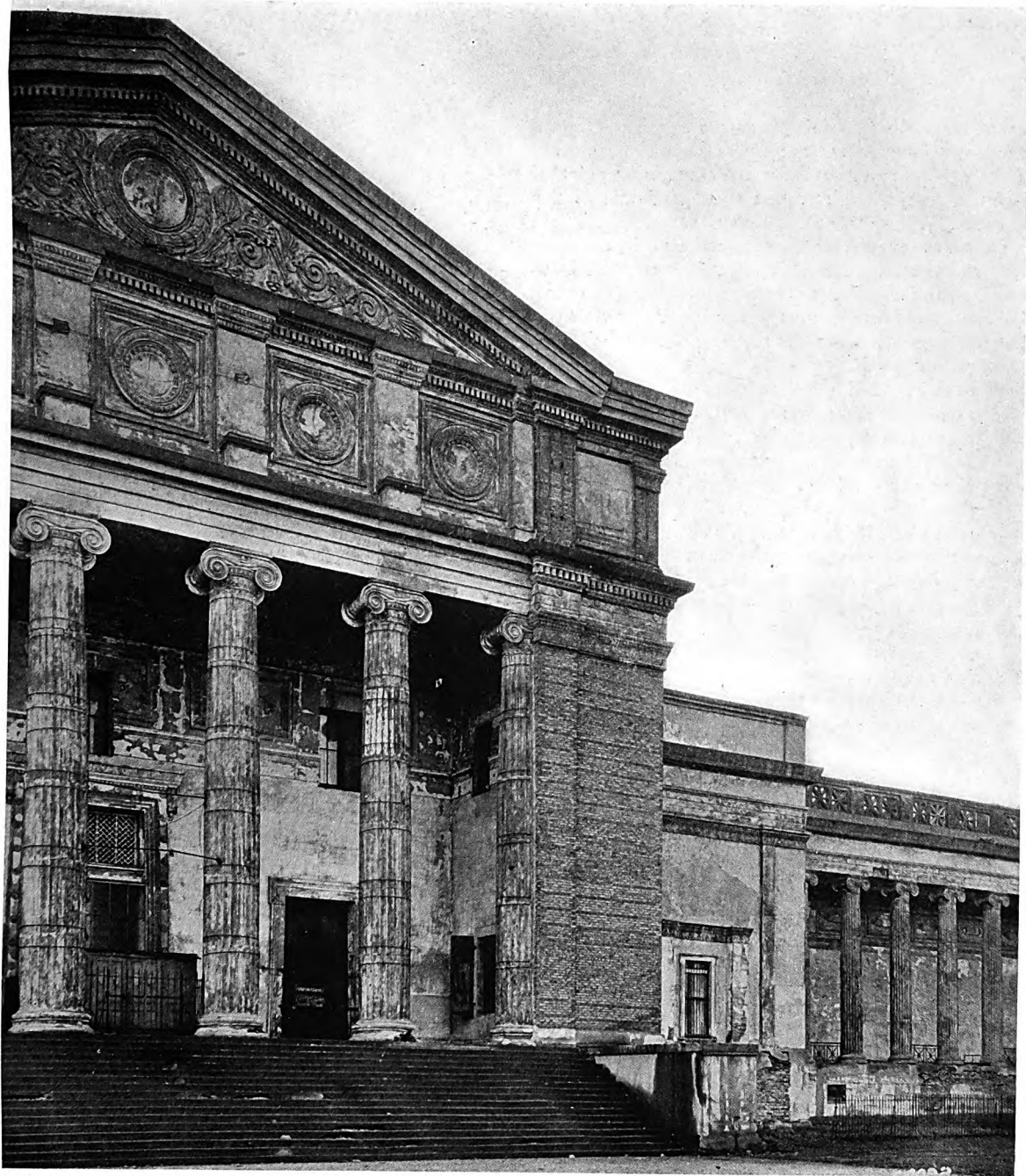
(g) For a great center for the Liberal Arts, a stimulus for creative and American art in all of its various branches inclusive of music and the drama.

(h) To interest the Chicago University in this building and the opportunities presented for extension of art studies.

Judging by the many letters and resolutions the Committee has received from all sources, it is very evident that there is a wide-spread desire to save this structure.

It is proposed to restore the northwest corner of the east pavilion during the summer of 1922, and a fund is being privately raised for the purpose.

The committee is of the opinion that the restoration will be so strikingly beautiful architecturally in contrast with the deplorable condition of the balance of the exterior that public opinion will favor the restoration of the entire building, especially when it is demonstrated that the new work can be done against the skeleton of the old walls.



THE FINE ARTS BUILDING—CHICAGO
Main North Portico

The Building of Manhattan

By FREDERICK LEE ACKERMAN

The accompanying aerial photographs taken from a great map covering the entire island of Manhattan, serve vividly to expose what has been the controlling point of view over a century with respect to the building of this modern city. The result of action is spread out before us; we may appraise it. Likewise we may in the light of our present knowledge appraise that system of institutions which gave rise to the peculiar architectural masses which go to make up the result. What do these photographs reveal; what is the significance of these architectural masses?

North of City Hall on both sides of Broadway, at certain points stretching from the East River to the Hudson and extending north to the present mid town section of Manhattan lies a vast mass of habitations built largely prior to 1880. North of this area along both sides of the island and extending from the mid town section to say 125th Street on the Hudson side and to the Bronx to the north east the city took form largely during the next 20 years. And still to the north of this second area we find another, miles in extent, reaching Spuyten Duyvil on the west and well out toward Westchester in the East. This vast area of the city came into being during the last twenty years. Let us turn to the photographs typical of these three periods of building and note the significance of the architectural forms.

Tenement Group I

A corner of the lower East Side of Manhattan typical of the first period. The East River to the right crossed by the Williamsburgh Bridge. This area was built over prior to 1880—largely before 1860, during which time a belief obtained that to cover less than 75 per cent of a lot was unprofitable and uneconomic. As late as 1900 we learn from Mr. John A. Dooner, Superintendent of Buildings for the Boroughs of Manhattan and Bronx, in his testimony before the New York State Tenement House Commission, of the then current state of opinion on this head. Newspaper files of that and previous date express the same opinion.

THE CHAIRMAN: "Is it your judgment, apart from the requirements of the law, that the ordinary tenement house built at the present day under the requirements of the law covering 75 per cent of the lot is adequately provided with light and air?"

MR. DOONER: "It is, sir; that is my opinion."

THE CHAIRMAN: "You think there can be no substantial improvement in the type of tenement houses now built?"

MR. DOONER: "No, sir; I do not."

An examination of the old and frightfully congested block bounded by Forsyth, Bayard, Canal and Chrystie Streets, made famous by the cardboard model of it in the first tenement house exhibit of 1900, discloses that it would have been possible to provide the same number of rooms, under better conditions as to light and air than obtain in the run of present day "new law" structures, in 6 story "walk up" tenements covering less than 58 per cent of the land. In this block 27.8 per cent of the rooms had no ventilation to the outer air.

A fairly typical block bounded by Cherry, Monroe, Pike and Rutgers Streets contained (in 1920) 2,107 rooms the majority of which were badly lighted. The same number of well lighted rooms could have been provided in 6 story walk up tenements covering less than 50 per cent of the land. This is housing at the rate of approximately 32 rooms per floor on plots 100 ft. square.

From an extended examination of the blocks in this area it is safe to assert that the same number of well lighted rooms with a full complement of baths could have been provided upon from 50 per cent to 60 per cent of the land as a maximum. And this could have been accomplished in a smaller volume of building.

Throughout this period and over this entire area the controlling factors in design were speculation, ownership of plots not exceeding 25 ft. in width and the assumption that net financial return varied with the area covered with building. 75 to 80 per cent of covered area was the rule. There is no trace anywhere in this vast area that technological insight played any part in designing buildings. Nor is there evidence that a workmanlike point of view was brought to bear upon the problem.

This area stands as a monument to the free running operation of business and the institutions of absentee ownership uncontaminated by considerations of sentiment, workmanship or technology.

Within this area were most of the 50,000 vacancies reported as of 1915. The buildings are fully occupied only when the tide of immigration runs full or when the shortage of habitations outside this area is so acute as to force a retreat on the part of those who cannot afford to live elsewhere. The area thus serves its purpose as a vehicle of Americanization, as we say, and as a check against building a sufficient number of rooms to house the population. But it should be remarked in passing that intelligently directed greed would have produced a much better result.



THE BUILDING OF MANHATTAN

Tenement Group I—An Aerial View of a Corner of the Lower East Side, With an enlargement of one Typical Block Section. Courtesy of The Fairchild Aerial Camera Corporation, New York City.

The Building of Manhattan--Continued

TENEMENT GROUP II

A section of the upper East Side of Manhattan typical of the second area and period already referred to, Central Park on the left, with the Metropolitan Museum in the upper left hand corner. East River and Blackwell's Island on the right. The Vanderbilt's Model Tenements to the left of the little park, with regularly spaced trees, at the river's edge. City and Suburban Homes Companies tenements at the top of this park and extending back to Avenue A, parallel with the river.

The half of picture to the right discloses a large percentage of "old law" tenements of the later period (1880-1900). Three blocks to the right of Central Park are given over largely to private residences, and tall apartment houses built during the last decade.

Aside from the "Model" tenements and the modern apartment structures along Park and Fifth Avenues, the design of the entire area is conceived in terms of the 25 ft. plots. Much of the area to the left was developed by speculative builders whose individual operations often covered many lots. This condition however did not in the slightest degree affect the result. Large plots are conceived as subdivided into so many 25 ft. frontages for purposes of sale; and these imaginary boundaries operate to dominate completely design. Throughout this area and period, except for the very recent development, the old concept of covering every inch of land allowed by law held full sway. Conditions of ownership still control the situation. Dark rooms, waste corridors and halls, useless volumes of building stand characteristic.

Such gains as were made in light and air were grudgingly conceded to a rising tide of sentiment against such conditions as obtained in the area first referred to. Besides, it had been found that crowding beyond a certain degree did not pay.

We should not be misled into thinking that technological considerations, economic planning and the economic use of labor and materials had entered to shift the point of view. The discussions revolving around what had best be done ran within the frontiers of a sentimental consideration. It was sentiment rather than technological or economic considerations which accounts for the Model tenements of this period. All this time the way out was viewed as possible only by resort to enterprises of a philanthropic or a semi philanthropic character. It was conceded that it was a case of being content with a "fair interest" return in the place of speculative profit or nothing could be done about it. See the Reports of the Tenement House Commission and the newspaper files for 1896 to 1900. Apparently the hope was to solve the problem by completely avoiding it. The impersonal, technological outlook which would raise questions concerning what had brought about the deplorable conditions, or which would deal with the problem of planning without making 70 or 75 per cent of the lot the point of departure in design plays no part all this time. The area is expressive of business traffic conceding a little here and there to the demands of sentiment.

NOTE: The enlargement of a block section on page 115 shows nearly all tenements of the dumb-bell type before 1900.

On page 117 the enlargement shows all old-law tenements, both railroad and dumb-bell type, the former having no side courts.

On page 119, three-quarters of the block shows new law tenements: the lower left hand corner shows old law types.



THE BUILDING OF MANHATTAN

Tenement Group II—An Aerial View of a Corner of the Upper East Side, With an enlargement of one Typical Block Section. Courtesy of The Fairchild Aerial Camera Corporation, New York City.

The Building of Manhattan--Continued

TENEMENT GROUP III

The area to the right is very largely made up of New Law 6 story walk up tenements covering ordinarily up to the maximum of 70 per cent allowed by the law. The impossibility of using 25 ft. lots for single operations under conditions imposed by the Tenement House Law now forces the use of plots of 40-50-75 and sometimes 100 ft. in width. The forms of the buildings disclose the then prevailing type of interior arrangement, that is, "railroad" apartments, long private halls. Buildings of this area are wasteful in the extreme. For the most part the plans of individual buildings are but a recall of the old arrangement in plan which was the direct outgrowth of the use of 25x100 ft. lots.

The controlling factor in design is still absentee ownership. What is curious however is that the type of plan used throughout this area and period actually relates to a condition of ownership which no longer obtained. It is again safe to say that technological considerations play no part in the design of building in this area. The ideas of the speculative builder brought over out of the habit of building on 25 foot plots still completely dominates the arrangement of the plan and the mass of the structure. And again the magic 70 per cent holds sway. As before the designer creates his new and larger mass of structure to coincide with the limit of mass allowed by the law; then he proceeds to burrow his way out to the light in the case he reaches a street or to gloom in the case his burrowing brings him to a court or side yard. Useless halls, corridors, long rooms, excess volume of building again characterize this area.

To the left, New Law Tenements, "walk up" and elevator "apartments," built consequent upon the extension of the subways. Use of still larger plots to be noted. The type of plan changes as a consequence. The builders are evidently trying this and that but always covering 70 per cent of the land. Here and there we note that a bold operator has "opened up" his plan; this however occurs but rarely. Any one familiar with the plans of the structures on this area and who has "seen the light" with respect to the advantages of covering less area will have no hesitation in asserting that the same accommodations could have been provided with in 15 to 20 per cent less volume of building with a corresponding increase in light and air. On the whole the preconception obtains with respect to covering all the land allowed by the law. Absentee ownership still controls the situation. The problem of building is still confined to the use of single lots. Nowhere in this area do we find any evidence to suggest that the block might well be viewed as the dominating factor in design. The technician evidently is still waiting for his opportunity.

Conclusion

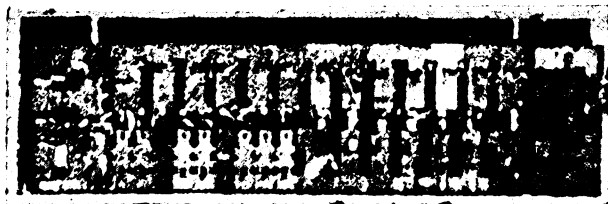
These three pictures cover the span of nearly a century. They represent a tremendous amount of human effort. The thing has been done under the direct—and one might say—the sole guidance of the business point

of view and the institution of absentee ownership. What progress has been made—that is to say, what changes have taken place from time to time have come about through the pressure of organized opposition, always guided by considerations of sentiment. From the standpoint of those directly responsible for the creation of this peculiar environment, it has not been a case of groping after a more adequate thing. No such attitude has characterized their work; they have stood firmly opposed to any and all changes.

But from first to last there has been available a body of technological knowledge and insight which would have guided the effort which these pictures represent toward a more adequate result. From first to last that body of knowledge and insight has not been drawn upon. Those possessing such insight have been forced by the business-like considerations attending the building of these structures to stand on one side or follow. Only when the forces of organized public sentiment or a philanthropic move has opened the door of opportunity, has the technician played any part in designing this city. But when it was no longer the confines of a 25'x100' lot which stood in his way it was the carrying over of the preference for a type of plan which had been the outgrowth of that shaped lot which hampered him. When the demand for this type of plan gave ground under the force of laws enacted, then the excessive percentage of built-over area allowed by those laws stood to defeat him.

One may view this record of progressive change as progress, and so it is—of a kind. But against that rating stands the condition that the changes run in the direction of ever greater congestion, consequently higher land values, higher rents and an ever more baffling transportation problem.

We now know that there has never been an occasion for covering so much of the land as is the case exposed in these three photographs. We know that a much lower percentage of cover is advantageous to everyone concerned. But in the face of this knowledge we continue to codify not this knowledge, but our preconceptions and fallacies in our building laws and zoning ordinances. Authoritative legalized congestion is being induced into our small communities by the enactment of laws which permit the same conditions as disclosed in the third illustration. This is being done under the auspices of what passes for a scientific point of view. But these laws and ordinances are not based upon a scientific point of view. For the time being, such laws are primarily concerned with the problem of so regulating absentee ownership and business as to insure that no harm will come to either. But this is the same as saying that laws governing the erection of buildings are now so framed as to leave scope for falsely conceived possibilities of profit taking in land and building. It was the falsely conceived possibilities of profit taking that induced us to build structures approximately 20 per cent of whose volumes is utter waste and more. For by so doing we reduced our light and air by so much.



THE BUILDING OF MANHATTAN

Tenement Group III—An Aerial View of a part of the Upper West Side, With an Enlargement of one Typical Block Section. The Hudson is seen on the left, the College of the City of New York in the lower center. Courtesy of The Fairchild Aerial Camera Corporation, New York City.

Around the Secretary's Table

By THE SECRETARY

THE SECRETARY: Speaking of architects' fees, I received about a year ago one of those inquiries to which it is quite impossible to give the complete and definite answer that is desired and evidently expected. A client, by nature a business corporation, had called in an architect and given him instructions regarding a restaurant that was to be built at a desired expenditure of about \$70,000. No mention of fees was made by either side. Plans were developed and at the suggestion of the architects the work was arranged to be done under a group of separate contracts. The architects were to give full services, including supervision. The work was in an existing building and therefore involved a considerable amount of alteration work as well as new construction. About three months after the work was started, at which time contracts totaling nearly \$90,000 had been let, the architects presented a contract demanding a fee of 20 per cent on the cost of the work. The officers of the corporation thought this was exorbitant and asked if I could help them to come to an amicable settlement.

The fee certainly seemed high, at first glance, but a complicated situation of this sort cannot be entirely divulged in one brief paragraph, and any statement would have been certainly unwise and probably in error if made before both sides had been heard in full detail. So I referred them to the president of the local Institute Chapter, who could advise more safely after the personal conference that would be possible.

Now I mention this particular case not with any desire to discuss the proper fee for such a piece of work, but because it raises the broader point regarding what fees it is appropriate for an architect to name under various circumstances.

Of one thing I am quite certain and that is that whatever the fee it should be stated and understood at the outset. Not necessarily at the first interview however. An architect who would charge on some basis of professional fee plus costs would need to study somewhat the scope of the problem, and the various elements of cost and duration of time involved, before being able to name an appropriate fee and any reasonably accurate estimate of costs. An architect who would charge a percentage fee might frequently need the same opportunity for a survey of the problem before hazarding a guess as to which per cent would, with his costs extracted from it, leave him a satisfactory balance for his pains. But to allow work to proceed on a complicated problem until one's services are more than half rendered and the owner is wholly committed is clearly poor practice.

MR. MAURAN: Do you have in mind a case where the owner is definitely awarding the work or is merely asking the architect, and perhaps other architects also, what fee he would charge if the commission were awarded to him?

THE SECRETARY: The latter case is exactly what I have in mind. Suppose I name a fixed fee plus an approximate item for costs, the two together being, let us say,

just under six per cent. The other two architects, let us assume, both say that they will charge the usual six per cent. Am I competing in price? Am I violating Canon 11 of the Code which says that it is unprofessional "to compete knowingly with a fellow architect for employment on the basis of professional charges?"

MR. FENNER: So long as there was but one recognized method of determining the fee, the Canon of Ethics could be very simply stated—that it is unprofessional for architects to compete with each other on the basis of professional charges; but with a variety of methods of charge in use it is becoming more difficult to fairly apply this Canon.

MR. MORRIS: In my opinion it is futile to attempt to preserve the fiction set forth in Canon 11 that members of the Institute can be prevented from competing with fellow members on the basis of professional charges. They may not compete knowingly, but they do compete actually. The prosperous and successful architects compete successfully, and vice versa.

THE SECRETARY: For example?

MR. MORRIS: To illustrate: A is a first-class, capable, conscientious architect. He studies and restudies his plans, changes drawings that are partially finished if he finds they can be improved to his client's advantage even if it be to his own temporary financial detriment. If errors have been made in executed work due to mistakes in his office, he frequently corrects the work at his own expense. His fee, we will say, is 6 per cent. His methods of practice and standards of performance are known in his community.

B, of the same city, county or state, as A, is a second-rate architect. He has not the training, the ability or the morale of A. If his work is done quickly and inexpensively in his office, his building is structurally sound, and sufficiently well executed to pass the building inspectors, he is happy and has performed his duty, as he sees it, to his client. B also gets 6 per cent. His methods of practice and standards of performance are also known in his community.

Years go by. A is successful, wealthy and happy. He gets the business. B is still shuffling along, getting a poor living, jealous of A, and cannot understand why he does not get his share. His charges are the same.

The answer is that A succeeds and B does not succeed, because A winning out in direct and active competition with B *gives and furnishes* more for the same money. I maintain that it cannot be refuted that he is competing on fee, however we may attempt to qualify the term.

THE SECRETARY: Of course that goes back to the fundamental inconsistency of a flat rate for all architects. We are pretty free in our criticism of labor unions for demanding the level wage and reducing mechanics to an average efficiency, below the level that many could attain. Of course the situations are not exactly parallel. We

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have no mandatory code. The very constitution of the Institute prevents any code that it issues from being mandatory. But it does indicate approval of a uniform scale of charges by all architects, and this indicates a uniform quality of service. In view of the peculiarly personal nature of certain elements of an architect's service, any such equality is of course impossible.

MR. MORRIS: We all know architects who charge a higher rate than that provided in the Institute schedule, and we know others who charge less, because they furnish less. I am firmly convinced that if a client wants first-class work he goes to a first-class architect and pays his fee. If he wants an inferior article, a hand-me-down, he knows his way to the counter where such wares are sold. The Institute can never produce an equality of ability or performance throughout its membership.

MR. FENNER: I am convinced that we must maintain the fundamental principle that professional men do not bid against each other for work.

MR. STURGIS: There is a modicum of truth in what Morris says but there is also, on the other side, the conscientious, thorough architect who studies the problem to the advantage of the owner, even if it be to his own financial loss, and is often passed by later by the same owner in favor of the showy and often extravagant architect, whose aim is to put into the building everything that he thinks he can make his owner pay for. Unfortunately, there is a large class of owners who demand and enjoy extravagance.

MR. MORRIS: Cut-throat competition for the same kind of work is ruinous, of course, but such competition cannot continue for any appreciable period of time. It will, owing to lowered quality of performance, sooner or later, lose the business of such persons as indulge therein; and the plugging old tortoise who persisted in turning out first-class work and charging first-class prices will, as usual, come under the wire first. We cannot alter such basic facts and conditions as these by any action that may be taken at the conventions.

THE SECRETARY: This discussion involves, of course, only those cases where an architect is approached by an owner and requested to state what his fee would be for a certain piece of work, and is told, or otherwise becomes definitely aware, that other architects are being similarly approached. This action by an owner is perfectly proper, indeed is desirable, provided he seeks to learn the general qualifications of the various architects and not merely the amounts of their fees. The question is how should the architect act in naming his fee in such circumstances?

MR. STURGIS: No false modesty should deter an architect from giving complete information about his experience and ability, his complete organization, and the way work is handled by him. The cost of professional service is a negligible item in the total cost of the building; the character of that service is important, and is a very determining factor in the cost of the building.

MR. MAURAN: The fundamental principle upon which Canon 11 is based, as I understood it, is that when a piece of work is offered to one architect and no other is

being considered, that architect has the fullest right to fix his compensation at any figure mutually acceptable, but when a proposition covering fees is offered to a number of architects for consideration no option is given to propose any less fee than the minimum prescribed by the schedule of the Institute without acting in contravention of Canon 11.

MR. FENNER: Suppose our regular charge for office or loft building work has always been 5 per cent; and at that is more profitable than any other kind of work. Now, if a man should come to our office and say that he intended to build an office building, that he had three firms of architects in mind and would like from us a list of office buildings designed by us and a statement of our charges, I should say, "our charge is now and always has been 5 per cent." I think it would be immoral to do otherwise even though, in so doing, I might be guilty of a violation of Canon 11.

MR. KOHN: You are perfectly correct. The custom as to fees for office and loft buildings in New York is 5 per cent. Those who compete on basis of price for this class of work all charge $2\frac{1}{2}$ and 3 per cent. It seems absurd to suggest that Fenner is competing as to price when he sticks to the same charge of 5 per cent which he has always made.

MR. MORRIS: We are all speaking glibly of 3, 4, 5 or 6 per cent, and do not particularize concerning even the amount of service rendered—to say nothing of quality. Which, if any, of these percentages include engineering services in the technical branches? No two jobs are alike in my office, and what is good and fair pay on one, would be absurdly high or low on another. I have no fixed and unalterable schedule, nor any immediate intent of adopting one. I have lost money at 10 per cent rates and made it at $4\frac{1}{4}$ per cent. I cannot agree that there is an established rate in New York of 5 per cent on loft buildings. If they are big enough, a man confining his business to such could soon retire.

MR. FENNER: I suspect that under a literal interpretation of Canon 11, as Mauran defines it, I would be obliged to say 6 per cent. If the two other architects were equally punctilious, they would name the same fee, with the same result that the owner would pay one per cent more than otherwise. It seems to me that this would be a very dangerous attitude for the Institute to take.

MR. MAURAN: It seems to me this discussion has gotten away from the fundamentals and that too much stress is being laid on details and hypothetical cases and too little emphasis placed on the purpose of this Canon, in fact, of all the Canons. If one will read carefully the Circular of Advice and the Canons which epitomize its dissertation on the decencies of professional conduct, the outstanding impression remains that it merely enumerates the pitfalls which we all instinctively try to avoid. What are they there for—why is it necessary to stress these elaborations of the Golden Rule? I think it can be put in a nutshell.

Suppose some prospective client, whether a friend or a stranger, asks me for my charges for a certain type of building and is even frank enough to say that he pro-

AROUND THE SECRETARY'S TABLE

poses to ask the same information from Jones and also Smith. Is it conceivable that I reply by quoting Canon 11? Of course not; my course is perfectly clear and one takes no advantage, such as Canon 11 guards client and architect from alike, in replying that the type of structure contemplated can be done by any reputable architect as, for example, Jones or Smith, at a fee less (or *more* if it be in that class) than the recommended minimum, *but* since that is the case won't he save us all embarrassment and secure *just what he desires* by determining in advance whether Jones, Smith or I will give him the results he desires on an assumption of a proper fee. Of course he will, if he is a client one would want and Jones and Smith are going to tell him the same thing if they be the kind of men I conceive them to be—professional confrères worthy of the client's trust working under a gentleman's agreement with the world. And if Catchem and Skinum are also being considered, they would come under the head of those so-called architects of whom you've spoken to the would-be client as in the large class who will doubtless *do his job* for little or nothing. And if the Institute is unfortunate enough to have on its rolls either Catchem or Skinum—why *that* is where Canon 11 shoots and shoots to kill.

THE SECRETARY: That, of course, plays the game safely and with due regard to one's professional brethren, but I wonder if it shows due regard for the prospective client who is refused an answer to a question that he may well consider a perfectly legitimate one.

MR. FENNER: The Institute's codes and its Canon of Ethics mean nothing more nor less than that practitioners of a profession should observe in their business and professional relations with each other, the same principles of courtesy and fair dealings that gentlemen observe in their social relations with each other. I think we must recognize the fact, however, that changes in architectural practice are occurring and that, while maintaining our fundamental principles, we must adapt their application to changing conditions.

THE SECRETARY: That, of course, is true in this matter of fees, with what appears to be a growing interest in various fee plus cost methods.

MR. FENNER: Exactly. I take it that we are all agreed that if Mr. A is in negotiation with a prospective client and has named his fee for doing the work, it would be unprofessional for Mr. B to seek out that same client and offer to do the work at a lesser fee, but if Mr. A named as his fee 6 per cent and Mr. B names cost plus a lump sum, how can one determine whether or not there is competition in price?

THE SECRETARY: This difference in method and actual results raises a question of competition in fees when, for instance, two or three architects are working more or less continuously for the same owner, let us say a public service corporation, with a fairly steady building program. Two of them, let us say, work on the customary 6 per cent basis; the third on a fee plus cost basis the results of which, in terms of percentage, vary according to the varying conditions of each job and the trend of the building market. If the building costs more than

expected, due to a rising market, the result at the end is a percentage that is lower than originally anticipated as based on a lower estimated cost. It may be only 5 per cent. Is he competing improperly with the others and by showing a lower cost of his services, is he to be considered as competing for future work on a basis of price?

MR. FENNER: Several years ago the first departure from the old percentage basis was made, I think, by Sturgis, who developed a system based on cost plus a fee. At the present time, modifications of this system seem to be coming into use more and more. I have also seen recently a tendency on the part of clients to ask for an agreement based on a lump sum. Not long ago one of the leading real estate operators in New York asked me how long it would be before architects would be willing to name a fixed price for their services so that a person going into a building operation could prepare a definite budget at the outset which he could depend upon.

THE SECRETARY: Mr. Mauran has recently made a plea for the "fixed price" method. But I don't quite see the logic of the real estate man's plea. A man going into a building operation cannot very well prepare a definite budget unless he can predetermine exactly the final cost of the building itself. If he can do this the architect can easily give him an outside limit of cost for all the professional services and incidental expenses whether he works on the basis of a fixed price or on a percentage basis or any other basis. The variation likely to occur in the cost of the building itself makes the variation in the architect's charges immaterial, I should say.

MR. MORRIS: The real estate man (or owner) in my opinion is to be censured, particularly in spending another's money, if he does not build to a budget. I think an architect, as a matter of economic duty, should be willing to quote a flat lump sum fee for his services in connection with any given building. Preliminary sketches of insignificant cost will determine its approximate cubage and general character. If his cost records are clear and intelligible, and he is reasonably conversant with market conditions, he can approximate its cost. Figuring a proper fee in dollars is a simple matter. The contract can and should provide a reasonable increase or deduction of fee, if the building by the owner's desire is materially changed in volume or character. I know that this method has worked to the satisfaction of owner and architect, and the architect's fee as an item in the budget is a known quantity. If the owner or the architect are either or both not on the square, the scheme will not prove satisfactory, any more than will a percentage fee or cost plus a fee.

MR. STURGIS: The practice in my office is to name a fixed fee for my own service; to estimate, and generally with some accuracy, the cost of draughting, of the various kinds of engineering service required, incidental expense of conducting the work, and of field superintendence. This is generally a more complete statement than is contained in calculating six per cent on an estimated cost of the building, and less liable to vary. In making up a complete statement or budget for an owner there

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would be given the cost of the land, the cost of the building, the cost of furniture, and the cost of commissions, engineering, incidental expenses, and the superintendence of the building, and, under these various headings, complete cost of the operation would be before the owner.

MR. FENNER: I also find evidences that prospective builders, especially corporations about to undertake important building operations of a more or less commercial character, are visiting three or four architects, making a careful study of their office organization and equipment, their methods of handling the business of construction and taking these elements into consideration, as well as the fee to be charged, in making their selection of an architect.

MR. STURGIS: This is as it should be.

MR. MORRIS: My opinion is that Canon 11 should be changed to read as follows:

"It is stupid and poor business to attempt to secure work by quoting a fee lower than that necessary to insure a fair profit to the architect after the performance of his services to the very best of his ability." And let it go at that.

MR. KOHN: It may be necessary to change the Canon to which you refer because it does not meet many modern conditions, but a man who has a price for his goods and does not vary that price by reason of the price made by anyone else is not competing with that other, is he? The word "competition" implies a process by which the price for an article is changed if necessary in order to get business. If I established a custom with regard to the price that I charge for my services on a particular class of building without making it lower because I know some other one makes his higher, I am not competing on price.

THE SECRETARY: That would seem to involve proving that when you charged customarily 5½ per cent for a class of work that others generally charged 6 per cent for you were doing so without any design to create a prejudice in your favor with owners of this class of property.

MR. KOHN: This argument is, I realize, quite inadequate when it comes to the case of a man who has never done that type of building and is suddenly asked for his price. It seems to me, however, that even though no custom had previously been established in his office, the custom of the profession has been established and is known to him, and he may very well say "I do not compete as to price; I charge what the leaders of the profession have already established as customary."

I realize again that there is a hole in my argument when it comes to public buildings or monuments, where no precedent has been established. There surely the services of different men vary so much in their value that it would be absurd to expect McKim's to value theirs at the same price as John Smith. The Institute Schedule clearly provides 6 per cent or more than 6 per cent for that type of work and I should say that any one ought to have the right to state any figure equal to or above the schedule rate.

MR. WAID: I cannot but agree that Mr. Fenner is correct in his attitude in the matter, as expressed in his remarks relative to naming a fee for an office building. The problem is certainly a difficult one. While simple enough (?) in private practice, we certainly need more carefully considered advice with respect to architects bidding on public work.

MR. KOHN: For my part, I wish we could get rid of that whole schedule business, or if that is impossible get rid of the Canon with regard to competing as to price. We need the idea of course, because it is valuable in raising the standard in many of our communities, but why cannot it be put in the category with advertising? There has been no outburst of billboard and newspaper advertising since we transferred it out of the class of dangerous crimes into the category of "no gentleman does this."

MR. MORRIS: I am glad to see that Kohn seconds my motion.

MR. STURGIS: I am inclined to agree with Mr. Kohn, that it would be a good thing if we could simply eliminate the schedule altogether, and put in place of it a short explanation of what good practice is.

THE SECRETARY: There seems to be a general agreement that intentional price-cutting for the purpose of getting a job away from some other known architect or architects is improper. It is clearly made so by Canon 11. The difficulty seems to lie in the application of the brief statement in the Canon to a multitude of present-day situations, where a statement of one's charges may be appropriately demanded and where the element of competition, in the mind of the client at least, will inevitably be present.

Is it enough if one names his standard fee, regardless of whether it is more or less than 6 per cent or than what is customarily charged by others?

Is it necessary to refuse the client an answer to what is to him at least a perfectly legitimate question in order to play with one's brother professionals?

Are there not several questions involved to which more conclusive answers are needed than our present discussion affords?

Skilled Mechanics in The Building Trades

By BURT L. FENNER

Pioneer work in the development of a comprehensive Apprenticeship system, which is designed to meet the increasing need for skilled and properly trained mechanics in the Building Trades, is well under way in New York City.

The movement is being fostered by the New York Building Congress. Instead, however, of superimposing any new organization to carry out the plans under contemplation, it is proposed to do so by bringing together

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the activities of the established employers' associations, the labor unions, and existing educational facilities.

The first step was made by the Building Congress at a meeting of the Executive Board held on 10 January last, when a general committee on apprenticeship was appointed which includes representation of investment, design, engineering, material supply, management, labor, and related interests.

After careful investigation of the conditions by this committee, it was determined that the only resource for providing men better trained in the building trades and in citizenship than present day conditions permit, was in establishing a thorough and sound system of instruction based on apprenticeship principles.

The general committee on apprenticeship then created an executive committee from its membership which consists of six members, two of whom represent employers' associations, two represent labor unions, and two, related interests.

The writer, as Chairman of the Apprenticeship Committee is being assisted in the Executive Committee by Clarence S. Stein, Secretary, Architect, 56 West 45th St., Dr. John L. Elliott, Director Hudson Guild, 436 West 27th St., Ronald Taylor, of the Ronald Taylor Co., Inc., Cement Floor Contractor, M. F. Westergren, of the M. F. Westergren Co., Inc., Sheet Metal Contractor, Roswell D. Tompkins, General Secretary, and John Halkett, Member of the Executive Board, of the N. Y. District Building Trades Labor Council.

The service is rendered through a Headquarters Office, which is in charge of a specialist on apprenticeship, employed by the Congress. This office conducts the business of the Committee, gathers information necessary for decisions, and carries out the policies and development determined upon by the Committee. As Educational Advisor the committee was lucky enough to secure the service of Frank L. Glynn, the former Director of Vocational Education of the State of Wisconsin.

The direct management and operation of the movement is provided for in the establishment of a general Board with equal representation from the Building Trades Employers' Associations, and the Building Trades Unions, to be jointly financed by employers and labor.

This committee shall have the authority and necessary funds for the employment of such assistants as may be required to devote their entire time to this field.

These assistants will then establish standards and carry on the operation of the work through the Joint Trade Boards now existing in each trade and composed of an equal number of representatives from employers and labor engaged in that trade. Educational experts shall act with such boards.

The work of each Joint Trade Board will be to adopt rules and regulations for the trade that it represents covering the following items:

1. Enrollment of the apprentice with the Joint Trade Board.
2. Identification for apprentice in trade or at work.
3. Probationary period of apprentice before being finally accepted.
4. Maximum and minimum age for apprentices.
5. Term of apprenticeship.

6. Division of apprenticeship into periods of advancement.
7. Periodic examination of apprentices.
8. Granting of advanced credit to apprentices for previous experience in the trade.
9. Transfer system for interchange in employment.
10. Apprentice wage by periods:
 - At work
 - In school
11. Overtime work limits.
12. Hours per week:
 - At work
 - In school
13. Determination of time for school attendance.
14. Enforcement of school attendance:
 - By employers
 - By unions
15. Apprentice fees or dues.
16. Determination of apprenticeship classification for the trades within the jurisdiction of the Joint Board.
17. Statement of trade processes to be taught apprentices in each such classification:
 - At work
 - In school

Note: The apprentice must have provided for him the opportunity to obtain all-around experience while he is at work.
18. Approve courses of study to be taught apprentices in school instruction, including technical studies related to the trade in which they are employed and training for citizenship.
19. Supervision of apprentice:
 - At work
 - In school
20. Periodic reports on apprentices to Joint Trade Board:
 - From work
 - From school
21. Regulation of adjustments:
 - For employer
 - For apprentice
22. Minimum ratio of apprentices to journeymen.
23. Approval of employer indicating:
 - That his work is sufficiently varied and equipment sufficiently complete to give the apprentice the required diversity of trade experience to cover his trade classification.
 - His ability to provide continuous employment to the apprentice during his apprenticeship period subject to conditions not under his control.
24. Special regulations as may be necessary.
25. Agreement by apprentice to abide by rules established.
26. Granting of diploma upon the termination of apprenticeship.
27. The definite provision of classes in school for the instruction of apprentices.

One of the serious obstacles in the development of the apprenticeship in the building trades in the past has

been the seasonal or intermittent employment. Experience has shown that where apprentices have entered the building industry, they have often drifted into other occupations during dull periods in building. They are attracted by steady employment and immediate returns rather than by appreciating the ultimate advantage of thorough training in a skilled occupation. Later as citizens their earning power in the juvenile pursuit is not sufficient to provide for living costs that have accumulated with larger responsibilities. The work they have followed cannot pay any higher income so that they are released and replaced by another youth at lower pay. The state and the community thus has added to the unemployment.

On the other hand what has the trade itself done to attract the young American of today? What opportunity or protection has it offered him? What assurance has he had that he could rise above the laborer or the specialist—again finding himself out of work—while the employer has to employ a number of specialists to do the work that one man should be trained and able to do, knowing the trade in its entirety?

In our plan we offer a definite assurance of con-

tinuous employment and place the responsibility with the Joint Trade Board in each trade instead of being satisfied with placing it with an employer only. Lodging the collective effort and duty with the Joint Trade Board to see that employment is not interrupted offers far greater assurance of security to the apprentice, thereby distributing the burden over the entire trade instead of resting it only with an individual.

The general policy of the entire plan is to have the trade processes taught to the apprentice "on the job" instead of trying to house the trade conditions in a school building. He will work regularly under actual trade conditions, with actual trade surroundings and associations.

A part of his employment time or evenings will be devoted to his theoretical or technical instruction. The studies related to his trade and training in citizenship will be taught in the continuation or evening division of the public schools and will be paid for out of public funds. If, however, the proper kind of relations cannot be established with the public service through mutual partnership, then other existing educational facilities will be used or established by the crafts themselves.

Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

One of the principal works of the Institute's Committee on Community Planning during the past year has been the development of the framework of a regional plan for the Appalachian Mountains. The readers of the JOURNAL will remember Mr. Benton MacKaye's imaginative "Project for An Appalachian Trail" which appeared in the October number. Mr. MacKaye outlined a new theme in regional planning. For the Eastern section of the country he offers the means of respite from the noise and strain of our cities. He has seen the big cities developed as working places with homes and parks as inadequate after-thoughts. He has seen the monstrous city growing and devouring the surrounding forests and farms. He offers as a tonic the big sweep of hills and plains. His is not a plan of more efficient labor, but a plan of escape. He warns us to conserve the whole stretch of the Appalachian Mountains for recreation—recreation in the biggest sense—the recreation of the spirit which is being crushed by the machinery of the modern industrial city, the spirit of fellowship and co-operation.

Mr. MacKaye's project is probably the biggest and most far-seeing undertaking in regional planning that our generation in America has known. It means more than a trail—the trail is but the backbone. It means more than a recreation ground with paths and shelter camps. It means the opportunity for the development of a new way of living, and with it new types of communities. It is one of the first constructive searchings for an escape from the crushing influences of industrialism and its overwhelming cities.

The architects have built our cities though they have

not created them. The blind force of industrialism has brought them into being. The architect's ability to plan has been squandered on details:—a house—a school—a monumental city hall. The real structure—of which these form but a part—which affects all these individual buildings—has come into being without plan. The city's growth must be controlled; it must be made to serve, to broaden and deepen our lives, not to narrow and crush them. And for this purpose city planning alone will not serve—we must have regional country-wide planning.

It was this that Mr. Whitaker saw when he induced Mr. MacKaye to develop his scheme for publication in the JOURNAL—it was for this reason that the Committee on Community Planning took the lead in fostering the project for an Appalachian Trail. In co-operation with our committee and a constantly growing group of friends of the Appalachian Trail, Mr. MacKaye has been devoting the winter to a detailed study of plans. Leaders in the trail movement, in forestry, in community development, in landscape architecture in the East, have all shown a wide and helpful interest in the undertaking. They have said: "This is a wonderful plan—but what has it to do with architects and the American Institute?"

It is just because this is a plan, a big plan, that it appeals to architects. After all, the architect's prime function is not to decorate, but to plan. In planning a house or any other structure he relates varied units one to the other so that they form not only a beautiful but a functioning whole. His job is to mould our physical surroundings so that our lives may harmonize more fully with our aspirations.

But the architect's energy has been concentrated on

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the details and not devoted to the essential elements of the planning of our physical environment. And so the leadership in city planning has in the main been taken by other groups—engineers, landscape architects, sociologists, philanthropists, politicians and lawyers.

The planning of communities is probably the greatest undertaking that we have before us. It is the making of the mould in which future generations will be formed. It is not the work for one group, for one profession. It must be a co-operative undertaking. But it is one in which architects, because of their training and their experience should be fitted to take a leading and not a subordinate part.

The architect and the engineer each has his essential part in the design of a city as of a building. But they are different. The architect plans what should be done to serve human needs—the engineer how to do the thing with physical matter. The engineer thinks of human beings as weights, loads, elements, to be used in production; the architect must conceive buildings and cities as makers of men. He must plan structures and towns so they will react upon and remould the character of men. The engineer counts the pedestrians and vehicles passing a given point—and, multiplying by the factor of probable growth and plan, the width and type of the future road to handle its future traffic. He studies the past growth of the city and prepares for a continued growth along the same lines by building in advance sufficient streets, transit and transportation lines. The architect must study the human beings—their needs and aspirations—and conceive a building and a city—to fit them and to help them grow.

The philosopher foresees the growth of human minds that must be supplied with new physical surroundings; the sociologist supplies the data as to human needs; the lawyer weighs the experience of the past; the statesman cuts a way by new laws through the overgrown forest of traditional restrictions; the engineer calculates each part of the plan so that it will be adequate. But it is the architect (and the landscape architect) who must conceive the plan. In doing so he works as an artist. But at the same time his interest must be a human, and a political interest. And so he needs the co-operation of all these others who are helping to relate the city to the human factor.

There has been altogether too little fundamental study of the needs of our cities. Much of the so-called planning has been the work of opportunists. There was first the craze for the "city beautiful." And then when that was seen not to pay the phrase changed to a "city useful," a city useful not necessarily to the community as a whole, but to the limited part of the community that owns property or carries on business. Now it is zoning that is being offered as the remedy of the city's ills. Other cures will come later, say the doctors, but why confuse the patient by talking of more than one at a time?

These are all palliatives. In America we have never stopped growing long enough to diagnose the disease of our cities. Until we have done so we will not be prepared to accept other forms of city growth. It is only through our own experience that we will learn. But the suggestions that come from abroad may help us to find a better way of building our cities.

Again—The Garden City Idea

So a book on the garden city by a group of men who have been intimately connected with the movement in Great Britain is welcome. "Town Theory and Practice," the joint work of six enthusiasts, is built around the definition adopted by the Garden Cities and Town Planning Association in 1919:

"A Garden City is a town planned for industry and healthy living; of a size that makes possible a full measure of social life, but not larger; surrounded by a permanent belt of rural land; the whole of the land being in public ownership or held in trust for the community."

A different portion of this definition forms the chapter treated by W. R. Lethaby, G. L. Pepler, Raymond Unwin, Sir Theodore Chambers, and R. L. Reiss. In the introductory chapter, C. B. Purdom tells of the growth of the idea expounded in Ebenezer Howard's "Garden Cities of Tomorrow" (or "Tomorrow," the title under which it was first published in 1898) to its realization in Letchworth, a self-contained city of over ten thousand population and in the second Garden City Welwyn founded in 1919 and planned as a satellite of London but also a self-sustaining city. Mr. Purdom says of Ebenezer Howard's idea that "the firm basis of it is the unity of urban and rural interests in a single community and the ownership of the land by that community." The garden city he points out is a combination of individual, municipal and industrial effort. It is not a mere plan; it is a creative organization. Town-plans do not make towns. "Dynamic forces, the energies of men and the enterprise associated with industries, the pressure of population lured to a centre by powerful forces of attraction—these are the makers of towns. In the past, towns have grown up under the blind influence of these forces; today there is a means in the art of town-planning to replace that heedless process by conscious effort. But the art of town-planning is not a matter of adding road to road, building estate to building estate; it means the possession of an ideal, the exercise of the imagination, by those who care about towns, understand and love them, and have the power to make them what they would have them be. That is the value of the garden city to these present times."

The chapter devoted to the Best Size of a Town for Social Life, by Raymond Unwin, is particularly interesting. He does not accept Howard's original limitation of 30,000 inhabitants. He finds that no exact figure either can represent the most economical unit, the one, that is, which will give the greatest number of conveniences and opportunities to the whole population with the least expenditure of time and labor.

The limit of economical efficiency is not necessarily the same as that of social efficiency. He quotes Lord Bryce as suggesting that "the desirable size for a city would be from 50,000 to 70,000 people, and that it is doubtful whether cultural advantages of any kind will result from cities over 100,000 in population which would compensate "for the sacrifices which they must entail."

As an example of the wastefulness of the overgrown

city, he points to the experience of New York of which he says "to increase the supply of water to meet its growing population may cost four or five times as much per head as formerly was the case. Not only is this true, but the needs of the population in some cases show a high ratio of relative increase as compared with the numbers. This applies notably to passenger traffic facilities; the total number of journeys, or the average number of journeys per head of population, seem to increase in large cities faster than the square of the increase of population. Mr. John Lothrop has recently stated that while New York was increasing in population about 30 per cent, the cost of installing traffic facilities increased about 400 per cent. There are other facilities—the telephone is perhaps the most obvious—in which the increased population necessarily so complicates a system that the cost per head tends to increase with the increased population." He recognizes that the increased size of population does enhance the opportunity of gain to fortunate business men and others but he says "it is, however, by no means clear that the increase of economic or financial opportunity to these individuals applies to the population generally; and, to some extent at least, the general population is probably bearing the cost of the increase of size beyond the most economic unit, while the advantages of that increase are going mainly to a limited number of successful traders."

Mr. R. L. Reiss in the last chapter of the book points out the practical value "of the whole of the land being in public ownership or held in trust for the community" because

- "(a) It is then possible to prepare a comprehensive plan for the whole area.
- "(b) In considering that plan, any reduction in the potential land value which may be brought about by restricting a particular area to agricultural purposes only may be counterbalanced by the increases in value due to having restricted factory or residential areas.
- "(c) The limitations in value due to land being used for open spaces or recreation purposes only may be balanced by the increases in value of the sites facing such land."

In a word, the creation of land values will be in one hand. But it is not sufficient that the land should be in one ownership. The monopoly thus created must be used to public advantage. The predominating consideration in the preparation and carrying out of a town plan must be the interests of the town rather than the profit of individuals. Moreover, the excess of land values created over and above the amount required to cover the interest upon the capital cost of development must be used for the benefit of the town as a whole.

Bibliography

A seven page review of *City Planning in the United States 1920-1921*, from the pen of the indefatigable librarian of the School of Landscape Architecture, Harvard University, has come to hand. Miss Kimball lists the names of many towns and cities that have plans

under way, but far too many are merely major street plans, re-arrangements of railroads or zoning. All these are meaningless without comprehensive plans. Of general city planning Miss Kimball lists only six (one of which is Canada). This is a poor showing as compared with the hundred or so cities that have zoning plans started, under way, or almost completed.

The National Fine Arts Commission

President Harding, in forwarding the Ninth Report of the National Fine Arts Commission to the Congress, does so in a most graceful and appreciative letter, printed at the beginning of the Report, which contains a History of the origin of the idea of such a Commission and also a summary of its activities since its legal birth in 1910; the latter are well illustrated.

Primarily this Commission was intended to act as an advisory board of experts on matters affecting the future growth of the Nation's Capital. Its work in this field has long since proven the wisdom of its creators. Without its influence Washington and the District of Columbia might have gone on and on, straying each year further and further away from the original conception of its creators, Major L'Enfant—in consultation with George Washington.

Thanks to McKim, Burnham, St. Gaudens, Olmsted, and their successors, the National Fine Arts Commission has made good and every one now knows what its future must be unless Congress, which is Lord and Master of the Federal City, sees fit to fly in the face of the best artistic advice that can be had, and ignores it entirely.

Since the time when the Commission was quite young and its advice sought on matters concerning Washington only, much water has passed over the dam. Now the best elements in the Government appreciate it and seek its advice in every field covered by its diversified artistic membership.

It has given splendid advice on our new coinage, our memorials of all sorts, our medals, statues, fountains and a great variety of other things that require mature, trained professional judgment.

The mere fact that its advice is sought and followed, as to the location, planning, landscaping, and placing of suitable memorials in our cemeteries overseas in France and England, is proof to the world and to ourselves that we can, and do, appreciate the best. These cemeteries will be as simple and as dignified as it is humanly possible to make them.

It is greatly to be regretted that just now there is a small but well organized effort on the part of some in the Congress to defeat the will of the people, by depriving this valuable advisory adjunct of the Government of the United States of its very life blood—the minimum amount of money absolutely necessary for its continued functioning, namely the sum of \$10,000.

We, who know the immense power for good which it is, must use every effort, politically and otherwise, to see that its sustenance is not shut off, and the commission permitted to die from inanition.

EDWARD W. DONN, JR.

The Knickerbocker Theatre Disaster

REPORT OF THE WASHINGTON, D. C., CHAPTER COMMITTEE

The Committee was authorized by the Chapter to make plans of the building, in order to have accurate data on which to base the relation of the roof steel to the walls, there being considerable doubt, according to testimony given, whether beams, trusses, etc., had proper bearings. The Committee obtained all the plans and specifications from the Building Inspector's Office, which plans and specifications were available for one day only, Sunday, 5 February. The plans were traced by members of the Chapter and were made the basis on which measurements taken at the building were placed. Without the use of proper instruments it was found difficult to make dependable drawings from measurements taken with tapes only, and your Committee then obtained the services of Mr. Hazen, City Surveyor, who delegated Mr. Latimer and three or four assistant engineers to make surveys to get accurate and definite information of the existing conditions.

This information was finally turned over to members of the Committee who were doing the drawing, on Wednesday night, 15 February. From this time on the drawings proceeded rapidly and are now completed ready for such disposition as the Chapter may wish to make.

The plans submitted herewith consist of first floor, balcony, and steel framing plan of roof. In order to be as accurate as possible all measurements were taken at the floor line and it has been assumed that the walls were plumb at the beginning.

In locating truss 11, however, on the Columbia Road wall it appears on the drawing to have more bearing than is known to exist at the building. This is due to the fact that all measurements were taken at the bottom of the wall at the level of the auditorium floor and carried up plumb. By computation it has been found that the inside face of the bearing beam on which truss 11 rested, at the center line of the truss, is practically 5 inches back of this plumb line, showing that at the bearing of truss 11 the wall probably leaned toward Columbia Road at the time it was built.

Truss 11 was not at right angles with trusses 12, 13 and 14, the angle being about 90.23 degrees. This slight variation may have been made to get more bearing for truss 11.

The beams directly over the orchestra resting on the proscenium arch and the Columbia Road wall, from the measurements taken, also appear to have been too short. Beam 20 according to the length given in the beam schedule was not long enough. It may have been swung around until it rested on the Columbia Road wall but we have been unable to find any indication of a bearing plate for it. Beam 21 was also short and was swung around to rest on the Columbia Road wall. Beam 22 was so short that it was swung considerably out of normal to rest on the proscenium arch wall. The condition due to the spreading of these beams makes the panel between beams 21 and 22, 10' 0" wide at the connection to the truss 12, and 11' 6" at wall. Beams 23 and 24 were also

swung out of position to get bearing at the proscenium arch wall. The approximate location of the fans are indicated by dotted lines on the framing.

Your Committee has made several personal investigations of the ruins, condition of walls, bearing plates, and various structural members forming the roof construction; they have had computations made of the various loads and have analyzed the effect of these loads on the various beams, trusses and concrete roof slab.

In general, the Committee finds that the roof construction was poorly designed, that it was so faulty in its entirety, that the partial collapse of any part of the structure would in turn produce conditions which would bring about the collapse of the entire roof. This feature of the design is, in our opinion, fundamentally wrong, as no structure should be so inter-dependent, that the breaking of one portion produces the collapse of the whole. To make matters worse, a great many members of the roof framing were greatly over-stressed, producing conditions which made the total collapse inevitable, it being only necessary for a slight overloading, due to snow or some severe shock, to precipitate the entire structure into the auditorium.

As to the immediate cause of the failure, there are so many evidences of weakness, so many faulty details of design such as over-stressed members of trusses, beams, columns, etc., so many poor connections that, in our opinion, they all contributed their share in producing the final collapse. Truss 11, the main supporting truss, had one end resting on column 2, the other resting on an 18" 48-lb. I beam, having a bearing on the Columbia Road wall of 8 feet. This truss was connected to column 2 by bolting the bottom flange of the truss to four angles at top of column. There was no bearing plate and top of column was not milled to give level bearing. The other, or Columbia Road end, was so badly designed that it undoubtedly was a large contributing factor in the general failure.

The wall bearing end of this truss was also without a bearing plate, the bearing being made directly by the bottom flanges of the bottom chord, namely, by two 12" channels, 20½ lbs., connected by a ½" gusset plate. The bottom edge of this gusset plate is 1" above bottom flanges of channels. The wall reaction at this point was so great that the channels forming the bottom chord spread, thereby causing a considerable bending stress in the web of the channel which was only ¼" thick. The gusset plate was so greatly over-stressed that failure at this point was a great possibility.

The system of trusses was stayed laterally only at the top chord by the roof beams or purlins and the concrete roof slab. No braces were provided to tie the bottom chords of these trusses.

Column 2 was very poorly braced and while there is no evidence of buckling or bending under its load, there was nothing to prevent it toppling over when the roof started to collapse. The roof beams resting on the

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proscenium arch had very little bearing and slipped from their plates without doing serious damage to the walls.

It appears by the testimony at the coroner's inquest, that the entire design of roof framing was changed. The designing was placed in the hands of the steel contractor. The practice of permitting the steel contractor executing the steel contract to design the steel work, your Committee feels, is an extremely dangerous practice and should not be permitted under any circumstances as he has a financial interest in all that is done. The Architect's specification requires the contractor to submit all structural detail drawings in duplicate for his approval together with such stress sheets or calculations as he may require. The question naturally arises,—did the architect insist upon these drawings, did he examine and check them himself or did he obtain the services of a competent engineer to do so? A cursory examination shows that the system of construction provided was inadequate to carry the dead load plus the live load as provided by the Building Regulations.

That the work did not have proper inspection is apparent from the evidence submitted at the Inquest. This Committee recommends that the Building Regulations be amended making it imperative with the owner, where the public safety is affected, to employ at his expense, a competent clerk of the work constantly on the building during its construction and acting under the direction of the architect. The duties of such a clerk being thoroughly to check all materials delivered with all contract drawings, specifications, approved shop drawings and schedules, as well as conformity of workmanship with the specification requirements. Had such been the case here, the checking of drawings with finished trusses would have disclosed the discrepancies of depth and length as well as the methods of fabrication and erection. The Building Regulations should be modified so as to compel the owner to provide, at his expense, for inspection of this character. This seems fundamental to the architect but to the layman it is often considered a burden which is to be avoided if possible. The office of the Building Inspector should not be required to maintain a force of inspectors sufficiently large to provide proper inspection of all building operations of the District. This is an entirely unnecessary expense, which expense is not borne by those receiving the benefit as there is no reason why Mr. A, B, or C, should be required to pay, in the form of taxes, for inspecting work done by D. The Building Inspector's Office should have a force of competent and thoroughly trained engineers who should pass upon structural features of the design and see that they comply with the general established safe practice and the building laws. But the detailed inspection of the carrying out the plans should be provided by the architect and paid for by the owner. Such inspection to be paid out of the usual percentage or such additional charges of the architect as may be arranged with the owner. The burden will then be borne by the owner and not the public. In general, the builder's responsibility should be the proper execution of the contract requirements. His bid is based on the various items called for and he is required to execute the work in conformity with the plans and specifications. He should not be held respon-

sible for any architectural or structural feature of the design as his financial responsibility is covered by the detailed requirements of the specifications as furnished by the architect. It is the architect's duty to himself and his client to see that these requirements are complied with by the builder.

The practice of architecture should also be regulated in this respect. Architects without adequate training, draftsmen without any training at all, should not be permitted to practice. The public is paying continually for improper and inadequate advice from men without proper training and experience. The Chapter should press with vigor the measure now before Congress providing for the registration of architects. Why should an architect be permitted to practice without proper education any more than a doctor or lawyer; even a plumber is required to pass an examination. The architect has the life, health and comfort of his client to provide for in much the same way as a doctor and in addition he has the financial advantage or disadvantage of his client to consider.

We recommend that one set of blue print copies of the drawings of the reconstructed building be presented to each official investigating committee or engineer and one copy of this report be sent to the District Attorney for his use in the prosecution of the case.

ALBERT L. HARRIS, *Chairman.*
E. W. DONN, JR.
F. G. PIERSON.
Committee.

Letters to the Editor

FREE ENGINEERING SERVICE

SIR:

Not long ago I received the following letter:

Mr. W. L. Steele,
Sioux City, Ia.

DEAR SIR:

Structural Steel is selling now at 50 per cent lower prices than last year and at practically the same level as before the war. Every indication is that steel can be bought cheaper right now than will be possible for a long time to come.

These exceedingly low prices make it possible to build with Structural Steel at a cost competitive with any other type of fireproof construction.

Our Engineering Department will design your Fireproof Construction at no cost to yourself. If you have any contemplated *work* on hand, *NOW* is the time to start it.

Send us your inquiries and preliminary sketches.

Yours very truly,

— STEEL WORKS.

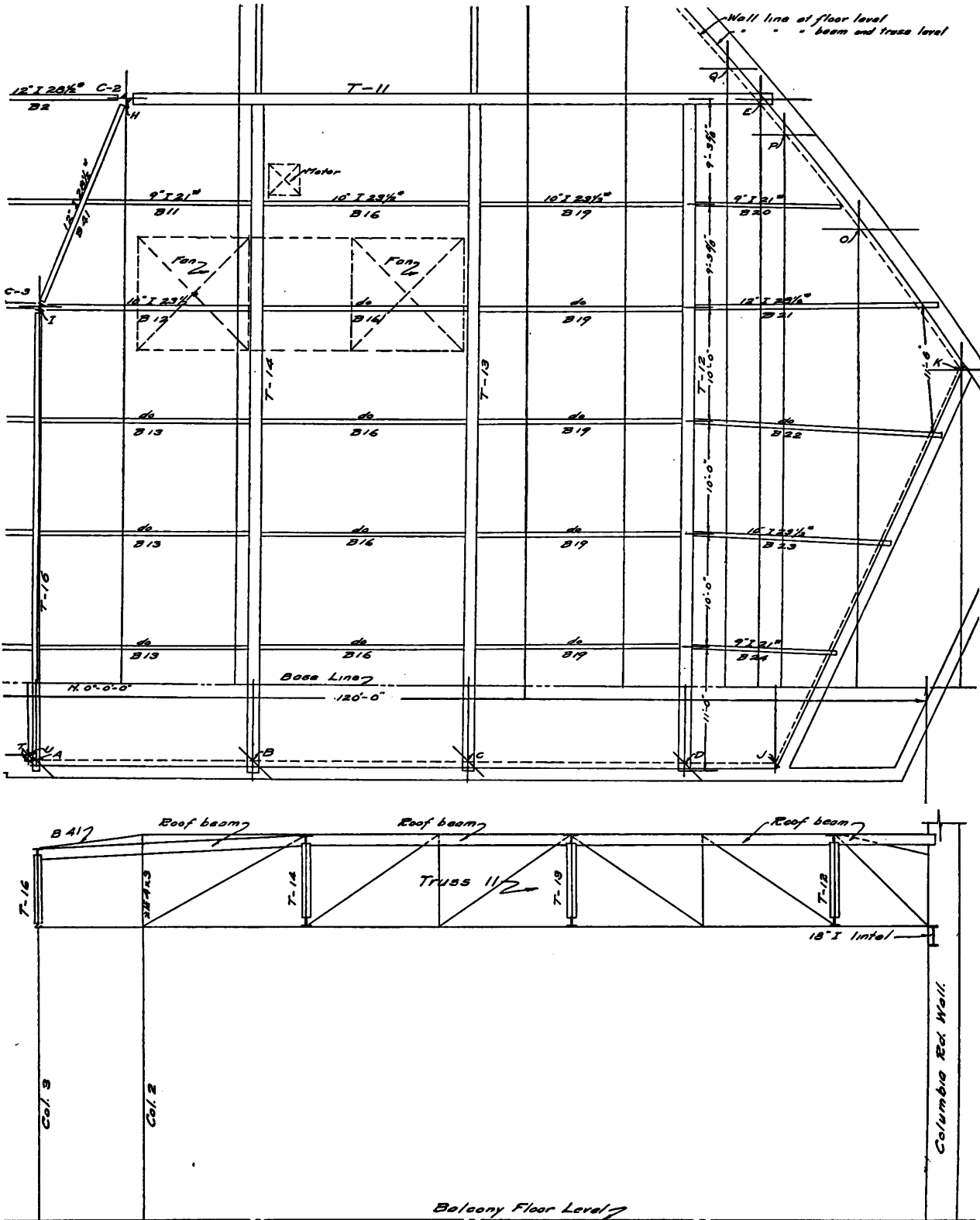
To it I replied as follows:

— Steel Works,

GENTLEMEN:

Replying to yours of October 29th, permit me to say that your statement that your engineering department will design fireproof construction for architects without charge does not appeal to me, nor should it appeal to any architect who has any respect for himself or his clients. I really believe that such help as you extend does more to keep incompetent men practicing architecture than any other one thing, and

THE KNICKERBOCKER THEATRE DISASTER



ELEVATION OF MAIN TRUSS
 Looking West
 Scale: 1/8" = 1'-0"

Details of Section of Roof Framing—Knickerbocker Theatre, Washington, D. C. Referred to in Accompanying Report of Washington Chapter.

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I wish high-grade firms like yours would be brought to see the necessity for insisting that architects pay for the favors which they receive. Engineering service is a very vital part of construction and if an architect is properly paid he will never permit this work to be done for nothing unless he is dishonest.

Yours very truly,

WM. L. STEELE.

This was the answer I received:

Wm. L. Steele, Architect,
Sioux City, Iowa.

DEAR SIR:

I have your letter of November 2nd in which you object to our offering the services of our Engineering Department without charge for the purpose of designing structural steel.

I note you state you believe that practices of this kind do more to keep incompetent men in architecture than anything else, and I am sure you are absolutely right in your contention, and you can be sure that we would very much prefer *not* to offer our services in this way.

We would prefer to furnish our products according to the design and under the direction of a competent architect than to be compelled to act in the capacity of an engineering adviser. . . .

The — Steel Works will be only too glad to stop designing structures for prospective builders when the interests play the game fairly and honestly. The use of structural steel and reinforced concrete in building construction should be governed by rules and building codes, absolutely fair to both systems. This is a matter that I think the architects should take up themselves. They can be sure that they will have the heartiest support and help of all the structural steel shops.

Yours truly,

— STEEL WORKS.

To this I replied that I would endeavor to bring the situation to the attention not only of my chapter but the Institute as well, which, as its members all know, has frankly condemned the practice so glaringly revealed and explained in the correspondence here submitted.
Sioux City, Iowa, 15 March, 1922.

WM. L. STEELE.

A QUESTION OF SMALL HOUSES

To the Editor of THE JOURNAL:

SIR: In the February issue Miss Georgiana Goddard King criticises a group of workmen's cottages at Williamsport, Pennsylvania, designed by the late Mr. George S. Welsh of Wilkes-Barre. My connection with this group was of the very slightest but in justice to Mr. Welsh's memory I cannot refrain from writing you.

The writer's statements of fact are in most cases untrue. Her assumptions are usually incorrect. That the houses are not as a whole occupied by factory workers is true. They were as a matter of fact designed for factory houses and were sold at an average price of less than \$2,800, with six rooms, a cellar, a bathroom with proper plumbing, and good heat and electric light, with slate roof, terra cotta exterior walls covered with stucco. The rents at the time of their construction ran from \$12 to \$22 a month.

The writer says the windows are very small and sunk deep in a thick wall. The average thickness of the wall is 8". The windows average about 3'x4' 6". The sash are of the casement type so that full openings can be obtained. Miss King says that in hot weather the bedrooms were suffocating. The least headroom in any bedroom is 6'; the casement sash make adequate ventilation possible; if the windows are kept shut the rooms may be hot.

She says that the detail of the house is bad. "The pretty casements were so arranged that no wire netting could be adjusted." This is not true. The frames are rabbeted for screens. She speaks of "sham carving" on the interior woodwork. This is not true. All interior trim was simple one-piece run molded trim, which was, in my opinion, extremely well designed and fitted to its purpose.

She speaks of lack of privacy downstairs as a great discomfort. The houses were designed first for the utmost economy of space, and second, to meet the desires of the tenants as ascertained from questioning a number of those who were to occupy the premises, and with the estate agents who rent property. The room in the roof of which she speaks as plastered but not heated is storage space. She says that when the door is opened the house is chilled throughout. She was there in summer time. The porches are designed for glass enclosures in the winter.

I cannot tell you when I have seen an article in which so little justice was done to the architect as in this one. Mr. Welsh was a pioneer in housing. His houses were the most economical that I have ever seen; were planned with as much care and consideration as I give to very much more expensive residences, and how on earth he was able to build such good houses at such low cost, I cannot understand. I hope you will publish this letter and communicate its contents to Miss King.

AYMAR EMBURY II.

New York City.

MISS KING'S REPLY

To the Editor of THE JOURNAL:

SIR: I have just read Mr. Embury's letter and I am very sorry he should have been so annoyed. I think, however, he hardly did justice to the praise in my article. I said, I think, that the houses were enchantingly pretty outside, and the streets picturesque and charming. Whatever the rents for which they were designed, those are not the rents now paid, which no factory worker could afford. This I deplored, citing parallels elsewhere. It is deplorable.

The windows *are* small; every picture shows that. Casement windows (except true French windows that open inward back against the wall) are unpractical and hot, for they necessarily cut off the wind from one direction; the plans show that. When in pairs they cut off the wind both ways. The rod of the window fixtures made screens impossible; that was said to me and I verified it on the spot. There are fixtures that accommodate screens, but not here.

The heat in the bedrooms and cold from the front door were the complaint of a resident. I observed the former and could not doubt the latter. Factory workers cannot afford a glazed porch; and some people do not fancy one. The third-story room without heat has to be counted in the "six rooms and bath." The moulding of the door-frames seems to me fussy and bad in profile; it certainly had corner ornaments that had shrunk away at the joints. That is, unfortunately, all I can remember nine months later.

The lack of privacy is common, as Mr. Embury implies, to poor people's houses and those of his own clients. I think I said something about that; but I think it a great misfortune and said (in part) why. The scheme is rather like the fashion of high-heeled slippers in the street, which those who cannot afford it have copied from those who can and who ought to know better; but it is bad just the same.

The article was not about any architect but about houses. It really was true.

G. G. KING.

Bryn Mawr, Pa.

LETTERS TO THE EDITOR

From Our Book Shelf

Sculpture

Mr. Kineton Parkes cannot be blamed for the sculpture of today, but when you have finished his two¹ volumes and looked at all the illustrations, it is a pity there is not just one head you can off with and be done.

Mr. Parkes knows what sculpture is about and it is not his fault that smooth clay models of so many sweet and noble ladies, their hair beautifully done up with many hair pins are called Sculpture today, as well as a few days ago.

We find ourselves in violent disagreement with some of his opinions and much he praises, and have not full sympathy with so catholic a taste. He has spread over the surface of a very large field and produced rather a remarkable "Who is Who," but while he has touched the real alive forward movement here and there, he has illustrated it hardly at all.

ESTELLE RUMBOLD KOHN.

Geometry

Geometry, as certainly must already have been remarked, is a rather useful equipment in the practice of architecture. It simplifies and makes easy a good many things. Not content with this, however, a number of inquiring minds seem to insist that great architecture develops by geometrical process. In the cosmic sense, this is very likely so. The laws of space teach us a sense of harmony and proportion. But that a knowledge of these laws reduced to a geometrical basis will assist in the production of great architecture is at least open to serious doubt.

Mr. Frederik Macody Lund has applied certain geometrical theories to the cathedral of Nidaros, Trondhjem, Norway. Apparently they are considered so important that his work² has been published by order of the Norwegian government, which leaves us exactly where we were before. The facades of Nidaros and of other well known churches are overlaid with a series of straight and curved lines purporting to prove Mr. Lund's conclusions. If they are proof then all is over, of course, but in the drawing of these lines the author seems to have had a curiously child-like predilection for making them begin and end at points exceptionally favorable to his own conclusions. Also, he seems totally to have ignored the long process of trial and error, of experiment, of patching and altering, by which most of the medieval churches attained structural solidity. There are eighty-seven ways more or less of making an architect. We would suggest trying the other eighty-six first.

C. H. W.

¹ SCULPTURE OF TODAY. By KINETON PARKES. Universal Art Series, Edited by Frederick Marriott. Published by Charles Scribner's Sons, 2 Vols. \$8.50. Volume I, America, Great Britain, Japan; Volume II, Continent of Europe.

² AD QUADRATUM. A Study of the Geometrical Bases of Classic and Mediæval Religious Architecture, with special reference to their application in the Restoration of the Cathedral of Nidaros (Trondhjem), Norway. By FREDERIK MACODY LUND. [London: B. T. Batsford.]

News Notes

MESSRS. ADDEN & PARKER announce the removal of their offices to 177 State Street, Boston, Mass.

MESSRS. BEACHAM & LEGRAND announce the removal of their offices to No. 211 Bruce Building, North Street, Greenville, S. C.

THE Executive Committee of the Board of Directors of the Institute met at New York City on 31 March and 1 April. The minutes of the meeting will be issued as a supplement to the May JOURNAL.

FOR the remainder of the unexpired term of office rendered vacant by the resignation of Sir Charles T. Ruthen, the Society of Architects have co-opted Mr. Edwin J. Sadgrove who was president of the Society 1916-20.

HEADS of the various architectural departments and schools in the Association of Collegiate Schools of Architecture have been advised that the Institute's Medals for general excellence in architecture throughout the course will be ready by the first of May. One medal is awarded in each school wherever a recommendation is received, and the recipient is likewise presented with a copy of Henry Adams's "Mont St. Michel and Chartres."

ZONING in Omaha, Nebraska, appears to be of doubtful utility. Reports recently received indicate that the law was so badly drawn as to disincline the district attorney to attempt to secure its enforcement and property owners in residential districts desirous of safeguarding their holdings are being forced to buy up vacant lands in order to prevent objectionable building undertakings.

PLANS for zoning Chicago are well under way, the Zoning Commission having retained Mr. E. H. Bennett as director. An accurate map of the city has been completed and the field survey of the use, height and depreciation of buildings is 52 per cent done, the other work of record, checking, density computation being likewise well along.

PORTLAND, Oregon, reports, through Mr. Ellis F. Lawrence, the organization of a branch of the Congress of the Building Industry. This is encouraging evidence of the slow drift toward localized activities rather than unwieldy national incoherencies. The futility of national conferences and meetings with which the country has been deluged for months is becoming a pretty well recognized phenomenon. Our business and economic troubles, like our charity, begin at home and only as local groups acquire knowledge and become ready to study and deal with their own particular problems shall we be likely to make much headway.

THAT the Chapters of the Institute in New York State, the New York Society of Architects, and the New York State Association of Architects, join in the employment of a legal expert to investigate and study legislation affecting the profession and introduced in the State Legislature, was the suggestion of Mr. Hobart P.

Upjohn, made at the annual meeting of the New York State Association of Architects held in New York City in February. Considerable legislative activity has recently occurred in New York State and the Knickerbocker Theatre disaster in Washington seems to have inspired a good many hasty and unwise suggestions. Likewise the subject of registration is bound to occupy an increasingly prominent position. National registration of architects has been suggested and although such a condition would seem entirely at variance with our theory of States Rights the intrusion of Federal regulation seems now too fixed a policy to arouse serious challenge. Altogether it is quite likely that architects throughout the country will have to keep a weather eye on their law-making bodies.

MESSRS. BARRY FAULKNER AND PAUL MANSHIP have been appointed annual professors for the academic year 1922-23 in the School of Fine Arts at the American Academy in Rome.

Obituary

Henry Martyn Congdon

Elected to the Institute as a Fellow in 1867.

Died at New York, 28 February, 1922.

Henry Martyn Congdon, a former Secretary of the Institute, was born 10 May, 1834. He was graduated from Columbia College in the class of 1854 and was a member of Psi Upsilon. His father, Charles Congdon, of Brooklyn, N. Y., was keenly interested in architecture and the church and was one of the founders of the now defunct Ecclesiological Society in this country. It was natural, then, that his oldest son should look with interest on architecture as a life-work.

He was accordingly apprenticed to John Priest, M.A., of Newburgh, a friend of Charles Congdon and a fellow member of the Ecclesiological Society, and on the death of Mr. Priest in 1859 Henry M. Congdon and John Littell, fellow students, opened an office for the practice of architecture in New York City. The partnership was a brief one, and was later followed by one with Cady, but the greater part of Mr. Congdon's 63 years of practice were spent without a partner. In 1907 his son, Herbert Wheaton Congdon, M.A., was admitted to partnership and father and son worked together until death separated them.

An early member of the American Institute of Architects in the days of small things, he was a Fellow and for a short time its secretary. Although always keenly interested in its work, of late years he kept very much to himself and was not known at conventions and meetings as in the earlier days.

Some of Mr. Congdon's more prominent works were: St. Andrew's Church, Harlem; The House of Mercy at Inwood; St. Mary's Free Hospital for Children (all in New York City); Trinity Church, Torrington; Christ Church, Ansonia, and Trinity Church in Portland, Connecticut—all three being groups with attached parish

houses—Christ Church, Portsmouth, N. H., Calvary Church, Summit, N. J., St. Paul's Church at Norwalk, Ohio, and St. Paul's Church, Philipsburg, Pa. He also did a great deal of minor architecture, church plate, monuments, etc., as well as the usual grist of dwellings, all of which, however simple, showed a sincerity and a picturesque charm of composition.

Mr. Congdon never retired, but was at his office until his death. He fell asleep, literally, while dressing to go to the office as usual, in his 88th year, on 28 February, 1922.

H. W. C.

Henry T. Pratt

Elected to the Institute in 1919.

Died at Kennebunk, Maine, 22 February, 1922.

"In the death of Henry Turner Pratt the Boston Society of Architects loses a valued member. Mr. Pratt died after a brief illness; his health had been poor for some time. A draughtsman of unusual ability and an architect of distinction, he had practiced his profession in Boston for the last ten years. He was the architect for a number of dignified and well-designed smaller commercial buildings, as well as of some very charming residential work in and around Boston. His early training began here about 1885, where for a number of years he was an assistant in some of the foremost offices. For awhile he worked in Southern California, gaining additional experience, and building up his health, which was not robust as a young man. He was a member of the office of the architects in charge of the Chicago World's Fair, 1892-1893, where he left his impress on a number of the more prominent buildings, and was one of a group of brilliant young designers and draughtsmen who were gathered together in Chicago at that time from all parts of the country. On his return to Boston, he was an important member of Mr. Edmund M. Wheelwright's office staff when the latter was city architect. Later on he spent a number of years in the office of the supervising architect of the Treasury Department at Washington, where he had charge of designing a number of important federal buildings, and his work there is well-known and still remembered.

"He had a great many friends in and out of his profession and was noted for the careful and painstaking study he gave to his designs. He was the author of many charming sketches made in this country and in various parts of Europe.

"He was one of the first members of the Boston Architectural Club and took a prominent part in its early activities, where his sunny personality and exuberant spirits made him universally popular. Of an extremely modest and retiring nature, Mr. Pratt hardly asserted himself sufficiently for the advancement that his talents merited. Perhaps that was one of the reasons we all loved him so well. He leaves a place that will not be easily filled, and his memory will be cherished by many.

"It is resolved that this notice be spread on the records of the Boston Society of Architects and copies sent to the Journal of the American Institute of Architects and to the family of the deceased."

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*

LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Government and Industry Co-operate in Standardization. At the request of Hon. Herbert C. Hoover, Secretary of Commerce, the American Engineering Standards Committee has designated Mr. A. A. Stevenson, the retiring chairman of the committee, as a special representative to work with the department in the co-operation between the Department's Division of Simplified Practice and the American Engineering Standards Committee.

The Division of Simplified Practice is a co-ordinating unit of the Department of Commerce assisting in those reductions of excessive variety and other simplifications which many industries are undertaking in order to decrease the cost of production and distribution of manufactured articles. The work of the division was organized in the latter part of 1921 and is now actively under way.

The American Engineering Standards Committee, which serves as a national clearing house for a broad field of engineering and industrial standardization, has offered Secretary Hoover the use of its machinery in carrying out the detailed work on technical projects initiated in the simplification program of the Department of Commerce. The committee hopes to be of great value to Mr. Hoover in this simplification program of the department. It was as a result of this hope that the designation of Mr. Stevenson as a representative came about.

The American Engineering Standards Committee has been actively at work somewhat over two years, during which time it has brought about a large measure of industry-wide co-operation. In this work more than a hundred national organizations are participating through representatives officially designated by them. The formulation of the standard for each specific project is in the hands of a working committee made up of representatives officially designated by the various bodies concerned. Eighteen standards have received formal approval as nationally recognized standards, and work on more than sixty other projects is in various stages of development. The American Engineering Standards Committee is maintained jointly by twenty-nine national organizations, including five departments of the Federal Government, nine national engineering societies, and fifteen national industrial associations.

There are now similar national industrial standardizing bodies in thirteen foreign countries, all but one of which were formed during or since the war. Of these the British and the German work is the most extensive, but active and important work is going forward in other countries.

Mr. Stevenson, who is a past president of the American Society for Testing Materials and has had a most extensive experience in standardization work, is vice-president in charge of manufacture of the Standard Steel Works Company, which is a subsidiary of the Baldwin Locomotive Works.

Committee Activities

Glass and Glazing. (2g)—In the March, 1922, issue of the JOURNAL reference was made to the work of the U. S. Bureau of Standards Conference Committee on Glass and

Glazing. The Sub-Committee on Classification and Nomenclature met on March 6th at the Bureau of Standards and tentatively established for sheet glass the following classifications or grades: "A" and "B." The familiar "AA" quality in single and double strength glass was abolished because it was found that only about 2 per cent of the sheet glass produced is strictly "AA" quality. It is "A Special," and is furnished—when it is furnished—by the glass jobber, through making a selection from his "A" stock. "C" quality was omitted because this quality is consumed in agricultural glazing (hot house sash and the like) in glazing barn sash and sash for cellar and other windows in the cheapest class of shacks. It is never specified in connection with better construction.

