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*The*  
ARCHITECTURAL  
RECORD



DECEMBER 1924

# Riddle

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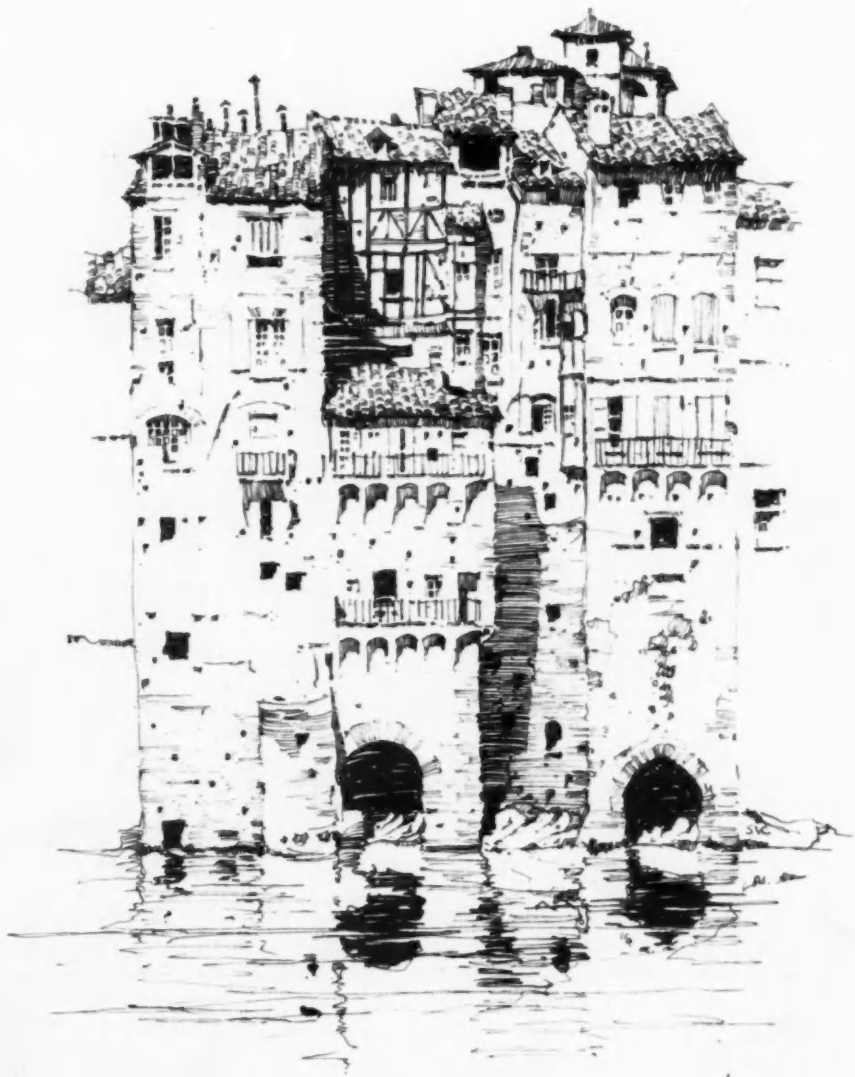
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HOUSES ON THE RIVER - ALBI

# The ARCHITECTURAL RECORD

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DECEMBER, 1924

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## CONCERNING CHURCH ARCHITECTURE



*By E. Donald Robb*

### PART I

LOOKING THROUGH the files of THE ARCHITECTURAL RECORD and its contemporaries for the past twenty or twenty-five years, one is struck by the steady and certain improvement in architectural taste. Farther back still in the last quarter of the nineteenth century, in examining illustrations of public and private buildings which at that time we thought worthy of place in our scrap books, and criticizing them from the viewpoint of the present, we gasp, "How did they do it and live." If, as experts tell us, the life of a building in lower New York is thirty years, then there are probably still practicing in that city architects who wait patiently and longingly for the death knell to sound the passing of some of their early works. New York has less to regret than other eastern cities, for example, Philadelphia, where flourished certain eccentric architects with Ideas and Ambitions to write new chapters in architectural history. In the conservative Quaker City these monuments to originality still encumber the landscape.

The magazine records tell us that progress continues to be rapid, with undoubtedly the best yet to come. It is a far cry from the Pennsylvania Station in Philadelphia to the New York terminus of that railroad; or from the Clark mansion to the Morgan Library; or St. Patrick's to St. Vincent's. Owing to a greater demand for secular buildings, and to the fact that church architecture had to be rescued from a more pitiable state of artistic depravity, as well as to the important fact that Gothic architecture is not taught in schools nor ateliers, and therefore its advocates are comparatively scarce—because of these things it is hardly to be expected that our churches today should show as high an average as secular work. If the church had maintained its original influential position in the world's affairs, it is more than probable its art would be more popular today.

In church architecture the advance, nevertheless, has been noteworthy during the last century, although one still stops to admire the grace and beauty of Old Trinity, New York, and to wonder how



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CHURCH AT HOAR CROSS, ENGLAND  
G. F. Bodley, Architect

December, 1924



PARISH CHURCH AT FAIRFORD, ENGLAND



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AN ENGLISH COUNTRY CHURCH  
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such a successful church could have been raised in those unenlightened times when folks still lived in blissful ignorance of jazz, static and adenoids.

For church architecture to progress it has been necessary for all the arts of the church to advance simultaneously. With artistic reform in ceremonial leading the way, church music, stained glass, metal work and altar furnishings, needlework and vestments have all felt the urge. This revival began with a wholehearted but only half intelligent return to the outward form of the earlier period work, with a schoolboy-like copying of details, but little appreciation of structural principles, and no knowledge of some of the recently discovered refinements of the style. A generation or two of this and we find

the Gothic designer endeavoring to travel untrodden paths and make his details ornament structures wholly untraditional in shape and ignoble in proportion. Thinking that modern conditions demanded the semi-circular auditorium with sloping floor and corner pulpit, he was led into architectural pitfalls from which he only recently has escaped. He was led to believe, against his will, that seeing and hearing from every seat in church is a paramount necessity in a good plan, forgetting weightier matters in church design. Acoustics was discovered—one had to see and hear to worship in the right spirit. A great hue and cry

was raised against the columns—"Away with the posts!" The church then became a concert and lecture hall. But return for a moment to the current magazines and see what sort of churches we now find; no longer the sloping floor, the semi-circular auditorium and the corner pulpit. This type was short-lived, and it disap-

peared so silently and so shamefacedly that few marked its passing. The columns have reappeared, arranging themselves in solemn procession along each side, although often too close to the outer walls. One does not hear them maligned by building committees and congregations now as heretofore. The altar, pulpit, choir and organ in all sorts of denominational churches are relocating themselves into



Restored Lady Chapel  
FAIRFORD PARISH CHURCH, ENGLAND

a more orderly arrangement with a view to solemnity of effect. All this without the difficulty which attended such things twenty years ago.

In the denominational churches, ancient prejudices have been breaking down; and beauty in all its manifestations has been welcomed back. In the business world beauty is now regarded as a real asset, a thing to be valued in dollars and cents, and the result of this interesting discovery has been the rapid multiplication of the business palace. Whether this psychological discovery is being made use of by the churches for similar reasons is not for us to say. Possibly it is in some cases.



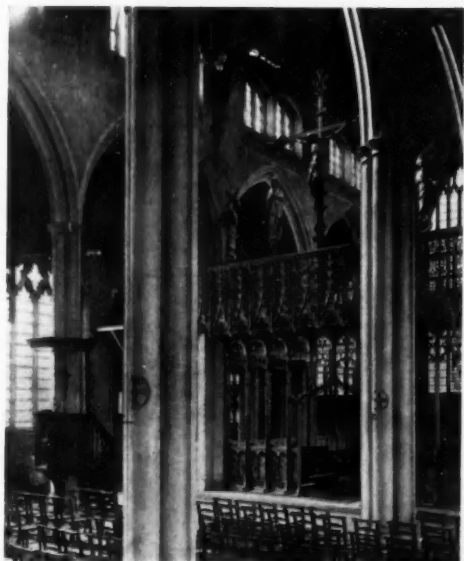


Photo by Cyril Ellis

ST. CYPRIAN'S, LONDON  
J. N. Comper, Architect

External beauty is symbolic of internal beauty of soul; and the one exists in general and can only exist because of the other. The presence of external beauty in music, ritual, scripture language, painted windows, architecture, induces a state of mind upon which beauty of an internal sort can react; and art thus becomes the handmaid of religion. If, however, art essays to usurp the place of religion in the church, it is well to banish it and begin all over again with the meeting house. This is what happened in the days of the Reformation, and possibly was one of the most important reasons for the wreckage among the churches, abbeys and cathedrals in England. The glorious windows ground into powder under the heel of the reformer, reredoses despoiled of their statues, beautiful carved and painted screens hacked and broken, noble abbey churches left in ruins—all tell of the public indignation against art elevated to dangerous heights and worshipped for its own sake. Art is a good servant, one of the best, but a dangerous and autocratic, albeit interesting mistress.

"Art for art's sake" may not be so re-

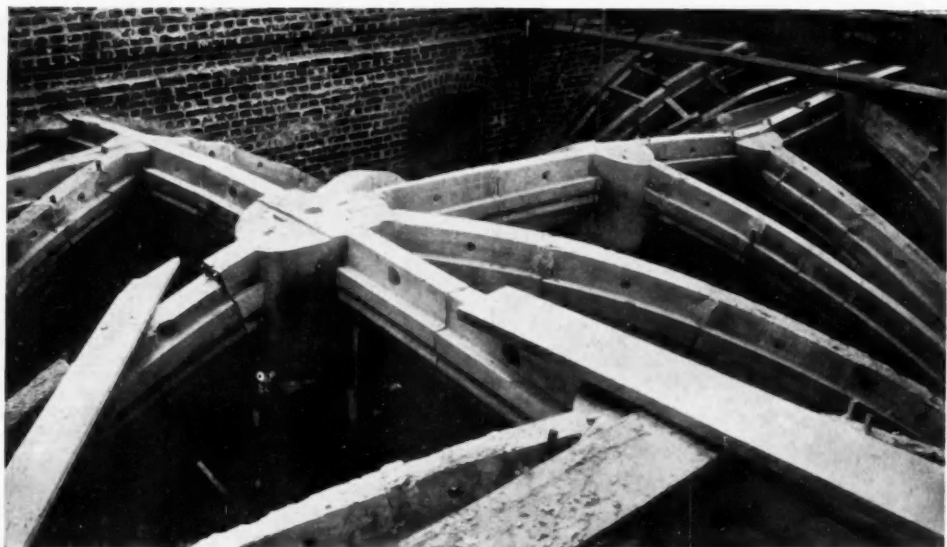
prehensible a slogan when applied to any but religious art; and architects who have ideas to express by means of their art may indulge themselves to their heart's content provided their activities are restricted to secular architecture. The church is no place for self expression—self *suppression* is the Gothic way;—no place for a display of ego—no place to experiment with architectural stunts. The best churches are not the clever ones. The clever churches amuse the architects (for a while), but the general public is unimpressed by novelty. The unprofessional observer is moved, unconsciously, by proportion, scale and lighting effects, and the latter is of no small consequence.

Too great a departure from the traditional seldom meets with success in church design; even the genius of a Goodhue is not always a guarantee against failure. A church may be architecturally interesting and highly successful as an academic problem, but so brimful of the personality and spirit of the designer, that there is no room for that Spirit whose Presence should be felt by all; and that Presence cannot be felt by



Photo by Cyril Ellis

CHURCH OF THE ANNUNCIATION, LONDON  
Walter Tapper, Architect



VAULTING OVER CHOIR AISLES—WASHINGTON CATHEDRAL, WASHINGTON, D. C.

Frohman, Robb & Little, Architects  
Cram & Ferguson, Consulting Architects

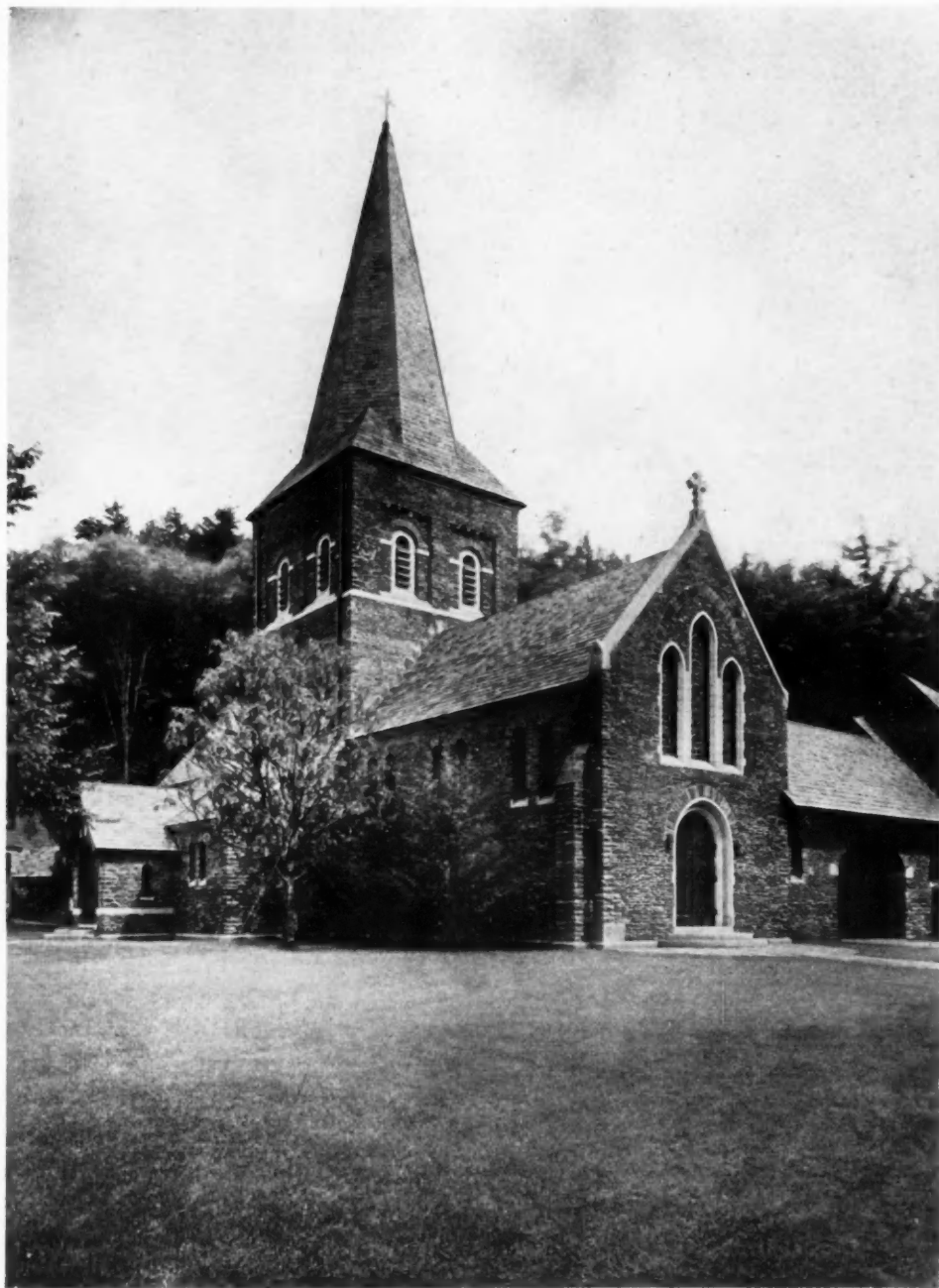
all, or any, unless it is first felt by the architect.

The problem of the church involves matters which do not occur in other classes of buildings: for example, the creation of an atmosphere to stir the devotional spirit. This is the problem of problems in church design and, being a matter of great subtlety, it is difficult to lay down guiding rules. Furthermore, while a bank building, to be an architectural success, has but to contain conveniently arranged space for employees and public, a system of protective locks and a façade done in whatever phase of the Romanesque or Renaissance happens to be popular in the best offices—a church to be a success, whatever the architectural style, must possess that indescribable something which induces worship even in those not easily stirred. No matter how well proportioned, how well detailed or how well executed a church building may be, if it does not possess this quality it is not a successful church; and it is in this one particular that most of our churches fail.

It is difficult to describe this elusive quality; how to put our finger on it, how

to secure it for the contemplated building. It is inherent in the architect's attitude toward his work. He must become like one of the nameless builders of the 13th century in England or France, living and working with a purpose above the acquisition of fame or fortune. And this applies to the various craftsmen, from the humblest workman to the officiating priest. Wherever the commercial spirit has governed the production of the work, there will be a positive blemish in the final result. Therefore none but the highest type craftsmen should be permitted to assist in the work.

The churches built by the late Henry Vaughan, considered dry by many of his fellow architects, show a beautiful self-restraint for the sake of the general good which never fails to move to worship. This is a form of sacrifice which is an act of worship in itself. It is the spirit in which Vaughan worked, plus his adherence to an historical type which time had accepted as a harmonious setting for the religious service, which makes his churches so satisfying in their way. He had little appreciation of craftsmanship and almost no sense of color, hence his

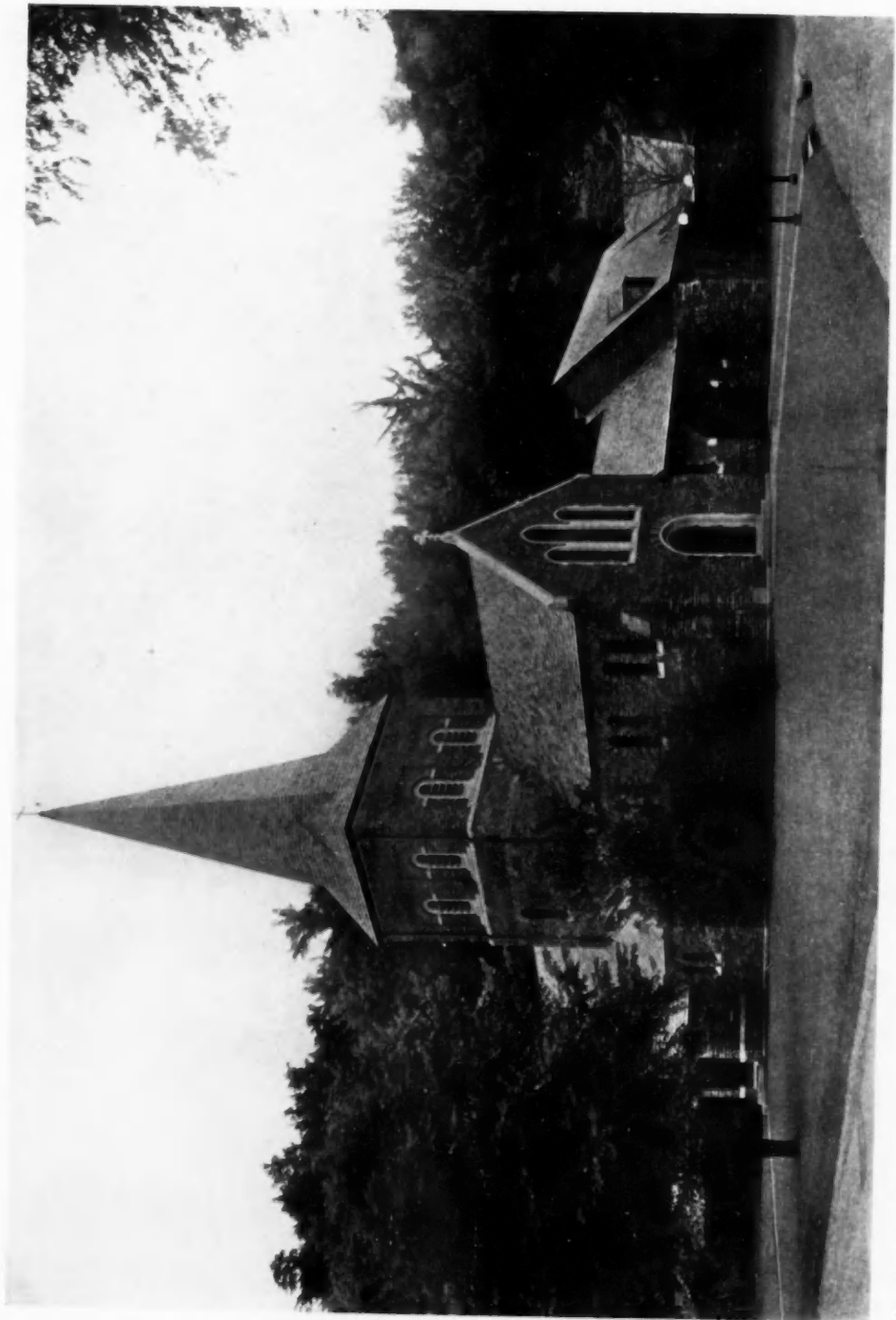


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*December, 1924*

ST. JAMES' CHURCH, LAKE DELAWARE, NEW YORK  
Cram & Ferguson, Architects

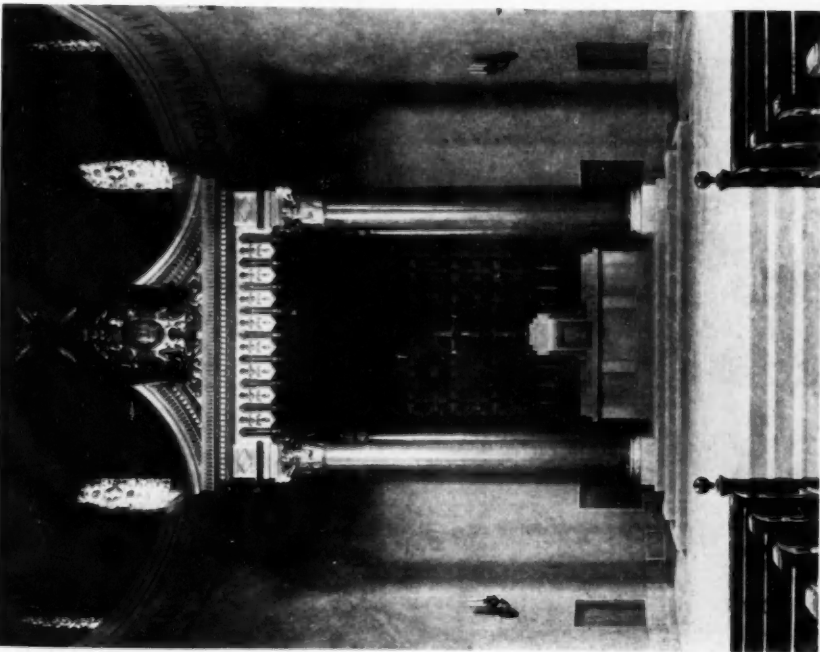
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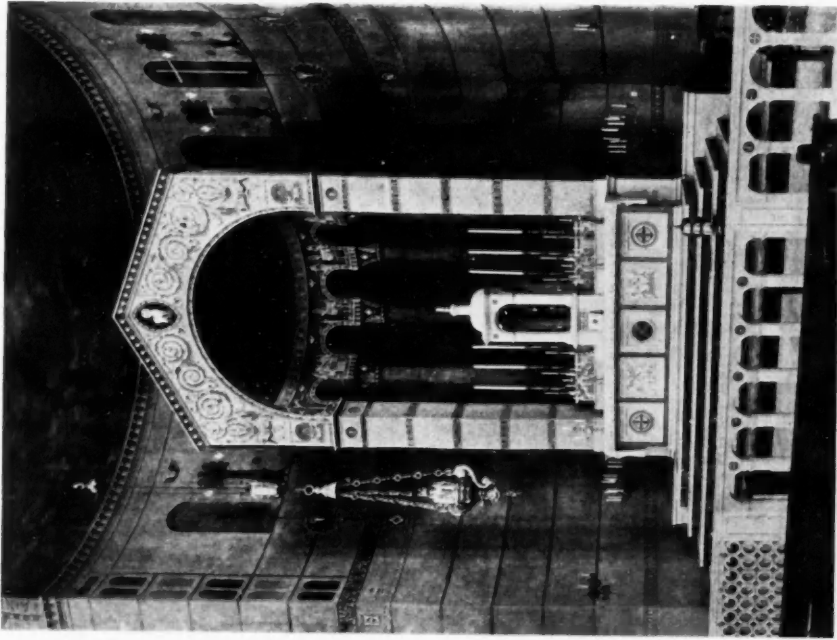
*December, 1924*

ST. JAMES' CHURCH, LAKE DELAWARE, NEW YORK  
Cram & Ferguson, Architects

*The Architectural Record*



HOLY CROSS CHAPEL, HOLY CROSS COLLEGE  
WORCESTER, MASSACHUSETTS  
Maginnis & Walsh, Architects



SACRED HEART CHURCH, WASHINGTON, D. C.  
Murphy & Olmsted, Architects  
Maginnis & Walsh, Associate Architects



Main Façade

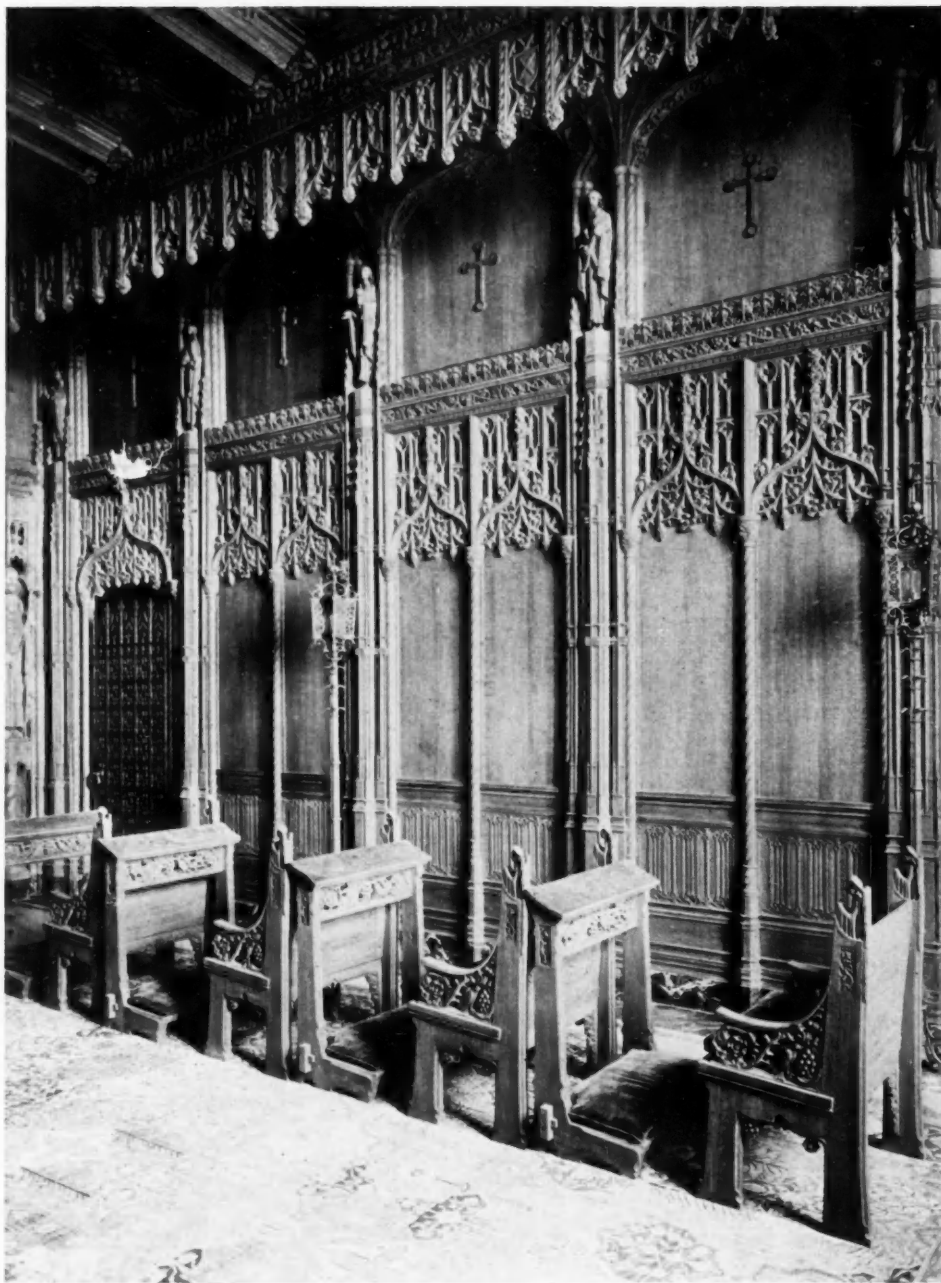
SACRED HEART CHURCH, WASHINGTON, D. C.

Murphy & Olmsted, Architects

Maginnis & Walsh, Associate Architects

work falls far short of that of his great preceptor, Dr. G. F. Bodley, who caught the real spirit of the art of church design and passed it on in its perfection in his Church of the Holy Angels at Hoar Cross. In this small but extremely complete church, proportion, scale, lighting, craftsmanship and color unite to produce one of the finest churches of ancient or modern times. Since Bodley's day, English church architects have been striving for novel effects, hopeless of excelling that master. Many of the English churches are excellent compared with contemporaneous work in this country, while many are more conducive to mirth than to reverence. In some others, proportion has been sacrificed to novelty; but they all show qualities which ours of the same period do not, conspicuous among which is a solidity of construction

due in some measure to the laws of the Incorporated Church Building Society governing thickness of walls and such matters; and also resulting from a universal avoidance of veneered steel skeleton construction for church work; which brings us face to face with that moot question—why should we not employ the most up-to-date methods of building construction in our churches even to the extent of using the rat-trap-and-bird-cage type so familiar in our commercial buildings? Why should we not resort to the use of steel to support a tower whose walls might clutter the first floor plan if carried down in the regular way? What is wrong with a sky-hung clerestory, or a buttress that delivers its thrust on a lally column? These things would not have been done in the days of Ictinus or William of Sens.



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PRIVATE CHAPEL OF MRS. NICHOLAS F. BRADY, ROSLYN, LONG ISLAND  
Maginnis & Walsh, Architects

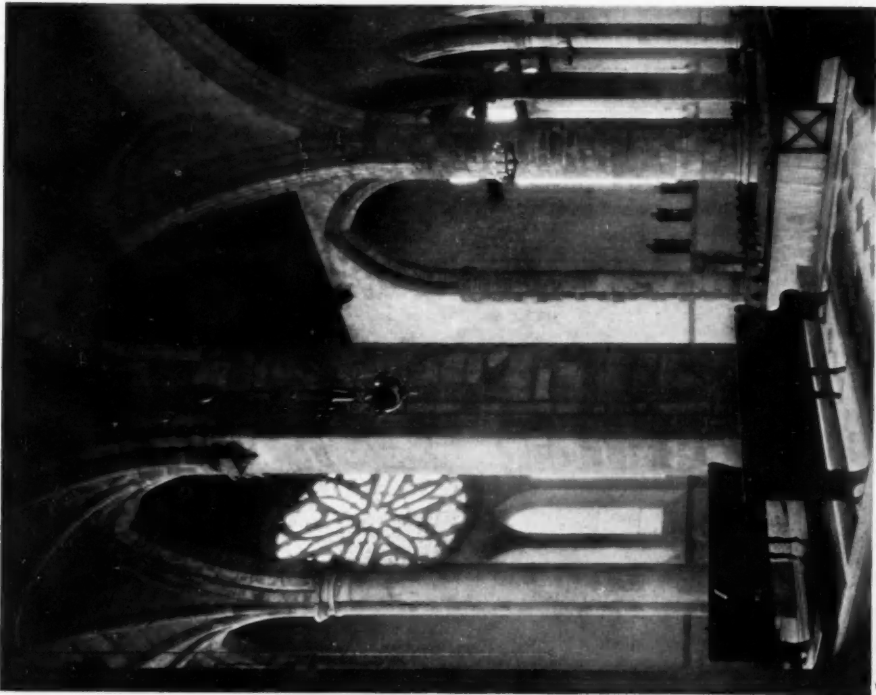


FIRST PRESBYTERIAN CHURCH, CHESTER, PENNSYLVANIA  
Frohman, Robb & Little and Clarence W. Brazer, Architects

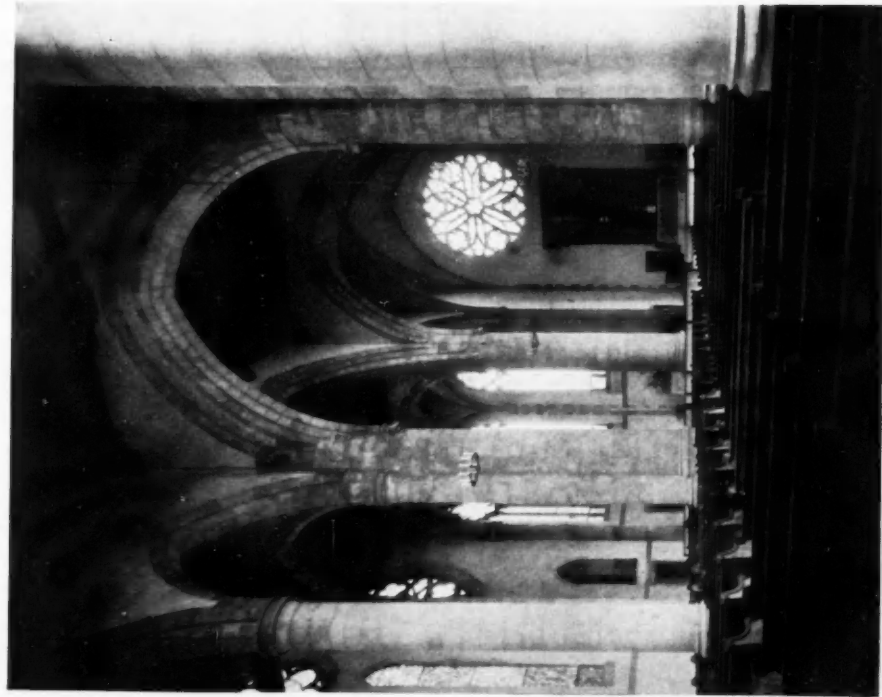
The American skyscraper, although an ingenious and permissible solution of a decidedly modern problem, should not be regarded as a serious architectural affair. Predestined to a brief existence, the office building cannot be given a place in that steady stream of architectural progress beginning in the dim and distant past, and demanding always as a prerequisite, a complete and harmonious marriage of the structural and artistic elements. The pyramids, the Greek temples, the Roman basilicas, the Gothic cathedrals, the Tudor timbered houses and the early American homesteads, tell truthful stories of structural problems solved in purely architectural ways. The skyscraper on the other hand, is but an illegitimate child of the engineer. Let the office buildings perish after thirty years or more, but let the construction used in the church be indicative of the perma-

nence of that institution. Build with frankness and honesty. Give the columns, arches and buttresses a chance to function. In a completely organized Gothic structure one can almost see the stresses and strains coursing their way through from airy vault to solid earth, like the life blood swelling the muscles of the athlete. Let us play this game earnestly, honestly and well. In running the course of the bases step squarely in the middle of each bag, and take no short cuts when the umpire isn't looking. Let the first base stand for a straightforward and workable plan, suited to its needs and uses. Step on it fair and square. Second base is the base of fine proportion, good scale and detail. Give it a good one in passing. In these days of mechanical contrivances, third base is often given a wide margin in the haste to get "home." In the cheering and excitement of the





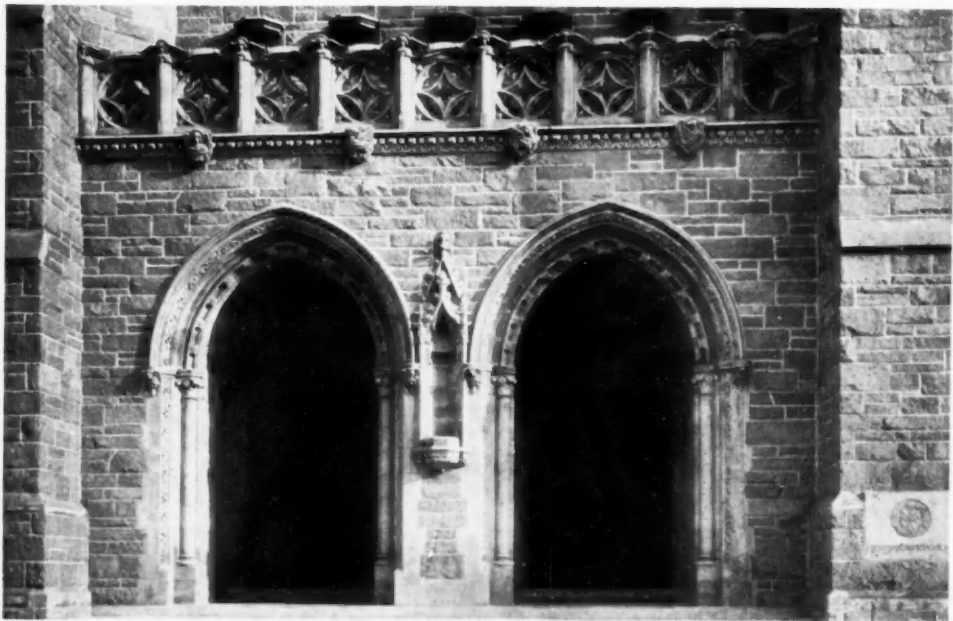
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*Interior Details*

CHURCH OF THE SACRED HEART, JERSEY CITY, NEW JERSEY  
Cram & Ferguson, Architects

*December, 1924*



Entrance Detail



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December, 1924

CHURCH OF THE SACRED HEART, JERSEY CITY, NEW JERSEY

Cram & Ferguson, Architects

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Side Entrance

CHURCH OF THE SACRED HEART, JERSEY CITY, NEW JERSEY  
Cram & Ferguson, Architects

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Altar

ST. CATHERINE'S CHURCH, SOMERVILLE, MASSACHUSETTS

Maginnis & Walsh, Architects

moment the umpire may not be looking. But no home run is complete without a good firm step on third—the base of structural and artistic integrity, of structural features properly functioning, of truth expressed both inwardly and outwardly. No short cuts allowed here, no unintelligent meddling with an ancient and noble art, whose principles have been passed on to us for safe keeping from the very beginning of history. Let us not be guilty of treating them lightly. Keep them alive for a while longer, hoping that another and wiser generation will find a way to use steel in a truthful manner.

This paper was announced in the annual prospectus as one having especial reference to the denominational church. It may seem as if we had rather disregarded the editor's statement. But on second thought, what has been said that

does not apply to the denominational church as well as to the "undenominational"? Perhaps we neglected to state that in the Baptist Church the font usually occupies a conspicuous place in the chancel with robing rooms for candidates conveniently near; or that the Methodists still retain a lingering preference for a less formal architectural setting than do the Protestant Episcopalians, or that the Christian Scientists—but that is overstepping the bounds of our subject.

There is a striking difference between the church buildings of a generation ago and those of today. The same difference is notable between the modern English and the modern American church plan. It is in the relative size of the parish building or buildings, and the church proper. Obviously this is the result of new life and increased activity in the



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Altar

ST. CATHERINE'S CHURCH, SOMERVILLE, MASSACHUSETTS

Maginnis & Walsh, Architects

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Carved Wood Panel by I. Kirchmayer  
ST. CATHERINE'S CHURCH, SOMERVILLE, MASSACHUSETTS  
Maginnis & Walsh, Architects

Church—a striving for a more intimate contact with men and women, boys and girls of all ages, in all their activities—social, recreational, educational, vocational and religious. After a lapse of several hundred years the Church is becoming once more a real factor in everyday life. The Christian world has been through much tribulation in that time, as architecture, always a sensitive recorder, will show. It is plain that real Christianity is coming back and with it real living Christian architecture.

The complete church plant of our father's day consisted of the church

proper, the Sunday School hall (used also for the annual bazaar and strawberry festival), and a ladies' parlor where sewing could be done for those in distant lands. These departments occupied a wing or ell much subordinated to the church. A glance at a fully equipped church plant of today will reveal the fact that the child has grown to manhood: in fact it is frequently difficult to locate the parent among its overgrown offspring.

The church architect has now to reckon with a "Director of Religious Education" who objects to the general assembly room with its adjoining class rooms

sometimes separated therefrom and from each other by accordion doors or rolling partitions. The assembly room is allowed to stay, but its use is for entertainments, banquets and bazaars. In addition there must be other assembly rooms, one for each grade—Beginners, Primary, Juniors, Intermediate, Seniors, Young People and Adults—each kept separate and distinct as in the day school. "Training for Leadership" is an expression we hear on every hand. Then we must have a gymnasium with bowling alleys. A swimming pool is always desired, but funds are seldom sufficient. The D.R.E. must have his office with plenty of room for filing cases, card indexes, a desk and typewriter table. We must provide for the Boy Scouts and the Campfire Girls, and for classes for sewing, day nurseries and mothers' rooms, men's clubs and plenty of closets everywhere, closets for sewing machines, stage properties and paraphernalia of all kinds, closets with glass doors and shelves for the display of Sunday School exhibits, closets for the storage of tables used for church banquets. Plenty of coat room and toilet facilities and drinking water bubblers. And be sure to make every room larger than is now necessary, for we are planning for a wonderful growth—and it has already begun.

The planning and composing of this multitude of elements is not so simple as it was in the days of less strenuous churchmanship; and the architect who does this kind of church planning has trouble in making his church edifice dominate as he still believes it should.

Scarcity of funds, or rather the desire to expend them in what the client believes to be more practical ways, forces him to thin down his church walls to the limit allowed by law, with a consequent loss of *poché*. In all too many cases the sphere of the church in its architecture and decoration is absent in everything beyond the "cloister garth," and this is greatly to be regretted. For we should not for a moment forget that all this elaborate outfit is still the Church in its larger relations. The resources of art should be marshalled to make certain that the spirit of the Church pervades the whole group. Especially is this important in the assembly rooms where the several grades hold their general exercises. These places should be churches in miniature, or chapels suitably proportioned and decorated as a church would be, for the purpose of stirring the better part of those impressionable natures in the children. Where funds will permit, there should be stained glass windows of subjects which the children will understand; and decent furniture, perhaps simpler than we have for the church, but good in design, detail and color. In fact the whole atmosphere of the church should be repeated in this—the children's church.

Leaving now the subject of the Sunday school and parish buildings, which have been ably dealt with in a recent number of THE ARCHITECTURAL RECORD, let us return to the church and, in another paper, see what can be done that has not yet been done, except in one or two rare instances, to improve our church architecture.



(c) Vanity Fair

Sketch of Night View

Drawing by Hugh Ferriss

NEW THEATRE FOR THE NEW YORK THEATRE GUILD, NEW YORK CITY

C. Howard Crane, Kenneth Franzheim and Charles H. Bettis, Architects



The  
NEW YORK THEATRE GUILD'S  
NEW THEATRE



*By Claude Bragdon*

THE NEW HOME of the New York Theatre Guild, now being built on West Fifty-Second street, though a theatre building of the usual type, is somehow different from those monsters of the mere market which in the roaring Forties nuzzle up as close as they can to Broadway. Although like them the Guild theatre will depend for its sustenance on the amusement-loving public, there is a subtle difference, not unlike the difference between a transient and a family hotel. That is to say, the Guild's productions are paid for in advance, by the year, cash over the counter, by subscribers many of whom are stockholders. These people constitute a group which however lacking in cohesion or solidarity has nevertheless a distinct psychology of its own. It stands for something other than what "Broadway" stands for; its demands in the amusement line are not those of the tired business man—some would say that they are more nearly those of the tired business woman, since the cultural and aesthetic side of life is so largely, with us, a feminine engrossment, most intense with those who are most emancipated.