Tests are being made on a large number of sheets of glass to determine the maximum safe dimensions for single and double thick lights.

American Engineering Standards Committee.—Under the procedure of A.E.S.C. the A.I.A. is at present represented through the Committee on Structural Service on the following Sectional Committees: Building Exits Code, Safety Code for Elevators, Elevator Standardization, Gas Safety Code, Floor Loads for School Buildings, Safety Code for Floor Openings, Railings and Toe Boards and Electrical Symbols.

The A.I.A. is one of the joint sponsors for the Elevator Safety Code, for Elevator Standardization and for Electrical Symbols.

Other projects which will be shortly organized to go forward under the A.E.S.C. procedure, in which the Institute will be represented are: standard methods for testing wood, standard indications for structural materials.

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Water Heating in the Home. (29d2). (*Kansas State Agricultural College. Engineering Experiment Station. Bulletin No. 11, by R. G. Klaeffler. Pages 76. Size 6" x 9".*) The object of this investigation by the Engineering Experiment Station was to determine the following factors in connection with the use of coal, kerosene, gasoline, gas and electricity for heating water; the cost of operation, both for supplying hot water continuously and for furnishing hot water for a single definite purpose; the care necessary to operate the heater; the quantity of water which will be given a definite rise in temperature per hour; the practical efficiency of the combined heater and its attached tank.

THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

A great difference of opinion exists regarding the efficiencies of hot water heaters. Each manufacturer has his own particular method of determining this value. The aim in this work has been to obtain a typical method for comparing water heating systems using different fuels, and not to show that one particular make of heater is more efficient than another. All water heaters were tested in a similar manner wherever possible.

Standards Chosen for Comparison.—In order to compare the various kinds of water heaters it has been necessary to arbitrarily adopt certain standards. These standards are: a standard quantity of water and temperature for rating water heaters; a standard quantity of water and temperature rise for specific domestic uses; a standard daily hot-water consumption in homes.

The temperature of water in underground pipes varies from 40 degrees F. to 70 degrees F. An average value would probably be 60 degrees F. A desirable temperature for bathing purposes is around 105 degrees F., for dish washing 110 degrees to 150 degrees is used, the higher value being recommended by the best authorities. However, 120 degrees F. (a 60-degree F. raise in average temperature of the water) might well be chosen as an average value for dish washing since it is about the maximum temperature the hand will permit. The most commonly used unit of quantity of water is a gallon. The following units were, therefore, adopted as standard:

Standard Unit for Rating.—One gallon of water given a temperature rise of 60 degrees F. in one hour. This unit did not meet with the favor of the manufacturers of electric water heaters, owing to the special characteristics of electric heaters. They were thoroughly justified in their opposition; but for the work of this investigation their objections were waived.

Standard Unit for Baths.—10 gallons of water at 100 degrees F. The data collected indicated that an average of nine gallons of water at 97 degrees F. was required for bathing in the ordinary bath tub. Shower baths required the same temperature, but only one-half the quantity.

Standard Unit for Washing Dishes.— $1\frac{1}{2}$ gallons of water at 135 degrees F. A series of tests showed that an average of $1\frac{1}{4}$ gallons of water at 132 degrees F. was necessary for washing dishes. An electric dish-washing machine required 4 gallons of water at 207 degrees F.

Standard Unit for Washing Clothes.—18 gallons of water at 160 degrees F. The amount and temperature of water for washing clothes is a variable quantity, depending on the size of the family, and whether a mechanical washing machine or hand work is employed. Washing machines require from 9 to 12 gallons of water. For best results this water should be at 180 degrees F. or higher. However, the temperature generally used is about 160 degrees F. For washing clothes by hand the quantity of water in the tub is less and the temperature lower, but about 7 gallons of boiling water is frequently used in a boiler, which makes the total heat required about 50 per cent more than with the washing machine.

Average Daily Hot Water Requirement.—From the data collected it appeared that the average daily hot water requirement per individual is ten gallons of water raised 60 degrees F. in temperature. The maximum daily requirement is about double the average.

Coal Water Heaters.—The coal water heaters tested were of the laundry stove type. The heaters were placed near and directly connected to an uncovered 30-gallon range boiler. The grate areas were 8", 10" and 12" in diameter.

Kerosene Water Heaters.—The kerosene water heaters tested were equipped with wick burners similar to those on kerosene cooking stoves. Above these burners are placed copper coils. Both single- and two-burner types were included. Since the kerosene water heater does not heat the water so rapidly as the coal heater there is a tendency for the water to circulate and the whole tank to become more uniformly heated. A small fraction of a tank of hot water rather than a large quantity of luke-warm water is usually required and this can be secured in a minimum time by placing a valve above the kerosene heater and restricting circulation.

Gasoline Water Heaters.—These consist of a burner underneath a copper coil. The burner is similar to the burner used on gas stoves.

Gas Water Heaters.—Gas water heaters on the market today are of three general types: circulation, automatic and instantaneous.

The circulation water heater generally consists of a copper helical coil mounted in a chamber above a gas burner.

The automatic gas heater consists of a heater combined with a storage tank, the flow of gas being automatically controlled by a thermostat. When the water supply cools below a certain temperature the gas is automatically turned on. When the storage system is heated to the desired temperature the gas is automatically turned off.

The instantaneous gas heaters are heaters having a large capacity and are capable of heating water as fast as it flows from the pipes. No tests upon instantaneous gas heaters are included in this work.

Electric Water Heaters.—Electric water heaters may be classed, first, according to the manner or place in which they impart their energy to the hot water system; or, second, according to the manner in which the heat is produced. Under the first classification is the circulation type (similar to the fuel heaters already described), immersion or insert type, plaster type and the instantaneous type.

In the second general classification electric heaters may be divided into the resistance type, induction type and carbon electrode type. In the resistance type the heat is produced by the electric current flowing through a conductor. In the induction type by transformer action a large flux is set up in an iron core, producing energy losses in the iron which appear in the form of heat. In the carbon electrode type, the electric current flows out directly through the water from one carbon electrode to another and this heats the water.

All the fuels used in hot water service contain heat energy, which is made available through combustion. Coal, kerosene, gasoline and gas may be stored in large quantities, and little importance may be attached to the rate at which they are consumed, so long as the total amount used is not increased. However, the case of electric energy is very different. It cannot be stored economically for large power consumption. It is produced by generating machines just as it is used. Hence, the amount that can be used in a given time (the rate of consumption) is limited by the capacities of the generating machines and the distribution systems, including transformers. Thus, electric water heaters are designed to heat the water at a slow rate. It is possible to build electric water heaters that will heat water just as quickly as fuel burning heaters, but it is not economical or practical for the power station to furnish current at the rate which would be required. Hence, practically all electric water heaters are connected to a storage tank and the heater is in operation a large part of the time. Frequently thermostats are used for automatic control.

In all the tests upon electric water heaters, except those

STRUCTURAL SERVICE DEPARTMENT

of the instantaneous type, the storage tanks were insulated by a tank cover, consisting of an inner layer of asbestos paper, 1/2 inch filler of hair felt, and a canvas cover.

Radiation Losses.—Loss of heat through radiation may be a very important consideration in water heating systems. To determine such losses and to determine the comparative heat-insulation value of different materials a series of radiation tests were made upon a 30-gallon tank.

A covering of asbestos cement to a thickness of about 3/4" reduces the losses 26 per cent. The range boiler tank cover, consisting of an inner lining of asbestos paper, a filling of 1/2" hair felt and an outer cover of canvas reduced the losses 60.7 per cent. A covering, consisting of asbestos paper and 3/4" hair felt held to the top and sides of the tank by a wrapping of white muslin, reduced the losses 71 per cent, these losses may be further reduced by from 5 per cent to 10 per cent by the addition of asbestos cement on top of a tank already covered as above described. Obviously, there is also considerable loss in connection with uncovered hot water pipe. Where a return system is used it is entirely possible for the losses from the pipes to exceed those from the tank.

Conclusions.—While there is a separate problem for each home the questions in general in the selection of the water heater are: the initial cost of the heater; the cost of operation; the convenience in using the heater; the time required to heat the water, and the thermal efficiency of the heater. For purposes of comparison the following costs of fuel have been assumed:

Soft coal.....	\$8.00 per ton
Kerosene.....	.15 per gal.
Gasoline.....	.20 per gal.
Artificial gas.....	1.25 per thousand
Electricity.....	.02 per k.w.h.

In the case of electric energy the rates vary from 1/2 cent to 22 cents per k.w.h., more common rates are from 5 cents and 10 cents. Only where rates of 2 cents per k.w.h. and less prevail can water heating by electricity on a large scale be considered feasible

To heat sufficient hot water for washing dishes will require the following:

Fuel	Cost	Time Required
Soft coal.....	\$.02	10 min.
Kerosene .....	.0055	30 min.
Gasoline .....	.0144	40 min.
Gas (circulation type heater) ..	.015	20 min.
Electric (3,000 watt instantaneous, at 3 cents per k.w.h.).....	.01	10 min.

To heat sufficient hot water for a bath will require the following:

Fuel	Cost	Time Required
Soft coal.....	\$.02	20 min.
Kerosene (1 burner).....	.011	1 hour
Gasoline.....	.022	1 hour
Gas (circulation type).....	.0225	30 min.
Electric (1,500 watt circulation type, at 2 cents per k.w.h.).....	.045	1 hr. 30 min.

To heat sufficient water for two baths will require the following:

Fuel	Cost	Time Required
Soft coal.....	\$.02	30 min.
Kerosene (1 burner).....	.0193	1 hr. 45 min.
Gasoline .....	.032	1 hr. 45 min.
Gas (circulation type).....	.03	40 min.
Electric (1,500 watt circulation heater, at 2 cts. per k.w.h.) .....	.08	2 hrs. 45 min.

To heat sufficient water for a washing of clothes will require the following:

Fuel	Cost	Time Required
Soft coal.....	\$.032	1 hour
Kerosene (1 burner).....	.0383	3 1/2 hrs.
Gasoline .....	.076	3 1/2 hrs.
Gas (circulation type).....	.0675	1 1/2 hrs.
Electric (1,500 watt circulation heater, at 2 cts. per k.w.h.) .....	.27	9 hours

To supply hot water at the tap 24 hours a day for a family of three for general domestic purposes, bath and laundry, the following table will apply, if the range boilers are well insulated:

Fuel per month	Quantity per month	Cost per month
Soft coal (\$8.00 per ton).....	300 lbs.	\$1.20
Kerosene (1 burner, 15c a gal.)	15 3/4 gal.	2.36
Gasoline (20c per gal.).....	19 gal.	3.80
Gas (automatic type heater, \$1.25 per 1,000 cu. ft.).....	2,700 cu. ft.	3.38
Electric (circulation, immersion or direct contact type, 750 watt at 2c per k.w.h.).....		7.50

It should be noted on the foregoing tabulations that in some cases it takes about as much time to heat a small quantity of water for washing dishes as it does sufficient water for a bath. The explanation of this lies in the fact that for washing dishes the water must be at a higher temperature and that when it has reached this temperature there will be a sufficient quantity (at a lower average temperature) for a bath.

Summary.—It costs from 40 cents to \$1.50 a month per individual to furnish hot water (24-hour service) in the home. The amount will vary with the kind of fuel used, the local fuel rate, and the habits of the individuals.

In the cost of operation the coal heater is cheapest; the kerosene, second; gas (artificial), third; gasoline, fourth; and the electric water heater cost is the highest.

For speed in heating water the coal water heater comes first; gas, second; kerosene and gasoline, third, and the electric heater is the slowest.

In order of convenience the electric water heater is first; gas, second; kerosene and gasoline, third, and coal the least convenient.

In efficiency the electric water heater comes first; the gas, second; the kerosene, third; the gasoline, fourth, and the coal heater last.

Specification for Spar Varnish. (25b11)—(Prepared and recommended by the U. S. Interdepartmental Committee on Paint Specification Standardization. Circular of the Bureau of Standards No. 103. Second edition. Size 7" x 10". Pages 6.)—The varnish shall be suitable for use on both outside and inside surfaces of vessels, buildings, etc., and must be resistant to air, light and water. The manufacturer is given wide latitude in the selection of raw materials and processes of manufacture, so that he may produce a varnish of the highest quality. It must meet the following requirements:

Appearance. Clear and transparent.

Color. Not darker than a solution of 3 g. of potassium dichromate in 100 cc. of pure sulphuric acid, specific gravity 1.84.

Flash Point (Closed-cup). Not below 30 degrees C. (85 degrees F.). Non-volatile matter. Not less than 40 per cent by weight.

Set to Touch. In not more than 5 hours.

THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Dry Hard and Tough. In not more than 24 hours.
Working Properties. Varnish must have good brushing, flowing, covering and leveling properties.

Safety of Working. Varnish must pass the draft test.

Water Resistance. Dried film must withstand cold water for 18 hours and boiling water for 15 minutes without whitening or dulling.

Toughness. Varnish must pass a 50 per cent Kauri reduction test at 24 degrees C. (75 degrees F.).

The circular also contains a discussion of sampling, laboratory examination and basis of purchase.

Specifications for Flat Interior Lithopone, Paint, White and Light Tints. (25b22)—(Prepared and recommended by the U. S. Interdepartmental Committee on Paint Specifications Standardization. Circular of the Bureau of Standards No. 111.)

General.—This specification covers ready-mixed lithopone paints, frequently known as flat, washable wall paint, in white and a variety of light tints. Paints under this specification are not intended for outside exposure; they shall dry to dead flat opaque coats that will adhere well to wood, metal and plaster, stand washing with soap and water, and show no material change in color on exposure to light.

The paint shall be purchased by volume (231 cubic inches to the gallon).

(a) **Pigment.**—The pigment shall consist of:

	Maximum Per cent	Minimum Per cent
Lithopone .....	..	80
Zinc oxide.....	10	..
Tinting and Extending pigments.....	10	..
Material soluble in water.....	0.8	..

Note.—The lithopone used must contain not less than 26 per cent of zinc sulphide and must not darken on exposure.

(b) **Liquid.**—The liquid portion of the paint shall consist of treated drying oils or varnish, or a mixture thereof, and turpentine or volatile mineral spirits, or a mixture thereof, in such proportions as to insure not less than 25 per cent of non-volatile vehicle. The non-volatile vehicle shall dry to a tough and elastic film.

(c) **Paint.**—The paint shall be well ground, shall not settle badly, cake or thicken in the container, shall be readily broken up with a paddle to a smooth, uniform paint of brushing consistency, and shall dry within 18 hours to a dead flat finish without streaking, running or sagging and free from laps and brush marks. The color and hiding power when specified shall be equal to those of a sample mutually agreed upon by buyer and seller. After drying for not less than five days, marks made on the painted surface with a soft lead pencil (No. 2 Mogul) shall be easily removed by washing with soap and warm water without appreciably marring the paint surface. The weight per gallon shall be not less than 14½ pounds.

The paint shall consist of:

	Maximum Per cent	Minimum Per cent
Pigment	72	68
Liquid (containing at least 25 per cent non-volatile matters)	32	28
Water	1	..
Coarse particles and "skins" (total residue retained on No. 200 screen based on pigment)	0.5	..

The circular also contains specifications for sampling, laboratory examination, analysis of pigment and reagents.

Lighting for Indoor Recreations. (31a17)—(*Bulletin L. D. 129, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 15.*)—In this bulletin the following subjects are discussed: Pool and Billiard Parlors, Bowling Alleys, Indoor Tennis Courts, Squash Courts, Skating Rinks.

Bibliography: "Electricity in Ice Skating Rinks," J. C. Carlsen, *Electrical Review*, May 12, 1912. "Lighting a Covered Squash Racket Court," *Illuminating Engineer* (London), September, 1912. "Illumination of Ice Skating Rink, Vancouver, N. B.," *Electrical World*, April 4, 1914. "Standardizing the Lighting of Bowling Alleys," J. L. Stair, *Lighting Journal*, July, 1914. "Lighting of Squash Racket Courts," *Illuminating Engineer* (London), August, 1914. "Billiard and Pool Table Lighting," H. C. Meredith, *Lighting Journal*, February, 1916.

Lighting for Outdoor Sports. (31a11)—(*Bulletin L. D. 126, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 23.*)—In this bulletin the following subjects are discussed: Tennis Court Lighting, Clock and Court Golf Lighting, Lighting of Motorcycle and Bicycle Racing, Lighting of Outdoor Arenas, Lighting of Bathing Beaches, Lighting of Trap Shooting Ranges, Croquet and Roque Court Lighting.

Bibliography: "Tennis by Night," *Electrical Merchandising*, August, 1912. "An Electrically Lighted Tennis Court—Newton Center," *Electrical World*, August 23, 1913. "Lighting of a Range for Night Trap Shooting," Clarence L. Law, *Lighting Journal*, May, 1914. "Lighting Outdoor Tennis Courts with High Efficiency Lamps," A. L. Powell and A. B. Oday, *Electrical World*, June 13, 1914. "Reduced Wattage with Overhead Lighting of a Tennis Court," S. L. E. Rose and C. S. Van Dyke, *Electrical World*, July 18, 1914. "Artificial Lighting of Tennis Courts," H. T. Spaulding, *Lighting Journal*, May, 1915. "Lighting the Sheephead Bay Race Track," L. C. Porter, *Lighting Journal*, June, 1916. "Adding Hours to Summer Days for Outdoor Recreation," *Electrical World*, June 17, 1916. "Increasing the Usefulness of Athletic Grounds," L. C. Porter, *Lighting Journal*, August 19, 1916. "The Lighting of Parks and Playgrounds," A. L. Powell and H. A. Tinson, *American City*, July, 1917. "Drill Field Illumination," A. B. Oday, *Electrical Merchandising*, September, 1917. "The Sport Alluring (Trap Shooting)," R. E. Harrington, *Dupont Magazine*, May, 1919.

The Lighting of Printing Plants. (31a13)—(*Bulletin L. D. 125, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 20.*)—In this Bulletin the following subjects are discussed: Present Practice, General Requirements, Type Making and Composing, Photo-engraving, Press Room, Bindery.

Bibliography: "The Illumination of Printing Works by Electricity," by J. Eck, *Illuminating Engineer* (London), April, 1912. "Revising the Lighting of a Composing Room," *Electrical World*, February 28, 1914. "The Lighting of Printing and Bookbinding Plants," by F. H. Berhard, *Electrical Review*, August 24, 1918. "Planning the Printing and Publishing Building," by George Nordham, *The American Printer*, March 20, 1920.

The Lighting of Offices and Drafting Rooms. (31a8)—(*Bulletin 35, Engineering Department, National Lamp Works. Size 6" x 9". Pages 26.*)—In this bulletin, the subject of office lighting is discussed under five principal subdivisions: 1. Quantity of light; 2. Quality of light, choice of units; 3. Utilization of light; 4. Location and number of lighting units; 5. Illumination calculations.

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INDUSTRIAL SECTION

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April, 1922

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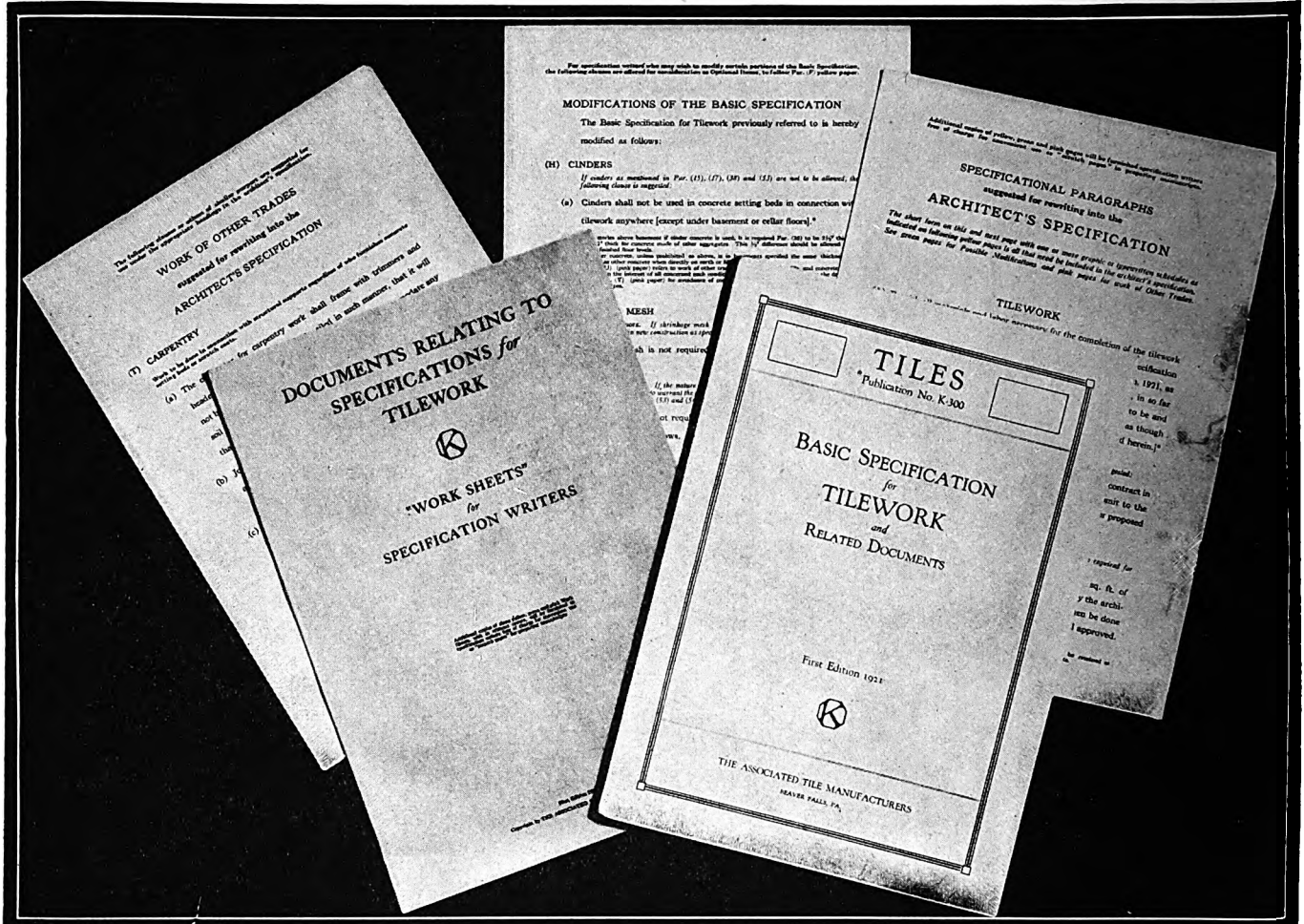
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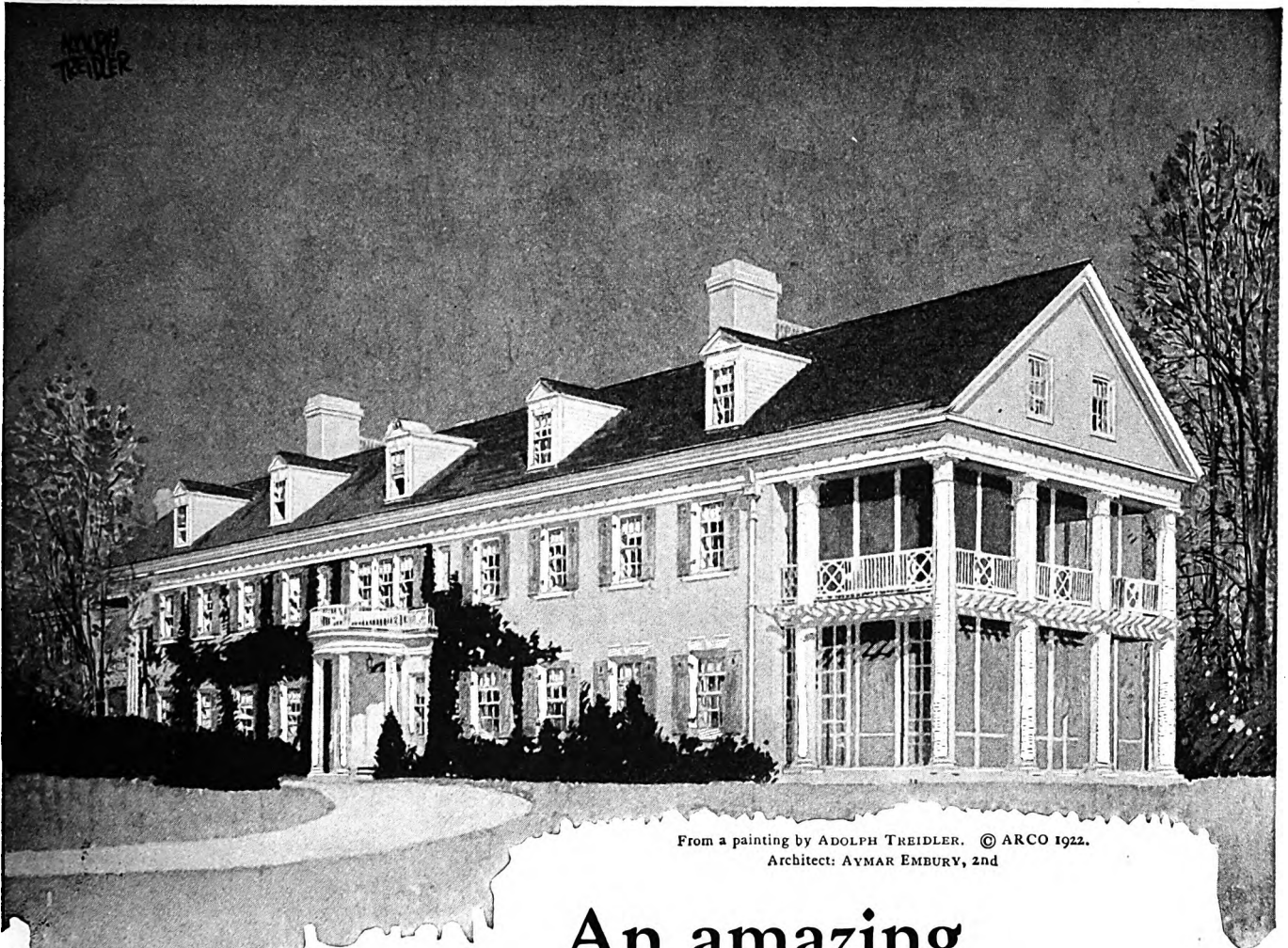
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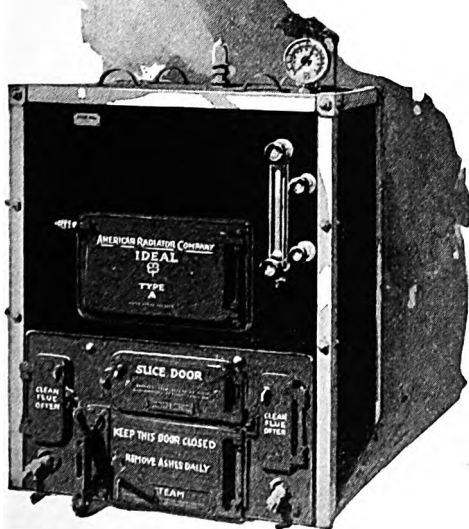
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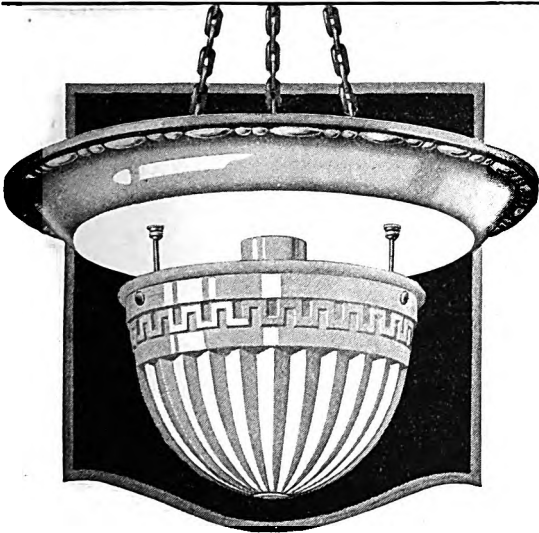
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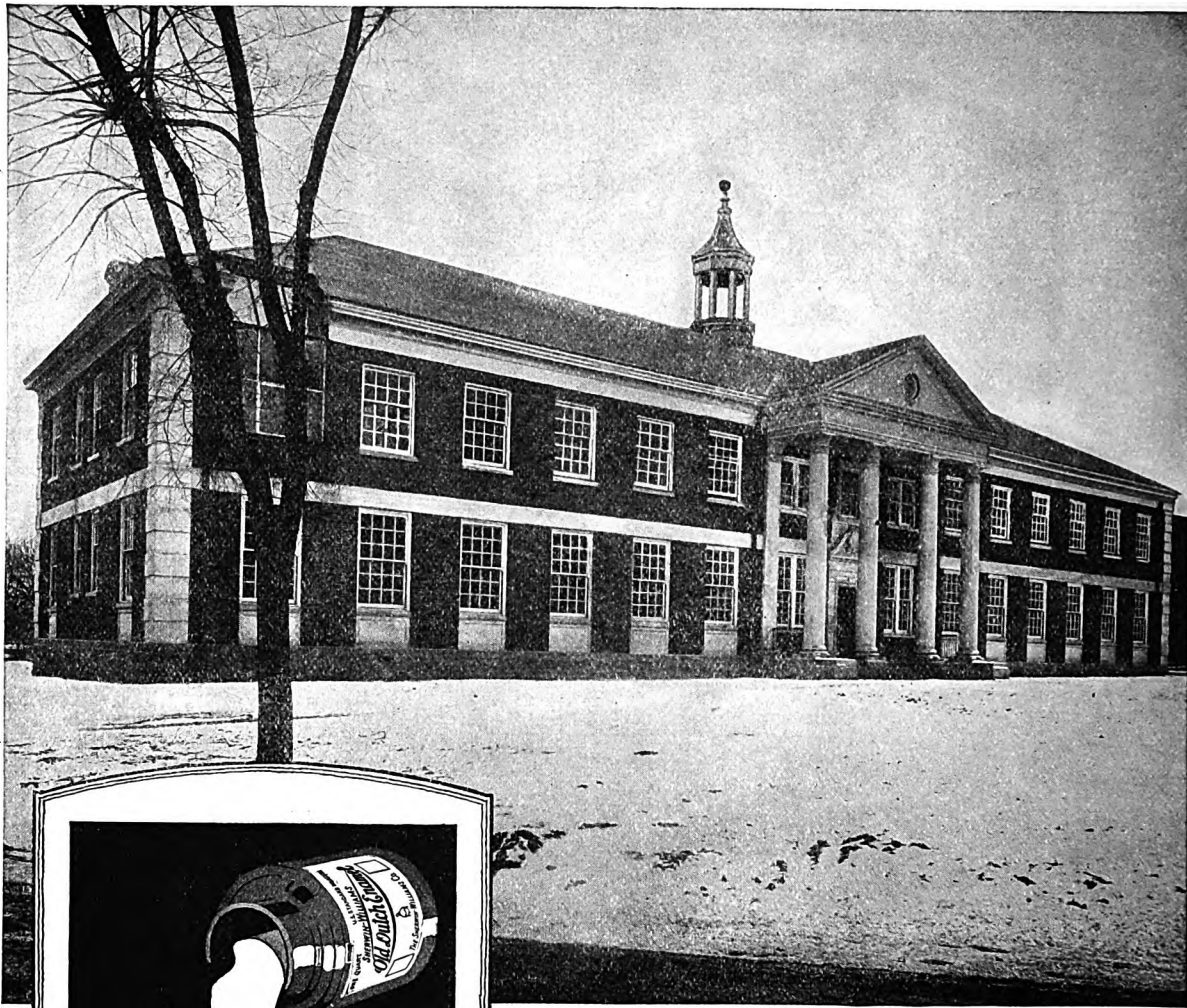
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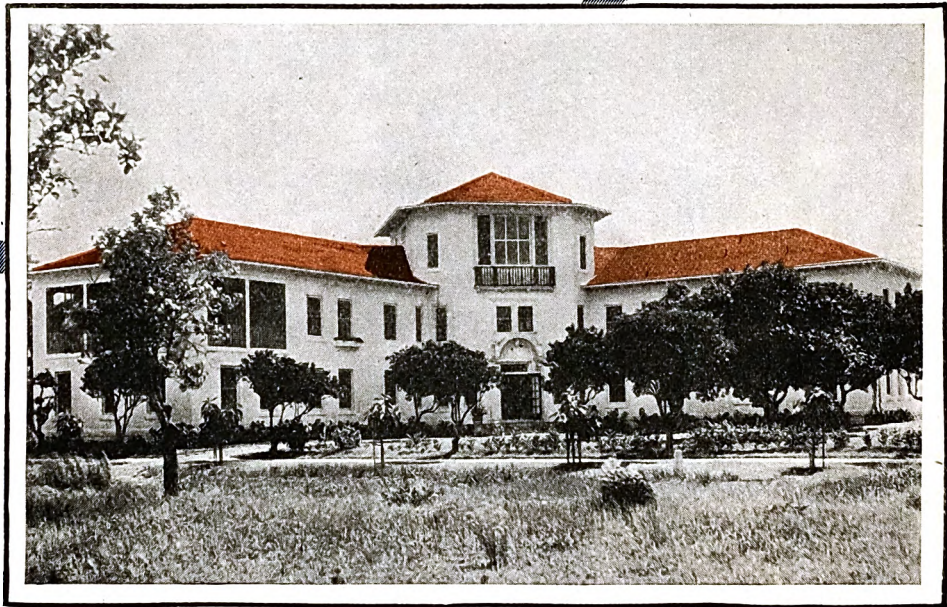
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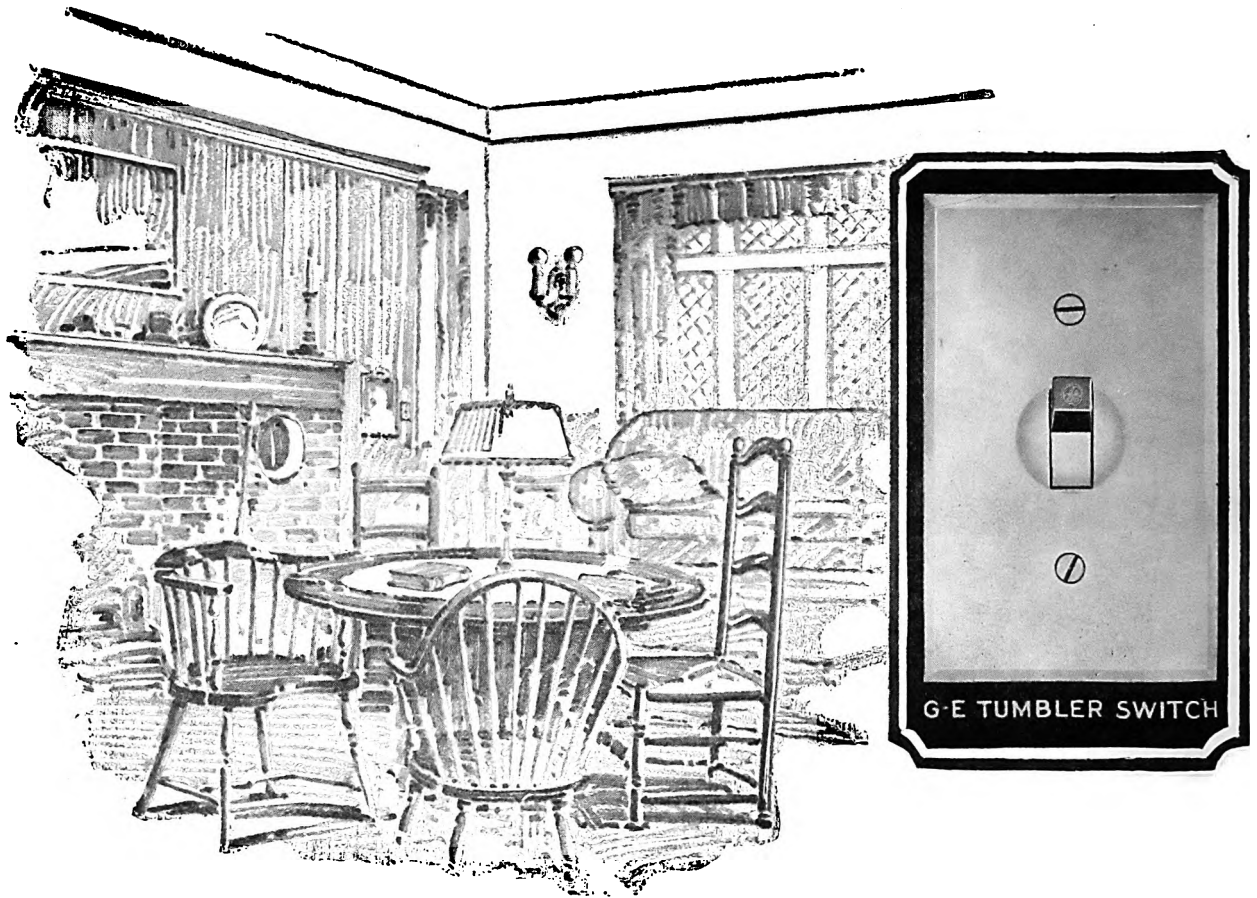
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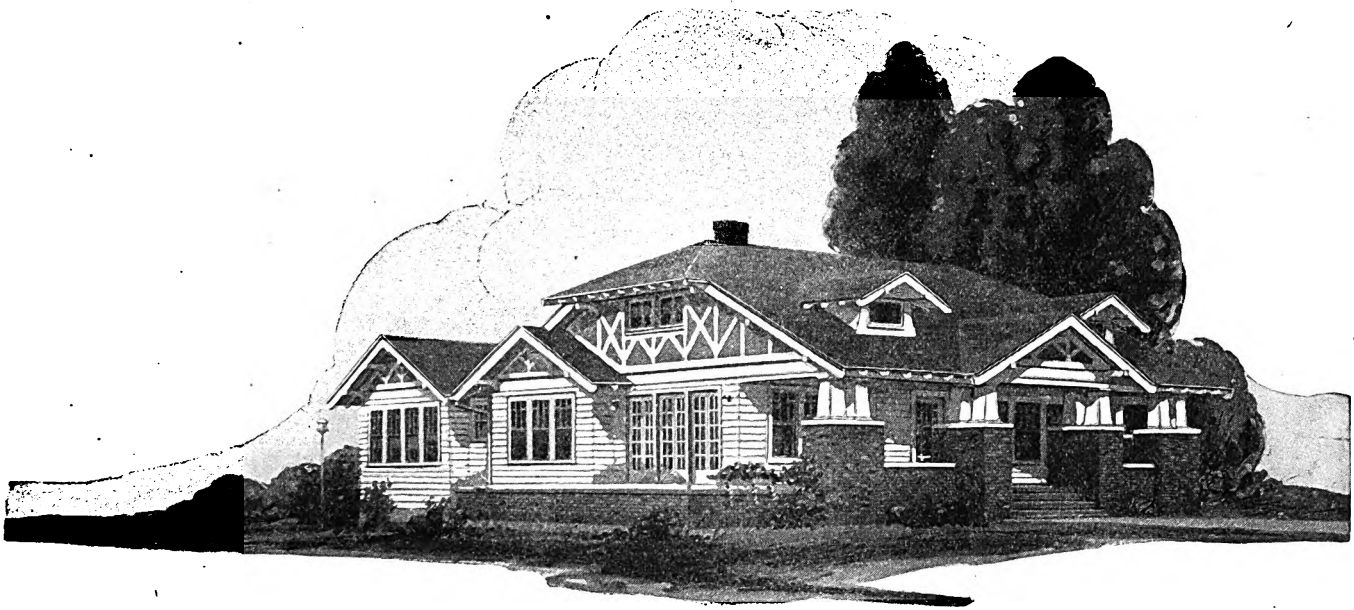
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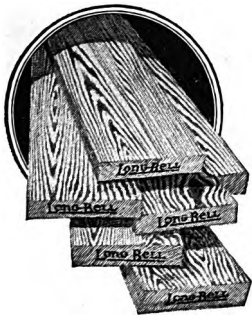
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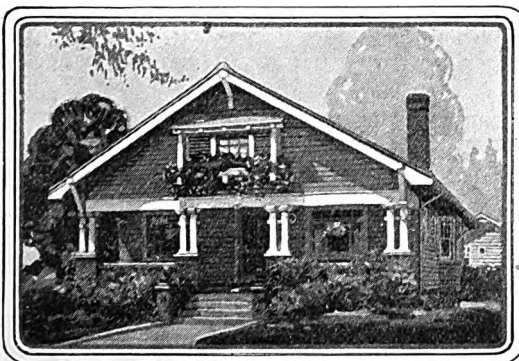
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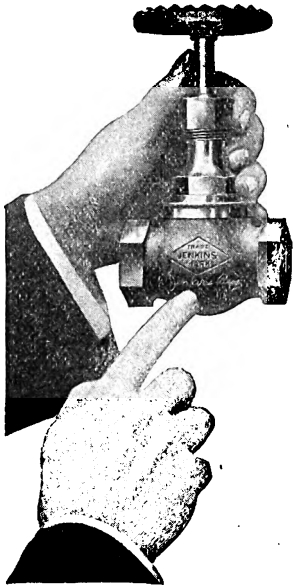
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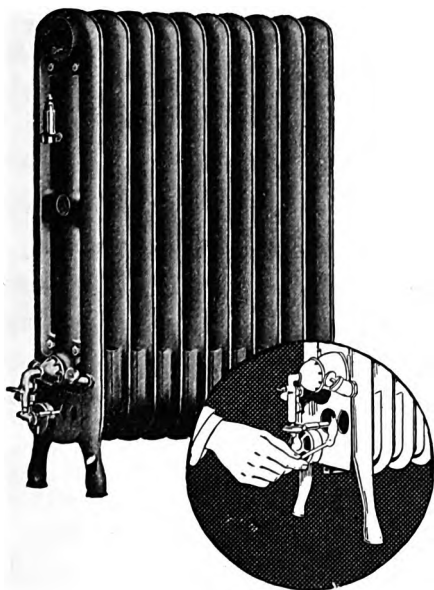
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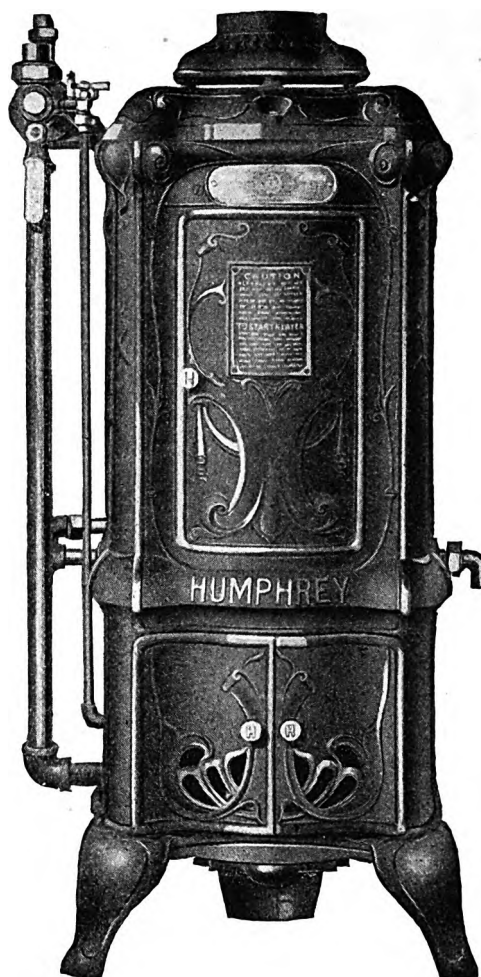
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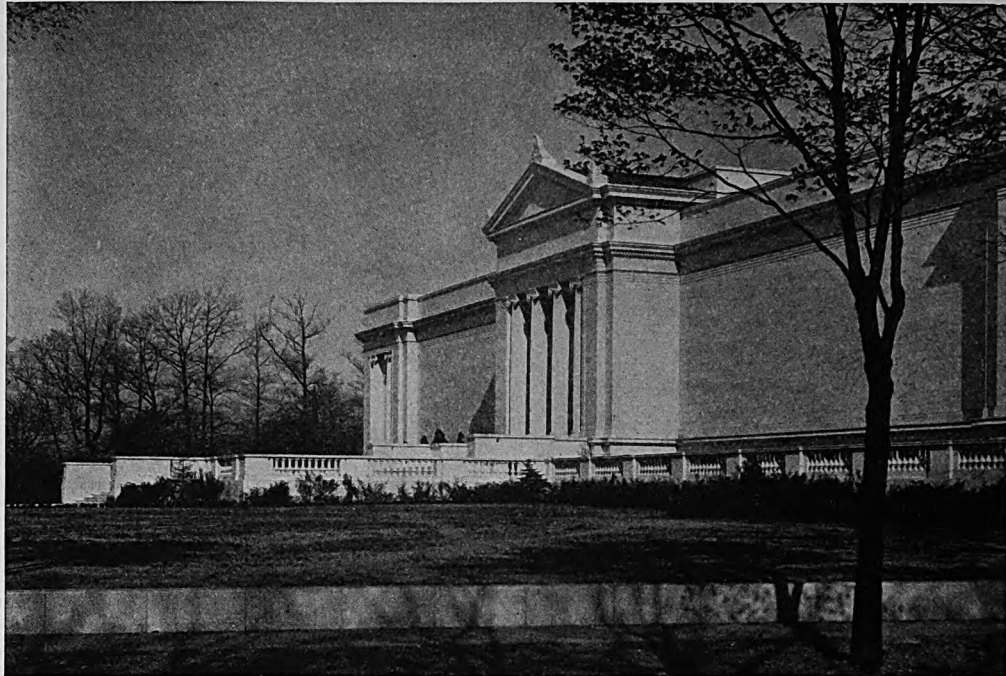
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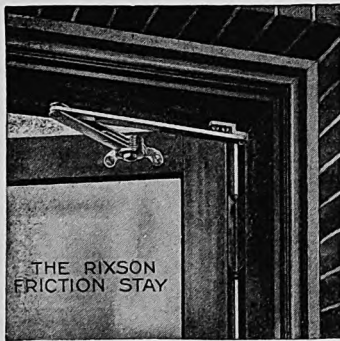
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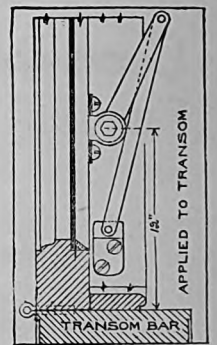
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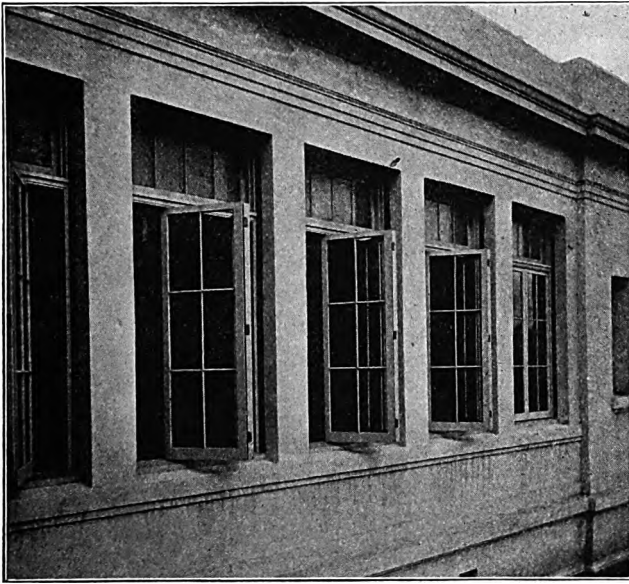
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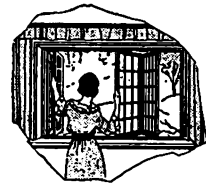
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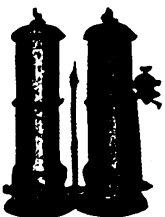


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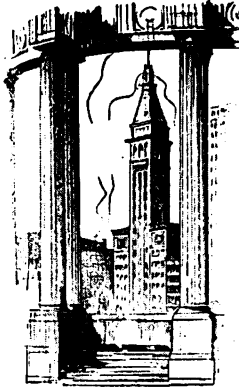
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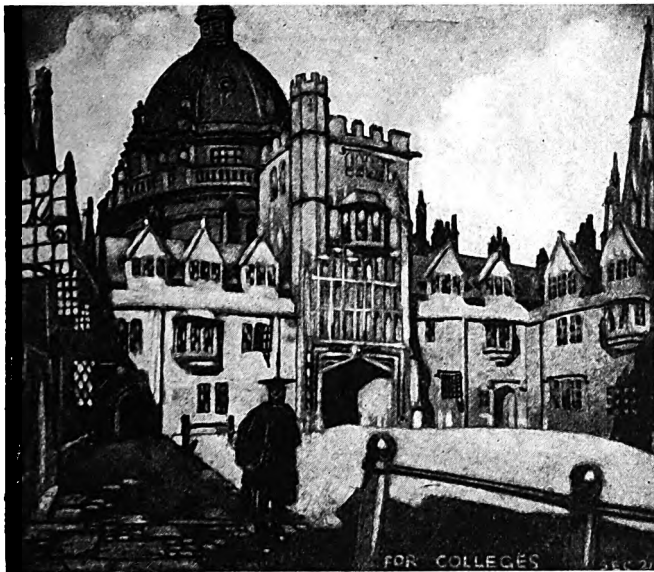


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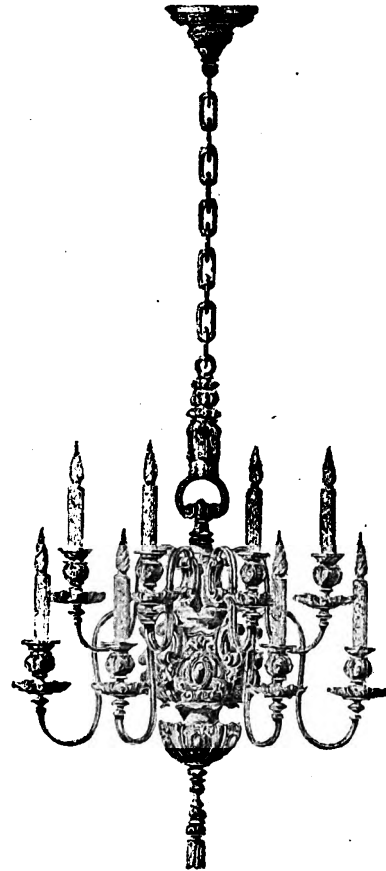


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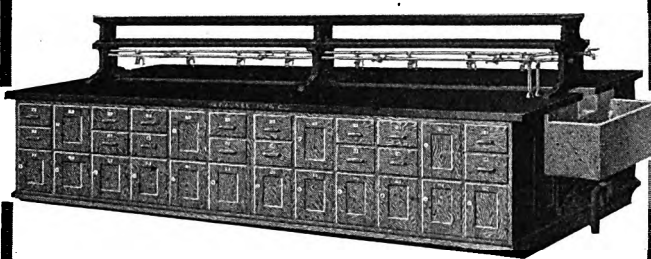


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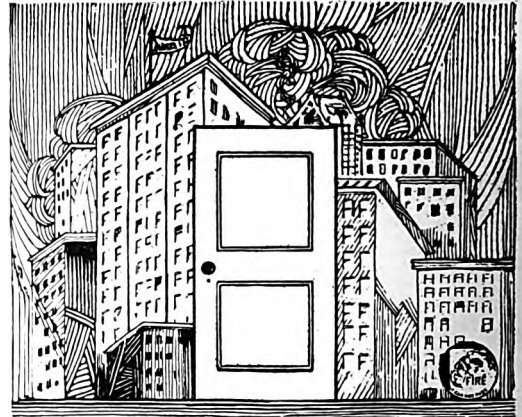
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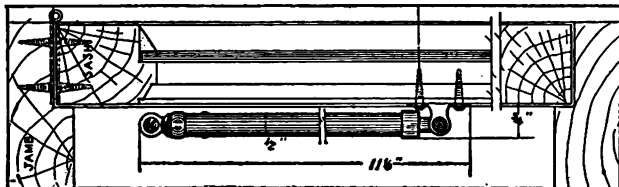
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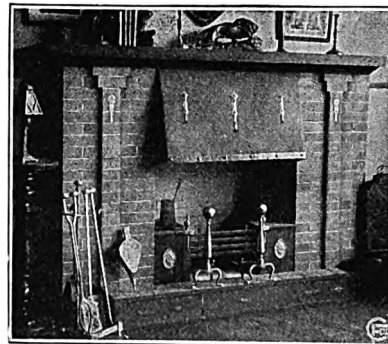


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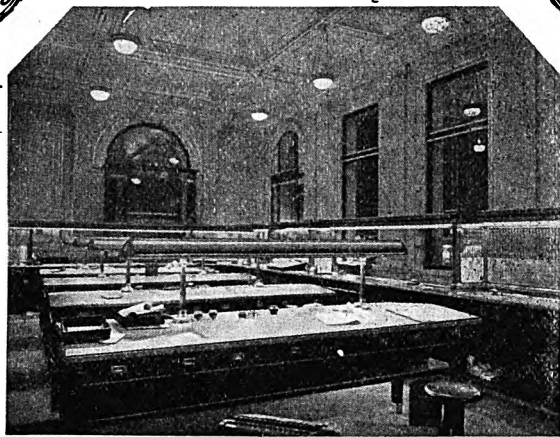
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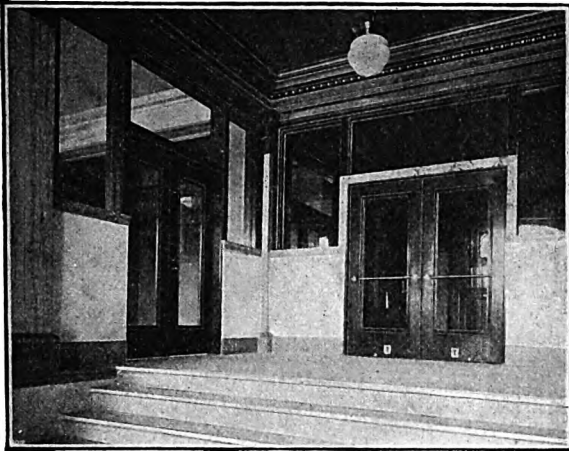
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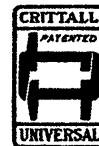
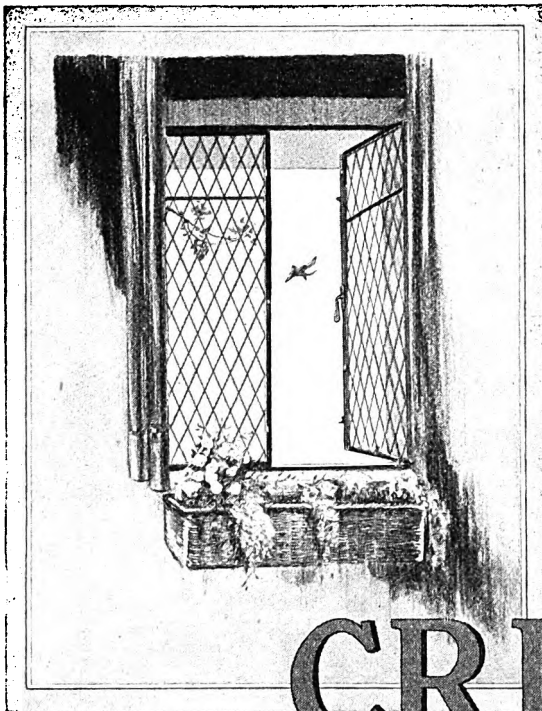
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H. B. CRESWELL

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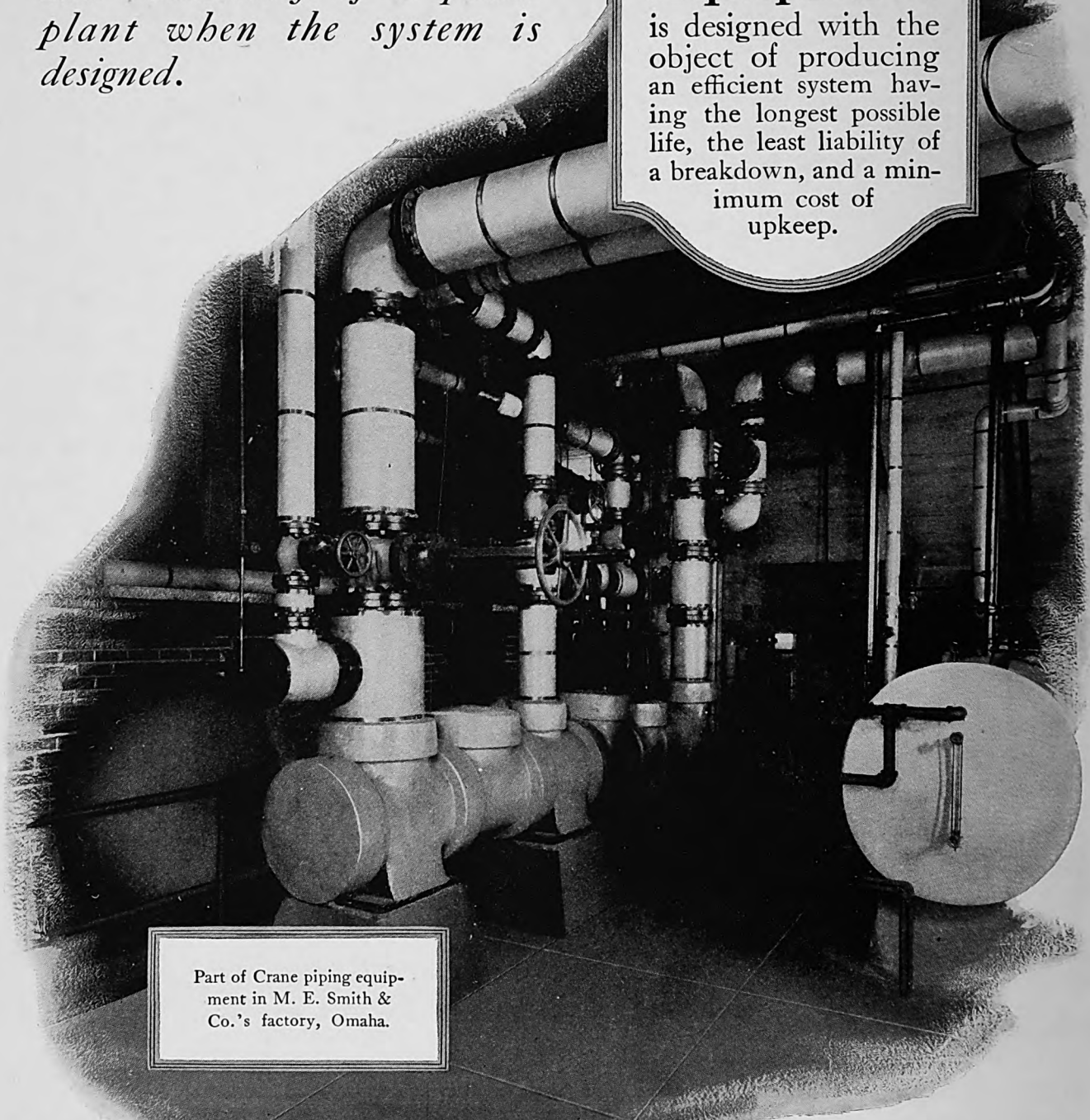
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JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

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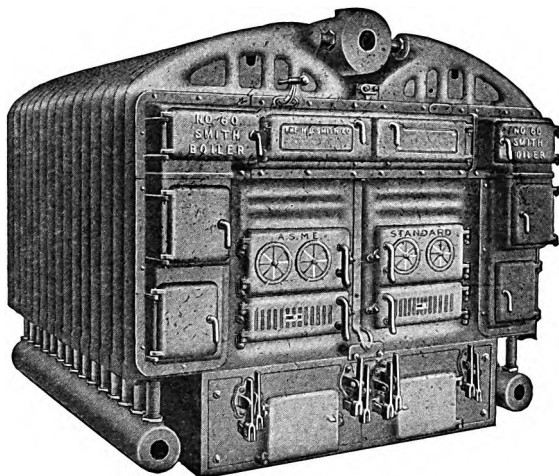
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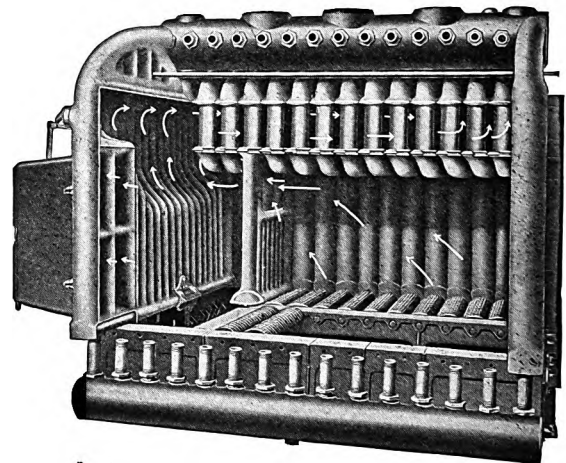
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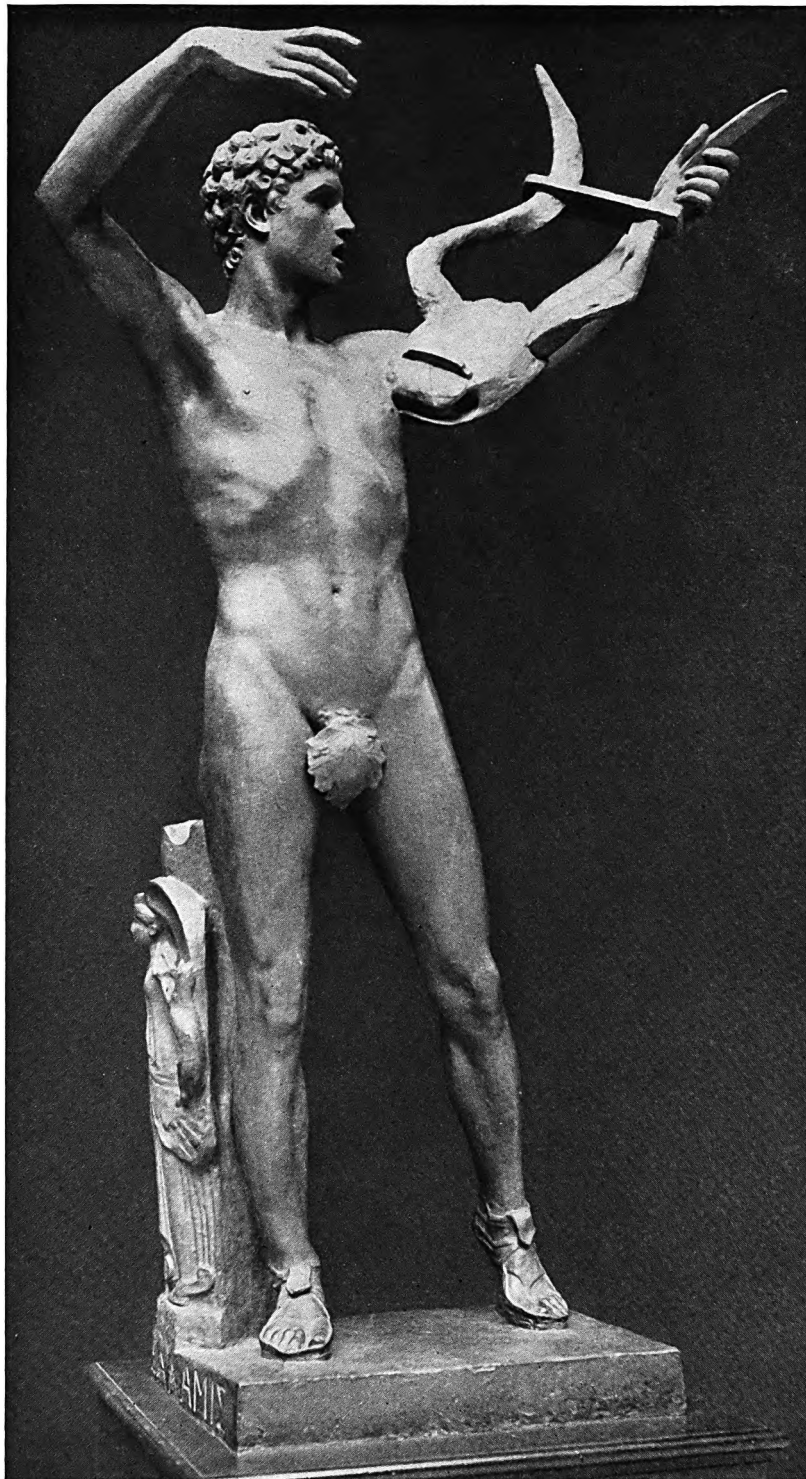
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THE YOUNG SOPHOCLES HEADING THE CHORUS OF VICTORY AFTER THE
BATTLE OF SALAMIS

John Donoghue—American—1853-1903
In the Art Institute, Chicago. See page 149

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Shadows and Straws

A VERY SMALL TEMPEST in a very large teapot passed over New York City during late March and early April. It occasioned the usual excitement and proved to be quite true to our rare American form. One could almost hear the taut snapping of lips as the ladies—some of them—protested at a symbolic presentation in which Civic Virtue, was presented as a godlike young man in the act of sprinting away from some female temptresses. At the height of the storm there was a fusillade of resolutions,—is there anything sillier, at such a moment, than a resolution?—in one of which we were sharply reminded that a work of art can only be judged by those who are qualified for the purpose. This of course settled the matter. New York subsided. There is nothing in all language which will cause an American population so quickly to sneak away shamefacedly as to tell it that it knows nothing about art. It is a form of reprimand that never draws a whimper. But it is a poor way to go about arousing a public interest in sculpture and architecture, and it might have the effect of closing the public purse-strings to which so many artists turn a pair of yearning eyes. Incidentally, however, the statuary group, we believe, is shortly to be erected. Heaven knows that Civic Virtue was never more sadly needed than just now, in New York City,—or in any other city for that matter,—and if Macmonnies' work adds no more than a jot or even a tittle to the present small store, his work will not have been in vain. Our guess is that there will be slight change, which carries no reflections on the sculpture. We have not seen it. We enjoyed the storm and laughed heartily at the fine feminine frenzy of the resolutions.

A CONTRIBUTOR raises the question "Who is an Architect?" It seems safe to say that the legal definition is merely in the making. His observations as to the statutory differences of definition now existing in various of our state laws on registration only sound a warning as to the difficulties that we shall encounter ere we come to a national agreement as to what is an architect. There are many complaints over the administration of the reciprocal features of our laws, and

they spring, of course, from the differences to which we refer. If, for example, an architect passes a certain examination in order to be registered in his own state, does that entitle him to be called an architect in another state where the entrance examination is very much harder?

Our contributor speaks of the same difficulty in England, but here the trouble is occurring before registration. Parliament is unwilling to grant any law, it appears, until the architects come before it as a united body. "Unification" therefore seems necessary as a first measure, but this calls not only for a merger of the Society of Architects with the R. I. B. A., but very likely requires that all architects now practising in the British Isles be admitted, without examination, to the R. I. B. A. Over this question there are strong differences of opinion, for many members of the R. I. B. A. cannot swallow the wholesale admission plan. The price seems far in excess of the ultimate value to be obtained by registration. But it is likewise true that there is probably no other way. Members of the A. I. A., for example, in States where registration laws are now in force had to suffer the humiliation of being registered in common with contractor-architects, builder-architects, and in one case, we remember, with an undertaker-architect. Of course this is not so bad as though they had been obliged to take these gentry into the Institute without examination, and we may well sympathize with the situation of our English confrères.

But the quest for a legal definition of the word architect leads over these unpleasant roads. So far as we can now tell, the ultimate result will be to raise the standards of practice and gradually to eliminate those who have sponged and faked their way for too long. Just as genius ought to be encouraged wherever found, so fakery ought to be discouraged. At present we seek the latter aim by law. We know only too well that the first will have to be sought for by far different methods.

In this connection Mr. Pond has also something to say as he comments upon the English registration problem.

Some Thoughts on Modern Architecture

By STEPHAN IVOR RICHEBOURG

MANY months have passed since you asked me to write my impressions of the architectural exhibit at last year's Salon. Your distinguished architects were then upon the point of sending over some of the pictorial evidence of their work. Illness, at the close of the exhibit, forbade the completion of the article I had begun. And then—the Europe in which we dwell nowadays does not inspire one to write. Rather does it bid us think and think and think. And our thinking is like the slow falling of water, drop by drop, always striking our brain at the same point—until we can bear it no longer—and yet there is no escape.

Thus, if I now seize this moment for a futile sally forth from the economic dungeon which our politicians have built for us, let me also be honest and say that I cannot longer resist your pleadings. You have such faith in me that I am touched. But now that these words of mine are before you, are you sure that your faith was not misplaced? Yet if you lay my pages aside, I shall not mind, even though I may have regrets over my failure to say what I really wish to say, for it will be because I have failed that you will lay them aside. The world, however, has a curious way of serving us. Opportunity is seldom so obliging as to knock at our door after all. Rather does she stand shy and silent, as we blindly pass her by. It was so in this instance, for while I looked forward to the exhibit at the Salon, and while I knew I should welcome the event for more reasons than one, you must admit that you had not only to knock at my door, but actually to beat upon it with a stick. However, if any of these words of mine can serve the art we both love, we shall have done well,—you to have knocked and I to have opened.

And now for what I have to say.

I have, as you well know, something more than a passing acquaintance with modern architects and modern architecture. I know your country and other countries; I know your people and other peoples. Thus it is that the work of your architects shown at the Salon last year (and more recently under the auspices of the R. I. B. A. in London), seems to offer an occasion for certain comment. Not by any means in criticism of that committee of your Institute. No, no! They labored well. Their work is surely deserving of the highest commendation. Indeed, one cannot too greatly praise this effort to broaden and deepen the channels of inter-professionalism, for there flows a stream of power. No effort should we spare in quickening its flow. It is a force for reawakening the universality of art, in all its branches. We need that

force! We need it now more than ever. Thus, to the plaudits already bestowed upon the committee I wish indeed to add my own humble praise.

It is toward the criticisms of the exhibition that I would fain turn my attention. Those which appeared in the French press, for example, doubtless seemed to you to indicate a certain naiveté. You thought them due to unacquaintance with modern America. It is true that the absence of plans seemed curiously to puzzle our critics. This is not difficult to understand, you must admit, since the French mind seeks a logical basis for that which it aims to understand or to criticise. No doubt your exhibition committee was confronted with a most difficult problem. In the space available, it had to choose between an imposing showing of design development, or a smaller exposition of the relation of design to *parti*. That is why, however, one seemed to read and hear in Paris, comment that sprang from a wish to know more. What, for instance, were the relations of elevation to plan? What were these vast structures about? What sort of life did they express? And were the United States growing to such a scale and were people generally in need of such gigantic buildings? And this, most of all: "Did the Americans love their buildings, or were they just proud of them? There is a difference, you know." I quote these phrases literally as I overheard them. From a critic? Bah! From a gray haired man, of course, who obviously was honest enough to confess his bewilderment and with childlike candor go at once to the source of that which develops any enduring national art—affection.

Now these observations, be it remembered, are only an attempt to interpret. My own understanding of modern architecture supplied the information not revealed in the exhibit, or at least I so flattered myself. I think I know what American architecture is narrating. But I, alas, was only one of many.

The exhibit was quite differently received across the Channel. Comment in the English press,—or at least such as I saw,—was more pedantic. Here one seemed to sense a certain recognition of American problems, even though the high building is still forbidden in English cities,—*Dieu merci!* (Very likely the discussion over permitting high buildings in London, about which I read so much nowadays, may well have been stimulated by the exhibit of your architects.) Possibly, also, the English architects and Englishmen generally have a more intimate knowledge of things American than have we. This might easily be so, since Englishmen are as a rule greater travelers. And their newspaper press is copious compared with ours.

SOME THOUGHTS ON MODERN ARCHITECTURE

What struck me particularly, however, in the English criticisms, was a very marked note of a certain professional jealousy. Is that the right phrase? What I mean is that the English architects seemed generally ready to admit that you had outdistanced them in what we are pleased to call architectural progress, but that secretly, they longed for a chance to have a try at some of the big American problems. Just as your own architects in the beginning of the great lower New York development, and when the Chicago Loop was surging skyward, lived only for the chance of getting a high building commission. Why? Because of their interest in architecture the art? I doubt it. Because of their interest in architecture the business,—because of the prestige that a high building would lend to their professional position,—and because too many modern architects regard their commissions as opportunities for developing their own personalities,—with all of which I have no quarrel. But we must differentiate between art and business.

However, here again, I am merely attempting an interpretation. But I do really regret that the American exhibit at Paris did not attempt to build up a logical presentation of the whyness and the whereforeness of the work of the distinguished practitioners in the United States, for I have the feeling that then there might have been drawn forth some comment that would have had a greater value because of its more solid and reasoned basis; very possibly there might have been a solid residuum of social import or social awareness.

For myself, may I say that I am very likely a little old-fashioned in that I am continually seeking, in architecture, for that stream which well diggers know so well, and which they call living water. That is, water that will continue to flow steadily and in abundance, in distinction to that which is no more than the sudden spurt of a pocket in the soil. Without that quality architecture as an art is as dead as a door-nail, to use one of your homely phrases, and those who find that living quality in American architecture of the last twenty years would surely be the last to pretend that any country has a superabundance of it. Indeed, what country, unless it be the United States, or perhaps the Scandinavian lands, has more than a flickering flame of architectural light? From the banalities of the speculative suburb to the dreary monotony of the increasingly expanding commercial sections of all cities in the new world, our modern communities are submerged, architecturally speaking, in stuff borrowed, wholesale and retail, by men to whom architectural practice is based upon a row of book-shelves. In your country, this sort of practitioner adds a collection of current magazines,—those dreadful allurements by which a great art has been turned into a weapon of business where once it was the noble tool of creative genius.

Shall we never learn that architecture cannot be made easy?

Do we not see the futility of trying to make it easy as we look about and see, everywhere, the sad consequences of the struggle for profits? We see a world which, to the mind still untainted with the gibberish of statesmen, already shows signs of its inability to pay in money profits, for that service it so sorely needs. We are aghast at the manner in which our politicians are able to threaten, cajole, or persuade people to cling to those economic fallacies which instantly swallow up all the financial economies that should accrue from the progress of science and invention in the field of building. But, because of these things, all the more must we applaud the work of those men who have successfully evaded the cobwebs of finance and who have given us buildings which speak in the language of emotion. Not the dull language of pedantry, nor the stilted speech of criticism, but in that voice which bids us pause and behold and lend our spirit to the reception of a message such as comes only from the spring of creative genius. To achieve such eloquence in this our modern world is indeed a rare event. To conceive and bring forth a building that has the quality of living water,—fresh, pure, abundant,—is indeed a task that taxes the powers of the greatest of our architectural geniuses. (I do not dwell upon the genius that our system crushes and consigns to waste. It is too sad.)

And this not because of the dearth of genius, even though we must admit that we have no prodigal endowment of that quality among us. But do we also admit that we are not likely to acquire it plentifully under the ministrations of a system that daily sprinkles the population with the universal Governmental disinfectant called education? Are we ready to laugh at ourselves as in little groups of two or three, we feverishly pursue the public under the belief that we are engaged in educating it, whereas we are, in reality, only trying to "pull its leg"? Do we admit that, as a whole, no modern people cares enough about architecture to inquire why it is no longer produced save in trifling quantity? There lies the crux of what I might call being old-fashioned. For, if people do not turn to architecture to satisfy their needs, why should they ever appreciate or think about it? Are we not struck with the fact that peoples all over the world do not turn instinctively to architects, for example, in these periodical visitations called the housing crisis? Yet this phenomenon, appalling in its moment, if we stop to think, passes quite unobserved, it would seem, although it indicates only too clearly that the technicians and the artists and the craftsmen have lost touch. Before we turn to them, we turn to the business man, or the politician, or the statesman, or the banker—we turn anywhere except to those who have

the knowledge and the skill to do what is necessary to be done. I think we are ready to admit this, now, although we might not have been ready seven years ago.

If I sit in a certain window in Fiesole and my eyes drink in the long loved beauties of a Tuscan landscape—the groves of dark cypress, the shine of sunlight on a hill-top, while at dusk comes the voice of a nightingale among the olives—or if I sit at eventide in the close of a well loved English cathedral, or stray in spring-time by the leafed windings of unforgettable Devon lanes, or wake to the chimes of a belfry in Flanders, or pause by one of those simple wooden cottages that dot Cape Cod, I cannot but feel that here are the sublime evidences of that fast disappearing instinct which taught men to turn to workers and to artists. I feel the pulse of architecture beating all about me, in these places, and in others, too—in streets of old London, old Paris, old Brussels, old Boston, old Baltimore, old New Orleans, and even in old New York—beating steadily, and rhythmically. And what is my answer? Admiration? No—my answer is affection. And may I remind you again that there is a difference?

Thus, when it is said that the United States is the only land that shows any architectural spark of life—although I, in common with your* Mr. Nobbs, would surely say a word for certain things in Germany and in the farther north of Europe—let it be insistently asked whether that peculiar quality for solving problems, so generously attributed to American architects, is really and definitely a demonstrable thing. No aspersions are intended, if you please. I neither wish to wound nor to appear as a pessimist. I merely wish to inquire, which is the great privilege, is it not? I wish to inquire whether American architects seeking heroically to solve the problems that come to them as individual commissions, are not aiding to create problems which they cannot solve. I believe that high buildings have not proved to be profitable, even to their owners. The social disasters they have wrought are only too well known. I am told that as investments they are now scrutinized with sedulous care. I am also told that architecture as an advertisement no longer makes the appeal it did, since business is intently examining that troublesome thing which you call “overhead,” and on a recent visit to New York I noticed that one of the modern bank buildings, although the home of an institution of international repute, was garbed in architectural plainness to the point of ugliness.

Surely things are changing and the end is not yet. I pretend to no powers occult and to no gift of prophecy. I note with misgivings that business now calls the tune, except in an occasional building where a private whim is to be humored or a public pride to be com-

memorated. Over the rest of the earth, in your country and in mine, in all countries everywhere, almost without a single exception, I look in vain for that intimate expression where life is founded on a heritage of cultural tradition, where, as in France, as a contributor to your paper recently observed, our* “minor architecture is so legible an expression,” indicative of “the patience, the will to endure, to build permanently in defiance of time’s inevitable ravages.” There is none of that left with us, I can assure you. Nor do I find it elsewhere, if you please. If I am thrilled with a certain grandiose quality as I come up the bay of New York and the towered island rises before me, I am also quite certain that this is not the end. You may admire it but you cannot love it and that is why we in France—many of us at least—feel sure that you build yourselves country houses because you cannot stand your cities. Do your business men love their office building? Do your bankers love their banks? Do either of them even love their country homes or their superb clubs—do you really love any of your modern architecture? A little, yes, here and there, but do you not for the most part persuade yourselves to believe that your heart responds when it is only your brain repeating phrases?

And so I inquire once more—for I am only an inquirer, please to remember. Is it not true that when architecture is used to glorify a thing that is wrong, or to mask a purpose that is not fair, or to pretend to sanctify that which is not holy, the art must suffer, must it not? You will say that there is nothing to be done—that the modern demand is for buildings that sprout like mushrooms in the night, that the architect is helpless, that he can do no more than give his best. I would admit this in a moment but I would not call it a compromise, and as a compromise I would let it be known. For one of the greatest dangers to any common appreciation of architecture is that professional vanity which exalts a spurious ware. To deal in such as a business, is one thing. To proclaim it as art is another matter.