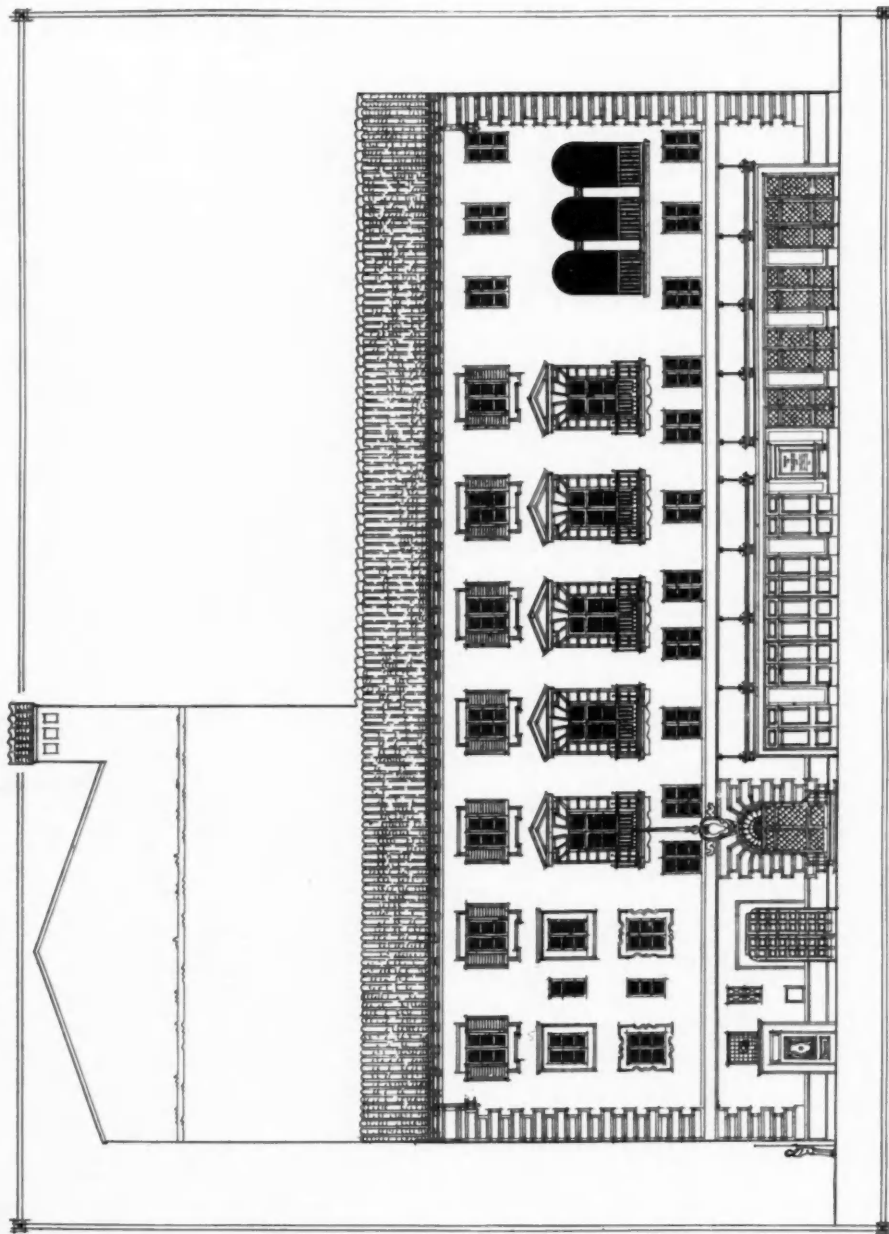
Be this as it may, there is a social and educational aspect to the Theatre Guild's activities, and this registers itself in an interesting way in the new building, which contains class-rooms, studios, a book shop, a library and club room, besides having a ground floor lounge almost as great in floor area as the auditorium itself. The stockholders, indeed, constitute a club, whose home is here. The club room occupies the middle of the front of the building at the balcony level, and is reached by an independent en-

trance and elevator directly from the street.

The large lounge beneath the auditorium was made possible through a special concession of the building department which permitted the Guild to establish the auditorium floor level of their theater considerably higher than the three low steps called for by the ordinance. The safety of the audience has been insured by making a wide exit direct to Fifty-Second street by means of two ramps and a flight of only five broad steps. This is entirely independent of the entrance to the auditorium, which is through the lounge and up a double stairway discharging at each end of a long foyer immediately back of the auditorium. Another double stairway leads to an upper foyer beneath the balcony.

The theatre has a seating capacity of 914; there is no second balcony and there are no boxes. The apron of the stage, which is lower than is usual, extends completely over the orchestra pit, thus eliminating that chasm which sometimes divides the audience from the actors. There is no proscenium arch, strictly speaking, for the walls and ceiling of the auditorium simply come to an end where the stage begins, but this omission of the picture frame does not constitute this, as some have supposed, a "prosceniumless theatre," which implies something altogether different, namely, that the stage is in the auditorium instead of behind it.

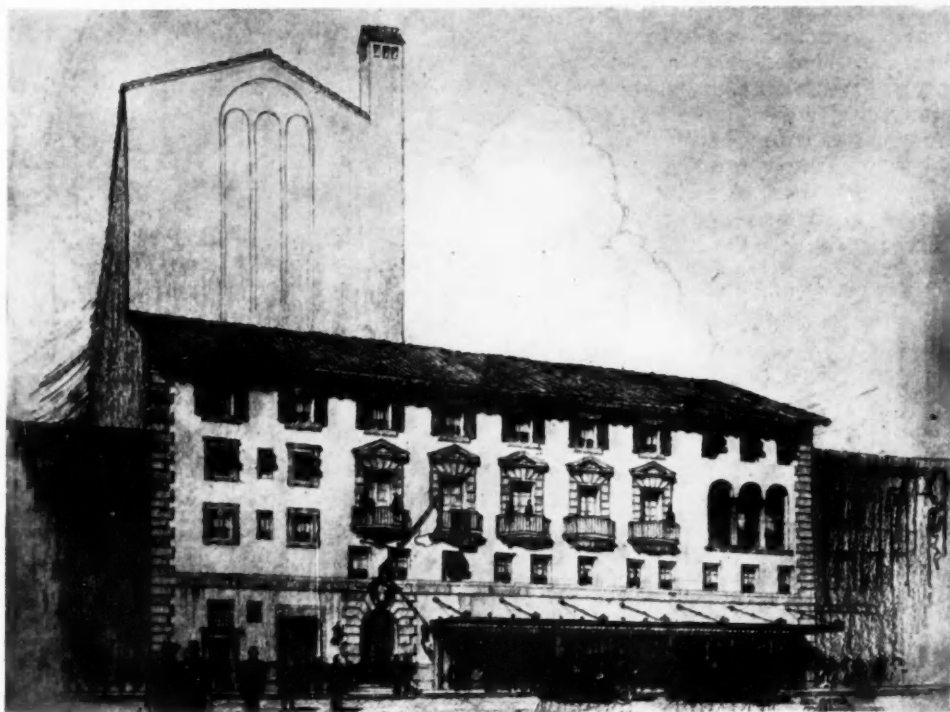
The stage presents no unusual features except that it is higher and deeper than most New York theatre stages built in recent years. The dressing rooms are



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Fifty-Second Street Elevation  
NEW THEATRE FOR THE NEW YORK THEATRE GUILD, NEW YORK CITY  
C. Howard Crane, Kenneth Franzheim and Charles H. Bettis, Architects

*The Architectural Record*



Perspective

NEW THEATRE FOR THE NEW YORK THEATRE GUILD, NEW YORK CITY

C. Howard Crane, Kenneth Franzheim and Charles H. Bettis, Architects

arranged in the usual inconvenient fashion, in vertical tiers reached by iron stairs, the number of such flights an actor has to climb to reach his dressing room accurately indicating his position in the company, for the higher he ascends towards the stars the farther he is from stardom. This vertical disposition of the dressing rooms is really imposed in a city like New York because of the high land values, which make lateral expansion prohibitive, and by reason of the stringent fire regulations which forbid dressing rooms beneath the stage.

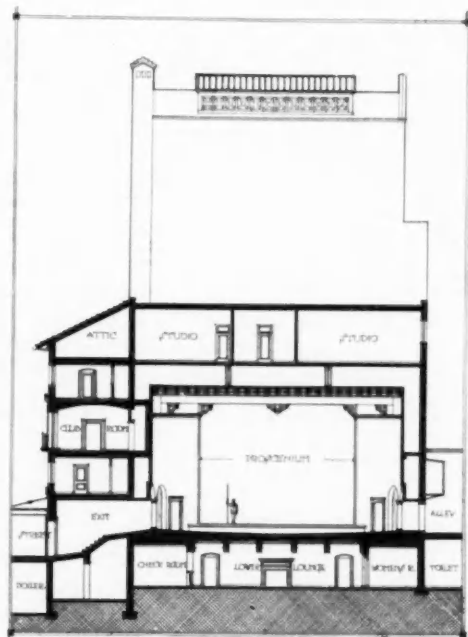
All of the scenery is handled from the stage floor by a counter-weight system, instead of from a fly gallery. The electrical switchboard possesses special features, being not only much smaller, but far more full and flexible than the old fashioned theatrical switchboard be-

cause equipped with interlocking and automatic devices whereby entire sequences of light changes ensue upon the operation of a single master switch. The dimmers are relegated to a fire and sound-proof vault in the basement.

These features, though not common, are not new: the real novelty in the matter of stage equipment is likely to be the cyclorama—that which in the theatre represents the sky. This is the *bête noir* of every art director, whose experience with stage firmaments is likely to give him a new respect for the architect of the universe, that he can keep the wrinkles out of his vast and seamless cyclorama in all weathers, never let it get in the way of the rest of the scenery, and can produce such a wide variety of subtly changing light and cloud effects. In the theatre the cyclorama is usually a

great sheet of dirty linen, suspended from the gridiron in the form of an ellipse, slaty blue in color, as perishable as lingerie from a cheap shop, susceptible as a consumptive curate to every change of temperature, which registers as wrinkles and as puckers in the seams, swayed by the slightest breeze, and always in the way of everything and everybody. To overcome all this the plaster cyclorama was invented, of which there are three in New York, but this has also its disadvantages, for if the one looks too much like cloth in certain lights, the other looks too much like plaster, and waves in the sky are just as disillusioning as wrinkles; dirt also has as great an affinity for the one as for the other.

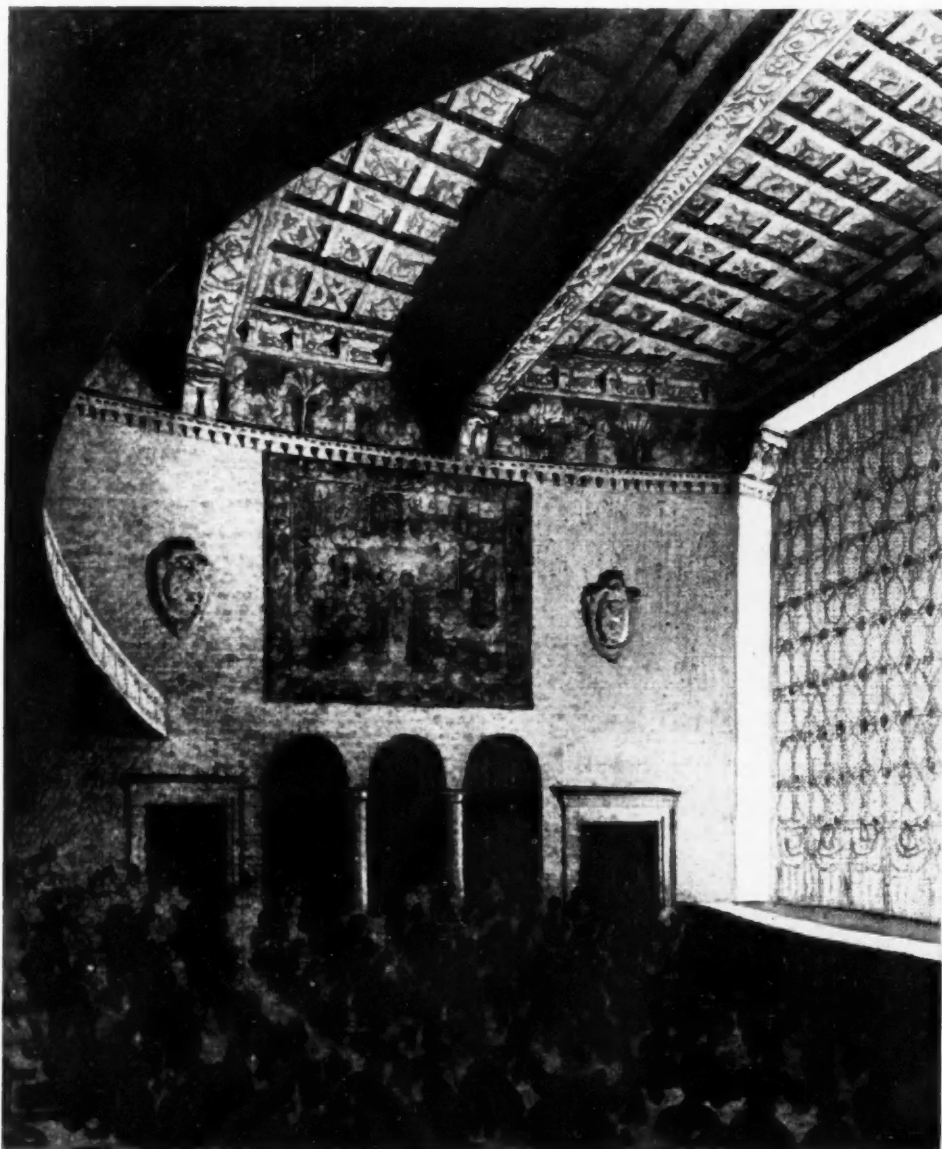
When Mr. Lee Simonson—the Guild's art director—was in Europe he discovered in use in certain theatres a cyclorama of a new type, the invention of that Linnebach whose lantern for painting scenes on the back drop with light instead of pigment has been used in the Guild productions from time to time. This cyclorama was of linen, sewed in such a way that the seams did not appear, but its uniqueness consisted in the fact that it was rolled up when not in use—and therefore out of the way and well protected—on a kind of gigantic vertical shade roller, the cloth attached at the top in such a way that by the pressing of an electric button it rapidly unfurled itself along the line of an elliptical track high aloft, out of the way and out of sight. This is the type of cyclorama that will be used in the Guild theatre. It will be lighted by the Pevear system, which makes possible every conceivable color combination, and insures perfect diffusion, the lamps being placed at top and bottom, within four feet of the cloth. The lamps at the bottom will be sunk in a trough in the stage floor, so that ground rows—which conceal the floor lights from the view of the audience—can be dispensed with. The other lighting devices will be, in general, like those in use at the Garrick now, but there will be in addition concealed projectors for lighting the stage from the auditorium. All these matters of back-stage lighting, plan-



Transverse Section

ning and equipment were Mr. Simonson's particular charge, one for which his experience as the Guild's art director makes him particularly well fitted.

The architects of the Guild Theatre are C. Howard Crane, Kenneth Franzheim, and Charles Hunter Bettis. Norman-Bel Geddes was retained as consultant—the man who performed the miracle of the *Miracle*, the transformation of the interior of the Century theater into a church. In the early conferences between the Guild directors and their architects, Mr. Geddes submitted a solution of his own, embodying many of the features of his "theatre number six," described in the September, 1922, number of *THE ARCHITECTURAL RECORD*. But to carry this plan out would have presented grave difficulties, since it violated ordinances framed for theatres of an entirely different type, and it would have involved delays and additional expenses in the matter of rock excavation, etc. Therefore only a few of Mr. Geddes' suggestions were adopted, and his hand appears in the final result scarcely at all.



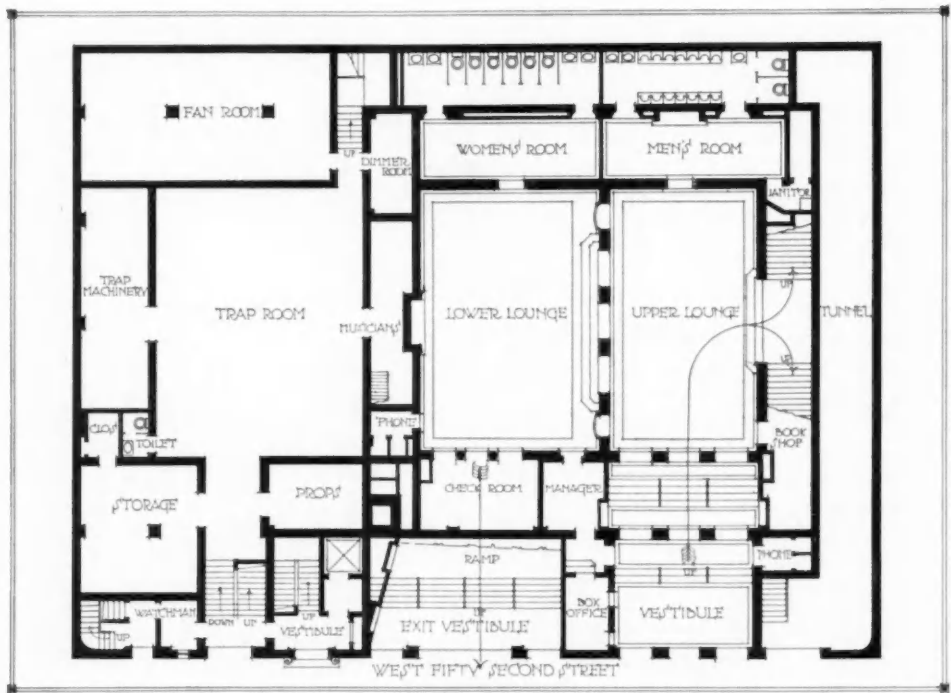
(c) Vanity Fair

Section of Auditorium and Stage

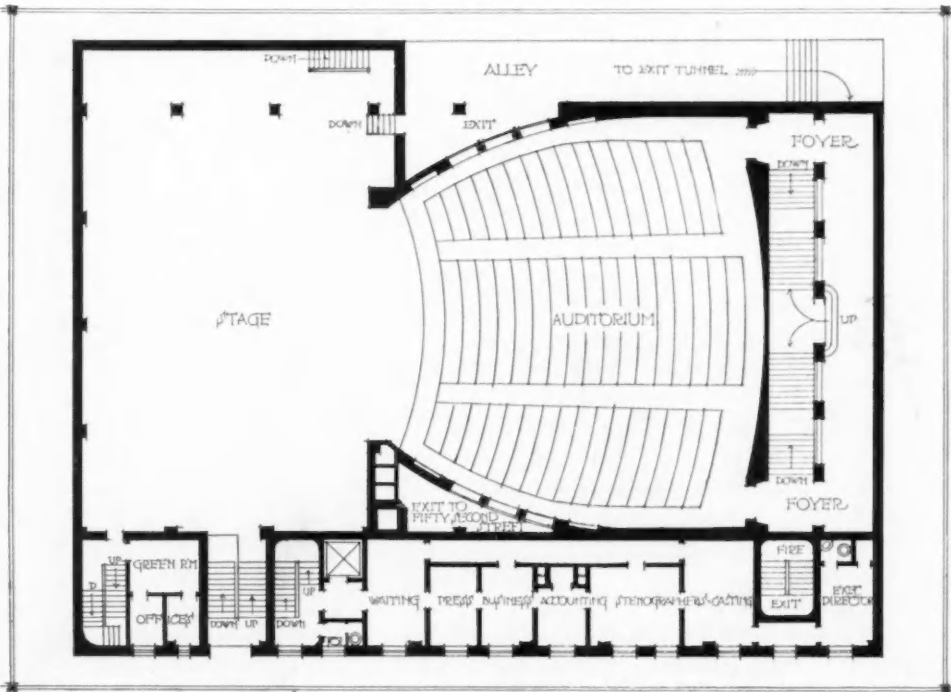
NEW THEATRE FOR THE NEW YORK THEATRE GUILD, NEW YORK CITY

C. Howard Crane, Kenneth Franzheim and Charles H. Bettis, Architects

THE ARCHITECTURAL RECORD.

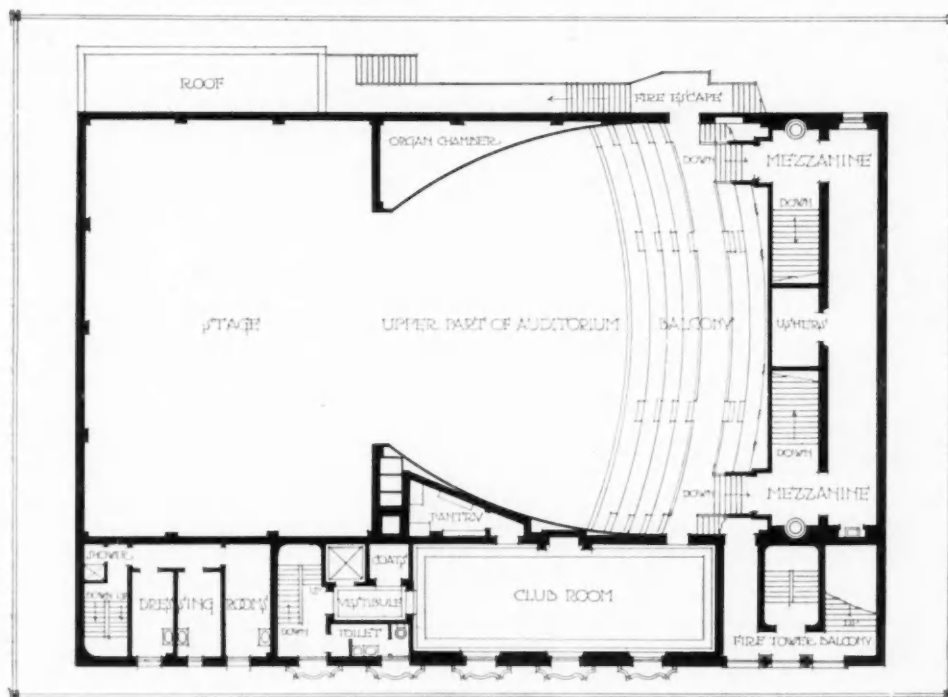


Ground Floor Plan



Auditorium Floor Plan

NEW THEATRE FOR THE NEW YORK THEATRE GUILD, NEW YORK CITY  
 C. Howard Crane, Kenneth Franzheim and Charles H. Bettis, Architects



Balcony Floor Plan

NEW THEATRE FOR THE NEW YORK THEATRE GUILD, NEW YORK CITY

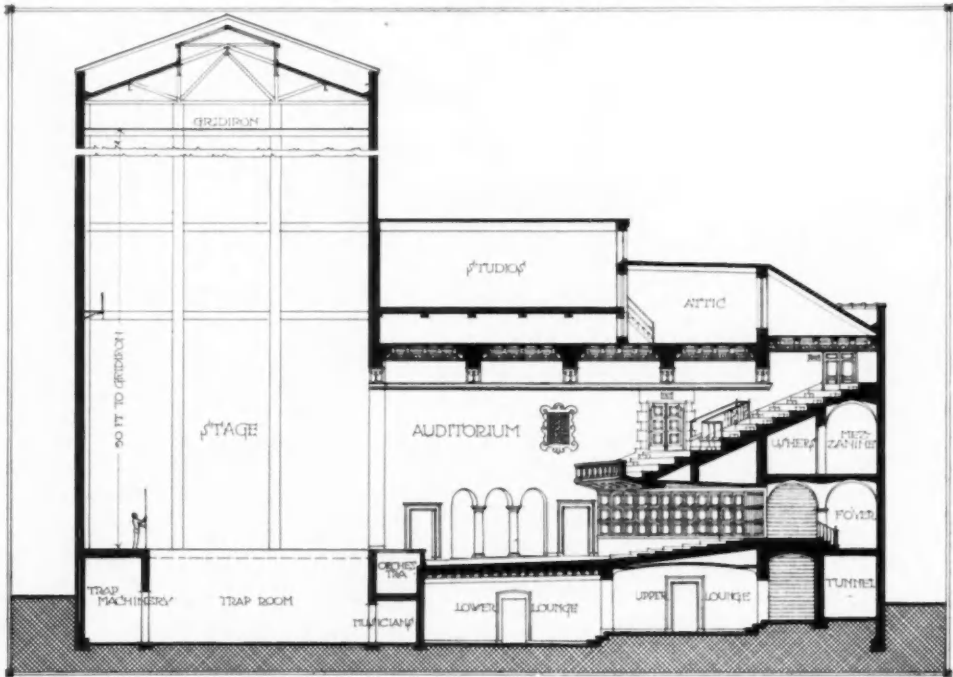
C. Howard Crane, Kenneth Franzheim and Charles H. Bettis, Architects

The Guild architects are specialists in theatre planning and construction, and from a study of the drawings it is apparent they have evolved a somewhat conventional and conservative, but wholly admirable solution of their problem, doing with it all that was possible under those most stern conditions governing theatre building in New York. Between the devil of land and building costs, and the deep sea of legal and operating requirements, ideal success being out of the question, they have escaped with such honor as may attend the designing of what is likely to prove the best theatre building of its class in New York. It would be unfair to institute a comparison of it with certain German theatres built by Professor Max Littmann, under so much more kind conditions and with a less restricted hand.

The style of the exterior appears to be that of the late Italian Renaissance—stucco wall surfaces, with heavily rusti-

cated stone quoins and window trim, an overhanging decorated wood cornice and a tile roof. The façade is well composed, the intricate elements of the plan being transformed, in the fenestration, to order and some semblance of symmetry. It is truthful, in the main: these little windows show the offices and dressing rooms; here, where the large French windows and balconies occur, is the club room; the triply arched loggia while concealing, reveals the presence of the fire-tower exit; the long marquise and the battery of doors publish the fact that here is a theatre.

There has been no attempt to give aesthetic expression to the upper part of the stage enclosure, or to relate it to the façade in any way: it remains a crude, rude pile of brick. Though this is according to the usual practice, it is an opportunity missed. The rear of the Metropolitan Opera House is an object lesson of what may be made with a stage en-



Longitudinal Section

NEW THEATRE FOR THE NEW YORK THEATRE GUILD, NEW YORK CITY  
 C. Howard Crane, Kenneth Franzheim and Charles H. Bettis, Architects

closure: there are few finer things, architecturally, in all New York, than that great grey buttressed wall and pediment.

Architecture is itself an art of *dramatization*: a building should be made eloquent of itself, expressive of its purpose. Now there are at least three things that might differentiate the exterior of a theatre from that of a hotel or a club for example. One of these is the towering stage enclosure above mentioned, and the others are the so necessary long marquise sheltering the numerous entrance and exit doors, and the quite indispensable electric sign which ballyhoos to Broadway the fact that here is pleasure to be purchased for a price. It would be interesting to see a theatre in which these two last-mentioned features were recognized as characteristic and dramatically important, and therefore designed with deliberate and distinguished art, instead

of being left to the untender mercies of some maker of commercial electric signs. It is to be hoped that the Guild theatre will not be thus afflicted, but that the architects will extend their jurisdiction over every last gleaming letter of every latest glistening sign.

This theatre should be a temple of austere joy, of fresh and living beauty, and as such its custodians and ministers should fling their harlequin cloak wide enough to cover every outer confine and affiliated field of endeavor, of which there are a number, for the theatre touches life at many points. It is a matter of theatrical history that the Guild made an excellent start in this direction during the difficult early days of the organization; now that they are beginning anew in so admirable a theatre of their own, may they dedicate themselves anew to their great task.



# The LIBRARY OF THE ARCHITECT



By  
*A Lawrence Kocher*

## PART IV

### Views of Writers and Architects of England

IN ANSWER TO the query concerning the value of reading for the architect, the dramatist and layman, Mr. George Bernard Shaw says that "architects are made by building, not by books. An architect may read Vitruvius, Piranesi, Adam, Ruskin and Morris to add culture to his professionalism; but a comparison of 12th century architecture with 16th century, or Greek with Latin, will suggest strongly that the more an architect knows academically the worse he builds. In England we had so many eminent 14th century faker-experts that the 19th century never had a dog's chance architecturally."

MR. CHARLES H. MOORE

Mr. Charles H. Moore deplors the divorce of the practice of architecture from craftsmanship and he would restrict the reading for the architect to the few books that treat primarily of structure as the formative principle of every genuine style. "I think," says Mr. Moore, "it is of first importance that students of architecture should understand present conditions, and realize that what is known as the 'architectural profession' is a new thing in the world, which has grown out of an abnormal state of things. The practice of architecture is now, as a result of these conditions, divorced from craftsmanship, in which alone any good art can have being. Building operations have passed out of the hands of artist-craftsmen into those of mechanical engineers and manual operatives—the architect having no

proper artistic training, since such training is impossible apart from the building craft. Moreover, building is now so industrialized and commercialized that a general demand for methods and materials that lend themselves to haste and cheapness in construction, has been created, whereas good architecture calls for sound methods and best materials. In these circumstances, the young architect with ideals is painfully handicapped, and it is only in the degree that a more favorable atmosphere can be brought about, that any hope of improvement can be justified.

"With regard to books, very few that we have are really useful, because, in the vast majority of cases they are not based on competent first-hand observation and accurate description of the works with which they deal. They are largely made up out of other books—all more or less unreliable. The few books worth reading are those that treat primarily of structure as the formative principle of every genuine style, and correctly describe the character of its ornamental features. Only one writer, that I know of, has done comprehensive justice to the vital part of the subject; namely, the French master, Viollet-le-Duc. His writings, as to structure, are incomparably superior to all others because, with an ardent native genius for the work, he took pains to equip himself by strenuous investigation of the monuments themselves. His writings cannot be too faithfully studied by young architects. The best other books are, I think, those which describe

great buildings of the past, though none of these give complete information. The best of them, with which I am acquainted, is de Verneilh-Puiraseau *L'Architecture Byzantine en France*, in which the Church of Saint-Front of Perigueux is described.

"Every student of mediaeval architecture ought to know the little notebook, preserved in the National Library of Paris, by Villard de Honnecourt, a French architect, or master builder, of the thirteenth century. It gives first-hand knowledge as to the nature and amount of scientific equipment that prevailed among the French Gothic constructors of the great age of Gothic building. It shows that these master builders though men of highest artistic and mechanical abilities, worked by what is called rule of thumb. This precious little book has been reproduced in photographic facsimile, and copies may, I believe, be had.\*

"There was little writing on architecture in ancient times or during the middle ages. The great bulk of our literature on the subject is modern, and begins with the Italian Renaissance of the fifteenth century. It is mainly of two kinds, that which treats of the Orders, and that which treats of the styles of the middle ages—mainly of what is commonly called Gothic. The Italian writings on the Orders are based on the writings of Vitruvius, and on them our modern practice has been largely founded.

"Writings on the architecture of the middle ages virtually began in the early years of the last century, but little in the most of them will be found profitable for the reason given above.

"It is not in reading, so much as in association with men of kindred ideas and aims, above all with intelligent

\*The original manuscript is in the Bibliothèque Nationale. A facsimile copy was published in Paris in 1858 by M.M. Lassus and Durcel. The following dedication appears on the second page of the sketch book:

"Villard de Honnecourt salutes you, and prays all who work in the various kinds of work contained in his book to pray for his soul, and to remember him; for in this book one may find great assistance in learning the principles of masonry and construction in carpentry. You will also find in it the method of drawing the figures as geometry commends and enjoins."

craftsmen, that the young architect will profit. While the old craft-training for the practice of architecture is not likely to revive in our day, something may be done to acquire the kind of knowledge and experience that is wanted, by contact with building operations—brick and stone masonry, carpentry, and whatever concerns the actual art of building, is altogether fundamental as preparation for right practice of architecture."

MR. C. F. A. VOYSEY

Mr. C. F. A. Voysey says it was personal character, not style, which made architecture great. The art of architecture has at all times been full of shifts and compromises, as every other mundane thing. In his youth there had been classical architects following Revett and Stuart while the Gothic architects were "swearing" by Britton, Pugin, Rickman, Scott and other mediaevalists—and each turning up their noses at the other group. Whereas the humanities were the important thing. The profession had a long way to go before they got back to human building and human interests. Says Mr. Voysey: "all my life I have regretted the divorce between professional training and morals, and I believe all true culture must be based on the love of truth, the love of beauty, and the love of God. And I do not believe you can make anyone artistic by cramming him with theories or facts.

"Cultivate character and art will take care of itself. Many of the best artists have received no so called artistic training.

"First and foremost, all books leading to the knowledge of materials and their possibilities and limitations."

Smith, Adam—Moral Testaments  
 Ruskin, John—The Eagle's Nest  
 Phillipps, March L.—Works of Man  
 —Form and Color

Emerson, Works of  
 Voysey, Rev. Charles, M. A.  
 —Religion for all Mankind  
 —The Mystery of Pain, Sin and Death  
 —Theism as a Science  
 —Theism the Religion of Common Sense

MR. STANLEY C. RAMSEY

Mr. Stanley C. Ramsey, London architect and author of "Small Houses of the Late Georgian Period" believes one of the most important features that should be remembered is, to start with, a student's library should not be too large nor too expensive. "It can always be added to in the future but the important thing is to have a good nucleus as a commencement.

"I suppose everybody's views differ as to what are the most useful books and one can only make proposals, and any proposals made must be more or less colored with one's own mental and architectural outlook.

"I think I should say that a small library for a student should consist of:  
1—Books dealing with general literature and fine arts.

2—Books dealing with purely architectural subjects which might be divided as follows:

In the general list I should include:

Pater, Walter—Italian Renaissance  
Gardner, Ernest, Prof.—Ancient Athens  
Murray, Gilbert, Prof.—Euripides

"In addition I think that every architectural student, particularly every American architectural student, ought to know Emerson's Essay on 'History' by heart, and should have acquaintance with Miss Edith Wharton's novels.

"In the list of purely architectural works I should include:

Anderson—Italian Renaissance  
Anderson & Spiers—Greek & Roman Architecture.

Blomfield, R.—History of English Renaissance Architecture (Students' edition)

—The Georgian Period 'American Colonial Architecture'

and if possible one of the following from the 'English Cottage Series,' published by Messrs. Batsford.

Dawber, Guy—Kent and Sussex Cottages  
Oliver, Basil—Cottages in East Anglia

SIR G. GILBERT SCOTT

Sir G. Gilbert Scott, architect of the Liverpool Cathedral, endorses the following list:

General

Fletcher, Sir Bannister—History of Architecture.

Simpson, F. M.—History of Architectural Development.

—The Architectural Association Sketch Book.

Classic

D'Espouy—Fragments d'Architecture Antique

Belcher & Macartney—Later Renaissance Architecture in England.

Gothic

Bond, Francis—Gothic Architecture in England.

Jackson, T. G.—Gothic Architecture.

Howard & Crossley—English Church Woodwork.

Crossley—English Church Monuments.

MR. LAWRENCE WEAVER

Mr. Lawrence Weaver, the architectural critic and editor of the English Country Life, has supplied a list of books recently purchased by the Architectural Department of an Australian University after consultation with him. Mr. Weaver very modestly says that the only defect in the list is that it contains some of his own books. This must be attributed to the good judgment of the professor who helped to make it.

Tipping—Grinling Gibbons.

Weaver—Gardens for Small Country Houses.

Phillipps, L. M.—Form and Colour.

Ricci, C.—Baroque Architecture.

Briggs—Baroque Architecture.

Fergusson—History of Indian Architecture.

Havell—Ancient and Mediaeval Architecture of India.

Blomfield, R.—History of French Architecture. 2 vols.

Unwin, R.—Town Planning in Practice.

Triggs, Inigo—Town Planning.

Geddes, Patrick—Cities in Evolution.

Belcher—Essentials in Architecture.

Godfrey—Gardens in the Making.

Blomfield, R.—The Mistress Art.

—Studies in Architecture.

Phillimore—Life of Wren.

Loftie—Christopher Wren.

Oliver—Old Houses in East Anglia.

THE ARCHITECTURAL RECORD.

- Harvey—Village of Bournville.  
 Innocent—Development of Building Construction.  
 Shuffrey—English Fireplace.  
 Repton—Landscape Gardening.  
 Sturgis—Dictionary of Architecture.  
 Bankart—Art of the Plasterer.  
 —The English Dictionary of Architecture.  
 Charles Platt, Works of  
 Triggs & Tanner—Inigo Jones.  
 Howard & Crossley—English Church Woodwork  
 Jackson—Gothic Architecture.  
 —Architectural Review—4 vols.  
 Macartney—Practical Exemplar of Architecture  
 Garbutt—Architecture.  
 Addy—Evolution of the English House.  
 Haverfield—Ancient Town Planning.  
 Eve—Decorative Heraldry.  
 Bell—Architecture of Ancient Egypt.  
 Lenygon—Decoration of 17th and 18th Century.  
 Petrie—Arts and Crafts of Egypt.  
 Brangwyn—Book of Bridges.  
 Hackett—Decorative Furniture.  
 Simon, C.—Eighteenth Century Furniture.  
 Elwood—English Furniture and Decoration.  
 Weaver—English Leadwork.  
 Hope—Heraldry for Craftsmen.  
 Williams, L.—Arts and Crafts of Spain.  
 Ashbee—Where the Great City Stands.  
 Thompson—Ground Plan of the English Church  
 Cov—English Parish Church  
 Wilmott—House Design.  
 Triggs, Inigo—Garden Craft in Europe.  
 Richardson & Gill—London Houses.  
 Bond—Cathedral Builders.  
 Blomfield, R.—Formal Gardens.  
 Sledding—Art and Handcraft.  
 Street, G. E.—Memoir of  
 Weaver—Lutvens' Houses and Gardens  
 Blomfield, R.—English Renaissance Architecture.



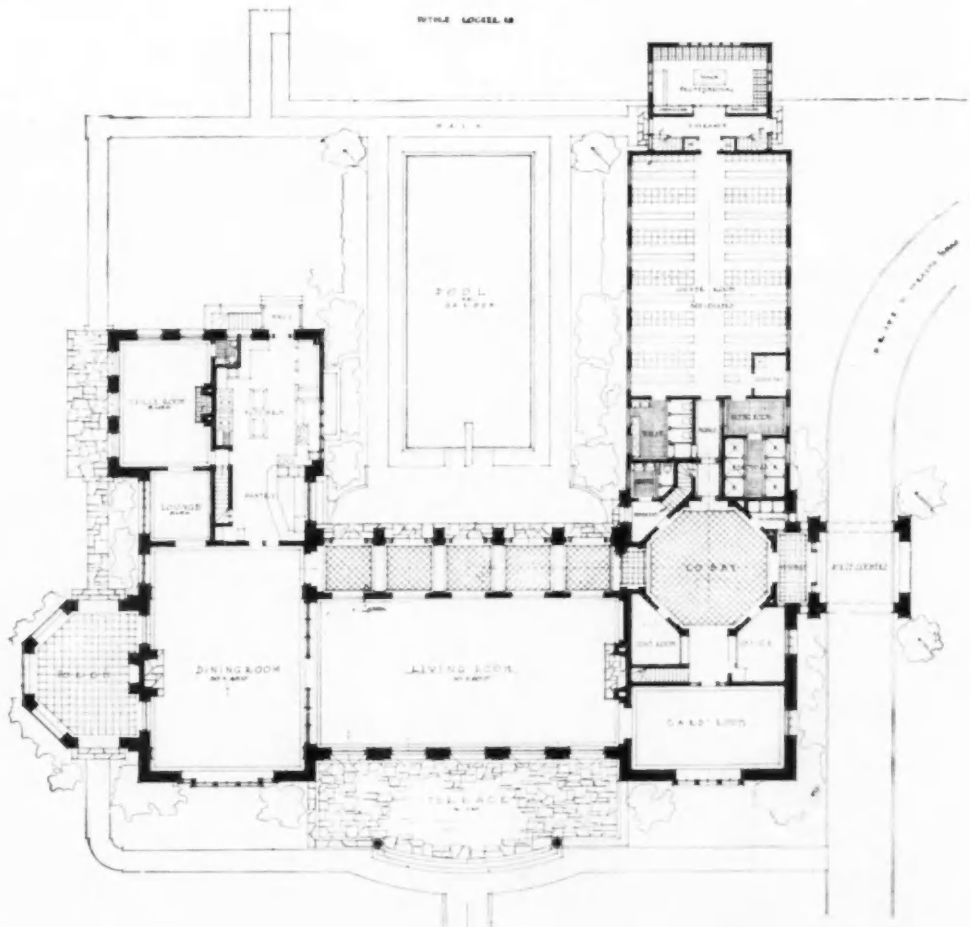
HOUSE AT LOWER SWELL, GLOUCESTERSHIRE

# P O R T F O L I O

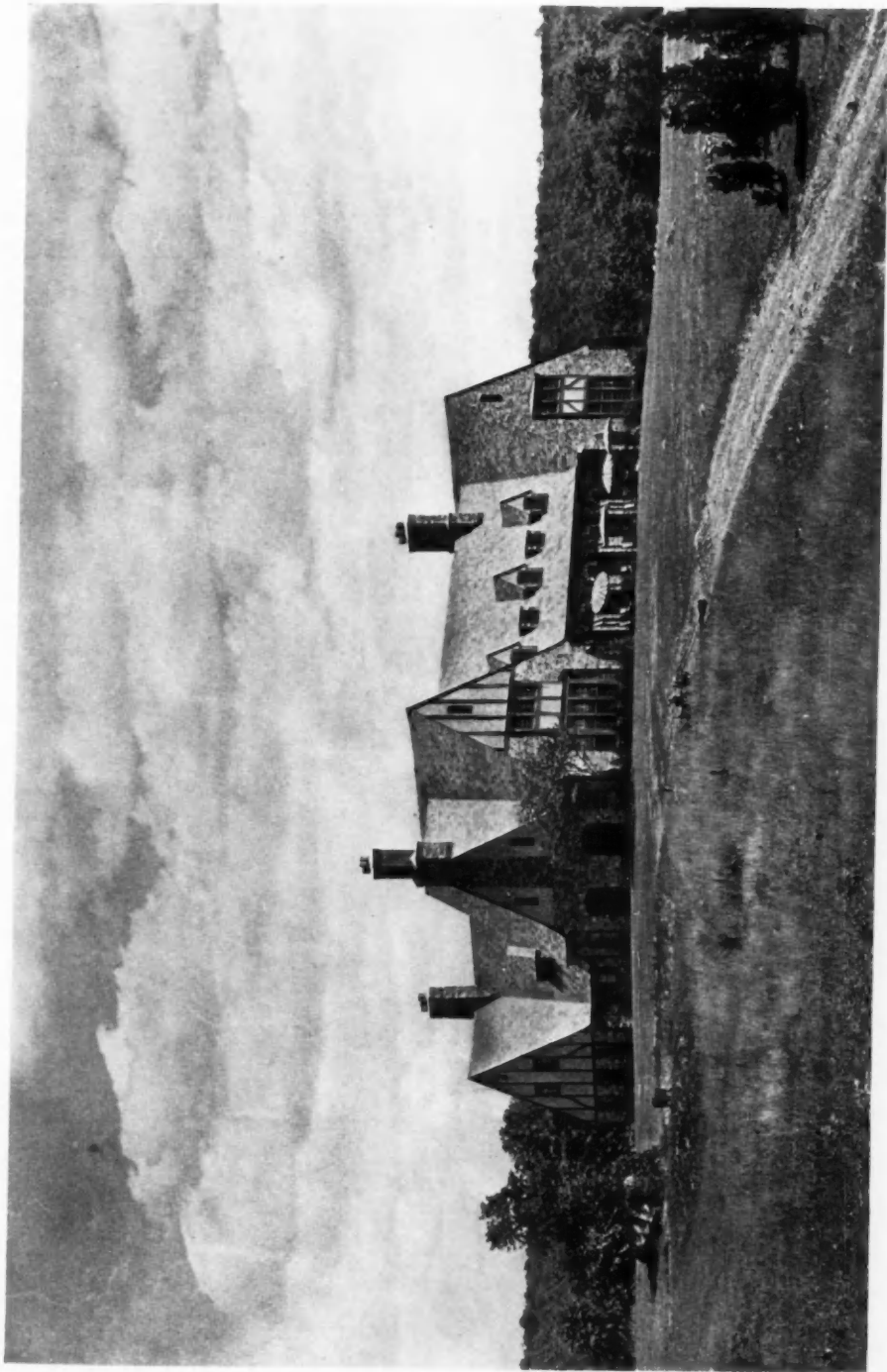
C V R R E N T · A R C H I T E C T V R E



NORTH JERSEY COUNTRY CLUB, PATERSON, NEW JERSEY  
Clifford C. Wendehack, Architect



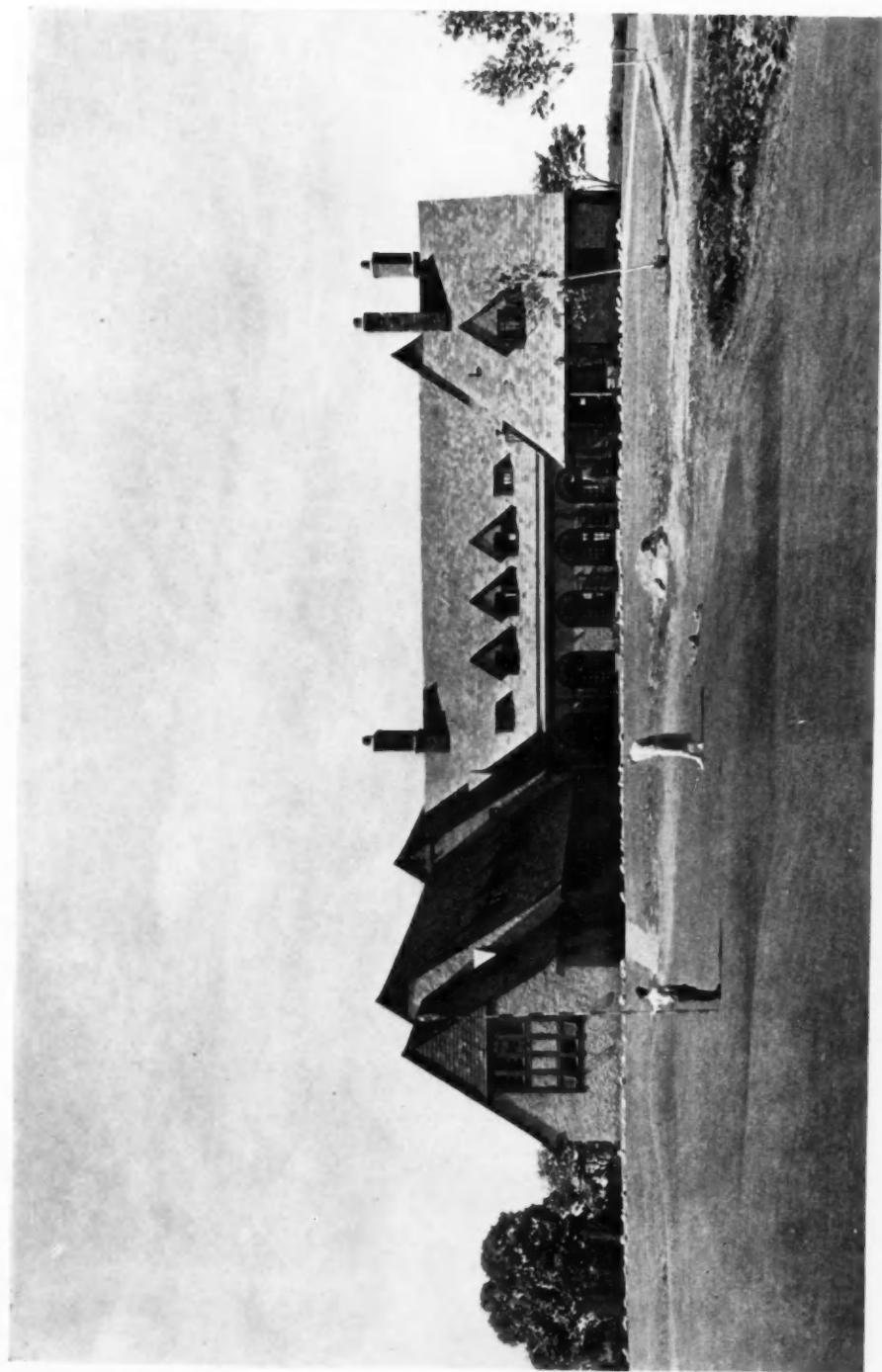
Floor Plan  
 NORTH JERSEY COUNTRY CLUB, PATERSON, NEW JERSEY  
 Clifford C. Wendehack, Architect