So it is, however, that I have hopes. May it not be that we in Europe have gone less far astray than you? Perhaps, of course, we are on the downward verge of the cycle that will see us vanish. Who knows? Perhaps you are on the upward verge and are to be exalted to a greater social well-being than any people has ever known. But I do not think that your architectural progress proves this, as yet, nor do I feel sure that our architectural stagnation proves the case against us. The race, says the proverb, is not always to the swift, and when reason and justice succeed in dethroning ignorance and injustice, as they will some day, the residuum of cultural tradition may be the only thing of value left in the world.

* This is a reference to an article by Mr. Percy E. Nobbs, entitled “The Architects,” which appeared in the JOURNAL for July, 1921.

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For myself, I cling to the faith that that tradition will be less of the brain and more of the heart. I am firmly persuaded that architecture, above all other arts, can only attain to enduring greatness as it inspires and nourishes the saving grace of affection.

And so I venture to think that after all the American architects have not yet come into their own. Not because of their training or their lack of ability but because of conditions. Amid the temptations of riotous extravagance and what all the rest of the world must, by the very nature of things, consider profligate expenditure, you have, surely in your cities—and they are always the national danger points—vied with each other in producing things of compelling size, irresistible appeal as *tours de forces*, but what that is really lovable? Have you not really been making great toys—too costly to play with in the long run—and of which you will soon grow so tired! While we in the older world have plodded along—almost stagnant in our architecture—living on our past—being dragged down too by

the same evils that are gnawing at your vitals. And yet, as I have said,—when it is all ended and something new, prescient with a greater happiness, has come out of the present welter,—it may be fifty or a hundred or perhaps only a score of years hence,—where will men dig for the precious cultural tradition of how to build?

In America? I do not think so. Your craft traditions are today at so low an ebb that the old world still has better ones. This is, perhaps, as a general statement, too prone to be misunderstood in these days of fiercely inflamed nationalisms. But I am not writing of them. They are the war tools of politicians who are the tools of financiers who are the tools of ignorance, profound, gigantic. I am writing sincerely about architecture, the art which is meant neither to exalt our pride nor feed our vanity, but to bless us by ministering to our needs,—and among these I would place affection as one of the first to be satisfied.

Ourselves and the Commercial Ideal¹

By H. B. CRESWELL

THE circumstance that has led me to jump into your laps was the appearance last year of Mr. Gordon Selfridge² upon these scenes. I know nothing of Mr. Selfridge except what he has himself told us. There was much that Mr. Selfridge could have told us—much we might have learnt from him of the organization of retail premises and the lay-out and fitting up of shops. We should also have liked to hear from him, why, having regard to the principles he advocates he is so cautious, parsimonious, experimental, and tentative; why his shop is such a small one; and why there are still so many other shops in Oxford Street! These are some of the things Mr. Selfridge might have told us, but instead he brought us a message which we may suppose to be one of the newest truths known to American retail trade. The message was that Architecture pays the shopkeeper. That it pays him as an advertisement. That it is the function of Architecture to advertise the shopkeeper, and that, in the interests of Architecture, the shopkeeper ought to be made the object of propaganda.

This message, having regard to its source, is entirely

satisfactory from our point of view, for it is typical of the modern Commercial Ideal, and it forms a suitable peg upon which to hang my discourse to-night. I am not going to preach a sermon, but I am entitled to ask of a community of young men entering on the threshold of a career in an art and a profession that it should approach this subject, not in the thin, starved light of expediency, but in that of robust, clear-eyed English manhood. And since I have reminded you of a message from America based on the Commercial Ideals of that remarkable country, let me remind you of the message of an Englishman who had nothing to do with commerce and who spent his life, not in the pursuit of material power and gain, but in devotion to a similar plane of ambition—for Science and Art are on the same plane—as that which brings us together under this roof. "*Civilization*," he said, "*can advance only along the lines of veracity of thought and action.*" I hope you feel with me that "there spoke a man." Those simple words not only bear the impress of truth—we know they are true—but they sound in the mind like the voice of doom. The words have special weight, for I am quoting Thomas Huxley, who, above all men, abhorred unction and platitudes, and was contemptuous of doctrinal religion.

Before I say more of the general question, I should like to dispose of this proposal to "boost" Architecture by inoculating shopkeepers with the idea that Architecture pays as an advertisement, and I propose to do

¹At a recent meeting of the Architectural Association (London), Mr. Creswell, a member as well as a Fellow of the R. I. B. A., presented a paper of which the title here appears. His subject is, we believe, of universal import, as was the discussion that followed. Both are therefore reprinted, with minor elisions, as they appeared in the *Journal of the Architectural Association*.

²Mr. Gordon Selfridge, after a successful department store experience in the United States, went to London and there established the well-known store that bears his name. Last year he addressed the Architectural Association on the subject of department stores and architecture.

so on the plane on which the proposal is made—that is, on the lowest plane, the plane of worldly expediency.

In the first place the shopkeeper knows much better than we can tell him what is good for him. He has been struggling for years, and is still struggling, to surpass himself and his rivals in this particular of his frontage, and the results are perfectly satisfactory, because they are perfectly natural and logical. The generality of shop fronts are vulgar, pretentious and tasteless, which is exactly what they ought to be, for nearly everything sold in shops pretends to be something different from, and better than, what it really is; or is a substitute, or an imitation or even a deception. This is not due to individual cupidity, but is an established system, fastened upon the community by the Commercial Ideal. If it were not for certain Acts of Parliament it would hardly be possible to buy anything under its true description. Already we have "pearls" and "real pearls," velvet, real velvet, and velveteen; leather, real leather, "leatherette," and for all I know "real leatherette." If it was not for our penal code, "real pearls" would be made of bread crumbs and fish-scales; some one would then have to invent a new name for the true pearl, which new name would be instantly appropriated by the bread crumb pearl. The picture I am showing you is that of the Commercial Ideal at large in paradise untortured by the police, and it is this Ideal that the shopkeeper strives to express in his Architecture and so often succeeds in expressing with the help of spurious materials and a spurious Architect. It is a remarkable fact that it is those shops that are not mere salesmen's lairs elevated into notoriety by advertisement, but which live on reputation and tradition, and where the name over the door is a guarantee of the goods in which the firm specializes, that the Architectural qualities of the front are usually satisfactory and often tasteful, while the old shop fronts which came into existence before vaunting advertisement darkened the outlook for honest endeavor, are frequently delightful for their expressive taste. And how could the case be otherwise? How, for instance, can a draper who lends himself to the trumpery deception of pricing nearly every article he sells down to eleven-pence three farthings, be expected to exhibit good taste in the Architectural treatment of his front. Nothing surely but clap-trap can come out of him.

The proposal is, then, to initiate an intensive culture among shop fronts; to impose a true Architecture where a false has planted itself, and dignify purposes which lack dignity by the glamor of an Art whose forms, so far as they are esteemed, owe their expressiveness to the glorious traditions with which they are associated. The proposal is to deck out the relative squalor of shops with the borrowed glories of Greece, Rome, Italy, and so on. Gentlemen, the thing cannot be

done. The beauty or majesty of a building does *not* depend upon its gratifying prejudices of the eye, but upon its raising a stimulating train of meditation in the mind as Ruskin pointed out more than sixty years ago. Architecture cannot clothe mean or ugly purposes or express a building in forms of which the tradition is repugnant to the purpose of the building. The proposal we are considering is, then, to use Architecture to camouflage shops so that their frontages shall raise false trains of meditation by obscuring the undignified and trivial or even mean uses of the building; and that to do this will raise the repute of Architecture.

Let us suppose that this idea has been put into effect; that propaganda has achieved its disingenuous end; that beautiful towers, each a triumph of Architectural skill, raise their proud heads into the sky severally proclaiming, "waist shirts," "high shoes," "umbrellas to mend," and so forth; while in the street below an arcaded Italian niche of Sienna marble panelled in lapis with ormolu caps and bases and an onyx plinth enshrines a tin of curried rabbit marked down from one-and-a-penny to ninepence-halfpenny.

Please do not think that the picture I paint is unduly grotesque. The highest building in the world—the notorious Woolworth building in New York, which is nearly eight hundred feet high—to commemorate itself among the monuments of the world? The fact is more grotesque than any my invention would dare. The Woolworth building, then, celebrates the sixpenny-halfpenny bazaar.

Suppose, then, that London exhibited forty magnificent commercial towers, and for the sake of argument let us suppose that these towers were in every case Architectural triumphs, proclaiming severally that substitutes pay better than the genuine thing; that fraudulent secret remedies are superior to honest pharmacy; that Tinker's memory training is a greater thing than education; that Twaddler's encyclopædia in six-penny parts with sensational color prints and richly interleaved with advertisements is of more importance than the public libraries; that Toodler's pay-first - and - see - what - you'll - get - but - on - no-account-tell-anyone Correspondence Course excels all Universities; that the inventor is greater than the scientist, notoriety a finer thing than repute, advertisement better worth while than endeavor, the publicity agent a better horse than merit, to boast more effective than to perform, to exploit its foibles and vices wiser than to serve humanity—that, in fine, falsehood is stronger than truth, success more inspiring than religion, the man with the muck rake more powerful than God. Suppose, I say, that these beautiful buildings encompassed us; for how long would we receive pleasure from the vision of them? For just so long, surely, as the glamor associated with the Architectural principles they embodied disguised the motive that brought them

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into existence, and the ideas they stood for, and no longer. So soon as we came to recognize that each of these edifices was a mere flaunting boast, that its motive was insincere, that it raised no trains of reflection from which the mind would wish to escape, we should hate it and its fellows alike; and soon, from hating the buildings, we should come to hate the Architectural forms by which we severally recognized them.

How, then, can it be, I asked myself, that an Association of young men (in whom if anywhere we must look for enthusiasm, devotion to high causes, inspired ambitions and clean convictions), should swallow down Mr. Selfridge's dose without any signs of restiveness or after-pains? There is only one explanation; that, living in a world in which popular usages, the conventions of thought, the public conscience itself is saturated with the commercial ideal, which is increasingly invading Art, Science, and the Professions, and thus poisoning the nation at the very heart and core of its strength and honor, you are perhaps not aware of the objectionable savors of the times in which you live—just as a gas fitter is the last man to notice a smell of gas. It will be more to the point if I remind you that at the very time Mr. Selfridge was addressing us a committee representative of Art and Letters, under the chairmanship of Sir Aston Webb, was memorializing the Bishop of London in the cause of the preservation of the City churches. The first point emphasized in that memorial was that at a time when the adulation of material success was so much in public evidence, it was specially desirable that memorials to a higher ideal standing in the centre of commercial activity itself should not be torn down.

The commercial ideal consists in supplanting the true significance of everything in the world by a false material evaluation. The root germ of it is the worship of success, and the measuring of success in terms of popular notoriety—or money, which are very much the same thing. The pure unsophisticated impulse of humanity is to esteem men and achievements by their quality; by their importance in the service of humanity; by their appeal to lofty emotions, by their advancement of the higher destinies of man. No one can attain to such achievement except in a spirit of selflessness; and humanity is aware of this, for human nature is sensitive to its own honor. It holds in affectionate memory the great achievements of such men, and of such men *only*. No achievement the world remembers with admiration was effected in pursuit of success or of power or of money. The large majority of such supreme achievements have never been paid for even on the basis of a living wage, and few indeed by a fee that much exceeded that scale. Generalizations of this kind are dangerous—I speak from lack of knowledge of exceptions, and in the certitude that exceptions are

few. We have evidence of the principle in our own surroundings. It is because the professional man honors skill and proficiency and good service before his pocket; the artist the perfect rendering of his creation before success; the scientist the acquirement of knowledge before the attainment of wealth and power that they and their callings are respected and accorded a dignity which has become a tradition. The reason no such dignity attaches to commercial pursuits in general is that the essential aim in such callings is understood to be the success which may be measured in treasury notes, and because the only spiritual implication generally associated with them is the tribute of envy paid to their coarse triumphs by the ignorant.

The impress of the Commercial Ideal is exhibited in various arts and callings in various, but kindred, ways.

In pictorial art it raises up dealers who seize on young gifted artists and hold them under a contract to hand over all their work for three or four years in return for a fixed remuneration. The man who pays the piper naturally calls the tune, but I need not enlarge on a system which would be impossible if the buyer had any true appreciation of art, or the seller were not pressed by necessity.

The Commercial Ideal tempts painters to repeat their successes and to sit down and go on painting the same picture. Any picture that is odd by being very large or very small or by displaying such differences from the generality of pictures as might arrest the attention of a bright child, is barked over and made the subject of a small excitement. Why? Because it's good for trade. Why should any mortal soul bother about it if it wasn't?

Literature, so far as it is Art, and like other arts, suffers from the same disabilities as painting under the influence of the Commercial Ideal. It induces many publishers to fight shy of manuscripts that are original and forceful works of art. What they want is "best sellers."

Dramatic Art has suffered in similar ways by the imposition of the Commercial Ideal. The pursuit of success by managers, who have no care for anything but "success" in the single sense in which they understand the word (that is of large returns), has led to a large number of "shows" being mere repetitions of old ideas, and to actors being earmarked, each for one sort of part. Lately a naturalist accomplished the remarkable feat of taking moving pictures of the methods of the cuckoo in depositing its egg—photographs which falsified in essential matters the work of previous observers. The pictures were memorable for their completeness and clearness, we are told. How many, do you suppose, of the hosts of cinema houses in London—my figure may be inclusive of the whole of England—displayed the film. *I believe not one.* This is the

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Commercial Ideal and this is the thing that is settling our destinies for us.

The Commercial Ideal wrecks sport. Soccer football I need not refer to, but I may mention that the game is being everywhere replaced in our schools by Rugby because of its degradation by the Commercial Ideal. It seems to me we shall end by going mad at the instigation of the Commercial Ideal. I saw last week a poster outside a cinema which advertised a topical picture. One item—"Prayers for Victory"—arrested me. What victory had we now to pray for? The sub-title explained. "The Southend-on-Sea team for Bristol attends special service in Church."

Of the influence of the Commercial Ideal in Architecture I have already ventured to prophesy. Let us look at what is now about us. Almost without exception, whenever you see pretentiousness, shoddiness, ignorance—all, in fact, that is comprehended in the word "ugliness" in buildings—you will find an immediate explanation in the motive, and that motive will prove to be some aspect of the Commercial Ideal; and, almost without exception, when you see buildings that you can accept as architecture, you will find that their motive is free from complicity with the Commercial Ideal—advertisement display, pretentiousness, shoddy material, ignorant taste—all these things would scarcely exist if it were not for the Commercial Ideal in which they have arisen and by which they are nourished. The subject admits of endless illustration and comment. I will confine myself to one—not by any means the most deplorable or aggressive of the impositions of the Commercial Ideal upon Architecture. I refer to its treatment of housing. The garden village is a philanthropic idea—practical, and rightly so (but based) as is every idea that is worth considering, in the human ideal. It was a reaction against exploitations under the Commercial Ideal; and, of course, directly the conception of the garden village as a worthy thing became popularly known, the shrewd, hard-headed man we all so love, adopted the term to give a deceptive gloss to his own speculative schemes. However, what I want to call attention to is housing before the garden village idea—Raymond Unwin's idea—rejuvenated us with hope of better things. You may see in the suburbs of London and of the provincial towns places where the shrewd, hard-headed men of England have effaced all natural beauty of their country by infection of the peculiar qualities of their own souls. These districts have grown by the same inscrutable laws which direct and control the ravages of mange on a dog's back. They have grown without thought, without knowledge, without plan or expectation or hope of ambition; they have merely eaten their way down the valley or up the slope of the hill and left their scars far and wide. The only possible explanation or justification is that the enterprises have

paid someone—someone must have made a great deal of money out of these exploits, for no human being would have associated himself with them for any other consideration. There is nothing beautiful or ingenious about these places, little that is efficient—they are typical achievements of the shoddy-minded who alone can find inspiration in the accumulation of wealth. The one saving grace has been the restrictions of the law. Without the restrictive Acts the shrewd and hard-headed would have been yet more shrewd and still harder in the head; their numbers would have been greater—for fewer would have been in prison—and the places might have fallen down or the inhabitants died off, for such things as flimsy construction, scamped drains, and damp walls not only pay well, but, since the work has soon to be done all over again, pay twice over, and, in fact, have in the past, been the source of much of England's "wealth."

To sum up—the Commercial Ideal is loading the world with products of art and manufacture, organizations, ideas, habits, tastes, customs, which have no justification except that they are incidental to the acquisition of money by individuals. Mankind must produce in order to consume, and the individual must work to live, but the natural impulse of human nature—the human ideal—demands of a man that he shall justify himself by producing what is of service to man, or what is beautiful, or what in some way expresses his individual aspirations for the destiny of humanity. That is the natural instinct in man and we, who observe what remains to us of mediæval craftsmanship—yes, and of the utensils and ornaments of savages—know the truth, as well by evidence of the fact as by the experience of our own hearts; yet, by compulsion of the Commercial Ideal, a large part of the works of man are not only of no service to humanity, but are a positive disservice, and they can have given no one any satisfaction either in inception or realization, for no man, as God made him, could set himself deliberately to exploit the ignorance, foibles and necessities of his fellowmen, any more than he would occupy himself by supplying bad whiskey and unreliable dynamite to savages.

I have tried to give you a hurried picture of an aspect of modern life which concerns us greatly, but the subject is so vast that I have been unable to touch upon many sides of it, nor have I given any practical application to my remarks. In conclusion, I will speak a few words on two matters. First, upon the direct material damage to our individual careers which the Commercial Ideal threatens; and second, as to what we can do to contest that danger and how play a part in helping to restore the human ideal—as I have called it—to its right place in life.

You must know that the Commercial Ideal, as exemplified among commercial houses who deal with the

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productions of artists, is tending to squeeze the artist out of existence. The publisher tries to enslave the author by binding him under one contract to as many as seven books, the music publisher and concert agent strives to secure a monopoly by compelling singers to sing only songs published by him and by making use of the powerful position thus secured to force the song writer to disadvantageous contracts; the theatrical manager seeks to limit and enslave the actor, the glass and mosaic manufacturer the large house decorating firms, and firms dealing in house property, and even firms of constructional engineers are ready to squeeze out the individual artist, and with the help of "our Mr. Jones" proclaim Messrs. Vinegar, Hissop and Co., Ltd., the designers of the cathedral window (with saints copied from Flemish pictures) or the architects of the new Georgian wing (with reach-me-down plaster swags and mantelpiece)—and so on. The position will one day be reached when the architect and decorative artist will have great difficulty in existing individually unless he makes use of commercial methods to flaunt himself into notoriety—and what sort of artist will that man be? The Commercial Ideal, if it continues to make way will render Art, as we estimate it, and as the records of the past reveal it, impossible.

As to what we can do to combat this poisonous Ideal, which I hope is as detestable to you as it is to me—Why! we can do a great deal. *We can acknowledge its existence.* That is the great point; to keep restlessly aware of the false, ugly thing, to refuse to accept it as inevitable, to refuse to float like straws down the current of life till we find ourselves in a mud hole. Let us then test things, examine motives, tear the false thing out by the roots, proclaim the stupid hypocrisy, wave it in the air, proclaim it, expose it, ridicule it, and denounce it, in thought, in our confidences with friends, in our conversation with acquaintances and on public occasions. So may we alike honor the memory of the men who have given mankind its proudest heritage, ourselves and our calling.

Mr. Reginald Hallward, in proposing a vote of thanks to Mr. Creswell, said he was glad to have that privilege, because he shared with him the views he held, and he knew those views grew out of his honorable career. To him (the speaker) it was a particular pleasure to say a few words; in no way to minimise what Mr. Creswell had said, but to confirm the general truth of the whole paper. As he had listened to the address, he had felt his mind going back and recalling an ancient legend of classical times, that "when a man sleeps he should not be wakened too suddenly for fear his soul should not have joined his body again." He could not help feeling that that was something of the position in which the world had been standing. It was some seven years since the awakening began, but he thought when the soul joined the body it had not that full relationship to it that was expected. It was only now that a new life was beginning

for this country, and he saw confirmation of his belief in the address. He could confirm from his own experience, the general truth of the whole of the statements of the address, and he believed hope lay behind it. The aim of the paper was solely for the public good. He thought things had been taken too much for granted, and he wanted the younger men to take nothing for granted nothing but what answered to their own convictions of what was the truth. We had arrived at a time when appearances deceived us on every hand, but it seemed to him that there was a hope that we were groping towards a greater reality, a greater correspondence between what a man should be and what he was. If young architects were going to measure their art, they should, rather than seek what was above them, seek what was below them. To know the people better was to find how the people were; to know the people was to know that people were not base, but that they were deceived.

In seconding the motion, Mr. Maurice E. Webb said it seemed to him that the most difficult part of the subject of the "Commercial Ideal" was the fact that we were living in a commercial age. We were a nation of shopkeepers, and the job of the architect and the artist was, somewhat or other, to help the shopkeeper, and they had got to do it. But they must not lower their own ideals or standards in order to help the shopkeeper. If the shopkeeper wanted a really fine shop, and went to the architect to get it, it seemed the architect must do his best, and he would not succeed unless he could put something more into the shop than the shopkeeper himself was able to do. In the old days, the Italian architects and painters built and decorated most wonderful churches, and painted most wonderful altar-pieces, but they did that because they wanted to do it, or because they were asked to do it by the churches. In those days, was not religion the motive? The position was perhaps different today, and architects and artists had got to do what they were paid to do, but they must do it properly. There was a tendency of many, under the stress of circumstances, to lower their ideals in order to please the people who were paying them. He was a little bit sorry Mr. Creswell had chosen Mr. Selfridge for his comments, because he (the speaker) felt that Mr. Selfridge had done a great deal for the architecture of London, and had shown, certainly in his own building in Oxford Street, that a really fine work of architecture could stand on its own without those vulgar aids to be seen in other parts of London; such as the horrible lighted signs which continually revolved. Mr. Selfridge had shown that by a little judicious lighting he could make his building look as fine by night as by day. Mr. Selfridge's architect had produced a notable addition to London architecture.

Mr. T. S. Tait said he thought Mr. Creswell had been rather hard on Mr. Selfridge, as he thought the latter struck a very high note in his paper last year. To the speaker, Mr. Creswell's paper seemed more of the old fight between commercialism and professionalism. To give way in art to commercialism was wrong. The selling of goods at 11¾d each was the business of the seller, not of architects, but if the man who sold such goods desired certain things made, it was up to the architects and others to deal with it in the most beautiful

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way possible. It was not the duty of architects to ignore commercial problems, but to treat them to the best of their ability.

Mr. H. T. Buckland said he had been a friend of Mr. Creswell's for many years, and knew his views pretty well; he also knew that when Mr. Creswell spoke he was very provocative. The one thing he deplored was that no one was able to announce the entry of Mr. Selfridge to the meeting, for he believed it better for a man to be present when he was attacked so that he might reply. If Mr. Selfridge were present, he (the speaker) was sure he would have something very substantial to say, and he thought the proper revenge for Mr. Selfridge to take would be to engage Mr. Creswell as architect for his next extension. If he would do that, and Mr. Creswell would go there and give them his changed views, he was sure they would all be very much amused.

Mr. A. S. E. Ackerman said he was an engineer, and would admit at once that engineers spoilt the face of nature. He was pleasantly surprised to find how respectable were some of the tall buildings in New York; they were not the monstrosities some people said they were. Quite a number of buildings in New York, certainly one close to the Bowery, struck him as being very beautiful, because they were made to serve their purpose so well. Undoubtedly the comfort in American offices was much greater than that provided generally in this country, especially as regards lifts, lighting, and heating. He was not an architect, but he rather suspected that the columns in the A.A. Dining Room were not all they pretended to be. It was very horrible that many people judged others by the size of their banking account, but he doubted whether anyone in the room could name 50 deceased millionaires, although they would probably have no difficulty in naming 50 deceased artists or scientists. The effect of wealthy people was very ephemeral, while the memory of scientists and artists of note lived.

Mr. Sylvester Sullivan said the interest of the architect in shop front building was to observe the truth, and not to be inveigled into being architectural liars for the sake of designing an advertisement.

In replying to the points raised in the discussion, Mr. Creswell said he had to thank them for the way in which he had been received, but, quite frankly, he thought his paper had completely failed in its object. He had absolutely missed the mark with it. He did not appear to have made the least impression anywhere. He did not believe anyone in the room really knew what he was driving at. That was a humiliating thing, but it was his own fault—it was defective art. But he was quite sure, if he had put what he had to say in a more practical form, they would have grasped his meaning, and having grasped his meaning, they would have been bound to have agreed with him. To begin with, he noticed that instead of referring to the "commercial ideal," speakers referred to commerce; that was a totally different thing. He had said nothing against commerce, and had nothing to say against commerce; commerce was a necessary thing, but the "commercial ideal" was a bad influence, a bad standard which had sprung up in commerce. It was unnecessary to commerce, but was pervading public opinion and was robbing England. You could go into the

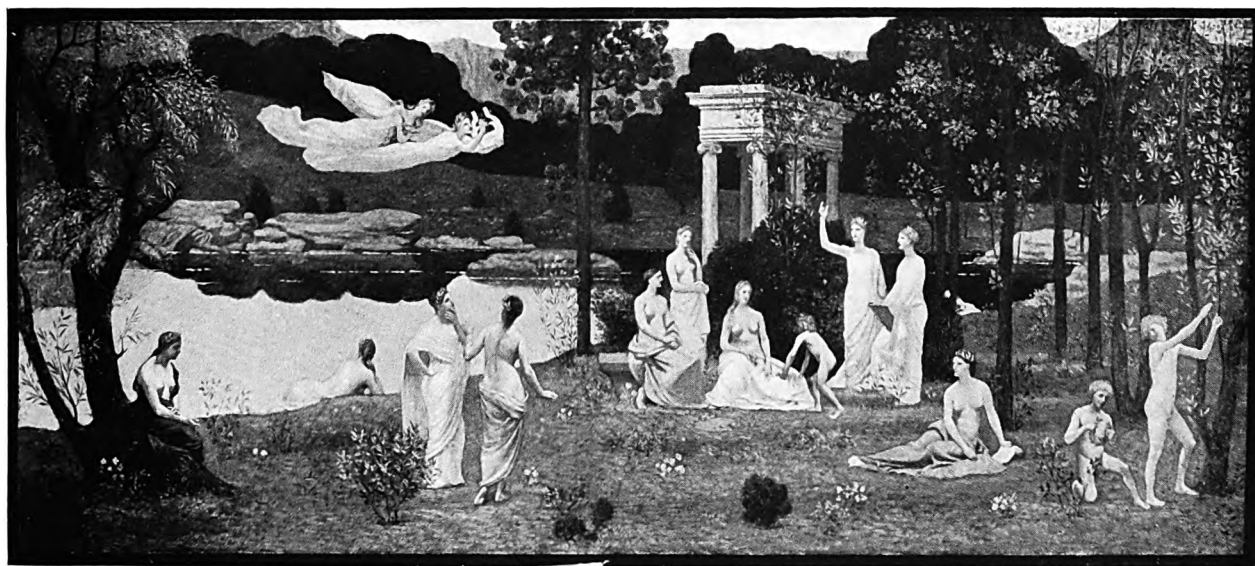
streets and read the papers, and look around you everywhere, and everything was a humbug and a sham in the way it was represented. It was because we were living in a world colored with the things of which he was complaining that we could not perceive them. What we wanted today was to get into touch with the great minds of men who really mattered in the world. He was speaking only of ideals, and nothing personal at all. Mr. Selfridge and he would get on very well together and would both be interested in what the other had to say. The danger was that the Selfridge type of man would predominate. Mr. Selfridge's was a necessary work and had to be done, but it was the point of view of which he complained. Turn to the records and thoughts of the men who made the world a decent place to live in, and then contrast them with the "commercial ideal," and you would see where we were going—we were going to hell! In twenty years time England would hardly be worth living in. Compare England let us say before the war and now, and you must see the way things were going. The whole thing was a question of motive; it was not what one did, but the motive for it. If a man set out to write a book, he made up his mind on the subject. How was he going to approach it? If he were going to do it with an eye on what had been successfully done in the past, and on what he was going to make out of it, what worth was such a book in the world? Nothing. Every idea in the world, every bit of work that had ever been done in the world that had had any effect had been done out of men's consciences. His friend, Mr. Ackerman, had spent 20 years of his life in elaborating a monumental work of reference for which he could expect no reward and which was entirely a work of personal enthusiasm; that would be, and had been, a useful contribution to humanity. He had also got elaborate mud works in his house, and for three years at least he had been elaborating under difficult conditions a series of experiments in the fluidity of clay, which were contributing to the knowledge of the world, and which had already been received among engineers as entirely revolutionizing theories of pile work. From the "commercial ideal" point of view, Mr. Ackerman was a darned fool; but in the speaker's opinion, Mr. Ackerman was the man who was doing things, not Mr. Selfridge. Mr. Ackerman's motive was the motive that was impelling things, and was worth living for. As to our living in a commercial age, of course we were living in a commercial age—that was the devil of it! Thirty years ago life was colored with quite a different thing; it was colored with thought and culture, but because we were living in a commercial age it was not for us to follow the commercial ideal because we were a commercial people. They were artists and professional men, and, to a certain extent, scientists, and those three things did not touch upon the "commercial ideal" at all; and so far as men were carried to a point when the instructive motive was colored by a commercial motive, the work was worthless. Every single instance of commercial architecture was the result of the "commercial ideal"—someone had wanted to make money out of it. In good architecture in no single case was the "commercial ideal" present. What had the "commercial ideal" done for

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architecture? Look at the places that had grown up in the suburbs and in the provinces. The development of the places had been actuated by the same impulse that controlled the mange on a dog's back, or like erysipelas, with no thought or cure. If it had not been for restrictive Acts of Parliament those places would have fallen down, or the inhabitants would have fallen down because of damp walls. Several speakers in the discussion had taken the practical standpoint, "What am I to do if I am asked to design a shop front?" One had to do the best one could and dignify it—that was their art. But he had tried to show what the result of that was. In 100 years time, when all those towers and fine buildings had been built, where would architecture be? The "commercial ideal" had to be combatted, and it was only by continually talking about it that anything could be done

towards restoring the human ideal. When Watt was looking at the steam coming from the kettle, did he think of what he was going to make out of the steam engine? No; he had the scientist's ideal of gaining knowledge. Someone had complained that he had been unfair to commerce, but really he was not; he was not down on commerce at all. But there was a crooked, ugly idea that had sprung up in commerce which was bad for commerce, and bad for everything; it was rotting art and rotting thought.

In closing the meeting, the Chairman said he did not think Mr. Creswell need be so despondent of the reception he had received. The discussion might have taken a different turn had the speakers been able to read and digest his remarks beforehand; they had not fallen on deaf ears.



THE SACRED GROVE—PUVION DE CHAVAUUNES—FRENCH—1824-1898
In the Potter Palmer Collection. A Study for the Decoration now in the Palais des Arts, Lyons

The Art Institute of Chicago

ITS ARCHITECTURAL INTEREST

The assembling of delegates to the Fifty-third Annual Convention of the Institute in Chicago in June has seemed to offer a most opportune occasion for recalling the sympathetic influence of the art collections of Chicago upon architecture. The Art Institute of Chicago has most cordially responded to this idea and has been kind enough to co-operate with us in selecting from among its treasures a few of those which seem best to illustrate the work that institution is doing in stimulating an interest in those arts which

are so closely allied to architecture. A cordial invitation to visit the Art Institute is extended to all visiting delegates and we take occasion here to express our grateful appreciation of the courtesies which that institution has so graciously extended to the JOURNAL. In our next issue we shall present a series of illustrations selected from the collections of the Field Museum.

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Center: Panel of Carved and Polychromed Wood Representing a Choir—Gothic
Right: St. Catharine—Polychromed Stone. Left: Another Statue of St. Catharine



CARVED OAK CUPBOARD OF THE GOTHIC PERIOD—WITH LEATHER STRAP HINGES



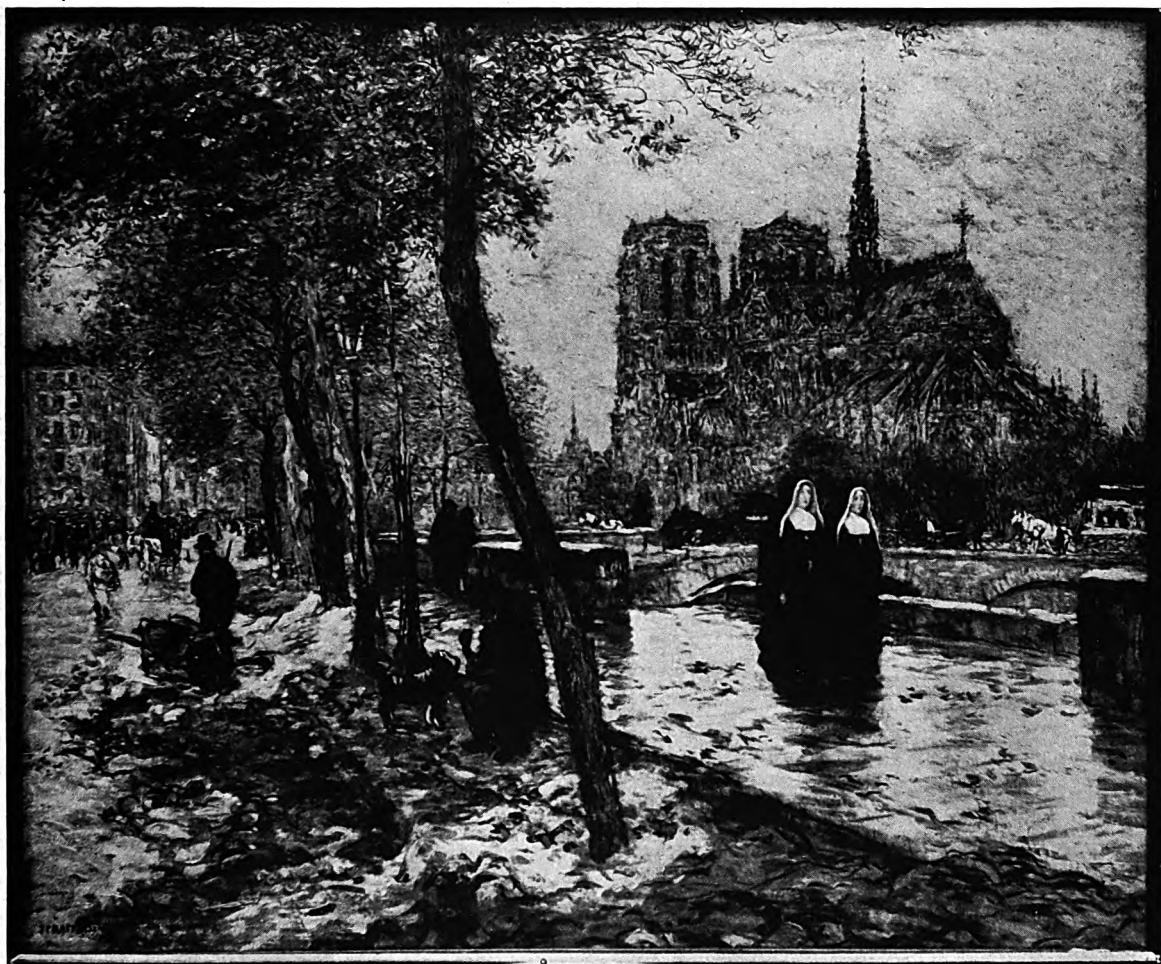
VIRGIN AND CHILD

Polychromed Stone. French—Late XIV Century



"ST. ANNE TEACHING MARY TO READ"

Gothic Statue of Polychromed Stone. French—XV Century



NOTRE DAME DE PARIS—JEAN FRANCOIS RAFFAELLI—FRENCH—1850
In the Potter Palmer Collection



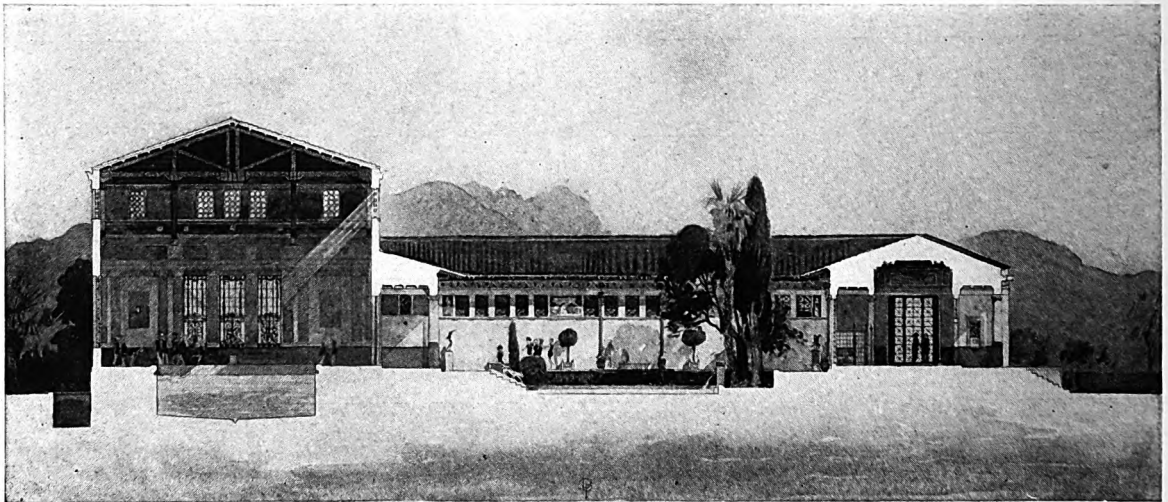
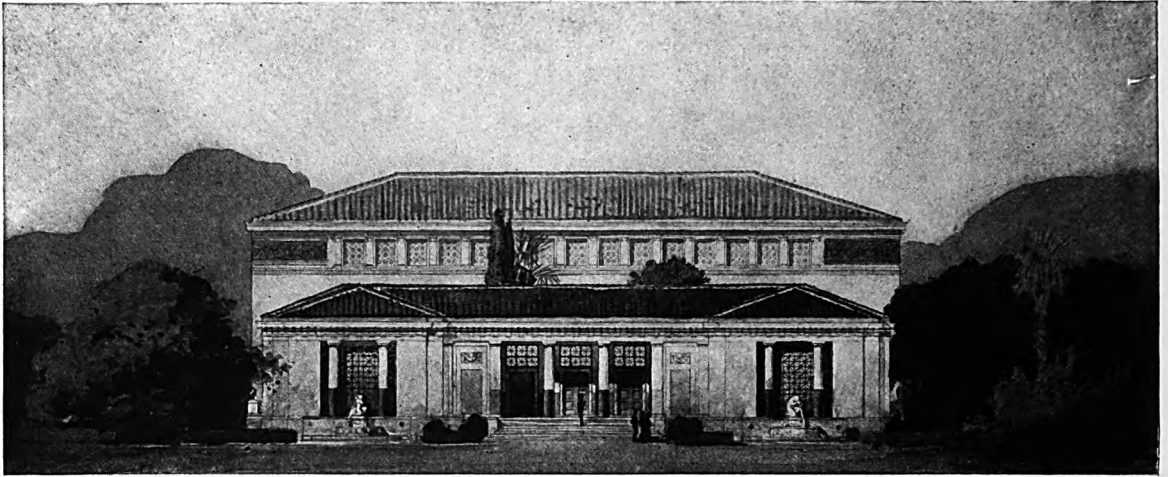
TWO BODDHISATVA AND ATTENDANT

Mortuary Stone belonging to the Potter Palmer Collection and lent to the Art Institute

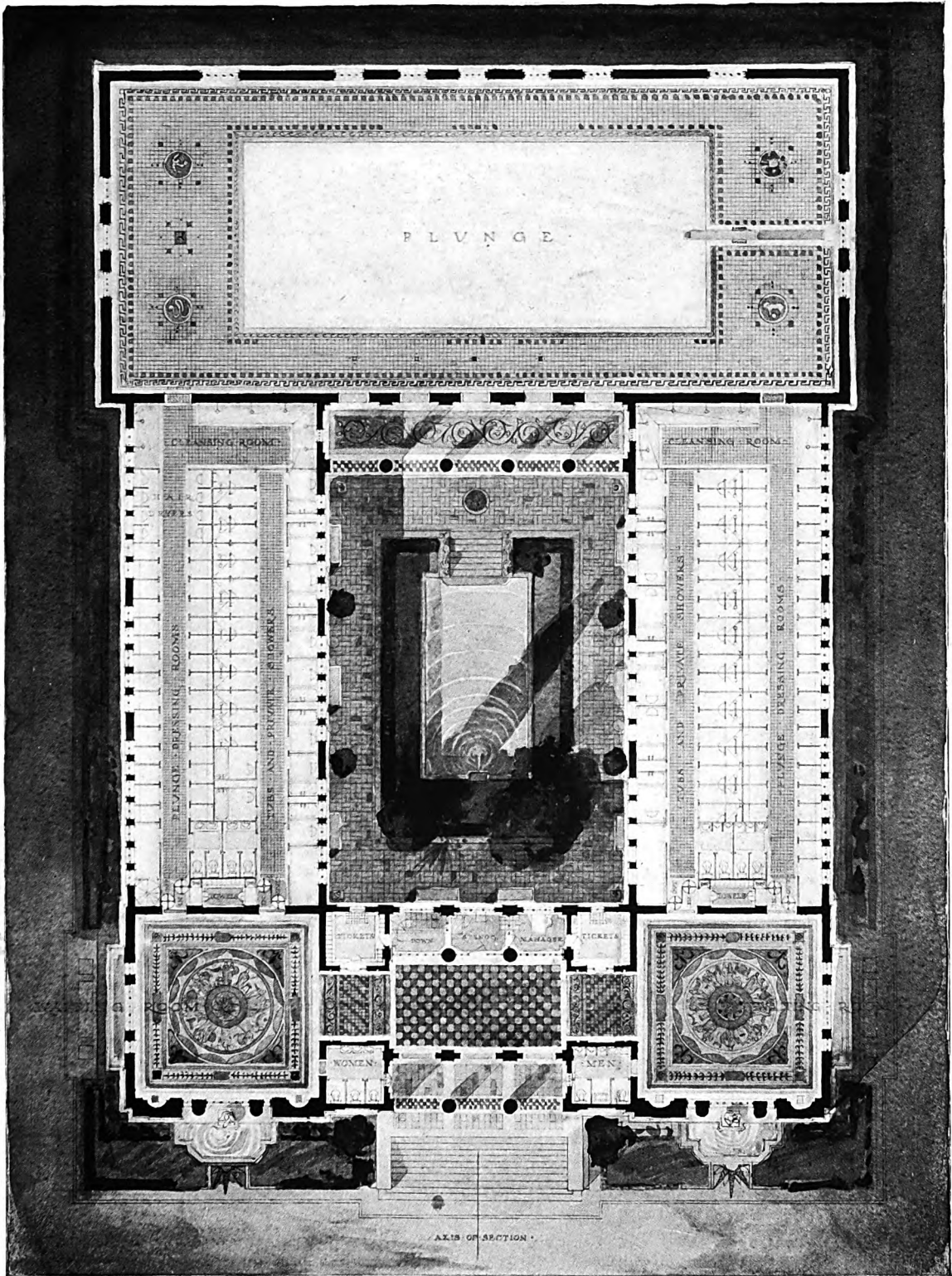


ST. GEORGE COMBATING THE DRAGON

Attributed to Benito Martorell—Spanish—Circa 1400? Central Panel of a Triptych from the Vidal Ferrer y Soler Collection, Barcelona



The Le Brun Travelling Scholarship—1922
A PUBLIC BATH
The Winning Design by Lionel H. Pries, Philadelphia



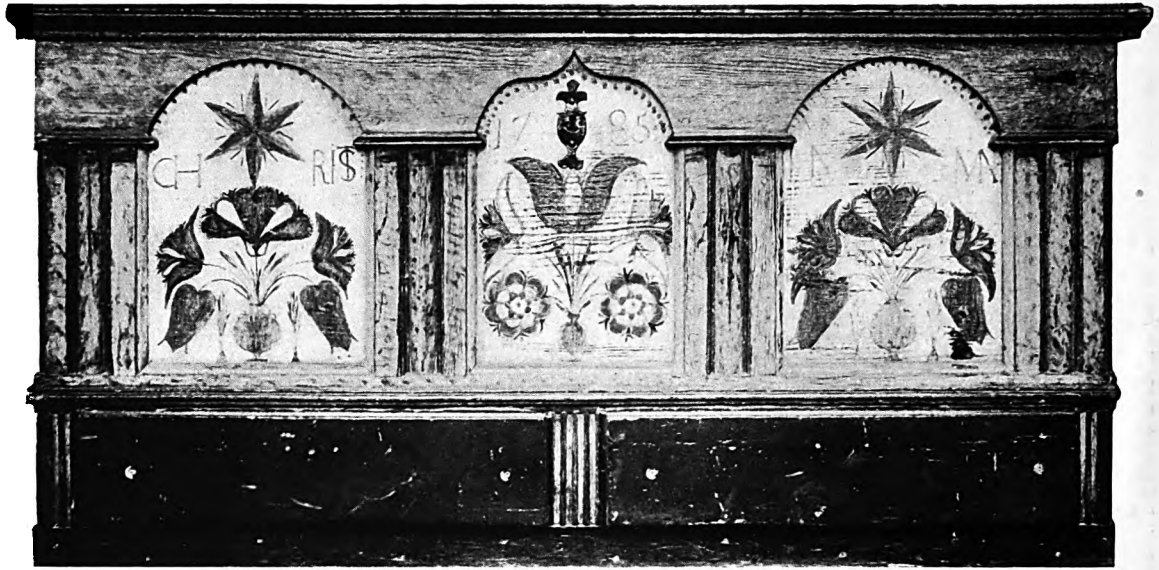
The Le Brun Travelling Scholarship—1922
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Photograph by E. L. MacMillan.

THE FINE ARTS BUILDING—CHICAGO

Courtesy of the Chicago Camera Club



PENNSYLVANIA DUTCH WEDDING CHEST—BEARING DATE OF 1785
In the Collection of the Art Institute, Chicago



Emblem of Institute Membership

The above illustration shows the exact size and design (and color) of the new emblem of Institute Membership, authorized by the Board of Directors at the November, 1921, meeting and executed by the Medallion Art Company of New York, under the direction of Mr. Robert D. Kohn.

The badges have been made with two kinds of fasteners—as a button for those who desire a lapel insignia; and as a pin for the vest. The face of the badge is 14 karat gold. The back of the lapel button is bronze, gold plated, and the back of the pin is German silver, gold plated.

The price is \$5.00, which is less than cost for the first 100 emblems and slightly more than cost for subsequent issues. Each badge is serially numbered and the names of purchasers will be registered at the Octagon.

Orders should specify the type of emblem desired (whether lapel or pin), should be accompanied by remittance, and should be sent to the Executive Secretary, The Octagon House, Washington, D. C.

MY DEAR MR. EDITOR:

The new Institute pin is now ready for distribution, and I have already entered my order for one and am wearing it with pride to advertise my membership in the A. I. A.

Wherever I go I see the emblems of various technical organizations; Mechanical Engineers, Electrical Engineers, and kindred groups, to say nothing of the many fraternal organizations whose members take pride in advising all who see that they are members.

I believe that we, who have been admitted to membership in the American Institute of Architects, may well be proud of the fact and with a proper self respect advertise it to the world.

Such an emblem, worn by worthy men, will in a short time command the attention and the respect of the public and I hope its use will become general amongst architects.

Yours truly,

HENRY H. KENDALL,
President.

East and West and Home Again

By IRVING K. POND

East

A batch of foreign Architectural publications of recent date recently dropped upon my table from THE JOURNAL office and I have superficially scanned the contents. Very superficially, I must say, in the case of the three numbers of the *Journal of the Institute of Japanese Architects*, and of the copy of *Architekten* published in Copenhagen; the names appearing in the advertisements of the latter make us feel not far from home; Olsen, Christensen, Jensen, Andersen, Hansen, Mohr, Jorgensen—every architect, in the middle west at least, has dealt with every one of them. Somehow, when they are working over there under the direction of Architect Jens Ingwersen, as indicated by a residence in a cut in one of the advertisements, the result is much more charming, much more refined in mass and fenestration than when they are carrying out the directions of some architect with an American name over here. The number is devoted to the presentation of plans and photographs of two, three, and four room tenement and apartment buildings, executed in series, in rows, in blocks; a bit stark, a bit naked in their austerity; always five stories in height and yet always with the pleasing window treatment and the happy relation of solid to void displayed in the residence above noted.

Farther East

Being ambidextrous I found no difficulty in flipping the pages of the Japanese documents in true Oriental fashion. One must read from right to left. One number of the *Journal* contains two public buildings, the one a museum, not so interesting, showing a German Romanesque influence; the other, a town hall or council house, done in the classic with a Doric portico, all beautifully balanced and fairly consistent throughout. A bit of Teutonic, or perhaps rather, Scandinavian influence is felt in this building. Another number contains architectural drawings and half-tones of a museum done in the Japanese style showing a marked classic restraint beautiful in proportion and entirely consistent in masses and details. The beauty inheres in the treatment of the structure. Neither cartouches nor festoons insult it nor impede the flow of functional forms. Later numbers are given over to an extended report of a committee to study crematorium and cemetery conditions in foreign countries. The first number, to revert, has the concluding parts of an exhaustive study of "the 'Engawa' and verandah in the domestic architecture." This is done into English by the author and the first paragraph will give an idea of the style: "In the history of the Japanese architecture there has been twice large influences from China; but these influenced forms were very reasonably changed after a certain run of time to new forms, which are fit to the nationality and the climate."

West

From the *Journal of the R. I. B. A.* one sees that the vital present is challenging the attention of our British

confrères; the same social and sociological tendencies which have been working through us have muddied their heretofore clear and limpid professional stream. The tendency to put art and professionalism in the straight-jacket of law is one which is now manifesting itself with our British brethren, as it has long manifested and still is manifesting itself with us. Registration and Unification—how familiar they sound to us! Many of our states—twenty-three, to be exact—have registration or license laws. One other state, in which literature alone seems to be considered an art, forces architects to register under an Engineering Act; the twenty-three, regarding architecture more or less as an art, treat it as such, regulating matters only which bear upon the health and safety and physical welfare of the public, except that one, in establishing qualifications, seeks to pass upon the capacity to design. So, fifty per cent of our states—and on the initiative of the architects themselves, acting from some confused notion of service to the public or (and?) from distinctively selfish motives—have passed laws regulating the practice of a supreme art! But regulation by law is in the air and our British brethren and our own fifty per cent as yet free and sane will have to come to it. There seems to be no inoculation against it. Materialism and legal and æsthetic formalism are stifling the spirit of freedom to create beauty in Great Britain as here in the United States. However, the R. I. B. A. has taken up, through its Committee reports, the principles of Registration and Unification and seems likely to adopt and establish them in spite of wise cautions, while our A. I. A. has up to now been able happily to avoid the issue. But it is going to come in spite of us—or to spite us.

Home Again

The architectural profession in both countries is becoming class-conscious. In Britain there always have been social classes which were conscious and self-conscious. Classes have existed in this country but their self-consciousness has been regarded rather as a joke. But now in England, and the tendency is here too among us, classes are taking on a new alignment and the barber, the plumber, the whitewasher, the architect, are becoming class-conscious and must needs demand legislation which shall protect them in their self-asserted "rights" against all comers. How long, at this rate, will it be before we establish a caste system rivaling that of India in its wide ramifications, and this on a materialistic as well as on a spiritual basis? And as to Unification—some of the British reactionaries fear the effect of that. And I, "if"—like Caesar—"my name were liable to fear," would fear with them. A class, especially an Artist Class, can be unified only in name, and in those things in which the law, not the law of the spirit but man-made law, can compress men into its mould. There can be true unity only when things of the Spirit—not selfish materialism or expectation of individual advancement—compel a fellowship of kindred souls. Souls are not nec-

essarily kindred because the accompanying minds have decreed that the body should practice architecture. Then the questions arise, how shall art be free? How may art escape the fetters which formal education and "class-consciousness" are binding about it? How, at the same time, shall the public be protected in its physical well-being as affected by sanitary or unsanitary, safe or unsafe, buildings? The answer is easy. Establish a practicable building code: district, state and national. Permit a building to be built from any set of plans which are in consonance with the provisions of the code, no matter who makes those plans—be he painter, sculptor, baker, mason or architect. License the builder to erect a structure in accordance with those plans and if you can't get class-consciousness out of your system, or if your soul is burdened with the awful responsibility of the architect to the public, then protect the term Architect—with a big A—by examination along purely material and physical lines. Leave the spiritual man to grow with the spiritual growth and development of the race; and the public will be sufficiently protected; will be given a choice, through knowledge, as between the Architect and the mere builder or designer, and that is all the protection the law needs give the public. The public in this case is generally a wilfully ignorant or self-sufficient individual who needs the lessons of experience.

Education

The *Journal of the R. I. B. A.* and the *Journal of The Society of Architects* give considerable space to architectural education. I read these documents and pronouncements without any noticeable quickening of the pulse—as I do those emanating from our own architectural press. I am much more concerned with our primary and secondary educational procedure and with the curricula of our colleges; for I assume that before "the great globe itself" dissolves architects mostly will be recruited from the ranks of educated, cultured men of wide sympathies and understanding. In a future day, let us hope not too remote, educated and cultured men will have been taught to observe and to record their observations in sketch and drawing throughout the period of kindergarten, school and college days. And, too, they will have been taught to use their hands in modeling and making, and their brains and imaginations in creating, in many fields. So that by and by they will be able to co-ordinate and correlate the activities of body and brain, of hand and heart. Then we will have a race prepared to create and enjoy art and capable of producing architects. The race is in no hurry to produce architects; that is an hysterical desire of individuals and schools. My hasty glance over these British Journals and periodicals informs that along with laws and education our brothers across the Atlantic interest themselves, as some of us do, in another form of "straight-jacket" for art: that is, the geometrical basis of art as expressing itself in formulæ involving fixed and unalterable proportions and ratios between triangles, or squares, or diagonals, or diameters. Some write books in earnest advocacy of these spontaneity crushing and spirit breaking formulæ—and some review them sanely, which is altogether an achievement.

Drawing and Design

The interesting modern Gothic church of St. Michael, Bitterne Park, South Hampton, by Sir Charles A. Nicholson, is illustrated by plans, sections and elevations in the 24 February number of *The Architect*, a purely architectural presentation. In general the illustrations in the various publications do not call for special comment in the matter either of subject or rendering.

The latter topic was thoroughly discussed in a meeting of the R. I. B. A. by Professor William Rothenstein, of the Royal College of Art. As to design, he says: "We are sometimes accused of being too eclectic and derivative; yet I find in a great number of modern architects' elevations . . . a lack of the scholarship which is characteristic of the best art of any period; they miss precisely those elements of severity and austerity, sensitiveness to proportion and balance of rhythm, which I would have thought were the very qualities which architects would have understood better than any other artists," and intimates that where these qualities are present they may sometimes be obscured by the pictorial presentation and "artistic" rendering.

The discussion indulged in by Sir Reginald Blomfield, in a letter to the Secretary, and by many others, was scholarly and interesting. I am decidedly of Sir Reginald's opinion that "the care lavished on the wonderful drawings produced in competitions is to the architectural mind dead waste of time." Mr. Edward Warren said that "perspective drawings are of little use to the designer unless he is the author of the drawing as well as of the design."

Drawings are elaborately rendered with an idea of pleasing or catching the public. My own clients in general seem satisfied with the perspective studies I make in the process of designing in order to satisfy myself as to the relationship of masses and scale.

Ships

"Architecture as applied to ships" is another topic presented before the R. I. B. A. by Mr. Arthur J. Davis, and intelligently discussed. It was suggested that ship interiors might be designed to look like ship interiors; in parabolic curves and flowing lines and in some manner which should impart a sense of stability and not make one feel the imminence of collapse—which one must feel in seeing columns and pilasters thrown out of the vertical and entablatures out of the horizontal. Mr. Davis had learned by experience that the great majority of passengers are "seasick American ladies, and the one thing they want to forget when they are on the vessel is that they are on a ship at all. They live mostly in hotels and want that sort of surrounding and accommodation when traveling." He may be right. They may be, probably are, *homesick* American ladies as well; homesickness in the sense of seasickness—that is, "sick at home" or "sick of the home"—and who prefer hotels with all their flashy life and insincere surroundings.

I presume that architecture as a social expression and architects as social servants and interpreters of social life must cater to that, on land, nauseating, and, at sea, nauseated, tribe.

Town Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

The International Conference—London

The Conference of the International Garden Cities and Town Planning Association, held at Olympia, London and Welwyn Garden City on 14 and 15 March, was unusually international in its makeup. Thirty-six nations were represented from the start, and thirty-eight after it had been voted to admit the Austrian and German delegates. The most numerous delegation came from Belgium. Plans of housing developments, mostly garden suburbs along familiar lines, were exhibited from France, Belgium, Holland, Italy, Norway, Sweden, Denmark and Palestine, where the Zionist movement has an active Garden City Department. For Great Britain, there were the Welwyn Garden City plans and those of the London County Council for its three housing schemes now under way,—Becontree, Old Oak, and Roehampton Estates. The United States was not represented.

One of the items of progress noted by Mr. Ebenezer Howard in his presidential address, was the latest (1921) amendment to the British Housing Act, which permits Government loans to approved associations for the developing of Garden Cities, and not simply for building dwellings, as before. This is likely to be of great importance to the Garden City movement, as it halves the amount of private capital necessary.

Two principal subjects of discussion were before the Conference: (1) How to start Garden Cities throughout the world; (2) The reduction of building costs. The papers presented were printed and distributed; all discussion was informal.

The British members of the association are struggling to keep the term "Garden City" true to its original definition in Mr. Ebenezer Howard's "Garden Cities of Tomorrow." In the paper presented by Sir Theodore Chambers and Mr. Purdom, we find the following statement:

"It must be a town large enough to have all the features of a town characteristic of the country in which it is placed. It must provide for all classes of the community so that it may possess a sound civic being. It must provide for industry to be carried on. It must be planned as a whole. It must combine rural interests with urban interests. Finally, it must *control* the whole of the land upon which it is built and surrounding it."

Under this definition, Letchworth and Welwyn are clearly the only Garden Cities in existence—or in serious contemplation. The Continental delegates, on the other hand, in spite of their loyalty to Mr. Howard personally, and their interest in his ideas, were obviously concentrating their attention on getting the maximum number of sanitary dwellings for working men wherever and however they could.

The outstanding feature of the cost-of-building discussion was the similarity of the price-curve reported for every country heard from, no matter how widely different their financial and other circumstances might seem to be. Lieutenant-Colonel E. N. Mozley, late Housing Com-

missioner for the South-West of England, told how in his region in 1919 the bids for cottages with parlor, living room, scullery and three bedrooms ran about £770 each. At the end of 1920, the price was something over £950. At this point Dr. Addison, then Minister of Health, issued instructions that no bids should be accepted for more than £800. "Within a fortnight of Dr. Addison's decision, builders in all parts of England were tendering for parlor houses at less than £800. . . . Since then the price has continually fallen to the present day, where it hardly exceeds £500."

M. Henri Sellier, Mayor of Suresnes, Department of the Seine, presented tables of building material prices from 1914 to 1922. "It would appear," he says, "that for Paris and district, if the cost of building in July 1914 be taken as one, that of July 1918 would be $2\frac{1}{2}$, July 1919 would be $3\frac{1}{2}$, and July 1920 (the maximum) would be 5. In July 1921, the price had descended to a co-efficient of about 4 as compared with 1914. Last January it appeared to be about $3\frac{1}{2}$, and from recent contracts, we may infer that the co-efficient 3 is about normal for the present moment."

Senator Vinck reported for Belgium that at the period of highest cost, building rates were five or six times those of 1914, and that they had now dropped to 4 or $4\frac{1}{2}$. It was said that in Holland the peak rate was about 3 times the pre-war rate and that the present cost was about twice that of 1914.

The American figures submitted in a paper by Mr. John M. Gries, Chief of Division of Building and Housing, U. S. Department of Commerce, resemble those of Holland and would do so even more closely if the cost of a house were given instead of the cost of materials. "The building material price index, using 1913 as 100, rose to 310 in March 1920, and went down to 156 by August 1921. Wages in the building trades are now relatively a little higher than materials."

An Austrian delegate stated that the fluctuations in the value of Kroner had become so fantastic that they had stopped trying to express the value of a house in money and described it as representing so many hours of skilled or unskilled labor.

Of supreme interest to visiting delegates were the excursions arranged for us by our English hosts. The third day of the Conference was spent at Welwyn, where the new Garden City is rapidly taking form. It has now about twelve hundred inhabitants and a large amount of building is going on, chiefly by public utility societies.

Welwyn is being developed more compactly than Letchworth, the widely scattered building permitted at Letchworth involved an unnecessarily large initial expense in water mains, sewers and paving, and so delayed the beginning of dividend payments. Not more than ten dwellings to the net acre are permitted—i. e., excluding streets and other public open spaces.

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The agricultural belt, including the dairy farm, is being very well managed, I understand, by the Agricultural Guild.

In one corner of Welwyn extends the *Daily Mail* Model Village, which perhaps might be more accurately described as a village of model, or sample houses, of which there are 41 representing 16 systems of construction. This public try-out has undoubtedly been of considerable use in helping to crystallize the opinion of home-seekers, as well as of architects and builders, in favor of two types—the old standard bricks and the Winget blocks composed of crushed clinkers and cement, which in most localities run a trifle cheaper in the making and require less skilled labor for building.

Although the Conference came to an end officially on 16 March, most of the delegates stayed on for the excursions arranged for the two following days. The first of these was to Letchworth (which now has about 12,000 inhabitants), with a look on the way at Hampstead Garden Suburb, while the second was divided between an interesting small development (120 dwellings) for dock laborers on the Isle of Dogs (near Greenwich) erected by the Poplar Borough Council, and the huge undertaking of the London County Council at Becontree (also known as Dagenham). Both showed excellent standards of housing, and a pleasing, though severely plain style of architecture. The Becontree Estate of 3,000 acres (largely in market gardens before the London County Council acquired it) was planned for 20,000 houses and a population of 100,000. The retrenchment policy of the national government has called a halt on the work for the present, beyond the completion of the 2,874 houses already finished or under way in the Ilford section. Even this, it will be granted, is a very big piece of work. But the impression prevails that the whole scheme will be carried out eventually.

Indeed that is the prevailing spirit of England in regard to housing. Abnormal demand and excessive haste drove prices unreasonably high. A halt was wisely called. Prices have already fallen and will doubtless fall still more. More than 200,000 dwellings will have been completed by the end of 1922. That the remaining 300,000 of the original program will soon be undertaken under some modified form of government aid, no one seems to doubt.

EDITH ELMER WOOD.

Current Notes

The magnet-like power of our great civic centers tend to inflate land values and thus increase the cost of housing. As a result the inhabitants of our cities must live in more and more inadequate quarters. Centralization and uncontrolled land speculation have an equally baneful effect on the art of the theatre.

Mr. Lee Simonson, the talented scenic director of the Theatre Guild, in speaking before the Architectural League of New York a few weeks ago, said: "The art of the modern scenic designer is cramped and crippled by the inadequate size of our New York stages. We get results in spite of our limitations. Why are these stages not built to give the artist an opportunity to do

expansive work? It is because the theatres of New York are erected not for the purpose of fostering theatrical art but to make a quick return for some speculator. Practically every playhouse in New York is between 41st and 49th Street and within a block of Broadway. It is the Ghetto idea—they must all huddle together. As a result, land values are sky high—and space is too valuable for the owner to afford adequate stage space. So the art of the theatre suffers that a few speculators may make their pile."

Somewhat the same thought is expressed by Walter Pritchard Eaton in *The Freeman* of 5 April: "It might be worth some reformer's while, if he really desired to improve our drama, to look into the economics of Broadway. In spite of the great increase of late years in the number of theatres, rents have continued to rise, reaching their peak a season ago. . . . Roughly speaking, the minimum rent per week for a desirable Broadway theatre is \$4,000. The producer of a play has to guarantee that amount. . . ."

"Is it any wonder that certain theatrical producers have ceased to produce, and have become real-estate speculators, letting the other fellows put on the plays, while they pocket the rents? On Broadway, too, speculation has reached, at some points, ridiculous limits. There are houses built on land leased from a man who leased it from a man who leased it from a man who leased it from Astor, and each lessor, save the last, does and has done nothing to increase its real value. They merely feed on the public."

New York's hope of relief from subway congestion is not improved by the hearings now being held before the Transit Commission. President Frank Hedley of the Interborough declared that the facilities can not be increased until 1926 sufficiently to decrease crowding. "In fact," he said, "the congestion will from year to year get very much worse than it is and it is bad enough now." It is apparent from the figures he gave of provisions planned by his company and the number of passengers it expects to carry, that it does not plan to catch up with the growing traffic. We quote the figures from the daily press:

	Cars Operated	Passengers Carried	Per Car
1921.....	1,935	639,385,780	330,000
1922.....	1,935	670,500,000	346,000
1923.....	1,985	725,000,000	365,000
1924.....	2,085	775,000,000	372,000
1925.....	2,185	825,000,000	378,000
1926.....	2,285	880,000,000	385,000

This looks bad to the poor straphanger who only can find room for one foot at a time on the crowded subway floors. Apparently transit is no way out of the dilemma that the bad planning of our cities has developed.

"Zone Your Own Home"

"If the citizens of Philadelphia who 'own their own homes' wish to protect them from the many invasions which destroy their value, they must call upon the officials of their city government to provide this city with a zoning ordinance." This was an opinion given yester-

WHO IS AN ARCHITECT?

day by Milton B. Medary, Jr., architect and member of the Zoning Commission, in speaking of certain conditions that are damaging to the value of residential properties. "Zone your own home," said Mr. Medary. Explaining the situation, he said:

"Several years ago great publicity was given the phrase 'Own your own home.' Many arguments were advanced in favor of owning one's home, and, as the housing shortage became more and more acute, due to the suspension of building activities, threats were added to arguments, until it became a question of 'own your own home' at any price which happened to be asked, or do without a home.

"Of the thousands forced into buying at apex prices the great majority could actually own only a small equity in the homes purchased. This equity generally represented all of the owner's capital, and it is this equity which is in jeopardy as soon as the cost of building material and labor recedes, or as soon as any other element is permitted to interfere in any way with the value of property. This equity represents the profit of the speculator, and is the first amount to be written off as total loss. The only hope of preserving it is to maintain the value of the property, and the first step toward maintaining its value is to withdraw it from the field of speculation.

Preserve Residential Districts

"This is accomplished to a large degree by regulating the height, use and area of buildings by zoning ordinances such as have been enacted in many cities throughout the United States. These cities have learned that in order to make it safe to 'own your own home,' it is necessary to 'zone your own home.'

"A sentimental appeal was put forth by one of the enemies of zoning in Philadelphia, on behalf of the widow who wishes to conduct a small business enterprise in her home. It is obvious, of course, that if any hardships of this sort would result from the ordinance as written, exceptions could be made which would correct this condition without abandoning the great protective value of zoning throughout the city. Nothing was said by this objector of the widow of the workingman, whose entire estate consists of the small equity in his home, one of the units in the rows upon rows of small houses which have made individual and self-respecting family life possible in Philadelphia for workers of small income.

"It is into these blocks of small homes that the butcher, the baker and the undertaker come, with their contemptible little shops, built of corrugated sheet iron, extending out to the sidewalk, simply because they can buy these houses for less money than a similar frontage on the commercial street a block farther on, and, by covering them with projecting signs, hope to attract the eyes of the shoppers passing along the commercial street or going to and from their homes. The gain of the shopkeeper is at the expense of his neighbors, who must suffer the loss in the value of their property without redress.

Know Your Neighborhood

"In some localities it is right and proper to change from domestic to commercial use, and, when this is reg-

ulated, it is to the advantage of all concerned, but without regulation the properties adjacent to a commercial district are always exploited.

"The zoning of a city is in no wise different from applying the same principles in your own home. Every housekeeper knows the necessity for arranging the affairs of the home in an orderly fashion. Provisions and supplies must be brought into the house and the waste removed without interference with the living quarters of the home; the heating plant must heat without filling the house with smoke and soot, and the kitchen must serve for the preparation of food without filling the living and bedrooms with the noise and odor of frying fat. The individual should realize that, while such conditions would not be permitted in his or her own home, collectively the citizens of Philadelphia are permitting exactly these conditions to exist in their collective home, the city of Philadelphia."—*Philadelphia Record*.

Who Is An Architect?

The first impulse is to turn to our dictionary; if it happens to be the "Standard" you will find that he is "One skilled in practical architecture; one whose profession it is to devise the plans and ornamentation of buildings or other structures and direct their construction."

This does not seem to settle the question, at least in law. As a matter of fact the making of an Architect in some states requires long and serious preliminary and technical training while in another state a man not possessed of the same qualifications may be accepted as an Architect. The first state says he isn't an Architect and the second says that he is. They both say it by a standard of law.

The Royal Institute of British Architects, at a special meeting held in February of this year, seems to feel that an Architect is one who has the qualifications which would entitle him to become a member of that body and that any Parliamentary Bill for registration must limit the right to those persons who have these qualifications. This led to an enlightening debate on "Unification" which appears to mean some provision by which all Architects may find cover. Their problem is a difficult one since if membership in their society is an essential some folks will lose their right to practice if they cannot pay their dues.

We have not solved the problem in our country by Federal act; it is doubtful if we could, even though there were no constitutional barriers in the way. We have twenty-two definitions to date covering that number of states; some day we shall have forty-eight.

The American Institute of Architects has, in the past, met the problem in its own way, as far as related to its membership, but one cannot help speculating as to the future attitude of this representative body. Can the Institute demand anything but the best in granting membership? If it does insist on the highest standards, will not its field be limited to the states requiring the highest standard by law? It seems certain that the "Model Law" adopted by the Institute is a rule that it must

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use in testing the qualifications of candidates for membership.

It seems also fair to assume that a person calling himself an Architect in a state where the lawful use of the title does not meet the accepted standards of the Institute may not be accepted for Institute membership unless such person can pass the examinations and requirements of the state having the maximum standard.

The architects have the companionship, in their journey, of lawyers, doctors, teachers and others classed as members of learned professions. All kinds of expedients have been tried such as "reciprocal transfer;" but one state does not recognize the right of anyone in another state to govern its actions, or to examine its applicants for professional attainment.

One state says that you may be called an Architect if you are a Canadian, but not if you are a Mexican; other states say that you cannot be an Architect unless you have applied for American citizenship. We do not seem to let it bother us as it does our British brothers even though it may be a little confusing to interstate societies.

W. P. B.

Overcrowding of the Profession

The architectural profession, like all other vocations, is certainly overcrowded with incompetent men. No doubt about that,—which is why the policy of discouraging the unfit student to continue is worthy of special commendation. The following public statement has been issued by the largest architectural school in England:

In view of the general discussion which has been taking place recently in connection with the numbers entering the Architectural profession, and the suggestion made that the Schools are unduly encouraging students to enter a profession in which there is little chance of their obtaining a reasonable livelihood owing to its already overcrowded state, the Council of the Architectural Association has asked me to issue the following statement as to the steps taken to ensure that only those who show an aptitude for Architecture, and are likely to become efficient and useful members of the Profession, are allowed to enter or remain in its Schools.

In the first instance, no candidate's application for admission will be considered unless he or she has attained to a good standard of general education, equal at least to the Senior Oxford or Cambridge Local examination, or London Matriculation. Applicants who produce the necessary evidence of having reached the standard of general education required, are interviewed, and at once advised if it is considered that they are not fitted for the Architectural profession.

Approved candidates are allowed to sit for the Entrance Examination, which consists of the following subjects:—
1. English Composition. 2. Freehand Drawing from the Cast. 3. Mathematics (Algebra, Quadratic Equations). 4. Geometry (Intersections of Solids). A "Pass" must be obtained in subject 2, and in any two of the remaining subjects.

It is not suggested that the examination is an infallible test of the candidate's suitability, but it does afford an

opportunity of obtaining, at least, some indication of the ability and type of mind of those sitting for the examination, and a fairly broad view is taken in arriving at a decision as to which candidates are to be admitted and which not.

Those entering the School do so on a year's probation, and if they do not justify their admission during that period they are asked to leave, and are advised to take up some other calling.

I think it will be seen that it is not an easy matter for a student to enter our Schools, and that it is not the case that admission is granted haphazard to anyone who cares to ask it, irrespective of suitability for the profession of Architecture.

If the Architectural profession is overcrowded, it is certainly not overcrowded with well-trained men, and as evidence of this I may state that even during the worst times there is little or no difficulty in obtaining paid employment for those leaving our Schools on completion of training.

WILLIAM G. NEWTON,
President the Architectural Association.

Association of Collegiate Schools of Architecture

Ninth Annual Meeting—First Notice

The ninth annual meeting of the Association of Collegiate Schools of Architecture will be held in Chicago on 6 June, 1922, on the day preceding the opening of the annual convention of the American Institute of Architects.

A further announcement will be issued giving more complete information as to time and place, but probably there will be a morning meeting on the sixth at ten or eleven o'clock, followed by afternoon and evening sessions.

The meetings are open to all who are interested in the education of the Architect, but the Association wishes especially to extend a cordial invitation to all teachers of architecture to be present and to participate in the discussions.

CLARENCE A. MARTIN,
Secretary-Treasurer.

The Amended Registration Law in New York State

It will now be possible for competent architects who were in actual practice in New York State prior to April, 1915, to obtain registration certificates without examination if their applications are filed before the end of the current year, 1922, and on condition that they satisfy the Board as to their qualifications. All such architects may continue to practice without a certificate if they so desire. The amendment of the law does not affect the requirement in this respect, except to provide that every architect practicing without a certificate will have to file an affidavit that he was in bona fide practice one year before the law was enacted.

RESTORING THE FINE ARTS INSTITUTE—CHICAGO

An annual fee must now be paid by every registered architect in the State. This amendment was made at the request of the Regents, to prevent fraudulent use of certificates and keep the list of registered architects accurate. The annual fee for reregistration is \$2.00, payable on or before 1 September.

The law now defines an "architect" as "one who designs plans for structures and superintends or supervises their construction."

All registered architects are subject to heavy fine if they do not have recorded in the office of the County Clerk in the county of residence, their certificate of registration and have it stamped by that official—fee \$1.00. In case of loss of the certificate the Board of Examiners should be notified.

Correspondence in reference to the registration law and requests for application blanks, or information relative to the law should be addressed to the Board of Examiners and Registration of Architects, Education Building, Albany, New York. Payment for registration and annual reregistration should be sent to the same address.

Restoring the Fine Arts Institute-- Chicago

At its last meeting, the Illinois Chapter received a report from its Committee on Municipal Art, Zoning and Town Planning, to the effect that the Second Congressional District, Illinois Federation of Women's Clubs, had received pledges amounting to \$5,000 for the purpose of restoring the northeast corner of the Fine Arts Building, an account of which was given in our last issue. Three other illustrations of the building appear in this number.

On receipt of this most encouraging report, the Chapter adopted the following resolution:

That the American Institute of Architects, Illinois Chapter, extend its thanks and appreciation to the Second Congressional District, Illinois Federation of Women's Clubs, for this conspicuous public service and appreciation of Municipal Art, thereby taking the initiative in providing means to restore the first part of this historic structure.

WHEREAS, this act is further significant inasmuch as it undoubtedly paves the way to restore and rehabilitate the entire structure making it ready for use and perpetuating an enduring memorial to the World's Columbian Exposition, America's greatest art achievement.

Be it further resolved, that authority be given by the American Institute of Architects, Illinois Chapter, to the Municipal Art, Zoning and Town Planning Committee to accept the funds appropriated by the Second Congressional District, Illinois Federation of Women's Clubs and enter into contract when sufficient money is available to erect the corner mentioned.

Obituary

Octavius Morgan

Elected to the Institute in 1900, Fellow in 1909
Died at Los Angeles on March 29, 1922

Letters to the Editor

MUMBO JUMBO

To the Editor of THE JOURNAL:

In the course of some researches in architectural history at the British Museum last summer I happened upon some records so interesting, although incomplete, that I transcribed them. Quite recently, a chance encounter with some African fetish lore stirred a chord of memory, and upon looking up my Assyrian notes I found a parallel so singular and suggestive that it seemed worth while to make it known to those who take an interest in such matters. To make the Assyrian chronicle more acceptable to the reader who finds an archaic flavor repellant, I have translated and sometimes transliterated many words and expressions into everyday English. For example, as an equivalent for the Assyrian "He who is shod as with velvet" I have given "gum-shoe artist"—a colloquialism of general comprehension. "Pussy-footer" is an attempt to render the sense of a Babylonian expression, current also however in Nineveh, "He who walketh the tiles in silence." With such exceptions, the suppression of extraneous detail, and a rearrangement of the subject matter in accordance with the laws of English composition, the record is unchanged.—*H. Van Buren Magonigle.*

The African savage, carving the idol before which he later prostrates himself, seeing the chips fall from the tool he uses, seeing the miracle the tool performs in transmuted the lifeless log into an object of worship, may very likely in his simple savage way endow the tool also with the attributes of godhood and, his task completed, enshrine idol and tool together and fall on his face in awful adoration. His dim logic carries him no farther back than the tool; his defective sense of cause and effect mercifully simplifies his problem and spares him the complications of confounding idol, tool and self in a savage trinity.

How far removed from our African savage was the Assyrian Academy of Architects? (The approximate designation of the national body of architects in Upper Mesopotamia.) How far did it confuse the tool with the god of the guild? With the superior logic of a superior race did it enshrine the tool maker with the tool, beside the god? And further, in this confused worship, did the nature, the very identity of the god itself suffer a change?

It would seem from the chronicle, that the profession of architecture was once practiced in Assyria by gentle persons of artistic inclinations, who thought, and spoke, and wrote of architecture as an art; men who placed the work above the material reward and undertook only a volume of work they could give their personal supervision as artists. As life and living became more complicated, as the demands upon their powers of practical invention became more insistent, as their field of action broadened and their relations with the men of affairs and the leaders of the vast commerce of the Mesopotamian basin became closer, and problems arose in their professional life in which they needed the counsel of their fellows, they drew together in organizations for the interchange of ideas and for the strength that lies in union. They would appear to have still been artists, practicing architecture as an art.

As time went on they found they needed professional tools to work with; and year after year they gathered about the forge and hammered out schedules of professional charges, and codes of ethics and of competition. But they recognized them as tools, mere tools, for the fairer fashioning and better service of the god of their guild, the god of their reverence, the Art of Architecture.

Then, it appears, the infiltration of another type began—earnest men of a so-called practical class, who, new to the

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work, seeing these tools, their importance, growing weight and size, fell to polishing and sharpening them; and mistaking their function, confusing means and ends, conceived tool-making to be the end; so they made new tools to whet and burnish, invented new uses to make new tools necessary; for, not being artists, they could not see what in architecture there would be left to do if the tool-making industry ceased, and the very sweat that ran into the eyes of these busy workers took on the precious quality of a sacred ichor. And many other men, carried away by the enthusiastic contagion of the atmosphere, yearned to be practical too, shed their upper garments, spat in their palms, and let the sweat obscure their vision also.