NORTH JERSEY COUNTRY CLUB, PATERSON, NEW JERSEY  
Clifford C. Wendehack, Architect

Architectural  
Library





NORTH JERSEY COUNTRY CLUB, PATERSON, NEW JERSEY  
Clifford C. Wendehack, Architect

Architectural  
Library



Dining Room



Lounge

NORTH JERSEY COUNTRY CLUB, PATERSON, NEW JERSEY  
Clifford C. Wendhack, Architect

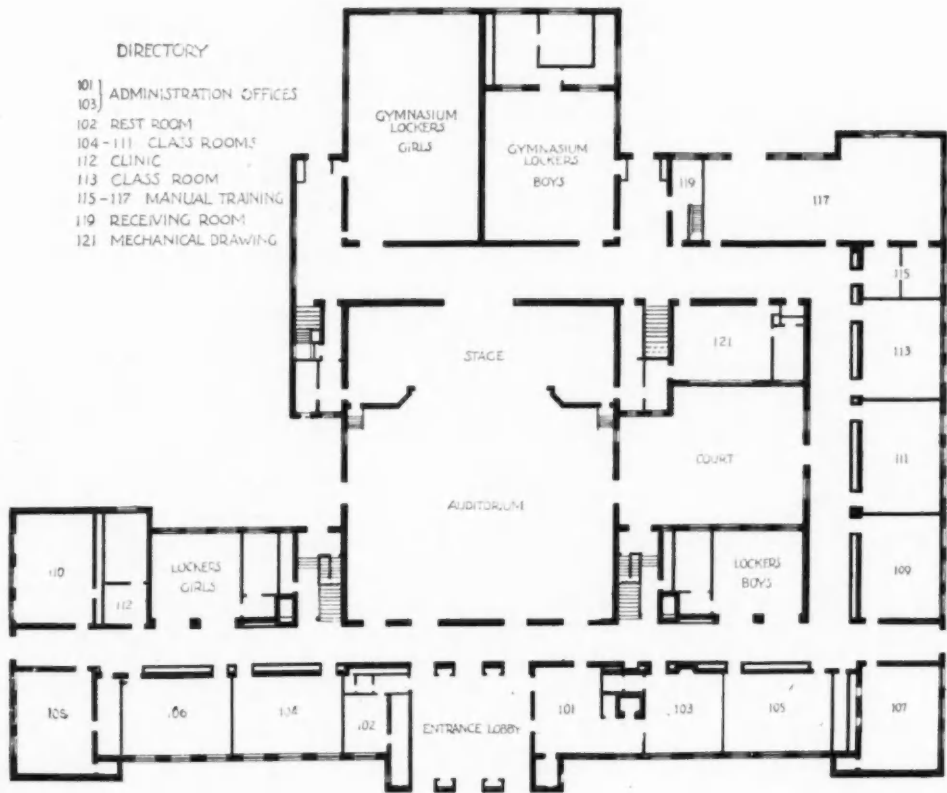
Architectural  
Library



Rear and Side Views  
SOUTH SIDE HIGH SCHOOL, ROCKVILLE CENTRE, NEW YORK  
Huse Templeton Blanchard, Architect

DIRECTORY

- 101 } ADMINISTRATION OFFICES
- 103 }
- 102 REST ROOM
- 104-111 CLASS ROOMS
- 112 CLINIC
- 113 CLASS ROOM
- 115-117 MANUAL TRAINING
- 119 RECEIVING ROOM
- 121 MECHANICAL DRAWING



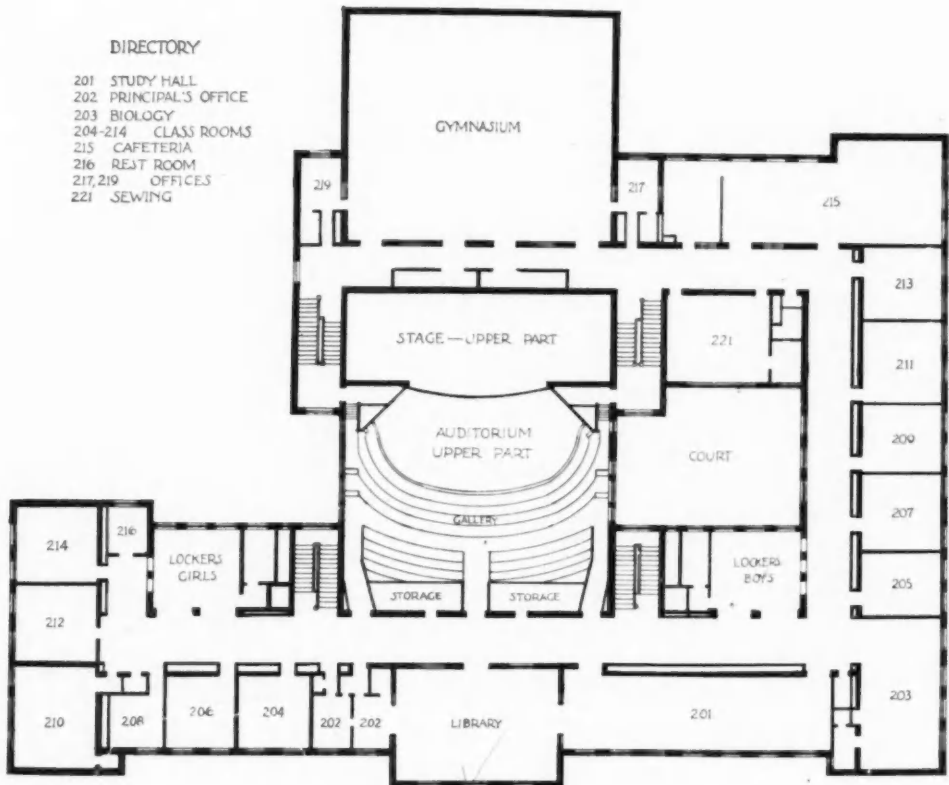
First Floor Plan  
 SOUTH SIDE HIGH SCHOOL, ROCKVILLE CENTRE, NEW YORK  
 Huse Templeton Blanchard, Architect



Entrance Detail  
SOUTH SIDE HIGH SCHOOL, ROCKVILLE CENTRE, NEW YORK  
Huse Templeton Blanchard, Architect

DIRECTORY

- 201 STUDY HALL
- 202 PRINCIPAL'S OFFICE
- 203 BIOLOGY
- 204-214 CLASS ROOMS
- 215 CAFETERIA
- 216 REST ROOM
- 217, 219 OFFICES
- 221 SEWING



Second Floor Plan  
**SOUTH SIDE HIGH SCHOOL, ROCKVILLE CENTRE, NEW YORK**  
 Huse Templeton Blanchard, Architect

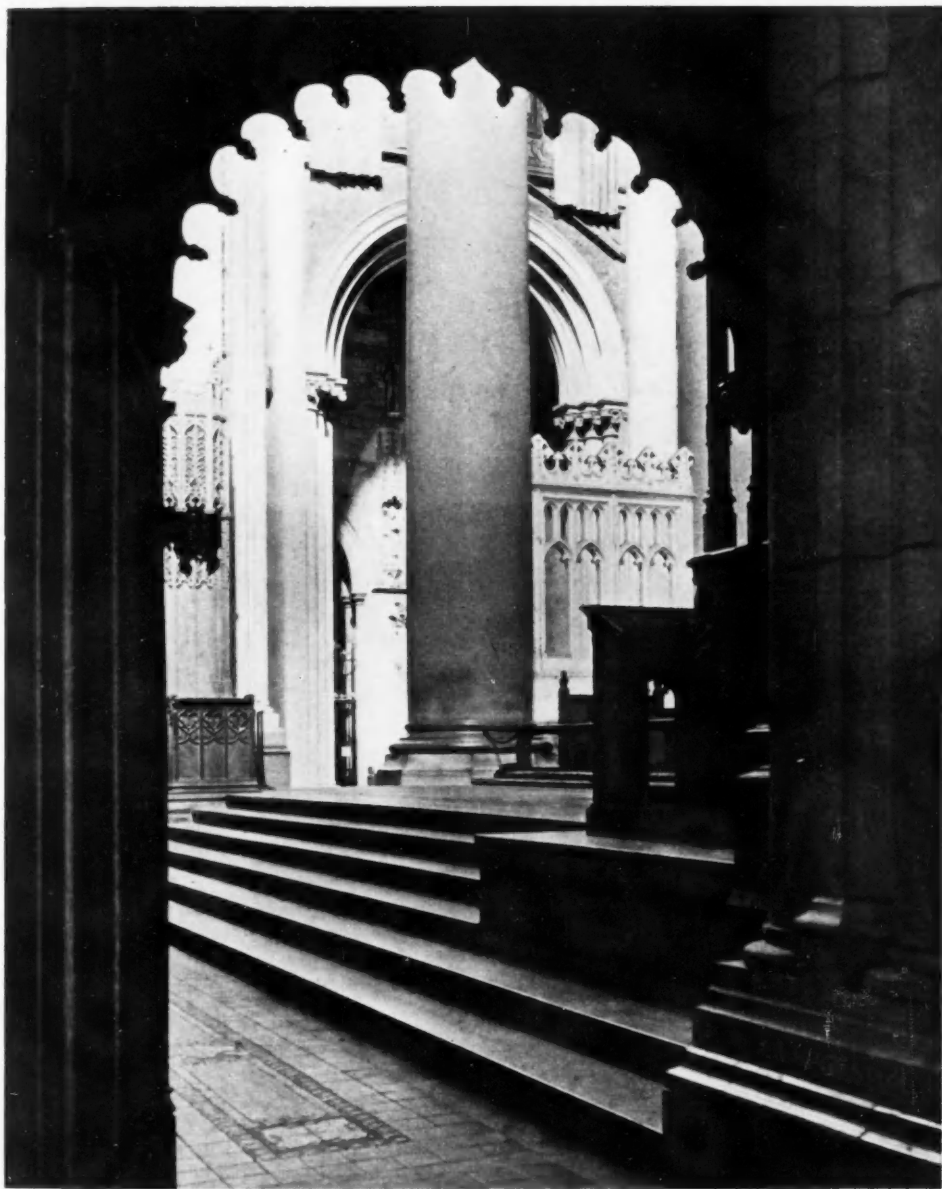




Detail

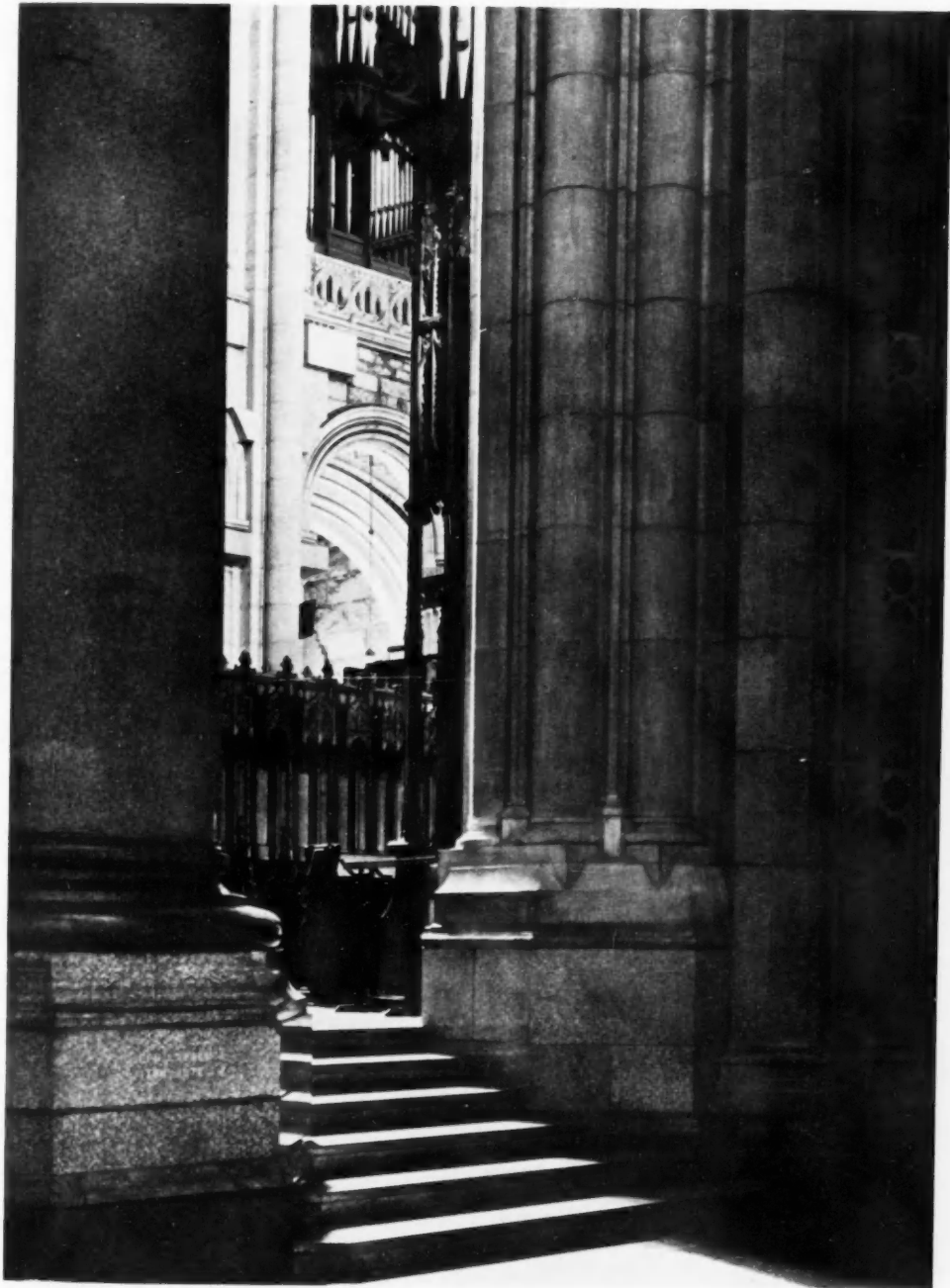
SOUTH SIDE HIGH SCHOOL, ROCKVILLE CENTRE, NEW YORK  
Huse Templeton Blanchard, Architect

Architectural  
Library



View from Aisle into Chancel  
CATHEDRAL OF ST. JOHN THE DIVINE, NEW YORK CITY  
Heins & La Farge, Architects

Architectural  
Library



View from Aisle into Chancel  
CATHEDRAL OF ST. JOHN THE DIVINE, NEW YORK CITY  
Heins & La Farge, Architects

Architectural  
Library



General View  
RESIDENCE OF JOSEPH H. GAY, ORANGE, NEW JERSEY  
Charles C. May, Architect



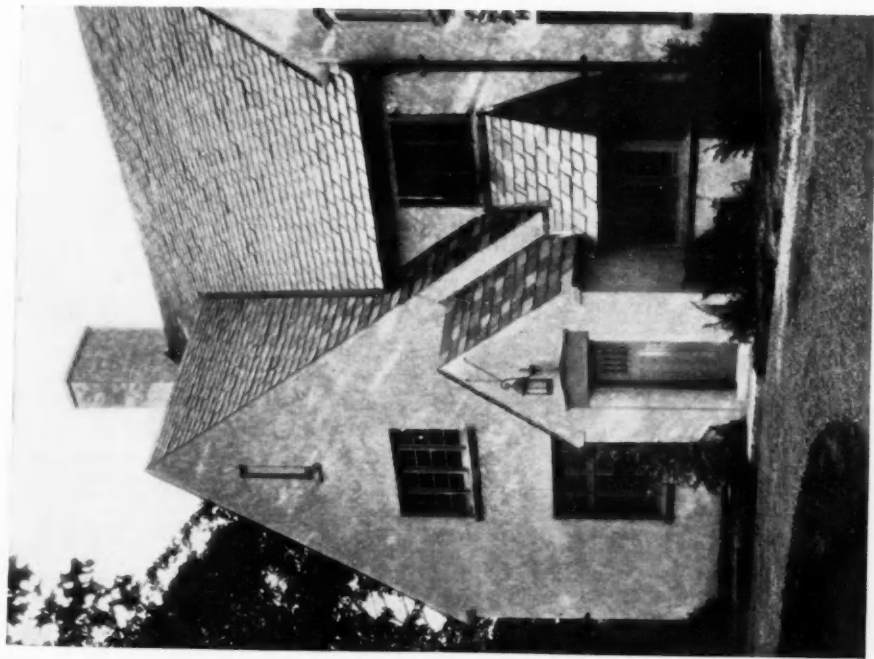
Second Floor Plan



First Floor Plan

RESIDENCE OF JOSEPH H. GAY, ORANGE, NEW JERSEY  
Charles C. May, Architect





Entrance Detail



Detail of Bay

RESIDENCE OF JOSEPH H. GAY, ORANGE, NEW JERSEY  
Charles C. May, Architect

Architectural  
Library



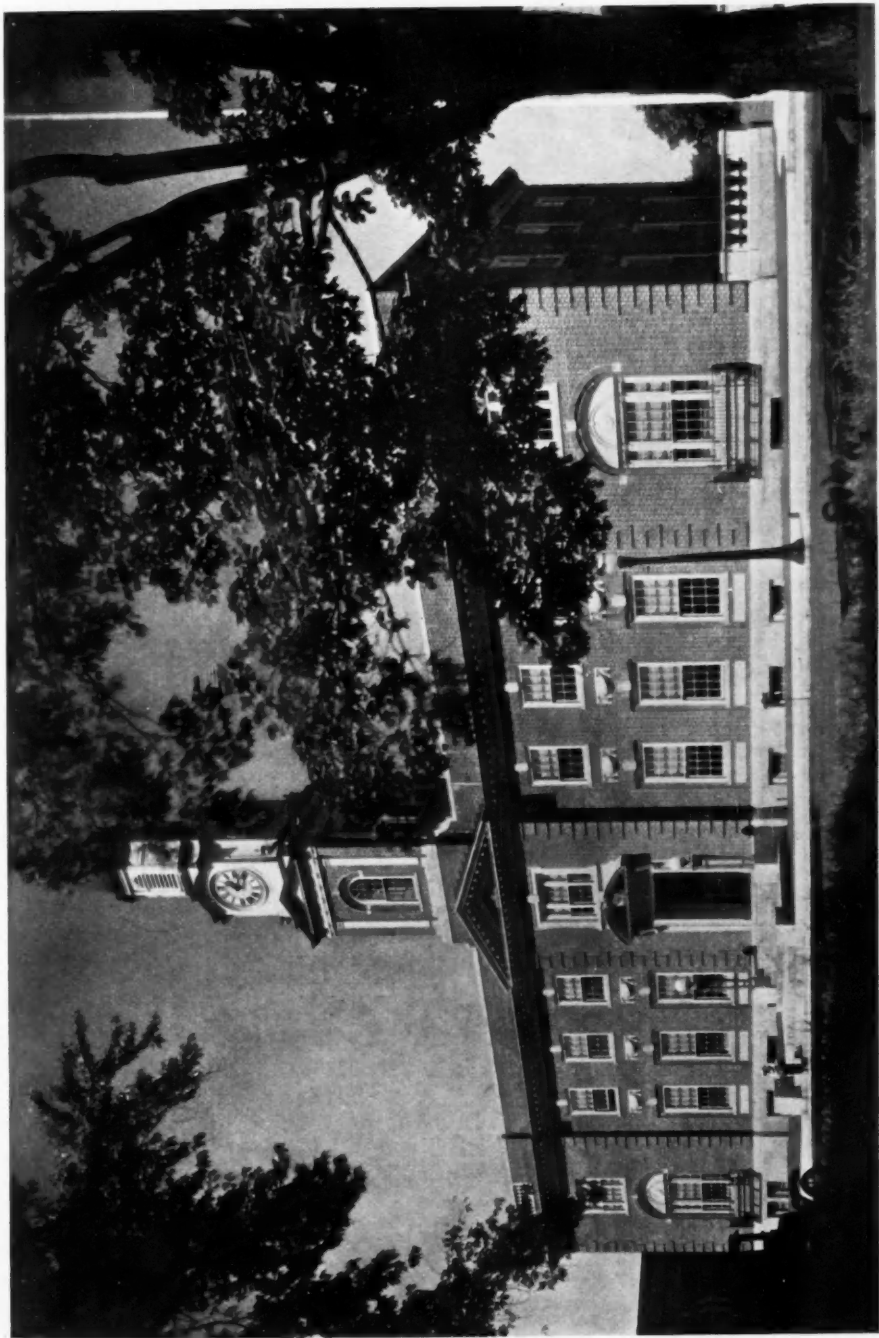
Garden



Garden Elevation

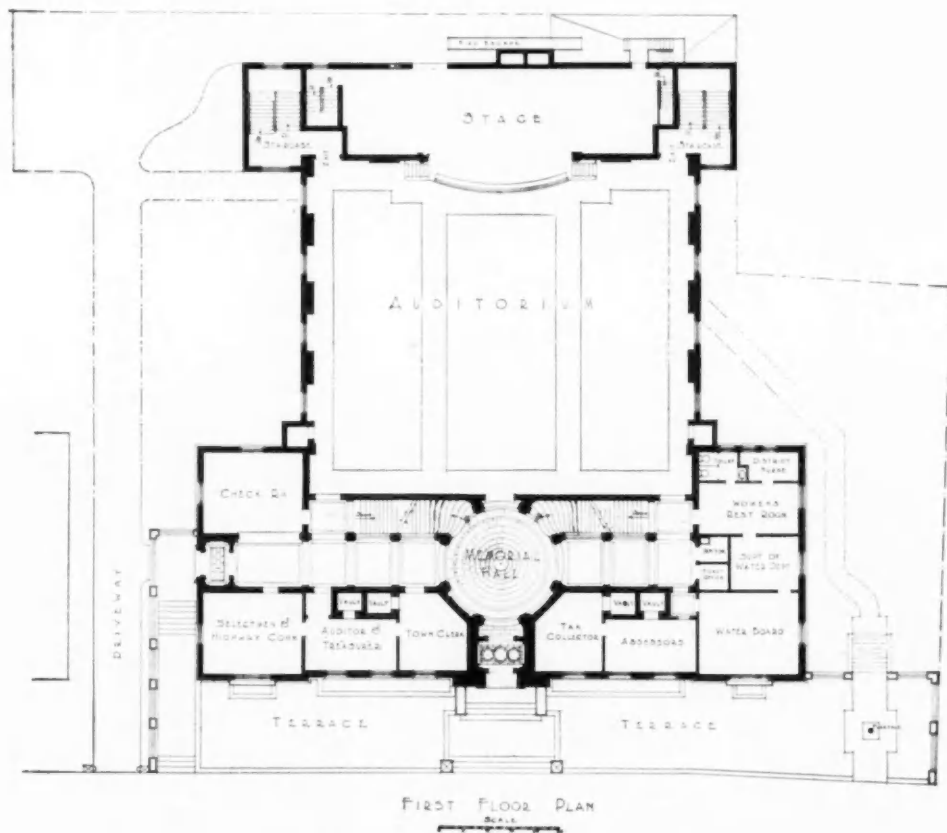
RESIDENCE OF JOSEPH H. GAY, ORANGE, NEW JERSEY  
Charles C. May, Architect

Architectural  
Library

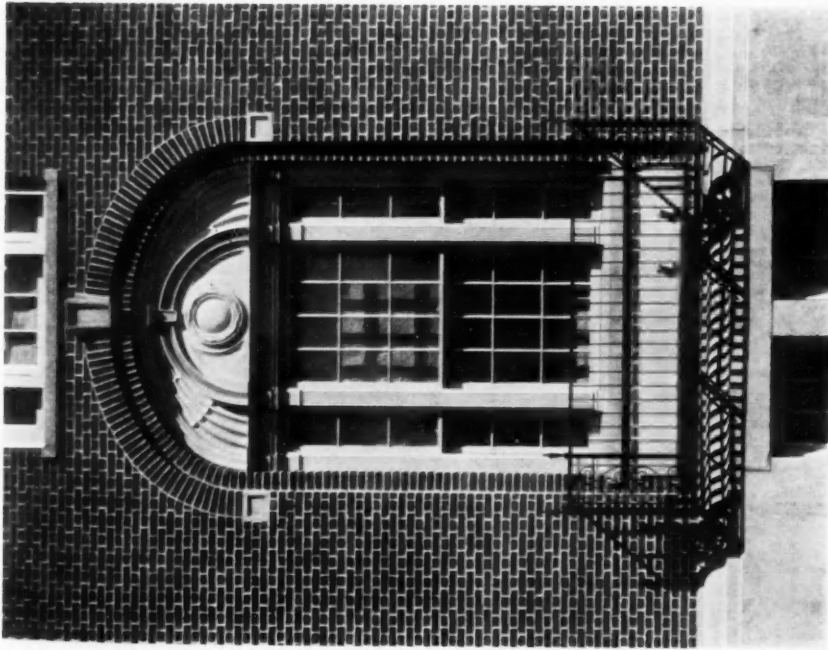


Main Façade

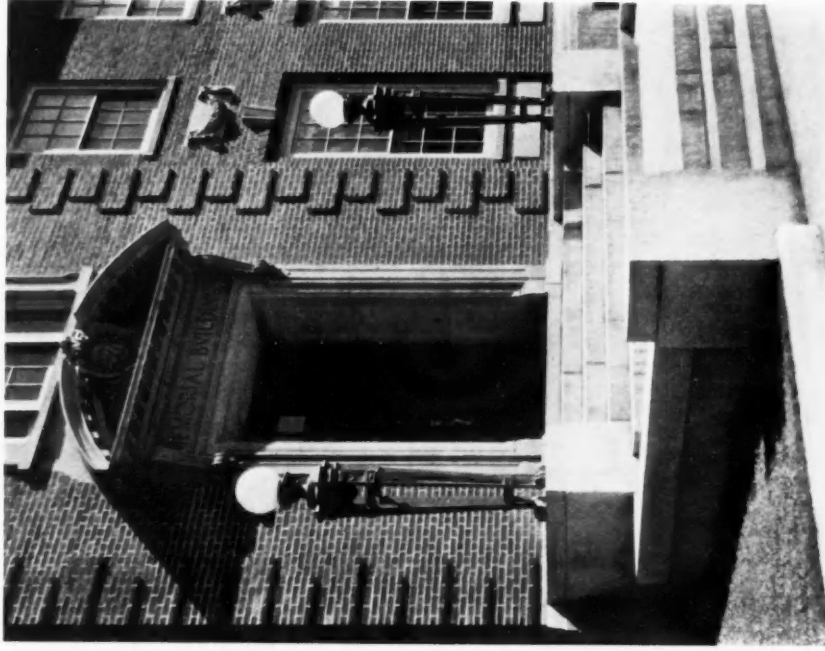
✓ ATHOL MEMORIAL BUILDING, ATHOL, MASSACHUSETTS  
Brainerd & Leeds and Oscar A. Thayer, Associated Architects



ATHOL MEMORIAL BUILDING, ATHOL, MASSACHUSETTS  
Brainerd & Leeds and Oscar A. Thayer, Associated Architects

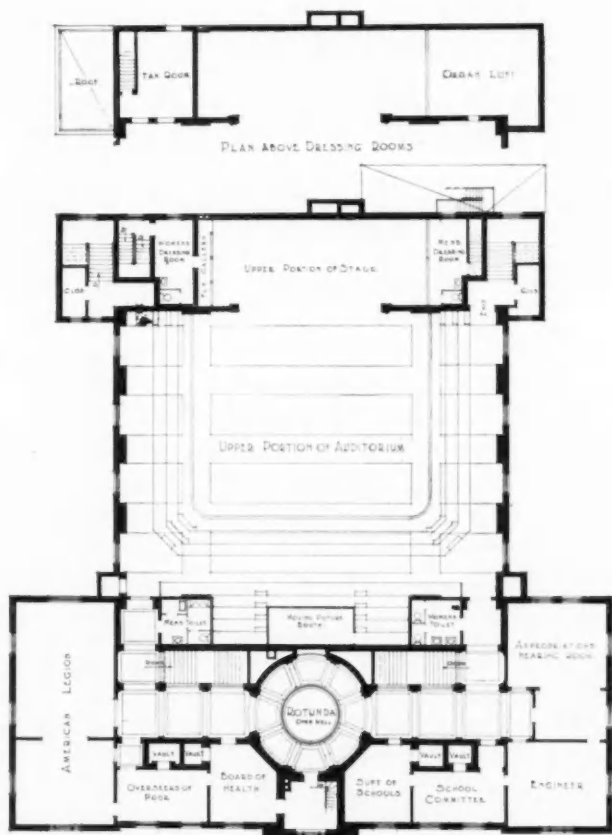


Window Detail



Entrance Detail

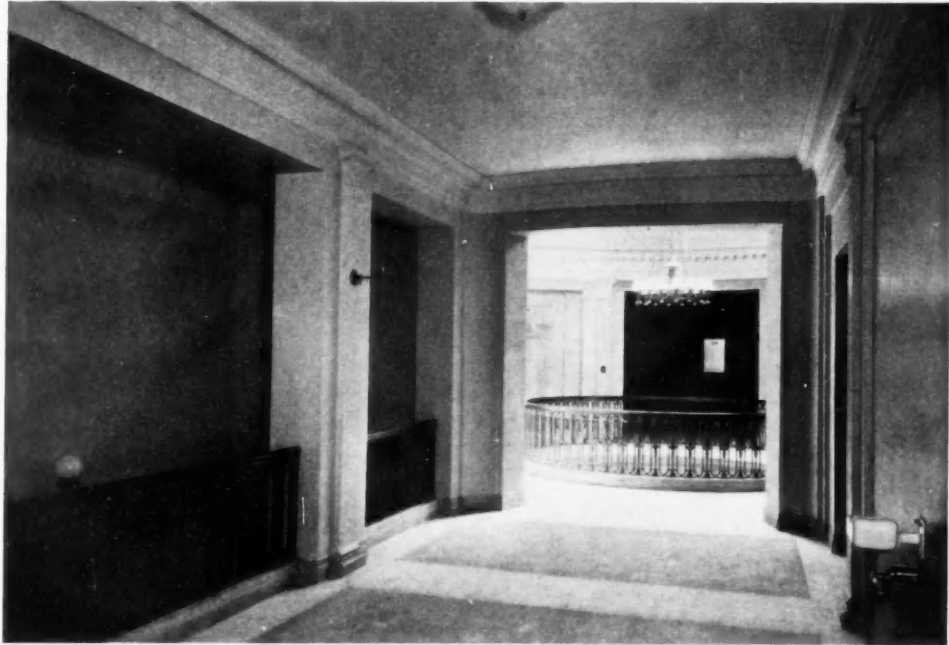
ATHOL MEMORIAL BUILDING, ATHOL, MASSACHUSETTS  
Brahner & Leisl and Oscar A. Thayer, Associated Architects



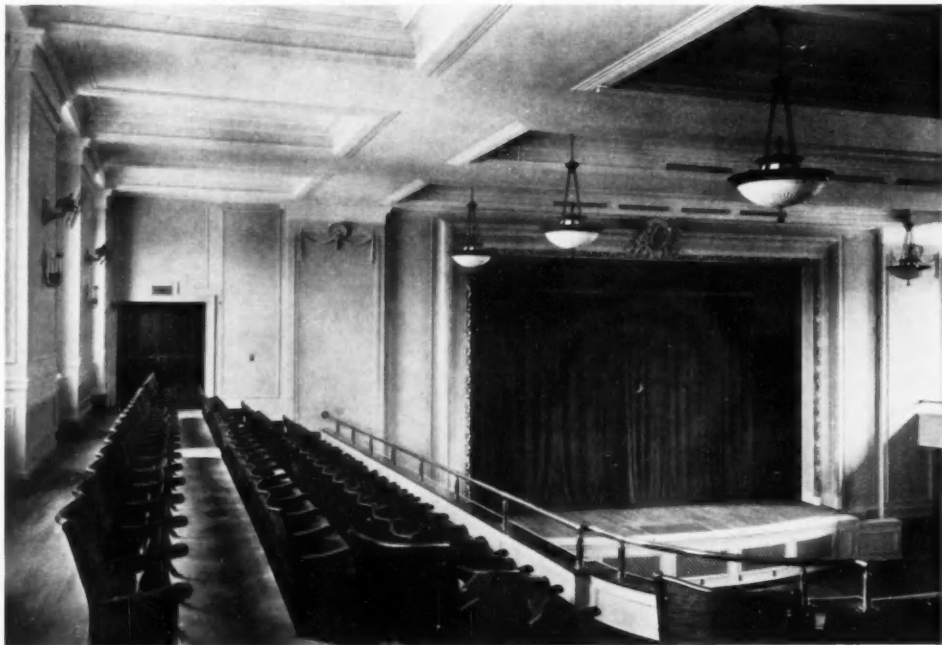
SECOND FLOOR PLAN  
 SCALE: 1/8" = 1'-0"

ATHOL MEMORIAL BUILDING, ATHOL, MASSACHUSETTS  
 Brainerd & Leeds and Oscar A. Thayer, Associated Architects



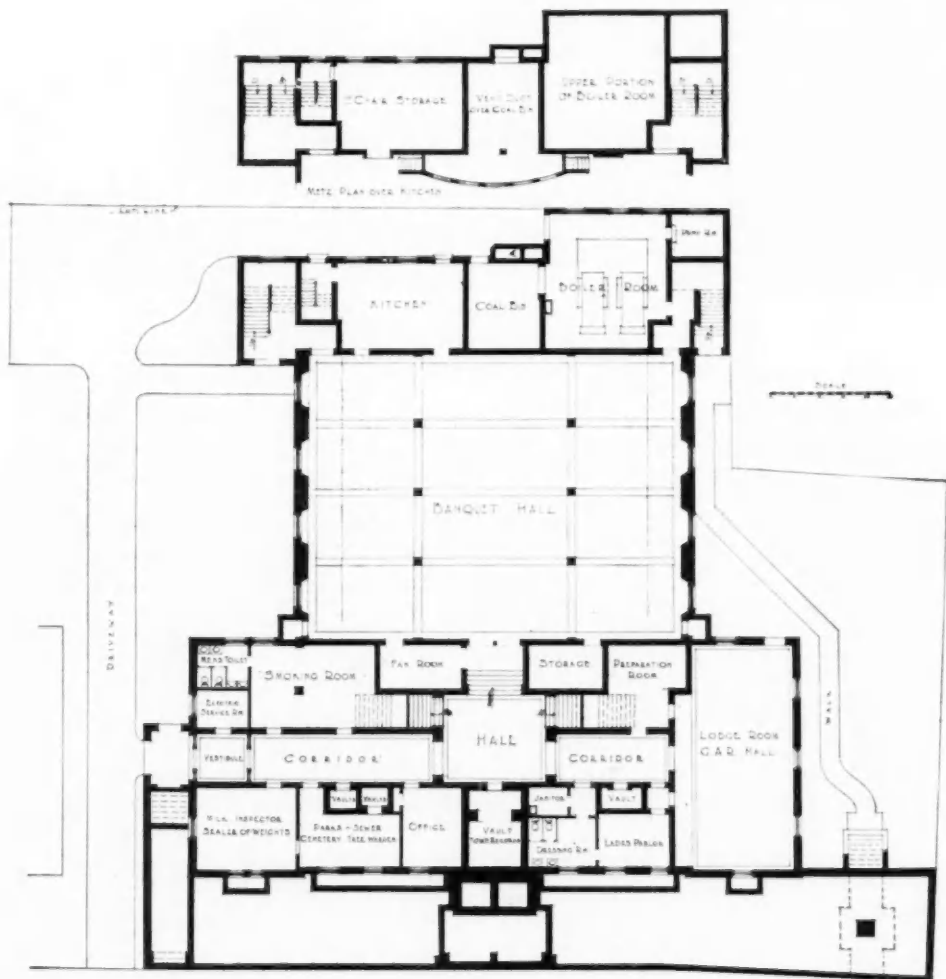


Upper Hall

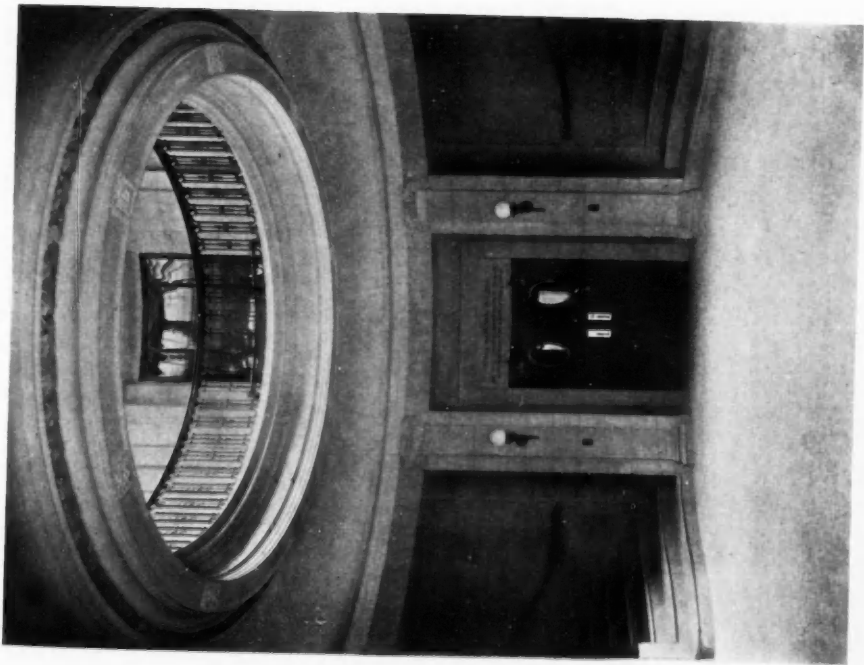


Auditorium

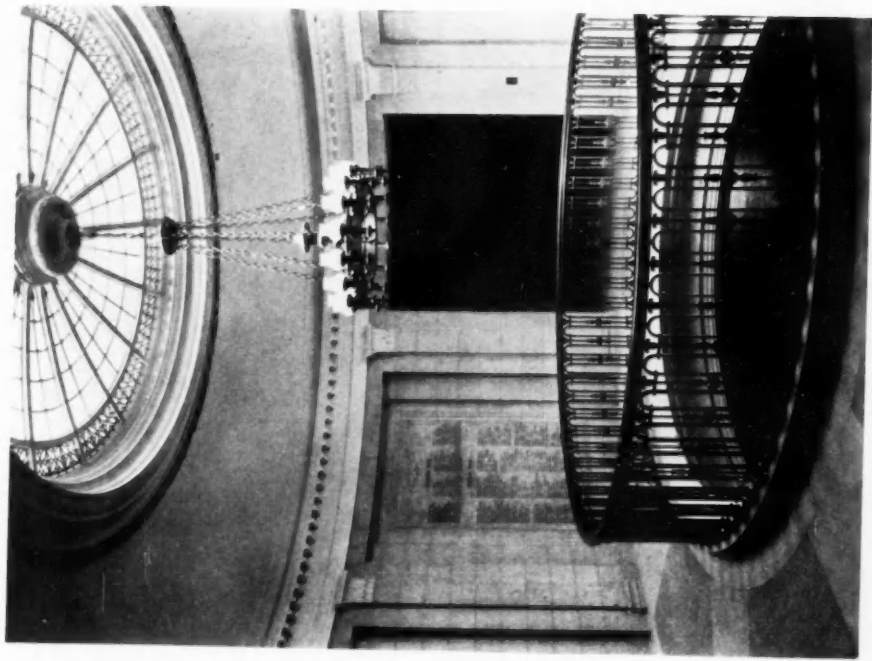
ATHOL MEMORIAL BUILDING, ATHOL, MASSACHUSETTS  
Brainerd & Leeds and Oscar A. Thayer, Associated Architects



Basement Floor Plan  
 ATHOL MEMORIAL BUILDING, ATHOL, MASSACHUSETTS  
 Brainerd & Leeds and Oscar A. Thayer, Associated Architects



Entrance Hallway



Rotunda

ATHOL MEMORIAL BUILDING, ATHOL, MASSACHUSETTS  
Brainerd & Leeds and Oscar A. Thayer, Associated Architects

Architecture  
Library

# LOW-RENTAL HOUSING

*The New Immigration and European  
Housing, Their Future Effect on  
American Conditions*

*By Frank Chouteau Brown*

IN OUR ANALYSIS of the problems of providing low cost housing to the poorer paid workers in our social fabric (as it has been constituted in the past) we have touched on several phases where it has been necessary to arrest our progress to discover exactly what effect changing conditions might exert on the matter. One of these new conditions that we have ourselves established is the change in our Immigration laws, which operates not only to restrict the number of immigrants that may *legally* enter our boundaries, but also has been so worded as to materially change the character of our future imports. In this connection we must form at least an elementary idea of the housing conditions to which the new classes of immigrants have been accustomed, in order to provide the kind and cost of housing they should find in this country if we expect them to become and remain contented and loyal citizens.

These two matters, together with an endeavor to discover what has been done or is projected in this country along the lines of European progress, should conclude this series at a point where it would contain information of the utmost value to those sincerely interested in the housing problem in this country.

First, let us regard the recent changes made in the classes of our immigrants. In the May article of this series something was said about this matter, although at that time the bill had not reached either its final reading or completed form. Nevertheless, it was passed eventually and in substantially the form that was there presaged.

The immigration bill now in force was signed by the President on May 26. It

definitely establishes for three years a quota of 2 per cent. of the number of any nation actually in this country in the year 1890, as the number that may be admitted in any one of the three years. This time limit seems to indicate a disposition to open the subject to further discussion, but the law also contains a provision that after July 1, 1927, the quota which under the above restrictions is something over 160,000 a year, shall not exceed 150,000, a reduction of 7% to 8%, to be divided among the many nationalities concerned. A survey of our population is indicated by this provision, that may produce interesting and unexpected results.

In order to realize fully the peculiarly drastic restrictions of the present law, a basis of comparison may be found in the year 1846, when 154,416 immigrants came into the country, while in the following year the number increased to 234,968. From then on the increase was rapid, and in 1854 it was 427,823. The Civil War caused some interruption, but by 1873 the total was 459,803, and in 1907 it reached 1,285,349. Except for our imposed restrictions it would undoubtedly by now have reached a total of 2,000,000—or more.

From 1835 to 1855, when the number of immigrants seemed so large in proportion to our population, our country was largely unsettled and labor was acutely needed, particularly in the West, where railroads were building and large agricultural sections were being opened up. Therefore, the immigrants were absorbed far more easily than in recent years, during which swarming hosts of foreigners have been dumped down in

our most congested centers of population and forced to adapt themselves to new ways of making a living. Perhaps we should have met the problem by taking them at once to inland industrial locations or agricultural districts, to healthier localities with better living conditions than are possible in our swarming centres.

The present bill has limited the number of immigrants, first, by reducing the quota from 3% to 2%, and, second, by arbitrarily basing this percentage on the number of foreigners listed in this country in the census returns of 1890, instead of in the census of 1910, the previous basis of computation. Not only did this change materially reduce the total from around 358,000 to about 169,000, but it also succeeded in so altering the proportioning of this smaller total among the European nations as to reduce, for instance, the Italian quota from 42,000 to less than 8,400.