Presently came the great war with Babylon, and with it came Organization with a great O, and Method with a capital M, and System with its portly S, and new sizes and kinds of cylinders for recording everything with meticulous impartiality, whether trivial or important, in clays and enamels of different colors for each different shade of meaning or purpose and all the like paraphernalia of a bureaucratic experience. And these were new tools, to be piled up before and around the forgotten god. And then, with grim fatality of logic, the tool makers began to be confused with the tools. The Art of Architecture having been pushed to the back of the shrine—now much enlarged and improved—the merchant, the overseer of the workshop, the scrivener of specifications, the keeper of accounts, were given places on the commodious altar, where they could admire each other at ease or contemplate the profundity of their own navels with infinite satisfaction; and softly, very softly, moving with the trained stealth of the semi-professional lobbyist, the gum-shoe artist and the pussy-footer mounted unobtrusively but firmly to their places with the others. And the rank and file of the guild, dazzled by the glitter of the burnished tools and the whiteness of the white cylinders, awed by the rich splendor of those in red enamel, the austere beauty of the blue records, and impressed by the smart and practical air of the other new gods, fell on their blind faces and worshipped.

And as they crouched before these false idols, the voice of the true god, the voice of their Art, was heard, like a silver bell through the clatter of a thousand typewriters, saying, "How long, oh god of light, how long! Will those who loved me, and who love me still, arise some day, sweep this sanctuary clear, and reveal again that beauty before which, with humble, tremulous, and adoring hands they tended the flame of sacrifice? Will my worship ever come into its own again?" And then the voice of the god rang out over the serried cruppers of the prostrate worshippers: "Tell me, men of the Assyrian Academy, where is art in your ritual? Where are your artists? Read your scroll of Headmen, Councillors, and Leaders! Read your Conclave programs for the past ten years! Read the programs of your provincial assemblies from Ninus in the north to Tereodon in the South! Read the bulletins of these minor assemblies, those of you who have them. Read your official screed and record and see whether or not it reflects with the pitiless accuracy of a perfect piece of journalism the present spirit, aims, and vision of your Academy! Then ask yourselves whether my worship is neglected, forgotten, and the instruments of my cult erected into gods that crowd my very shrine. Where is my place, the place of your Art, in your lives? Where are my servants and worshippers, the artists, in your councils? Do you want an Academy of Architects, or of merchants and pussy-footers? Perhaps the architects of Assyria prefer business to Art. But in other days it was not so; then, my worshippers, being artists, had a sense of proportion; they knew the difference between the means and the end; they knew that this Acad-

emy has more than one function and that chief among these is the preservation of my worship—a sacred trust in a materialistic age. Fail in this trust and you fall below the scorn of men! Lift up your heads! Look before you! Measure and weigh your drift and tendencies, and the kind and quality of your leadership, and the worth and glory of the goal toward which you blindly follow! Ask yourselves whether you have had enough of tool worship and of Mumbo Jumbo!"

And there fell a great silence as of thought in the temple and . . .

Here the characters were defaced and illegible and further search for the continuation of the chronicle proved fruitless.

Housing in New York City

It will be of great interest to our readers, as well as to students of the housing question the world over, to know that following upon the exposition of tenement house design by Mr. Andrew J. Thomas in these columns, and the collateral studies of the economics of housing as presented by Mr. Frederick L. Ackerman, also in these columns, announcement is now made that the Metropolitan Life Insurance Company is to build some four story tenement houses after the designs of Mr. Thomas, Mr. D. Everett Waid of New York City being associated with him in this work.

News Notes

THE twenty-fifth architectural exhibition of the Philadelphia Chapter, American Institute of Architects and T Square Club will be held at the galleries of the Art Alliance, 1823 Walnut Street, Philadelphia, on 14-28 May, 1922, inclusive. All communications should be sent to R. J. Wadsworth, chairman, 204 S. Quince Street, Philadelphia.

THE ILLINOIS CHAPTER has instructed its Educational Committee to work out a plan for providing speakers on architectural subjects for other organizations, to prepare a list of the members of the Chapter who would be available for such work, to obtain the consent of persons so listed, and when these arrangements have been made, to send out a circular letter to various civic organizations in Chicago, calling attention to the fact that the speakers as listed are available.

THE Bly bill introduced in the New York State Assembly "amending the general business law in relation to the Registration of Architects," was passed by that body during the recent session. It provides for the registration of all architects practising in the State before 1 January, 1923, and eliminates the term "Registered Architect" substituting therefor the single word "Architect." It contains provision whereby action will be instituted against offenders who use the title improperly. An annual registration fee will be payable at the rate of \$2 per year in addition to the initial registration fee of \$25. This annual registration will make it possible to keep the records correctly. The bill has been signed by the Governor and is a law.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Sound-Proof Partitions. (39a)—(*University of Illinois Bulletin No. 127, by F. R. Watson. Pages 85. Size 6" x 9". Illustrated.*) The bulletin discusses the action and insulation of sound in buildings; records preliminary investigations and experimental investigations to determine the action of various materials on sound, including thin plastered partitions, solid plaster partitions, miscellaneous transmission tests; and describes examples of sound proof rooms, sound proof buildings and the apparatus and methods used in the investigations.

Action of Materials on Sound. When sound waves travelling in one medium encounter a second medium with a different elasticity or density, their regular progression is disturbed. Part of the energy is thrown back in the form of reflected waves, part is absorbed in the second medium, and part is transmitted—the relative amounts depending on the changes in elasticity and density of the second medium compared with the first.

Transmission of Sound. Sound waves in the air may be transmitted through an obstructing medium in three ways. First, they may pass through the air spaces of a porous material. A porous material like hairfelt presents but little resistance to sound. The reflection is small but the absorption in the porous channels may be quite large. What is not reflected and absorbed is transmitted. When air passages through which sound is passing are small in cross section, friction results in a conversion of wave energy into heat. Sound entering a small crack in a thick wall may thus be completely absorbed before emerging on the other side. The absorption and transmission of sound vary with the thickness of the absorbing material but not in direct proportion, for example if one inch of hairfelt stops 10% of the incident sound, two inches will stop 19%, three inches 27%, etc. The absorption of sound is an essential factor in the solution of sound insulation. It is not sufficient to reflect and scatter sound waves for the energy cannot be destroyed in this manner, it must be absorbed, that is: converted by friction into heat energy. (The reflection of sound may prevent its transmission to adjoining rooms but will cause reverberations or noise in the room in which it originated. Ed.)

Second, the waves may be transmitted by modified waves in the new medium. In this process sound compressions and rarefactions progress rapidly through the air, moving the molecules successively as they pass. On reaching a solid partition the forward motion is hindered, particularly

if the molecules of the new material are massive and resist compressions, when most of the energy is reflected and only a small proportion progresses through the wall. On meeting further discontinuity of material, such as wood or air, the waves are again affected until finally a part of the energy emerges. If the sound waves generated in a room meet solid plaster walls of sufficient rigidity over 99% will be reflected because of the wide difference between the elasticity and density of air and solids.

Third, sound may be transmitted by setting a partition as a whole in vibration. The partition will act as an independent series of waves, setting up compressions and rarefactions on the further side and giving a sort of fictitious transmission. If the partition is rigid and massive the vibrations are very small and very little sound is transmitted; if the partition is thin and flexible a considerable amount of energy is thus transferred. In the case, for example, of plaster on wood lath and studding, the plaster areas between the studding act in a manner similar to drum heads and transmit sound. Hard plaster on metal lath present a different surface with a modified action on the incident sound.

Two Types of Sound in Buildings. One type includes sounds that are generated in the air and progress through the air to the boundaries of the room; the other is vibrations generated in the building structure by motors, elevators and street traffic.

Insulations of Sounds in Air. Sounds of moderate intensity such as those generated by the human voice or a violin may be stopped with comparative ease if the walls of the room are continuous and fairly rigid. The more vigorous sounds of a cornet, trombone, etc., would require specially heavy walls or else double partitions. Any breaks in the walls for ventilation, pipes or doors should be guarded by effective insulation.

Insulation of Building Vibrations. Compressional waves generated in the building structure may pass readily along the continuity of solid materials, and, as they have more paths for escape are more difficult to insulate than sounds in air. The insulation is secured by the same method used for insulating air sounds; namely: by interposing a new medium differing in elasticity and density. An air space in masonry would be effective if not bridged by solid material; but since this is impossible for ordinary building construction an approximate insulation is sought by using air filled substances like dry sand, ground cork, hairfelt or flax, that possess but little rigidity but are capable of sustaining a not too heavy floor or partition.

Experimental Investigations of Action of Materials on Sound. Among the various investigations reported in this bulletin, the following are of especial interest:

Experiments of F. L. Tufts, 1902. These experiments included both porous materials and materials impervious to air. The conclusion reached in regard to porous materials was that their resistance to sound was in the same proportion as their resistance to air currents. The following table gives the results of his tests on the materials impervious to air:

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Material	Thickness in cm.	Rigidity*	Transmitted Sound
1. Lead	0.012	0.000106	Louder
Glass	0.012	0.000053	
2. Pine	0.65	0.000013	
Leather	0.65	0.000212	Louder
3. Reinforced brass	0.015	0.00008	Equal
Two thicknesses of cardboard	0.44	0.00008	Loudness
4. 10 sheets cardboard ..	0.70	0.0002	Equal
1 sheet cardboard	0.22	0.0002	Loudness
5. Reinforced brass	0.015	0.00008	
Brass with mass at center	0.015	0.0022	Much Louder
6. Cardboard	0.22	0.0004	Louder
Cardboard with 34 gm. mass at center.....	0.22	0.0004	
7. 3 cardboards separated by air spaces.....	all cut from same sample.		Louder
3 cardboards in contact			

* The numbers in the rigidity column represent the displacement of the discs for a pressure of 1 gm. per sq. cm., the smaller value thus indicating the greater rigidities.

A study of this table leads to the following conclusions: (1) the more rigid glass is the better insulator; (2) the more rigid pine is the better insulator; (3) for the same rigidity the cardboard 30 times thicker than the brass transmits the same amount of sound; (4) for the same rigidity ten sheets of cardboard transmit the same sound as one sheet; (5) the more massive disc with smaller rigidity transmits more sound; (6) for equal rigidity the more massive disc is the better insulator; (7) the cardboards in contact gave a greater rigidity and cut off more sound. The air spaces are thus not as effective as was supposed.

These results seem to indicate that rigidity is the deciding factor, the amount of sound transmitted as an elastic wave being negligible as compared with to and fro vibration of the material.

Work of Wallace C. Sabine. The following table gives the results of the preliminary investigation on sound transmission by sheet iron and hairfelt:

Layers	Hairfelt	Sheet Iron	Sheet Iron and Hairfelt Combined
0	1,000,000	1,000,000	1,000,000
1	270,000	22,700	23,000
2	128,000	8,700	3,300
3	65,000	4,880	700
4	33,000	3,150	220
5	21,500	2,060	150
6	11,400	1,520	88

The sheet iron, because of its great rigidity and mass, reflected much sound and transmitted but little. The reduction of transmission by hairfelt was due largely to its absorbing power. The combination of the two in alternate layers gave the more effective insulation, the hairfelt serving to reduce further the small amount of sound transmitted by the iron.

Investigations of P. E. Sabine. These investigations indicate that flexural vibrations play an important part in transmission. The plate of glass $\frac{3}{8}$ " thick transmitted less sound than $\frac{1}{8}$ " composite structure of two $\frac{1}{8}$ " plates sealed together with a sheet of celluloid. But air spaces between double windows were not as effective as naturally supposed. The air space should not be bridged over by solid materials even at the edges of the glass. Inserting sound absorbers between the glass plates increased the insulation. A steel door $\frac{1}{4}$ " thick proved more effective than a solid oak door $1\frac{3}{4}$ " thick or a refrigerator door 4" thick filled with heat insulation material.

Investigations of University of Illinois. The following data are abstracted from the results of experiments that have extended over a period of seven years at the University of Illinois. The method used remained essentially the same throughout, but the apparatus and conditions were improved greatly for the later tests.

Experimental Results Obtained.

TRANSMISSION AND REFLECTION OF SOUND.

Material	Thickness in Layers *	Deflection of Resonator in cm.							
		Reflection			Transmission				
		0	1	2	3	0	1	2	3
Open Doorway.....	3.9	...	...	...	...	39.4	...	...	...
$\frac{1}{2}$ in. Hairfelt.....	...	4.9	6.6	10.5	...	22.6	15.4	10.4	...
$\frac{1}{4}$ in. Cork Board..	...	15.7	22.0	22.6	...	7.9	3.75	2.9	...
$\frac{1}{4}$ in. Cork Board..	...	25.9	21.2	22.1	...	1.15	2.05	0.85	...
$\frac{1}{4}$ in. Paper Lined Hairfelt	20.7	5.9	10.0	...	5.0	21.7	3.8	...
$\frac{1}{4}$ in. Paper Lined Hairfelt	10.4	6.6	9.3	...	6.5	1.95	0.4	...
$\frac{1}{4}$ in. Flax Board..	...	22.5	20.0	20.0	...	2.25	0.55	0.1	...
$\frac{1}{4}$ in. Pressed Fiber	...	23.2	...	...	...	0.32	...	...	...
$\frac{1}{4}$ in. Pressed Fiber	0.2	...	...	...

The above tests indicate that porous hairfelt transmits considerable sound and reflects but little. Other materials, impervious to air, reflect more and transmit less. The reflection increases with increasing thickness but tends toward constant value, indicating that the reflection does not take place entirely at the surface of a porous material but requires a certain thickness to give the maximum value.

It will be noted that two layers of paper lined felt transmitted more sound than one layer, also, the reflection was less for two layers than for one. The explanation is that the two layers vibrated under the action of the sound so that the transmission was disproportionately large. This is the usual case in building construction where partitions vibrate more or less under the action of sound and give unexpected results. The obvious procedure to avoid this complication is to use rigid partitions and minimize the vibration.

Investigations of Thin Plaster Partitions. The materials tested varied in structure from porous hairfelt to plaster coating on wood lath.

Deflections of Resonator For Transmitted and Reflected Sound.

Material	Transmission	Reflection
$\frac{1}{2}$ in. Flax, burlap-lined	69.4	5.2
$\frac{1}{2}$ in. Hairfelt	59.7	6.0
$\frac{1}{4}$ in. Paper-lined hairfelt	35.2	14.7
$\frac{1}{4}$ in. Cabot Quilt single ply.....	34.3	15.6
$\frac{1}{8}$ in. Building paper	12.7	32.3
$\frac{1}{2}$ in. Flax board	6.5	26.2
$\frac{1}{4}$ in. Sackett board	0.36	41.9
$\frac{3}{8}$ in. Sackett board	0.26	42.2
$\frac{1}{2}$ in. Sackett board	0.15	42.7

Transmission Obtained with the More Sensitive Resonator.

Material	Transmission	Reflection
$\frac{1}{4}$ in. Sackett board	28.3	...
$\frac{3}{8}$ in. Sackett board	23.4	...
$\frac{1}{2}$ in. Sackett board	9.4	...
2 in. Mineral wool	18.5	16.9
2 in. Gypsum furring strips	6.1	45.8

PLASTER PANELS

Material	Transmission	Reflection
Lime base, gypsum finish	5.2	45.2
Sanded gypsum base, lime finish ...	6.5	45.1
Sanded gypsum base, gypsum finish..	3.5	45.8
Wood fiber base, gypsum finish.....	3.0	46.0
Wood fiber base, lime finish.....	1.8	46.1

The results show that porous burlap lined flax and hairfelt transmit considerable sound and reflect little. Paper lined materials—Keystone hair insulator and Cabot's Quilt

STRUCTURAL SERVICE DEPARTMENT

transmit less and reflect more. Sackett boards are the most efficient sound insulators of the thinner samples, while in the plaster panels those containing gypsum plaster appear to be more effective in stopping sound. This is probably due to the fact that gypsum produces a stiffer, more rigid structure.

Since this series of materials was tested under conditions maintained as uniform as possible the results obtained are valuable for guidance in selecting materials for sound proofing purposes.

Transmission of Sound Through Threshold Aperture. In order to test the transmission through threshold apertures a door was built into a 2" solid metal lath and plaster partition. The door was constructed of 2" wooden planks and was carefully fitted into the opening. Door stops were used on the side opposite the source of sound except at the threshold aperture. The relative intensities of sound calculated from the resonator readings are as follows:

2 in. metal lath partition, before insertion of door	0.93
With door installed with $\frac{1}{8}$ in. threshold opening	7.3
With door installed with $\frac{1}{2}$ in. threshold opening	11.7

While the results probably do not express the exact intensities of the transmitted sound because of the diffraction effect of the narrow opening, they give relative values of the effect of threshold openings.

Transmission of Sound by Solid Plaster Partitions.

	Average Deflection	Relative Transmission
2 in. solid metal lath and plaster partition	3.35 cm.	0.93
2 in. Plaster board and plaster partition	8.52 cm.	2.35

Comparative Transmission of Sound by 3 in. Plaster Block Partitions. The partitions tested are described as follows: (a) 3" plaster block partition plastered on both sides, giving a total thickness of 4". (b) 3" plaster block partition plastered on both sides with the air holes in the plaster blocks filled with plaster, giving a total thickness of 4". The measurements were taken in the same manner as for the 2" partitions. The plaster blocks for test (b) were filled with plaster and allowed to dry before erection into the partition. The results obtained are as follows:

	Average Deflection	Relative Transmission
Partition (a)	13.9 cm.	3.85
Partition (b)	4.23 cm.	1.16

The transmission of sound through a plaster partition appears to depend upon its rigidity and mass. Thin partitions transmit considerably more sound than thick ones, largely because they are less rigid and vibrate more easily. Vibrations are set up which may become quite large when the natural frequency of the partition is in tune with the incident sound. Thick partitions on the other hand are more rigid, vibrate less and stop sound largely in proportion to their mass.

Another factor affecting the transmission of sound through a partition is the character of the structure. Compared with a thin partition a thick, homogeneous structure has the advantages of greater inertia and rigidity. The use of an air space completely separating two members of a rigid non-vibrating double partition would have a marked action on sound, and, according to theory, a partition of this construction would stop much more of the sound than a single partition whose thickness equals the sum of the thicknesses

of the two members of the double partition. This is due to the abrupt change in elasticity and density from plaster to air and from air to plaster as the sound strikes the second member. If the air space is bridged over at the ceiling, floor and other points as is usually the case in practical structures, this theoretical efficiency is greatly diminished because the vibrations travel easily along the paths afforded by the continuity of solid materials. Thus the bridged over partition should be considered as a unit instead of two separate members and its efficiency in stopping sound judged mainly on its weight and rigidity.

The core of a partition is another feature of a structure that affects sound transmission. It may be of such a nature as to increase the strength of the partition; it may be simply the central part of a homogeneous medium; or it may so separate the partition into two parts that the structure is weaker than a homogeneous unit. A partition whose strength is increased by such a core as steel reinforcement, would be more rigid than an equally thick homogeneous partition and would stop more sound. The homogeneous partition in turn would be more efficient in stopping sound than the double partition weakened by the core. The latter, however, has some possible advantage in reflecting sound because of the change in elasticity and density in the core.

It should not be concluded from these tests that partitions of similar construction will all have exactly the same sound-proof qualities, for partitions of larger area and lessened rigidity will allow a greater transmission of sound. The results are valuable because they were obtained by tests and direct comparisons under identical surroundings, and not by tests on different types of partitions in different buildings, with varying floor and ceiling constructions, unequal sizes of rooms, uncontrolled extraneous sounds, etc. They give information useful in the choice of materials and constructions where sound insulation is contemplated.

Sound Insulation in the Smith Music Building. This problem involved the sound insulation of some 50 small practice rooms, 12 studios and a larger concert hall besides the acoustic control of sound of motors, fans and elevators.

Since the possibility of transmission of sound was greatest between adjacent rooms, each dividing wall, ceiling, or floor was made double, with air space containing absorbing material, and was left entirely unbroken. All pipes, conduits, ventilator ducts, doors and windows were specially placed in outside or corridor walls where the leakage of sound would be less harmful. This systematic construction throughout the building meant that sound generated in a room must penetrate the insulation to escape. To enter another room, it must pass a second time through a special insulation. When traversing the building structure, a sound would continually meet hindrances that would either stop or absorb it.

The concrete floor, 12" thick was broken in its continuity by the form planks that were purposely left in place. Walls between rooms were constructed of two 3" gypsum block partitions insulated at the bottom by machinery cork and at the top and sides by hairfelt. "Insulite" was installed in the air spaces between the gypsum partitions, to absorb sound and also to prevent a barrier in case cracks developed in the gypsum. The finished floors were floated on a one inch layer of dry sand in order to break the continuity of material and thus stop the progress of vibrations.

Experiments conducted in the building after its completion show that a measure of success attended the design and construction. Loud speaking and shouting in the practice rooms can hardly be heard outside. Music, however, penetrates the insulation more easily so that sound, largely

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diminished, may be heard in adjoining rooms. But this leakage of sound does not appear of great disadvantage since students use adjoining rooms without serious disturbance to each other.

The ventilation system is not as soundproof as desired and appears to be the greatest drawback in the control of sound. Each room is equipped with a separate inlet and outlet duct. Four independent ventilating systems furnish air to four groups of rooms in order to lessen the chance for travelling of sound through one group to others. The ventilation system is now under investigation with a view to improving the insulation.

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Notes on Tuberculosis Sanatorium Planning. (35k)—*Reprint No. 667. Public Health Reports. Treasury Department. Pages 27. Size 6" x 9".*) These notes were prepared by Mr. T. B. Kidner, Institutional Secretary, National Tuberculosis Association, in order to formulate the results of recent experiences and a study of the subject by officers of the Public Health Service, as a basis for the design of sanatoria for the care of ex-service men. Plans are presented for the more essential buildings and a group plan on an assumed site. The following are the principal subjects general administration, patients' quarters, hospital building, must be provided, general lay-out, medical administration, general administration, patients' quarters, hospital building, semiambulant patients' quarters, ambulant patients' quarters, dining halls, service and working buildings, residences for staff and employees, laboratories, community building, occupational and prevocational therapy.

Lime in Construction. (3)—(*Bulletin No. 306. National Lime Association. Size 6" x 9". Pages 80.*) This publication contains a discussion of the following uses of lime: availability of materials, customs of local mechanics, desirable properties of materials, hydrated lime in concrete, lime mortar, interior plaster, exterior plaster or stucco, clauses suggested for inclusion in building codes and specifications, data derived from tests, showing properties of lime in its various applications in construction, tentative specifications of Committee C-7 on Lime of the American Society for Testing Materials, resolution passed by labor union regarding the use of lime in construction.

The Lighting of Piers and Warehouses. (31a13)—(*Bulletin L. D. 111, Lighting Data, Edison Lamp works. Size 6" x 9". Pages 16.*)—In this bulletin the following subjects are discussed: Reasons for Adequate Lighting, General Requirements of Lighting, Choice of Size of Lamps, Piers and Warehouses.

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The Lighting of Textile Mills. (31a13)—(*Bulletin L. D. 110, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 28.*)—In this bulletin the following subjects are discussed: Methods of Illumination, Present Practice, Cotton Mills, Woolen Mills, Silk Mills.

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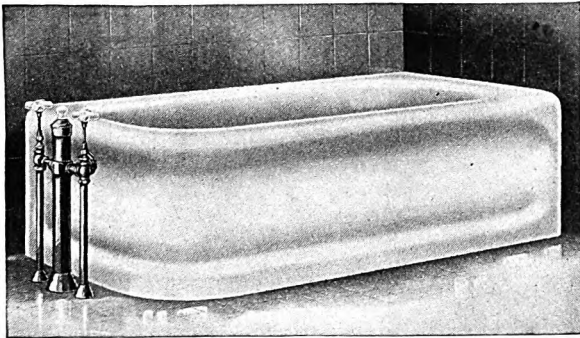
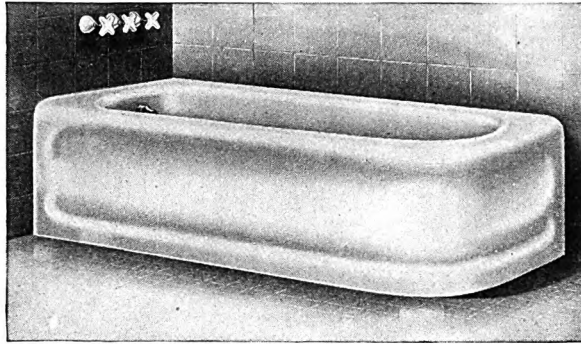
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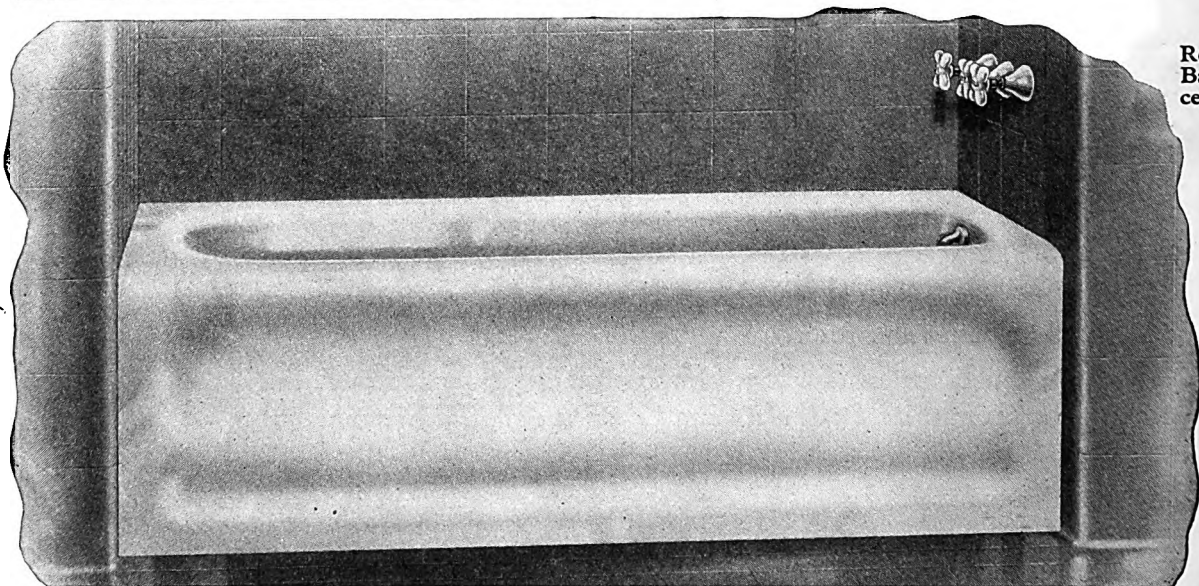
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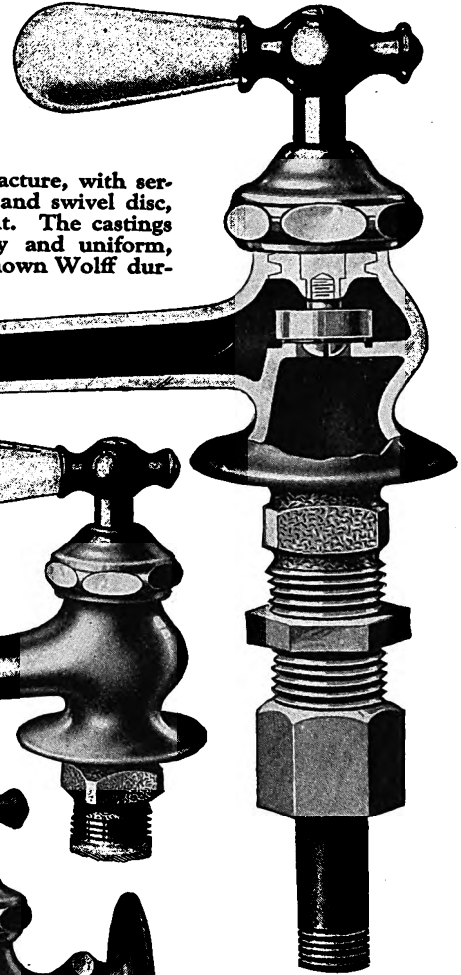
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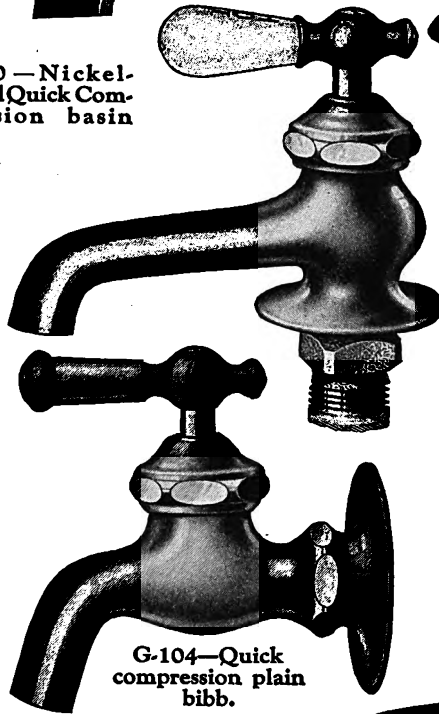
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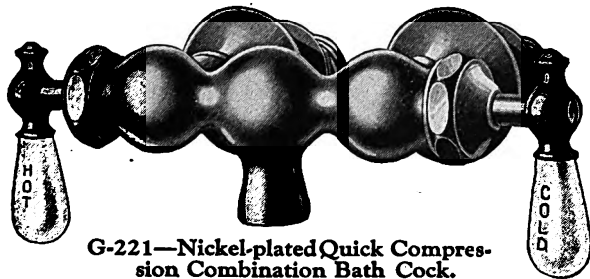
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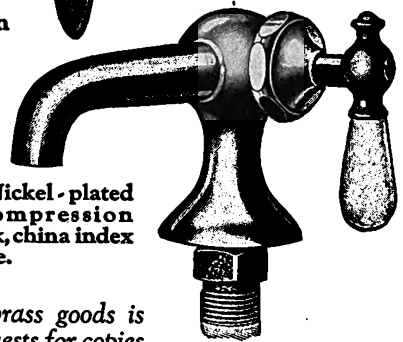
G-200 — Nickel-plated Quick Compression basin cock.



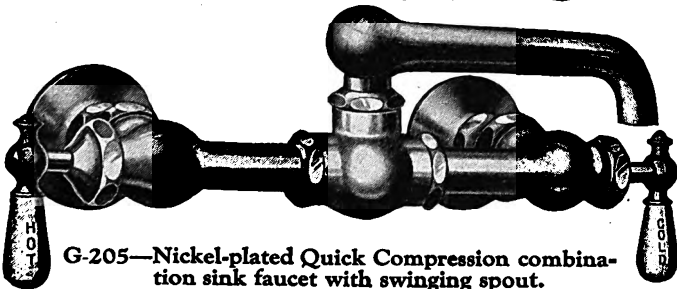
G-104—Quick compression plain bibb.



G-221—Nickel-plated Quick Compression Combination Bath Cock.



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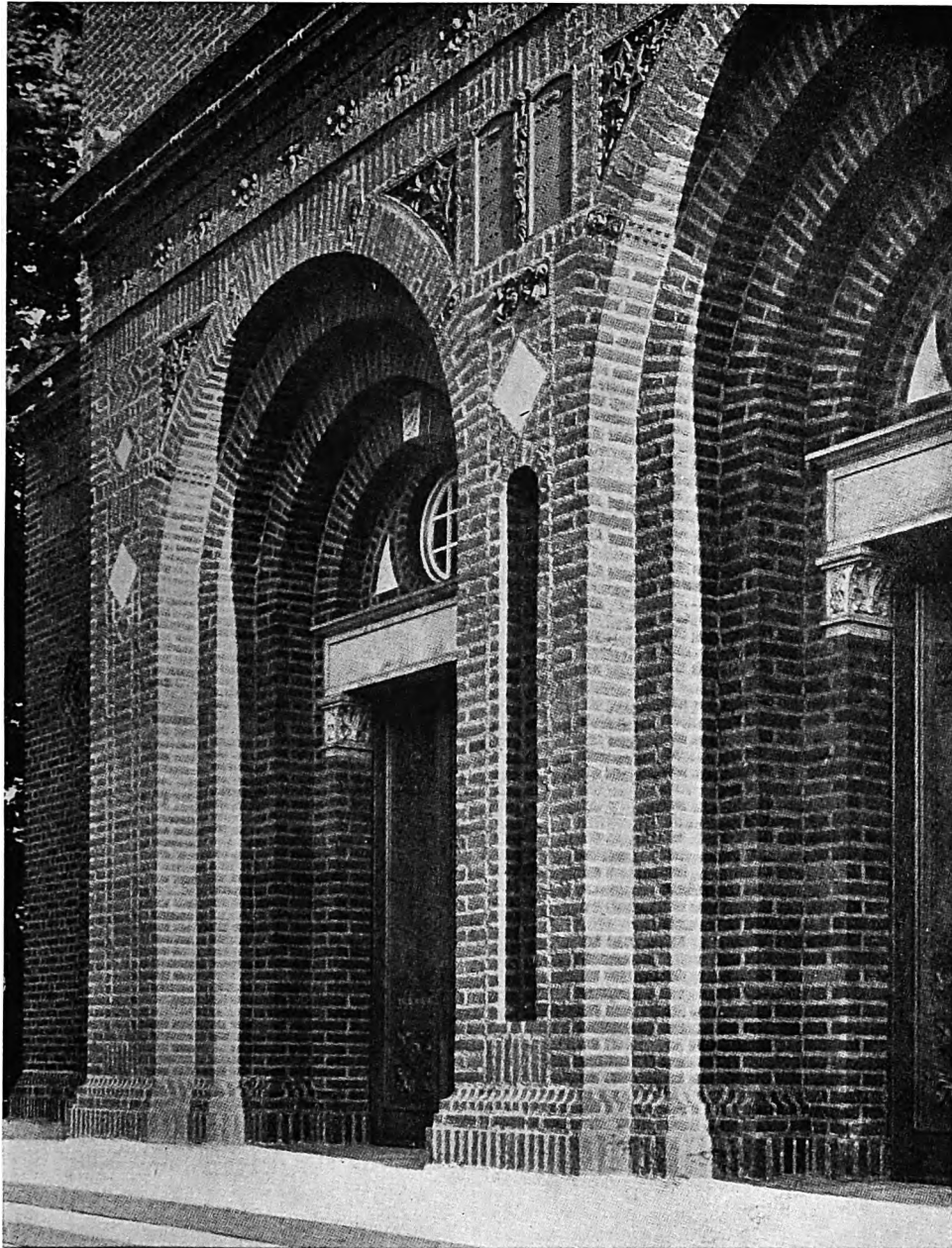
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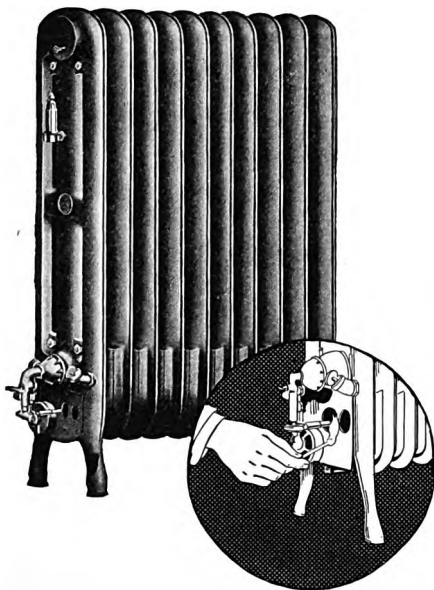
They are economical in operation, because of their unit control, and because there is no waste of heat in sudden changes of weather. As to convenience, they are, of course, unrivaled—no dust, smoke or ash removal.

CLOW GASTEAM radiators are used successfully in all kinds of buildings, large and small, with installations ranging from one radiator to hundreds.

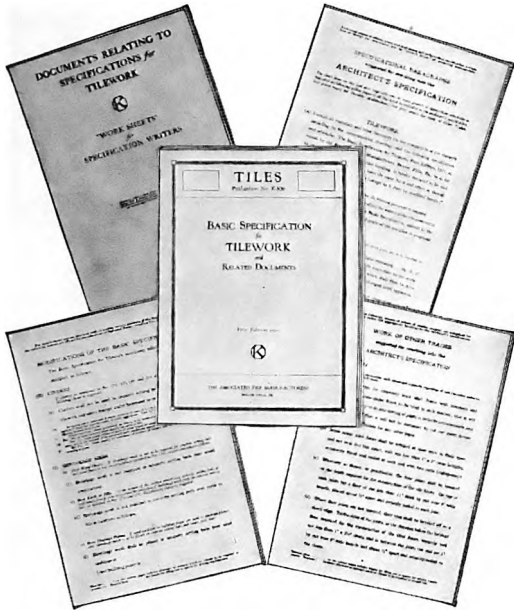
Let us send you the CLOW GASTEAM Handbook for Architects.

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CLOW



A Sensible and Businesslike Document

Publication No. K-300, "Basic Specification," permits a very brief specification to cover almost any Tile installation.

This document, 7½x10½ inches in size, was especially prepared to serve as a record to which architects may conveniently refer, under Tilework, in issuing their own specifications.

"BASIC SPECIFICATION"

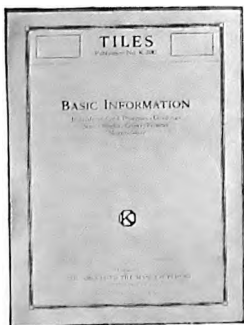
There are four related documents, all available in drafting a specification for each Tile installation. These include:

- Schedules for Tilework and for accessories.
- Specification paragraphs suggested for re-writing into the architect's own specification.
- Paragraphs for suggested modifications of the Basic Specification.
- Paragraphs relating to structural features incident to Tile installation in the work of other trades.

Publication No. K-200—"Basic Information"—is another document prepared for the architect's use, embracing such subjects as Ingredients and Processes, Gradings, Sizes, Shapes, Colors, Finishes and Nomenclature. Tiles are grouped and described, with illustrations. Plates of drawings show relative proportions and classifications.

The documents here described are typical of the co-operative service which The Associated Tile Manufacturers are prepared to give. All of these publications, including several not here mentioned, are designed to accomplish the satisfactory use of Tiles in the most economical way.

Our Swimming Pool book has supplied the fundamental data for the construction of many of the finest pools. This has been credited by architects with being the most comprehensive work on this subject. Like other publications here mentioned, copies will be sent on request.



**The Associated
Tile Manufacturers**

BEAVER FALLS, PA.

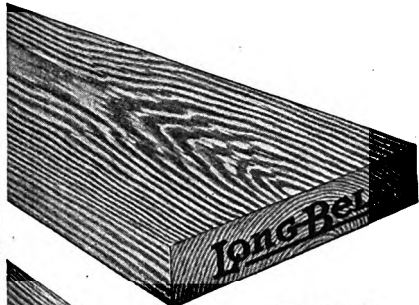


Long-Bell

TRADE-MARKED

LUMBER and TIMBERS

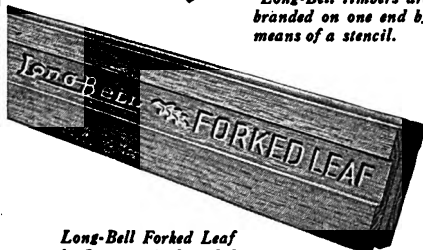
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Long-Bell lumber is branded mechanically on one end, just after it passes the trimmer.



Long-Bell timbers are branded on one end by means of a stencil.



Long-Bell Forked Leaf oak flooring is branded mechanically on the back as it passes through the surfacing machines. The brand is indented.

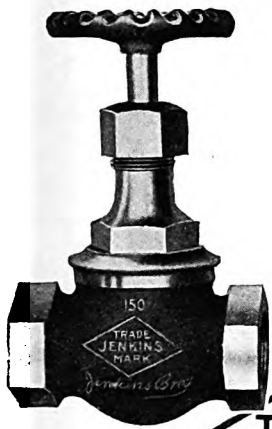
The Long-Bell Lumber Company trademarks its lumber and lumber products for the same reason the manufacturer of good merchandise stamps his brand on his shoes, or hats, or plumbing, or labels his paint or hardware.

Trade-marked goods are known as reliable merchandise. The manufacturer of a good product takes pride in it and naturally wants to be given credit for the goodness he builds into it.

The Long-Bell Lumber Company believes that the buyer of lumber and lumber products is entitled to the same protection that he gets on other merchandise—hence the Long-Bell brand on Long-Bell products.

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However, this committee which is called into daily conference is but one precaution exercised to maintain the high standard for which Jenkins Valves are so well known. Others are: correct

design and proportion; ingredient metals that analyze pure; uniform castings; careful machining; accurate assembly; wide margin tests; and handsome finishing.

Jenkins Valves are made for all requirements. Each is guaranteed for the maximum service, not merely the average. The signature and Jenkins "Diamond" identify the genuine at supply houses everywhere.

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The same note of stability and permanence that has always dominated the architecture of the Old South is again evidenced in the recently completed Federal Reserve Bank Building at Richmond, which is constructed of Indiana Limestone.

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INDIANA LIMESTONE QUARRYMEN'S ASSOCIATION
Box 769, Bedford, Indiana
METROPOLITAN SERVICE BUREAU, 489 FIFTH AVENUE, NEW YORK CITY

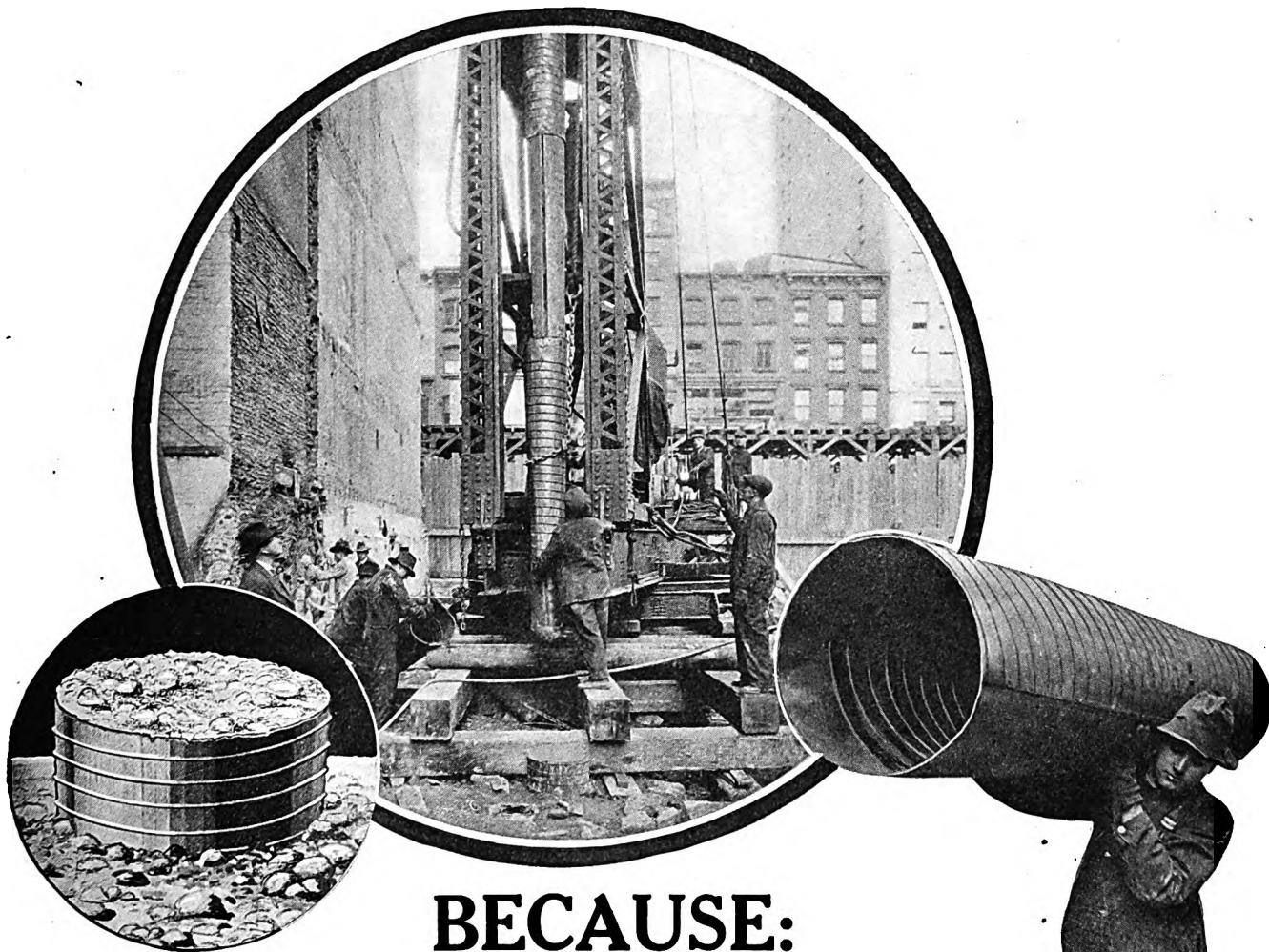
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Why do we cast each Raymond Concrete Pile in a shell of spirally reinforced steel and leave this shell on each pile in the ground?

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BECAUSE:

You simply cannot be certain that the concrete pile column will preserve correct length and taper underground unless it is protected while "setting." This the shell insures. There is no other way of making *certain*. That's why.

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"A form for every pile --- A pile for every purpose"

Carey

BUILT-UP ROOFING

Cedar Rapids, Iowa
March 23, 1922

The Philip Carey Company,
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Re McKinley & Roosevelt Jr.
High Schools



Write for specification book.

The Philip Carey Co.
507-527 Wayne Ave., Lockland
Cincinnati, Ohio, U. S. A.

*"A Roof for Every
Building"*

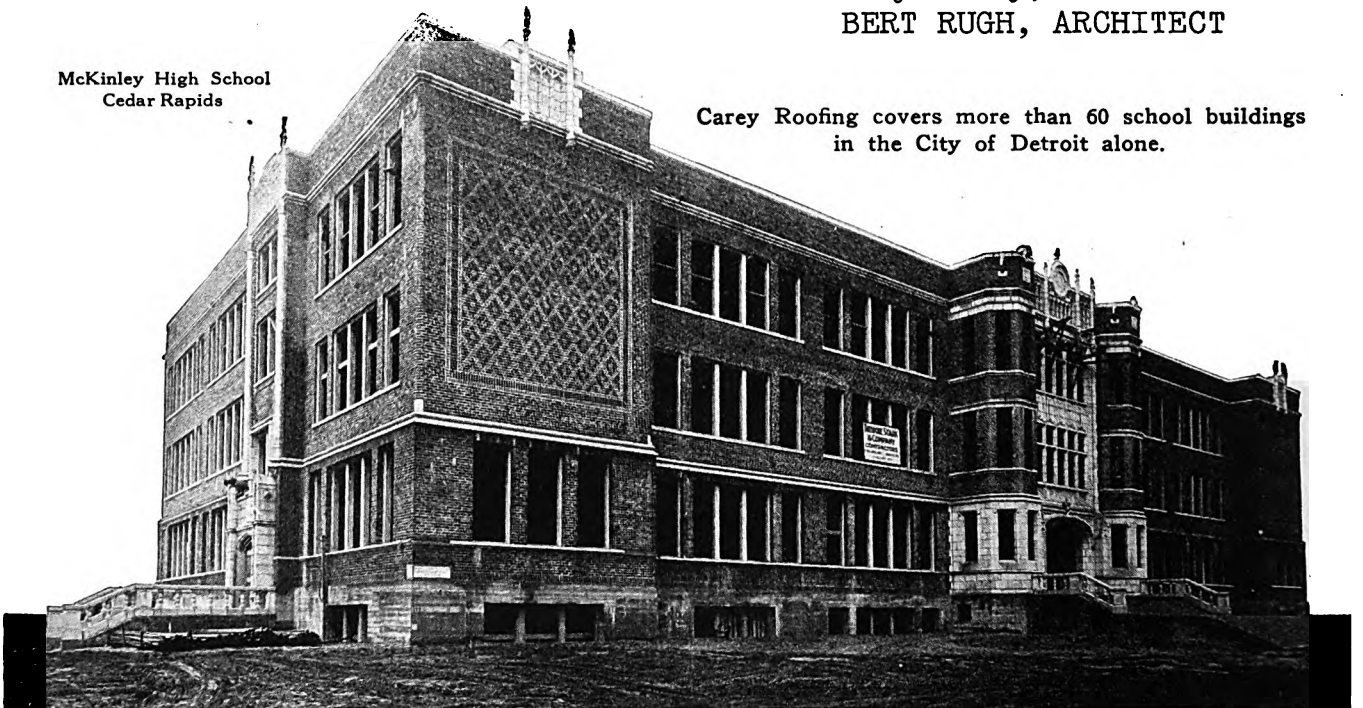
Gentlemen:

Carey's No. 7 Feltex Built-up Roofing is being used on the above jobs. It was specified by us and accepted by the Board as the best roof that could be had for the money. The roof on the McKinley building has been in place about three months, the Roosevelt building roof will be put on in about six weeks.

Yours very truly,
BERT RUGH, ARCHITECT

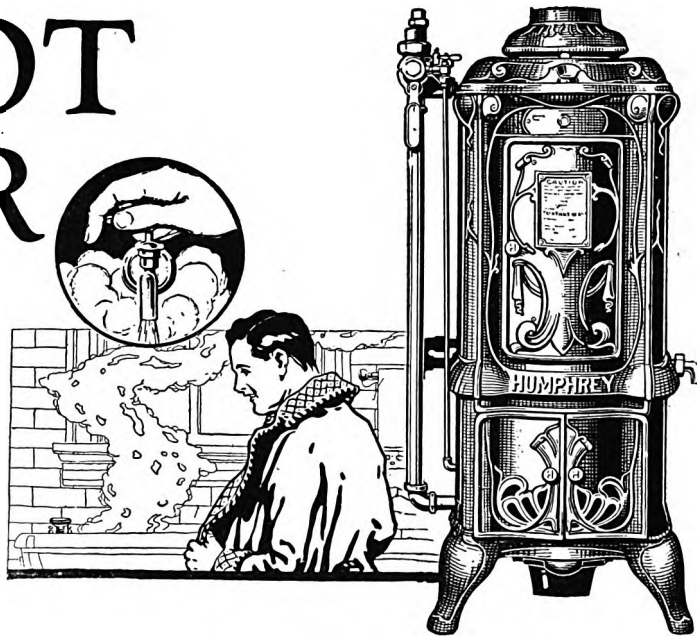
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This automatic gas control saves in two ways—gas is used only when running water is below 140 degrees F. and when faucet is first opened.

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(264)

LUDOWICI-CELADON COMPANY

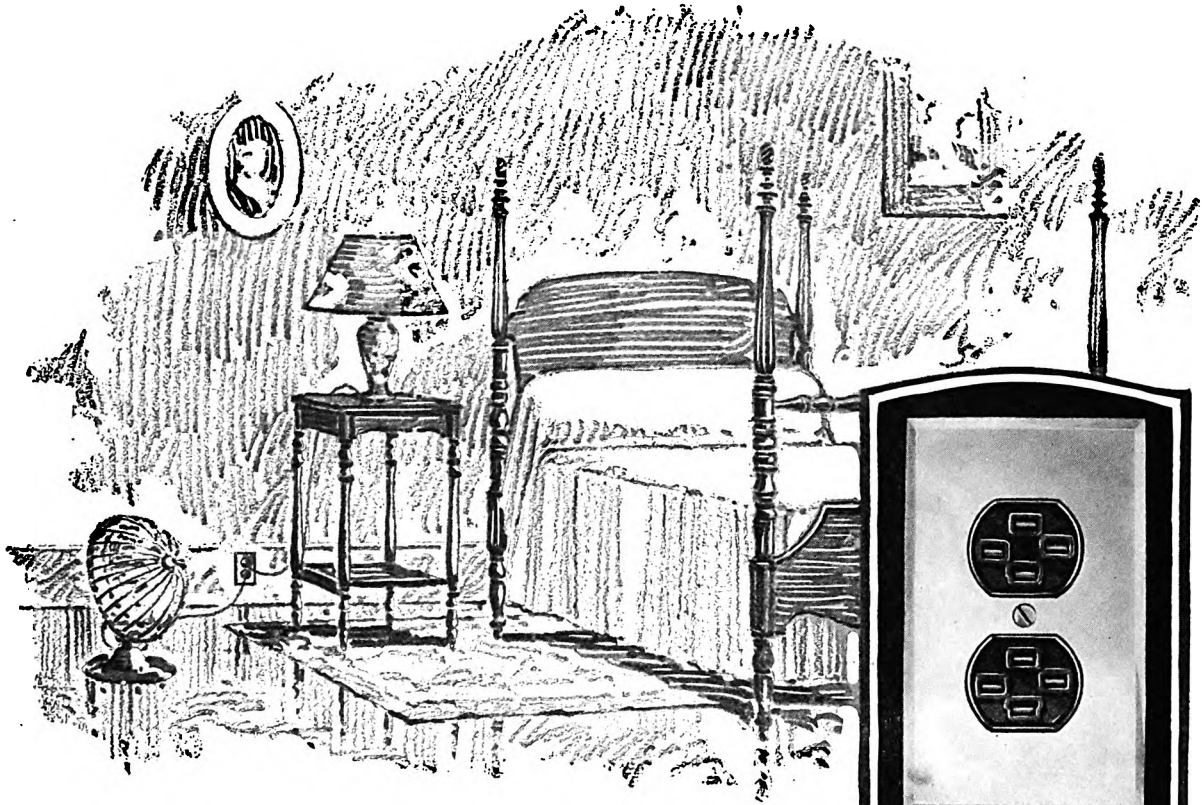
WHEN you come to the roof you want something that will harmonize with the walls—will give character to the building and will be absolutely permanent.

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“Imperial” Shale Roofing Tiles

in various colors and textures
fully meet these requirements.

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The art of anticipating a need

TO the architect is given the task of making a home. His farsightedness is largely responsible for the comfort and convenience to be found in that home when completed.

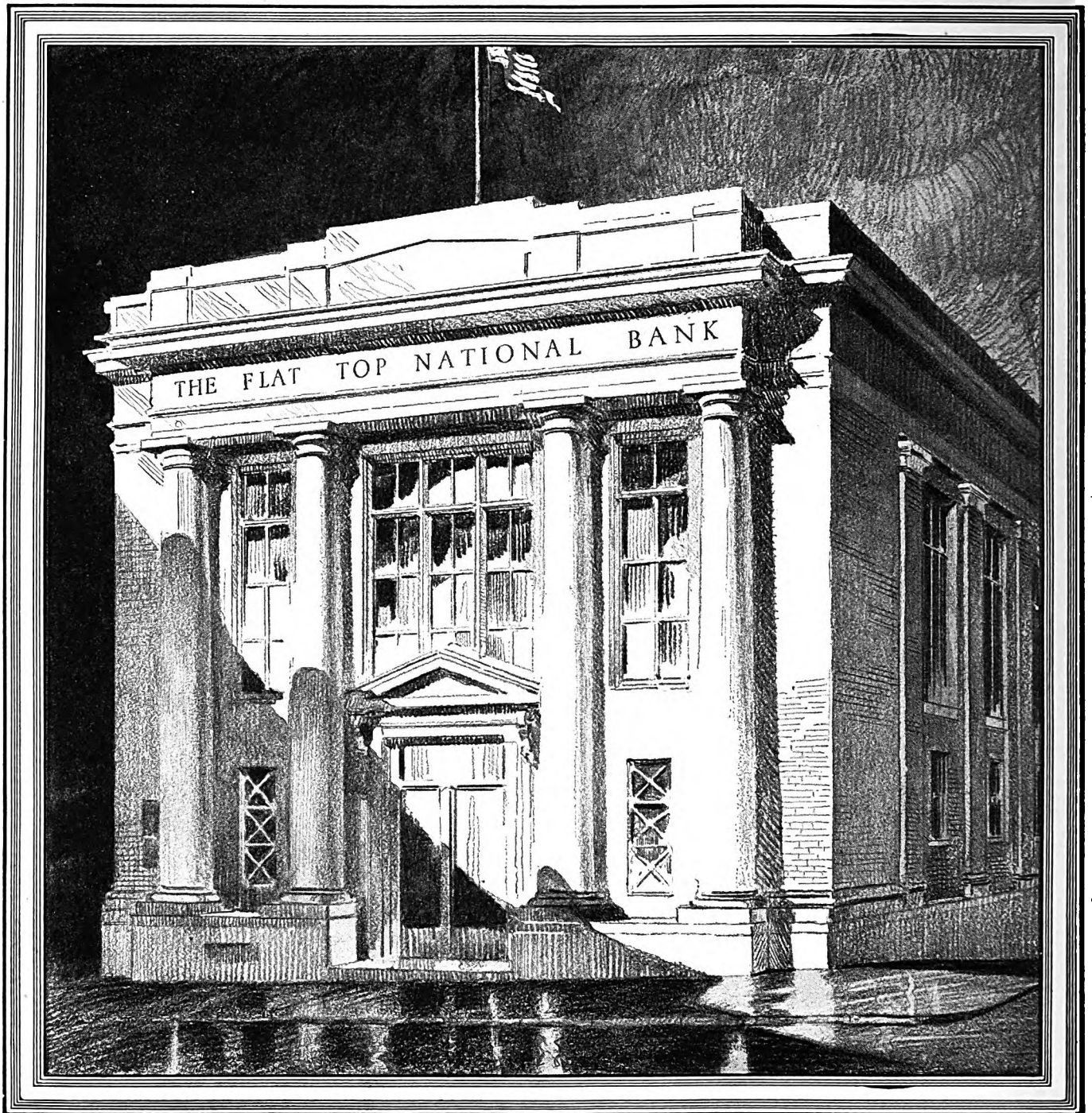
In any home, electricity is a factor of growing importance. The extent of its use depends upon the number of receptacles where connections may be easily and quickly made. Thus the G-E "Standard" Twin Receptacle, being a double duty convenience, promotes electric utility and removes the objectionable long cords and unsightly socket connections which are necessary in a building inadequately wired.

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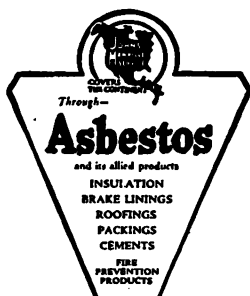


Flat Top National Bank, Bluefield, W. Va. Theodore C. Visscher, Architect

THE only real selling we have ever done among architects has been through performance on the work assigned to us.

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Johns-Manville Building Materials include: Asbestos Built-Up Roofing, Asbestos Ready Roofing, Corrugated Asbestos Roofing, Standard and Colorblende Asbestos Shingles, Transite Corrugated Asbestos Wood, Flexstone Asbestos Shingles and Roll Roofing, Wall Insulations, Acoustical Correction, Pipe and Boiler Insulations, Steam Traps, Radiator Traps, Industrial Flooring, etc.

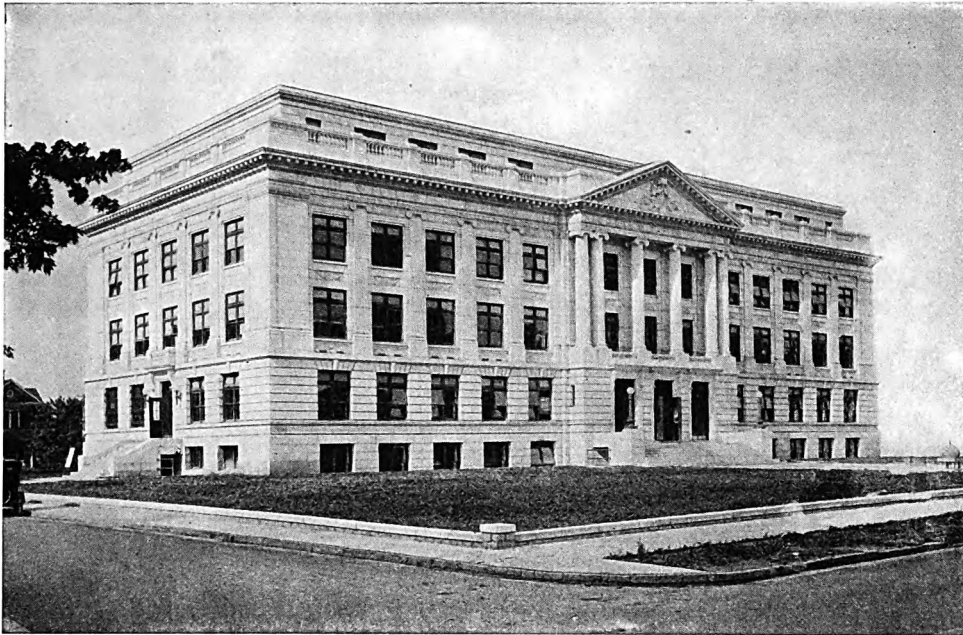


INDUSTRIAL SECTION

JOHNS-MANVILLE Asbestos Roofing

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

May, 1922



ATLANTIC TERRA COTTA panels, column and pilaster capitals, massive pediment, cornice, balustrade, parapet and coping.

When detail repeats hundreds of times, it is well to remember: the cost of Atlantic Terra Cotta per piece goes downward as the number of pieces goes up.

An excellent example of Atlantic Terra Cotta for ornamental and moulded detail, and stone for plain surfaces in the lower stories.

"Questions Answered" on request

Guilford County Court House, Greensboro, N. C.; Harry Barton, Architect; W. P. Rose, Builder. Entirely of Atlantic Terra Cotta above the fourth story, from and including column and pilaster caps; conglomerate in color, taking up with granite of plain surfaces.



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Southern Factory

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A FINE and exceptional sample of the use of architectural terra cotta and faience for a restaurant interior is shown in the above illustration. This building was erected at 16-18 So. Clark St., Chicago, for the Charles Weeghman Corporation, John Archibald Armstrong, Architect.

NORTHWESTERN
is a short form of
specification for archi-
tectural Terra Cotta
of superior quality.

With the exception of the base course, which is jet black, "Northwestern" brown and white duo-tone architectural terra cotta and faience were used for the entire wall facing, the facing of counters and enclosures and the elaborate service tables.

The perfect alignment of courses, the fine joints and the general mechanical excellence, indicate a conscientious care of detail which characterizes "Northwestern" workmanship. The simplest cleaning process will maintain this work in its original brightness and beauty without redecorating or renewal.

THE NORTHWESTERN TERRA COTTA CO.

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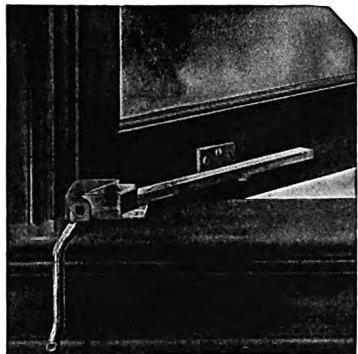


FIG. 1



Casement Operator No. 95

For Hinged Windows Swinging Out

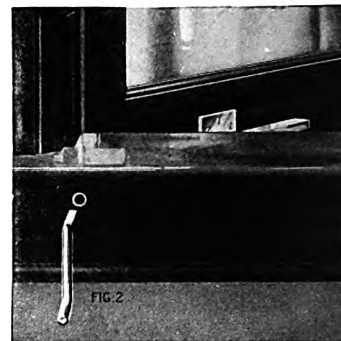


FIG. 2

This device has been on the market nearly six years and has been used in every part of the country and in all sorts of buildings—both public and private—so we will simply state here that a window equipped with this device is always locked in whatever position it is left and cannot be moved except by turning the handle and when closed the window is held absolutely tight; no rattle.

The mechanism being of the screw type develops ample power to handle most any kind of sash up to 2' 6" wide. The driving screw is of steel with double square threads and the traveler that runs on this screw is of cast bronze, thus avoiding the danger of these two parts rusting together.

The slide which runs inside the arm is covered with fiber which makes the device noiseless and also eliminates friction.

This device may be used concealed or exposed. (See Figs. 1 and 2.)

Furnished in Iron Electro Galvanized for painting and in Brass or Bronze Metal.

We recommend that the Electro Galvanized device be used and painted at the job to match the woodwork.

Complete catalogue containing 58 pages sent free to readers of "The Journal."

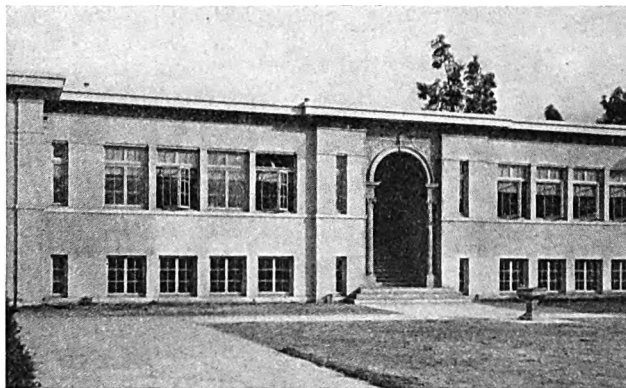
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IN BUILDERS' HARDWARE

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New York, N. Y.

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OUTWARD opening windows, movable to any point between the jambs, weather tight when closed, cleaned from within and easily operated because entirely supported by hangers from above.

THEY are suitable for any type building but are particularly adapted for schools because they permit the exact regulation of ventilation.

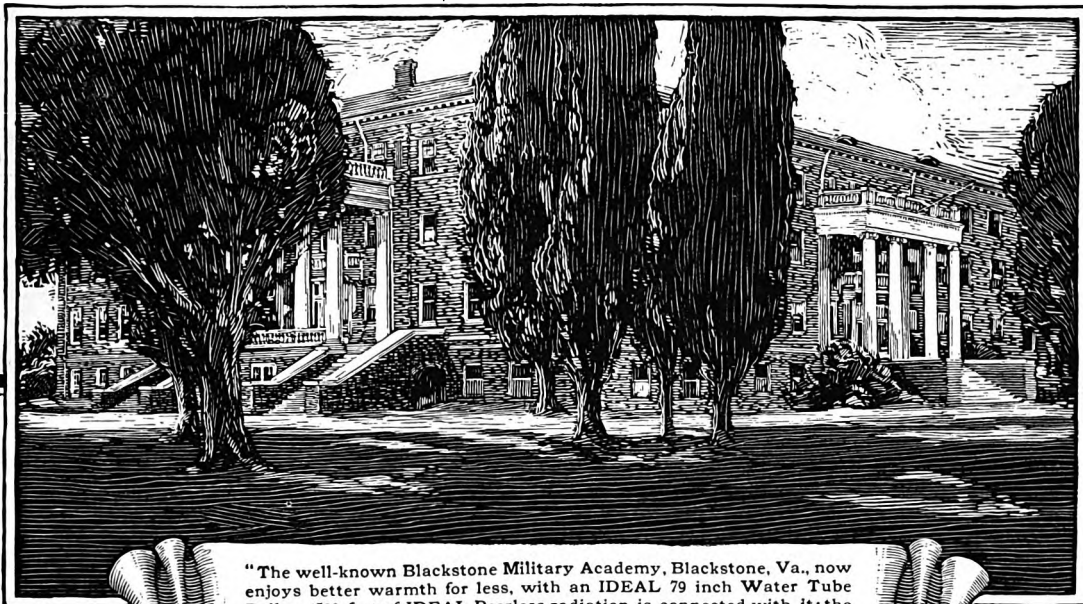


*Pp. 1202-1205
Complete catalog of details and information for architects upon request—filing size.*

Andrew Hoffman Mfg. Co. Hoffman Casement Window

907 STEGER BUILDING
CHICAGO





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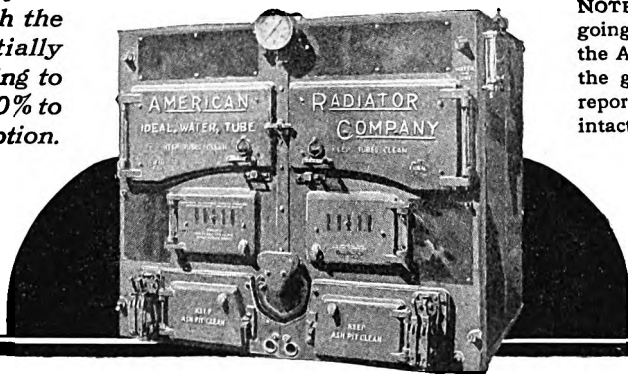
The boiler was installed. The first of the year the President, Col. Elvin S. Ligon, wrote:

"We are pleased in every respect with this boiler. It has proved economical of both time and fuel. We have been able to raise the heat in the morning in half the time formerly required; and although the season is only partially over we are expecting to show a reduction of 20% to 25% in fuel consumption."

"The boiler makes a good appearance and requires much smaller space in the boiler room."

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NOTE: As this advertisement was going to press, word came that the Academy had been burned to the ground. Col. Ligon, in his report says: "we have the boiler intact, and expect to use it in our new building which we are planning to erect."

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For Architects and Their Clients

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The Handbook of Professional Practice represents a continued effort extending over five years and embracing an examination and study of the systems in use in the best offices in the United States. Also, it contains the complete text of all the documents published by the American Institute of Architects as enumerated under Part VII.

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A complete guide to the use of ink and paper, angle and square, pencil and wash, eraser and paste, containing innumerable suggestions of the greatest value in the draughting room. **\$2.00.**

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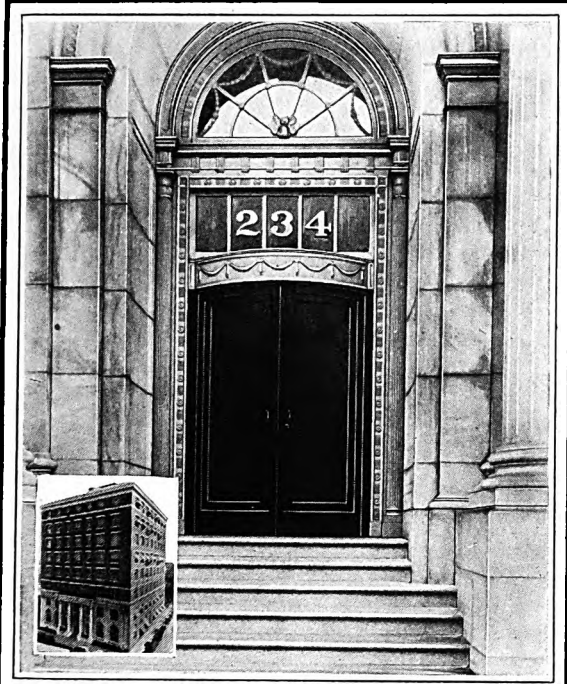
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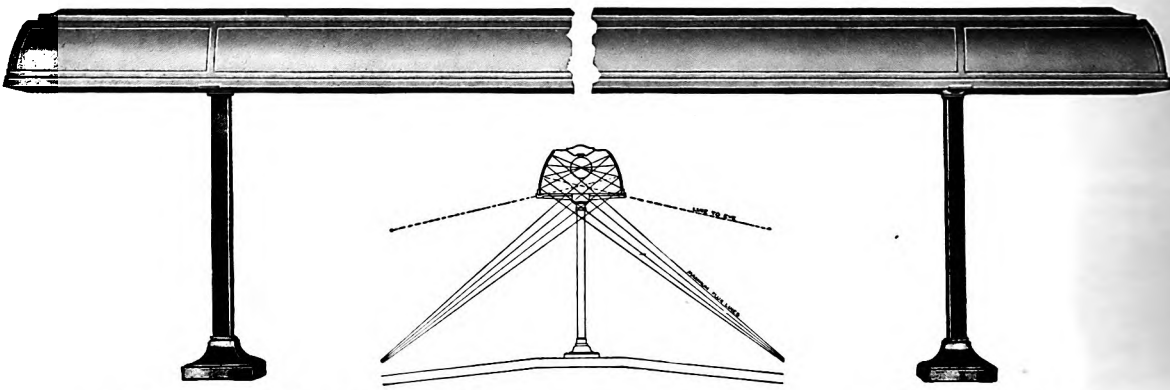
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For banks, insurance companies and other institutions for which architectural harmony and correct illumination of working services are equally imperative, *Frink Desk Reflectors*, are being specified very generally.

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Write for our Bank Catalog covering Frink Desk Reflectors, Screen Reflectors, Upward Diffusers and Polaralite Signs.