In 1890 the majority of the immigrants came from the northern countries, and we find that the Germans were then 30% to the Italians 2% of our foreign population, a ratio that was much altered by the census of 1910. We are now admitting 126,000 Germans for 8,400 Italians, or about 15 to 1. Italian labor has always provided us with our cheapest class of unskilled workingmen. The Germans, on the contrary, afford a more highly skilled class of labor, demanding higher wages. As they have been furnished in their homeland with much better living accommodations than we give our best paid labor in this country, they are not likely to be pleased with what we have at present to offer them. Least of all will they contentedly accept our housing provisions when they find the cost of these much inferior accommodations will be somewhere from 8 to 10 times as much as they have been accustomed to pay in Europe. In place of fire-proof masonry, detached houses in gardens, or apartments in large groups around courtyards, they will be shown crowded, unclean dwellings, mostly of wood and without attractive surroundings. They will not be within easy walking distance of their work and the ex-

pense of transportation will have to be added to their large rentals.

Much the same situation will exist in regard to all the races whose entrance will be favored under our new law. Yet, having intentionally changed the type of our immigration, we can hardly escape the responsibilities accompanying these changes. In these articles thus far we have found no easy means of relief from existing housing conditions. Tax remission, the only parental means we have yet attempted, now stands discredited. The employer in this country is not willing to take on the responsibilities of the landlord, as is done so universally abroad. Our city, state and national government have no adequate idea of the responsibilities confronting them, nor have the taxpayers!

Let us see what has been done in those countries in Europe from which our new inhabitants are coming. What will they expect of us in this "land of opportunity?"

The new bill will admit far greater numbers of the northern races than the old law permitted. People of Germany, Great Britain, Ireland and the Scandinavian countries will be the most favored groups under the new law, as against those from Italy, Eastern Europe and Asia. But the present law does not admit large enough numbers from these favored countries to relieve our labor shortage. In other words, it is definitely intended to maintain a labor shortage in order to force labor costs higher and higher each year. This means more complete control by the labor unions and will operate to make costs increasingly higher, particularly in such fundamental industries as agriculture, building and the clothing trades.

This new law has not been in operation long enough for us to realize that it not only restricts the number of immigrants, but through the change in the proportion allowed from the various nationalities, eliminates all the cheap unskilled labor—the Italians, Czechs, Poles and Russians. The more skilled and intelligent class of labor found in Germany, England and Scandinavia are also

apt to be more discontented, so we are introducing more social unrest into trade and professional lines already unsettled by constant labor agitation. Finally—and this is the point of particular pertinence to those readers interested in our national housing problem—all these peo-

ple prepared to find some means of housing them, let alone feeding and clothing them, as adequately and conveniently and cheaply as has been done by their home governments; and if so, how will we set about the matter? That is a point of departure at least, for the present article.

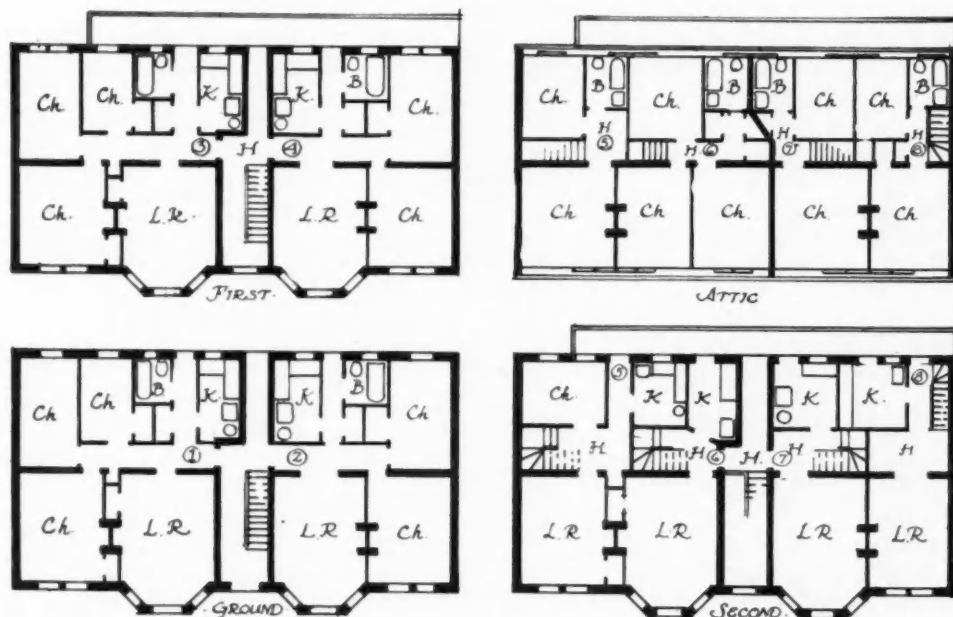


Fig. 42—Plan of Four Story, Eight Apartment Unit  
BOROUGH COUNCIL HOUSING SCHEME, BETHNAL GREEN, LONDON, ENGLAND

ple have been accustomed to greater cleanliness, convenience and cheapness of living conditions; and while, on first hearing, the wages promised them in this country will sound most inviting, what will be their feelings when they discover that their clothing will cost them three to four times, their food two to three times and their homes six to ten times as much as they were accustomed to pay for such necessities in their own countries; and at that, none of them will be as satisfactory, as convenient or as good!

Will we be making contented citizens in this process, or will we be educating malcontents of a more dangerous because more intelligent class? If we are willing to increase our own living costs in order to secure restricted immigration, are we

What have these particular governments of England, Germany, Belgium, Norway, Sweden and France done to care for their working classes.

The government of Great Britain is now under the control of the Labor Party.\* What are they doing or do they propose doing to provide low rental housing for their lower paid working classes?

Of course most of us know something about what has already been done in that country. The article in the August issue touched briefly on some of the housing provided by employers for their employees as well as others, and all those interested in the matter of housing know how well established is the English policy of the "Garden City" plan, and the

\*This article was written before the dissolution of the British Labor Parliament.



Fig. 43—Street View of Cottage Type of Municipal Housing  
GARDEN CITY SUBURB OF OOSTZAAN, AMSTERDAM, HOLLAND

housing suburb with small individual family cottages (Figs. 43 and 44) scattered through beautifully landscaped grounds, available for rental at sums equivalent to our \$2.50 to \$6.00 a week, even when in London or within a half dozen miles from that city.

England has also provided some apartment types, especially in the larger city suburbs that are often the direct product of the municipalities themselves. During the war the English Government succeeded so well with the housing of families engaged in war industries that a continuance of its parental control, as well as an extension of it in succeeding years along practical and helpful lines, was easy.

A consideration of the most recent steps taken by the British Government toward bettering the housing conditions of the lower paid working class will afford the best view of the situation.

The first big piece of social legislation to be put through Parliament was the Housing bill of the Minister of Health, Mr. J. Wheatley, which takes the general form of an enormous subsidy, increasing every year for a fifteen-year term, with

amortization continuing over sixty years. It provides for 2,500,000 houses in fifteen years, beginning with 90,000 next year, and going up to 225,000 annually from 1934 to 1939. This bill proposes to make the working class tenant a yearly gift of from \$45 to \$60 on his rent, lowering rentals for this amount on new construction. This, of course, cannot be done except by lowering rentals also on all older competitive property, on which the owners can obtain no Government assistance, thus inevitably exploiting the existing householders as a class and causing the departure of capital into other fields.

Undoubtedly, if once put into actual operation, it will offer considerable immediate relief, but it remains to be seen if this can be done without disturbing the return to normal building, housing and business conditions, by arbitrarily depressing rentals below their real economic level. In other words, it will operate differently from the subsidy arrangement, the results of which we have traced in New York, but by the same disturbance of natural forces must bring disastrous consequences in its wake. It also will be impossible to put it into op-





Fig. 44—Cottage Type of Municipal Housing  
GARDEN CITY SUBURB OF OOSTZAAN, AMSTERDAM, HOLLAND

eration without mulcting the taxpayer of at least \$5,830,560,000—an annual charge of \$150,850,000—or about 1% of his national income.

In spite of this the housing shortage in Britain, particularly in the poorer districts, has been so acute each year that no political party seriously opposed this new legislation. It also met with the approval of the builders' and trades' unions, the more so as previous schemes, such as those proposed by Addison and Chamberlain, resulted in an insufficient number of houses. Moreover, those that were erected, as is so often the case in America, did not go to the working people, for whom they were originally intended.

In England before the war there were annually built from 50,000 to 100,000 houses for working families. It was calculated that even this number of new dwellings fell below the total necessary to replace the annual wastage. The war interrupted this process, and afterward no new buildings in this class were erected by the landlord who had previously built them, because of the law forbidding raising of rents above pre-

war valuation sufficiently to make construction profitable. With building materials at from two to three times higher than before the war and with wages in the building trades increased, the owner could no longer obtain even the modest percentage that he had been able to eke out on this class of property before the war, and could hardly hope for more than a meager 2% to 3% return. Consequently in England, as in America, the endeavor to remedy conditions by laws interfering with economic principles resulted only in diverting capital that might have otherwise gone into this class of building construction, into other fields. England now finds herself confronted with an estimated shortage of one million homes.

The Wheatley bill proposes to limit the rentals from property improved through this subsidy. It limits the use of the subsidy to specific types of laboring men's houses. The fallacy of this scheme is that, in the endeavor to keep the rental of workmen's houses below the natural economic level set by the evaluation of other business conditions, a subnormal return is received from the capital thus invested. This automatically cuts down all new

building, and the taxpayer, already much overburdened in England, is asked to step in and carry the load. Either he or the landlord must meet the deficit. To maintain a proper economic balance the worker must be given a wage large enough to pay an economically fair rental for the property he occupies. Otherwise our entire economic system must inevitably be upset. If he is paid a larger wage, by the time that increase reaches the consumer it will have doubled or trebled; on the other hand, if the tax is increased an equal amount, it will also be increased before the burden reaches the taxpayer, as a result of the general inefficiency in government disbursements in contrast to the economy with which similar business is carried on under private control.

Once the natural levels of supply and demand are disturbed, the end cannot be ascertained. Mr. Wheatley has already cause to suspect that the demand for building materials necessary to carry out his program will cause unusual disturbances in the scale of prices and so has asked for dictatorial powers, with fines and jail sentences for those who attempt to profiteer unduly. This demand, along with other evidences, already indicates that this elaborate government program is likely to fall apart by its own weight and its lack of understanding of the true industrial and financial conditions.

No fixing of prices by law has ever long survived. We have had instances with wheat, silver and other commodities. "Pegging" of prices has been difficult, even in war times. When undertaken for so long a period as fifteen years it becomes an obvious impossibility. The whole scheme is founded besides on a weak link—the labor unions. Their hearty coöperation is necessary for its successful outcome and labor has never worked so well nor so steadily for the Government as it has for the individual.

Under this bill a working man who desired to buy a house could choose between three methods. He could rent a municipal house at perhaps fifteen shillings a month; he could borrow from a Building Society to build himself under the Small Dwellings Acquisition Act, or he could join a Public Utility Society and

have his house constructed with their assistance.

In working under the provisions of this bill the local authorities have a Government subsidy of nine pounds per house for forty years, to which they may add a Municipal subsidy of four pounds, ten shillings per house. The rental allowed is only the pre-war rate, plus a 40% increase, and the house thus constructed *must* be let and not sold. Legislation is also proposed for increasing the number of apprentices and shortening the length of their apprenticeship, though how this is to increase either their output or their skill is not explained. On the material side, the brick manufacturers are to be required to provide the quantity needed in this gigantic program at a charge not to exceed the January, 1923 prices, and other materials are to be correspondingly limited in price.

From all this it is evident that the building field in this class of construction will be left largely, if not wholly, to Government enterprise, and that the behavior of labor under this kind of employment is not likely to be such as to make it a profitable experiment; that what success is secured can be obtained only at the cost of the landlord class, and that the taxpaying classes will foot the bill for any deficit! This hardly appears any more plausible a venture than our own experiments with a subsidy in this country, and its failure may prove dangerous for the Labor Party in England.

Most English housing, as we have already shown, even in London, is likely to be of the cottage rather than the apartment type, with dwellings and surroundings similar to those shown in Figs. 43 and 44. Of a number of reconstructions undertaken by the London County Council, however, a few have been four or five-story apartment houses of a type practically unknown in this country, although in use on the Continent. It possesses certain advantages, particularly in the class of rental property we would generally term "walk-up" apartments.

Take a four-story structure, for instance, such as the Borough Council has lately started at Bethnal Green. Here a considerable area has been cleared and

will be given to seven blocks of buildings containing a total of 86 flats and 80 "maisonettes" (Fig. 42). The two lower stories are given over to apartments consisting of living room, bath, scullery and either two or three bedrooms. Two apartments open from the landing on the ground and first (what we would call the second) floor. The public hall and staircase continue to the floor above, which is

staircase, thus securing two apartments for these two upper floors, both renting at more than would be obtainable for the top floor otherwise. The outdoor balcony is always clean, light and well ventilated, as are the apartments opening from it. There are no dark corners or halls to be kept clean, which saves janitor service. The balcony is always available for use as a "porch," and a means of egress

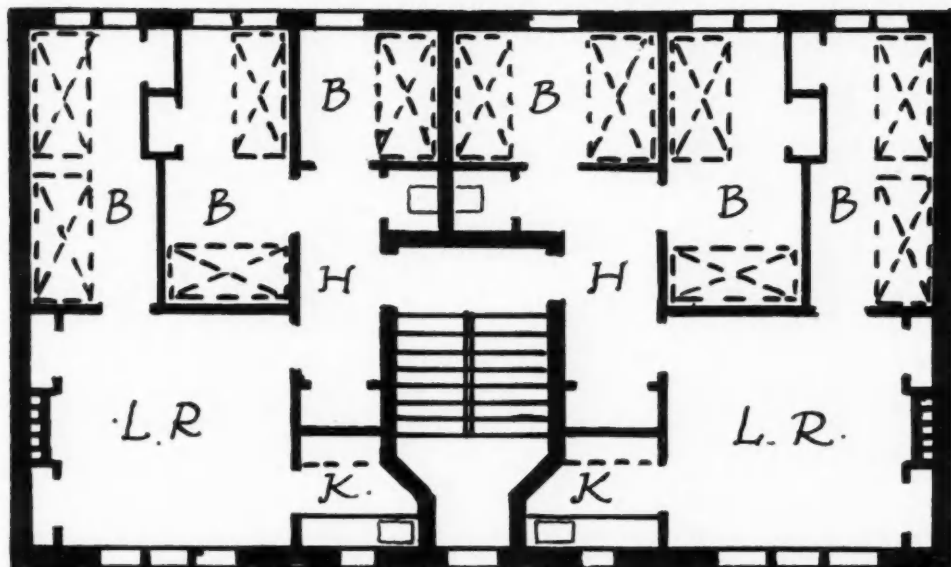


Fig. 45

Plan of Apartment Unit, Municipal Housing, for Large Families

the living floor of individual "duplex" apartments (as we would term them) with their bedrooms located on the next floor above; thus all the upper apartments may be reached by going up only two flights of stairs, the tenants having a private stair to their bedroom floors.

The English also have worked out an ingenious device which in some portions of this country would be open to the same objections as the "open stair" tenement. From the top of the second flight of public stairs a passage opens on to a balcony that generally continues across the house at front or back (Figs. 42, 48 and 49). By means of this balcony access is obtained to the portions of the upper floors that are farthest away from the public

(fire escape) in case of fire and panic. In Fig. 42 is shown some sketch floor plans of such a plan arrangement as it has been developed, illustrating all four floors in order that the scheme may be fully understood. The exteriors of these English apartments are, in the best examples, always successful exponents of the simpler forms of direct brick Georgian composition, depending for their effectiveness on the good proportions of the openings, their sturdy framework, and the cheerful contrasts of white paint and red brick.

Holland and Belgium have done much along the line of Low-Rental Housing. In Belgium there exists the "*Société Nationale des Habitations et Logements*



Fig. 46—Façade on Playground  
 APARTMENT BUILDING OF MUNICIPAL HOUSING DEPARTMENT,  
 AMSTERDAM, HOLLAND

*à Bon Marché*" consisting of joint stock or coöperative societies. Of these there are three types whose interests are in Local, Industrial or Coöperative Housing, with dividends limited to 5%. Here the well-thought-out financial basis of encouraging or supporting housing operations by public funds is well worthy of special consideration. It is similar to the schemes employed by all the other governments that have been most successful in achieving actual results.

The Government has established a credit of 355 million francs, in addition to 150 million available for use in 1924. This money is to be used for loans for construction of certain accepted types and may run for 66 years at 2% interest. Local capital may be subscribed, and supplemented by one-fifth of the value of the housing supplied by the state, and another fifth by the province, both funds being available for Local or Industrial housing by employers. The National society lends up to five times the amount subscribed or five-sixths of the total building cost, for all housing used for the needy, invalids, ex-soldiers

and for those dislodged by the war. For industrial housing the employer must subscribe more of the total amount, State and National sources lending about two-thirds of the total building costs. For coöperative housing the tenants subscribe about 3,000 francs each, the State and Province about one-fifth of the cost each, and the National Society may lend five times the amount subscribed, or about five-sixths of the total cost. If there is a deficit in a well managed society, relief may be also given to the extent of one-quarter interest and repayment charges.

Unlike the English regulations, these societies are encouraged to sell completed houses in order to replenish their funds, and then re-employ the amounts thus secured in new building. Both prices and the class of occupants are controlled by the Minister of Finance and Labor, and a State subsidy of 2,000 to 3,600 francs may be allowed. The purchaser may also borrow at the rate of 4½% to 5% from the Credit Society, while the Province may also give a subsidy, available to permanent purchasers only.

By November, 1923, 249 Societies had

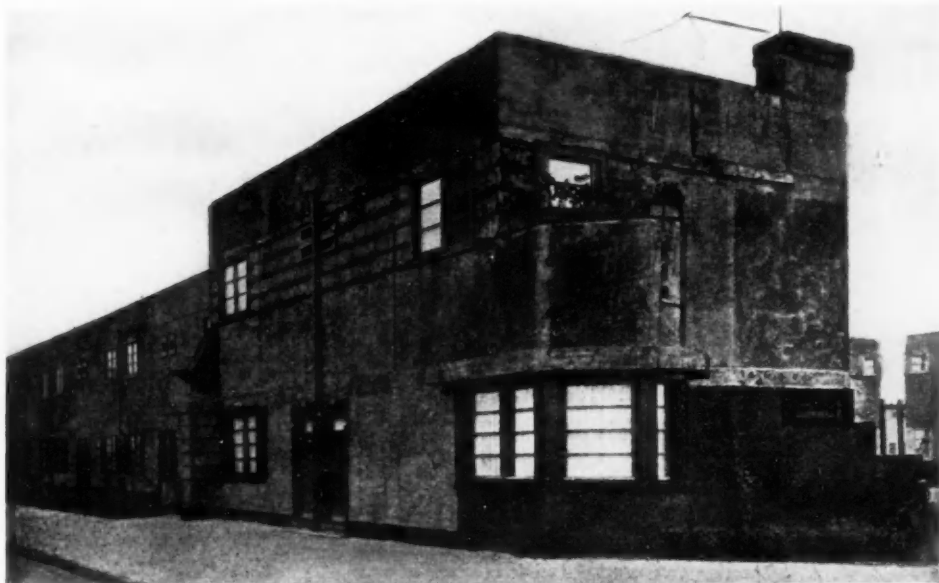


Fig. 47—Concrete Flat Roofed Houses  
MUNICIPAL HOUSING DEPARTMENT, AMSTERDAM, HOLLAND

been approved, 1,524 houses had been built under this plan before the war and 8,000 since, up to June, 1923, when 10,600 more were being built. Over 500 had been sold and the proceeds were being used to build new dwellings.

In the Netherlands the methods of securing up-to-date housing accommodations are somewhat different. In the larger cities, Amsterdam for instance, an earlier tendency had been evidenced for higher buildings than are now permitted. Originally dwellings of four stories were allowed in certain sections. But laws passed in 1912 reduced the height limit to three and in 1919 it was again reduced to two stories, for certain residential districts. For all cities over 10,000 population the Municipality is obliged to provide for the systematic extension of housing from year to year. For such extensions the Government advances money for purchasing land in those cities where the town does not itself already own its land. Amsterdam owns and leases all land within its limits, thus securing a permanent income and complete control of the uses to which the property is put.

The Government also grants advances

to Municipalities to enable them to lend money to landowners unable to afford necessary improvements in all old, run down properties; for the laws require surveys of existing housing and demand improvements upon it at regular intervals. This, unlike the custom in America, sometimes causes landlords to rebuild old property instead of merely continuing forever to repair it piece by piece. The result produces more modern and clean living conditions even in the oldest, most rundown dwelling portions of the cities.

Cities are also required to commandeer bad quarters and clean out and rebuild these sections with modern housing, the Government granting advances to the municipalities and sharing any deficits both in land purchase and in low rentals. These advances are made at the same interest rates the Government itself pays, and redemption is by annuity, operating in from fifty to seventy-five years. It is made a condition of these loans—both to building societies and municipalities—that profits are to be applied to further improvements in local housing. Both the planning and the letting of all premises thus subsidized are under control of the

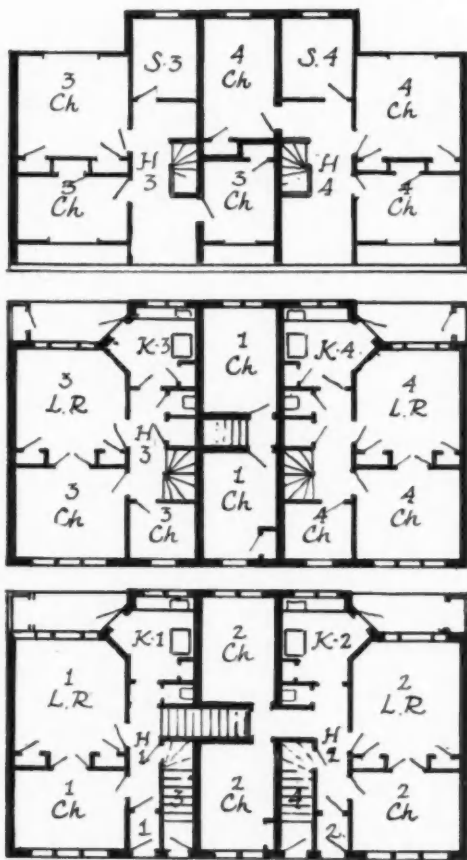


Fig. 48  
Plan of Four-Family Apartment House with  
"Inserted Section" of Additional Bedrooms in  
the centre

Municipality and the Government. One of the stipulations made by the Municipality as a rule, is that it may take possession for debts incurred by the building societies, so that, at the expiration of the loan, the Government may come into possession of all such property at little cost.

In Amsterdam, since the recent act went into effect, building societies have built and let 11,253 dwellings, have 1,640 in process of construction and 2,670 projected. Private enterprises with Municipal assistance have let 6,799 dwellings, have 4,857 in course of construction and 4,816 projected. The Municipality has built and let 6,335, has 474 in course of construction and 1,570 are projected.