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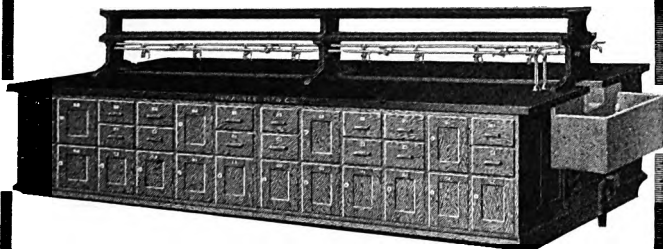
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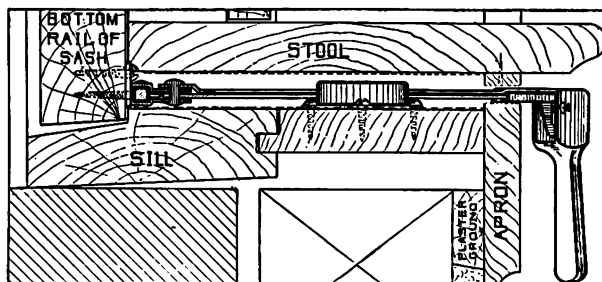
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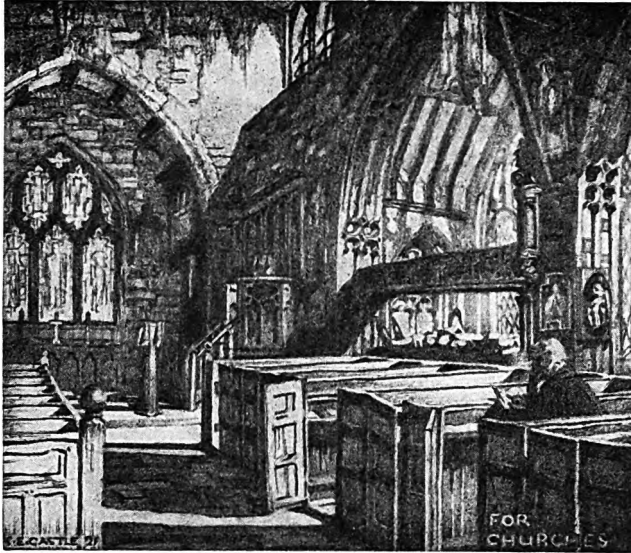
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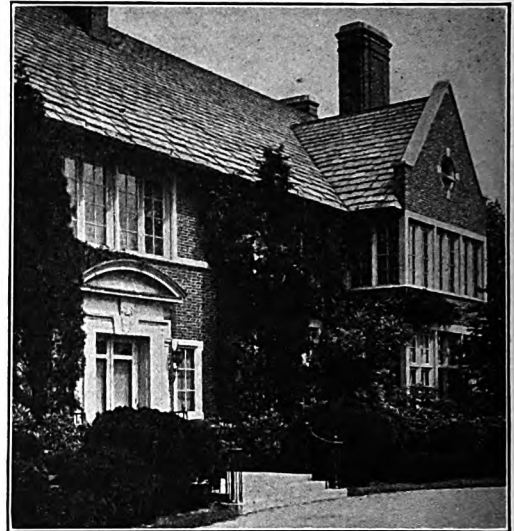
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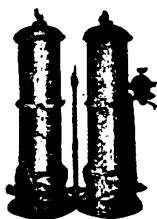
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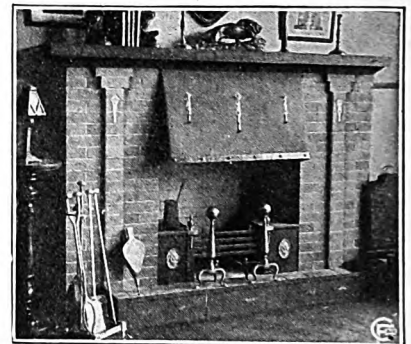
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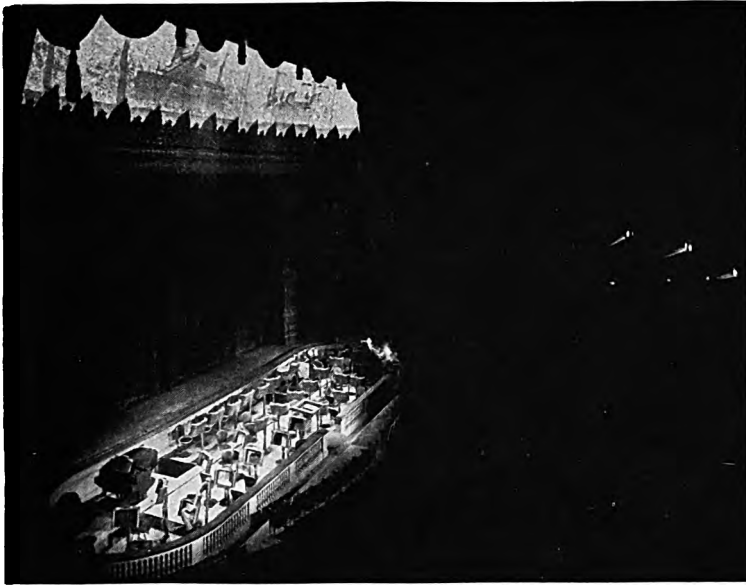
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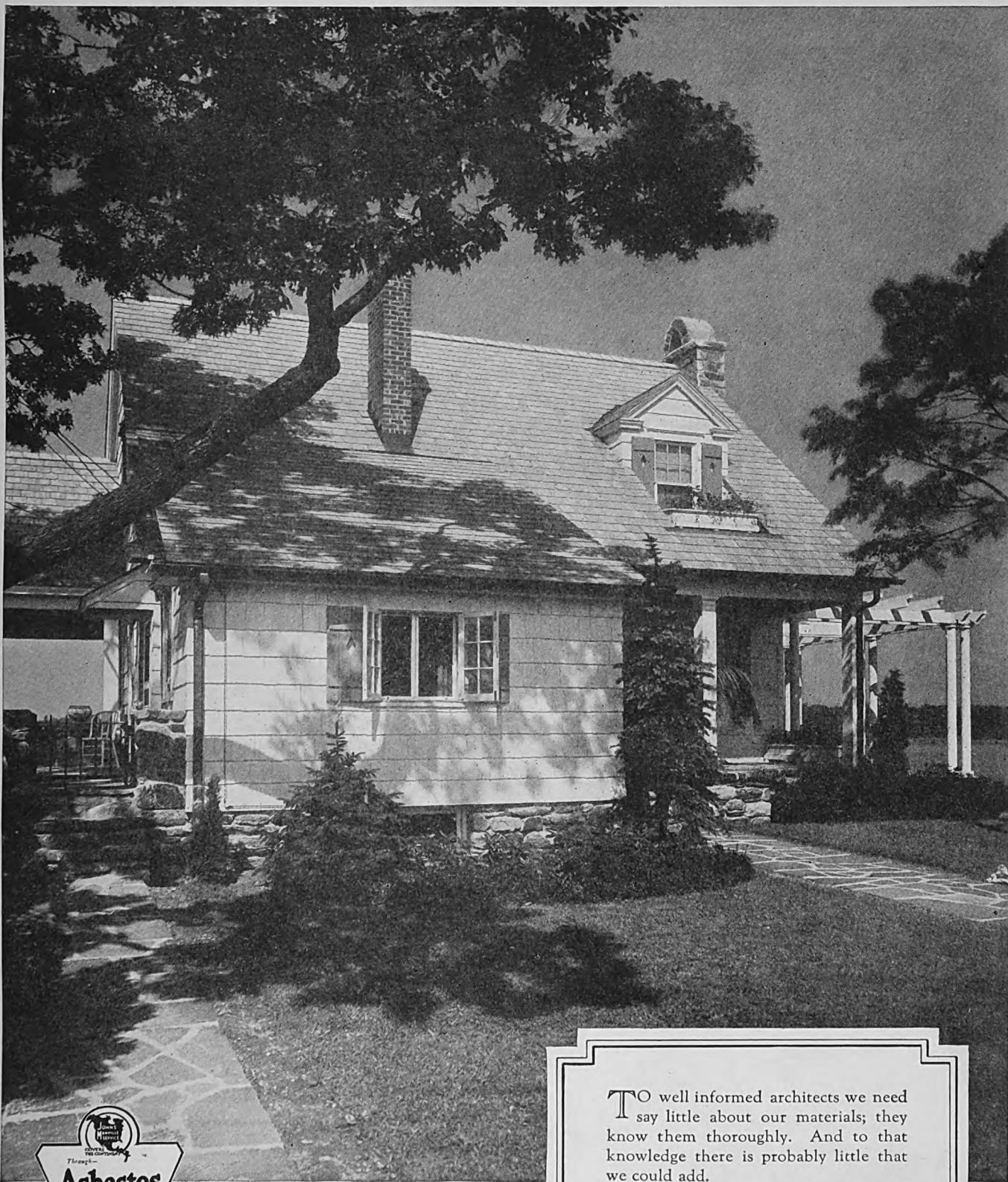
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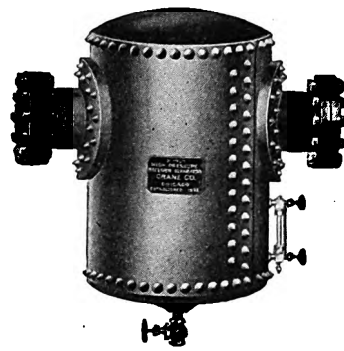
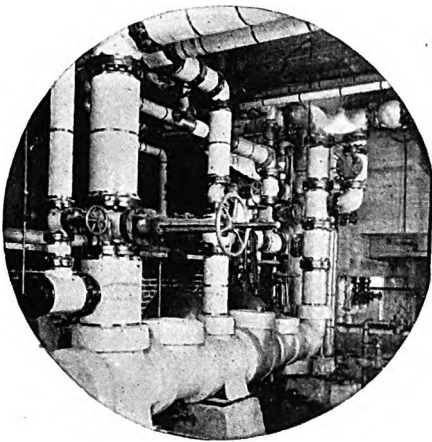
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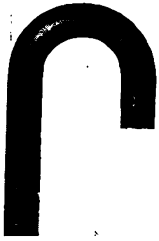
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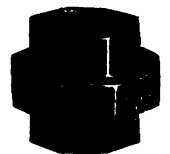
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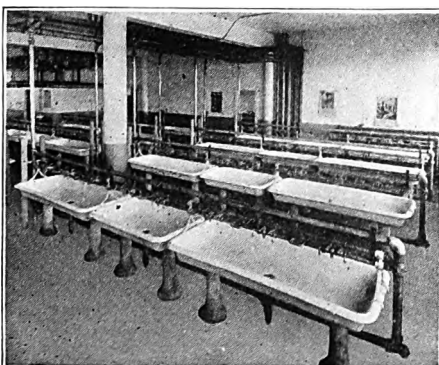
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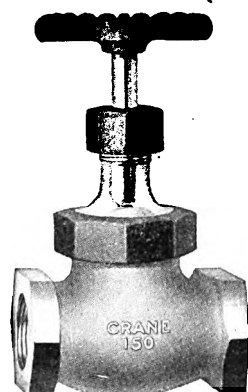
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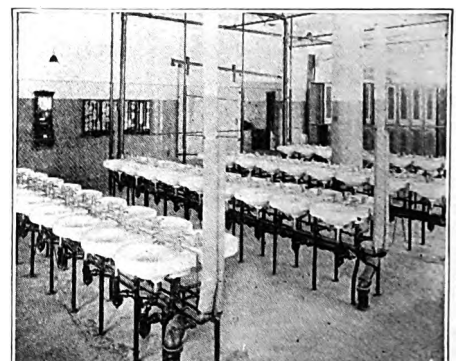
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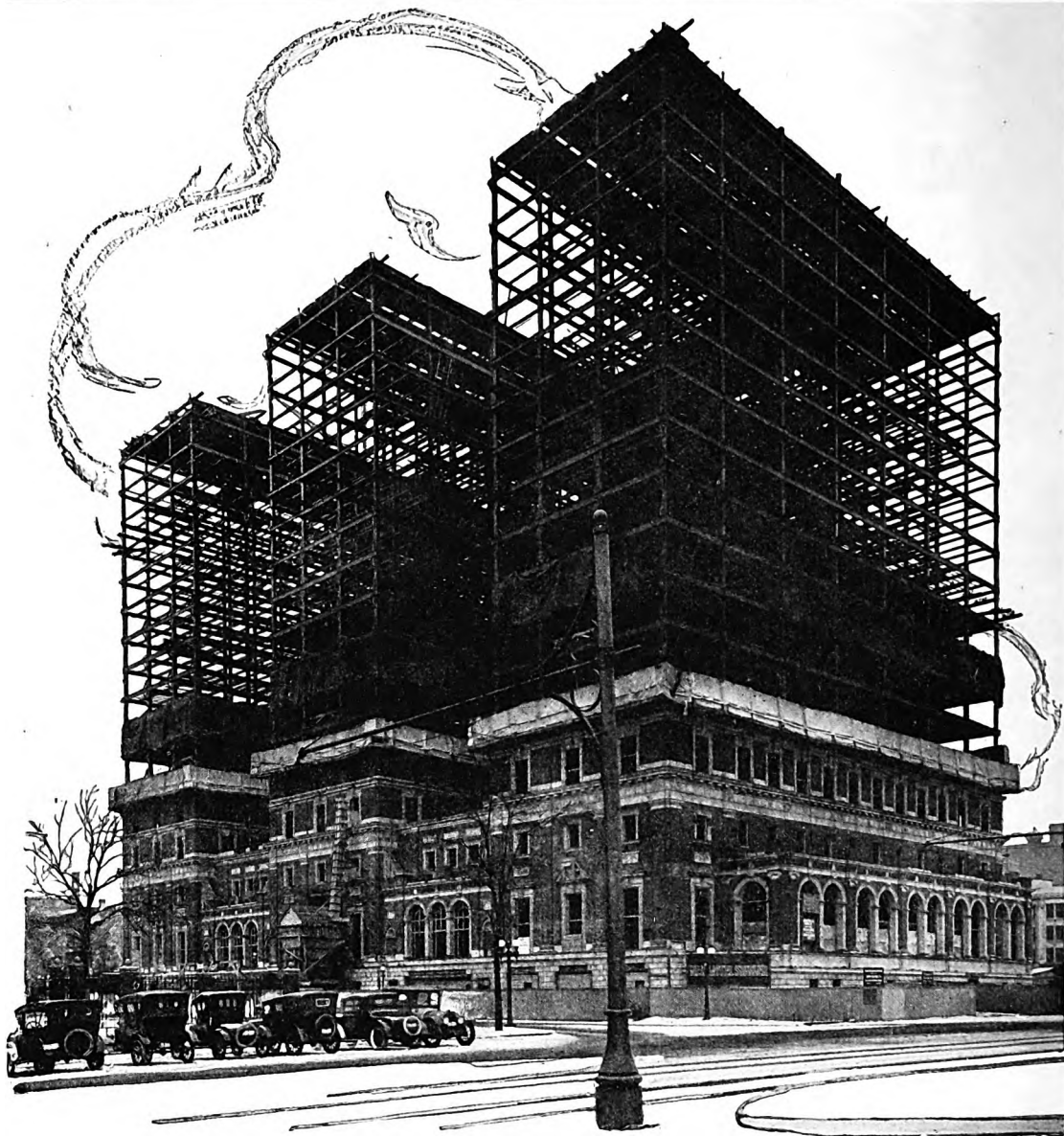
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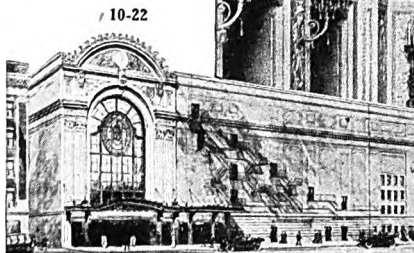
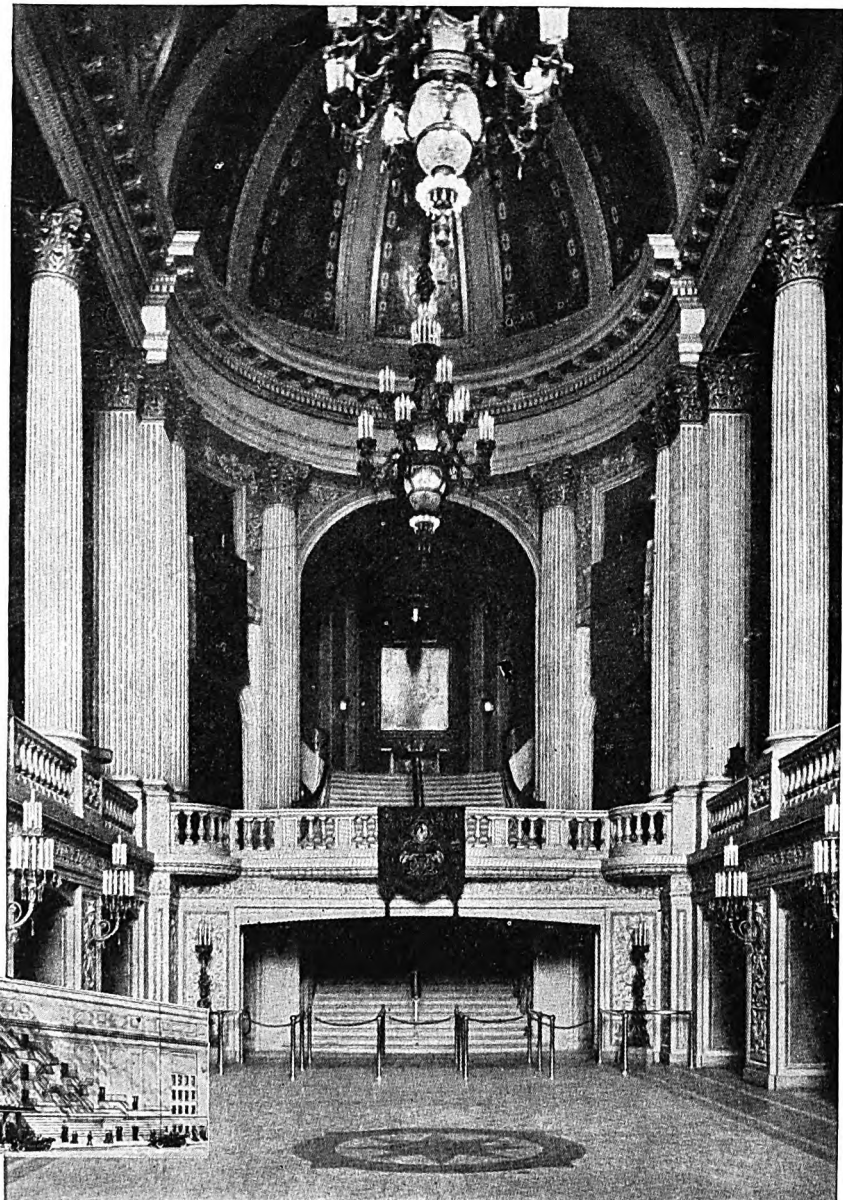
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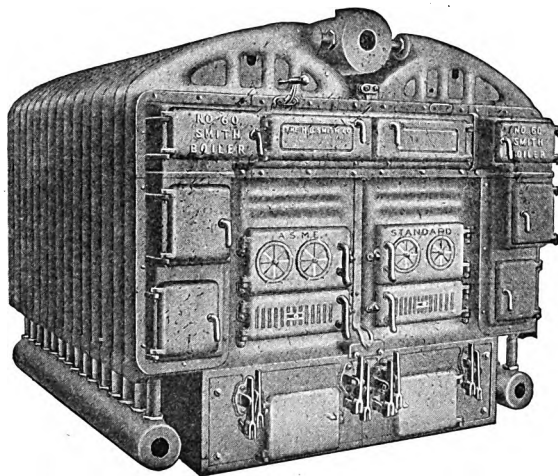
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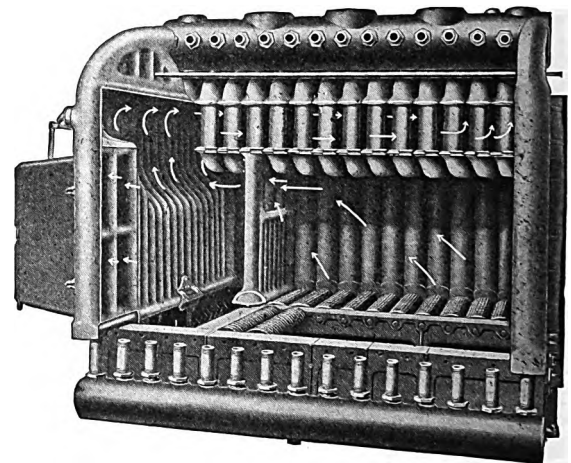
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DEVELOPMENT OF THE OCTAGON HOUSE PROPERTY
AS PROPOSED BY THE BUILDING COMMITTEE
SEE PLANS AND REPORT HEREINAFTER
COLOR SKETCH BY MR. CHARLES PLATT

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

Vol. X

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No. 6

Shadows and Straws

THE OCTAGON HOUSE at Washington is a cherished possession of the American Institute of Architects. The attachment is more or less unique, it might be said, since it links architects to architecture, and although the building was not the design of a member of the profession, the attachment is none the less. Indeed, it may even be a little more, for Dr. Thornton himself has his own niche in the annals of American architecture and we doubt if there are any who would deny it to him.

Again, the Octagon House savors very definitely of something that has gone. It exhales the fragrance of gentility. About it hovers the delicate patina of a cultural tradition. No one can set foot upon the steps leading up to the little portico without coming under the influence of a refinement so unmistakable, and yet so unobtrusive, that the spell descends like a quiet mantle of peace. And if the door be open upon the garden, there is always an exclamation. Many people come to visit it and I have never heard of one who did not carry away something more than a memory,—something perhaps that savored strongly of a deep longing.

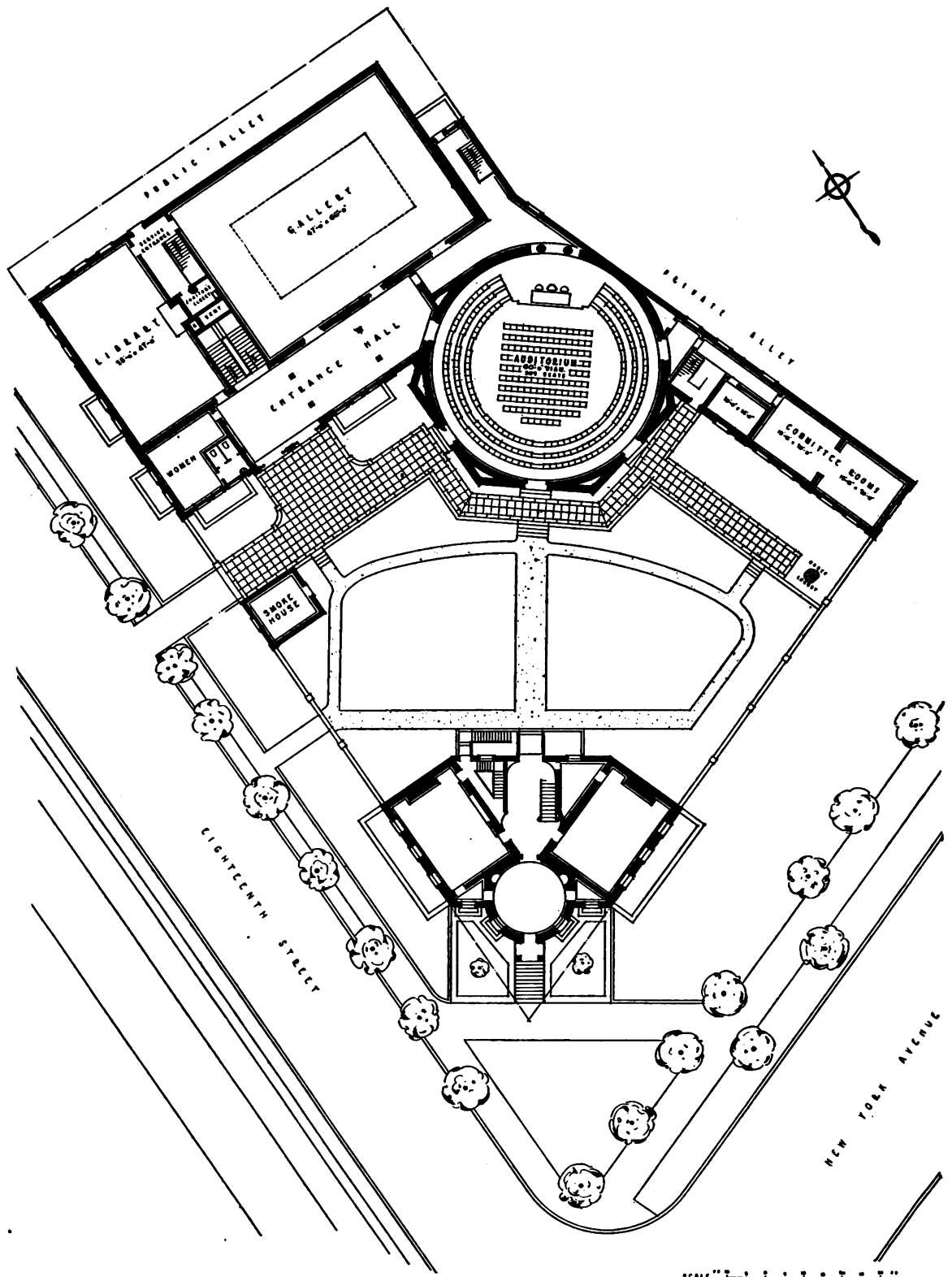
True it is that the traditions of culture and gentility play no such part in our life as they did when John Tayloe came to build himself a town house in Washington. One may find remnants of them, here and there, but the busy hum of democracy and the brutish hustle of industry have jostled them aside. They cannot be revived, in architecture, even with the help of the most skillful of architects, for a house is little enough until it reflects the quality of life that is within it. And if we deplore the passing of a tradition,—if we admit, as we must, that in its original form it will never revisit us,—then all the more precious does the symbol of it become. We treasure it as we treasure nothing else, for it is irreplaceable.

Of course, opposed to all this sentimental nonsense, as they call it, we have the school of practical people. One cannot deny them their right to be heard. They say, as Mr. Bernard Shaw said, that our time should not be wasted in preserving antiquities simply because they were beautiful, but that we should steadily bend

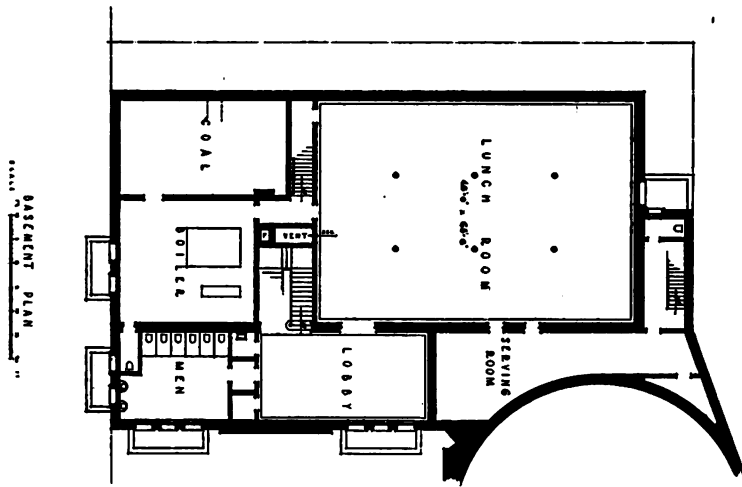
our energies toward producing better ones. I think that on that point the practical people have a strong argument on their side. It seems a sad reflection upon our abilities that we can in this day and generation build so little that is as comely as that which came from the hands of a nation that had scarcely an architect to its name. It ought to remind us that the cultural tradition is more important, in the last analysis, than architects, which is a thing not easy to admit, we shall agree.

But there remains the problem of what to do with the Octagon House property. The subject has been almost constantly before the Institute for some years, and many plans have been suggested. Practically, these have differed on two essential points: Should the Octagon House remain as the offices of the Institute or should it be set aside as an exemplar of the old days? And again, should there or should there not be built an auditorium for use by the Conventions of the Institute and perhaps for use by other bodies *ad interim*?

The Building Committee present certain definite proposals this year. They seem to indicate not only a wise and carefully considered plan, but one that will attract the support of the majority of those who have been thinking on the subject. The feeling that the Octagon House should be set aside as a museum, either supported by the Institute or perhaps taken over by the Government, has aroused, on the other hand, a strong desire to keep the building fairly steadily in useful service, so that it might grow old in work rather than in idleness, as becomes not only men but things. As to the question of a new building which should combine offices for the Institute with a Convention Hall, the Committee seems wisely to have chosen the middle course. It proposes a Convention Hall with suitable Committee Rooms, and the second floor of the Octagon for offices, while the rest of the building shall be restored to its one time condition, whereby, with the aid of suitable furniture of the period, the Octagon House would be more useful and more beautiful than ever.



PROPOSED DEVELOPMENT
 THE OCTAGON HOUSE PROPERTY OF
 THE AMERICAN INSTITUTE OF ARCHITECTS
 WASHINGTON, D. C.



PROPOSED DEVELOPMENT
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The Proposed Improvement of Octagon House

The Building Committee, in submitting its report for the consideration of the Fifty-fifth Convention, stated that it has studied the problems of the improvement of the Octagon property together with the two adjoining lots on 18th Street, from two points of view.

First, the Committee has studied the point of view which contemplates restoring the Octagon property to its original probable condition as a private residence of the period of A.D. 1800. Strictly so restored, the property might be regarded as a relic of Colonial days which would have to be maintained at the expense of the Institute, or donated to the Federal Government with the hope that it would be kept in order by the Nation as an historic residence. In this event the Institute would house its own activities on the adjoining lots in a building about 50 x 180 feet in plan.

Such a scheme would leave the Institute rather remotely identified with the Octagon House; would be of doubtful benefit to the Institute or to the public; and quite surely would overburden the Institute financially.

Second, the Committee considered the point of view which contemplates restoring the Octagon House and grounds to their supposed original condition and equipping the first and part of the second stories with reproductions of the choicest furniture of the period, including here and there, when available, an historic original piece. The House would be a residence museum standing before the public as an example of the best taste in furniture and decoration dating back to Colonial days. At the same time the House would be the home of the Institute and headquarters for architects visiting the Capital City. The drawing room would be available for formal receptions and for meetings of the Board of Directors. A portion of the second story would not be profaned if used as an office for Institute activities, and every visiting member of the profession would feel that his organization had a close association with a beautiful home of the early days of the nation, a home which shel-

tered President Madison when the White House was burned, and which was the scene of the ratification of the Treaty of Ghent. This second idea includes also erecting a convention hall and architectural exhibition and committee rooms. The new construction should be less in height and designed to form an harmonious setting and background for the Octagon House.

A study of this possible development is presented in this number of the JOURNAL. In the judgment of the Committee the use of the two adjoining lots and of the Octagon plot to the limit suggested would leave a space for garden and landscape effect quite ample in proportion to the building. The whole composition could be made attractive and would be suitably expressive of its use and, at the same time, would enhance the effect of the old Octagon House as an historic monument.

The scheme presented is only tentative, but sufficient, it is hoped, to enable the Convention to reach a decision as to a general policy for putting in order and developing the Octagon property.

A consensus of opinion may decide that a circular convention hall with a capacity of 300 seats is unwise or insufficient for future needs. The Committee believes that further consideration should be given to the idea of providing on the 18th Street property a larger auditorium which might be used for general public lecture hall purposes, as well as for the needs of the Institute.

It is hoped that the sketches and report will be suggestive and will bring out various ideas from the delegates which can be referred, with power, to the Board of Directors, and that the Convention will authorize this or a succeeding Building Committee to proceed with the restoration, repair and development of the property, under the supervision of the Board of Directors.

The members of the Octagon Building Committee are: Henry Bacon, D. H. Burnham, E. W. Donn, Jr., Wm. Mitchell Kendall, Robert D. Kohn, Charles A. Platt, Howard Shaw, D. Everett Waid, *Chairman*.

The Autobiography of An Idea

By LOUIS H. SULLIVAN

CHAPTER I

The Child

ONCE upon a time there was a village in New England called South Reading. Here lived a little boy of five years. That is to say he nested with his grandparents on a miniature farm of twenty-four acres, a mile or so removed from the center of gravity and activity which was called Main Street, though not related in those ancient days to any Gopher Prairie far or nearby. It was a main street of the day and generation, and so was the farm proper to its time and place.

Eagerly the grandparents had for some time urged that the child come to them for a while; and after a light shower of motherhood tears—the father indifferent—consent was given and the angel child was taken on his way into the wilderness lying ten miles north of the then uncouth city of Boston. The farm had been but recently acquired, and the child appeared, shortly thereafter, as a greedy parasite, to absorb that affection, that abundant warmth of heart which only Grandma and Grandpa have the intuitive folly to bestow. In short they loved him, and kept him bodily clean.

To the neighbors, forsooth, he was in no sense a wonder-child, but merely another brat- nuisance to run about and laugh and scream and fight and bawl with the others—all bent on joy and destruction. The peculiar kink in this little man's brain, however, was this: he had no desire to destroy—excepted always his momentary mortal enemies. His bent was the other way; all without regard for the requisite rhyme, reason, or the exalted virtues.

Now lest it appear to some that this child had come suddenly out of nothing into being at the age of five, we must needs authenticate him, in the only acceptable way, that is by sketching his prior tumultuous life. He was born of woman in the usual way at 22 South Bennett Street, Boston, Mass., U. S. A., on the third day of September, 1856. And, for the benefit of the exigent and meticulous, it may be added, on the authority of the young mother, that the event occurred on the second floor: day Tuesday, hour 10 P. M., weight 10 pounds. It may further be stated for the information of the clan of eugenists, that the mother, at that date, had arrived at the age of 21 years, 5 months, 15 days—and some hours, minutes and seconds, more or less; while the father would be 38 come Christmas. It is further stated for the benefit of mothers and others that the infant was of the breast-fed variety.

The long interval of passing years has made it clear that this pink monstrosity came into the world possessed of a picture-memory. He remembers, even now, certain cradle indiscretions; and from that same cradle he recalls a dim vision of a ghastly lady in somber black, and veiled, entering through the open door and speaking in a voice strangely unlike the mellow tones of his nearby mother. One night in mid-winter, he was lifted from his warm cozy refuge, bundled up and taken to the third floor. Grandpa was already there, scraping the heavy frost from one of the small square window panes; finally, after the ecstasies of Mama and the awed tones of Grandpa, the child was lifted up and held close to the pane to see what?—a long brilliant, cloud-like streak, which, he dimly fancied, must be unusual; but as it seemed to have no connection with the important concerns of his existence, he was glad to leave it to itself, whatever it was, and return to the warm spot from which he had been taken. This streak in the sky was Donati's comet of 1858.

Before going further into the personal deeds of our two-year old, it may be well to give a bit of space to an outline of his mongrel origin—always bearing in mind what is said concerning roses.

As to his father, Patrick Sullivan, no need for discussion—he was Irish. As to the mother, Andrienne List Sullivan, she seemed French, but was not wholly so. She had the typical French eyelids, expressive hazel eyes, a somewhat oval face, features very mobile. She was of medium stature, trimly built, highly emotional, and given to ecstasies of speech. But *she also* had parents: her father, Henri List, was straight German of the Hanoverian type—6 feet tall, well proportioned, erect carriage, and topped by a domical head, full, clean-shaven face, thick lips, small gray eyes, beetling brows and bottle-nose. He was of intellectual mold, and cynically amused at men, women, children and all else. Her mother, a miniature woman of great sweetness and gentle poise, was Swiss-French, born in Geneva—where also her three children were born. But her long Florentine nose suggested, unmistakably, an Italian strain. Her maiden name was Anna Mattheus. Like a true *mère de famille*, she ruled the roost, as was the custom in European society of the Middle Class. Her mind was methodic, her affection all-embracing.

Henri List was reticent as to his past, but the family gossip had it that as a young man he was educated for the Catholic priesthood, rebelled at the job and ran away from home.

The intervening years between this hegira and his arrival in Geneva, Switzerland, are a blank. There

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seems to have been some lack of clearness as to his vocation in Geneva; was he a Professor of Greek in the University, or did he coach rich young English gentlemen through their university course? In any event he was highly educated, and he prospered. It was further gossiped that, having met Anna Mattheus—considerably older than he—who kept a store filled with a sumptuous stock of choice linens and laces, he courted her. It was sneeringly said he married her for her money. At any rate, they were well to do, and lived in a marble house with large grounds called *La Maison Des Paquis*. Here three children were born to them, in order of arrival: Andrienne, Jennie and Jules. The narrator has in his possession a small oval card with perforated edge, on the plain field of which is drawn with colored pencils, a park-like view, with house half-hidden among the trees. On the back, in the handwriting of her mother is the notation "Terrace de la Maison des Paquis faites par Andrienne en 1849"—(that is at the age of 14). According also to family gossip, there seems to be no doubt that Henri List was tainted with cupidity. He speculated and finally lent ear to the wiles of a Jew. He ventured his all. The enterprise strangely and suddenly lost its credit, and the house of List tottered and collapsed in irretrievable ruin. Anna List borrowed money of her relatives to take the family to America, to forget the past and start anew in a strange land. Little wonder that Grandfather was reticent. It required a span of years for the narrator to pick up little by little the thread of the story.

As to Patrick Sullivan; he had no secrets, but his memory did not extend much back of his 12th year. He said his father was a landscape painter, a widower, and he an only child. That together they used to visit the county fairs in Ireland. That at one of these fairs he lost his father in the crowd and never saw him again. Thus at the age of twelve he was thrown upon the world to make his way. With a curious little fiddle, he wandered barefoot about the countryside, to fiddle here and there for those who wished to dance; and of dancing there was plenty. Thus traveling he saw nearly all of Ireland. This wandering life must have covered a number of years. The period that emerges from the wander-period seems obscure in transition, but his attention must have focused on dancing as an art. As to the grim determination of his character, his pride and his ambition there can be no doubt; but what chain of influences took him to London is not known. Arrived there, he placed himself under the tutelage of the best—most fashionable—masters, and in due time set up an academy of his own. Not content with this advance, which was successful, he must needs reach the heights of his art, and in Paris, the Center of fashion, took instruction of the leading masters. In those days dancing was a

social art of grace, of deportment, and of personal carriage. It had many branches of development, from the simple polka to highly figurative formations, in social functions, upward to its highest and most poetic reach in the romantic classical ballet. It was an art of elegance that has passed with the days of elegance. Artificial it largely was, yet humanizing, and beneficent. In such wise must the social value of the dance, of the dancing master, and the academy of a day long since past be visualized, to be understood in this day.

This young Irishman had another grand passion. To him the art of dancing was a fine art of symmetry, of grace, of rhythm; but parallel to this ran a hunger for Nature's beauty. He must have been a pagan, this man, for in him Nature's beauty, particularly in its more grandiose moods, inspired an ecstasy, a sort of waking trance, a glorious mystic worship. In this romantic quest, he had, through a series of years, footed it over a considerable part of Switzerland.

It seems strange at first glance that these highly virile and sensitive powers should be embodied in one so unlovely in person. His medium size, his too-sloping shoulders, his excessive Irish face, his small repulsive eyes—the eyes of a pig—of nondescript color and no flash, sunk into his head under rough brows, all seemed unpromising enough in themselves until it is remembered that behind that same mask resided the grim will, the instinctive ambition that had brought him, alone and unaided, out of a childhood of poverty.

Naturally enough he had not found time to acquire an "education," as it was then called and is still called. He, however, wrote and spoke English in a polite way, and had acquired an excruciating French. Hence by the standards of his time in England he was no gentleman as that technical term went, but essentially a lackey, a flunkey or social parasite. Perhaps it was for this reason he revered book-learning and the learned. He knew no better, because he had not been educated.

It is probable that, about this time, the lure of America, goal of the adventurous spirit, land of the free, home of the brave, the great hospitable, open-armed land of equality and opportunity, had been acting on his imagination. This is surmise. The fact, of which there is documentary evidence, is this: that on the 22nd day of July, 1847, he took passage at London for Boston in the good ship *Unicorn* of 550 tons register burthen. This, in the eleventh year of the reign of Victoria; Louis Phillipe nearing his political end; with revolution ripening in Germany; and the United States kindly relieving Mexico of its too heavy burden. And this, also, while a small prosperous family in a small European City was awaiting, all unconscious, the call to join him in the same city of the same far away land; and that but eleven brief

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years lay between them all and the advent of a child to whose story we must now in all conscience begin a return. For the finger of fate was tracing a line in the air that was to lead on and on until it reached a finger tracing a futile line now and here.

Patrick Sullivan reached Boston in 1847, set up an academy and was successful. He always was successful. His probity was such that he could always command desirable influence and respect. He was familiar with polite forms. Later on, probably in 1850, the Geneva family also reached there. Somehow they met. The young Irishman, keen through training in the hard school of experience and self discipline was always wide awake; and this is what happened according to Mother. He met the young girl, Andrienne, in the conventional way, was attracted by her grace of manner, her interesting broken English, her skilled piano playing; paid his court to her, professed love for her; they became engaged, and on August 14th, 1852, they were married. What is more likely is this; that he heard her playing of Chopin, Beethoven, *et al.*, with approval, for he was fond of music; that he asked her to substitute dance music; that after the first few bars he was electrified—he had found a jewel without price. Her sense of rhythm, of sweep, of accent, of the dance-cadence with its reinforcements and languishments, the *tempo rubato*—was genius itself. He lost no time in marrying her as a business asset. She was lovable and he may have loved her. It is possible but hardly probable; for there is nothing in the record to show that he loved others, or that he loved himself. He was merely self-centered—not even cold. He was moderate of habit; drank a little wine, smoked an occasional cigar, and was an enthusiast regarding hygiene. The stage-setting augured well for the coming child. The stock was sound. All the tribe were black-haired. So he came to pay his visit in due time, as recorded, believed by his mother to be an angel from Heaven, so great, so illusioning is the Mother-passion. But, as regarded from the view-point of the chronicler, he was not an angel from heaven. Rather the reverse. At the age of two he had developed temper, strong will, and obstinacy. He became at times a veritable howling dervish. He bawled, he shrieked, he blubbered, sobbed, whined and whimpered. He seemed to be obsessed by fixed ideas. Once in a while, as time passed, there came periods of relative calm within the pervading tempest, and now and then he was not wholly unlovable. A rising sun seemed to be dawning within him. He became interested in his bath, given daily in a movable tub. Grandmama would allow none but herself to perform this rite, and as she sponged him down, he would sing to her something about *Marlbrouck s'en va-t'en guerre*, or tell what this giant did, or that fairy. Life was beginning to break in upon him from the outside. A continuous breaking in from

the outside and breaking out from the inside was to shape his destiny.

He loved to look out of the window; to see people, moving to and fro. But it was when first he saw the street-cleaners at work that there upsprung a life-fascination,—the sight, the drama of things being done. South Bennett Street ran from Washington Street to Harrison Avenue, a short block, but for him a large world. The street was paved with cobble stones; the sidewalks were of brick. He was there at the window when the work began. Came on the front rank; four men armed with huge watering cans painted red; these they swung in rhythm one-two, one-two. The thrill began, the child breathed hard. Then followed the second rank—four men with huge brooms made of switches; they also, two-fisted, swung one-two, one-two, shaping a windrow in the gutter. Then came the glory of it all, the romantic, the utterly thrilling and befitting climax—an enormous, a wonderful speckled gray Normandy horse, drawing a heavy tip cart, and followed as a retinue by two men, one sweeping the windrows into hillocks, the other with shovel and with mighty faith, moving these mountains into the great chariot. Thus appeared from Washington Street, thus passed in orderly action, thus disappeared into Harrison Avenue the Pageant of Labor, leaving the child, alone, thrilled with a sort of alarm of discovery, held by an utter infatuation. He had missed nothing; he had noted every detail. He had seen it whole and seen it steady. It is a close surmise that what actually passed in the child's mind, aside from the romance, was a budding sense of orderly power. Indeed, the rhythm of it all had made a special impression. And then to the wondering child, in turn, slowly there arose the dawn of a wonder-world.

Of course his mother often dandled him on her foot, holding his puny outstretched hands in hers, and in great glee and high spirits sang to him about *Le bon roi Dagobert*, *Le grand St. Eloi*, and other heroes of the nursery. He felt these tales to be true, especially when the high points and low points of knee action were reached in a rushing climax. But one evening his mother took him for a visit; and on the return walk he tired and wailed. The mother raised him to her shoulder, and when the tears had dried he looked upward at the sky and beheld with delight the moon plowing its way through fleecy clouds. He called upon Mother to share in the joy. She too looked upward, yet told him that the moon was not plowing a path through the clouds, but that the clouds were driven by the wind across the face of the moon. This astounding statement he received as a direct personal insult, an affront to his common sense, and so stated. But the mother was adamant in her folly. He looked again skyward, to confirm himself. As by accident his eye fastened on the moon; the moon held steady and he

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was amazed to see the clouds go by. Then consciously he tried it on the clouds and the moon again plowed on. This process he reversed and reversed until he felt sure, and *then* it was he confided to his weary mother sagging under the intolerable burden of him, that he had made a *discovery!* He felt a sense of mastery and pride. He, HE, had discovered this thing. In a world rising larger, difficulties appeared, and this particular thing was not quite what it seemed at first sight to be. But he had *mastered* it. The fact that his mother knew all about it, had told him all about it instantly faded away, the wonder-child sank into sleep. The mother, weary unto death, neared her destination; she entered with the dormant one her son while the clouds and the moon in the stillness of early night went their serene way undisturbed by further mundane intervention.

Ever at the window pane, he liked to watch the snow, falling gently in large moist flakes and, in the little gusts, swirling and piling here and there, gathering curiously in odd nooks, and crannies, gathering on the window panes across the street, gathering on his own window panes, mantling the trees in a loving way, building far out in a roll from the top of a neighbor house—and not breaking off (why did it not break off?). And the stillness, the muffled stillness, the lovely stillness. He was not satisfied to glance, he must look long, very long and steadily, he must see things move, he must follow the story, he must himself live the drama of dark things slowly changing into white things. It was all so real to him as he gazed through the window pane, alone and very quiet. And then when morning came, the hasty rattle and scoop and sip of the shovels, cleaning the sidewalks, heaping the snow in mountains in the street. Again the song of work, the song of action. Then came the thaw.

About this time a strange thing happened. It is the Mother's story repeated many times in after years. It seems one afternoon she was at the piano playing a nocturne with the fervor and melancholy sweetness that were her sometime mood. Lost in dreamland she played on and on, when of a sudden she seemed to hear a voice low-pitched like a sigh, a moan. She stopped, looked, listened; no one there. She seemed mistaken; then from under the very piano itself, came a true sob, a child sob and sigh. Why tell what happened? Her precious son in her arms pressed tight to her bosom; tears, tears, an ecstasy of tears, a turmoil of embraces, the flood gates open wide, a wonder, a joy, a happiness, an exultation, an exaltation supreme over all the world. The child did not understand. Why did he, unnoticed enter the room, why secrete himself where he was found, why was he overcome and melted into lamentation? Had anyone else been playing, would he have thus responded? Had a new world begun to arise, this time a wonder-world within him-

self? Had there been awakened a new power within this child of three,—a power arising from the fountainhead of all tears?

FOLLY COVE

The family had decided to spend the summer on Cape Ann. They settled in a farm house of the very old fashioned kind, at a tiny spot called Folly Cove. The farm was a fairly large one and spread out to the rock-bound coast. It had its weather-beaten orchards, its meadows and its fields, its barn and out-buildings, its barnyard with a well and bright tin bucket worked with a pulley and chain. There were also the farmer, a typical extra-nasal Yankee; the faded, shriveled, worn-out wife; the usual dozen or more children, and a farm hand. Also in the meadow was a well without a curb. Presently our hero wanders into this meadow, picking the sparkling flowers, feeling the lush grass, glorying in the open. Quite incidentally in his floral march he walked into the well. It was rather deep, and amid his shrieks he remembers that his blue flannel skirt seemed to float about him. The father and mother were away fishing; the farmer busy at a distance. Came the hired man on the run; a quick descent, a quick ascent of the boulder wall of the well, the child was saved. In the arms of the man he was hurried to the farm house and turned over to the women-folk. The farm-man returned to his work. The children quickly gathered. The women folk rapidly stripped the chilly child, rubbed him down with harsh towels, and stood him naked with back to the fire ablaze in the huge old fireplace. The children, all older than he, looked on curiously, pointed, giggled. For the first time he was aware of a vague sensitiveness. He felt, uncomfortably, that there was something in the air besides atmosphere. He turned aside. A new world was gestating in the depths.

Upon the return of the parents all was in turmoil again. Appalled thanks, gratitude, relief, amazement, the precious, the precious, and again the precious!

The father, more sedate, bethought him it would be righteous should he hold early communion with the life-saver, the farm-man. They met. The father offered lucre in gratitude sincere enough. The offer was spurned. Would the farm-man, an American he-man, accept of gold for saving the life of an innocent child? He would not! Things looked bad. There was argument, persuasion, even supplication. Finally as by an inspiration he was asked if he would not accept something that was not money. With dignity the farm-man replied that if the father insisted and would not otherwise be calmed, he would with pleasure accept from him, as a casual gift, a plug of chewing tobacco. Thus was the value of a man-child ascertained and established and is to remain herein a set

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mark. Let courts and juries decide what they may, how many grown men are worth more?

In the course of his voyages of exploration, our prodigy came across the other well, the one in the barn yard with pulley, chain, and big bright tin bucket. He was curious, and began huge experiments. Somehow the bucket got loose from the hook, struck the water with a splash and began to fill. He leaned over the edge in alarm. What was to be done? Nothing: The bucket began its swaying descent, glinting this way, darkening that way, became dusky and was gone. In its place arose from the well an accusation seeming to say "guilty," and there arose within and without the child a new world, the world of accountability, of responsibility. Yet what was to be done? Nothing! So we may say that once there was a well in Cape Ann, a bucket and a child and a thought in the throes of birth.

He spent most of his time with his father: the bond of union was the love of the great out-of-doors. Too young to philosophize and search his soul to discover sin, he took all things for granted. It seemed natural to him that there should be flowers, grass, trees, cows, oxen, sunshine and rains, the great open sky, the solid earth underfoot, men, women, children, the great ocean and its rock-bound shore. All these he took at their face value—they all belonged to him. He would sit beside his father on a great boulder watching him fish with pole and line. He would remain patiently there, inspired by the salt breeze, listening to the joyous song of the sea as the ground swells reared and dashed upon the rocks with a mighty shouting, and a roaring recall, to form and break and form again. It seemed to lull him. It was mighty. It belonged to him. It was *his* sea. It was *his* father fishing.

One day, as he was sitting alone on the boulder, his father swung into sight in a row boat, and pulled for the open sea. The child did not know about row-boats, he had not discovered them, he did not understand how they went. Suddenly the father and the boat disappeared, the child gave a shriek of alarm, then as suddenly man and boat re-appeared, to disap-

pear again. The ground-swell was running high, the breeze was stiffening, the boat with the man grew smaller, and smaller at each renewed appearance; there was a flash each time. Smaller and smaller grew the boat until it became but a speck, then it began to grow bigger and bigger. The child, dumb-founded, ran to meet his father, in wild excitement at the landing. The father, very patient in such matters, explained it all as best he could, and the child listened eagerly, with some understanding. What was said must be true because his father, who knew everything had said so. But, what he knew, all of himself, and beyond the knowledge of others was that the sea was a monster, a huge monster that would have swallowed up his father, like one of the giants he had told his grandmama about, if his father had not been such a big strong man. He felt this with terror and pride. Thus arose the rim of another world, a world of strife and power, on the horizon verge of a greater sea.

For the remainder of the summer, nothing of special import occurred. The family returned to the City.

When all were settled, he was sent to the primary school of that district. He reported to the family at the end of the first day that teacher had called him to the platform to lead the singing. What a dreary prison the primary school of that day must have been. His recollection of his stay there is but a gray blank. Not one bright spot to recall, not one stimulus to his imagination, not one happiness. These he found only at home. He learned his letters, he followed the routine, that is all. Nor were there any especially memorable events at home until the matter of the farm came up and was discussed interminably. He had been merely enlarging his geographical boundaries, and exhausting the material. The primary school had, for the moment, dulled his faculties, slackened his frank eagerness, ignored his abundant imagination, his native sympathy. Even the family influence could not wholly antidote this. The neighborhood was growing disreputable. Next came the farm.

(To be continued.)

Restoration of Durham Cathedral

Important work is being carried out in connection with the great central tower of Durham Cathedral (England).

The walls have moved in the course of years, and there are cracks wide enough to admit a man's arm, and in some instances the keystones have dropped. It is intended securely to bind the walls together. Some of the angle beams which have been removed have been there since the 17th century, and, with the exception of the

ends which have rotted away, are still in remarkably good condition. Much of the stonework, the admiration of archaeologists for generations, is crumbling away, and many curious figures have become displaced and are suspended in a dangerous position.

The hanging of the bells is to be improved, and only one has been left in position for marking the hours and ringing the nightly curfew. It is expected that the work will occupy at least twelve months.

A Bird's-Eye View of Chinese Art

Illustrated by Examples in the Collections of Field Museum of Natural History, Chicago

By BERTHOLD LAUFER

Curator, Department of Anthropology, Field Museum, Chicago

IN 1907, Mrs. T. B. Blackstone of Chicago provided the Field Museum of Natural History with an endowment for carrying on researches and securing collections in China and Tibet. The work was entrusted to the writer of this article, who spent over a year in Tibet and almost two years, from 1908 to 1910, in the interior of China. The results of this expedition are shown in the east and west galleries of the new museum building and aim at giving a general survey of the development of Chinese civilization from earliest times until the beginning of the nineteenth century, as well as a representative picture of the culture of Tibet. China is a world in itself, and its civilization is a complex, as vast as the ocean. Within the brief compass of an article, only a few phases in this rich development could be selected for discussion, and the objects serving as illustration are very few examples picked from thousands in the Museum's collections.

All emanations of ancient Chinese art must be interpreted from the religious conceptions and ideals of the nation. Worship of the great elementary forces of nature, deep reverence for the departed, unlimited devotion to ancestors and their ethical traditions, an insatiable yearning for salvation and immortality, combined with a sound and practical philosophy of life and moral standards, form the keynote of the mentality of Chinese society. Like that of Egypt, the art of ancient China is one of the dead, and the monuments discovered in the graves bear a distinct relation to the beliefs in a future life entertained by the people and simultaneously reflect the actual state which their civilization had reached.

The Han period covering the time around the Christian era (206 B.C.-A.D. 220) marks the transition from the impersonal art of the archaic epoch to the middle ages. It denotes the culminating point of idealistic art in that religious sentiments or ideas are expressed in a straightforward manner with an intimate personal and human touch. During this epoch, the graves were laid out in large sepulchral chambers composed either of stone slabs or enormous bricks, which formed a vault sheltering the coffin and the paraphernalia interred with the departed spirit. The slabs were usually adorned with pictures traced in flat relief and illustrating favorite incidents of ancient history or mythological lore in a narrative of almost epic style. Somewhat naïve and primitive in the representation of human figures and in the expression of emotions, they are nevertheless full of life and move-

ment in their records of battles, hunting scenes, court processions, royal receptions, or domestic affairs. These engravings in stone come down from the second century A.D., and present an important source for the study of ancient civilization. The bricks were impressed with elaborate compositions of geometric designs (see Fig. 1). On the same plate may be seen roofing-tiles coming from the ancient palaces of the Han dynasty, of which no other remains are left. These tiles consist of a long half-cylinder to the front of which a disk is attached, and are made of a burnt steel-hard clay. The cylindrical portion rested on the lower end of the roof so that the disk projected over the eaves, and was visible to the passer-by from below. This part was therefore embellished with designs or ornamental characters in relief, forming a saying of good omen or giving the name of the palace to which they belonged.

The most conspicuous feature of the Han dynasty graves is formed by a magnificent display of plain or green and brown glazed pottery, of which a very comprehensive and representative collection is assembled in the Field Museum. This mortuary fictile art presents a microcosm of the life and culture of that age, and makes a substantial contribution toward a reconstruction of China's past. All the property dear to the living was then reproduced in clay objects of miniature size and confided to the grave, as houses, granaries, watch-towers, farm-sheds, barn-yards, mills, grain-crushers, sheepfolds, stoves, as well as the favorite domestic animals like dogs and swine. The likeness of an object suggested a living reality, and the inmate of the tomb was believed to enjoy the possession of the durable clay offerings as though they were the real thing. The meaning of death was, to the Chinese, a continuation of this life in almost the identical surroundings. The spirits of the deceased, though they had relinquished their bodily form, still were compelled to partake of food and drink. Hundreds of models of cooking-stoves have been discovered in the ancient graves, which goes to show that cooking, symbolically at least, was believed to be continued in the other world.

Pottery jars bearing out the conception of a draw-well (Fig. 2) were lowered into the grave to furnish the dead with a constant supply of fresh water. The square body of the jar represents the well-curb, the well-frame being erected over its edges on which leans a water-bucket, resembling in shape the one still used at present. The frame above makes space for the in-

sertion of a pulley over which a rope passes, the buckets being suspended from the ends of the rope. In some specimens the pulley is actually moulded in clay, in the form of a small wheel. The pulley is protected from rain by a sloping, tiled roof.

This type of draw-well jar affords an interesting example of how realistic objects assumed idealized expression and artistic form under the hands of unnamed potters. It is still more interesting to observe how this realistic subject gradually became conventionalized to shrink into a mere ceramic type of basket shape with a handle. In Fig. 3 the draw-well idea is plainly manifest; the well-curb is a cylindrical vessel; the bucket is there, resting on the edge, but the structural framework is replaced with an elegantly curved handle, while the pulley and roof have developed into a merely ornamental function. There are other specimens like this one, devoid of the well-bucket; while in others, ultimately, even pulley and roof have disappeared, leaving solely a jar surmounted by a rounded handle. One of the chief attractions of Han pottery is the beauty and color variety of the glazes and the decomposition of the glaze subsequently brought about by oxidation underground of the metals mixed in the glaze and frequently resulting in golden and silvery iridescence.

The clay modelers of the Han period chiefly depended for their forms on the contemporaneous bronze-founders. Most of the large pottery vases interred with the dead were in fact derived from corresponding types of bronze, which, on their part, served the purposes of the living generation. Of all nations, the ancient Chinese remain unexcelled in the art of bronze-casting, both as to beauty of form and technical excellence. The process of casting was *à cire perdue*, of which Benvenuto Cellini has left so classical a description; and it is amazing that large vessels, many of them of great complexity, were in ancient times produced in a single cast, inclusive of bottom and handles. The bottle-shaped bronze vase (Fig. 4) is a good example of Han art, exquisite in shape, admirable in proportion, and striking by its simplicity. It is coated with a layer of fine, deep green patina.

Some fifteen years ago, graves of the middle ages were first opened during the construction of railroads, yielding an unexpected harvest of clay figurines of a bewildering variety of forms. Under the Tang dynasty (A.D. 618-906), from which the majority of these figurines come down, culture had made a considerable advance, and life was enriched by a noble refinement of social customs, as well as by a vast progress in poetry, painting, and sculpture. It was China's Augustan age. In distinction from the art of the Han, this epoch is characterized by naturalistic tendencies of art, as notably evidenced by the work of the great landscapists. In the Tang graves we encounter an overwhelming number of human figures, and this per-

sonal element that makes a direct appeal to us is the most remarkable feature cropping out of these new discoveries. The feminine ideal of that age is illustrated by numerous statuettes of graceful women, who were loyal companions of their masters in the beyond. They exhibit a large variety of costumes and hair-dressings (Fig. 5), as suggested by local usage; this trait renders them a live source for the study of former fashions.

In viewing the Chinese exclusively under the influence of the Confucian doctrines and the rigid ethical system based on them, we are prone to make them out as a rather serious and even pedantic people. It should be borne in mind, however, that there was at all times a merry old China fond of good shows and addicted to entertaining games. Dominoes and playing-cards were invented in China, football was played as early as the Han, and polo was introduced from Central Asia under the Tang. Figures of acrobats, jugglers, musicians, and dancers are carved on the walls of the Han grave-chambers; and skilfully modelled clay statuettes of quaint mimes and actors, providing entertainment for the souls of the deceased, have arisen from the graves of the middle ages (Fig. 6). Some are represented in the midst of reciting a monologue, others are shown in highly dramatic poses, gesticulating with lively motions as if acting on the stage. Others are portrayed with such impressive realism and individuality of expression that we feel almost tempted to name them after favorite casts familiar to us. The countenance of these actors displays decidedly Aryan features. It seems almost certain that they are intended to represent performers hailing from Kucha in Turkestan. We know from the contemporaneous Chinese annals that music and art were eagerly cultivated by the people of Kucha, and that their actors paid frequent visits to China, being favorite guests at the imperial court residing in Chang-an, Shen-si Province. From manuscripts discovered in the sandy deserts of Turkestan, and recently deciphered, it is now ascertained that the inhabitants of Kucha spoke an Indo-European language, designated as Tokharian B.

It is a far cry from the Tang (A.D. 618-906) to the Ming dynasty (1368-1643), which in the main was a retrospective period of art. The styles of ancient masters were then copied; and while novel ideas were no longer created, technical skill and perfection, as well as grace and refinement prevailed. A unique set of ten bronze figures, each representing a renowned beauty of the Han period, in the collections of Field Museum, is thoroughly characteristic of these tendencies (Fig. 7). Each is shown in a different posture of dancing, dressed in a long flowing robe with embroidered collar. The bases, of bronze also, are moulded in the shape of rocks surrounded by waves. This work is exceptional in that it is the individual



FIG. 1



FIG. 2

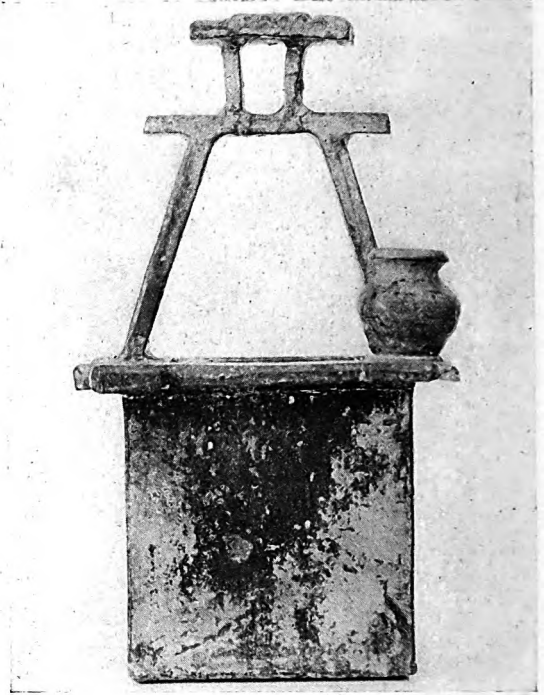


FIG. 3



FIG. 4



FIG. 6



FIG. 5



FIG. 7

A BIRD'S EYE VIEW OF CHINESE ART



FIG. 9

conception of an artist, widely differing from the conventional figure-productions of contemporaneous craftsmen.

From the third and fourth century onward a new

current of thought and art swept over eastern Asia. This novel influence emanated from India, the land of speculative dreams, poetic imagery, good stories, philosophical doctrines, and many theories of religious salvation. The expansion of Indian influence throughout the far east, inclusive of the Malay Archipelago,



FIG. 8

is one of the outstanding and fundamental facts in the history of the world, and disseminated the elements of Indian civilization to the mountain tribes of the Himalayas and the poorest jungle tribes of Indo-China, in the same manner as it enriched and deepened the life of the civilized nations like the Chinese, Koreans, and Japanese. This intellectual conquest is connected with the name of Buddha, the first who founded a universal religion that made a world-wide appeal. Many Buddhist missionaries travelled from India to China, either over land by way of Kashmir and Turkestan,

A BIRD'S EYE VIEW OF CHINESE ART



FIG. 11

the Gandhāra school which for the first time created a statue of Buddha after the model of the Greek Apollo, with such modifications as were compatible with the Indian national spirit. A remarkable collection of early Gandhāra sculptures was recently acquired by the Field Museum. The great historical importance of this art centre rests on the fact that it became the mother and fountain-head of all Buddhist art in the east, that its models and lessons were propagated to Nepal, Tibet, China, Korea, Japan, as well as to Siam, Cambodia, and Java; the Indo-Hellenic style, though sometimes modified, overlaid or even obscured by native traditions, has persisted to this day, and is still plainly discernible in the most recent productions of all those countries.

In China, particularly, the advent of Buddhism tended to revolutionize many long-inherited conceptions of art. National Chinese art, as conditioned perhaps by its appliances—paper, silk, ink, and soft hair-brush—is one of line and color, unrivalled in

surface decorations; while the sense of plasticity is by far less developed. Here remains a significant psychological problem for investigation. There are analogous phenomena in other lines of mental activity; glancing at mathematics, we observe that the Chinese have successfully cultivated and signally advanced plane geometry, arithmetic, and trigonometry; they had no understanding, however, of the laws governing stereometry. They embarked on scientific surveying and map-making as early as the Tang period, their early maps are fairly accurate and in many ways excellent; boundaries, routes, rivers, canals, and other water-courses, in short, the configuration of plain surface areas, are registered with a high degree of fidelity, but mountain-ranges always presented a task beyond their capacity, and were simply neglected. The mountain scenery was enjoyed esthetically, but its structure was not grasped, its characteristics not expressed, its elevations not measured; in fact, I dare say, as I often made the experiment, no ordinary Chinese has any conception of orography, or is capable of giving a half-way intelligent description of any mountain formation. To return to Buddhism, however,—its exponents opened the astonished eyes of Chinese artists, for the first time, to the beauty of the human body and its personification in free sculpture. The nude has always been alien to Chinese spirit, and is not merely timidly dodged, but stringently tabooed by the great painters. They never accentuate sex and passion, and the eternal love-theme does not furnish them with any inspiration. What attracts them is the richly decorated and easily flowing silk robe with its graceful movements, and face and hands are the sole organs finding expression. And now Buddhism came with an art showing undercurrents of Hellenic thought and, despite the pessimistic keynote of its teachings, making a free display of the nude and of bodily forms. While, in the beginning, the Chinese merely copied the models, as transmitted from India, they gradually learned how to assimilate them to their own national consciousness, and the masters of the chisel during the Tang period have handed down to us monuments which not only vie with their Indian counterparts, but even surpass them in spirit and fervor of faith.

The praying Bodhisatva (a saint on the way to the dignity of a Buddha, a future Buddha), represented in the marble relief of Fig. 8, reminds us, in the naïve, pious simplicity of the conception, of our own mediæval tomb-sculptures of saints and devout kings. The two recumbent lions by which he is flanked symbolize the saint's power over the king of the beasts. The nimbus, foreign to the East, was early derived in India from western Asia. He is equipped with a five-leaved diadem, a necklace falling crosswise over the chest, and a mantle covering the shoulders and reaching the ground; above all, the fine pose, the hands devotedly



FIG. 14



FIG. 13



FIG. 15

folded for prayer (a custom attested in the Buddhist community at least three centuries B.C.), and the tranquil, contemplative countenance make this marble a little masterpiece.

The marble statuette in Fig. 9 represents the Bodhisatva Maitreya, the Messiah of the Buddhists, who will appear at the end of this world-period as the future Buddha for the salvation of mankind. He stands on a base formed by lotus petals, the lotus being an emblem of purity and virtue. In his left he holds a holy-water bottle. He appears adorned with the regalia of a prince and decked with elaborate jewelry. The high-relief carving of a seated Bodhisatva (Fig. 10) is laid out on a square marble block, which served as a building-stone in a temple near Si-ngan fu, the capital of Shen-si Province and the ancient metropolis and imperial seat under the Tang. It was chiefly in this centre that most of the Buddhist scriptures were translated into Chinese. The unconventional freedom with which the shawl is treated, its ends fluttering in the air and in their motion strangely contrasting with



FIG. 16

the motionless repose of the meditating saint, is a noteworthy feature of this sculpture. The detached marble head of a Bodhisatva, shown in Fig. 11, allows one to view in detail the somewhat extravagant hair-dressing with which most of these statues are adorned; a very decorative fillet holds the hair in order, and the closed eyes of the Bodhisatva indicate the state of religious contemplation.

The black marble image, illustrated in Fig. 12, reveals a quite different aspect of Buddhist art. This is a guardian deity, a defender of the faith, the Buddha Acala; that is, the Immovable, who combines features of the Hindu gods Civa and Indra, and who reappears in Japan as Fudo. Immovable and stern, he is seated cross-legged on a lotus-base, clad only with a sash running over his left shoulder. A powerful, double-edged sword, ready to strike, is firmly clenched in his right fist to ward off demons and the enemies of the faith, and which demon could gather courage enough to approach him? His stanch countenance with the sturdy muscles of an athlete would assuredly deter any one.



FIG. 17



FIG. 18

His hair is combed from the forehead upward, bound up in a top-knot, where it is held by an ornament of floral shape, and then falls down in front in a single long tress, kept in shape by three rings. This is one of the most vigorous examples of modelling in Buddhist art that has ever come under my notice. This stone was excavated in the village of Yang-kia, three miles north of Si-ngan fu, and comes down from the period of the Wei dynasty (A.D. 386-532).

While Buddhism obtained a firm grip over the masses of China, modifying to a considerable extent their beliefs and hopes of the hereafter, it never succeeded in wiping out the old national religion, commonly known as Taoism. As a practical people, the Chinese were always intent on having several roads to salvation open to them. In its esoteric aspect, Taoism is a sort of pantheistic philosophy; in its popular garb, it is essentially worship of nature gods, spirits, and fairies. Alchemy, the quest for the philosophers' stone and the elixir of life, yearning for eternal youth and immortal life on the isles of the blest far away in the eastern ocean, are essential articles in the faith of its adepts. They worshipped among others a trinity of

gods, termed the Three Pure Ones, the first of whom was Yüan Shi Tien-tsun ("the Venerable One of Heaven"), the supreme god, who was regarded as the personification of the beginning and creation of all things. His cult was highly developed under the Tang dynasty. A life-size head chiseled from a marble of beautifully yellowish tinge (Figs. 13-14) testifies to the fact that the Taoists of that period mustered artists of the same high calibre as the Buddhists, whether they may have learned the art of sculpture from the latter or not. The virile, majestic forehead strongly modelled and the spiritual expressiveness of the face divulge the presence of a god; and with all its conventional features, as, for instance, evidenced by the beard and the ears, this bust nevertheless makes a strong impression, and is distinguished by high artistic qualities. This impression would be still more favorable, were the nose not mutilated. The crown shaped lotus leaves or lotus-petals superposed in three layers is noteworthy.

The same god we encounter again in the votive image represented in Fig. 15. Here he is seated cross-legged on a railed throne skillfully draped. This conception is rather naturalistic; the right hand, full of



FIG. 19

life, rests leisurely on the top of the rail; the left hand, unfortunately broken off, was raised in the act of preaching. The face is profoundly spiritualized and decidedly noble and beautiful. The whole composition of this sculpture (note the pedestal built in four sections) is harmonious and monumental, and stamps it as a work of art of the first order. It is provided with an inscription, which yields a date corresponding to our year A.D. 709; that is, the early Tang period. The inscribed stones were all dedicated to temples by faithful laymen, the usual occasion for such an event being cases of sickness in the family, especially on the part of a man's parents; it was accordingly an act of filial piety, and the donor invoked, in the inscription, the deity figured on the stone, that his mother or father might soon recover. In large votive stones we occasionally have a lengthy pedigree or a long list of a whole village community carved on the reverse of the slab, and in some cases the founders had their portraits incised in the stone or represented in relief. Such

a votive stone is illustrated in Fig. 16. The god Yüan Shi Tien-tsun occupies the centre on a throne flanked by two lions. The founder of the stone is portrayed to his right; the founder's wife, to his left, in the attitude of worshipping the god. An inscription of eleven lines is spread over the socle and contains a date, which answers to A.D. 665 (Tang dynasty).

In northern China it was customary to erect a mound or tumulus over the grave. In front of this mound was usually placed an altar of stone on which were arranged five vessels for sacrificing—an incense-burner in the centre, surrounded by two flower-vases and a pair of candlesticks, all carved from solid stone. In the ancestral and other temples this set of vessels was ordinarily cast from bronze, and the funerary sets were modelled in stone after the bronze vessels. Such a funerary stone flower-vase of the Ming period (1368-1643) is shown in Fig. 17. Its surface is elaborately decorated with dragons soaring in clouds and conceived of as the messengers of fertile rain. The handles are



FIG. 20



FIG. 21

shaped into elephant-heads holding dead rings carved in relief, while the rings are alive and movable in the corresponding bronze vases.

Characteristic of the Ming period also are small portable bronze stoves neatly decorated with relief pictures and very scarce at present. The Chinese are in the habit of heating their bodies rather than their rooms by laying onion-like suits of clothes one on top of the other, adding on, as the severity of the winter increases. Open braziers of copper or clay pans filled with burning charcoal, as a rule, are the only means of heating employed in the average man's home, while asbestos stoves are now largely used in Peking. Artistic bronze stoves, such as illustrated in Figs. 18 and 19, are at present things of the past and no longer made. The former is decorated on both sides with a picture of cranes wading through a lotus-pond; the latter, posed on four dragon-heads, is elaborately adorned with four-clawed, imperial dragons skillfully moulded in high relief, testifying to the fact that this stove was made for and actually utilized in the palaces of the Ming emperors. It is divided into three cylindrical compartments, the fire being built in the central larger one, the opening being formed by the gaping jaws of a powerful dragon-head.

The most prominent and conspicuous feature of a Chinese mansion, public building, or temple, is the

roof on which an exuberant wealth of ornamentation is usually lavished, and which glitters in dazzling colors of green, blue, or yellow brought out in the glazes of the tiles. Under the Manchu dynasty yellow tiles were reserved for the imperial palaces and temples; and green tiles for the buildings of the ministries; color symbolism of this kind played a significant rôle in Chinese society from time immemorial. The roof is the index of the position, rank, and taste of the tenant; and, according to the simplicity, grandeur, massiveness, or elegance of construction, as the case may be, foreshadows the scope and importance of the building.

The tiles on the gables are frequently surmounted by figures of fantastic animals or guardian gods, set up in long rows and giving the roof a very picturesque appearance. In Fig. 20 a green-glazed lion is shown with curly mane, tail and lower part of the mane being glazed yellow. Fig. 21 represents a winged griffin or dragon-horse of a brilliant, pure yellow. The statuette of a mail-clad warrior, glazed a beautiful turquoise blue (Fig. 22), was placed on the roof to ward off from the house malignant spirits and any evil influences. The same function was shared by the devil-exorciser in Fig. 23, glazed green and yellow, who, with his magic sword and ferocious grimaces, made an efficient guard and tutelary saint of a fine temple structure in Shn-sai Province.



FIG. 22



FIG. 23

Architects and City Planning

By THOMAS ADAMS

What are the architectural matters that need to be dealt with in the preparation of a city or town plan and to what extent does the architect need to have knowledge of the landscape, engineering and legal factors, so as to supervise the work or to collaborate effectively with a working group of city planners?

We should answer these two questions before we consider the further question of what instruction should be given to architectural students in the art and science of city planning.

The Architect as City Planner

It goes without saying that the architect, by virtue of his training in the principles and practice of design, his cultivation of the artistic and imaginative qualities, and his responsibility for the buildings of the city, is in a most important sense a city planner. Indeed there is some excuse for the claim that is sometimes made that, because he is an architect, therefore he is *the* city planner. History to a large extent supports that claim. When we read of ancient city plans we usually find reference to the architects who planned them.

In more modern times we find the contribution of the architect to the greatest examples of city planning to be an outstanding one. Washington owes as much, if not more, to the architect as to the engineer and the landscape architect. The re-planning of Chicago was under the supervision of an architect. One of the most completely executed plans was that of New Edinburgh, in Scotland, which was laid out according to a competitive plan of Craig the architect and was built up from designs of the brothers Adam, Playfair and other leading Scottish architects of the period. The greatest achievement of Edinburgh was not the street system of Craig, which R. L. Stevenson criticized somewhat harshly and not altogether justly, but the arrangement and composition of the building groups facing the streets and squares. In a later competition for designs of extensions of Craig's plans the premiated designs were those of Playfair, Crichton, Reade and Nasmyth, all Edinburgh architects.

In England there is only one firm of landscape architects that practices town planning but it includes an architect as a partner. Several architects and a smaller number of engineers (including surveyors) in Britain, have gained their reputation chiefly in the field of town planning. During the period of the writer's experience few important town planning schemes have been carried to completion without the aid of an architect. When the first Garden City Company was formed at Letchworth in 1902 designs were invited from two sets of two collaborating architects—one Parker and Unwin, and the other Lethaby and Ricardo. The second Garden City of Welwyn was first planned by Crickmer, an architect who gained his early experience at Letchworth. The writer has always been associated with an architect in any plans he has prepared, and would not attempt to

make a plan without architectural assistance. That association has taken the form of co-operation with an architect like Lutyens as consultant or of employing capable architectural assistants. Where, by force of circumstances, the supervision of the collaborating architect was not maintained over the execution of the plan failure has resulted.

The professors of Civic Design at Liverpool and London University are architects. Perhaps the greatest town planning conference that has been held was promoted by the Royal Institute of Architects and the proceedings of that conference is a standard work of reference on town planning.

Much more might be said to the same effect to prove the necessity, first, for the collaboration of the architects in city planning, and second, the importance of specialized training for those architects who desire to practice city planning. Similar claims could be made for the landscape architect and the engineer, in respect of those parts of the field of city planning which is properly their own. In a previous article it was shown that the field was wide enough to require the contributions of members of all three professions, with such legal aid as may be needed.

City planning will advance as an art and develop as a science all the more rapidly if it is recognized that it cannot be monopolized as a practice by individuals working alone. No doubt differences of opinion will always exist as to the relative degree of responsibility of different members in a group, but, once the general principle, that the field is one for co-operation of specialists, is accepted the relationships between the specialists will soon adjust themselves.

A certain aloofness to city planning by American architects may be ascribed in part to two reasons—one, the lack of appreciation on their part of the need for co-operation with others, owing to a disregard of the scope and ramifications of the factors to be dealt with in the modern city plan and, two, (both a cause and effect of the first), a lack of special training in city planning.

Architectural Matters to Be Considered in City Plan

To return, then, to the question with which we started, what are the factors to be considered by the architect in the city plan?—remembering that the modern American city is a peculiar urban agglomeration growing up on a democratic foundation and without any precedent for the character of many of its problems.

It has to be studied and planned from sociological, economic and aesthetic viewpoints. Among the objects of the plan are healthy living conditions, economic use of the land, convenience for the means of transportation and distribution, order and beauty in structure and natural feature. The facts have to be known regard-

ing topographic, social, climatic, hygienic, historic and economic conditions, and the relation between these facts have to be ascertained to get the foundation of knowledge necessary to plan.

The renaissance of cities cannot be accomplished by schemes for architectural treatment of their structural growth—such as the treatment of monumental civic centres, any more than by the widening of streets or the laying out of park systems. These matters have to be dealt with in proper order, but there must first be study of the underlying elements in city growth—living conditions, industry, and control of land development,—next has to be considered all the services of the city,—transportation, drainage, water supply, power, educational and recreation facilities, public open spaces and public buildings.

To begin with, whether or not the architect is co-operating with the lawyer, he needs to know something of the State laws and city charters governing safety, construction of adjacent and related buildings, building set-backs, zoning and creation of city plan commissions.

He has to investigate the effects of social and industrial factors, ascertained in surveys, on height, use and character of buildings; the influence of land tenure and methods of sub-division of blocks and lots on the arrangement, density and character of buildings erected or to be erected; the historical factors that have promoted, retarded, or changed the type of buildings; the location and reciprocal relations of industrial, business and residence buildings.

He has to study conditions regarding local types of

dwellings and their improvement; the relation between urban and rural development; planning of small sites for dwellings and community centres; the relation of width of street to height and bulk of buildings and between elevation of buildings and street grades. Other matters to be dealt with from the architectural point of view are treatment of building set-backs and encroachments on sidewalks; general distribution of buildings of different character; use of alleys; private restrictions in residential areas; apartment houses, garages, theatres and other special types of building.

There are still left the big civic problems of an architectural character relating to railway termini and their approaches; market buildings; bridges, buildings in parks and athletic fields, groups of buildings for municipal, educational, hospital and other public purposes; waterfront buildings; and generally the placing, arrangement and surroundings of public and quasi-public buildings, the approaches to these buildings and their connection with the park system and main entrances of the city.

All of these matters require to be considered by an architect in collaboration with the landscape architect and engineer. The architect needs to know something of all of them so as to enable him to co-operate effectively with the group whose combined knowledge should enable them to prepare the comprehensive plan. If, as seems certain, the planning of cities is going to be more actively promoted in the future, we have to consider what special equipment of knowledge the young architect needs to make him competent to undertake his share of the work of planning cities.

Building Trades and Other Trades A National Problem

By STUART CHASE

THAT the shortage of skilled workers in the building trades is a real problem, as distinguished from a local or temporary one, is well shown by the Census of Occupations for 1920 as compared with that of 1910. Unfortunately the detailed classified figures of occupations for the whole country have not yet been made available, but the enumeration of New York State has lately been published, and it is probable that it is broadly representative of the country as a whole. The census includes all persons, male and female, over ten years of age who are "gainfully employed." Needless to say, a worker, whether employed or not on the day the census man comes around, records himself as belonging to one or another of the "gainfully employed" classifications. There is a psychological imperative against recording oneself as a jobless bum. Furthermore, the year 1920 was one of comparatively little unemployment, as unemployment goes. We are safe then in taking the following figures at very near their face value. It is to be noted, however, that on the basis of the square feet of building contracts awarded, 1920 was not so good a year

as 1919 or 1918, but a better year than 1916 or 1917, and far better than 1921. It was not an abnormal year.

New York State

Persons Gainfully Employed

	1910	1920	Increase	Percent
All persons	4,003,844	4,503,153	12.5%	....
Brick and stone masons	28,306	19,676	....	30.5%
Carpenters	93,547	92,304	....	1.3
Painters and glaziers	46,738	41,399	....	11.4
Total masons, carpenters and painters..	168,591	153,379	....	9.9%

Thus while the total persons gainfully employed in New York State during the decade increased from four to four and one-half million, or 12.5%; the building trades workers listed above decreased from 168,591 to 153,379, or 9.9%. With population and total workers going up, building trades craftsmen are coming down. They are coming down almost as fast as the others are going up. The greatest decline seems to be in the ranks of the masons,

COMMUNITY PLANNING AND HOUSING

the least decline in the case of the carpenters, with the painters holding a middle course between the two.

Skilled building trades workers may be classed as primary producers. The result of their efforts is of the first importance, for they provide us with shelter—one of the three fundamental human wants. While this alarming shortage has been taking place in their ranks during the past decade it is interesting to observe the gains which have been made in the case of certain "overhead" workers during the same period. "Overhead" workers, as their name implies, produce nothing, but are engaged in distributing, selling, cajoling and recording the things which the primary producers make. The value of the function of a certain number of overhead workers is indisputable but the question arises as to how great a load of them the industrial system can effectively bear. Should they necessarily increase faster than primary producers, as the following figures show them to be increasing? What, if any, is the breaking point of maximum non-productive load?

New York State

Persons Gainfully Employed

	1910	1920	Percent Increase
All persons	4,003,844	4,503,153	12.5%
Agents	13,487	24,447	81.4
Bankers and brokers.....	14,903	21,293	42.9
Bookkeepers	84,189	121,663	44.5
Chauffeurs	13,159	70,843	438.2
Clerks	212,275	343,481	61.8
Insurance agents	13,843	19,266	39.2
Salesmen and women.....	140,049	169,837	21.3
Stenographers	58,522	113,544	94.4
Telephone operators	13,759	40,867	197.0
Wholesale dealers	10,869	19,604	80.4
Total of above overhead groups	575,055	944,845	64.3%

While the number of persons gainfully employed during the decade increased 12.5% this group of overhead workers shot up 64.3%. In the case of chauffeurs and telephone operators we should expect a faster rate of increase, but how about agents, bookkeepers, bankers, stenographers and wholesale dealers? How long can New York State support such an acceleration in overhead trades?

In this connection, the Census Bureau has published some nation-wide figures in which the distinction between

primary producers and overhead workers is strikingly shown. While individual trades are not classified, the occupations for great trade groups have been made public, as follows:

United States

Persons Gainfully Employed

	1910	1920	Percent	
			Increase	Decrease
<i>Primary Producers</i>				
Farmers and				
Fishermen	12,659,000	10,951,000	.....	13.5%
Miners	965,000	1,091,000	13.1	....
Factory and mechanical workers	10,659,000	12,813,000	20.2	....
Total primary....	24,283,000	24,855,000	2.4%	....
<i>Overhead Workers</i>				
Transportation	2,638,000	3,066,000	16.2%	....
Trade	3,615,000	4,244,000	17.4	....
Clerical service.....	1,737,000	3,120,000	79.6	....
Public service.....	459,000	771,000	68.0	....
Professional service.	1,663,000	2,153,000	29.5	....
Domestic service....	3,772,000	3,400,000	....	9.9%
Total overhead...	13,884,000	16,754,000	20.7%	
Grand total all persons	38,167,000	41,609,000	9.0%	

The total number of persons gainfully employed in the country, increased from 38,167,000 in 1910 to 41,609,000 in 1920—or just 9%. Meanwhile the primary producers as a group increased only 2.4%, while the overhead workers as a group increased 20.7%. How long can the country as a whole support such an acceleration in overhead trades?

The farmer's fell off 13.5% during the decade. Factory workers increased 20.2% but how much of this increase is due to the manufacture of non-essential goods supported by advertising? Meanwhile, clerks increased 79.6%, public servants 68%, professional people 29.5%. Domestic servants, waiters, etc., strangely enough, declined nearly 10% during the decade. Here is one type of overhead service that is actually on the down grade. Cafeterias may have something to do with it.

The problem of the architect and his dearth of skilled workers in the building trades thus turns out to be part of a vast, nation-wide problem which comprehends the articulation of occupations throughout the whole industrial system.

Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

Obligatory Planning in Canada

The Canadian province of Saskatchewan has taken an important step in city and rural planning far in advance of any of our States. The April *Journal of the Town Planning Institute* (Canada) says under the heading "Obligatory Town Planning in Canada": "Provincial legislation in town planning and rural development was

adopted by the province of Saskatchewan in December, 1917, giving the director of town planning under the Department of Municipal Affairs the power to call upon any city, town or village within the province to prepare an orderly plan for its future development within three years so that the expensive mistakes, the disorder and ugliness that have so often characterized the growth of

towns and cities might be avoided in the province of Saskatchewan.

"The compulsion of law for the preservation of life had to be applied to factories and workshops many years ago. Manufacturers are not allowed to expose their workers to needless risks of life and limb. The town is a factory and workshop for the making of citizens. The ideal of law is the protection of those who are not able to protect themselves. Let a town grow up on the method of land sweating and for the supposed benefit of a few real estate owners only and sooner or later the price will be paid in waste of life and by men and women and children who were not in the least responsible for the conditions that demanded their sacrifice.

"From all villages, towns and cities in Saskatchewan the province has now the power to ask for by-laws that will:

- (1) fix the building lines of all existing roads and all new roads so as to preserve the utility and beauty of streets;
- (2) reserve land for new thoroughfares that may be needed later in the interests of future civic economy;
- (3) reserve land for parks and open spaces so that there will be always room for children and adults to play;
- (4) limit the number of separate family dwellings to the acre and the percentage of the building area on the lots so as to prevent over-crowding and slum conditions;
- (5) set aside certain districts or zones for different civic uses such as industry, commerce and residences to prevent destruction of home values;
- (6) classify agricultural land into different uses to prevent waste of human energy on unprofitable soil;
- (7) prohibit the carrying on of noxious trades or manufactures or the erection of bill-boards among the residences of the people; and,
- (8) regulate the width of streets according to their uses in order to save the expense of unnecessarily wide roads.

"There is every sign that the administrative officials are fully impressed with the importance of the opportunity for shaping the towns of Saskatchewan to better uses of life and industry. The town planning branch has prepared various procedure regulations and by-laws for the guidance of the towns, villages and hamlets. The framers of the act realized that a jumble town usually begins as a hamlet or village and wisely placed no population limit to the operations of town planning method. A question in the legislature of 17 January revealed the fact that 238 applications have been made to the director of town planning for approval of new developments; that 52 plans of new townsites have been approved and that 10 of these have been organized as villages with reasonable chance of working to a plan of development that will co-ordinate the various activities and save future waste of change, expensive mistakes and ugly confusion. The total area of lands covered by the applications is 12,010 acres of which 10,000 acres represent land laid out for farm plots or market gardens, thus demonstrating that rural planning is receiving as much attention as town planning. Of the remainder, 162 acres represent land intended for school sites and public reserves, which

is a demonstration of the economy of providing for these needs before land values multiply because of the existence of such social necessities.

"The chief problem appears to be in persuading local authorities that orderly development is for the common good. Owing to existing business depression and continued shortage of houses councils are loath to discuss plans of future improvement or to submit to building restrictions. *Laissez-faire* methods have prevailed so long and particular individuals have so often benefited by confusion at the expense of the community that many civic officials find it difficult to rise to the conception of the cash value, not to mention other values, of community order and beauty. The province of Saskatchewan has one of the most advanced town planning acts in the world and has the distinction of first putting an obligatory town planning act in operation. It is a good twelve months ahead of British procedure and has only Nova Scotia as a near competitor."

British Housing and "The Axe"

The Committee on National Expenditure, appointed to inquire into the financial situation of Britain with a view toward that greatly desired end—a balanced budget—has, as is now well known, made its First Interim Report, somewhat satirically referred to by the opposition press as the "Geddes Axe," the qualificative being borrowed from the name of the Chairman.

The report has kindled some considerable hubbub. Prepared as they might well have been during the last three years, many Englishmen are still in no way reconciled to the blunt facts and the brutal truth. They decline to admit that a "better land for heroes" cannot be had from the economic system which they resolutely refuse to examine. Thus, to students of the housing question the world over, the Geddes report has a warning message:

For the year 1922-3 the British ministry of Health presented the following estimate:

(a) Housing subsidy to private builders.....	£2,500,000
(b) Grants towards the deficit on local housing schemes	9,500,000
Discount on sale of army huts.....	20,000
Improvement of slum dwellings.....	130,000
	£12,150,000
Less balance of sales of housing materials over purchases.....	750,000
	£11,400,000

In analyzing the situation the National Committee finds that:

The average cost of houses now built is.....	£1,100
The loan charge at 6.8 per cent is (per annum)..	75
The average rent is	16
The average per annum deficit per house is.....	59
The contribution of local authorities through the special compulsory housing tax rate of a penny in the pound is.....	4
Leaving the national taxpayers to meet a per annum deficit on each house of.....	£55

COMMUNITY PLANNING AND HOUSING

The full annual charge is reckoned at £10,000,000 for sixty years. The National Committee sees no relief except the sale of houses. It estimates that the full annual charge could thus be reduced (on 176,000 houses), to £6,400,000. *Garden Cities and Town Planning* says:

"We have very good reason to believe that at the time of the armistice the condition of the country was such that two clear alternatives were seriously examined by the Government in regard to the supply of houses. Either wages had to be raised to enable the workers to pay an economic rent for houses built by the normal processes of the trade, or existing wages had to be supplemented by a large subsidy to house rent. The former solution was too dangerous and uncertain in its operation, and the rent subsidy was accepted in its place. The decision, in the difficult circumstances, was a wise one, for while the raising of wages to make possible the universal payment of economic rent might have produced some houses, it could not be guaranteed to do so; it might have produced more luxury-spending, or less industry, and so on. On the other hand a scheme to build through the local authorities would at least produce houses, physically; and that was half the battle. Homeless workers would flock to these houses and the immediate house famine would cease. The financing of this gigantic movement was not easy, but at least it was separated from the material problem of house supply. Tenants are now in the 77,000 houses reported completed in our issue of last month and, given good fortune, about 160,000 houses may be completed and tenanted under the restricted program by the end of this year.

"There are regulations under the Acts for the sale of houses on certain terms, but it is obvious that only a comparatively small number of tenants will be in a position to buy them. If many were sufficiently prosperous to purchase, or, to stretch the point, if all were, then the assumption underlying the whole policy of rent subsidy would be proved false: for if tenants are able to purchase houses at 75 per cent or 50 per cent of their cost they could well afford to pay more than an uneconomic rent of £16 or so per annum. But, as everyone knows, the working classes cannot purchase their own houses.

"The housing policy was framed to enable the very large working population, liberated by the cessation of war, to rent houses in towns to which they were drawn by industry; it was framed to have a good social and industrial effect upon the country, at an admitted and necessary expense to the Exchequer. The Axe Committee, however, disregards sociology, industry, economics and moral obligation: it courts revolution, and occupies itself alone with finance—a narrow, dangerous and impractical view.

"But let us assume that the state-owned houses are sold as the result of an amendment to the Acts: that the total burden accruing from the completion of the restricted program is reduced from £600,000,000 by 36 per cent. On to whose shoulders will it be shifted as it slides off the back of the taxpayers? If the local authorities purchase the houses they will either have to raise the rent from a net to an economic level or put the burden on to the rates. If speculative landlords buy the houses they will certainly have to charge an enhanced

rent to yield them a profit. But here again we are met with another difficulty in which the Minister and the Committee are in ominous agreement: according to the Report the one affirms 'it is very unlikely that it will ever be possible to increase rents' and the other confesses 'it appears unlikely, therefore, that any material increase in the rent for these houses can be looked for.'

"We may summarize the thing in a sentence by saying that the Committee proposes to sell 176,000 houses that the working-classes, as a whole, cannot buy, that the ratepayers will not buy, and that landlords would be foolish to buy unless they can secure an economic rent. There is yet another evil alternative that the houses will be sold to the slightly more fortunate lower-middle-classes (or newly-rich working men to the number of 170,000) who will evict the present tenants—workers, heroes and their families. What a witches' cauldron of mischief these business experts have set abrewing!"

Zoning in Atlanta

The plan prepared by the experienced zoning adviser, Robert Whitten, for Atlanta, Georgia, subdivides residential districts into three race subdivisions: white, colored and undetermined. Families of one race may not hereafter move into districts reserved for the other race. Exception, however, is made for servants when housed on the same lot as their employer.

The *Survey* of April 22 says in comment:

"Mr. Whitten, in introducing this measure of race segregation in his zoning plan, is acting in accordance with a conviction that has grown upon him in the course of his experience. In conversation with the present writer he stated recently that he was opposed to any zoning that would favor a mixture of residences for families of different economic status. In his opinion it is more desirable that bankers and the leading business men should live in one part of town, storekeepers, clerks and technicians in another, and working people in yet others where they would enjoy the association with neighbors more or less of their own kind. Nothing is to be gained, he thinks, by trying to promote a better mutual acquaintance of different groups by arranging for residential use areas that leave open the erection of homes of unlimited variety as to type of occupation. An entirely logical application of this viewpoint by a minute differentiation of restrictions for residential areas according to the cost of homes is, of course, impossible and has nowhere been attempted, except by private restriction. The Atlanta plan is the first which makes a distinction concerning type of residents as well as type of residence. To judge from the support it has received from the local newspapers and organizations of citizens, it seems to answer the prevailing desire of the white Atlantans—the more so since the emphasis in the commission's report and in the publicity supporting it has been laid entirely on the protection of property values as the main purpose of zoning. But as a precedent it opens up the possibility of new zoning ordinances embodying restrictions against immigrants, or immigrants of certain races, against persons of certain occupations, political or religious affiliations, or modes of life. As such it deserves very serious consideration by all students of city development."

Defending the Profession

"THE ARCHITECT!" How easily the bland, impersonal phrase flows from those contemptuous lips, who are bent upon damning a whole profession because of the laxity of some individual member. What a fine fury fumes and fulminates in the mind that fashions the words,—what slinking scorn,—what devilish despite!

The *Engineering News-Record*—one is surprised at the source—recently inquired with a grand flourish of trumpets, what is becoming of "the architect," and of course the inquiry was accompanied with a rather ominous narration of "the architect's" technical deficiencies. A contemporary—*The American Architect*, thereupon labored itself into quite a heavy excitement, lost no time in running up its own largest and finest "*Ich Dien*," and in haughty language demanded to be informed what THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS had ever done in defending "the honor of the profession," ending the matter by advising that now is the time for all good men, including the Institute, etc., etc. It was quite a fine bit of rhetorical sputtering and we hope it gave relief.

For ourselves, we confess that so far neither of the two publications mentioned have yet started a single bead of perspiration on our dull pates. We have the odd and curious feeling that honor is not a possession which required a defense, with all due deference to Laertes. We think it is never at a loss in taking care of itself. As for the "honor of the profession," why not be sensible about it instead of taking a cue from the gallery? What is honorable in any profession needs no defense. What is not honorable cannot be defended. Men whose acts are based upon a sense of honor do not advertise the fact, just as men whose motives are interested have the fatal habit of resorting to the word "disinterested."

Honor has two simple tests. They never fail. One requires the attainment of success by honorable means, yet without any puffing or blowing. The other asks for honorable failure with no whining. The first demands that sort of humility which knows that all success rests solidly on the failures of others quite as much as on their successes. The second requires the finest kind of courage and reverence known to man in a world where paeans to Success have howled Humility into hiding and made Reverence a beggar.

And then—what is this mysterious thing called honor? How does it differ from truth or justice, or righteousness? And is it personal or universal? Fixed and immutable or only a light that the wisest men follow with uncertain steps at best, and never with utter faith? Two men under the same sets of circumstances might act in diametrical opposition, yet be equally honorable. Thus honor has something to do with motive, we opine. And the motives of men are more often beyond than within their ken or ours. We suggest with the kindest intentions and the utmost deference that our two contemporaries return to Don Quixote, that immortal tilter at windmills and that equally immortal "defender." They have too long neglected him, one feels sure.

We may later turn up our File of Architectural Curiosities and see what we have on the subject of Honor.

We recall the "nice point" for example, which Mr. Galsworthy raises in "Forsyte vs. Bosinney." Then there is the diaphanous question raised in the case of that architect who, as accepted participant in a competition carrying a fat fee, managed to convey to certain of the authorities concerned the information that his office made no charge for engineering services (we think we have a photographic copy of the exact wording), as his office was so organized as to etc., etc. A nice and different point there, too.

Or that still more fleeting, shadowy and obscure question of honor involved in the extraordinary case—unparalleled in the history of architectural practice, we believe—of the two partners who agreed between themselves not to enter a competition to which they as a firm had been invited. Whereupon each, making a pretext to the office for an unusual absence fled for the battlefield. Thus, imagine the scene on the day when the invited competitors were assembled to meet the authorities in charge: Here, before the actual hour of meeting, in one room, was one of the partners explaining to the Chairman how impossible it was for his partner to be present, while in another room his partner had buttonholed the members of the Committee and was expressing his profound sorrow that his partner could not be there. Then they all met. A very nice point, gentlemen of the jury, when you remember that one of the partners had previously and secretly besought the favor of having the invitation issued to him rather than to the firm!

These are merely some things that we happen to recall, but presently we shall have a look at our files. In the meantime we shall persist in our theory that honor is a very personal thing,—that it does not require to be defended,—that it looks dubiously upon gratuitous offers of aid, that men governed by their sense of honor use it naturally and unconsciously, just as they use the tibia or the tendon Achilles,—and that they never get excited about it.

But what we should like to see would be a more keenly developed sense of the Tragic Tale of Those That Tried. That is the blot on all professional or vocational escutcheons. It is what hides the million graves of honorable Effort of striving that failed, not for want of skill, but for lack of opportunity, lack of friends, lack of money, position, appreciation,—failed through shyness, timidity, or because of a sense of professional dignity that would brook neither asking nor seeking. Over the resting places of these unhonored and unsung Success too often takes its careless way of pleasant ease.

C. H. W.

From Our Book Shelf

Hospitals

The second edition of "The American Hospital of the Twentieth Century"¹ has been increased by over a hundred pages and an even greater number of illustrations, showing many buildings completed since the publication of the earlier edition and covering many new details.

¹"The American Hospital of the Twentieth Century." By Edward F. Stevens. The Architectural Record Co., N. Y. 1921.

LETTERS TO THE EDITOR

The criticism of the earlier edition, that the space devoted to the general grouping of buildings was inadequate, has been met in part, and more examples of hospital layouts are given, but the author, from his long experience, might well go into greater detail in his criticism of the various types of plan and treat at greater length the relative advantages of high and low buildings.

The chapter devoted to the Ward Unit has been very materially increased with much data from recent hospitals, including the work of architects not represented in the earlier volume. For the student of hospital planning, the opportunity is given for comparison of some of the best of the hospital wards of Europe with many examples of American practice, not always to the advantage of the latter, as some enthusiastic Americans would have us believe.

The continued progress of hospital planning is nowhere better demonstrated than in the chapter on Contagious Hospitals where more and better planned buildings are shown than in the earlier edition, though all still owe their homage to the late Florentin Martin, architect of the Pasteur Hospital in Paris. The author treats at greater length the planning of small hospitals, a matter of especial interest to the average architect, and a number of interesting examples have been added. It is of particular value to learn how this problem has been solved with limited space and limited means, and the amount of the remodelling of a residence, at the end of the book, will also be found interesting; as this is a constant feature of small hospital work, more data of this sort would be welcomed.

The chapters on Kitchen and Laundry Equipment, Details of Construction, and Furniture, have all been increased in size and more fully illustrated, and all in all the profession is once more indebted to Mr. Stevens for bringing up to date what is today recognized as the standard work on hospital practice. C. B.

News Notes

THOSE members of the New York Chapter who have been giving their time, as part of the Committee on Public Information, to the study of the City Hall Park plan and fountains for different parks throughout the City, have been making considerable progress, and hope to have their drawings completed in May so that an exhibition may be held shortly thereafter. Mr. Birch Burdette Long has kindly offered his services for the general massing and rendering of a bird's-eye perspective of the City Hall Park development.

MESSRS. LANG, RAUGLAND & LEWIS, Architects and Engineers, announce the opening of an office at 627 Metropolitan Bank Building, Minneapolis, Minn.

MESSRS. MCKENZIE, VOORHIES & GMELIN announce their removal to the Canadian-Pacific Building, 342 Madison Avenue, New York City.

THOMAS PRINGLE announces the removal of his offices to 217 Ninth Street, Pittsburgh, Pa.

ANDREW J. THOMAS announces the removal of his office to 15 East 47th Street, New York City.

A SUM of £200 has been placed in the hands of the President of the R. I. B. A. by an anonymous donor for the purpose of instituting a competition for a business building, facing on an ordinary London street, in which "color" would be the dominant feature.

The Competition will be open to all members of the profession, and students of the Architectural Schools in London and elsewhere.

Competitors have a free hand as regards style, material and color treatment. Three premiums (£100, £50 and £20) will be awarded to the best color designs, irrespective of architectural excellence. A fourth premium of £30 will be awarded to the best architectural design. *Color must be suggested by the use of permanent material only.* Designs in oil paint, fresco, scrafito, and so on, will not be admissible.

The members of the jury are: Sir Edwin Lutyens, R. A.; T. E. Collcutt, Esq., P.P.R.I.B.A.; Professor Gerald Moira; William Walcot, Esq. The designs, by the courtesy of the Royal Institute of British Architects, will be exhibited at 9, Conduit Street, W. 1, after the award has been made. The Competition will be conducted under the Regulations of the R. I. B. A. in so far as these are applicable.

Letters to the Editor Architects and Advertising

TO THE EDITOR:

April 3, 1922.

Enclosed is a copy of a letter written to one of our concerns by — —, of — —, and a copy of the letter written to him from this office.

Yours very truly,

ASSOCIATION OF NATIONAL ADVERTISERS, INC.
J. SULLIVAN,
Secretary-Treasurer.

COPY

— — — — —
Architect
— — — — —

GENTLEMEN:

March 16, 1922.

I am informed that under date of February 20th Messrs. — — & — —, General Contractors of the new — —, requested your cooperation in an elaborate issue about to be published featuring the building.

I do not desire to influence your judgment in this matter, but as the Architect of the work wish to impress upon you the unique position this building holds in the — — world. It has been freely stated, without contradiction, that it has no equal. At any rate, I know of no other that possesses the elaborate development that this does—bearing this in mind it would appear to me to be a privilege to be associated with the work in any capacity. I believe the publicity would be an excellent investment. The issue I understand is to be run on National — — Day, — —, at which time the leading — — Superintendents of the Country are invited to be present at the opening of the building.

I commend the enterprise to your careful consideration, and would be glad to hear how you look at it.

Sincerely yours,

(Signed) — —

THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

COPY

March 28, 1922.

Mr. _____,

_____, _____,

DEAR SIR:

Did you ever hear of Vanity Advertising? If not, may we say that there are many varieties of it, of which one is, doubtless, the publication to be issued by _____ & _____, to feature the new _____ building, use of which for advertising purposes is being advised by you to members of this Association.

If we had time to write, and you to read, what could be written about Vanity Advertising, you would probably be much interested and edified by the story.

Suffice it to say that all such advertising is a waste of money; and, as will be obvious to an educated man, waste of money not only immediately increases the cost of promoting business, but recoils upon all those who waste it, or advise its waste.

In the case to which we have referred, it seems also fair to say that if _____ & _____ desire to advertise their business, they should do so at their own expense, and not at the expense of firms supplying, or likely to be interested in supplying, furniture or equipment to the new building.

Without a doubt, if it were suggested to you that you should ask a manufacturer to send a sum of money to _____ & _____ in order that they might spend it to advertise themselves, you would decline the suggestion as not only unethical, but entirely uneconomic.

But there is no difference whatever between that and asking a manufacturer to help pay for _____ & _____'s "elaborate issue about to be published featuring the building."

Such requests—may we say?—are against the interests of your profession, against the interests of the contracting business, against the interests of the manufacturer, and against the public interests in economy in selling merchandise.

In drawing attention to such an unwarranted request to our members as you have made, we are doing no more than what has already been done by the American Institute of Architects in the attached resolution.

Yours very truly,

ASSOCIATION OF NATIONAL ADVERTISERS, INC.

(Signed) J. SULLIVAN,

Secretary-Treasurer.

New Members Elected

ALABAMA: John Eayres Davis, *Birmingham*. BOSTON: Frank E. Cleveland. Harold Buckley Willis, *Weston*. BROOKLYN: Adolph Goldberg, Daniel D. Streeter. CENTRAL NEW YORK: Carl Wesley Clark, *Cortland*. Charles Henry Conrad, *Binghamton*. DAYTON: Rollin E. Gebhart, Howard William Germann. George Hermann, William M. McCluer, Gustave A. Niehus, Lawrence Hampton Hall, *Springfield*. ERIE: Joseph P. Brenot. GEORGIA: Harrison S. McCrary, Jr., *Savannah*. ILLINOIS: Charles Gerhard Beersman, Robert J. McLaren, *Chicago*. NEBRASKA: Charles Alban Carr, Lweyn J. Prestwich, Frederick Scholer, Noel S. Wallace, *Omaha*. PHILADELPHIA: Ralph B. Bencker, M. Hawley McLanahan. SAN FRANCISCO: Russell Ray, *Santa Barbara*. SCRANTON-WILKES-BARRE: Frederick

Amsden Nelson. TEXAS: Emmett T. Jackson, Paul George Silber, *San Antonio*. VIRGINIA: Marcellus E. Wright, *Richmond*. WASHINGTON, D. C.: Thomas S. Browne, Harry F. Cunningham.

Architectural Instruction

The Department of Architecture, Ohio State University, Columbus, Ohio, will fill a position in the near future. The person filling this position will be given a rank on the University faculty and will divide his time between the instruction of classes in Architecture and the office of the University Architect designing academic buildings. Candidates should be graduates of a recognized school of architecture and have experience of not less than eight years in an office handling important work. They should communicate with Joseph N. Bradford, giving age, degree, experience and references.

Obituary

William V. Madden

Elected to the Institute in 1909

Died at Rochester, November 17, 1921

Mr. William V. Madden was born June 25, 1868, and was a representative of one of the oldest families of Monroe County.

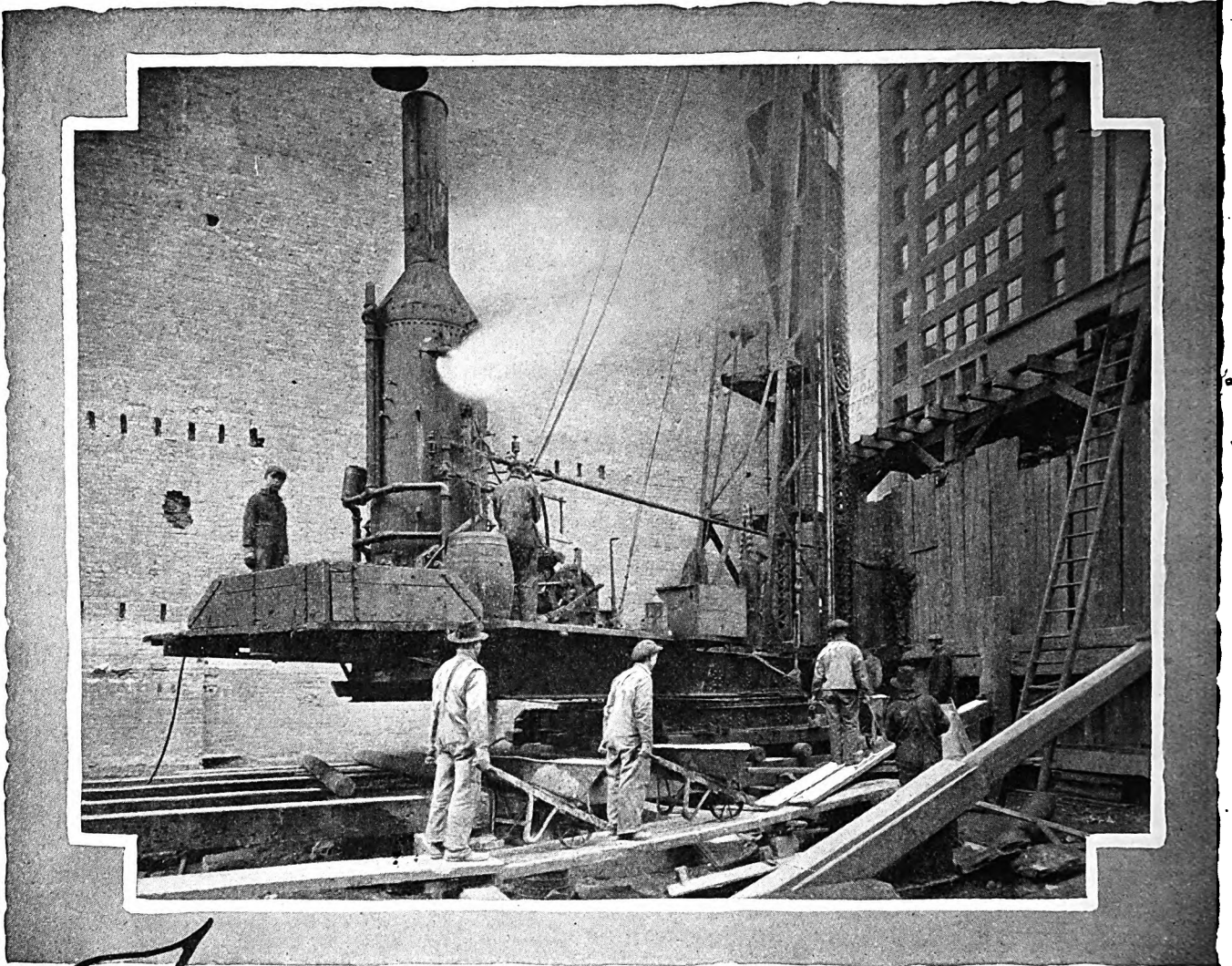
Mr. Madden supplemented his early education, acquired in the parochial schools, by study in the high school and Mechanic's Institute and he further qualified for an active business career by taking up the study of architecture under the direction of W. F. Kelley and completing with J. Foster Warner, one of the most prominent and successful architects in the city. Mr. Madden spent five years in the building business with Thomas W. Finucane and in May, 1902, formed a partnership with Edwin S. Gordon, under the business name of Gordon and Madden, which continued until May 1st, 1918, during which time they were architects for some of the prominent buildings of the city, including the Corpus Christi Church of Rochester, the Sibley Block, the Central Bldg., the largest portion of Stromberg-Carlson telephone manufacturing building, St. Mary's Church of Canandaigua, New York, St. Mary's Chapel, the residences of George D. B. Bonbright and George C. Gordon, the Immaculate Conception Convent and numerous other fine structures which stand as evidence of the superior skill and ability of the firm in their profession.

By mutual agreement a dissolution of partnership was made May 1st, 1918.

Mr. Madden was a member of the Central New York Chapter of the American Institute of Architects, and the Rochester Engineering Society and Rochester Club, and he neglected no opportunity, to his knowledge, to promote his skill in the line of his chosen profession, in which he already attained more than local distinction.

His death occurred November 17, 1921.

Structural Service Department appears on the second right-hand page following



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Structural Service Department

SULLIVAN W. JONES, *Associate Editor*

LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Committee Activities

Specifications for Glazing Glass. (26a1)—At the meeting of the Conference Committee on Specifications for Glazing Glass, held at the United States Bureau of Standards on May 8th, the matter of sheet glass only was considered because the plate glass interests were not represented. In connection with heavy sheet glass running from 26 oz. to 39 oz. the grade heretofore known as Selected Glazing was eliminated for the same reason that the AA quality of single and double strength sheet glass was previously eliminated, namely: that the quantity produced was so small that it was not a factor in the market.

Lime and Cement. (3)—(*Memoranda from the records of Mr. Thomas Nolan, delegate to recent meetings of Committees C-1 on cement, and C-7 on lime, of the A. S. T. M., as a representative of the A. I. A.*)

Lime. (*Meeting of Committee C-7, Nov. 30, Dec. 1 and 2, 1921.*) It will be interesting to architects to read the headings of the subdivisions of the work of research of only one of the many Committees of the A. S. T. M., for example, its Committee on Lime. It is an illustration of the subdivision of human knowledge, and the work that is being done for the architect and the engineer, in regard to the nature and proper use of building materials.

Sub-Committee 1. Co-ordination.

Sub-Committee 2. On Structural Lime.

1. Package guarantee
2. Apparent density
3. Panel tests
4. Specifications for sand
5. "Properly burned"

Sub-Committee 3. Lime for Chemical Industries.

1. Lime for varnish makers
2. Lime for water softening
3. Lime for silica brick
4. Lime for causticising
5. Lime for other chemical uses.

Sub-Committee 4. Lime for Agricultural Uses.

1. Investigations on solubility of limes
2. Collecting of samples of limes and lime-stones suitable for agricultural purposes
3. Graduation of liming material

Sub-Committee 5. On Methods of Analysis.

1. Consideration of criticism of tentative methods
2. Determination of "available lime"
3. Method of determining apparent density

Sub-Committee 6. On Plasticity.

1. The plasticimeter and sand-carrying capacity
2. The nature and cause of plasticity
3. Effect of lime on plasticity of concrete

Sub-Committee 7. Lime for Use in Highway Construction.

1. Hydrated lime in sand clay for roads

Sub-Committee 8. On Nomenclature.

1. Consideration of glossary
2. Consideration of gypsum glossary
3. Specific gravity
4. Apparent specific gravity

During the meeting the following questions relating to Lime Plasters were proposed for discussion by Mr. Nolan:

1. Is it true that the main advantage in the use of Hydrated Lime Plaster over other wall plasters is the fact that a wall made with lime as a base tends to deaden sound and does not reflect or transmit it in the way that a wall made with some other hard-wall plaster does?

2. Is it also true that one of the great advantages in the use of Hydrated Lime Plaster is the fact that lime plaster does not harden within the short time that some other wall plasters harden?

3. Is it a disadvantage to any plaster after water is added to hold back the initial set by the action of a retarder so that the set will be deferred to from one and one-half to two hours?

4. Is it possible for a plasterer to straighten the walls and true them up in a proper manner if a wall plaster sets in less than two hours?

5. When a plaster is what is called "over-retarded," does or does not this tend to "kill" the material and cause it to lose some strength?

6. Is Hydrated Lime Plaster entirely free from the liability to corrode untreated metal lath, and do the various treatments applied to metal lath entirely prevent all plasters from causing corrosion?

7. Can it be said that Hydrated Lime Plaster would tend to preserve an untreated metal lath?

8. If there were any acids in a wall plaster would they ever be active without dampness or moisture?

9. Would an acid in a plaster start over again to be active, even after the wall had been finished, when unexpected dampness or humidity entered the wall?

10. Has it ever been found that an acid action has started up later on in the life of a building from leaks in plumbing or water pipes?

11. In regard to the question of the corrosion of metal lath due to an acid in any wall plaster, are chemists in general agreement as to the theory of how the acid is liberated in a wall plaster under moist conditions?

12. Does the buckling of wooden lath depend entirely upon the quality of the lath and the manner in which it is nailed?

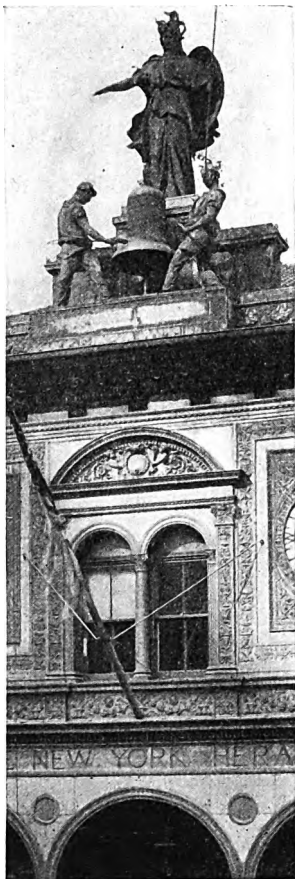
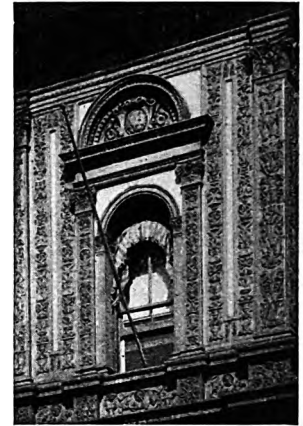
13. Is or is it not true that when Hydrated Lime Plaster is used, there is generally less noticeable effect from buckling of wooden lath than with some other wall plasters?

14. As the buckling of wooden lath is occasioned by the expansive action of the lath due to the absorption of moisture upon application of the plaster, is it true that if laths are placed too close together expansion will continue to such an extent that the laths touch each other, and that the expansion will from that point force the laths outward until the plaster cracks?

1892

Herald Building, New York
McKim, Mead & White, Architects

Occupied by The New York Herald for thirty years. Now occupied by one of the highest class shops in New York—striking evidence of the enduring beauty and worth of Atlantic Terra Cotta.



AT the beginning of its thirtieth year, The Herald Building takes on a new lease of life. The dark cream unglazed Atlantic Terra Cotta is unaltered; the modeling is as crisp and fresh as the day it came from the modeler's hand.

"The Herald" has departed; the animated clock has disappeared. Cleaned outside and remodeled inside the building now houses the mid-town branch of Rogers Peet and several smaller stores.

Many larger and more important buildings have been erected since the Herald Building, buildings that take advantage of recent developments in glazed colors and unusual textures, but in modeled Terra Cotta detail the Herald Building has never been surpassed.

"Questions Answered" on request



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 Atlanta Terra Cotta Company
 Atlanta, Georgia

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15. Is it or is it not true that, in some cases, in case a lath is not securely nailed, the whole end of a lath will force its way entirely through the plaster?

16. Is it also a fact that a crooked lath may often, by the distortion of its natural state when it is nailed in place, after it has absorbed the moisture from the plaster, pull the nail out, and actually return to its natural crooked shape?

17. As the result of buckling of lath is a wavy and uneven surface of the finished walls, is it possible largely to overcome this by having the laths spaced a full three-eighths of an inch apart, and by firmly nailing them to each stud?

18. Is it true that although the expansive action of the laths seems to act in the same manner, no matter what kind of wall plaster is used, the slower hardening properties of Hydrated Lime Plaster have an advantage because it allows the plasterer to float the surfaces after the expansive action is complete, and permits, to a large extent, the removal of wavy and uneven appearances on the surfaces of the wall?

19. Does lime plaster have any advantage as a fire-retarder, on account of the temperature required to de-carbonize or calcine?

20. Is it or is it not true that a wall plaster composed of Hydrated Lime with a proper percentage of Portland Cement, makes one of the best of the fire-resisting plasters?

21. Does Hydrated Lime Plaster enjoy any advantage on account of its property of combining easily with Portland Cement?

22. Does lime plaster, or any plaster which has lime as a base, enjoy any advantage because of its certainty of sticking to concrete walls?

23. Is it just as well, when it is desired to secure the best results, to apply Hydrated Lime Plaster on concrete, just as it is, or is it better first to wash the concrete surface with a solution of hydrochloric acid and water and then brush it thoroughly with a wire brush? Is it necessary to remove the filmy surface which is found on nearly all concrete work, before applying lime plaster to the concrete?

24. Does or does not lime plaster require a sizing coat when the plaster surface is to be tinted or decorated?

25. Is a sizing coat necessary before tinting or decorating in case a wall plaster contains acids or retarders used in the manufacture of the plaster?

26. Has it always been customary to apply paints in tinting on the surfaces of lime wall plaster, and is it true that some of the oldest paintings in Europe, for example, have been painted directly on lime plaster and are still in excellent state of preservation?

27. Are there any differences, in regard to the economic advantages of different wall plasters, in the sand-carrying capacity?

28. Will a certain quantity of neat Hydrated Lime, when sanded, produce a greater or smaller quantity of plaster than other wall plasters?

29. In regard to "plaster droppings" on the floor while a job of plastering is going on, is there any advantage in regard to prevention of loss to the plastering contractor in a big job, in using lime plaster?

30. Is there any difference in the time of deterioration of different kinds of neat wall plasters?

31. In regard to spreading qualities, that is, the ease with which a wall plaster may be worked under the trowel, is the claim true or not true that Hydrated Lime is the most plastic of plastering materials?

32. Can plastering today be finished just as quickly with Hydrated Lime plaster as with any other kind of wall plaster?

33. As in all plastering work, the work is rotated,—i. e.,

in three-coat work, the scratch coat is put on, then the brown coat, and then the white coat,—(and a plasterer is putting on one of these coats in one place while the wall is hardening in another place just previously done), does it make much difference, in this rotation process, in regard to the final time for finishing the job, as to Hydrated Lime Plaster and other kinds of wall plasters?

34. Is it true that under favorable conditions, jobs of lime plastering have been done, in which the scratch coat is put on in the morning, the brown coat in the afternoon, and the white coat the following day?

Cement. (Meeting of Committee C-1, on Cement, January 4, 1922). The meeting called attention to the need of further work dealing with "Soundness" of cement; referred to the fact that in a number of cases unsound cements had produced concrete which was, even after long periods, satisfactory; that this property was differently determined in different countries and differently interpreted; and finally asked for a discussion of the activities of the committee along investigating lines not only dealing with unsoundness but with the other properties of cement.

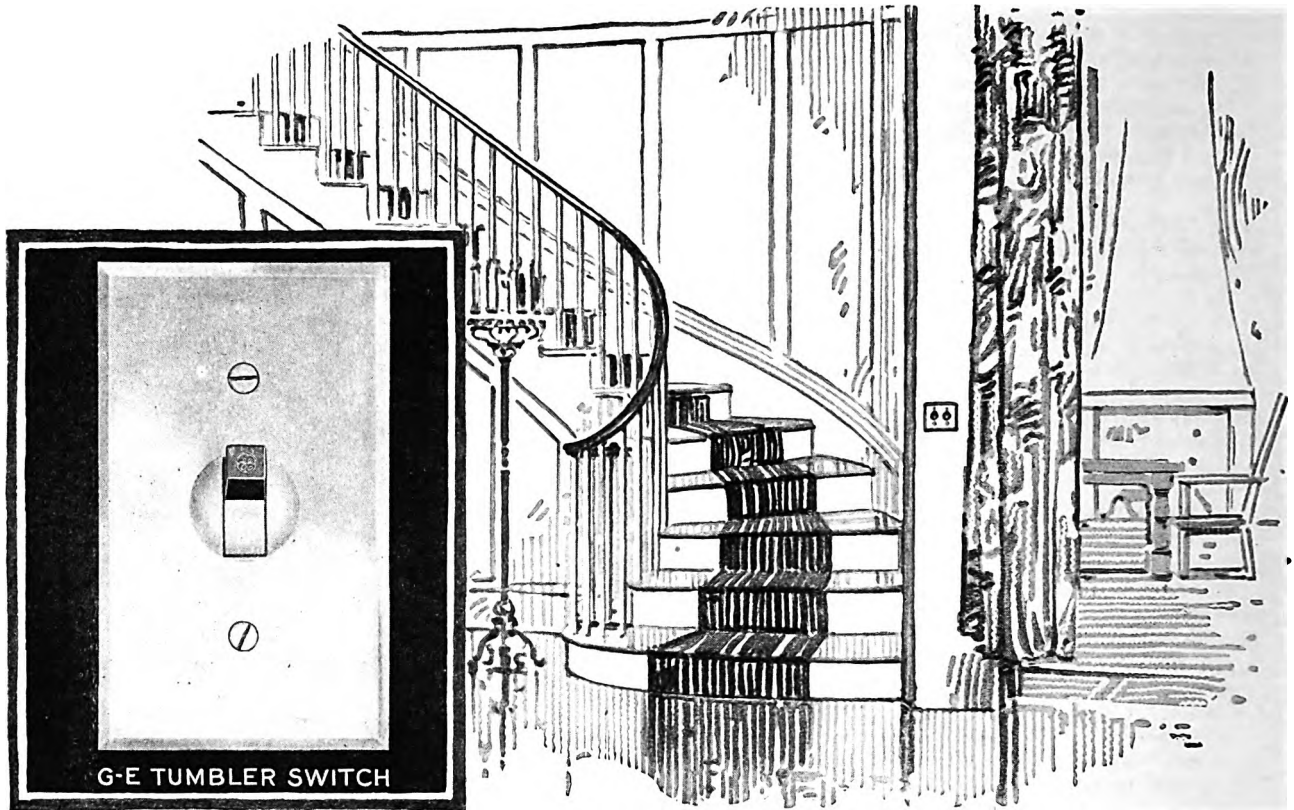
The discussion which followed this meeting of the committee was one of the most interesting held during the period. In general those present felt the need of investigations which would help solve not only how unsoundness, or slow set, or rapid hardening, etc., affected the strength of the cement in concrete, but why. In other words, the need of vital fundamental research of cement was recognized. Attention was called to the fact that those interested in the industry had not shown this need to those directing research or training research men. As a result practically no research of cement is being conducted at our Universities (investigations of concrete are not cement investigations) though such work is being done and investigators being developed along other lines: for instance, dyes, the value of the annual output of which is but a part of the value of the annual production of cement.

It was recognized at the same time that the present cement specifications were not in need of immediate revision, especially as the art of concrete making was such as not to make use of the full value of the cement as now available. But in the meantime the committee should not be inactive, but should be doing fundamental research.

It was therefore moved and carried that a committee of three be appointed to outline investigations dealing with the qualities and what constitutes the qualities of Portland cement, such a committee also to secure the aid of laboratories and allot the work to them.

In regard to the subject of the *Time of Set of Cement Mortar*, it was stated that several of the laboratories of State Highway Departments had reported to the Office of Public Roads cases of "false" flash setting of cement. Attention was called to the fact that this may be an example of "syneresis"—the phenomenon of a colloid in setting and then becoming more liquid. Cements may contain some very active constituent which may hydrate rapidly (false set) to a colloid which then gives off water; or it may be the separating out of a compound with the liberation of water. It has been repeatedly noted, especially when recording time-of-set machines have been used.

In regard to the *Strength of Cement*, important further research is projected and outlined. This is for the purpose of having more tests made on more brands of cement to determine values for the compressive tests of cement, to compare these with the tensile tests and to correlate these with their cementing value in concrete. According to the program five laboratories so located as to be centers for the assembling of cement samples conveniently from the different



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Tension test: 1:3 Standard Sand Mortar at 7-28-90-365 days. 2 x 4 Compression Cylinders 1:3 Standard Sand Mortar at 7-28-90-365 days. 2 x 4 Compression Cylinders 1:3 Local Sand Mortar at 7-28-90-365 days. 6 x 12 Compression Cylinders 1:2.5:5 Local Aggregate at 7-28-90-365 days.

Definitions. Attention was called, in connection with correct interpretation of tests for "Consistency," "Plasticity," etc., of Cementitious Materials, to the proper definition of these terms.

There have been general discussions of the terms, "Consistency," "Plasticity," "Workability," "Flowability," "Viscosity," and "Ductility," and it was very clearly brought out in the discussions that there is confusion in the use of these terms. It was very clearly developed that it would be impossible for committees to define these terms without considerable study.

In connection with the definition of the term "consistency" several ideas were advanced as follows: That the term consistency was a measure of the degree of wetness of a material; that the consistency of a material was a measure of its resistance to change of form; that consistency depended primarily upon the dispersion of the solid particles in a liquid medium.

Consistency. Funk & Wagnall's: Compatibility or harmony between things, acts, or statements. Degree of firmness or density. That which has coherence or firmness. Webster: Condition of remaining at rest or quiescent. Condition of standing or adhering together, or being fixed in union; firmness; coherence; solidity. A degree of firmness, density. Standard: Any state or degree of density and firmness; figuratively, any degree or firm cohesion of parts. That which has coherence or firmness in the composition of its parts.

Plasticity. Funk & Wagnall's: Plastic quality. Formative power. Webster: Plastic quality or state. Standard: The property of some substances, as clay, through which the form of the mass can be readily changed or molded. Plasticity, in the wide sense of the word, means the possession of a structure weak enough to yield to an influence, but strong enough not to yield all at once. W. James, Prin. of Psychology.

Workability. Funk & Wagnall's: Not given. Webster: Not given. Standard: Given as noun after workable. No definition.

Flowability. Not given in any of above dictionaries.

Viscosity. Funk & Wagnall's: Not given. Webster: A resistance offered by a fluid to the relative motion of its particles; internal friction; capability possessed by a solid to yield under stress. Standard: Thickness of a fluid; stickiness; gumminess. In physics: That property of semi-fluids, fluids, and gases, by virtue of which they resist an instantaneous change of their shape or of the arrangement of their parts; internal friction; opposed to mobility. The property of matter by virtue of which bodies in the solid state yield continually under stress.

Ductility. Funk & Wagnall's: The state or degree of being ductile. Webster: Ductile quality or state. Standard: That property of some solids by which they can be extended by drawing out, as into wire or threads. Pliancy of disposition; flexibility; tractableness.

Lime (Meeting of Committee C-7, March 28 and 29, 1922.) Of various sub-committees' activities, the work of the sub-committee on Structural Lime is relatively the most interesting and important to the Architect.

Attention was called to a method and apparatus described by Washburn and Bunting in the February, 1920, issue of the *Journal of the American Ceramic Society* as a standard method for determining the porosity of quicklime.

It was announced that 98 panels, representing different finish coats, have been erected to determine the relation between the fineness and soundness of lime. It was suggested that if any substances prove to cause unsoundness when they are used in finish coats, these substances be tried in the brown coats to see whether the unsoundness will still be evident. It was suggested that those panels which prove to be sound after some months' exposure be subjected to a more severe test by wetting them thoroughly with water. The Committee was greatly assisted in this work by the Plasterers' Union, the Plastering Contractors' Association, the National Lime Association, and the United States Bureau of Standards. An outline of this work will be included in the annual report of Committee C-7.

Future Meetings. The annual meeting of the American Society for Testing Materials will be held at the Chalfont-Haddon Hall, Atlantic City, N. J., during the week of June 26, 1922. Among the topics of special importance to be opened to general discussion will be "Inspection of Concrete" and "Specifications for Concrete and Reinforced Concrete." At the Annual Meeting there is a summing up of the work of the year, and the writer of this progress report expects to submit a further report, as the representative of the Institute to the A. S. T. M.

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Stain, Shellac and Wax for Wood Floors. (25b1)—(U. S. Department of Agriculture. *Farmers' Bulletin* 1219. "Floors and Floor Coverings," Page 36. Size 6" x 9".)—This bulletin contains, besides general instructions for the finishing and care of floors, the following formulæ:

Stain No. 1.—1 ounce permanganate of potash, 1 quart warm water.

The solution made by dissolving the permanganate of potash in the water is violet colored, but when it is applied to wood a chemical action results and the wood is stained brown. This stain gives better results on pine than on oak flooring.

Stain No. 2.—1¼ ounces pulverized gilsonite. 1 quart turpentine.

This is a brown stain that can be used on either softwoods or hardwoods.

Stain No. 3.—½ pound raw sienna (ground in oil), 2 ounces raw umber (ground in oil), 1 pint boiled linseed oil, ½ pint ground Japan drier, 1 pint turpentine.

Putting these materials into a bottle and shaking vigorously is perhaps the best way of mixing this stain. It has been found to give excellent results on oak.

Oil stains will be absorbed more evenly by pine or maple floors—if the wood is first coated with a mixture of 3 parts turpentine and 1 part linseed oil and the surface sandpapered smooth after it is dry.

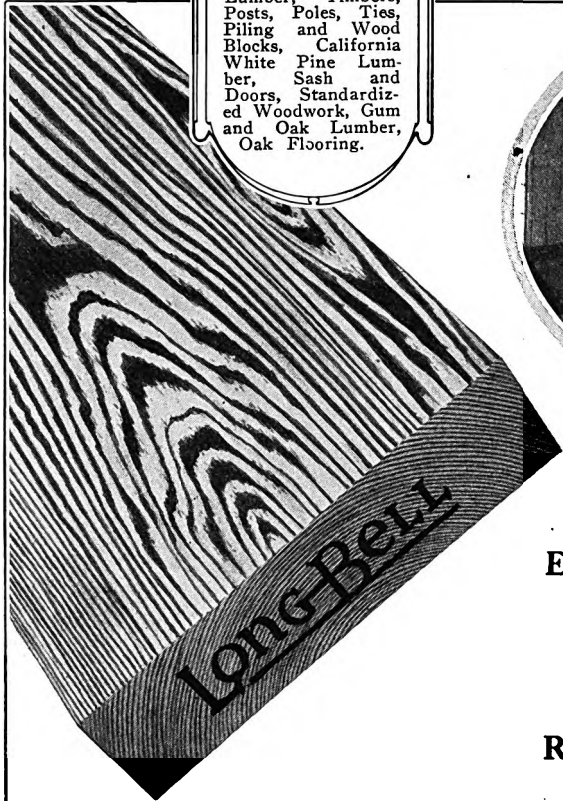
Shellac Varnish.—2 pounds gum shellac, ½ pound castor

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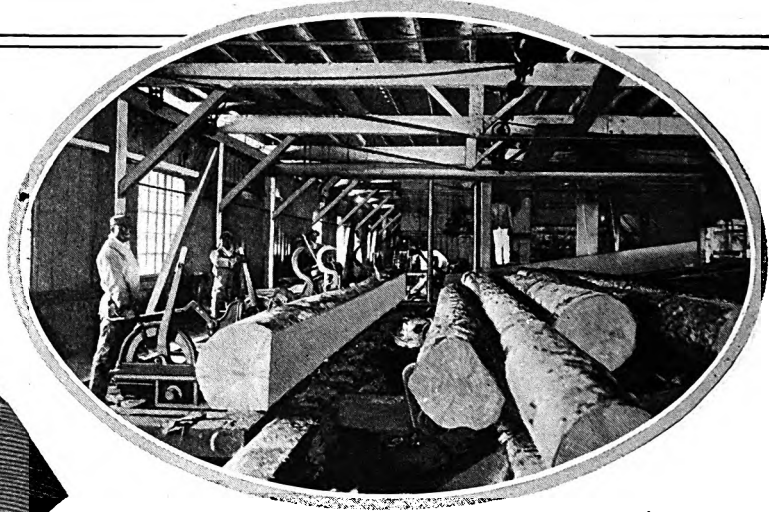
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Long-Bell lumber is branded mechanically on one end just after it passes the trimmer.

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Long-Bell Lumber and Timbers are trade-marked with the name of the manufacturer. This means individuality, *unmistakable* identification—the same kind of buying guide you demand on other merchandise.

Reliability—

Long-Bell Lumber and Timbers have back of them the reliability of a lumber concern that has been 47 years in the business.

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Long-Bell Lumber and Timbers come from exceptional stands of virgin timber. They are manufactured in mills equipped with only the very best of modern machinery.

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Long-Bell Lumber and Timbers are made by skilled workmen—men who have been with this company for years and who take a personal interest and a personal pride in the products that bear their company's name.

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Each process of manufacture and each step in the grading is under the supervision of men who have had years of experience. Each log is cut for purposes for which it is best adapted.

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oil, 1 gallon alcohol, denatured according to United States Internal Revenue formula No. 1.

Put these ingredients into a well-stoppered bottle in a warm place, and shake the mixture frequently until the shellac is dissolved. The alcohol should contain not more than 5 per cent of water, and care should be taken not to drop any water into it as it is being mixed with the dry shellac. The castor oil aids in making the varnish flexible and less brittle when dry, but may be omitted; in that case, the quantity of gum shellac should be increased to $2\frac{1}{2}$ pounds. If too thick, this varnish may be thinned by the addition of more alcohol.

Floor Wax No. 1.—1 pint turpentine, 4 ounces beeswax, 3 ounces aqua ammonia (strength, 10 per cent), 1 pint water.

Mix the beeswax and the turpentine and heat them by placing the vessel in hot water until the wax dissolves. Remove the mixture from the source of heat, add the ammonia and the water, and stir vigorously until the mass becomes creamy.

On varnished or shellaced floors this wax should be applied lightly and any excess wiped off at once, because ammonia dissolves varnish and shellac. Unfinished oak flooring polished with this wax will be darkened somewhat as a result of the chemical action of the ammonia.

Floor Wax No. 2.— $\frac{1}{4}$ pound beeswax, 1 pound paraffin, $\frac{1}{4}$ pint raw linseed oil, $\frac{1}{4}$ pint turpentine.

Melt the beeswax and the paraffin, add the linseed oil and turpentine, and stir the mixture vigorously. Unfinished wood will be darkened somewhat by this wax as a result of the absorption of the linseed oil.

Turpentine is highly inflammable; therefore care must be taken in making these waxes to heat the ingredients only by setting them in hot water and to have no flames in the room.

Varnish Remover.—4 parts benzol, 3 parts amyl acetate or fusel oil, 1 part carbon tetrachloride or chloroform.

After this mixture has been applied to the wood and allowed to stand for a few minutes, the old varnish may be scraped or rubbed off with a dull knife, steel wool or excelsior. This varnish remover and others of this type should be used only where there is good ventilation and no open flame of any kind, for they contain anaesthetic and inflammable materials.

Beeswax. (25b14)—(*Journal of the Royal Society of Arts*, Oct. 14, 1921. *Extracted from leaflet published by the British Ministry of Agriculture and Fisheries.*)—The melting point of pure beeswax is between 63 degrees and 64 degrees C., which is higher than that of any other wax. The color, which varies from pale primrose to orange red, depends to a great extent upon the variety of pollen consumed by the bees. It is a curious fact that dark honey produces a light wax, while light honey yields one of a darker hue.

For commercial purposes the lightest colored wax commands the best price and, therefore, before extracting it is advisable to grade the combs. Those which have not been occupied by brood, and also cappings removed from combs previous to extracting the honey will yield the best wax, and should be sorted out and melted separately from old combs, which will yield a darker and consequently less valuable wax.

Adulteration.—The following are simple tests for detecting adulteration of beeswax: (1) A small piece of wax placed in the mouth and chewed should not adhere to the teeth, or become pasty but, generally speaking, should disintegrate into small fragments and have no unpleasant taste. (2) Place a piece of suspected wax (of the size of a small nut) into a test tube, half fill with spirits of turpentine, and carefully warm over the flame of a spirit lamp. If the solu-

tion is cloudy, or a deposit is thrown down, the solution is not complete, and the wax is adulterated, as spirits of turpentine completely dissolve pure beeswax.

Distinguishing Characteristics of Mahogany. (19a)—(*Technical Note Number 162, Forest Products Laboratory.*) Only true mahogany from tropical America, "African mahogany," and "Philippine mahogany" are commonly sold as mahogany in this country, but at various times over 60 different species of timber have been sold under that name. Although all of these species resemble each other in varying degrees, tropical American mahogany and "African mahogany" possesses one important characteristic in common. This is the occurrence of dark amber-colored gum in many of the pores. The gum does not fill the pores but is recognized as dark specks or streaks in the pores as seen on end or side grain. This gum is barely visible to the naked eye, but is easily seen through a hand lens with a magnification of 10-15 diameters. In preparing the end grain of the wood for examination, a very sharp knife should be used to make a smooth cut.

Some other woods have similar dark masses of gum in the pores, but none of these are commonly substituted for mahogany. Among them are crabwood and sapeli, species imported from South America in small quantities only, and the Cedrelas (Spanish cedar, etc.), which are rarely sold as mahoganies, and are easily recognized by their odor.

True mahogany has fine continuous, concentric lines on the cross section usually from $\frac{1}{8}$ to $\frac{1}{2}$ inch apart, which distinguish it from "African mahogany" in which these lines never occur.*

"Philippine mahogany," although not marked by the black masses of gum, is distinguished from true mahogany and other so-called mahoganies by the presence of fine, white, tangential lines $\frac{1}{8}$ inch to several inches apart, readily visible to the naked eye, and showing under a lens as rows of small openings filled with a white substance.

A more complete key and description of mahogany and so-called mahogany, which describes common species in detail, may be obtained from the Forest Products Laboratory.

Ship Lighting. (31a19)—(*Bulletin L. D. 127, Lighting Data, Edison Lamp Works. Size 6" x 9". Pages 24.*)—In this bulletin the following subjects are discussed: Special Requirements as to Wiring, Special Requirements as to Fixtures, Lighting Practice and Requirements for Salons, Writing Room, Smoking Room, Dining Room, State Room, Working Areas, Engine and Fire Room, Galleys, Freight Decks and Passageways and Decks; Lake and River Boats and Special Fixtures.

Bibliography: "Lighting of the Largest River Steamer in the World," L. C. Porter, *Lighting Journal*, September, 1913. "Electrical Equipment of Argentine Battleship *Moreno*," H. A. Hornor, *Transactions of the American Institute of Electrical Engineers*, 1914, page 1567. "Lighting of Passenger Steamer," H. T. Spaulding, *Transactions of Illuminating Engineering Society*, Vol. X, page 680. "Lighting of Ships," H. A. Hornor, *Transactions of Illuminating Engineering Society*, Vol. XI, page 235. "Illumination in the Navy," Lieutenant C. S. McDowell, *Transactions of Illuminating Society*, Vol. XI, page 573. "Electricity's Part in Building and Navigating Ships," H. A. Hornor, *Electrical Engineer*, May and June, 1918. "Science of Marine Camouflage Design," Lieutenant E. L. Warner, *Transactions of Illuminating Engineering Society*, Vol. XIV, page 215. "Application of Electrical Equipment for Marine Service," *Electrical Record*, February, 1920. "Lighting of Ships," L. C. Porter, *General Electric Review*, February, 1915. "Painting Battleships for Low Visibility," Lieutenant E. L. Warner, *Trans. I. E. S.*, Vol. XIV, page 220.



From a drawing by Wesley Bonestell © ARCO 1922

Architects: Henry M. Congdon & Son, New York

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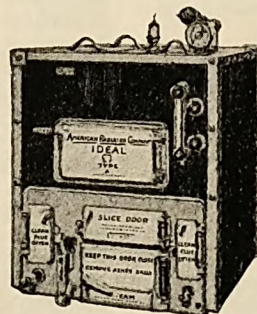
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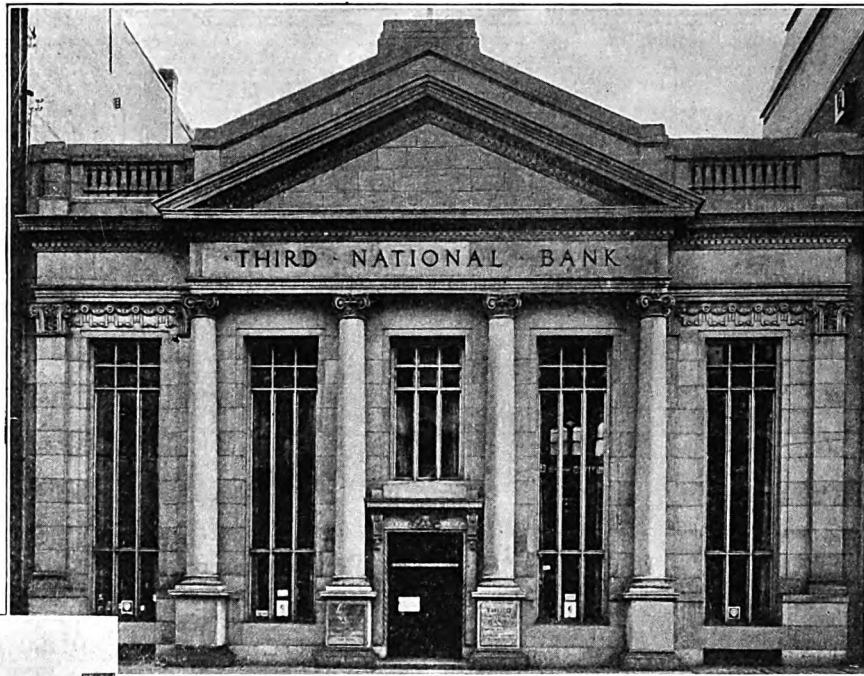
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*Third National Bank Building, Scranton, Pa. After being remodeled.
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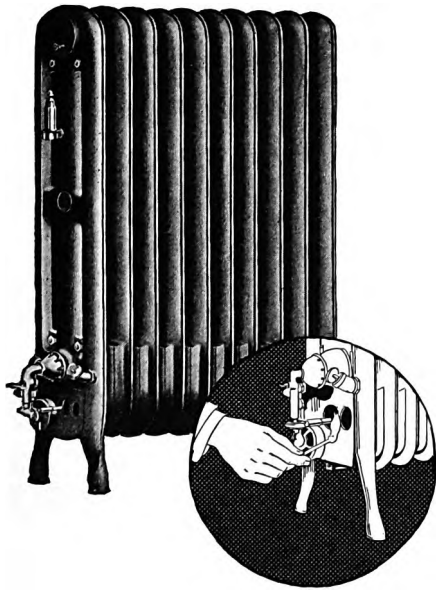
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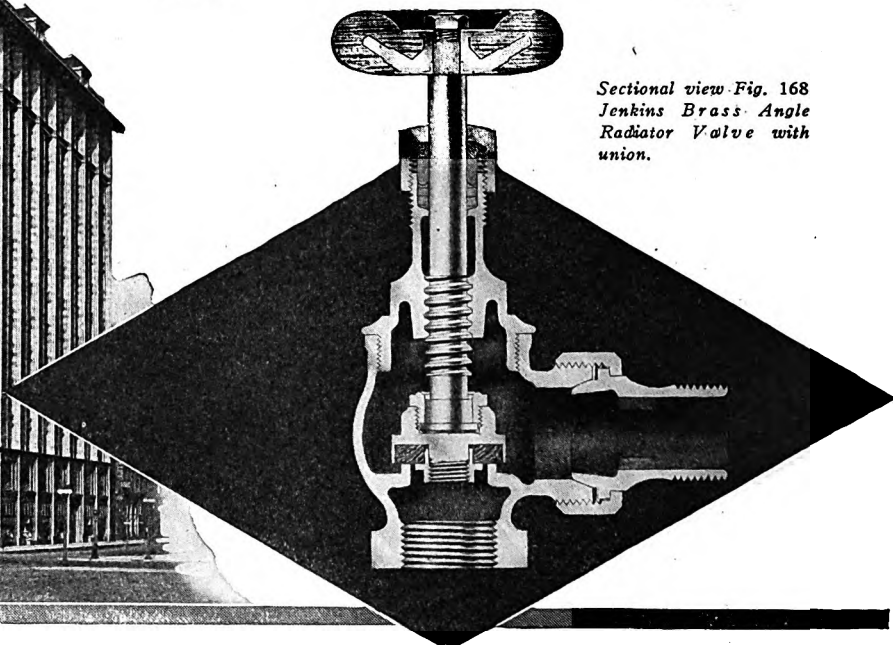
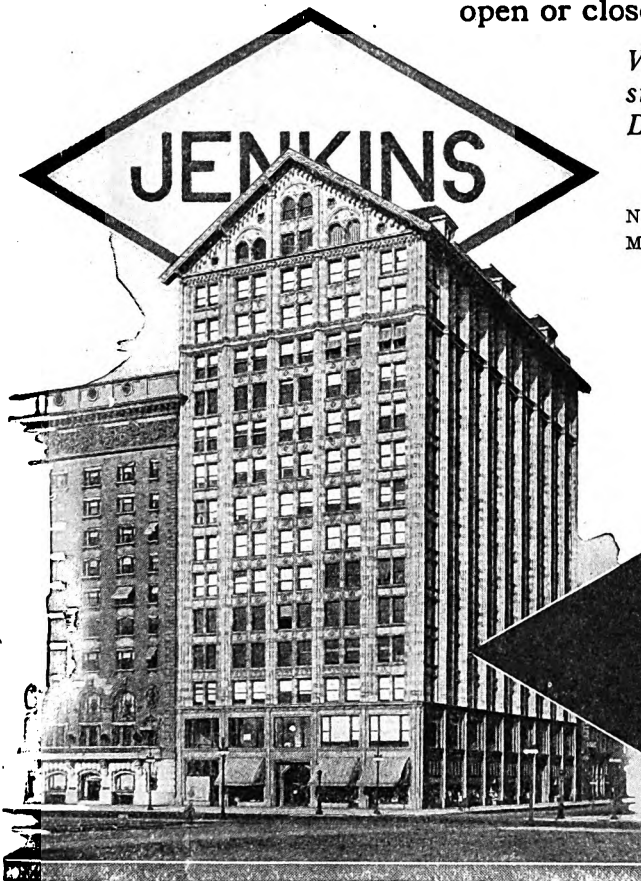
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Sectional view Fig. 168 Jenkins Brass Angle Radiator Valve with union.

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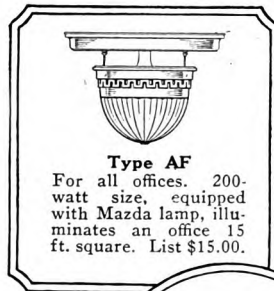
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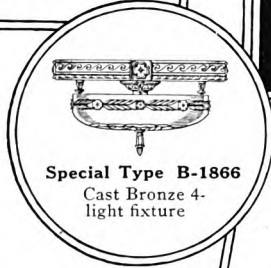
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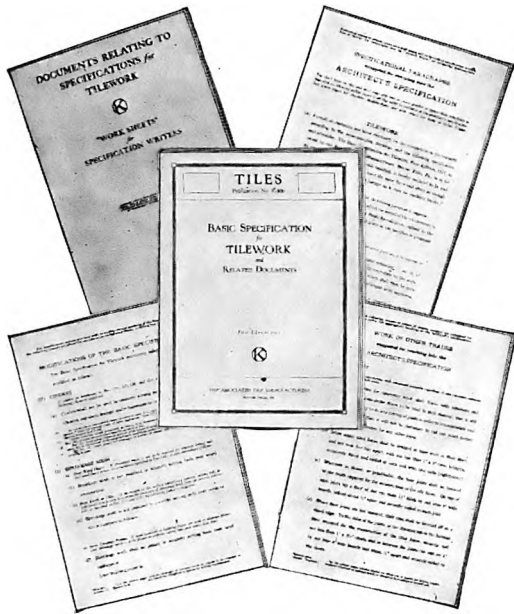
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- Paragraphs for suggested modifications of the Basic Specification.
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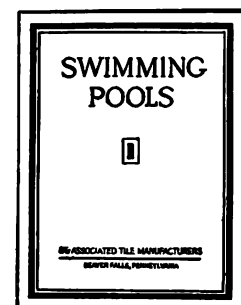
Publication No. K-200—"Basic information"—is another document prepared for the architect's use, embracing such subjects as Ingredients and Processes, Gradings, Sizes, Shapes, Colors, Finishes and Nomenclature. Tiles are grouped and described, with illustrations. Plates of drawings show relative proportions and classifications.

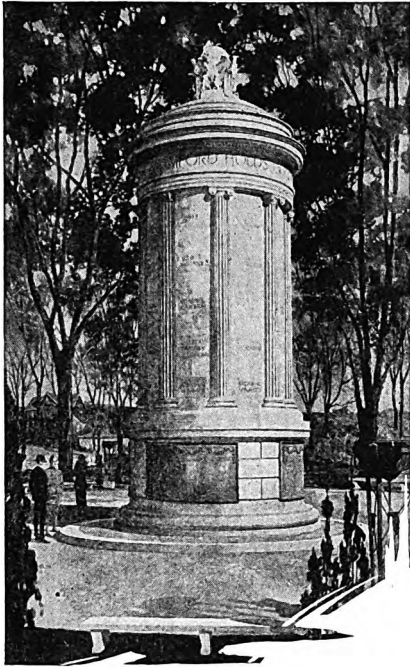
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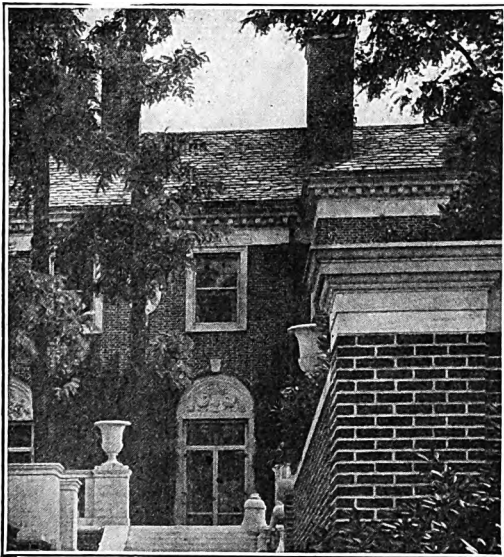
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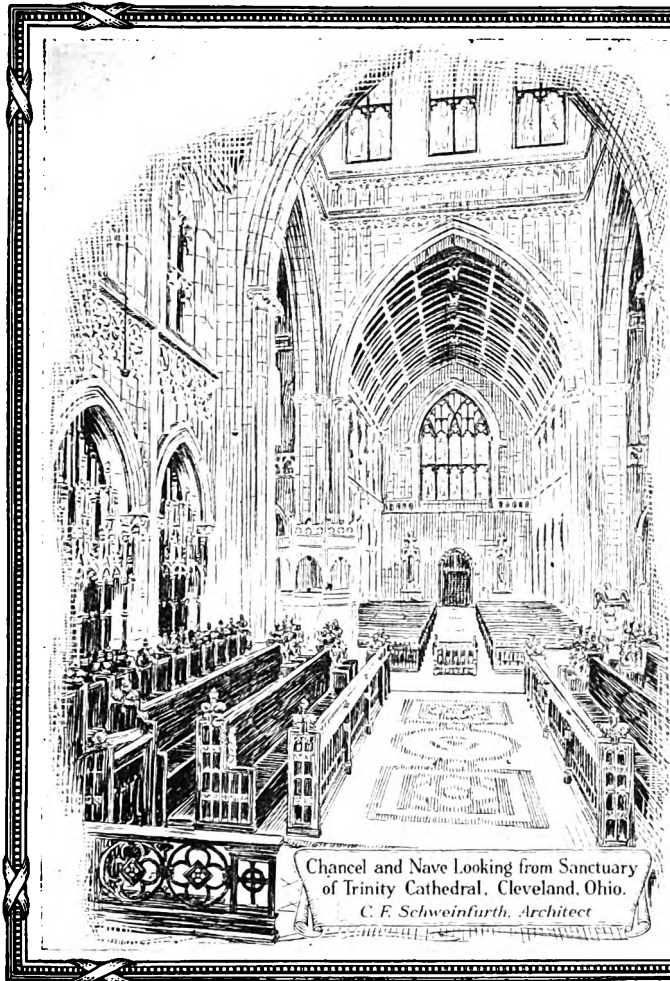
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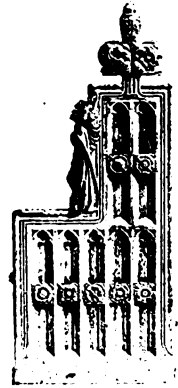
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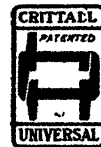
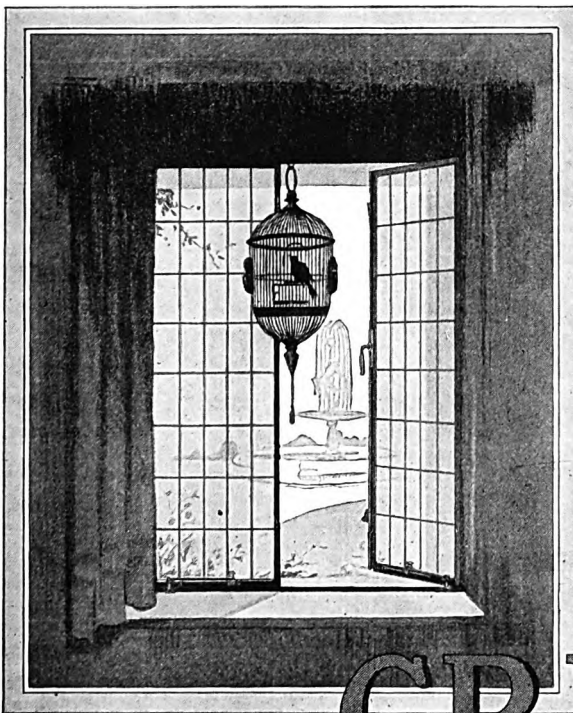


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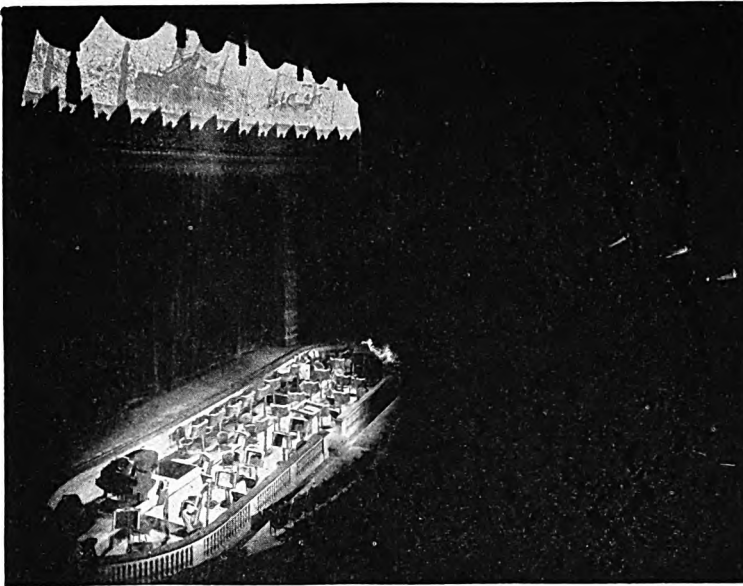
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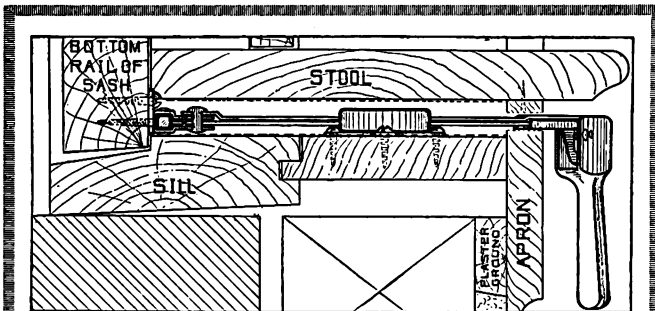
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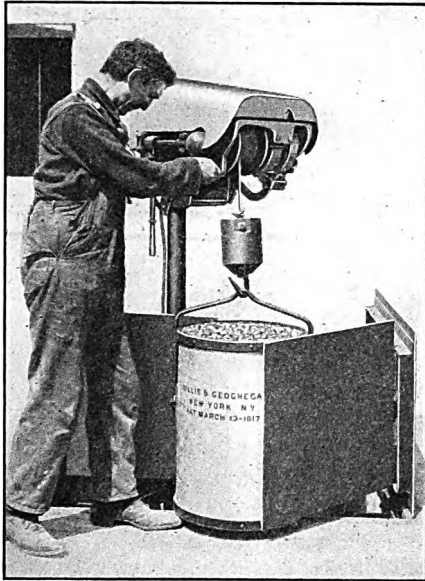
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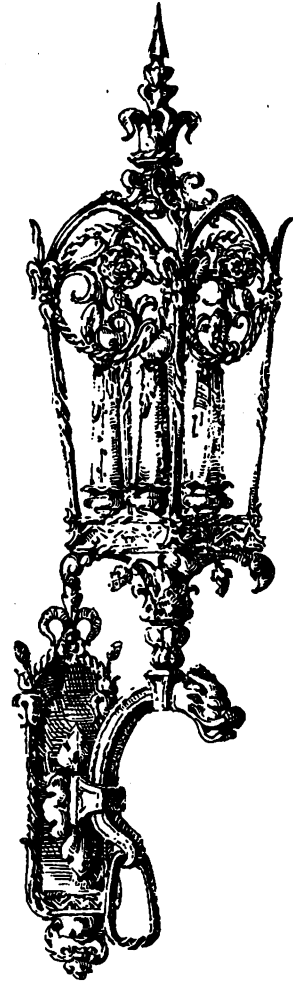
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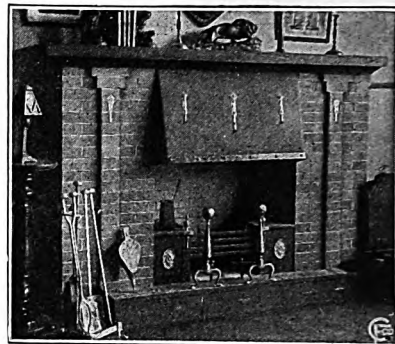
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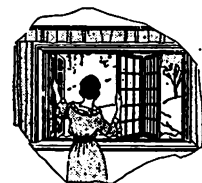
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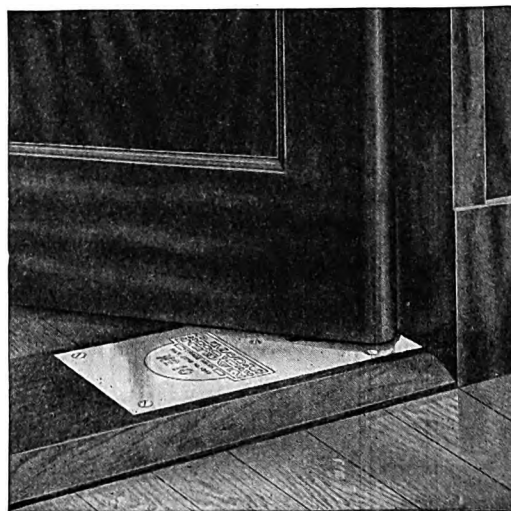
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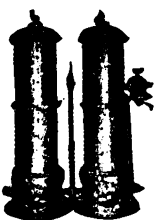
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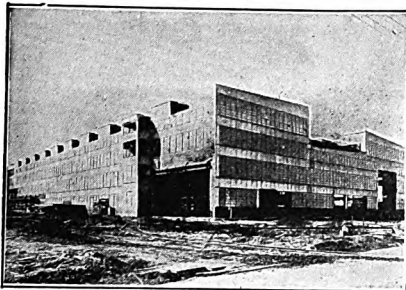
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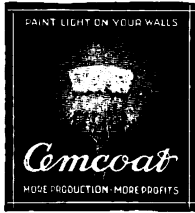
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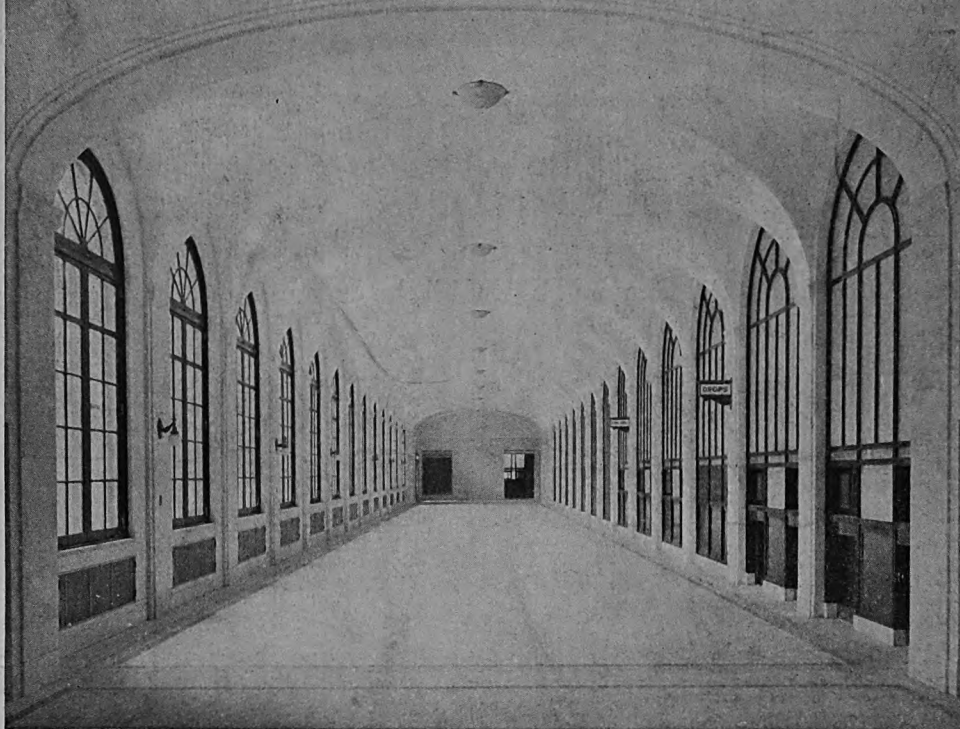
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Proceedings
of
The Joint Conference
on
“Better Advertising to Architects”

Held at Indianapolis, Indiana, November 10-11, 1921

BETWEEN

The Board of Directors of the American Institute of Architects

AND

The Building Materials Producers of the United States

The Press of the A. I. A., Inc.,
313 East Twenty-third Street,
New York City

Proceedings of the Joint Conference on "Better Advertising to Architects"

Held at

INDIANAPOLIS, INDIANA, NOVEMBER 10-11, 1921

*Between the Board of Directors of the American Institute of Architects
and the Building Materials Producers of the United States*

The conference met at the Lincoln Hotel, Indianapolis, on Thursday, November 10, 1921, at 2:30 P. M., with Mr. Henry H. Kendall, president of the Institute, presiding.

THE CHAIRMAN: We have come together to discuss the presentation to the architectural profession of materials and processes utilized in the construction of buildings. We architects are somewhat embarrassed by the efforts of people to bring to our attention, and to induce us to use things in which they think we should be interested.

There come, day after day, pamphlets, circulars, letters, follow-up letters, and very beautifully arranged and printed catalogues, of a wide variety of sizes and in thickness from one sheet of paper to volumes. We try to preserve those that give or which we think will give us information. All of this literature comes to us as the product of your effort to induce us to appreciate the merits of what you have to offer, and provide for its use in structures we are designing.

Neither your process of inducement nor ours of discrimination is thoroughly successful. We attack our morning mail with a waste basket right handy, and much of this material you send us goes into it unopened; some of it is glanced at and laid aside only to go into the waste basket within the next twenty-four hours; some of it is retained.

This problem of waste is no new one. You producers are spending a very large amount of money to present your wares; you are doing it under the advice of those who have studied the problem of presentation, and yet, I think, you feel that you are not reaching us, and I know, we feel we are not getting the information we want, in the shape in which we want it.

We get a catalog which is a splendid example of

the printers' art, with fine cuts and illustrations, and a declaration of the very great merit of the article advertised—and we take it with a certain grain of salt. We receive a letter which tells us that you have the very best process in the world for accomplishing a certain result. We happen not to be interested in that process at that time, and we, therefore, drop that letter into the waste basket.

Some of you, a little later, send us a follow up letter, calling attention to your unacknowledged first letter. We throw that into the waste basket also. A little later we get another letter, couched in a little more insistent terms; that letter also goes into the waste basket. Sometimes, however, we get angry enough to write you that "as soon as we get to where we want your stuff, we will let you know"; which stirs up some little ire on your part.

Now, we need your information, but we want it in a shape in which we can use it. The matter of size, and of the method of presentation are two of the things which I think should be considered.

We are also trying to find the answer to the filing problem. It is highly important to both of us that we find the right system. We are trying vertical filing. Perhaps with a little study and some adjustments we can make the vertical file satisfactory. That is one phase of the problem we are here to discuss.

Another phase is the reliability of the statements that come to us in the form of advertising. We have, in the Institute, our Structural Service Committee, made up of men from all sections of the country. That Committee is receiving continuously calls for information on particular materials, devices and practices. The Committee is making careful briefs of the information available, and is searching out reliable facts; it is consulting every impartial source of information. Every month, in our Journal there is pub-

lished more or less of the work of this Committee, and architects are finding its work very valuable.

The great economic waste inherent in the present methods of publicity presents a very urgent problem to be solved. How can you tell us effectively what you want to tell us and what we wish to know? We have no sovereign remedy to propose, but we do feel that here is something of as vital interest to you as to us. Your selling costs are increasing all the time. Our informational needs are increasing with the ever increasing complexity of the modern structure. We need each other. We can help each other. Therefore, we thought it would be worth while for us to come together to discuss these things, and if possible arrive at some manner of presentation, some method of preservation, some way in which we could be mutually helpful, so you may get what you want and we may get that which we need.

I do not anticipate that we shall be able to solve this problem in one session; but if we can find out each other's standpoint, and get some understanding of what is necessary, we may be able to make a definite beginning toward a very much desired end. (Applause.)

I ask the Chairman of our Structural Service Committee, Mr. Sullivan W. Jones, of New York, to give us the point of view of the Institute.

MR. SULLIVAN W. JONES, New York: To most of those engaged in the production and sale of things used in construction, the architect, as a prospect, has been a baffling psychological riddle. Some of you, therefore, have probably looked forward to this conference with interest mixed with a feeling of curiosity as to the reason for this sudden concern of the architect in what has been regarded as the manufacturer's problem of finding the right kind of bait to catch architects.

This conference is merely a symptom of the Institute's broadening knowledge and understanding of relationships between the functional elements of the building industry, of the absolute interdependence of these elements for progress. The industry, if it is going to move forward at all, must move as a unit. This meeting is evidence of the fact that the Institute is going forward. The Committee on Structural Service is charged by the American Institute of Architects with the task of raising the standard of service rendered by the architect on the technological side of his practice. Its task necessarily embraces the opening up of channels through which may flow information about structural methods and materials.

The Committee has thus a direct and vital concern in the character of advertising and its value to the architect. This concern has led quite naturally, and I may say, inevitably, to a study of that class of advertising intended to influence the architect in his choice of materials and methods. The architect, if we judge him in mass, has been insensible of his partial responsibility for the Niagara of money, ingenuity, enthusiasm and heartbreaks in the form of advertising

intended to influence him that daily pours across his desk into the waste basket.

Markets and Distribution.

Now the manufacturer is faced with the imperative necessity of creating a demand or finding a market. The competitive pressure under which sales are made has been a prolific generator of waste, not to mention the many practices which must in the end destroy the foundation of service, confidence and good will upon which a business to endure must necessarily be built.

The mechanism by which industry markets its product must work smoothly and with minimum friction. Upon its proper working depends the standard of life of the community. This mechanism, however, is developing an alarming amount of friction. It is badly in need of adjustment. For the last decade, and perhaps longer, selling costs have been rising out of all proportions to production; that is, the cost of selling the unit product has been steadily increasing and now has reached the point where in some quarters we find a feeling of alarm and a grave concern in regard to where these increasing costs are carrying industry.

I do not know how much money is spent in the aggregate annually by manufacturers of building materials in finding or developing markets, but the question I put is—to what end is this money being spent? Is the total consumption of building materials being thereby increased? Your own knowledge relieves me of answering the question. The net result of these expenditures is merely a continuous redistribution of markets among the various classes of competitive and semi-competitive materials. The gain of one, as pointed out in a recent article in *Printers' Ink*, is won at the expense of another or several others.

What is the struggle for markets costing the consumers of the product, and would not that money be better spent, that is, with greater benefits to the community and to the industry, if it was devoted to a collective effort to increase the total consumption of good materials?

The Consumer's Money.

Let me here point out that the money spent on sales, which includes advertising, is the consumer's money. When the consumer buys a brick or a bag of plaster or a gallon of varnish, in the price he pays, he makes an involuntary contribution toward defraying the cost of selling him the thing he buys, and in addition, the cost of the effort to sell him a lot of things he does not buy. I have listened to hours of argument in support of the claim that advertising has reduced costs,—a contention which present conditions do not seem to support,—but the fact that it is the consumer's money which is spent explains the Institute's interest in the manufacturer's sales methods, especially as those methods are intended to influence the architect.

The members of the Institute—all architects—are purchasing agents for a large body of consumers. Money spent to reach the architect is at least in part his client's money. We are interested, therefore, in how the manufacturer spends that money. If he spends

it wisely, efficiently and honestly, we cannot very well complain, but if he wastes it or spends it in building a market by resort to exaggerated claims or misrepresentation, we believe we are justified in recording our objection, if indeed a direct responsibility to object does not rest with us. To be quite fair, I wish to emphasize the architect's share of responsibility for the waste and objectionable practices in publicity now current.

The Architect as Salesman.

Perhaps the fact that the architect has any responsibility at all in this connection is a new thought to many manufacturers and likewise to many architects. The architect's position is a dual one. I have referred to him as a purchasing agent; he is also the manufacturer's salesman. To make that clear let me relate a recent incident. Not long ago an architect specified the use of a certain metal moulding in connection with the electric wiring of a job. The contractor came to the architect and proposed the use of another make of metal moulding. He stated that he had never used the metal moulding specified but had used quantities of the proposed substitute with perfectly satisfactory results. He did not know what results would be secured with the moulding specified and, therefore, could not guarantee the work. He further stated that if the architect had any doubts as to the real merit of the substitute moulding he might satisfy himself by consulting so and so, and so and so, all of whom had used the substitute moulding and were perfectly satisfied with it. The architect having no definite knowledge on the relative merits of the two brands of metal moulding approved the substitution. The manufacturer of the moulding specified had not given the architect the information he needed to sell the product to the contractor. This, of course, is only one of hundreds of such cases which I might cite.

The architect is the manufacturer's salesman also in another sense. The psychologist, I suppose, would say that he has first to sell the product to himself. In the process of choosing as between competitive products for the same use, he does with himself precisely what the manufacturer's salesman attempts to do with him. Presumably his motive and purpose are different from those of the manufacturer's salesman. His aim is to render his client a service by advising the purchase of that material best suited to meet the particular needs.

After the manufacturer has persuaded the architect to specify his product, he then beseeches him to accept no substitutes. But, generally speaking, the manufacturer does not convince the architect why the particular product is a better buy than a competitor, and here the manufacturer fails, I think, principally because he does not know the basis on which the architect reaches conviction. He does not give him all the facts, and thus the architect is placed in the uncomfortable position of being unable to support the wisdom of his choice. Let the manufacturer ask himself if he would send a salesman out without the facts to support his claims for his product.

How may the manufacturer seek to sell and and con-

vince the architect? There are two ways, namely: publicity and direct salesmanship. Publicity is far more important because it can be spread over the whole potential market. Eighteen months of painstaking study has led the Committee on Structural Service to the unavoidable conclusion that a very large percentage of manufacturers' advertising publicity is waste, at least when measured in terms of its value to the architect. Thus one of the things to which this conference should give careful thought is the general character of advertising produced to influence the architect. We ought to find a formula for lifting it to the plane of dependable informational publicity.

Circulars and Catalogs.

Let me also speak of the variable sizes of circulars and catalogs. All of us who run offices know that vertical files are the most convenient and the most economical in floor space. They are standardized. The Institute, some years ago, advocated a standard size for advertising literature of $8\frac{1}{2} \times 11$. The Bureau of Standards is now interesting itself in the matter of standard paper and press sizes. The catalog standardization conference held in Chicago in May, 1918, adopted the following sizes for catalogs as standard: 6×9 inches, $7\frac{1}{2} \times 10\frac{5}{8}$ inches, 8×11 inches. The National Association of Purchasing Agents has adopted these standard sizes and recommended the use of $7\frac{1}{2} \times 10\frac{5}{8}$ inch or that size, folded and saddle-stitched so that when opened the catalog or folder will be standard size. Now, if it is proved that the $8\frac{1}{2} \times 11$ is not economical, let us abandon it and adopt another, but let us wait for the report of the Bureau of Standards.

We now come to the subject matter of circulars and catalogs. It is not unusual to receive a catalog in which a thousand products are listed for as many different uses. It is impossible to file such catalogs. They are costly and although published, for the purpose of being filed for reference, the multiplicity of subjects covered makes filing an impossibility; such catalogs defeat their own purpose.

Subject Segregation.

Segregation of subject matter in advertising literature, therefore, must be considered by the conference. Some manufacturers have during recent years been following more or less this policy of segregation, which, I believe, should be made on the basis of the use of the product because it is from the consideration of use that the architect approaches his file for information.

Filing.

And then,—the filing system. I may say without fear of contradiction that very few architects' offices have adequate filing systems for information. Many have some kind of system, but unfortunately most of the systems do not work; thus so far as the manufacturer is concerned, the file might as well not exist.

At its 1920 Convention, the A. I. A. adopted the Standard Classification proposed by the Committee on

Structural Service. It was thought that this classification would gradually be installed in architects' offices, and that under it manufacturers could mark their literature for filing. In this way much that now goes into the waste basket, because filing is difficult would find its way into the file through the functioning of an office boy.

The importance of such a standard classification arises from several conditions. Unmarked or unclassified literature is difficult and expensive to file under any system because it requires a certain amount of knowledge on the part of the person who undertakes to file it. This means that the filing must be done by the architect himself, the specification writer or some other highly paid employee. The result is that the material is not filed. Specification writers also drift. In one office there is one system and in another office a different one. The specification writer going into a new office finds it difficult to refer to the material he needs; this difficulty results in sending duplicate literature to the same office. As to the knowledge essential to proper filing where there is no recognized classification, I can emphasize the point by citing one architect's experience who turned his filing over to the office boy and found information on fly screens filed under aviation. This conference ought to give some thought to means by which this standard construction classification can be brought into general use.

Things to Do.

To recapitulate, the four matters which the Institute suggests for consideration are:

1. The general character of advertising literature.
2. Standard sizes.
3. Segregation of subject matter.
4. Standard Classification.

MR. O. C. HARN, National Lead Company, New York: I am called upon to speak as an advertiser, but I do not speak as an official representative of any particular advertiser. I am speaking for myself, but I believe that most of the things that I shall say are reasonable, and certainly do not arise from our own particular problem, but for the experiences common to all advertisers.

The Major Interest of the Buyer.

I believe it should be taken as axiomatic that merchandise is just as important to the buyer as it is to the seller.

Now, advertising is simply telling about the merchandise—the thing you have to sell.

I am afraid that some architects who are very busy, and much sought after, take the view that the manufacturer hounds the buyer; that he is trying, at all times, to put something over. Such architects—I do not include among them Mr. Jones or the rest of you who understand the problem because you have been studying it—forget that a piece of merchandise is of equal importance to the buyer and to the seller. In fact, it is of greater importance to the buyer than to the seller. The man who buys a loaf of bread must

recognize that it is more important to him than it is to the seller. To the seller it may mean a few cents' profit and be a very small fractional part of his business, and yet that loaf of bread may stand between the buyer and starvation. The safe a man buys may mean a profit of ten, fifteen or fifty dollars, or whatever it may be to the seller, but if you, as a buyer, put all your jewels and all your fortune into that safe, it makes a great deal of difference to you whether it is a proper piece of merchandise, and whether it may, when the test comes, stand between you and the loss of your all. And so it is with building materials. To the seller a sale may mean only one sale,—a small part of his annual business,—but to you it may mean the success or the failure of a building costing hundreds of thousands, or perhaps millions of dollars. Hence, any legitimate effort made by the seller to bring to the attention of the buyer the merits of that piece of merchandise, is a favor to the buyer just as much as it is a favor to himself.

Waste and Competition.

True, there is worthless merchandise, and merchandise which is perfectly legitimate and good, but unsuitable for the particular buyer's purpose. In the process of selling all kinds of merchandise there is necessarily some waste; there is necessarily, perhaps, irritation on the part of the buyer especially when the seller insists on selling something which is really unsuited to the buyer's needs. I don't know how such waste can be avoided in a competitive system.

Advertising Is Merchandise Until—

Now, we come to the point, really, that we split on. The architect often takes the view that he wants a piece of merchandise presented to him in a certain way. I want to say right at the start—and, possibly, I should have said it before I even said "Mr. Chairman"—that in the last analysis the manufacturers' interest in all these questions is simply that of finding out what you architects want. It is to our interest to know what influences you. Advertising, or, rather, printed matter, whether it be in the form of booklets, catalogs, or the advertisements in a publication, is not advertising at all really; it is simply merchandise, until it has been read and has done its work.

Booklets, in the printer's shop, are not advertisements; nor are they advertisements in the architect's waste basket. Obviously it is in our interest to get up an advertisement in the shape that you want it, to say the thing that you want to have said, for that will get your attention and lead you to buy. We do want you to buy. We don't want you to buy the other fellow's products. That is a necessary evil of the competitive system. And, I do not understand we are here to discuss world reforms in the whole method of doing business. We have to accept the fact that we are doing business under a competitive system and do the things that system demands. That is one of the objections I have always had to those brokers down in Wall Street—bankers and boards of directors, and Congressmen in our National Legislature, who

periodically preach against advertising, as an economic waste.

Advertising and Distribution Costs.

Advertising is an economic waste—I will admit—provided that you will admit that the competitive system is an economic waste, and that we should abolish it. But as long as we have the competitive system of doing business, anything that will reduce the cost of the distribution of goods could hardly be considered a primary economic waste. With all due respect to the remark that Mr. Jones made, I believe we can prove, pretty conclusively that advertising, properly done, does reduce the cost of distribution. I don't want to enter into a lengthy discussion of that, but I believe it can be proven. In the proper use of the various means of getting our message to you lies the conservation of our resources, and the elimination of waste. I do not agree that advertising is an economic waste, except when it is done badly, or when it doesn't get to you. Now, we want to know how to get it to you.

I shall begin and I shall close with the statement that all we want you to do is tell us definitely what you want; then we will try to conform in every way to your wishes,—not out of respect for you, or in any philanthropic spirit, but just because it is to our interest to do so. We may not have the right idea as to what the catalog sizes should be, and I was glad to hear Mr. Jones say that although you have made a decision, you are ready to reconsider it, if that decision seems to have been unwise. I am quite sure that we will arrive at a wise decision on sizes.

But, there is another aspect of this advertising problem in connection with which we hope you will see something of our point of view before making a decision.

What Is "Hot Air"?

We have heard architects and purchasing agents say that whatever advertising may be printed in publications, or sent direct through the mails should be prepared for the files, that is, it should cut to the bone. They want only the actual facts. They want the hot air cut out.

Well, that is all right, perhaps, if we understand exactly what is meant by "hot air" and what we mean by cutting to the bone. But we believe that in the utterance of that dictum some purchasing agents—architects and other purchasing agents—possibly have in their minds the narrow view that the manufacturer is hounding them, pursuing them, and that they must escape if they can.

Gentlemen, you cannot escape, and you ought not to want to escape the legitimate selling effort of the manufacturer, because we agreed in the beginning, or I, at least, agreed for you that the buyer's interest in a legitimate piece of merchandise was as great as the seller's. I think you ought to welcome even the strategy and the resourcefulness exhibited by the salesman who puts it over on you against your will, provided you are satisfied that he has done so.

As a matter of fact, the skin and bone of advertising

—or what some buyers think is the skin and bone—is not enough for you to file. You may think it is all you want to know about size, formulas, designs, methods of installation and all that which is necessary, but, as a matter of fact, that is not all that you want.

Recently a salesman who calls upon architects and engineers in New York, came to me and said: "Mr. Harn, I think you would be interested in this order I have in my hand." It was a large order. He said, "I thought you would be interested in it, particularly because it was the direct result of an advertisement." Some time ago we received a call from the office of a prominent engineer of New York, and I went over to see him. He said: "Some time back I saw in your little house magazine, 'The Dutch Boy Painter,' an article about the decoration of an hospital. I was struck with it, but I have mislaid that article, and I would like to see it again. I happen to be a member of the board of directors of a large hospital which we are going to decorate, and I want to see those ideas put into practice. Could you get me another copy of it?" Of course our man was very glad to comply with the request, and he came back to the office, hunted it up, and took it to him. To make a long story short, there were a number of negotiations, with reference to formulas, applications, colors, and a great many details, which, of course, it was necessary to know, and finally the contractor placed this order which the salesman had in his hand.

Now, my point is this: The things which started that order coming towards us was not a concrete statement of the formulas, or the skin and bone of the proposition. The thing that started that order toward us was the expression of an idea. It was the idea that interested this professional man. Not only did the idea start that order toward us, but started that hospital toward getting something needed and wanted.

Well, you say, that is all right for that kind of advertising; that instance was all right, but when it comes to filing, after we have been sold on a proposition, then we want just the briefest kind of straight line information we need when we come to install apparatus, or to use any certain material.

Now, I am not so sure about that either. You architects are busy men. So are some of the rest of us. Nearly all purchasing agents are busy. They cannot hold in their minds all that is said to them—all the facts that are convincing. Now, I do not believe that you can listen to my talk upon a certain product, or read something convincing that I may send you, and then, a year or two later, when you have use for that kind of thing, go to your files and so refresh your memory from a plain statement of how to install it, or what formulas to mix, and how to use it, that you may recall all the reasons which ought to actuate you to use that particular product.

I believe that the files should yield to you, at the time you need it most, a résumé of those emotion-producing statements as well as those technical facts which appeal only to the intellect. The file should give you all the considerations which should influence

you to make a right decision at the right moment. If you are going to classify that kind of material as hot air, then I must say that I believe you should not exclude the hot air entirely from your files. Whether or not you call it hot air, it is a force, a motivating force which should influence you for your own good at the time you consult your files.

Perhaps we should differentiate. Perhaps you mean to differentiate. All material supposed to excite favorable emotion, but which is ineffective, I would call hot air. I would certainly eliminate it, not only from the files, but also from any part of our advertising. I have no doubt that that is one of the things that Mr. Jones had in mind when he said that you wanted to sit down with the advertiser and arrive at a program which will help us to a solution of our problems. I would agree with him on that. But I would drop a little warning. Do not let us decide too hurriedly what you should put in your files. I believe you should put there many things which you may call selling talk, because selling talk in another sense of the term is also buying talk. You should look upon it that way—as something that will help you to make a right decision at the right time.

MR. LYMAN CLARK, General Electric Company, Schenectady, N. Y.: Now I am not connected with the advertising department of my company but I have devoted a great deal of time to the service of architects and they are a great lot. They reject you without cause, rhyme or reason, and they accept you equally so. (Laughter and applause.) There is no basis that I know, upon which to get next to them. I think that no effective formula has ever been prescribed, so we struggle along and do the best we can.

The Architect and Business.

Some we may please, and some we may not. I have often wondered why. I have pretty nearly reached the conclusion that it is because the architect has so disassociated himself from the business world. I do not know why he rejects advertising unless he stands aloof from such material things. To be an architect, a high professional type of man, he feels that he must deal with beauty; he must not allow his mind to get down to such material things as advertising. For that reason we, who are interested in manufacturing and disposing of materials, are outside his sphere.

Now, I think the architect recognizes this,—that he wants to find out what is the matter,—and if he does not find out I think the builder, ultimately, will be the architect. He meets the manufacturer and the advertiser on common ground, and is, therefore, more familiar with materials than is the architect. I think that is the tendency, and that it will result in neglect of the architect.

I don't think any of us, as manufacturers, would like to see the architect neglected. I think we would like to see him on a better plane. The question is how to get him there. In the other professions—mechanical, civil and electrical engineers, and even

doctors pay a great deal of attention to materials. They are always interested in them. You go to their conventions, and there are always to be found manufacturers' exhibits of materials, which these professional men examine and with which they become familiar.

I have found that the architect does not always seek the best opinion on materials. He accepts the contractor's word for it, rather than ask for the best technical information that he could obtain. He feels that he might cast a shadow on his profession, if he went too close to the makers of the materials. Therefore, he lacks familiarity with them; and apparently he wants to. True, I can imagine that if he had as callers seventeen cement men, twenty iron men, and forty hardware men, leaving out my end of the business,—which would be still more,—he would have a hard job to see them every day, and they would all be there. (Laughter and applause.)

It is a hard problem to tell him what to do or ourselves how better to cultivate him—or, how better he should cultivate us. But there must be some basis on which manufacturers and architects can get together for their mutual benefit. I hope that some day the architects will open the closed doors of their organization and make it more like the other organizations, where there are all kinds of associate members—and the term associate is significant because all are associated in an industry, a common enterprise. To the manufacturer of building materials it is just as important to have a handsome building go up in the city, as it is to any architect who may have designed it.

Now, what can we do, either at this meeting or future ones, to bring together these two factors?

MR. THEODORE F. LAIST, National Lumber Manufacturers' Association, Chicago: Advertising literature may, it seems to me, be divided into classes; matter which is merely of temporary value primarily devised to stimulate and attract attention and which makes a personal appeal. And a second kind, the principal function of which is to convey information of practical use to the architect in designing or writing specifications.

Differing Advertising Appeals.

It seems to me that the latter class of advertising matter may be successfully standardized as to size and filed according to the A. I. A. Standard Construction Classification since it should be designed to form a useful part of the architect's working library. Advertising of this class should be condensed free from superlatives, and be arranged for quick reference.

The other class of advertising is short-lived, serves but a temporary use or is perhaps entirely local in character. In its function it is somewhat the same as any general newspaper or billboard advertising. While this sort of advertising seems wasteful yet it is the only way in which merchandise can be brought to the attention of the profession or of the building public. By display and constant repetition the maximum result can be obtained. Sporadic advertising of this kind is wasted effort.

It is not probable, therefore, that the advertiser would be willing to sacrifice in this class of advertising the advantage variety and novelty affords. This class of advertising was intended for the general public and to create a demand among the architect's probable clientele and through this channel reach the architect.

As regards the segregation of subjects in advertising literature to facilitate topical filing for reference, I can see in this only the greatest advantage. I, also, favor using in connection with such advertising the Institute's Standard Construction Classification of Advertising Literature.

Regarded merely as an academic problem, I suppose there will be no dissenting voice in any proposition which has for its end standardization, but in attempting to enforce or introduce such standards one lands on dangerous ground. Radical changes in any well established practice necessarily are far reaching and cause much confusion. It is better to move slowly than with undue haste.

In conclusion it is, of course, obvious that the most any committee can do is to offer suggestions since it cannot force advertisers to adopt any standards. Nevertheless, a very definite set of formulæ or programs for the use of advertisers will bring about a great deal of good and I am sure will be appreciated. The extent to which the individual advertiser will follow is a matter entirely within his own control, but I have no doubt that after the advantages become manifest advertisers will quickly fall in with the scheme, thus accomplishing a great saving and simplifying the work of the architect in his specification department.

MR. ROBERT D. KOHN, New York City, Second Vice-President, A. I. A.: I had a lot of ideas, perhaps somewhat confused, as to the position of the architect, and what he really wanted in this matter of advertising, until I heard these several very able addresses. I am now more confused than I was before I heard those talks, and before I began to think about the matter. The addresses have been interesting to me, and immensely instructive. My mixed state of mind is a desirable one, I am sure. It shows me how important it is that we should get together and begin to study this problem.

Seeing the Salesman.

I recognize, fully, the truth of what some of the speakers have said, when they stated that the average architect is unapproachable, and seems to treat the manufacturer as a nuisance, when he comes around seemingly intent upon boosting his particular product.

That is one problem that I don't know how to solve, because if the average busy architect, today, saw even one half of those who come through his office door, he could not practice architecture. He might know a lot about white lead and electric supplies, and those various other manufactured articles that have been mentioned, but he would not be able to design his buildings, or keep his clients satisfied. And that, by the way, is the most important function of the architect. (Laughter.) Or, perhaps still more important is getting the client in the first place!

"The Best"

Now I want to know about these things, and, somehow or other, I cannot get the facts. Superlatives have been mentioned here. The average advertising matter that comes to me is full of superlatives. "We make the best of this, that or the other." My client may say, "I want the best of this, or that. This or that, shall be the best—the best workmanship and the best material." Now, the best is not necessary in some cases. Many things are perfectly good enough in a certain situation. These superlative generalities that we have had pushed at us for so many years don't mean what they say. They can be interpreted in a dozen different ways.

A friend of mine recently told me about a bid he had handed in to an architect's office. I said, "How did you make up a bid like that? That is very high for a little bit of a house like that." And he said, "Well, I looked through the specifications in a general way, and I looked at the plans, and I put my foot rule on it, and decided that that little house was worth about eight thousand dollars, and then I counted the pages of general conditions and found that there were about twenty of them, and I multiplied that by forty dollars a page, and that made eight hundred dollars, and I added it on to the bid." (Laughter.)

He said that he thought there was potentially forty dollars' worth of trouble in every page of general conditions. I think, myself, that there is a good deal more than that amount of trouble in the general conditions of the architect's specifications.

In using the word "best" we have all been on the wrong track, doubtless. We have not meant what we said and so, to even things up, the manufacturer claims, for his particular product, that it is the best.

Now, how can we distinguish? I don't know. I hope this conference will presently resolve itself into a number of committees which will bring in, at least, a program and that, eventually, we will have—perhaps today—the skeleton of a permanent committee, representing the manufacturers, the architects, and I hope the engineers, and others who are interested in building products, to work out some scheme whereby, on the one hand, the merits of the different products may adequately be presented to the architects and, on the other hand, that the architects may know, authoritatively, the truth about these products. I think it would be highly desirable if that might be the outcome of this conference.

We need co-operation in the whole building industry. We cannot stand aside, each in his own particular field. Just one illustration as to what I meant when I spoke, a moment ago, of "the best." To say that you want the best, in every case, is nonsense. The other day I happened to need a considerable quantity of metal covered doors. Now, if I were to merely specify "all the doors in this building are to be the *best* metal covered doors, covered with twenty-gauge copper, or steel," it would be absurd. One manufacturer may make an excellent door, and so may another. As a matter of fact, I had ten bids running from somewhere

around ten to sixteen thousand dollars on that set of doors. Now, they were not all bidding on the same thing. It would be nonsensical to suppose that they were. There was not ten per cent difference between the two manufacturers of doors, that I could see, but between the sixteen and the ten thousand dollar man there was probably six thousand dollars' worth of difference in workmanship and material. Now, how to find that out, how to get at the distinctive quality of the product that the manufacturer wants to furnish me—that is the real problem, to my mind. I don't need that sixteen thousand dollar man's product in the sub-cellar of the building, but I do need it in the elevator hatchway openings.

The building art has become very complicated. These fine distinctions between the ten and the sixteen thousand dollar doors are things that we architects have to study out. We haven't found the way—I haven't found the way yet.

I have to see how the manufacturer puts his stuff together. I must see his product somewhere to realize what his workmanship is. And advertising, in the long run, will have to get down not only to saying things, in a general way, about the product, but it will have to illustrate and point out where the product may be seen.

The Problem a Joint One.

We want to get together. The building industry is getting together. The architects, two years ago, decided as one outcome of the war, that they could no longer stand alone; that they were part of a great industry; that the architect, by himself, could not solve the problems of the industry; that he could not solve his own problems by himself.

The then president of the Institute, Mr. Kimball, of Omaha, appointed the Post War Committee. That committee studied the needs of the architectural profession, the reason why it was not functioning as it should, and why its position in the community was not what it should be.

That committee worked long and carefully over the problems. To my mind the most important conclusion reached by the committee, and reported to the Institute, was just that point that I made a moment ago. They said, in their final report, "We find that the architectural profession, by itself, cannot solve its own problems. It must work co-operatively with all the other elements in the industry. The problems of the producers, the distributors, the contractors, the sub-contractors, the workmen, the engineer, and all the other elements that go to make up the industry, must be solved jointly."

Now, as I take it, this problem of advertising, of having the manufacturer present information in such a form that the architect can really appreciate and use it, the problem of educating the architect to realize that he ought to know about these things, and the problem of the architect in getting this information and having it available when he needs it—those are all parts of this larger problem that the American Institute of Architects is hoping to further—to bring together the

producer of building materials, the man who distributes them, the man who uses them, and the architect, that they may understand each other, and that the work of no branch of the industry may be in vain. And, whatever we may do here to further that idea, in order to make men like myself—busy as I am—appreciate the real distinctions that characterize the products you produce, that we may secure the information necessary to the proper use of those things at the right time and in the right place—to get everybody together to co-operate to that end, through some joint committee would be, to my mind, a wonderful outcome of this conference, and I hope that we may achieve that end. (Applause.)

MR. G. C. MARS (Director of Advertising, American Face Brick Association): So far as I represent our industry, regardless of the other arts, it has been a gracious thing on the part of the architects to call together such a meeting, to ascertain if there cannot be some co-operation that will result in mutual benefits.

The suggestions that have been made are very valuable, but the specific question presented is, can the manufacturer furnish to the architect material which the architect will find useful in his practice?

I believe that the manufacturers, as a whole, so far as I have heard them express themselves—at any rate, so far as the face brick manufacturers are concerned—are only too anxious to furnish architects with exactly what they want. The manufacturers do not want to go forward in the dark and issue a lot of material that the architect will throw away.

Your Structural Service Committee definitely states, in very specific language, first, the form or size of the literature best suited for filing—not any definite size, perhaps, but certain limits, between A and B—size $8\frac{1}{2} \times 11$, or $8 \times 6\frac{3}{4}$, down to the smaller size, and between those two limits their needs would be satisfied. With Mr. Laist, I cannot think it possible that any very definite thing can be laid down and adopted universally. But if two limits can be set, I believe the vast majority of the manufacturers could meet them without difficulty.

We want to know from the architects just what they want to know about this particular material. We do not want to repeat commonplaces and platitudes. But just what do they want to know, so far as a particular product is concerned? If we know the form in which it will be most satisfactory to them, and if we know, specifically, what information they want, we will pledge ourselves to supply it just exactly as they want it. (Applause.)

MR. E. H. HEWITT (Director, A. I. A., Minneapolis): I want to point out the experience of an architect's office that is trying to be practical and to meet the situation that confronts it. Personally, I made up my mind that I would examine this steady torrential flood of advertising over my desk long enough to, at least, see what it was. Had I realized what I was going to get into the task would have never been undertaken. As we have in our office a filing system twenty feet long completely filled with advertising matter and data regarding building materials, and

still growing, you can realize that it is something tremendous.

Reliable Reference Files.

Now, it is absurd to say that we ought to know all the merits and particular features of every one of these thousand and one things manufactured for use in buildings. As specified by the architects, they reach into the tens of thousands. In the past the architect has picked out, here and there, those things that he knew about by his own experience and that of his professional brethren; through reports by the Structural Service Committee of the Institute and other credible agencies.

Now, we must have more and better information. As architects we may be slow and behind the times in the matter of filing information, but I think we are waking up. We need to have first a bird's-eye view of what is going on in this country in building materials. But the information that might give us that view is coming to us in all sorts of forms, bulky and wasteful. Much of it isn't the right size. It is not in sufficient detail.

Let me assure you that the busy architect wants to give all the attention possible to advertising, but the only way it can be done, as the industry is now organized, is to have such files as will eliminate trouble and enable us to so keep the matter for reference that we can get at it quickly. (Applause.)

MR. D. K. BOYD (A. I. A., Philadelphia): We are discussing, not individual problems, but only one of the many which consolidate themselves into one tremendous problem in an architect's office. You, as manufacturers, have to consider, in connection with your individual advertising, the position of the architect as he confronts this Niagara of information to which you contribute. Much of it, perhaps, is valuable; the very thing he needs regarding materials with which he must work. But what shall he do with it? What does he do with it?

The Waste Basket.

Instead of consigning this material to the waste basket, some time ago I kept an entire year's inflow on a shelf. I got seven linear feet of single and double-page folders, and other kinds of unbound material, and three feet of bound books, for none of which I had asked. That did not include various pieces of literature for which I had asked. This ten feet of printed matter was simply the incoming mail, we will say, in the average architect's office.

I ask you to consider how many architects in this country maintain filing systems capable of properly holding this material, if they were disposed to file it—if they could afford to file it? I venture to say that we could not find more than 150 to 200 architects' offices equipped with an adequate filing system. There may be another 200 or 300 where an effort is made to keep the material, after making a cursory examination of it. And I say cursory advisedly. That gives you a

picture of the chaotic condition existing under the circumstances.

A very distinct service that the Structural Service Committee of the Institute, of which I have the honor to be a member, can perform, and only in thorough co-operation with such a group as is here represented, is to take a census of the systems of filing used by the architects throughout this country and let us see what can be done to locate the proper filing systems, the pseudo-filing systems, and the shelves and the waste-basket filers.

We ought to support some sort of census which would give us a tabulation, exact as possible, of the various kinds of systems that are now used, or which architects are trying to use, and then, perhaps, we might be able to devise a system to suit the different kinds of receptacles; or, better still, endeavor to arrange for some sort of a standard receptacle which architects might, more or less, universally adopt. That would solve some of our difficulties.

By way of illustrating what the architect does with that ten-foot shelf of ordinary material coming into his office, and why, I brought with me about two days' mail, exclusive of letters. This is an indiscriminate collection, so you must not mind whose head gets hit by my criticisms. I prefer, for the sake of the record, not to mention any of the names appearing on this material.

(Here Mr. Boyd gave a graphic illustration by opening and exhibiting the two-days' mail, most of which went into a waste basket beside him.)

The Need for Getting Together.

MR. R. C. SHEELER (Advertising Manager, John Lucas Company): We have given this subject more or less study, but apparently without getting anywhere. I have worked out some plans that I have submitted to architects in New York and Philadelphia, trying to find a means or method whereby the information that they want on paint could be given to them in useful form.

We found, however, that the proposed scheme appealed to some and not to others. That was one of the reasons why I wanted to come out here and see what steps would be taken towards standardizing this kind of data. If you, who are familiar with this problem, could give the paint industry some standardized form in which they could present their data to you it would help you and help them. (Applause.)

MR. FRED ADAM (St. Louis, of Frank Adam Electric Company): One of the hardest problems we have had to deal with was that of introducing our ideas and our materials to the architect. The question is, how to get at architects so that they will understand the problem which we have to solve for our own benefit and, we think, for theirs also.

Do the architects ever have a national meeting or convention?

THE PRESIDENT: We have an annual meeting of the Institute in which various problems are discussed.

MR. ADAM: Are representatives of the manufac-

turers and contractors invited to attend that meeting? Is that an open meeting?

THE PRESIDENT: It is not an open meeting in that sense, no.

MR. ADAM: The main branch of the electrical industry is the National Electric Light Association. It has what is called the Commercial Section. The manufacturers of electrical apparatus and supplies are represented in the N. E. L. A. through membership in the Commercial Section. This Commercial Section provides exhibitions of the products required by the members of the National Electric Light Association at the association's annual convention, and presents subjects of common interest for discussion.

It seems to me that this very beneficial arrangement furnishes a suggestion for bringing architects and manufacturers together for their mutual benefit. If architects could, or would have in connection with their national convention an exposition of products it would give manufacturers a chance to be present, and architects could see and learn in a few moments what it would take them a long time to get under present conditions.

Committees.

MR. SULLIVAN W. JONES (New York): We cannot expect to accomplish very much that is concrete in this session, or even in two. We must go on. We must develop our thoughts and formulate a program that will lead to the realization of the big purpose we evidently have in mind.

I move that the chair be empowered to appoint the following committees:

A committee on permanent organization which could consider, among other things, the suggestion by Mr. Adam for some sort of a co-operative point of contact between the architects and manufacturers.

A committee on the character of information contained in advertising literature.

A committee on classification and standard sizes which, I think, might well consider Mr. Boyd's suggestion that a survey of the existing filing systems be made.

A committee on segregation of subject matter.

I move that those committees be requested to formulate, very quickly, tentative reports, which can be brought in at a session this evening, for the further consideration of the conference.

The following committees were appointed:

Permanent Organization—Mr. N. Max Dunning, of Chicago, chairman; Mr. J. S. Sewell, Mr. Fred Adam, Mr. Theodore Laist and Mr. K. H. Pullen.

Character of Information—Robert D. Kohn, chairman; Mr. O. A. Bigler, Mr. Lyman Clark, Mr. J. H. Libberton and Mr. W. D. Sargent.

Classification and Standard Sizes—Mr. Sullivan W. Jones, chairman; Mr. A. J. McComb, Mr. F. W. Walker, Mr. S. L. Barnes and Mr. O. C. Harn.

Segregation of Subjects—Mr. E. H. Hewitt, chairman; Mr. J. E. Freeman, Mr. Lane, Mr. R. C. Sheeler and Mr. T. A. Randall.

(The committees reported at the evening session).

REPORT OF THE COMMITTEE ON SEGREGATION OF SUBJECTS

MR. HEWITT: My committee met promptly, but fell into a discussion to which there seemed to be no end in sight, when we adjourned.

I trust that some permanent arrangement will be thought out whereby we can continue this work. The problem is largely one of operating the files so that time is economized. The desired result can be secured in a measure if manufacturers will, so far as possible, confine a publication to a single subject. That is all we can now recommend. I sincerely believe there will come a system that will be of immense assistance to us and to the producers.

REPORT OF THE COMMITTEE ON PERMANENT ORGANIZATION

MR. N. MAX DUNNING (of Chicago): Our report deals with an interim organization which, we believe, should be formed at this conference, to carry on the work, to give the whole subject more intensive study, and to be prepared at a later date, to report definite policies, and definite recommendations as to procedure. Such an organization will make it possible for us to accomplish the objects for which this conference was called.

The committee makes the following recommendations:

1. That the conference create a joint continuing committee to study the problem of reducing waste in advertising to architects, and (b) to promote the efficient classification and distribution of accurate information on building materials and appliances and their appropriate use, and (c) to call a future conference to which it may present a plan for a permanent organization.

2. That the Continuing Committee be composed of the members of the temporary committee this afternoon with the addition of five manufacturers and five architects to be named by the chairman, and that the Continuing Committee have power to increase its membership, so that it may be thoroughly represented, and to appoint sub-committees.

3. That the chairman of the Continuing Committee be the chairman of the A. I. A. Committee on Structural Service and that the committee headquarters be the office of the Committee on Structural Service at 19 West Forty-fourth Street, New York City.

4. That the Continuing Committee shall co-operate with national trade, engineering and professional bodies in the standardization of advertising matter.

5. That the architect members of the Continuing Committee prepare a statement clearly defining the form and character of advertising which will best suit their needs, and submit it to the manufacturer members, and that the manufacturer members consider these suggestions and indicate to what extent they can be adopted and put into practice. That the full committee then draw up a report to be given general circulation through the press and otherwise.

6. That the Continuing Committee meet tomorrow morning for the purpose of organizing, formulating a policy and assigning work to sub-committees.

Many of these recommendations will have to be considered merely as suggestive points for debate at this meeting. I think they are not sufficiently considered to be filed as a report that we would want to stand on. The report, as amended by this conference, should be referred to the Continuing Committee, which I hope will be appointed. (Applause.)

REPORT OF COMMITTEE ON CHARACTER OF INFORMATION

MR. SARGENT: The committee submits the following data for advertising literature sent to the architectural profession by manufacturers:

1. That a stamp of approval of form be placed on all literature by the American Institute of Architects.
2. Literature to contain specific data on (a) drawings, (b) specifications.
3. References:
 - (a) Where material has been used.
 - (b) Name of architect specifying material.
 - (c) Where practicable, name of contractor and owner.
4. Adaptation for special conditions:
 - (a) Non-adaptable conditions.
5. Technical data:
 - (a) Physical properties and tests.
6. Information regarding stability and integrity of manufacturer.
 - (a) Installations—where made or used.
 - (b) How long in business.
7. Analysis of material. Information on product and its manufacture.
 - (a) Structure, quality of material and care of workmanship.
8. Where material can be obtained.
 - (a) Agents or jobbers.
 - (b) Show rooms.
9. Information from the architect to the manufacturer regarding installation or use of that particular manufacturer's material on jobs of certain sizes so that work can be supervised by a representative of the manufacturer to insure proper installation or application. This will insure satisfaction for both the architect's client and the architect. This plan may not be carried out in every instance, but wherever possible would eliminate careless installation or application.

REPORT OF COMMITTEE ON CLASSIFICATION AND SIZE

MR. S. W. JONES: The committee submits the following report and recommendations:

The committee feels that what is needed for the guidance of the conference in arriving at right decisions regarding a filing system and the underlying classification is not such information as may be secured by

taking a census of present filing systems or quasi systems, but rather information on a relative few of the better systems, large and small, and the opinions of the architects who operate these files as to their adequacy and suggestions for improvements. The committee, therefore, recommends that the A. I. A. Committee on Structural Service be requested to secure from a limited number of architectural offices, known to maintain typical filing systems, suggestions on both improved systems and convenient classification.

The committee further recommends that after the Committee on Structural Service has secured suggestions, the A. I. A. Standard Construction Classification be amended as may be considered advisable, a specification be prepared for a filing system and the manufacturer of such equipment be requested to consider the production of the system to be sold by them with the approval of the A. I. A. architects and others.

That the Association of National Advertisers and other interested bodies be requested to report to their members the action taken by the conference and endeavor to secure the co-operation of their members in furthering the ends in mind.

That the conference adopt temporarily as standard sizes for advertising literature:

7½" x 10⅝" to 8½" x 11".

As the result of a general discussion, which touched upon every recommendation in each of the committee reports, the reports were approved and referred to the Continuing Committee provided for in the report of the Committee on Permanent Organization.

MR. SLY: This conference has been called by the A. I. A. to assist the manufacturer in eliminating a certain part of the waste inherent in the present method of reaching architects.

The architectural press, as I view it, stands in a peculiar position between the manufacturer and the architect. The architectural press, as a whole, is intensely interested in helping both the profession and the manufacturers, who are attempting to serve the profession.

Speaking for my own organization, I can say that we are attempting, at all times, to assist manufacturers in the proper preparation of literature, that is, in the form which architects desire and which will give them the most information.

There are, in this country, something like 14,000 manufacturers producing things that go into construction—more than one manufacturer per architect.

It is a tremendous undertaking for an organization to educate 14,000 manufacturers in the preparation of their literature. It is a tremendous problem that you have handed to this Committee to solve.

I think I voice the sentiment of the architectural press generally when I say that anything we can do to forward this work through our publications, or through personal effort, we shall be only too glad to do. (Applause.)

THE PRESIDENT: Mr. Morgan of the F. W. Dodge Co. is certainly sufficiently interested to speak to us.

MR. MORGAN: Mr. Chairman, I did not anticipate that the courtesy of the floor would be extended to the representatives of the publications. In fact, my invitation did not indicate that we were to participate in this discussion. Hence, I came to listen, and I have listened with exceedingly great interest, because you have been talking about a problem with which we have been concerned for many years.

It has been the purpose of Sweets Catalogue to eliminate waste and conserve resources. We are working on that problem today, as we have been working on it for seventeen years.

THE PRESIDENT: The American Institute publishes an architectural magazine, which is the official organ of the Institute, and it goes to the desk of every architect who is a member of the Institute, every month. This magazine carries the official report of our proceedings; it carries the reports of the Structural Service Committee; it carries a certain amount of publicity for manufacturers, and dealers, and also the editorial comments of our accomplished editor, Mr. Whitaker.

Mr. Whitaker is present, and we would be pleased to have him say something.

MR. C. H. WHITAKER: Mr. President, theoretically an editor is not supposed to know anything about advertising.

There is a point in the very interesting deliberations that have gone on here, today, that has not been touched upon, this evening. It is a rather delicate point. It relates to the editorial function in the conduct of a journal—especially a journal for the American Institute of Architects. Upon the editor, it seems, devolves peculiar responsibilities in accepting money from advertisers, with which to carry on the publication. The Institute has always been conscious of these peculiar responsibilities.

But one thing that I would like to lay before you for consideration, and a subject upon which I would be very happy to have all the advice possible, is—How is it possible to maintain the utter inviolability of the editorial columns of a journal that carries advertising?

I conceive it to be the function of the *Journal of the American Institute of Architects* to present all information that is useful to architects. Sometimes that information runs quite counter to the business interests of advertisers.

This is not a new problem. I think all of you know more or less about it. I am sometimes astonished at the manner in which the editorial function is beseeched to lend its aid to advertisers. I think it is a great mistake, because, after all, the only thing that you have got to build your advertising on, is the inviolability of the editorial pages of any journal. It is the only thing that will last through.

Now, when requests come to my desk, as they do almost daily, to give publicity to this, and publicity to that, I am governed by a very arbitrary rule. We give no publicity of any kind, to anything. Now, such

a rule is quite wrong, because some of that publicity is very desirable. Yet I do not know where to draw the line. And I don't know anybody who does.

Now, that is a question that I would like to lay before this Conference, and before this Committee.

Most of all, I would like to find some way of persuading advertisers to interest themselves in preserving the editorial fearlessness, which must go into the making of any decent journal, and especially into the making of the *Journal of the American Institute of Architects*. We ought to be free to give our members all the information they need. Yet the fact is that information goes to the Structural Service Committee, and comes to me, relating to materials, relating to new methods, to new discoveries, and we are inhibited from publishing some of that information, because we cannot legitimately take money from one advertiser for giving him the privilege of speaking in our columns, and give the same privilege to another man for nothing.

I earnestly hope that among the things to be deliberated upon by this Committee that is to be set up, there will be some consideration given to the poor editor who struggles with these problems in all publications today. (Applause.)

THE PRESIDENT: Even editors have their troubles. I supposed that they were mostly confined to architects and manufacturers.

We will be very glad to have Mr. Morton, of the *Western Architect*, address the Conference. (Applause.)

MR. MORTON: There are one or two things that some of the men here have said in relation to the kind of advertising which will impress the architects most favorably.

You are studying ways and means of presenting specifications, drawings and data of various sorts. Once that gets into the files of the architects, how shall you proceed to the pages of the architectural journal, to perpetuate that idea? I think that is one of the very important problems that one of these committees could well take up.

As far as the *Western Architect* is concerned, our services may be called upon at any time. (Applause.)

THE PRESIDENT: I am sure that we can count upon the assistance of the architectural press in every endeavor that will serve to forward this movement, and I am quite sure that they can be of very material assistance to us, in this matter.

I had the pleasure of talking to Mr. Walker, of the Associated Tile Manufacturers, about some of the things that have been done by that Association, and I am sure that we would be very glad to have Mr. Walker speak to us.

Mr. Walker addressed the Conference briefly with reference to the manufacture of tile products.

Mr. Boyd also explained certain specifications which have been adopted by the tile manufacturers.

THE PRESIDENT: I will now name the additional members of the Continuing Committee, as follows:

ARCHITECTS

H. W. Foltz, Indianapolis; D. K. Boyd, Philadelphia; Thomas R. Kimball, Omaha.

Leaving two vacancies to be filled.

MANUFACTURERS

Mr. Mars, American Face Brick Association; L. J. Powell, Bostwick Steel Lath Company; H. S. Brightley, Indiana Limestone Quarrymen's Association; R. H. Bradley, Kelsey Heating Company; E. R. McBride, National Fireproofing Co.

The conference adjourned.

MEETING OF THE CONTINUING COMMITTEE. NOVEMBER 11, 1921

The meeting was called to order at 10:30 A. M. with Mr. S. W. Jones in the chair.

MR. JONES: The Continuing Committee created by the Joint Conference on Better Advertising to Architects, has been charged by the Conference with the following duties:

1. *To secure through the A. I. A. Committee on Structural Service data on existing typical filing systems used in architects' offices for the accumulation of information and informational publicity on materials, methods and devices utilized in building construction, and with such data to make such revisions in the A. I. A. Standard Construction Classification as may seem advantageous.*

2. *To arrange with manufacturers of filing equipment for the production of a system based upon the revised standard classification, to be sold to architects, engineers, contractors and others with the A. I. A. label of approval.*

3. *To prepare a statement clearly defining those general requirements of form and character for publicity, compliance with which by the manufacturer will make his publicity most useful to the architect and therefore most effective as an agency for promoting sales.*

4. *To seek the co-operation of national bodies of manufacturers in securing the widest possible distribution of these requirements and general compliance with them.*

5. *To prepare a statement of purposes and to give it general publicity among manufacturers, architects, and others interested, through the advertising and architectural press and otherwise.*

6. *To formulate a plan and program for a permanent national joint organization whose purpose shall be the progressive improvement of advertising to make it of increasing usefulness to the architect and therefore of greater value to the manufacturer, to eliminate, so far as possible, the waste inherent in the present promiscuous distribution of advertising and to promote a better understanding among architects and manufacturers of their common interests.*

7. *To call a second joint conference and present to it the plan and program formulated.*

To accomplish this work the committee must organize. At present it consists of four sub-committees of five members each and ten additional members at large, making a committee of thirty.

What are the views of the members of this committee on organization for the job which confronts us?

MR. HARN: We ought to have a small working committee. We shall not get ahead very fast if we depend upon correspondence, and I see very little prospect of getting meetings of the larger committee, which will doubtless get larger and more unwieldy as we go along.

I move that the chair be authorized to appoint an executive committee of five. I suggest that the members of this committee be selected from among those located in or near New York so that we may insure full attendance at meetings.

The motion carried.

MR. JONES: In due course I will announce the names of the members of the Executive Committee.

Now, what do you wish to do with the committee reports, submitted yesterday evening? Of course you can merely refer them to your Executive Committee to be put through the mill and handed back to you in the form of definite recommendations, as targets to be shot at. But I believe the Executive Committee would be glad—I would, anyway—of an expression of opinion or a voted concensus of opinion as an aid in reaching acceptable decisions on many of the matters referred to the committee.

The reports were referred to the Executive Committee for study.

MR. BRIGHTLEY: I think we will make a mistake if we change the recommended standard size of advertising from $8\frac{1}{2} \times 11$ inches to $7\frac{1}{2} \times 10\frac{5}{8}$ inches.

MR. JONES: I do not understand that the conference recommended a change in the A. I. A. standard size. The conference merely went on record to the effect that, until a definite conclusion was reached, any size from $7\frac{1}{2} \times 10\frac{5}{8}$ inches to $8\frac{1}{2} \times 11$ inches would be satisfactory. If I remember correctly, Mr. Hewitt even advocated a larger size than the $8\frac{1}{2} \times 11$ inches. It is my understanding that this matter of size has been consigned to the tender mercies of this committee, and I am sure it will be carefully considered when we have all the necessary information, including that which will be forthcoming eventually from the Bureau of Standards.

MR. HARN: We should not overlook a class of advertising which was mentioned yesterday. I refer to promotional publicity. We run the danger, I fear, of thinking about advertising containing technical information to the exclusion of this other important class of publicity. We cannot and ought not attempt to do away with it. Perhaps it is of no value in the reference file. Much of it is intended for the waste basket, and if the architect looks at it before he places it in the waste basket it has performed its mission.

The problem here is to make this class of advertising of such a character that the architect will look at

it. If in that we can succeed we shall have gone a long way toward preventing it from carrying into the waste basket with it a quantity of material that ought to go into the file.

MR. LANE: What we all want, and want as soon as it can be had, is the whole truth in advertising. We ought to lose no time in finding the answer to that problem. Why cannot the Structural Service Committee approve advertising which it finds to contain accurate statements? Of course the proof of accuracy involves investigations and tests which will be expensive, and also an organization of salaried employees, but there should be no trouble about raising the money needed. My company would gladly pay twelve hundred dollars a year for such service, and I am sure there are many others who would be perfectly willing to pay the same or larger amounts. Actually, we would be saving money.

MR. JONES: We should go slowly in this matter and know exactly where we are going. The Structural Service Committee could not undertake the work suggested, much as it might like to, without authority from the Institute's Board of Directors and probably the approval of the convention. We are in no position yet to go to the Board or to the convention to get such necessary authority because we have no definite plan. Let us first decide exactly what we want to do, put our decisions into writing, budget the plan and then go to the Institute for its approval, and to those who will benefit by the service for their money.

MR. LANE: A point that I think is important to manufacturers is the misuse of a product. Perhaps we can do something to correct that condition. Products are often misused and consequently unjustly condemned because the architect does not know how they should be used. We manufacturers can do something through our advertising, if we can get it across, but we ought to do something more, we ought to try to associate with the architect more than we have on a basis that will permit us to talk to them to some effect.

MR. ADAM: I would like to ask the chairman when the architects hold their annual meeting?

MR. JONES: The next convention is scheduled for the middle of June in Chicago.

MR. ADAM: Why can't we hold the next conference at the same time? I think it would be a good thing if the Executive Committee could get its program worked out for presentation to a second conference to be held at the same time as or during the Institute meeting. We could get a large number of architects to attend, and if we could do that I believe we would have little or no trouble in selling them the plan we have been talking about; that is, the plan for organizing a commercial section of the Institute. That is the big thing this conference can do.

MR. HARN: It would be very advantageous, it seems to me, if Mr. Adam's suggestion could be carried out. But we ought to consider very carefully the manner in which the scheme is to be presented. We have

been discussing two things; first, the agency for improving and distributing advertising and, second, this new section or branch of the Institute which would include manufacturers in its membership.

The agency for passing upon and distributing technical advertising we want and, I believe, we can get without much trouble. We ought not, however, run the risk of losing it as a part of the larger scheme which might not prove acceptable to the architects.

MR. CLARK: It seems to me that if our plan is right and is properly presented we will not run the risk feared by Mr. Harn. If we can get the Institute to accept the whole plan we shall be in a position to solve our financial problem also. If we can get 200 manufacturers to go to Chicago and discuss the scheme before the larger conference, as it has been discussed here, I think we will succeed.

MR. LANE: I would like to see the whole plan accepted by the Institute if possible at its May convention. As I have said before, my company will be perfectly willing to pay its good money for membership, and many of the gentlemen I have talked to feel the same way about the companies they represent. With the money paid in by manufacturers for membership, this new body ought to conduct investigations and tests to determine the truth of the advertised claims.

MR. JONES: Two or three manufacturers have suggested to me the plan of having the Committee on Structural Service conduct tests and investigations through a laboratory of its own or through some other investigating agency, the cost to be paid by the manufacturer whose product is under investigation. My answer to all such suggestions is why not use such existing organizations as the United States Bureau of Standards. I cannot see the wisdom or the advantage of creating new research agencies when there are so many now in existence that can easily care for our needs.

I think this whole question of plan and its presentation to the second conference should be left in the hands of the Executive Committee. There are a great number of factors to be considered, which can be considered only in the light of information which is not now available.

I have appointed the following gentlemen (subject to their acceptance) as members of the Executive Committee:

Mr. O. C. Harn, Mr. Lyman Clark, Mr. A. J. McComb, Mr. L. G. Powell, Mr. D. K. Boyd.

The meeting adjourned.

WORK OF THE CONTINUING COMMITTEE

The Executive Committee of Five of the Continuing Committee met in New York on December 16th.

The Committee made a careful study of the personnel of the Continuing Committee with respect to interests represented and it was found that many important groups had no spokesmen on the Continuing Committee. The feeling was that the Continuing Committee should be enlarged to provide for repre-

sentation from those interests not now represented. A list was prepared and the chairman was authorized to invite the various manufacturers' associations to designate representatives. Certain leading companies in unorganized industries will be asked to agree among themselves upon suitable representation.

The cost of publishing and distributing the proceedings of the Indianapolis Conference was closely approximated, and it was agreed that a charge of \$1.00 per copy should be made. The suggestion that the Press of the A. I. A. Inc., publish the proceedings was adopted.

Further consideration of the recommendations made by the Indianapolis Conference in regard to standard sizes, character of advertising copy, and segregation of subject matter was postponed until the Continuing Committee is enlarged and reorganized.

It was felt that the work with which the Committee was charged by the Indianapolis Conference should be more finely divided and assigned to a larger number of sub-committees than now exist.

The chairman was authorized to discuss with a specified list of manufacturers the production of filing equipment, after the standard classification has been so revised as to embody any valuable features that might be turned up by answers to the questionnaire sent to a select list of 150 architects.

The questionnaire on filing systems addressed to 150 architects brought up to February 1st, 1922, 70 replies.

In 35 of the 70 offices reporting, manufacturer's literature and reference data is filed in standard vertical file drawers. In 16 offices, drawers (not vertical type) of varying sizes are used. In 21 offices shelves are used either exclusively or in combination with vertical and other drawer files. Two offices report no files and no attempt to keep catalogues. One of these two reports that it relies entirely on Sweets Catalogue. Four offices report using old type letter box files.

The smallest amount of material reported as in the file is equivalent to the contents of two standard vertical file drawers; and the largest amount reported fills 40 such drawers. The average quantity for the 68 offices reporting maintenance of files is 7 standard

vertical file drawers. One standard vertical file drawer holds an average of 200 pieces of literature other than bound books, the latter being kept generally on shelves.

Twenty offices report dissatisfaction with their filing systems, and 32 are satisfied with theirs. Of the 32 offices satisfied with the system used, 27 report the maintenance of vertical files, and of these 27, 25 use an accompanying card index system.

Thirty-eight offices maintain a card index system and 24 do not.

Fifty-three offices report that incoming material is marked or indexed for filing, and 9 offices do not so mark new literature.

In 11 offices the filing is done by a stenographer, generally under the supervision of a member of the firm. In 4 offices filing is done by the office boy. None of the offices in which the office boy does the filing is satisfied with the system. The specification writer does the filing in 18 offices, a draftsman in 6 offices, and in 24 offices a member of the firm maintains the file. Three offices employ a file clerk.

Twenty-three offices classify material for filing alphabetically by the name of the product and the name of the manufacturer, cross-indexed through a card system. Eight offices classify by trades, that is, they collect material under such captions as carpentry, plumbing, painting, etc. Twenty-nine offices use an alphabetical classification of the names of products. Seven offices use the A. I. A. Standard Classification, and of these seven, six are satisfied.

If the offices using the A. I. A. Standard Classification are eliminated, satisfaction or dissatisfaction of the remaining offices with the filing systems in use seems to have nothing to do with the classification used. The reports would seem to indicate that satisfaction results when the file (no matter what its character or what classification is used) is properly maintained by some one possessing intelligence and knowledge of materials and their uses.

The A. I. A. Standard Classification has undergone revision and the second edition will be issued before the end of February.

A Filing System
for
Architects' Offices



The Standard Construction Classification

Adopted by The American Institute of Architects
Revised 1922

What it is and how to use it

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THE AMERICAN INSTITUTE OF ARCHITECTS
THE OCTAGON HOUSE, WASHINGTON, D. C.

The A. I. A. Standard Construction Classification

What It Is and How to Use It

The Problem of Filing.—Construction has become a complex and highly technical enterprise. With the world as a market from which to select the materials and devices fabricated into buildings, the architect, if he would serve his client well by giving him a good building fulfilling its purpose, must keep himself posted, not only on available products, but also on the experience of others with them; he must be able to familiarize himself with new materials and reach conclusions as to their probable serviceability; he must be in a position to judge the relative merits of competing products by reference to criteria of quality and by resort to standard tests.

No human mind can absorb and retain the vast conglomeration of information and data which the architect, especially he who practices in the semi-isolation of the small city or town, should be able to draw upon quickly and conveniently in solving his everyday problems.

The information of a technical character relating to products and their uses and to methods and practices comes to the architect by various media—by his own relatively limited experience, and the recorded experience of others; in publications and reports on research and tests; the work of standardizing bodies and of the Government; by manufacturer's advertising and by articles and advertising in the periodicals. Most of this information reaches the architect in the form of advertising or trade literature. If he attempted to read this material as it reaches him, he might become a walking encyclopedia, but he would have no time for the practice of architecture. He, therefore, finds it necessary to lay this material away for future reference. It is the storage of this material for ready future reference that presents the problem of filing and indexing.

If the file does not yield readily the information wanted the file is useless, a mere office encumbrance betokening a double waste—waste of the architect's time and energy applied to filing, and waste of the effort, time and money put into the production of the material filed.

The Key to the File.—The key to any file is the system of indexing or the classification under which the material is grouped and filed. A file without an adequate index is like a locked door to which the key has been lost.

The usefulness of a file, and therefore, its value as a reservoir of needed information, depends upon the logic, simplicity, flexibility and practicability of the indexing system or classification.

Classifications in Use.—In the production of the A. I. A. Standard Classification many existing classifications or indexing systems, including those known as checking lists (alphabetical lists of more than 3,000 products and classes of products), the decimal system, the systems in use in various technical and public libraries and those in a number of architects' offices, were studied and tested and failed to meet one or more of these requirements essential to the classification of information on construction.

Most of the classifications examined and tried out were, from the architect's standpoint, illogical; they did not fit into the scheme of things in an architect's office and were out of line with the habit of mind and train of thought which are characteristic of the specification writer. To be made practicable an elaborate system of cross indexing would have to be introduced or a complete card index would have to be maintained as well as the file.

The alphabetical index presented the problem of finding a logical place in the file for information of a technical character on basic or raw materials entering into the manufacture of a number of finished or semi-finished products for dissimilar uses. Such an index calls for elaborate cross indexing. It also threatens confusion and diversity of practice due to the individual's freedom of choice as between filing by trade names, manufacturers' names or class names.

The decimal system, limiting as it does the number of major divisions, sub-divisions and extensions to ten was found to be too restrictive to meet the logical requirements of the particular problem. It seemed to involve a wholly unwarranted sacrifice of practicability to an idea.

The systems in use in libraries were found complex and far too comprehensive. They are unworkable without an accompanying complete card index system.

The classifications in architects' offices, deficient as some of them were, had developed quite naturally in response to office needs. The sequence of major divisions was similar to the sequence of department captions in the well ordered specification. Generally they were based upon the use of the product rather than upon the product itself or names. They were working and some of them were giving entire satisfaction.

The A. I. A. Standard Classification.—It was from the last type of classification that the standard adopted by the A. I. A. was developed.

The Standard Classification is in principle a use classification, although the principle has been sacrificed when it operated against simplicity and practicability. Several major divisions have been introduced to provide for filing information on basic materials used by several trades and for a diversity of purposes, thus obviating cross references or the alternative duplication. The major division 3, "MASONRY MATERIALS," is thus accounted for.

The few necessary cross references to avoid duplicate filing appear in the printed classification. After a little experience in extracting information from the file by reference to the printed classification, there will be found no need of a card index. All one needs to remember, in going to the classification and file for information, is that the approach is from the standpoint of the purpose for which the product in question is to be used. There is a clear and logical follow-through from the specification to the file.

Flexibility.—An attempt has been made to reconcile, so far as possible, the architect's need for a rather fine division of subject matter in the file and the present practice and inclination on the part of manufacturers to include in one catalog information on his whole line of products.

The Standard Classification is sufficiently flexible to take care either of the single sheet or folder dealing with one product or of the catalog descriptive of a group of products for similar uses. But neither the A. I. A. Standard nor any other Classification can be made to work easily, without cross reference and at the same time provide a place for a catalog that covers metal lath and concrete reinforcements or that contains information on asbestos shingles and pipe insulation.

In time, as the Standard Classification comes more generally into use, manufacturers who now crowd descriptive matter on a line of products for diversified uses into one catalog, will realize the advertising advantage to them of dividing the material and distributing it according to the Classification throughout a number of small publications that lend themselves to filing for convenient future reference.

It is not intended, however, nor is it necessary for a manufacturer of a line of products all of which classify themselves under one major division to split up his catalog. By way of illustration; a bulletin on revolving ventilators would be filed under 12k1; one on stationary ventilators would be filed under 12k2; and a catalog of both revolving and stationary ventilators would be filed under 12k. A catalog of sky-lights would take the file index 12j; and a catalog covering sky-lights, ventilators, leader heads and sheet metal work would be filed under 12. The simple rule is to move the publication up from the extension to the sub-division and from the sub-division to the major division until nothing contained remains uncovered or calls for a cross reference.

This flexibility is an advantage to the architect in adopting the system because it removes the necessity of installing the complete file. A new office or a small office can start the system with the 40 major divisions only, and later, as the need arises, sub-divide, installing the sub-division cards and folders.

Advantages of a Standard Classification.—If files were to be generally used but without a standard classification, and a manufacturer sent out a piece of literature to 5,000 architects, the filing would require the time of 5,000 competent persons in the 5,000 offices. With a Standard Classification this waste can be eliminated by getting the manufacturer to print on the front page or cover of the publication the Standard file index number. This practice has been adopted by a number of manufacturers and it is gratifying to note that the number is increasing.

This practice of printing the file index on advertising literature, it should be noted, in no way interferes with filing under a system other than the A. I. A. Standard, but at the same time it is a material aid to the architect whose file is Standard.

All of the material published in the Structural Service Department of THE JOURNAL of the A. I. A. is indexed for filing in the Standard file. It is hoped that the time will come when the A. I. A. may be justified, by the number of Standard files in use, to propose to other architectural publications that they similarly index their technical articles for filing.

In order to bridge the gap between the present chaotic filing conditions and the time when the Standard Classification and file is the rule, the Structural Service Committee will prepare an alphabetical list of products and assign to each its proper file index number.

Purpose.—The broad purpose back of the A. I. A. Standard Classification is to simplify filing in the architect's office to the point where an adequate file can be operated by a person without technical knowledge, and where the maintenance of an adequate file is within the reach of every architect from the largest, who can afford an experienced file clerk, to the one who does his own filing.

STANDARD CONSTRUCTION CLASSIFICATION.

1. PREPARATION OF SITE.
 2. EXCAVATION.
 3. MASONRY MATERIALS.
 4. CONCRETE AND CONCRETE WORK.
 5. BRICK WORK.
 6. FOUNDATIONS.
 7. WATERPROOFING AND DAMPPROOFING.
 8. STONE WORK.
 9. ARCHITECTURAL TERRA COTTA.
 10. BLOCK CONSTRUCTION.
 11. PAVING.
 12. ROOFING, SHEET METAL AND SKYLIGHTS.
 13. STRUCTURAL STEEL AND IRON.
 14. MISCELLANEOUS STEEL AND IRON.
 15. ORNAMENTAL METAL WORK.
 16. FIRE RESISTING DOORS, WINDOWS, AND TRIM.
 17. SPECIAL DOORS AND WINDOWS.
 18. VAULTS AND SAFES.
 19. CARPENTRY.
 20. FURRING AND LATHING.
 21. PLASTERING.
 22. MARBLE AND SLATE.
 23. FLOOR AND WALL TILE.
 24. PLASTIC FLOORS.
 25. PAINT, PAINTING AND VARNISHING.
 26. GLASS AND GLAZING.
 27. HARDWARE.
 28. FURNISHINGS.
 29. PLUMBING.
 30. HEATING AND VENTILATING.
 31. ELECTRICAL WORK.
 32. REFRIGERATION.
 33. ELEVATORS.
 34. POWER PLANT.
 35. EQUIPMENT, STATIONARY.
 36. CONSTRUCTION PLANT.
 37. MODELS.
 38. LANDSCAPE.
 39. ACOUSTICS.
 40. REGULATIONS.
1. PREPARATION OF SITE.
 - 1a. DEMOLITION OF STRUCTURES.
 - 1a1. OWNERSHIP OF MATERIALS.
 - 1a2. STORAGE OF SALVED MATERIALS.
 - 1a3. SPRINKLING.
 - 1b. PROTECTION OF TREES, SHRUBS AND SIDEWALKS.
 - 1c. TOP SOIL REMOVAL AND STORAGE.
 2. EXCAVATION.
 - 2a. TESTS OF SUBSOIL.
 - 2a1. PITS.
 - 2a2. BORINGS.
 - 2a2 1. DRY.
 - 2a2 2. WASH.
 - 2a3. LOADING
 - 2a4. TEST PILES.
 - 2b. EXCAVATED MATERIAL, DISPOSAL OF.
 - 2c. BLASTING.
 - 2d. OPEN CAISSON.
 - 2e. SHORING.
 - 2f. SHEET PILING.
 - 2f1. WOOD.
 - 2f2. METAL.
 - 2g. ROCK DRESSING.
 - 2h. TUNNELING.
 - 2i. UNDERPINNING.
 - 2j. BACK-FILLING.
 - 2k. DREDGING.
 3. MASONRY MATERIALS.
 - 3a. CEMENT.
 - 3a1. PORTLAND.
 - 3a2. WHITE PORTLAND.
 - 3a3. NON-STAINING.
 - 3a4. NATURAL.
 - 3a5. KEENES.

3. MASONRY MATERIALS—Continued.

- 3b. INTEGRAL COMPOUNDS AND CONCRETE FLOOR TREATMENTS.
 - 3b1. SET ACCELERATING.
 - 3b2. HARDENING AND DUSTPROOFING.
 - 3b3. ACIDPROOFING.
 - 3b4. WATERPROOFING.
 - 3c. LIME.
 - 3c1. LUMP.
 - 3c2. HYDRAULIC.
 - 3c3. HYDRATED.
 - 3c4. SPECIALS.
 - 3d. AGGREGATES.
 - 3d1. GRADING.
 - 3d2. TESTERS.
 - 3d3. SAND AND FINE AGGREGATE.
 - 3d4. COARSE AGGREGATE.
 - 3d41. CRUSHED STONE.
 - 3d42. GRAVEL.
 - 3d43. CLINKER.
 - 3d44. SLAG.
 - 3e. WATER.
 - 3f. BRICK. (For Brickwork, see 5.)
 - 3f1. COMMON.
 - 3f2. FACE.
 - 3f21. VITREOUS.
 - 3f22. SEMI-VITREOUS.
 - 3f23. ROUGH TEXTURE.
 - 3f24. GLAZED.
 - 3f25. ENAMELED.
 - 3f26. CONCRETE.
 - 3f3. SAND-LIME.
 - 3f4. PAVING.
 - 3f41. SHALE AND CLAY.
 - 3f42. CORK.
 - 3f43. COMPOSITION.
 - 3f5. HOLLOW.
 - 3f6. REFRACTORY.
 - 3f7. SEWER.
 - 3g. GYPSUM.
 - 3h. HOLLOW TILE.
 - 3i. RUBBLE STONE.
 - 3j. CAST BUILDING BLOCKS.
 - 3k. MORTAR COLORS.
 - 3l. MORTAR.
 - 3l1. CEMENT.
 - 3l2. LIME.
 - 3l3. LIME-CEMENT AND CEMENT-LIME.
 - 3l4. NON-STAINING.
 - 3l5. GYPSUM.
4. CONCRETE AND CONCRETE WORK.
 - 4a. QUALITY OF CONCRETE.
 - 4a1. SLUMP TESTS.
 - 4a2. STRENGTH.
 - 4b. PROPORTIONING AND MIXING. (For added compounds, see 3b.)
 - 4b1. PROPORTIONING.
 - 4b2. CONSISTENCY.
 - 4b3. MIXING.
 - 4b31. MACHINE.
 - 4b32. HAND.
 - 4c. DEPOSITING. (For handling plant, see 3b.)
 - 4c1. IN AIR.
 - 4c11. SPOUTING.
 - 4c12. CONTINUOUS.
 - 4c13. BONDING.
 - 4c14. COMPACTING.
 - 4c2. IN WATER.
 - 4c21. TREMIE.
 - 4c22. DROP-BOTTOM BUCKET.
 - 4c23. BAGS.
 - 4c3. RUBBLE AND CYCLOPEAN AGGREGATE.
 - 4c4. PROTECTION FROM FREEZING.

4. CONCRETE AND CONCRETE WORK—Continued.

- 4d. FORMS.
 - 4d1. DESIGN.
 - 4d2. WOOD.
 - 4d3. METAL.
 - 4d4. SPECIAL.
- 4e. REINFORCED.
 - 4e1. DESIGN.
 - 4e11. EXPANSION JOINTS.
 - 4e2. REINFORCING METAL.
 - 4e21. MEDIUM STEEL.
 - 4e22. HIGH CARBON STEEL.
 - 4e23. RE-ROLLED STEEL.
 - 4e24. SPECIAL.
 - 4e25. FABRICS.
 - 4e26. DEFORMED BARS.
 - 4e3. FOOTINGS.
 - 4e31. GRILLAGE.
 - 4e4. COLUMNS AND WALLS.
 - 4e41. COLUMNS.
 - 4e42. WALLS.
 - 4e5. BEAMS AND SLABS.
 - 4e51. FLAT SLAB CONSTRUCTION.
 - 4e52. BEAM AND SLAB CONSTRUCTION.
 - 4e53. BEAM AND FILLER CONSTRUCTION.

- 4f. FIREPROOFING.
- 4g. FLOOR FILLS.
- 4h. INSERTS AND ACCESSORIES.
- 4i. SURFACING AND CEMENT WORK.
 - 4i1. IN THE FORM.
 - 4i2. WALLS AND CEILINGS.
 - 4i3. FLOORS.
- 4j. CONTAINERS.
 - 4j1. TANKS.
 - 4j2. BINS.

5. BRICK WORK. (For brick, see 3f.)

- 5a. LAYING METHODS.
 - 5a1. BONDS.
 - 5a2. JOINTS AND POINTING.
 - 5a3. CLEANING.
- 5b. BACKING FOR STONE AND TERRA COTTA.
- 5c. FIREPROOFING.
- 5d. FIRE-STOPPING.
- 5e. ARCHES.
- 5f. REINFORCEMENTS.
- 5g. CARVING.
- 5h. CHIMNEYS AND FIREPLACES. (For industrial stacks, see 35i24.)
 - 5h1. FLUE LININGS.
 - 5h2. TILE THIMBLES.
 - 5h3. CHIMNEY POTS.
 - 5h4. FIREPLACE DESIGN AND CONSTRUCTION.
 - 5h41. FIREPLACE LININGS, BRICK.
 - 5h42. TRIMMER ARCHES AND HEARTHES. (For iron ash dumps, linings, clean-outs, throats, and dampers, see 14e.)

5i. BRICK VENEER.

6. FOUNDATIONS.

- 6a. PILING.
 - 6a1. WOOD.
 - 6a2. CONCRETE.
- 6b. CAISSONS, AIR.
- 6c. SUB-DRAINAGE.
- 6d. RETAINING WALLS.

7. WATERPROOFING AND DAMPPROOFING. (For Physical Properties of Bitumens and Felts, see 12a.)

- 7a. WATERPROOFING. (Against static head.)
 - 7a1. MEMBRANOUS.
 - 7a2. INTEGRAL.
 - 7a3. PLASTER COAT. (For compounds used in 7a2 and 7a3, see 3b.)
- 7b. DAMPPROOFING. (No static head.)
 - 7b1. MORTAR.
 - 7b2. COATINGS.
 - 7b21. EXTERIOR SURFACES.
 - 7b22. INTERIOR SURFACES.

8. STONE WORK.

- 8a. RUBBLE.
- 8b. CUT.
 - 8b1. MARBLE.
 - 8b2. LIMESTONE.
 - 8b3. GRANITE.
 - 8b4. SLATE. (For interior slate, see 22b.)
- 8c. ARTIFICIAL.
- 8d. CUTTING AND SURFACING.
 - 8d1. CARVING. (For models, see 37.)
- 8e. SETTING. (For mortar, see 3l.)
 - 8e1. CLAMPS AND ANCHORS.
 - 8e2. STAIN PROOFING.
 - 8e21. PAINTING.
 - 8e22. PARGING.
 - 8e3. CLEANING.

9. ARCHITECTURAL TERRA COTTA.

- 9a. MATERIAL.
 - 9a1. MANUFACTURE.
 - 9a2. FINISHES.
 - 9a3. TRIAL SETTING.
- 9b. SETTING.
 - 9b1. ANCHORING.
 - 9b2. BACKING.

10. BLOCK CONSTRUCTION.

- 10a. WALLS AND PARTITIONS.
 - 10a1. HOLLOW TILE.
 - 10a11. BEARING AND EXTERIOR.
 - 10a12. NON-BEARING AND INTERIOR.
 - 10a2. CONCRETE BLOCK.
 - 10a21. BEARING AND EXTERIOR.
 - 10a22. NON-BEARING AND INTERIOR.
 - 10a3. GYPSUM.
 - 10a4. MAGNESITE.
 - 10a5. MISCELLANEOUS
 - 10a6. REINFORCEMENTS.
- 10b. FLOORS AND ROOFS.
 - 10b1. HOLLOW TILE.
 - 10b11. FLOORS.
 - 10b12. ROOFS.
 - 10b2. GYPSUM.
 - 10b21. FLOORS.
 - 10b22. ROOFS.
- 10c. FURRING AND FIREPROOFING.
 - 10c1. HOLLOW TILE.
 - 10c11. FURRING.
 - 10c12. FIREPROOFING.
 - 10c2. GYPSUM.
 - 10c21. FURRING.
 - 10c22. FIREPROOFING.
 - 10c3. MAGNESITE.
 - 10c31. FURRING.
 - 10c32. FIREPROOFING.
 - 10c4. MISCELLANEOUS.

11. PAVING.

- 11a. CONCRETE.
- 11b. BRICK.
- 11c. STONE BLOCK.
- 11d. ASPHALT.
- 11e. COMPOSITION BLOCK.
- 11f. WOOD BLOCK.
- 11g. CORK BRICK.
- 11h. MACADAM.
 - 11h1. BITUMINOUS BINDERS.
- 11i. GUTTERS AND CURBS. (For curb guards, gutter bridges, catch basins, and manhole fittings, see 14.)
- 11j. VAULT LIGHTS.

12. ROOFING, SHEET METAL AND SKYLIGHTS.

- 12a. BASIC MATERIALS.
 - 12a1. BITUMENS.
 - 12a11. PITCH.
 - 12a12. ASPHALT.
 - 12a2. FELTS AND FABRICS.

12. ROOFING, SHEET METAL AND SKYLIGHTS—Continued.

- 12a. BASIC MATERIALS—Continued.
 - 12a3. METALS.
 - 12a31. SHEET IRON.
 - 12a32. SHEET STEEL.
 - 12a33. SHEET TIN.
 - 12a34. SHEET COPPER.
 - 12a35. SHEET ZINC.
 - 12a36. SHEET LEAD.
 - 12b. BITUMINOUS ROOFING.
 - 12b1. BUILT-UP.
 - 12b11. GRAVEL OR SLAG.
 - 12b12. TILE SURFACING.
 - 12b13. SLATE SURFACING.
 - 12b14. SPECIAL.
 - 12b2. PREPARED.
 - 12b21. ROLL.
 - 12b22. SHINGLES.
 - 12c. SHEET METAL ROOFING.
 - 12c1. TIN.
 - 12c11. STANDING SEAM.
 - 12c12. FLAT SEAM.
 - 12c13. BATTEN.
 - 12c2. COPPER.
 - 12c21. FLAT SEAM.
 - 12c22. BATTEN.
 - 12c23. TILE.
 - 12c3. GALVANIZED.
 - 12c31. CORRUGATED.
 - 12c32. SHINGLES.
 - 12c33. TILE.
 - 12c4. ZINC.
 - 12c41. SHINGLES.
 - 12c5. LEAD.
 - 12d. SLATE ROOFING.
 - 12d1. GRADUATED.
 - 12e. TILE. (Except metal and flat tile.)
 - 12e1. CLAY.
 - 12e2. CEMENT.
 - 12f. ASBESTOS. (For roll and built-up, see 12b.)
 - 12f1. SHINGLES.
 - 12f2. CORRUGATED.
 - 12g. CANVAS.
 - 12h. FLASHINGS.
 - 12h1. METAL.
 - 12h2. BITUMINOUS.
 - 12h3. PLASTIC.
 - 12i. GUTTERS, LEADERS AND ACCESSORIES.
 - 12j. SKYLIGHTS.
 - 12j1. PUTTYLESS TYPE.
 - 12j2. PUTTY GLAZED.
 - 12j3. GLASS AND GLAZING.
 - 12j31. GLASS.
 - 12j32. VAULT LIGHTS.
 - 12j33. GLAZING.
 - 12k. VENTILATORS.
 - 12k1. REVOLVING.
 - 12k2. STATIONARY.
 - 12l. ARCHITECTURAL SHEET METAL.
 - 12l1. SHEET METAL CEILINGS.
 - 12l2. CORNICES, PEDIMENTS, ETC.
 - 12m. PRESSED SHEET METAL COLUMNS.
 - 12n. PAINTING.
 - 12n1. ENAMELING SHEET METAL.

13. STRUCTURAL STEEL AND IRON.

14. MISCELLANEOUS STEEL AND IRON.

- 14a. SIDEWALK FITTINGS
 - 14a1. AREA GRATINGS.
 - 14a2. SIDEWALK DOORS AND FRAMES.
 - 14a3. COAL HOLE COVERS AND FRAMES.
 - 14a4. CURB GUARDS.
 - 14a5. GUTTER COVERS AND BRIDGES.
 - 14b. DOOR AND WINDOW OPENINGS.
 - 14b1. WHEEL GUARDS.
 - 14b2. BUCKS, STRUCTURAL SHAPES.
 - 14b3. LINTELS, CAST IRON.
 - 14b4. GRATINGS.
 - 14b5. SHEET AND PLATE DOORS AND SHUTTERS.
 - 14c. FIRE ESCAPES AND BALCONIES.
 - 14d. STAIRS, PLATFORMS, LADDERS AND RAILINGS.
 - 14d1. SAFETY TREADS.
 - 14e. FIREPLACE AND CHIMNEY ACCESSORIES.
 - 14e1. ASH DUMPS.
 - 14e2. THROATS AND DAMPERS.
 - 14e3. FIREPLACE LININGS.
 - 14e4. CLEAN-OUT DOORS AND FRAMES.
 - 14f. FLAG POLES, STEEL. (For lightning protection, see 35n6.)
 - 14g. WALL BEARING PLATES.
 - 14h. METAL SMOKESTACKS.
 - 14i. PORTABLE STEEL BUILDINGS.
 - 14j. HANGERS AND ANCHORS.
 - 14k. FENCES.
- ## 15. ORNAMENTAL METAL WORK.
- 15a. BRONZE. (Composition and Finishes.)
 - 15a1. ARCHITECTURAL.
 - 15a2. SCULPTURAL.
 - 15b. BRASS AND COPPER.
 - 15c. CAST IRON.
 - 15d. WROUGHT IRON.
 - 15e. METAL PLATING PROCESSES.
- ## 16. FIRE RESISTING DOORS, WINDOWS AND TRIM.
- 16a. HOLLOW METAL.
 - 16a1. DOORS.
 - 16a11. DOOR FRAMES. (Combined Frames and Trim.)
 - 16a2. WINDOWS.
 - 16a3. MOLDINGS AND TRIM.
 - 16b. METAL COVERED WOOD. (Kalamined.)
 - 16b1. DOORS.
 - 16b2. WINDOWS.
 - 16b3. MOLDINGS AND TRIM.
 - 16c. TIN CLAD.
 - 16c1. DOORS.
 - 16c2. FIRE SHUTTERS.
 - 16d. SHEET METAL TYPE. (Corrugated, etc.)
 - 16d1. DOORS.
 - 16d11. HINGED.
 - 16d12. SLIDING.
 - 16d13. ROLLING.
 - 16d2. SHUTTERS.
 - 16d3. WINDOWS. (Heavy gauge solid.)
 - 16e. SOLID, ROLLED AND DRAWN SHAPES.
 - 16e1. SASH AND FRAMES.
 - 16e2. MOLDINGS AND TRIM.

17. SPECIAL DOORS AND WINDOWS.

(Note: Special features are generally confined to the hardware used.)

- 17a. DOORS.
 - 17a1. REVOLVING.
 - 17a2. COUNTERBALANCED.
 - 17a3. CANOPY.
 - 17a4. FOLDING.
 - 17a5. SOUNDPROOF.
 - 17b. WINDOWS.
- ## 18. VAULTS AND SAFES.
- 18a. BUILT-IN VAULTS.
 - 18b. FIREPROOF VESTIBULES.
 - 18c. PORTABLE AND BUILT-IN SAFES.
 - 18d. CHESTS.
 - 18e. PROTECTIVE SYSTEMS.

19. CARPENTRY.

19a. LUMBER.

- 19a1. CLASSIFICATION.
- 19a2. GRADING RULES.
- 19a3. TREATMENTS.
 - 19a31. ROT PREVENTION.
 - 19a32. CURING AND DRYING.
 - 19a33. FIRE-PROOFING.

19b. FRAMING.

- 19b1. DESIGN.
- 19b2. HALF-TIMBER.

19c. DOCKS AND BULKHEADS. (For piling, see 6a.)

19d. ROOF AND WALL COVERINGS.

19e. MILLWORK.

- 19e1. SASH, DOORS AND FRAMES.
 - 19e11. SASH.
 - 19e12. DOORS.
 - 19e13. FRAMES.
 - 19e14. WEATHER STRIPS.
 - 19e15. FLY SCREENS AND SCREEN DOORS.
 - 19e16. CAULKING.
- 19e2. SHUTTERS. (For fire shutters, see 16c2.)
- 19e3. MOULDS AND TRIMS.
- 19e4. STAIRS. (For safety treads, see 14d1.)
- 19e5. VENEERING AND PLYWOOD.
 - 19e51. GLUES AND GLUEING.
- 19e6. PARTITIONS AND BOOTHS.
 - 19e61. SLIDING AND ROLLING.
- 19e7. MISC. BUILT-IN FURNITURE.
- 19e8. COLUMNS.
- 19e9. FLOORING.

19f. WALL BOARDS. (For plaster board, see 21d.) (For combination sheathing and lath, see 19k.)

19g. BUILDING AND SHEATHING PAPERS, FELTS AND QUILTS.

19h. FLAG POLES.

19i. PORTABLE AND PRE-CUT BUILDINGS.

19j. GROUNDS AND NAILING PLUGS.

19k. COMBINATION SHEATHING AND LATH SHEATHING.

19l. WOOD TANKS.

20. FURRING AND LATHING.

20a. FURRING.

20b. LATHING. (For combination sheathing and lath, see 19k.)

- 20b1. METAL.
 - 20b11. WIRE.
 - 20b12. EXPANDED METAL.
 - 20b13. SELF-FURRING.
 - 20b14. METAL LATH PARTITIONS.
 - 20b15. COMPOSITE.

20b2. WOOD.

20c. CORNER BEADS.

21. PLASTERING.

21a. PLAIN.

- 21a1. LIME PLASTER.
- 21a2. GYPSUM PLASTER.
- 21a3. KEENES CEMENT.

21b. ORNAMENTAL.

- 21b1. ARTIFICIAL STONE.
- 21b2. ARTIFICIAL MARBLE. (Scagliola.)
- 21b3. CAEN STONE.
- 21b4. STANDARD MOULDS.

21c. PLASTER BOARDS.

- 21c1. PLASTER BOARD PARTITIONS.

21d. STUCCO.

- 21d1. CEMENT.
- 21d2. MAGNESITE.
- 21d3. LIME.

21e. SCRAFFITO.

21f. BONDING AND STAIN-PROOFING COATINGS.

22. MARBLE AND SLATE.

22a. INTERIOR MARBLE.

22b. INTERIOR SLATE. (For slate used as cut stone, see 8b4.) (For slate blackboards, see 35b11.)

22. MARBLE AND SLATE—Continued.

22c. ALBERENE STONE. (Soap Stone.)

22d. MARBLE MOSAIC.

22e. TERRAZZO.

22f. STRUCTURAL GLASS.

23. FLOOR AND WALL TILE.

23a. CERAMIC.

23a1. VITREOUS AND SEMI-VITREOUS.

23a2. GLAZED AND ENAMELED.

23a3. MOSAIC.

23a4. FAIENCE.

23a5. SETTING.

23a51. FLOORS.

23a52. WALLS AND CEILINGS.

23b. CORK.

23b1. SETTING.

23c. RUBBER.

23c1. SETTING.

23d. COMPOSITION.

23d1. SETTING.

23e. ACOUSTICAL.

23e1. SETTING.

23f. METAL.

23f1. SETTING.

24. PLASTIC FLOORS.

24a. MAGNESITE.

24b. MASTIC.

24b1. HEAVY SERVICE.

24b2. LIGHT SERVICE.

25. PAINT, PAINTING AND FINISHING.

25a. RAW PRODUCTS.

25a1. VEHICLES.

25a11. OILS.

25a12. TURPENTINES AND SUBSTITUTES.

25a13. ALCOHOL.

25a14. DRYERS.

25a2. PIGMENTS.

25a21. WHITE LEAD.

25a22. ZINC WHITE.

25a23. RED LEAD, METALLIC LEAD.

25a24. GRAPHITE.

25a25. OCHER. (Iron Oxides.)

25a26. INERT FILLERS.

25a27. COLORS.

25a3. GUMS, RESINS, ETC.

25b. FINISHED PRODUCTS.

25b1. VARNISH, STAIN, FILLER, ETC.

25b11. VARNISH.

25b12. STAIN.

25b13. FILLERS.

25b14. LACQUERS AND GLAZES.

25b15. WAX.

25b2. PAINTS AND ENAMELS.

25b21. WHITWASH AND WATER PAINTS.

25b22. FLAT PAINT. (Lithopone Type.)

25b23. ENAMEL.

25b24. GRAPHITE PAINT, RED LEAD, IRON OXIDE, ETC.

25b25. SINGLE PIGMENT PAINT.

25b26. READY MIXED PAINTS.

25b27. BITUMINOUS PAINTS.

25b28. MISCELLANEOUS AND SPECIAL.

25c. PAINTING AND FINISHING.

25c1. WOODWORK.

25c11. STAINING, FILLING, VARNISHING, ETC.

25c12. PAINTING, ENAMELING.

25c2. MASONRY, PLASTER, ETC.

25c21. PLASTER, STUCCO AND CONCRETE.

25c22. BRICK.

25c23. STONE.

25c3. METAL. (For structural steel, see 13c2.)

25c4. CANVAS AND FABRICS.

25. PAINT, PAINTING AND FINISHING—Continued.

- 25*d*. DECORATIVE.
 - 25*d*1. GOLD LEAF.
 - 25*d*2. STENCILING.
 - 25*d*3. PAINTED DECORATION.
- 25*e*. LETTERING.
- 25*f*. REFLECTING SURFACES.

26. GLASS AND GLAZING.

- 26*a*. GLASS.
 - 26*a*1. SHEET GLASS.
 - 26*a*2. PLATE GLASS.
 - 26*a*3. WIRED GLASS.
 - 26*a*4. PRISMATIC. (Regular refracting.)
 - 26*a*5. DIFFUSING. (Irregularly refracting.)
 - 26*a*6. OBSCURED.
 - 26*a*7. LEADED AND STAINED.
 - 26*a*8. NON-SHATTERABLE AND BULLET PROOF.
- 26*b*. GLAZING.
 - 26*b*1. STORE FRONTS.

27. HARDWARE.

- 27*a*. BUILDERS.
 - 27*a*1. PULLEYS, WEIGHTS, CHAINS, CORDS.
 - 27*a*2. WINDOW CLEANERS.
 - 27*a*3. HANGERS, DOOR.
 - 27*a*4. EXPANSION BOLTS.
- 27*b*. FINISHING.
- 27*c*. SPECIALTIES.
 - 27*c*1. REVERSIBLE WINDOWS.
 - 27*c*2. CASEMENT SPECIALTIES.
 - 27*c*3. DOOR OPERATORS.
 - 27*c*4. SASH OPERATORS.

28. FURNISHINGS.

- 28*a*. METAL.
 - 28*a*1. LOCKERS.
 - 28*a*2. FURNITURE. (For safes, see 18.)
 - 28*a*3. PARTITIONS.
- 28*b*. WOOD.
 - 28*b*1. SEATING.
 - 28*b*11. CHURCH.
 - 28*b*12. SCHOOL.
 - 28*b*13. CHAIRS.
 - 28*b*2. TABLES AND DESKS.
 - 28*b*21. LIBRARY.
 - 28*b*22. SCHOOL.
 - 28*b*23. OFFICE.
 - 28*b*3. CASES.
 - 28*b*31. SHOW.
 - 28*b*32. BOOK.
 - 28*b*33. WARDROBES AND CASES.
 - 28*b*4. WILLOW AND WICKER.
 - 28*b*5. UPHOLSTERY AND TRIMMINGS.
- 28*c*. WALL COVERINGS.
 - 28*c*1. FABRICS.
 - 28*c*2. PAPER.
- 28*d*. DRAPERIES.
- 28*e*. WINDOW SHADES.
- 28*f*. AWNINGS.
- 28*g*. VENETIAN BLINDS.
- 28*h*. HARDWARE, UPHOLSTERER'S.
- 28*i*. FLOOR COVERINGS AND ACCESSORIES.
 - 28*i*1. LINOLEUM.
 - 28*i*11. LINOLEUM CEMENT.

29. PLUMBING.

- 29*a*. DESIGN.
- 29*b*. PHYSICAL PROPERTIES OF PIPE AND FITTINGS.
 - 29*b*1. CAST IRON PIPE AND FITTINGS.
 - 29*b*2. WROUGHT IRON PIPE AND FITTINGS.
 - 29*b*3. STEEL PIPE AND FITTINGS.
 - 29*b*4. BRASS PIPE AND FITTINGS, BRONZE VALVES.
 - 29*b*5. CLAY PIPE AND FITTINGS.
 - 29*b*6. CEMENT PIPE AND FITTINGS.
 - 29*b*7. LEAD PIPE.
 - 29*b*8. MISCELLANEOUS AND SPECIAL.

29. PLUMBING—Continued.

- 29*c*. DRAINAGE.
 - 29*c*1. EJECTORS AND PUMPS.
 - 29*c*2. SEWAGE DISPOSAL.
 - 29*c*21. SEPTIC TANKS.
- 29*d*. WATER SUPPLY.
 - 29*d*1. METERS.
 - 29*d*2. HEATERS AND BOILERS.
 - 29*d*3. WATER TREATMENT.
 - 29*d*31. FILTERS.
 - 29*d*32. SOFTENERS.
 - 29*d*33. STERILIZERS.
 - 29*d*34. FOR RUST PREVENTION.
 - 29*d*4. STORAGE AND TANKS.
 - 29*d*5. PUMPS.
 - 29*d*51. HYDRAULIC RAMS.
- 29*e*. FIRE PROTECTION.
 - 29*e*1. SPRINKLERS.
 - 29*e*2. HOSE RACKS, VALVES, FITTINGS AND FIRE HOSE.
 - 29*e*3. EXTINGUISHERS.
- 29*f*. GAS.
 - 29*f*1. GENERATORS AND PRODUCERS.
 - 29*f*2. LIGHTING FIXTURES.
 - 29*f*3. RANGES.
 - 29*f*4. HEATING.
- 29*g*. AIR.
- 29*h*. PLUMBING FIXTURES.
- 29*i*. BATH ROOM ACCESSORIES.

30. HEATING AND VENTILATING.

- 30*a*. DESIGN.
- 30*b*. WARM AIR SYSTEMS.
 - 30*b*1. FURNACES.
 - 30*b*2. PIPE AND FITTINGS. (For registers, see 30*e*.)
- 30*c*. STEAM AND WATER.
 - 30*c*1. BOILERS.
 - 30*c*2. PIPE, VALVES AND FITTINGS. (For physical properties and tests, see 29*b*.)
 - 30*c*3. INSULATION.
 - 30*c*4. RADIATION.
 - 30*c*41. RADIATOR COVERS AND CONCEALING RADIATORS.
 - 30*c*5. PUMPS.
- 30*d*. VENTILATING.
 - 30*d*1. BLOWERS AND FANS.
 - 30*d*2. AIR WASHERS.
 - 30*d*3. AIR FILTERS.
 - 30*d*4. FLUES AND DUCTS.
- 30*e*. REGISTERS.
- 30*f*. TEMPERATURE REGULATION.
 - 30*f*1. AIR MOISTENERS AND CONDITIONING.
- 30*g*. FUEL AND FUEL FEEDS.

31. ELECTRICAL WORK.

- 31*a*. GENERATING APPARATUS.
 - 31*a*1. ENGINEERING DATA.
- 31*b*. TRANSFORMERS AND LIGHTNING ARRESTORS.
- 31*c*. DISTRIBUTION SYSTEM.
 - 31*c*1. ENGINEERING DATA.
 - 31*c*2. SWITCH BOARDS.
 - 31*c*3. PANELBOARDS.
 - 31*c*31. CABINETS.
 - 31*c*32. PANELS.
 - 31*c*33. TRIMS. (Switches, fuse blocks, etc.)
 - 31*c*4. CIRCUIT RUPTURING DEVICES.
 - 31*c*41. FUSES.
 - 31*c*42. CIRCUIT BREAKERS.
 - 31*c*43. RELAYS.
 - 31*c*5. CONDUIT SYSTEMS.
 - 31*c*51. CONDUIT.
 - 31*c*52. OUTLET BOXES.
 - 31*c*53. JUNCTION BOXES.
 - 31*c*54. MISCELLANEOUS FITTINGS.
 - 31*c*55. MANHOLES.

31. ELECTRICAL WORK—Continued.

- 31c. DISTRIBUTION SYSTEM—Continued.
 - 31c6. WIRES AND CABLES.
 - 31c61. CONDUCTORS.
 - 31c62. INSULATIONS.
 - 31c7. WIRING DEVICES.
 - 31c71. SOCKETS.
 - 31c72. RECEPTACLES.
 - 31c73. SWITCHES. (For knife switches, see 31c33.)
 - 31c74. MISCELLANEOUS APPLIANCES.
- 31d. MOTORS AND CONTROL.
- 31e. ELECTRIC MEASURING INSTRUMENTS.
- 31f. ILLUMINATION.
 - 31f1. ENGINEERING DATA.
 - 31f11. OUTDOOR ILLUMINATION.
 - 31f12. RESIDENTIAL.
 - 31f13. INDUSTRIAL. (Factories.)
 - 31f14. COMMERCIAL. (Stores.)
 - 31f15. BUSINESS. (Offices, Banks, etc.)
 - 31f16. EDUCATIONAL. (Schools, Libraries.)
 - 31f17. PUBLIC BUILDINGS, AUDITORIUMS.
 - 31f18. INDOOR RECREATIONS AND SPORTS.
 - 31f19. MISCELLANEOUS.
 - 31f2. EQUIPMENT.
 - 31f21. INCANDESCENT LAMPS.
 - 31f22. REFLECTORS.
 - 31f23. LIGHTING FIXTURES.
 - 31f24. SEARCHLIGHTS.
 - 31f25. MAINTENANCE.
- 31g. HEATING.
 - 31g1. ENGINEERING DATA.
 - 31g2. HEATING ELEMENTS.
 - 31g3. HEATERS.
 - 31g31. AIR.
 - 31g32. WATER.
 - 31g4. COOKING.
 - 31g5. INDUSTRIAL. (Ovens, furnaces, etc.)
- 31h. SMALL POWER APPLIANCES.
 - 31h1. LAUNDRY EQUIPMENT.
 - 31h2. KITCHEN EQUIPMENT.
 - 31h3. PUMPS.
 - 31h31. WATER.
 - 31h32. GASOLINE.
 - 31h33. OIL.
 - 31h34. AIR AND GAS.
 - 31h4. MISCELLANEOUS.
 - 31h41. PORTABLE VACUUM CLEANERS.
 - 31h42. PORTABLE FANS.
 - 31h43. SEWING MACHINES.
 - 31h44. ADDING MACHINES.
- 31i. SIGNALING AND COMMUNICATING SYSTEMS.
 - 31i1. CALL SYSTEMS.
 - 31i11. GENERATORS AND BATTERIES.
 - 31i12. BELL RINGING TRANSFORMERS.
 - 31i13. BELLS AND ANNUNCIATORS.
 - 31i14. PUSH BUTTONS.
 - 31i2. TIME SYSTEMS.
 - 31i21. TIME CLOCKS AND STAMPS.
 - 31i22. WATCHMEN'S TIME DETECTOR.
 - 31i3. ALARMS.
 - 31i31. FIRE ALARMS.
 - 31i32. BURGLAR ALARMS.
 - 31i4. TELAUTOGRAPHS.
 - 31i5. TELEPHONES.
 - 31i6. WIRELESS APPARATUS.
- 31j. ELECTRO-MEDICAL AND THERAPEUTIC APPARATUS.
- 31k. ULTRA VIOLET AND X-RAY APPARATUS.
 - 31k1. STERILIZATION OF WATER.

32. REFRIGERATION.

- 32a. DESIGN.
- 32b. INSULATION.
- 32c. REFRIGERATORS.
 - 32c1. DOORS.
- 32d. SMALL DOMESTIC UNITS.
- 32e. SPECIALTIES.

33. ELEVATORS.

- 33a. ENGINEERING REQUIREMENTS AND DESIGN.
 - 33a1. TRAFFIC DATA.
 - 33a2. PLATFORM SIZES.
 - 33a3. DUTIES.
 - 33a31. LOADS.
 - 33a32. SPEEDS.
 - 33a33. ACCELERATION.
- 33b. PASSENGER, POWER.
 - 33b1. ELECTRIC.
 - 33b11. TRACTION.
 - 33b12. WINDING DRUM.
 - 33b2. HYDRAULIC.
 - 33b21. PLUNGER.
 - 33b22. ROPE GEARED.
 - 33b3. STEAM.
- 33c. FREIGHT.
 - 33c1. ELECTRIC.
 - 33c11. TRACTION. (Direct drive, 2 to 1 rope geared, worm or helical gear.)
 - 33c12. WINDING. (Worm gear.)
 - 33c2. HYDRAULIC.
 - 33c21. PLUNGER.
 - 33c22. ROPE GEARED.
 - 33c3. GRAVITY.
 - 33c4. HAND.
 - 33c5. STEAM.
- 33d. DUMBWAITERS.
 - 33d1. POWER.
 - 33d2. HAND.
- 33e. ESCALATORS.
- 33f. CAR ENCLOSURES.
- 33g. DOORS AND GATES.
 - 33g1. INTERLOCKS AND CLOSERS.
- 33h. SIGNALS AND INDICATORS, PUSH BUTTON BOXES AND ANNUNCIATORS.
- 33i. DEVICES.
- 33j. SPIRAL CHUTES.

34. POWER PLANT.

- 34a. DESIGN.
- 34b. BOILER ROOM EQUIPMENT.
 - 34b1. BOILERS AND ACCESSORIES.
 - 34b2. CONDENSERS.
 - 34b3. ECONOMIZERS.
 - 34b4. SUPER-HEATERS AND MECHANICAL DRAFT.
 - 34b5. GRATES.
 - 34b6. STOKERS.
 - 34b7. TUBE CLEANERS AND SEPARATORS.
 - 34b8. FUEL OIL AND POWDERED COAL EQUIPMENT.
- 34c. COAL AND ASH HANDLING.
 - 34c1. CONVEYORS.
 - 34c2. PULVERIZERS.
- 34d. CRANES AND TROLLEYS.
- 34e. VALVES AND OPERATORS.
- 34f. PUMPS.
- 34g. REGULATORS.
 - 34g1. DAMPER.
 - 34g2. FEED WATER.
 - 34g3. PRESSURE, WATER, STEAM, GAS.
- 34h. ENGINE ROOM EQUIPMENT.
 - 34h1. STEAM ENGINES.
 - 34h2. INTERNAL COMBUSTION ENGINES.
 - 34h3. TURBINES.
 - 34h4. COMPRESSORS.
- 34i. MISCELLANEOUS.
 - 34i1. GAS PRODUCERS.
 - 34i2. OILING SYSTEMS, STORAGE AND FILTERS.
 - 34i3. WATER COOLING, HEATING AND TREATING.
 - 34i4. COMBUSTION RECORDERS.

35. EQUIPMENT, STATIONARY.

- (For vaults and safes, see No. 18.)
- (For furnishings, see No. 28.)
- 35a. STAGE AND THEATRICAL.

35. EQUIPMENT, STATIONARY—Continued.

- 35b. EDUCATIONAL. (Including Library.)
 - 35b1. BLACKBOARDS.
 - 35b11. SLATE.
 - 35b12. ARTIFICIAL.
 - 35b2. BOOK STACKS AND LIFTS. (For bookcases, see 28b32.)
- 35c. COOKING.
 - 35c1. KITCHEN. (For electrical equipment, see 31h2.)
 - 35c11. COAL AND WOOD RANGES. (For gas ranges, see 29f3.)
 - 35c12. FURNITURE. (Tables, cabinets, etc.)
 - 35c2. BAKERY.
 - 35c21. OVENS.
- 35d. LAUNDRY. (For portable electric appliance, see 31h1.)
 - 35d1. WASHING MACHINES.
 - 35d2. IRONING MACHINES.
 - 35d3. CLOTHES DRYERS.
 - 35d31. GAS.
 - 35d32. COAL.
- 35e. LABORATORY. (For bacteriological, see 35k1.)
 - 35e1. CHEMICAL.
 - 35e2. PHYSICAL.
- 35f. ATHLETIC.
 - 35f1. GYMNASIUM.
 - 35f2. POOLS AND NATATORIUMS.
- 35g. MUSICAL.
 - 35g1. ORGANS.
 - 35g11. PIPE.
 - 35g12. REED.
 - 35g2. CHIMES AND BELLS.
- 35h. COMMERCIAL. (For show cases, see 28b31.)
 - 35h1. MAIL CHUTES.
 - 35h2. CARRIERS.
 - 35h21. PNEUMATIC.
- 35i. INDUSTRIAL.
 - 35i1. MATERIAL HANDLING MACHINERY.
 - 35i2. MACHINERY AND APPLIANCES.
 - 35i21. OVENS, KILNS, FURNACES, CONVERTERS, DRYERS.
 - 35i22. PRESSES.
 - 35i23. TANKS AND VATS.
 - 35i24. STACKS.
 - 35i25. MACHINE TOOLS.
 - 35i26. MISC. PLANT.
- 35j. DUST AND WASTE MATERIAL COLLECTION.
 - 35j1. STATIONARY VACUUM CLEANERS. (For portable V. C., see 31h41.)
 - 35j2. PNEUMATIC ASH COLLECTION.
 - 35j3. CYCLONES.
- 35k. SURGICAL AND MEDICAL.
 - 35k1. BACTERIOLOGICAL LABORATORY.
 - 35k2. OPERATING ROOM.
 - 35k3. DIET KITCHEN.
- 35l. AGRICULTURAL.
- 35m. AUTOMOBILE.
 - 35m1. TURNTABLES.
 - 35m2. GASOLINE TANKS AND PUMPS.
 - 35m3. RAMPS.

35. EQUIPMENT, STATIONARY—Continued.

- 35n. MISCELLANEOUS.
 - 35n1. CLOTHES CHUTES.
 - 35n2. INCINERATORS.
 - 35n3. ASH AND GARBAGE RECEIVERS.
 - 35n4. CLOCKS. (For time clocks, see 31j21.)
 - 35n5. PRISON CELLS.
 - 35n6. LIGHTNING RODS.
 - 35n7. PERISCOPES.
 - 35n8. ASH HOISTS.
 - 35n9. SPACE SAVING APPLIANCES.
- 36. CONSTRUCTION PLANT.
 - 36a. TEMPORARY BUILDINGS.
 - 36b. CONCRETE MIXING AND HANDLING MACHINERY.
 - 36c. HOISTING.
 - 36c1. PLATFORM LIFTS.
 - 36c2. HOD AND OTHER HOISTS.
 - 36c3. DERRICKS.
 - 36c4. ENGINES, STEAM, ELECTRIC.
 - 36c5. BOILERS.
 - 36d. EXCAVATING PLANT.
 - 36e. SCAFFOLDS AND LADDERS.
 - 36f. PILEDRIVERS.
 - 36g. TRUCKS.
 - 36h. SMALL TOOLS.
 - 36i. INDUSTRIAL RAILROADS. (See also 35i.)
 - 36j. PUMPS.
 - 36k. ROPES, CHAINS, CABLES.
- 37. MODELS.
- 38. LANDSCAPE. (For Roads, see Paving 11.)
 - 38a. GRADING.
 - 38b. SOIL TESTING.
 - 38c. FERTILIZERS.
 - 38d. PATHS. (For roads, see 11.)
 - 38e. PLANTING.
 - 38e1. GRASS AND SOD.
 - 38e2. TREES.
 - 38e3. SHRUBS.
 - 38e4. PLANTS.
 - 38f. GREENHOUSES.
 - 38g. GARDEN FURNITURE.
- 39. ACOUSTICS.
 - 39a. TECHNICAL DATA.
 - 39b. MATERIALS.
- 40. REGULATIONS.
 - 40a. LAW.
 - 40a1. CONTRACTS.
 - 40b. CODES. (Building.)
 - 40b1. SAFETY AND INDUSTRIAL CODES.
 - 40b2. NATIONAL ELECTRICAL CODES.
 - 40c. UNDERWRITERS.
 - 40c1. LISTS OF APPROVED APPLIANCES.



THE AMERICAN INSTITUTE OF ARCHITECTS
THE OCTAGON HOUSE, WASHINGTON, D. C.

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For One Year (1921-22)

EDWIN H. HEWITT, 1200 2nd Ave. So., Minneapolis, Minn.
WM. B. ITTNER, Board of Education Bldg., St. Louis, Mo.
ERNEST J. RUSSELL, Chemical Building, St. Louis, Mo.

For Two Years (1921-23)

CHARLES H. ALDEN, Empire Building, Seattle, Wash.
N. MAX DUNNING, 310 South Wabash Ave., Chicago, Ill.
ABRAM GARFIELD, Garfield Building, Cleveland, Ohio.

For Three Years (1921-1924)

EDWIN BERGSTROM, Citizens Nat. Bank Bldg., Los Angeles, Calif.
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L. P. WHEAT, JR., 808 17th Street, N. W., Washington, D. C.

Minutes

MEETING OF EXECUTIVE COMMITTEE, MARCH 31, APRIL 1, 1922.

Members present. The meeting was called to order by President Henry H. Kendall, at the office of Mr. Robert D. Kohn, New York, N. Y., at 10 A. M., on March 31, 1922. Others present were the Second Vice-President, Mr. Robert D. Kohn; the Secretary, Mr. Wm. Stanley Parker; and the Treasurer, Mr. D. Everett Waid; also Mr. C. H. Whitaker, Editor of THE JOURNAL, and the Executive Secretary, Mr. E. C. Kemper. Directors E. J. Russell and N. Max Dunning; and Mr. C. Herrick Hammond, Chairman of the Convention Committee, were present only on April 1st.

Minutes Corrected and Approved. The Minutes of the meeting of the Board of Directors meeting held on November 11 and 12, 1921, were presented. A reading was dispensed with and the Minutes were approved as printed.

Preliminary Drafts of Committee Reports. Drafts of Committee Convention reports, in tentative form, or letters indicating generally the character of such reports

when ready, were submitted by the Chairmen of the following Standing and Special Committees:

Allied Arts; Building; Community Planning; Competitions; Contracts; Cooperation with Engineers; Cooperation with National Commission of Fine Arts; Education; Finance; Fire Prevention; Foreign Building Cooperation; Historic Monuments and Scenic Beauties; Public Information; Public Works; Registration Laws; School Building Standards; Small House; Structural Service; War Memorials.

Most of these reports were referred to the President and Secretary for review, with authority to make suggestions to Committee Chairmen before final printing.

On others suggestions were made by the Executive Committee, and these have been sent to the Committee Chairmen.

Structural Service Matters. Proposed cooperation between the Department of Commerce and the A. E. S. C., approved, in the form set forth in the report, on the

To the Membership:

These Minutes are the official record of the March-April meeting of the Executive Committee, as distributed to Directors, but there have been eliminated several pages on the subjects relating to the status of members, or other matters of a privileged character.

A careful reading of this record will help to inform Institute Members of the work of their national organization.

WILLIAM STANLEY PARKER, Secretary.

understanding that the President will appoint an Institute member in Washington a member of the Structural Service Committee, with the particular object of representing the Committee in Departmental conferences in so far as possible.

With regard to the suggested appropriation of \$500 for the investigation of wood preservatives by the Forest Products Laboratories, the Executive Committee recorded sympathy with the purposes thereof, but inasmuch as the Institute is now spending on structural service matters as much as its resources will allow, the Committee does not feel justified in making an appropriation of \$500 at the present time.

Advertising Conference in Chicago at Time of Convention. The Executive Committee recommends that the advertising conference be held on the day, or the two days preceding the Convention, that it be announced in the Program, and that a place be made on the Program for a report from the Conference.

Discharge of Lincoln Highway Committee. A letter was read from the Chairman of the Lincoln Highway Committee, reporting the accomplishment of the purposes for which the Committee was organized, and suggesting its discharge. The Chairman, Mr. Elmer C. Jensen, is serving as representative of the Institute on the Lincoln Highway Commission.

Resolved, that the Lincoln Highway Committee be discharged with the thanks of the Institute for its efforts and accomplishments.

Letter from Aymar Embury II. A letter was read from Mr. Aymar Embury II, concerning an article published in the February JOURNAL.

Resolved, that the communication be referred to the Directors of the Press.

Clarification of the Schedule of Charges. The Secretary reported the constantly increasing evidence of misunderstanding by Institute members of the intent and spirit of the Schedule of Charges, and the Canons of Ethics, with particular reference to Canon 11 of the Canons of Ethics, which provides that it is unprofessional for an Institute member "to compete knowingly with a fellow architect for employment on the basis of professional charges."

After some discussion the following recommendation was made to the Board of Directors in connection with the Board's Report to the Convention:

Resolved, that there be brought before the Convention a proposal that competition in price be put on the same basis as advertising—that it is bad judgment and bad taste. This would eliminate Canon 11 of the Canons of Ethics, and would require a new section in the Circular of Advice—advisory in character.

Resolved, that the clarification of the Principles of Professional Practice and Canons of Ethics on this point be referred to the Secretary, with a request that he prepare amendments for the consideration of the Board of Directors and the Convention.

Ship Interior Designs. The Secretary reported that a special committee representing the Institute, Mr. Frank Upman, Chairman, conferred with Mr. Frey, Vice-President of the United States Shipping Board, with regard to improving the architectural design of ship interiors. It was found that no new ship construction is contemplated by the Board, except the reconditioning of the Leviathan. Mr. Kohn was named as the representative of the Institute in New York, with whom the officials in charge of the Leviathan might confer.

The Secretary has received a report from Mr. Butler, of the Subcommittee of the New York Chapter, which conferred with Mr. Munson. Certain improvements were suggested by the Subcommittee, but in general its report was favorable to the work now being done. A competent firm of architects have been engaged from the beginning in connection with the re-designing of the interior of the Leviathan. Satisfactory relations with the Shipping Board have been established.

Mr. Kohn, as the Board's representative, was authorized to keep in touch with the situation.

It was

Resolved, that the action of the Shipping Board in employing competent architects for this work is highly endorsed.

Distribution of Standard Classification. The printing of the approved Standard Classification, under the direction of the Structural Service Committee, was reported. It has been suggested that this document be transmitted to the Membership as a supplement to THE JOURNAL.

Resolved, that it be issued as a separate document for distribution with THE JOURNAL, or sent directly from the office of the Secretary.

Award of Duplicate Exhibition Medal to Lee O. Lawrie. A communication was read from the Chairman of the Allied Arts Committee, recommending that a duplicate gold medal be awarded Mr. Lee O. Lawrie, for excellence in ecclesiastical work. The original medal was awarded to Mr. Bertram Goodhue at the Second National Architectural Exhibition for the Reredos of St. John's Church. Mr. Goodhue feels that inasmuch as the authorship of this work was as much Mr. Lawrie's as his own, the award should be made in duplicate. He has offered to meet the expense of making the medal, and he suggests that it bear the legend "Awarded to Lee O. Lawrie for Excellence in Ecclesiastical Work—Bertram Goodhue, Architect."

Resolved, that the recommendation of the Allied Arts Committee be approved.

The S. W. Straus Medal. A communication was presented from a member of the St. Louis Chapter showing the declination, by the Chapter, of the S. W. Straus medal, to be awarded annually for the best architectural work in the city of St. Louis. The same offer has been accepted by the Illinois Chapter. Mr. Dunning's brief report was read.

The Executive Secretary reported that a recent questionnaire to the Chapters as to such awards in general

has so far shown few awards and little interest. He suggested that the Institute develop this legitimate and fruitful field of Public Information by offering annually 50 gold medals to be awarded by the Institute on the recommendation of the several Chapters to the best architectural work for the year in their respective territories. An item of \$1,000 on the 1923 Budget would be sufficient for the purpose.

Resolved, that the question of policy with respect to awards of this kind be referred to the Board. A review of the situation should be sent to the Board members in advance of the next meeting.

Appointment of Prof. Nolan on Structural Service Committee. The President appointed Prof. Thomas Nolan a member of the Structural Service Committee, in order that his reports as the Institute's official representative on the A. S. T. M. Committees on Cement and Lime may be made to the Board in connection with the report of the Structural Service Committee.

Cooperation with the American Gas Association. A letter was read from the Secretary of the Commercial Section of the American Gas Association requesting the appointment of a Committee to cooperate with a similar committee of the American Gas Association for the purpose of conferring and, if possible, arriving at some definite understanding as to ways and means whereby the two associations can be mutually helpful.

Resolved, that the matter be referred to the Structural Service Committee with power.

Transfer of St. Clair and Madison Counties. At present 8 small towns in Illinois, in the Counties of St. Clair and Madison, are specifically assigned to the territory of the St. Louis Chapter. Presumably other small towns in the same counties remain in the territory of the Illinois Chapter. To avoid this overlapping it was

Resolved, that with the consent of the Illinois Chapter, and the consent of the St. Louis Chapter, the Counties of St. Clair and Madison be transferred to the territory of the St. Louis Chapter.

Fine Arts Building Restoration. A letter was presented from the Municipal Art and Town Planning Committee of the Illinois Chapter, Mr. George W. Maher, Chairman, in which appeal was made for a contribution to a fund to be used to secure the restoration of the Old Fine Arts Building in Jackson Park, which was built for the World's Columbian Exposition. Many suggestions have been made for utilizing the building when restored. The Illinois Chapter is most desirous of securing the necessary support in its efforts with the Park Commissioners which will justify them in proposing a bond or other tax to provide means for restoring the structure.

It was the sense of the meeting that this is a matter for local Chapter action or individual appeal. A contribution of Institute funds does not seem feasible at this time. The proposed restoration was strongly endorsed by the Fifty-fourth Convention and this should be of some help to the Chapter's commendable efforts.

Bulletin of Illinois Chapter. At present, by direction of the Executive Committee, the Illinois Bulletin is being distributed to Chapter Presidents and Secretaries. Bulletins of other Chapters are sent solely to Chapter Secretaries. To make this distribution uniform, and to avoid unnecessary expense it was

Resolved, that the Illinois Bulletin be sent to Chapter Secretaries only.

Letter from George Edward Barton. A letter was read from Mr. George E. Barton, Institute member, highly commending the professional conduct of Messrs. MacLaren and Hetherington, Institute members of the Colorado Chapter, in connection with the plans for the Cragmore Sanatorium. He asked that some word of approval be sent by the Executive Committee to the Colorado Chapter.

Resolved, that the President be requested to acknowledge the receipt of this information, and to write a personal letter to Mr. MacLaren expressing to him appreciation of his conduct with respect to Mr. Barton's rights. A copy of this communication should be sent to the Colorado Chapter and to THE JOURNAL.

Membership Status in Territory of New Chapter. A letter was presented from the Secretary of the Pittsburgh Chapter stating that Mr. E. E. Bailey of Oil City, within the territory of the new Erie Chapter, prefers to continue in the Pittsburgh Chapter for convenience in attending meetings. This issue has arisen in other instances. There are frequently Institute members in the territory of a new Chapter who do not sign its petition. When the new Chapter is chartered the question arises—shall these men be arbitrarily transferred to the new Chapter, or shall they be allowed to continue their Institute membership in the parent Chapter?

With regard to the general issue it was

Resolved, that upon the creation of a new Chapter all Institute members, residing or practicing within its territory, shall, with their consent, be transferred to that Chapter, effective upon the date the charter is issued.

Reserve Fund—Reduction of Percentage. In accordance with instructions of the November Board, the Secretary presented the following amendment to the By-laws with regard to the percentage of dues to be placed in the Reserve Fund.

"Change Section 5, Article V, first sentence to read: 10 per cent of the annual income from Initiation Fees and Dues shall be set aside as a Reserve Fund."

Resolved, that this be approved.

San Francisco Municipal Bonds—Sale of. The Treasurer requested authority to sell the San Francisco Municipal Bonds on deposit as part of the Reserve Fund, five in number, with a par value of \$1,000 each, paying 5 per cent and due in 1924. The proceeds can be invested to better advantage than that now offered by the bonds.

Resolved, that the matter be left in the hands of the Treasurer with power.

Resolved, that the Treasurer be authorized to sell any other securities that it may be wise to sell for purposes of reinvestment, after consultation with the Executive Committee.

Press Bond Donated. The Treasurer reported the donation to the Institute of Press Bond No. 406, in the sum of \$25.00—Mr. Wm. B. Mundie of Chicago donor.

Resolved, that the gift be accepted with the thanks of the Institute and that the bond be deposited to the credit of the Endowment Fund.

Expenses of Membership on Jurisdictional Board. A statement of January 5, 1922, was presented, in the sum of \$50.26, the Institute's share of the total 1921 expenses of \$251.31 of the Board for Jurisdictional Awards. As there is no item on the Budget to cover this, the Treasurer requested authority to pay it, and to insert the appropriation in the Budget.

Resolved, that this item be approved and paid for from the Contingent Fund.

Structural Service Committee Appropriation. The Treasurer presented voucher for \$177.67, the petty cash account of the Structural Service Committee for December and part of November, 1921, and requested authority to pay the same. The Chairman, Mr. Jones, stated that it would require \$125 per month after June first to meet general expenses of the Committee's work, exclusive of Mr. Kern's salary. The item of \$500 now in the 1922 appropriation will be exhausted on June 1st.

Resolved, that with the clear understanding that the Structural Service Committee is working out a plan whereby eventually the professional, supervisory element of its work will be separated from the technical, investigative element, the cost of which should eventually be carried by the entire industry and not solely by the architects, and because for the time being the continued development of this program by the Institute is most important; it is directed that an additional appropriation of \$1,000 be made to the Committee for the seven months after June 1st, which sum shall include the item of \$177.67 outstanding on the 1921 account.

Convention Matters—Report of Chairman of Convention Committee.* Mr. C. Herrick Hammond, Chairman of the Convention Committee, reported personally concerning the arrangements for the Convention and the Program.

Particulars were agreed upon tentatively, subject to changes by the Convention Committee in conference with the President and Secretary.

Headquarters. The Chicago Beach Hotel is selected as headquarters for delegates and meetings. The auditorium of the hotel will be used for the Convention sessions. Information as to rates, means of reaching hotel, and similar items will be included in the next Convention notice.

* Members are advised that the following outline of Convention activities is tentative. The final program will be distributed well in advance of the Convention.

Committee Meetings. Ample provision has been made for Board and any Committee meetings on the 5th and 6th. The Convention Committee will make reservations at the hotel for the members of the Executive Committee.

Registration Committee. Mr. Holsman was suggested as Chairman, and the appointment of the complete personnel was left in the hands of the President.

Badges. It was decided that badges be used. The design was left to the Convention Committee.

Public Information. Mr. F. E. Davidson will be Chairman of this sub committee and will furnish data to the Public and Architectural Press. Fly sheets showing the Convention news will be issued, and the advance number of the May Bulletin of the Illinois Society will be devoted to the Convention.

Stenographic Report. Contract to be let to Mr. Manning at 27 cents per folio, including two carbons. Daily copy is to be furnished for each of the three days.

Committee on Resolutions. Such a Committee will be appointed by the President. To it should go any resolutions to be offered from the floor concerning matters of policy not covered by the Board's Report—in other words, new business.

Program—Tuesday. Informal smoker on Tuesday evening at the Chicago Beach Hotel. Reception Committee of the Chapter will be on hand and there will be a special committee to meet and entertain visiting ladies.

Wednesday—Morning. Convention Business. At noon a ready-to-serve luncheon, with five-minute speeches at the hotel.

Afternoon. Convention business. Trip through the Chicago University grounds after adjournment. Tea for the ladies at the University during the afternoon.

Evening. Special session of the Convention at which the topics will be Industrial Relations; Organization of the Building Industry; and Registration. After adjournment there will be dancing at the hotel.

Thursday—Morning. Convention business until one o'clock. Same kind of luncheon as on Wednesday. Then the delegates will be taken from the hotel through Lake Forest. The McCormick and Armour homes, and other places will be open to inspection. This tour will be run on schedule, and a return will be made to Winnetka for supper at the Indian Hill Golf Club. After supper the Chicago Architectural Club will provide entertainment. The delegates will be taken back to the hotel, or to the nearby station of the Illinois Central.

Friday—Morning. Convention business. The ladies will be taken through the Marshall Field stores, also the Field Museum and the Art Institute. Noon luncheon as usual.

Afternoon. Convention business.

Evening. Annual Dinner in the old Fine Arts Build-

ing. Service by the hotel at a cost of not over \$3.50 per plate. Feature will be the inauguration of the new officers; and the presentation of Laloux medal. The themes of discussion at the banquet will be the Chicago City Plan and the perpetuation of the old Fine Arts Building. There will be short addresses by good speakers.

Delivery of Craftsmanship Medal to Mr. Manship. At the November meeting the delivery of the craftsmanship medal to Mr. Manship was left in the hands of the Executive Committee for decision. Mr. Manship has stated his inability to be present at the Fifty-Fifth Convention to receive the medal in person.

Resolved, that the medal be turned over to the New York Chapter for delivery.

Presentation of Gold Medal to Monsieur Laloux. In connection with the Convention Program, and the presentation of the gold medal to Monsieur Laloux, the President reported his letter to Monsieur Laloux cordially inviting him to attend the Convention to receive the medal in person. The striking of the medal was also considered, and the suggestion of Mr. Butler that the inscription read as follows: "Awarded by the American Institute of Architects to Victor Laloux, great teacher and Architect."

Resolved, that the medal be presented at the Dinner. If Mr. Laloux cannot attend Ambassador Jusserand, or one of his aides, should be invited to appear for Monsieur Laloux.

Constitution Amendments. Mr. Kohn, as Chairman of the Committee on Legal Matters, presented a report having to do with changes in the Constitution of the Institute necessary to make that document consistent with the Institute Charter and the New York State Law; also draft of notice to the membership.

Resolved, that the report be accepted and distributed as a notice to the membership.

Taxes and Refunds. A complete schedule of taxes and refunds relative to traveling expenses of delegates attending the Fifty-Fifth Convention was submitted, on the basis of reduced delegations, and on the basis of reduced transportation rates in effect after June 1, as submitted by the Convention Committee. A letter of March 8 was read from the President of the New Jersey Chapter, suggesting a modification of the method of computing the schedule.

Resolved, that in view of the long established method of determining the taxes and refunds, and the general satisfaction which it has given to the Chapters, that no change be made. The Treasurer was authorized to send the necessary notice to the Chapters.

Pre-Convention Board and Executive Committee Meetings. The notice of the pre-Convention Board meeting on June 5 and 6 has been sent out. If the report of the Board is to be printed for distribution at the first session of the Convention it will require practically all of the time of the Board until Tuesday afternoon, which

is set aside for disciplinary matters. The question of holding an Executive Committee meeting in advance of the Board meeting to dispose of all routine matters has been suggested.

Resolved, that an Executive Committee meeting be held on June 3 and 4 en route.

Coordinating the Building Industry. Mr. Kohn, as Chairman of a special committee, reported a meeting in Washington on March 27, called by the F. A. E. S., at which representatives of the Engineers, the Architects, the Contractors and Labor were present and at which resolutions were adopted, intended to bring about coordination in the building industry, and perhaps the creation of a national or controlling body over all groups constituting the industry.

A conference with similar purposes has been called by the N. F. C. I. in Chicago on April 3 and 4.

The Secretary was requested to ask Mr. Brown and Mr. Nimmons to represent the Institute in Chicago on the third, and to join with Mr. Russell and Mr. Dunning on the fourth, as a delegation of four.

Resolved, that the position of the Institute is that it is glad to co-operate with any or all bodies which seek to bring together every functional element in the Building Industry, and to co-operate with them in developing better methods for the Industry.

Board for Jurisdictional Awards. A communication was read from the Chairman of the National Board for Jurisdictional Awards which explained the splendid cooperation which the work and decisions of the Board have received from the 16 international unions constituting the Building Trades Department of the American Federation of Labor. One International Union, the Carpenters, has refused to abide by the decisions of the Board and has withdrawn from the Building Trades Department.

The various larger national organizations representing the major elements in the Building Industry, including the Associated General Contractors, the National Association of Building Trades Employers, and the American Federated Engineering Societies, have decided to give the Board full support in its controversy with the Carpenters.

The American Institute is asked to take similar action and to aid in putting quickly to an end the sole remaining obstacle in the way of complete success. This can be largely accomplished if the Institute will insert in the general provisions of the contract a clause making the decisions of the Board a part of the specifications, the Contract, and the Subcontract. The Chairman of the Board requested permission to address a communication to the Members of the Institute on the subject.

It was pointed out by members of the Executive Committee that at the Fifty-Fourth Convention the following resolution was adopted:

"Resolved, that the American Institute of Architects reaffirms its support of the principle underlying the work of the National Board for Jurisdictional Awards and its desire to support whole-heartedly the efforts of the Board

to the end that the fullest value of the Board's labors may result."

Resolved, that the Executive Committee hereby reaffirms this resolution. The representative of the Institute on the Jurisdictional Board is authorized to issue a statement to the membership to this effect, and concerning the work of the Board.

Distribution of Decisions of Jurisdictional Board. Recent decisions of the Board for Jurisdictional Awards have been received from the Board and the question has arisen as to the best method of distributing the same to the architectural profession. In January, 1920, a compilation of all decisions to that date was distributed to the entire membership as an Institute document. It has been suggested that the decisions should be uniformly printed for the memberships of all of the supporting organizations, and that such printing should be done by the Jurisdictional Board.

Resolved, that the Secretary be requested to take up with the Jurisdictional Board the feasibility of one printing for the Jurisdictional decisions.

Official Notices in the Journal. Correspondence between the Secretary and the Editor of THE JOURNAL with regard to using THE JOURNAL more extensively as a means of official communication with the membership was presented.

Resolved, that the Secretary is authorized to use THE JOURNAL for official notices in so far as practicable.

The Institute and the Open Shop. A letter was read

from the Wisconsin Chapter asking for guidance in the fight for an open shop now being made by certain interests in the Building Industry, in the territory of the Wisconsin Chapter. The same issue is being raised in the territory of other Chapters. The letter of the President, dated March 25, to the Secretary of the Wisconsin Chapter was read, in which it was made clear that the Institute as a national organization can take no side in this controversy.

Local conditions vary greatly throughout the country and each Chapter must be governed in its attitude by the best interests of the public, and the Building Industry.

Resolved, that the letter of the President be approved, as stating correctly the position of the Institute.

Los Angeles Public Library. The President reported informally the protest received from the San Francisco Chapter with regard to a public advertisement in a Los Angeles newspaper calling for bids for architectural service on a percentage basis, accompanied by a certified check, in connection with the Los Angeles Public Library. After obtaining the advice of Messrs. Faville and Bergstrom, and information from the Library authorities and the Southern California Chapter officers, it was decided by referendum vote of the Executive Committee that Institute disapproval of participation by its members would probably conflict with the State law, and with public policy. It was also decided that no action should be taken by the Institute.

The action taken by the Executive Committee and the records in the case have been scheduled for report to the Board at the June meeting.



THE AMERICAN INSTITUTE OF ARCHITECTS

THE OCTAGON HOUSE, WASHINGTON, D. C.

OFFICERS

<i>President</i>	HENRY H. KENDALL, Boston, Mass.
<i>First Vice-President</i>	WM. B. FAVILLE, San Francisco, Calif.
<i>Second Vice-President</i>	ROBERT D. KOHN, New York, N. Y.
<i>Secretary</i>	WM. STANLEY PARKER, Boston, Mass.
<i>Treasurer</i>	D. EVERETT WAID, New York, N. Y.

BOARD OF DIRECTORS

For One Year (1921-22)

EDWIN H. HEWITT, 1200 2nd Ave. So., Minneapolis, Minn.
 WM. B. ITTNER, Board of Education Bldg., St. Louis, Mo.
 ERNEST J. RUSSELL, Chemical Building, St. Louis, Mo.

For Two Years (1921-23)

CHARLES H. ALDEN, Empire Building, Seattle, Wash.
 N. MAX DUNNING, 310 South Wabash Ave., Chicago, Ill.
 ABRAM GARFIELD, Garfield Building, Cleveland, Ohio.

For Three Years (1921-24)

EDWIN BERGSTROM, Citizens Nat. Bank Bldg., Los Angeles, Calif.
 CHARLES A. FAVROT, Title Guarantee Bldg., New Orleans, La.
 L. P. WHEAT, JR., 808 17th Street, N. W., Washington, D. C.

Minutes

MEETINGS OF EXECUTIVE COMMITTEE AND BOARD OF DIRECTORS, JUNE 4, 5, 6, 9, AND 10, 1922.

Meeting of the Executive Committee, June 4, 1922.

Members Present. The meeting was called to order by President Henry H. Kendall, in a New York Central train drawing room en route from New York to Chicago at 10 A. M., on June 4, 1922. Others present were the Second Vice-President, Mr. Robert D. Kohn; the Secretary, Mr. Wm. Stanley Parker; the Treasurer, Mr. D. Everett Waid; and Director E. J. Russell; also the Editor of the JOURNAL, Mr. C. H. Whitaker; and the Executive Secretary, Mr. E. C. Kemper.

President Kendall stated that the meeting was called to consider routine matters, thereby relieving the Board of such work.

Form of Bequest. In considering generally a greater usefulness for the Institute, and its dependency upon increased financial resources, it was directed that a form of bequest, approved by Counsel, be inserted in the Annuary, and also printed in the JOURNAL from time to time.

Basic Building Code. The Secretary reported the request of the Department of Commerce for the co-operation of the Chapters of the Institute, in commenting upon the first draft of a model form of basic building code. Copies of the code were sent to the Chapters with a letter of explanation from the Octagon. The returns have been gratifying. In most cases the Chapters found

the tentative code satisfactory, and in many instances constructive suggestions were made to the Committee. The Institute is represented on the Committee by Messrs. E. J. Russell and E. H. Brown.

International Housing Congress. An invitation to send delegates to the International Housing Congress, to be held in Rome in September, was presented from the Executive Committee of the Congress.

It was directed that this invitation be called to the attention of the membership, so that any who may be in Rome in September may represent the Institute at the Congress.

The Secretary was requested to call the Congress to the attention of Institute members in the School of Architecture at Rome.

Views of Home Interiors. A letter was read from Mr. Richard H. Bach, Associate in Industrial Art of the Metropolitan Museum, asking whether the Institute would consider the production of lantern slides or films bringing out the factors of design in house interiors, which would aid the consumer in the selection of his furnishings. In this connection he offered the support of the Museum.

Resolved, that this request be referred to the New

York Chapter with the suggestion that one of its Committees might be of some assistance to Mr. Bach.

Eligibility of Building Superintendents. A letter was read from Mr. T. E. Billquist, former Chairman of the Pittsburgh Chapter Committee on Membership, in which he pointed out the marked ability of building superintendents, experts in special features of construction, or specification writers who are not eligible to membership in the Institute as now provided in Article I, Section I of the By-laws. He recommended that some steps be taken to affiliate men of this class with the Institute.

It was the sense of the meeting that building superintendents should be regarded as eligible to Institute membership, provided they have the necessary professional and technical qualifications.

The Secretary was requested to draft a formal resolution covering this, for submission to the Board of Directors.

Eligibility of Architect Serving Corporation on Retainer Basis. Attention was directed to the case of an architect representing a housing company in the interest of a special type of construction, which is alleged to allow the creation of fire-proof structures at a low cost. He is serving for a retainer fee, and has no other financial interest in the company. A letter of Mr. B. W. Morris was also read in this regard.

Mr. Waid was requested to respond to the letter from the architect concerned. The Executive Committee agreed that his serving a construction company as an architect is no bar; but that the performance of duties commonly assigned to a solicitor would make him ineligible.

Conversion of Chicago, Burlington and Quincy Bonds. The Treasurer stated that the Chicago, Burlington & Quincy bonds matured on July 12, 1922, and requested authority to sell and reinvest.

Resolved, that the Treasurer be authorized to do so.

Non-Resident Dues Chapter and Institute. In some of the Chapters, non-resident members are required to pay full dues. In the Institute, members traveling abroad are required to pay full dues.

Mr. Alden's letter recommending that steps be taken to provide nominal dues for Institute members abroad for a certain period; and Mr. Waid's recommendation that Chapters not having non-resident dues adopt amendments to their By-laws to that effect, were considered.

The Secretary was requested to advise the Chapters in this matter in a circular letter. With regard to Institute dues, it is now in the power of the Board to remit for cause in any particular case.

Scranton-Wilkes-Barre Chapter — Charter Granted. The Secretary reported a referendum vote of the Executive Committee granting a formal charter of Chapter membership in the Institute to the Scranton-Wilkes-Barre Chapter with the following counties in Pennsylvania as territory: Sullivan, Wyoming, Columbia, Bradford, Susquehanna, Pike, Luzerne, Lackawanna and Wayne. The names of the petitioners, all of whom are Institute members, are as follows: Lewis Hancock, Jr.,

David H. Morgan, George M. D. Lewis, E. H. Davis and Edward Langley.

Attached to the petition was a copy of the proposed Constitution and By-laws for the new Chapter which were approved in principle by the Secretary.

The charter became effective January 16, 1922. The counties named in the petition were transferred from the Philadelphia Chapter to become the territory of the new Chapter; and the Institute members signing the petition were formally transferred, from the Philadelphia Chapter to the Scranton-Wilkes-Barre Chapter, effective January 16, 1922.

South Georgia Chapter—Charter Granted. The Secretary reported a referendum vote of the Executive Committee granting a formal charter of Chapter membership in the Institute to the South Georgia Chapter with territory consisting of all counties South and East of the North or West boundary lines of the following counties: Early, Calhoun, Dougherty, Worth, Tift, Irwin, Coffee, Telfair, Wilcox, Pulaski, Twiggs, Laurens, Emanuel, Johnson, Burke and Houston. Attached to the petition was a copy of the proposed Constitution and By-laws for the new Chapter which were approved by the Secretary in principle.

The names of the petitioners, all of whom are Institute members, are as follows: H. W. Witcover, Henrik Wallin, M. H. Levy, Wm. B. Clarke, Arthur F. Comer and E. Lynn Drummond.

The charter became effective May 24, 1922. The counties covered in the petition were transferred from the Georgia Chapter to become the territory of the new Chapter; and the Institute members signing the petition were formally transferred from the Georgia Chapter to the South Georgia Chapter, effective May 24, 1922.

Reassignment of Idaho Counties. Apparently the counties of Boundary, Benewah, Idaho and Valley in the State of Idaho are unassigned to any Chapter, because of recent creation, or because of error. Examination of the map of Idaho showed the necessity of some readjustment with regard to counties already assigned, and the following action was taken, subject to the approval of the Chapters concerned.

Resolved, that the counties of Boundary and Benewah be assigned to the Washington State Chapter;

Resolved, that the counties of Idaho and Valley be assigned to the Utah Chapter, and

Resolved, that the counties of Lemhi and Custer be transferred from the territory of the Oregon Chapter to the territory of the Utah Chapter.

New Chapter in Counties Between Scranton-Wilkes-Barre and Philadelphia Chapters. A letter of April 27 was read from Mr. M. I. Kast, President of the Pennsylvania State Association, with regard to certain counties which lie midway between the headquarters of the Philadelphia Chapter and the territory of the new Scranton-Wilkes-Barre Chapter. These counties are: Schuylkill, Carbon, Monroe, Berks, Lehigh and Northampton. Mr. Kast recommended that the counties be organized

into a new Chapter, and he desired the advice of the Board.

The Secretary was requested to write Mr. Kast that the Executive Committee would approve the organization of a new Chapter in this territory, but that the initiative should come from the local Institute members. If there are enough Institute members available and the Chapters involved are in favor of creating a new Chapter the Executive Committee would approve such action.

The meeting adjourned at 12:45 P. M.

Meeting of the Board of Directors, June 5 and 6, 1922.

Members Present. The meeting was called to order by President Henry H. Kendall, at the Chicago Beach Hotel, Chicago, Ill., at 10 A. M., on June 5, 1922. Others present were the First Vice-President, Mr. Wm. B. Faville; the Second Vice-President, Mr. Robert D. Kohn; the Secretary, Mr. Wm. Stanley Parker; the Treasurer, Mr. D. Everett Waid; and Directors Edwin H. Hewitt, Ernest J. Russell, Charles H. Alden, N. Max Dunning, Edwin Bergstrom, Charles A. Favrot; also the Editor of the JOURNAL, Mr. C. H. Whitaker, and the Executive Secretary, Mr. E. C. Kemper. Directors Abram Garfield and L. P. Wheat, Jr., were unable to attend for business reasons. Mr. Wm. B. Ittner was present only on June 6.

The President reported the meeting of the Executive Committee on the previous day, called en route for the purpose of disposing of routine matters, and reviewed briefly the cases acted upon.

Minutes Corrected and Approved. The Minutes of the Executive Committee meeting held on March 30-April 1, 1922, were presented. A reading was dispensed with and the Minutes were approved with the following corrections: On page 4 change heading "Bulletin of Illinois Chapter" to read "Bulletin of the Illinois Society of Architects," also change index reference accordingly.

Report of the Treasurer. The Treasurer outlined his report to the Convention, and spoke on the financial condition of the Institute for the year ending 1921, which in the main he found satisfactory. He reviewed briefly the financial operations for the first quarter of 1922.

Resolved, that the Treasurer's report be received with approval, for presentation to the Convention.

Expenditures from the Adams Fund. There was discussion of the purposes of the Adams Fund, and the conditions under which expenditures should be made from it. This arose in connection with the proposed publication of Mr. Klaunder's lectures in brochure form, and the trusteeship relation of the Board to the Funds. It was

Resolved, that in future no expenditures from the fund shall be made or arranged for without the advance approval of the Executive Committee, and that the Committee on Education be so advised.

Taxes of New Chapters. With regard to the Chapters recently admitted to the Institute, some of whom were to be unrepresented at the Convention, it was

Resolved, that the question of adjusting or remitting the taxes of any or all of the five new Chapters be left in the hands of the Treasurer with power.

Transfer of Securities from Washington to New York. On motion of the Treasurer, it was

Resolved, that the Institute securities be transferred from Washington to New York to save the personal tax levied in Washington, the securities being made available to any two of certain officers or directors under methods approved by the Board.

The Treasurer was requested to present later, for approval, a supplementary resolution. This he did, and it was

Resolved, that the securities owned by the Institute shall be stored in a safe deposit box rented by the Institute from the Broadway Safe Deposit Co., New York City.

It was further resolved that said securities shall be accessible to the Treasurer, or one of the other officers, when accompanied by one of the Directors.

The Board after adopting the above resolution authorized the Executive Committee to issue an authorization to the Broadway Safe Deposit or another company selected by the Executive Committee, in a manner acceptable to the Safe Deposit Company, with the stipulation that the funds of the Institute shall be accessible to the Treasurer, or one of the other officers, when accompanied by one of the Directors.

Report of the Board of Directors. The Secretary presented a draft of the report of the Board of Directors to the 55th Convention. The various subjects were considered in detail throughout the meeting and after changes in some cases the draft was approved and the resolutions appearing in the report were adopted, in each case on motion duly made and seconded. (See Proceedings of 55th Convention.)

The Secretary was instructed at the conclusion of the meeting to present the report to the Convention on behalf of the Board.

Extension of Architectural Education. Mr. Alden spoke of the great need for bringing before the faculties of colleges now offering no courses in art or architecture, the need for such courses, particularly in colleges in the states distant from the eastern centres.

It was directed that Mr. Alden's suggestion be called to the attention of the Committee on Education as having the approval of the Board. He cited the University of Oregon as an example and what might be accomplished there if the effort was made by the Institute. It was noted that this action is in line with the present policies of the Committee on Education.

Public Information. With regard to the recommendation of the Public Information Committee that a Circular on the Functions of the Architect be issued as a national document, it was

Resolved, that the Committee be requested to submit draft of such document to the Board for approval.

Los Angeles Public Library. The President reported the protest of the San Francisco Chapter with regard

to a public advertisement in a Los Angeles newspaper calling for bids for architectural services on a percentage basis in connection with the Los Angeles Public Library. It was required that the bids be accompanied by certified check or bond for 10 per cent of the bid. After obtaining the advices of Messrs. Faville and Bergstrom, and information from the Library authorities and the Southern California Chapter officers, it was decided by referendum vote of the Executive Committee that Institute disapproval of participation by Institute members would probably conflict with the State law, and with public policy. Therefore, it was decided that no formal action be taken by the Executive Committee.

Resolved, that the action of the Executive Committee in this matter be ratified.

Nomination of Mr. Henry Bacon to Receive the Gold Medal. The President spoke of the achievement of Mr. Henry Bacon, architect of the Lincoln Memorial, as evidenced by the memorial itself, and proposed that Mr. Bacon's name be offered to the Convention as that of one to whom the Institute should give its highest award.

Resolved, that it be proposed to the Convention that the Gold Medal of the Institute be awarded to Mr. Henry Bacon.

School Building Standards. Mr. Ittner reported concerning the work of the School Building Standards Committee of the National Educational Association, and the desirability of co-operation with it.

Resolved, that the Institute Committee on School Building Measurements be authorized to co-operate to the fullest extent with the similar committee of the National Educational Association.

Government Architecture. The President referred to suggestions by members that the Institute adopt a policy looking to the restoration of the principle of the Tarsney Act. Since the repeal of the Tarsney Act the profession, as a whole, has had little to do with the designing of many public buildings. It has also been said that the Institute should insist upon the appointment of an architect as the head of the Supervising Architect's office in the Treasury Department, which position, has been unfilled for a number of years.

It was the sense of the meeting that this matter should be brought to the attention of the incoming Board for consideration when the appointment of the Committee on Public Works is made.

No action was taken.

Federal Hospital Program. The President reported the passage of H. R. 10864, providing an appropriation of \$17,000,000 for hospitals for war veterans, which hospitals are to be built under the direction of the United States Veterans Bureau. He referred to his letter of April 17 to the Director of the Bureau, which urged the greatest care in the selection of competent architectural advisors; and to the reply of the Director, dated April 24, in which he stated that tentative plans and specifications for standard hospitals have been carefully drawn with the advice of several kinds of experts, not including architects.

No action was taken.

State and Municipal Architects. Chapters of the Institute are asking for guidance as to the position they should take toward proposals by their communities or states to appoint municipal or state architects. A questionnaire was addressed to all Chapters, and to the various States, seeking information and expressions of opinion. The returns were presented to the Board in the form of a summary. It was

Resolved, that the matter be referred to the incoming Board, with the suggestion that a Committee be appointed to study the whole situation and submit recommendations.

George Washington Memorial and National Victory Building. A circular concerning the George Washington Memorial and National Victory Building was presented; also a letter from the Chairman of the Committee on Co-operation with the Commission of Fine Arts.

The Executive Secretary urged that the Institute investigate this project and take a definite stand for or against it, in line with its established policy of protecting the national capital from erroneous developments.

It was the sense of the meeting that no action by the Institute is required at the present time.

Medal Certificates. The Chairman of the Committee on Allied Arts, Mr. Faville, reported the request for a certificate of award from Mr. Samuel Yellin, to whom the craftsmanship medal was awarded. This raised the question of issuing certificates with the major awards of the Institute, and Mr. Faville recommended that such certificates be issued. A draft was presented for criticism.

It was the sense of the meeting that this matter should be referred to the incoming Board for action.

Award of Fine Arts Medal and Allied Arts Medal. Upon the recommendation of the Chairman of the Committee on Allied Arts, Mr. Faville, it was

Resolved, that the gold medal for distinguished achievement in Painting in the Fine Arts be awarded to Mr. Arthur F. Mathews; and that the gold medal for distinguished achievement, in Typography, in the Allied Arts be awarded to Mr. W. F. Goudy.

These medals are to be presented at the 56th Convention.

Awards for Current Architectural Work. At the March 31-April 1 meeting of the Executive Committee it was directed that investigation be made concerning awards by Institute Chapters, or similar agencies, for the best current architectural work. It was found that seven Chapters directly, or by membership on juries, participate in making awards of this kind. A summary of the returns from these Chapters was presented.

The medal awarded by the S. W. Straus Company of Chicago was referred to. The sponsorship of this medal has been accepted by two chapters and declined by one.

It would cost \$1,000 annually to establish an Institute gold medal, for award by each Chapter of the Institute in the name of the Chapter for the best architectural work in its community.

Resolved, that the Institute take no action toward creating medals to be distributed by the Chapters.

The Board believes that cooperation by the Chapters with local associations or donors making such awards should be encouraged.

The Secretary was requested to outline to the Chapters the general policy of the Institute as above expressed.

Regional Representation—Proposed Amendments. Draft of amendments to the By-Laws, putting into effect, with modifications, the present tentative system of regional representation, was presented by Mr. Favrot, under a request of the Board that such amendments be formulated by him.

Resolved, that these proposals be referred to the new Board of Directors for further consideration.

Distribution of Proceedings. With regard to the distribution of the Proceedings to other than Institute members, it was

Resolved, that return postcards be sent to the members of State Societies, Libraries, Schools, etc., on which the recipients shall be requested to indicate whether or not they desire the Proceedings. The book is to be sent complimentary to those who respond affirmatively.

Circular of Advice for the Guidance of the Committee on Practice. A circular of the kind suggested in the heading was presented, from the Chairman of the Committee on Practice, Mr. Mauran. The intention was to furnish a permanent and informal document which could be passed on yearly with improvements, and under the general oversight of the Board, to the end that the work of the Chairman of the Committee on Practice might be made easier, and to the end that the purposes intended by the Disciplinary Rules of the Institute might be better accomplished.

The Executive Secretary was directed to transmit this

document to the next Chairman of the Committee on Practice for his information.

Competition Records. The question of the records of the work of the Committee on Competitions and what to do with them was considered.

It was suggested that briefs be made of each case for the information of subsequent Committees and Chapter officers.

The matter was referred to the Secretary and the incoming Board.

The meeting adjourned at 5.45 p.m.

Meeting of the Board of Directors, June 9, 1922.

Members Present. The meeting was called to order by President Wm. B. Faville at the Chicago Beach Hotel, at 3.45 p.m., June 9, 1922.

Others present were the Past-President, Mr. Henry H. Kendall; the First Vice-President, Mr. E. J. Russell; the Second Vice-President, Mr. Robert D. Kohn; the Secretary, Mr. Wm. Stanley Parker; and Directors Charles H. Alden, N. Max Dunning, Charles A. Favrot, Abram Garfield, B. W. Morris, and Wm. Emerson; also the Executive Secretary, Mr. E. C. Kemper.

President Faville expressed his appreciation and his sense of responsibility upon his selection as President. He was assured by the members of the Board of their cooperation and support.

Messrs. Russell, Kohn and Parker were requested to check up the transcript of the Convention proceedings, and to report to the succeeding meeting on matters requiring immediate action.

Adjournment was made at 4.00 p.m., to reconvene at 9.00 a.m. on June 10th, at the hotel.



THE AMERICAN INSTITUTE OF ARCHITECTS

THE OCTAGON HOUSE, WASHINGTON, D. C.

OFFICERS

<i>President</i>	WM. B. FAVILLE, San Francisco, Calif.
<i>First Vice-President</i>	ERNEST JOHN RUSSELL, St. Louis, Mo.
<i>Second Vice-President</i>	ROBERT D. KOHN, New York City
<i>Secretary</i>	WILLIAM STANLEY PARKER, Boston, Mass.
<i>Treasurer</i>	D. EVERETT WAID, New York City.

BOARD OF DIRECTORS

For One Year (1922-23)
 CHARLES H. ALDEN, Seattle, Wash.
 N. MAX DUNNING, Chicago, Ill.
 ABRAM GARFIELD, Cleveland, Ohio.

For Two Years (1922-24)
 EDWIN BERGSTROM, Los Angeles, Cal.
 CHARLES A. FAVROT, New Orleans, La.
 L. P. WHEAT, JR., Washington, D. C.

For Three Years (1922-25)
 WILLIAM EMERSON, Boston, Mass.
 BENJAMIN W. MORRIS, New York City.
 WM. L. STEELE, Sioux City, Iowa.

Meeting of the Board of Directors, June 10, 1922.

Members Present. The meeting was called to order by President Faville at the Chicago Beach Hotel at 9:01 A. M., on June 10, 1922. Others present were Past-President Kendall; the First Vice-President, Mr. E. J. Russell; the Second Vice-President, Mr. Robert D. Kohn; the Secretary, Mr. Wm. Stanley Parker; the Treasurer, Mr. D. Everett Waid; and Directors Charles H. Alden, N. Max Dunning, Abram Garfield, Edwin Bergstrom, Charles A. Favrot, B. W. Morris, also the Editor of the JOURNAL, Mr. C. H. Whitaker, and the Executive Secretary, Mr. Edward C. Kemper. Directors Ittner, Emerson and Steele were unable to attend for business reasons.

Government Architecture. Mr. Electus D. Litchfield spoke briefly urging the inauguration of steps to develop a contact with the Government, looking to the passage of some substitute for the Tarsney Act, and suggesting the possible assistance to be gained from Mr. Elliott Woods.

No formal action was taken and the matter was left for consideration at the time instructions to the Committee on Public Works are formulated.

General Instructions to Committees. Resolved, that the general instructions to all standing and special committees for 1922-1923 be as follows: To observe and carry out the instructions of the 55th Convention; to continue the general programs of committee work as now established (unless or until the same are modified by subsequent instructions from the Board); to carry out in connection with the Convention instructions the

specific instructions of the Board, as the same are issued from time to time; to make progress reports to the Board of Directors not later than December 1st, 1922; and to observe the appropriations allowed in the Budget of 1922.

Appointment of Committee Personnels. The President discussed with the Board the appointment of the Committee personnels of the various standing and special committees. He emphasized that such changes as were contemplated were in no sense reflections on retiring committeemen, and were largely determined upon through his desire to impress some of the younger men into the active work of the Institute, or were made necessary by changed conditions in committee activities which demanded new men with special qualifications.

Appointments by the President, and in some instances instructions by the Board, were as follows:

Executive Committee (Elective-1). An Executive Committee for the year 1922-1923 was elected as follows: Wm. B. Faville, San Francisco; Robert D. Kohn, New York; Wm. Stanley Parker, Boston; D. Everett Waid, New York; and N. Max Dunning, Chicago.

Powers Delegated. With reference to the powers of the Executive Committee, it was

Resolved, that the Board delegates to the Executive Committee have the power to exercise the functions of the Board, with the exception of any powers involving the discipline of members. These powers delegated to the Executive Committee are effective during intervals of Board meetings in 1922, and until after the adjourn-

ment of the Convention of 1923. The Executive Committee is further authorized to supplement the instructions to any of the standing or special committees as circumstances may require.

The Standing and Special Committees for the ensuing year were then discussed. The personnels of the various committees will appear in the Annuary for 1922-1923, shortly to be published.

Regional Districts. The Regional Districts of the Institute are as follows:

District.—

- No. 1. Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island.
- No. 2. New York, Porto Rico, Virgin Isles.
- No. 3. Pennsylvania (exclusive of Pittsburgh and Erie Chapters) New Jersey, Delaware.
- No. 4. Maryland, District of Columbia, West Virginia, Virginia, North Carolina, South Carolina.
- No. 5. Pennsylvania (Pittsburgh Chapter territory) Ohio, Kentucky, Indiana, Michigan, Illinois.
- No. 6. North Dakota, South Dakota, Minnesota, Wisconsin, Iowa, Colorado, Nebraska, Kansas, Missouri.
- No. 7. Tennessee, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas.
- No. 8. Washington, Montana, Oregon, Idaho, Wyoming, Utah, Alaska.
- No. 9. California, Nevada, Arizona, New Mexico, (All insular possessions in the Pacific).

All of these are represented by elected regional directors except the Third District, for which Mr. Kohn was requested to serve as active Regional Director.

The Board calls to the attention of the Regional Di-

rectors the duty of keeping in close touch with their respective Chapters by correspondence, and by visit whenever journey on private business makes such visits feasible; and to the attention of the Secretary the desirability of keeping each Regional Director posted on matters of major importance arising within his district, and the Secretary's privilege of calling upon Regional Directors for counsel or help in connection with such matters.

American Construction Council—Delegates to Organization Meeting. The following were appointed delegates to represent the Institute at the organization meeting of the American Construction Council, to be held in Washington on June 19 and 20. Robert D. Kohn, Chr., Sidney F. Heckert, L. P. Wheat, Jr., Henry H. Kendall, Stephen F. Voorhees, D. K. Boyd, Sullivan W. Jones, Members.

The Board's instructions to its delegates are that the Council should be organized to carry out the purposes agreed upon at the Cleveland meeting, and more definitely set forth in the proposed preamble and By-laws adopted at that meeting. Substantial variations from these purposes will be considered as justification of withdrawal.

Letter from Mexican Society of Architects. A letter was read by Mr. Bergstrom from the Mexican Society of Architects with regard to closer affiliation with the American Institute.

No formal action was taken.

Next Executive and Board Meetings. It was the sense of the meeting that the next Executive meeting ought to be held in September, and the next Board meeting early in December. Dates and places were left with the President.

Meeting adjourned at 12:45 P. M.



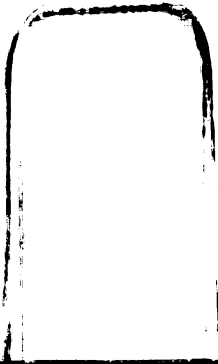
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