During the war the increased costs of building necessitated the raising of rents to a point where needy families were unable to afford them. In such cases the Municipality arranged with the societies erecting such houses to pay these extra expenses itself for five years in order to keep the rental within the means of the poorer classes of occupants.

Later the Government contributed 75% and the Municipality the remaining 25% of these enforced increases, both in material prices and interest rates, which had risen from upwards of 3½% before the war to 5% or higher. This arrangement continued to 1919, when the Government stopped its double contribution, but continued to bear with the Municipality its full proportion of the deficit still being incurred by renting these houses at low figures. All tenants whose income exceeded a certain figure had to pay a higher rent. Later still, a part of this increased expense was added to the rents, increasing from 50% of the higher building costs upward.

Immediately after the war, to encourage building by private builders, premiums were offered for the erection of dwellings not exceeding 450 cubic meters, for the use of artisans of the lower middle classes. These premiums were, in Amsterdam, a maximum of 2,500 florins (about \$1,000) and 2,200 florins (\$880) for the rest of the Netherlands, and were gradually reduced as conditions became more normal. During 1921, '22 and '23 the Government paid a premium on a total of 83,825 dwellings.

The oldest public utility societies, whose interest it was to improve housing conditions at cost or near cost, date from 1852. Eight of these societies built over 2,000 dwellings, mostly of two rooms, sometimes with kitchens and always at extremely low rentals. These houses are, of course, of rudimentary design, often built back to back, with a common stairway, but they answered an immediate need. Later, certain types of houses providing special accommodations for large families were built, with the financial assistance of the Municipality.

The Municipality of Amsterdam built

dwellings for rental as early as 1874. In 1914 the City undertook to erect 3,500 dwellings for rental below cost to people who could pay only as much as \$1.00 per week. Owing to the war the costs of construction were nearly double those estimated, and consequently these structures were finally let to a higher paying class whose housing needs were equally imperative, and the lower paying groups were accommodated elsewhere, partly in temporary emergency houses. These dwellings are still in use, both because of the housing shortage and because they meet the needs of a number of people whose income and ways of living do not render them eligible for permanent Municipal dwellings. Recently the rise in the price of bricks and in the wages of building laborers has caused the City of Amsterdam to experiment with small apartment buildings of concrete and other mechanically handled materials, in the endeavor to arrive at lower cost methods of providing low rental dwellings (Fig. 47).

A Municipal Housing Office has charge of the letting of these City-owned dwellings, of which Amsterdam has now 5,044 permanent and 1,182 temporary. Each housing group has generally a resident woman inspector, who collects rents and keeps in touch with the tenants, endeavoring to guide those among them of the lower social status toward better standards of living.

Great care is necessary in assigning new buildings. People capable of paying rent, but with not too large an income, are selected; and to avoid overcrowding the size of the families is considered, not too many children being permitted in one house; not two bad families side by side, nor a bad beside a respectable family.

Of the permanent buildings now owned by the Municipality, 1,373 were taken over from societies at a cost of 4,120,000 florins (\$1,648,000); 2,671 were erected at a cost of 22,374,000 florins (\$8,949,600)—the greater part being borrowed from the Government—and 1,000 more, along with the 1,182 emergency dwellings, whose cost was apportioned between the Government, 9,967,000 florins (\$3,986,800), and the

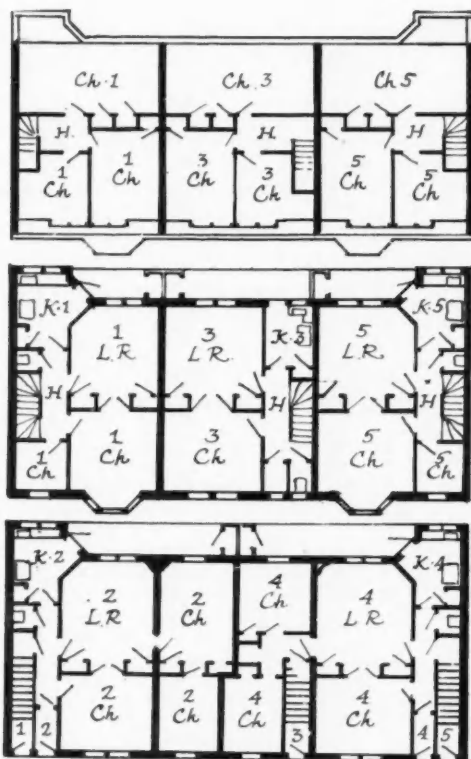


Fig. 49

Plan of Five-Family Apartment House, Two 5-Room Ground Floor Apartments, One 6-Room and Two 7-Room Duplex Apartments One Flight Up

Municipality, 3,723,000 florins (\$1,489,200).

Aside from the last group, 649 dwellings only are self supporting, and a deficit in the letting of 3,395 houses is shared between the Municipality, paying 364,000 florins (\$145,600), and the Government, 347,500 florins (\$139,000). All repairs are done by the Municipality, employing a permanent staff of 65 to 70 workmen of various trades for that purpose. Finally, as in Belgium, it is felt that the subletting of rooms to boarders is a detriment to the best family life, so this is prohibited, the unmarried of both sexes being cared for in large hotels or "hostels" provided for the exclusive use of one sex or the other. The city's annual income from rents is about 1,809,270 florins or approximately \$723,708.

Careful control is exercised over all housing built with Government or Muni-

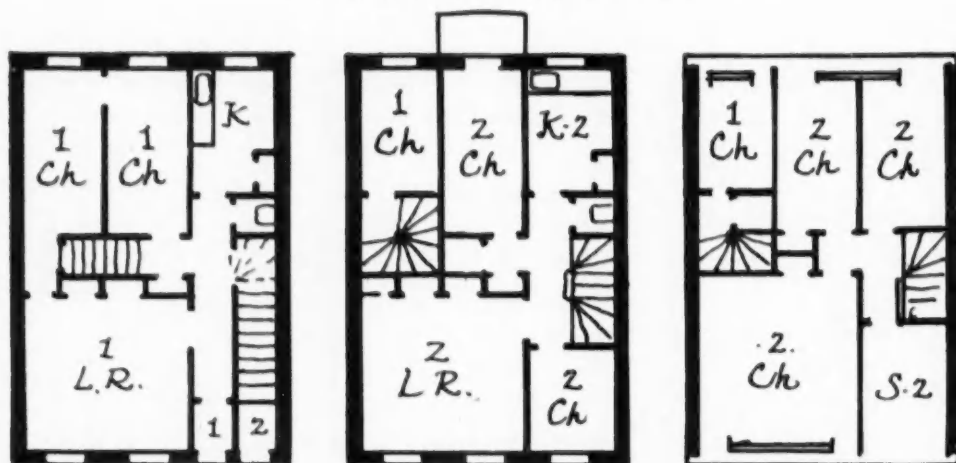


Fig. 50

DOUBLE DWELLING UNIT, AMSTERDAM, HOLLAND

cial subsidy. Returns of rentals are made on regular forms weekly, and the societies are required to pay every month about 80% of their total income into the Municipal bank. Against this is charged ground rent, interest, loan redemption dues, house tax, water rates, etc., and interest is allowed on unused deposits. The proportion retained by the societies pays for upkeep, office expenses, repairs, etc. Insurance is carried by a blanket Municipal insurance fund.

Aside from the houses built or owned by the Municipality, twenty-three societies possessing 9,239 completed dwellings, and a large hostel, are controlled under a total of advances amounting to 61,204,000 florins, or \$24,480,600. Revenue from these rents now totals 3,230,000 florins, or \$1,292,000 per annum. In addition 1,328 buildings are now under construction. About one-quarter of the completed dwellings are self-supporting.

Advances made during the war toward middle class dwellings cover about 1,000 structures and a total of about 7,000,000 florins (\$2,800,000) have been distributed on this class of buildings. In addition Government funds to an amount of about 5,784,000 florins (\$2,313,600) have been provided toward making up excess war costs on this property. The societies are required to make the rents cover from 150% to 180% of the estimated

1914 costs, the Government paying 75% and the city of Amsterdam the remaining 25% of the difference. The Government has also advanced premiums to private builders, guaranteed by the City, to the amount of 8,729,000 florins (\$3,491,600) on 1,570 dwellings. This is the record of a single city in Holland which had, in 1921, a population of 683,136!

Several types of apartment plans have been tried in Holland, most of them based on enlargements of the regular plan, particularly various methods of obtaining additional rooms on the upper floors to increase the capacity without enlarging the areas of the ground and first floor apartments. In one scheme there is an "inserted section" (Fig. 48) between two apartment units, the rooms of which are redistributed at will. A five dwelling type (Fig. 49) with two lower and three upper dwellings, is another method, while still another has two families with the lower apartment having one or two of the rooms on the upper floors added to it.

Certain general characteristics are to be observed in all these plans. First, the use of the living room to connect directly with the other rooms of the apartments, thus saving the area usually required for the hall or corridor, which in these plans is usually limited to a small entrance vestibule, and often not even that. Next it should be noted that while one room only



is given for both living and dining purposes, yet the plans are often so disposed that it is possible to use one other room either as a living or sleeping room, according to the needs of the occupants.

Finally, it might be said that the omission of the customary American type of bathroom is not to be taken as meaning a lack of cleanliness on the part of the occupants. These groups all have public baths and other facilities, while the Continent has a custom of combining the lavatory with the bath or another plumbing fixture, so that we often fail to find it specifically indicated on the plan. Even in North America the mere inclusion of a bath room in the plan does not necessarily mean that it is used for its original purpose. The toilet itself does not receive any direct ventilation or light in outside locations, in the plans shown. This fact means merely that the building regulations in these countries are lacking in many of the expensive and often unnecessary requirements that are imposing excessive costs to similar building operations where we have attempted them.

These illustrations have been selected from the housing structures built by Municipalities and by some of the Societies, while Figs. 43 and 44 illustrate the Municipal use of the Garden City idea, on lines exactly parallel with those most advocated in England. While this group is a comparatively small one, its success has led to a far larger scheme, the Nieuwendam Garden Village of about 1,000 dwellings, all of which will provide space for a "douche" and will also include a few houses for aged people, providing one living room, a scullery, a bedroom and a small storage space. The Oostzaan Village has an average of 37 dwellings per hectare (about fifteen to an acre) of three bedrooms, living room and kitchen for the most part, and this suburb has

recently been enlarged by three hundred dwellings, with more projected.

In The Hague are a number of groups of both private and public housing. At Duindorp are over 800 small houses with sloping tile and flat roofs, for one and two families, rented at from \$1.00 to \$2.00 a week, with larger dwellings running to \$3.00 a week. In the western part of the town are a number of buildings built by private individuals—aided by premiums from the state—with flats on the ground and two upper floors, with separate doorways from porches reached by stone stairways.

Another group built by the Municipality is available at Braamstraat at monthly rentals of from \$14.50 to \$18.00, or these same dwellings are for sale at \$2,200. At Trekweg about are 1,800 houses, built since 1916, with two-family houses on the smaller side streets and three families on the wider streets, living one over the other, at rentals of from \$2.25 to \$3.00 a week. The first of these houses cost about \$1,000, those built about 1920 cost \$2,650, and in 1924 the same type cost about \$1,175.

In Norway the local authorities guarantee the loans made for dwellings of this class. A dividend of only 4% to 5% is allowed, while the state has a fund of 17,000,000 kronen available for housing needs. In 1913 this country had 243 societies owning 6,599 houses, and there are now many times that number.

Sweden has a fund of 48½ million kronen for housing purposes. It is given free of interest for the first year, and 4% is charged thereafter, with an increase of 6% in the seventh year, when a sinking fund starts for the repayment of the loan at the end of the maximum 34-year period. The national loan is not over 50% of the building cost, but the municipality sometimes lends an additional amount.

— The —  
ENGLISH PARISH CHURCH  
AND ITS DETAILS

By  
*Robert M Blackall*

*Measured Drawings and Photographs by the Author*

THE CHURCH AT HAILES,  
GLOUCESTERSHIRE

Not far from Gloucester, in the heart of the Cotswold Hills, lies the little town of Hailes, the site of the large Cistercian Abbey.

The church dates from 1246, although the foundations were laid in 1135. History states that Ralph of Worcestershire acquired the de Laci property and built a church and small castle, of which nothing now remains except portions of the foundations. In the fourteenth century alterations were made. In 1225 Henry the Third gave the Manor to Richard, making him Earl of Cromwell. In 1242 Richard, driven by a gale to Sicily, vowed that an Abbey should be built at Hailes if he was saved, and in 1246 the Cistercian Abbey was founded. The building of this new Abbey caused more changes in the existing church which were finished by 1277. During Cromwell's time, in 1539, the Abbey was used as a quarry for nearby buildings, and the entire group, with the exception of the Parish Church, was demolished.

The present church is a typical Cotswold church, in that the Cotswold stone replaces the half-timber used in other parts of England. It makes a beautiful proportion of materials with stucco walls, the tower half timber and stucco, with jambs of the windows, the buttresses and coping of the Cotswold stone, and the roof the gray slate field stone.

The nave of the church is 30 feet long, 18 feet wide, and holds from 50 to 60 people. Like the church at Stratford-Under-Castle, it is vaulted, and has a plaster furred surface. It is typical of the small one-nave, one-apse church, and has a most pleasing combination of materials.

THE CHURCH AT WEST CRANMORE,  
SOMERSETSHIRE

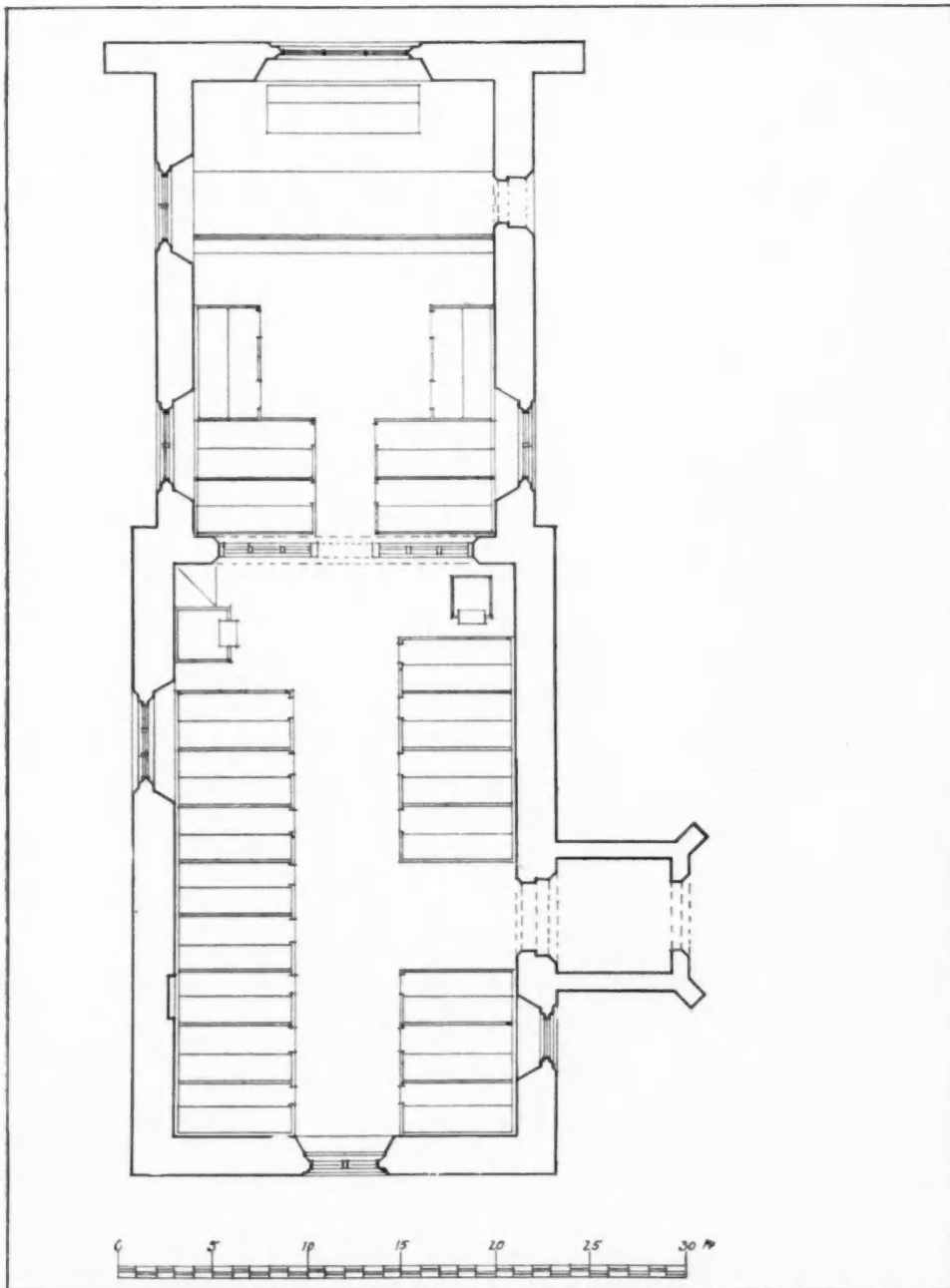
The church at West Cranmore in Somersetshire is a good example of the small one-nave, one-apse church which having become too small for the growing population, has an added aisle. It is clearly seen from the plan that the original church had but one aisle, and was built for a small congregation. The most natural addition has been an aisle, and later, when one aisle did not suffice, a second, as we shall see in some of the other churches.

The exterior of this church shows that it was undoubtedly remodeled when this aisle was added, but an examination of the interior of the nave shows it to be in general in its original condition. There are no pews in the church at present, chairs being used to seat the congregation. Field stone was used for the walls and tower, and simple wooden trusses and wooden ceiling for the interior.

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CHURCH AT RADLEY, IN BERKSHIRE

Like the church at West Cranmore, the one at Radley shows the first development of the English Parish Church, as the church with the single nave. The seating capacity becoming too small, an aisle was added to increase the number of pews. This church will seat approximately sixty people. The nave is 13½ feet wide and the aisle 7 feet. The wooden posts, separating the nave and the aisle, are interesting. They give the appearance of one large nave, as the roof slopes continuously from the center to the side of the aisle. To the right of the aisle a small chapel has been built, which at the present time contains the organ. This is a somewhat unusual arrangement.



*The Architectural Record*

*December, 1924*

Floor Plan  
CHURCH AT HAILES, GLOUCESTERSHIRE  
Measured and drawn by Robert M. Blackall  
[567]

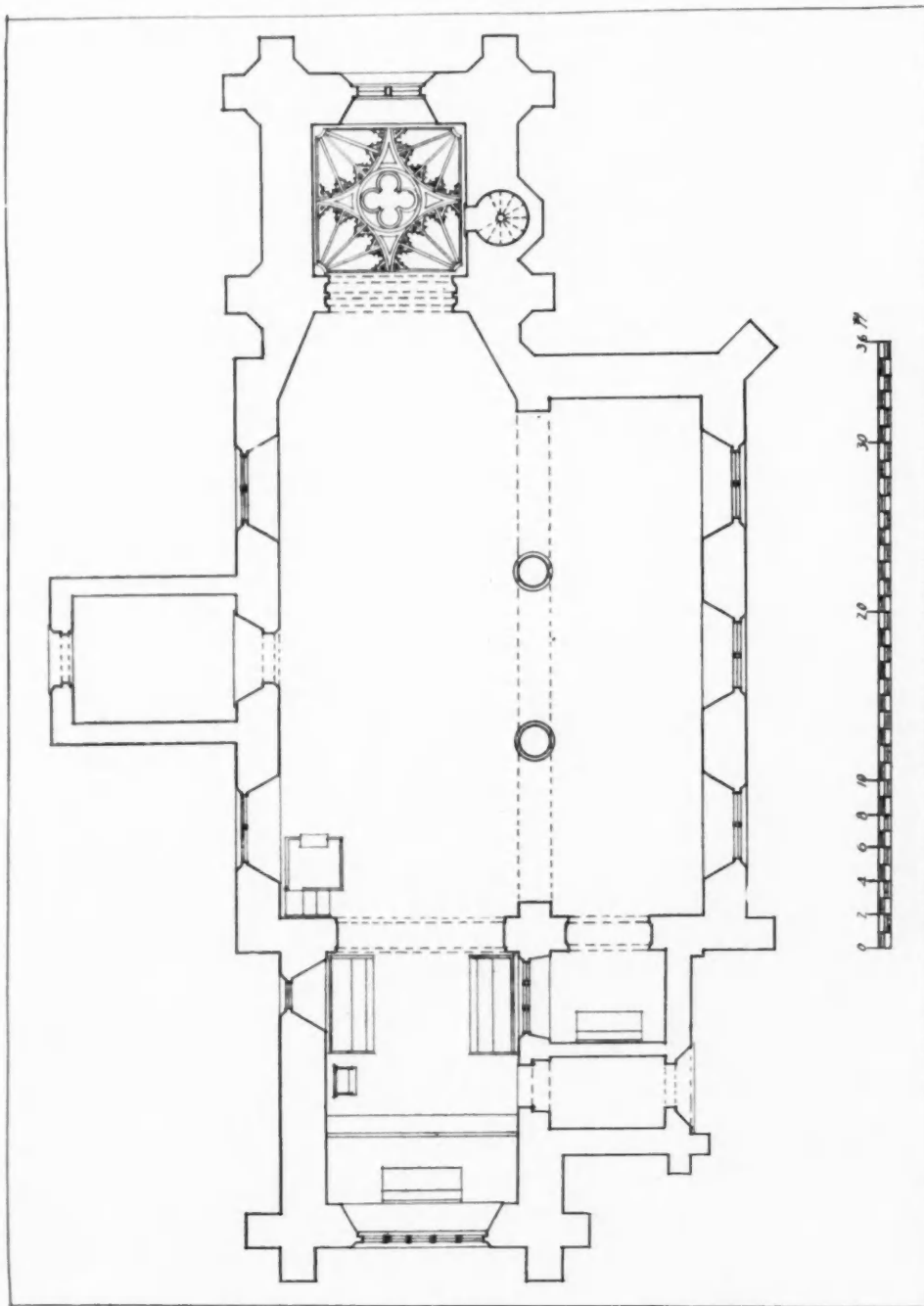


ABOVE CHURCH AT HAILES



RIGHT  
CHURCH AT WEST CRANMORE

Sectional Drawing and Façades  
CHURCHES AT HAILES, GLOUCESTERSHIRE AND WEST CRANMORE, SOMERSETSHIRE  
Photographs and drawing by Robert M. Blackall



Floor Plan  
CHURCH AT WEST CRANMORE, SOMERSETSHIRE  
Measured and drawn by Robert M. Blackall  
[569]



Façade

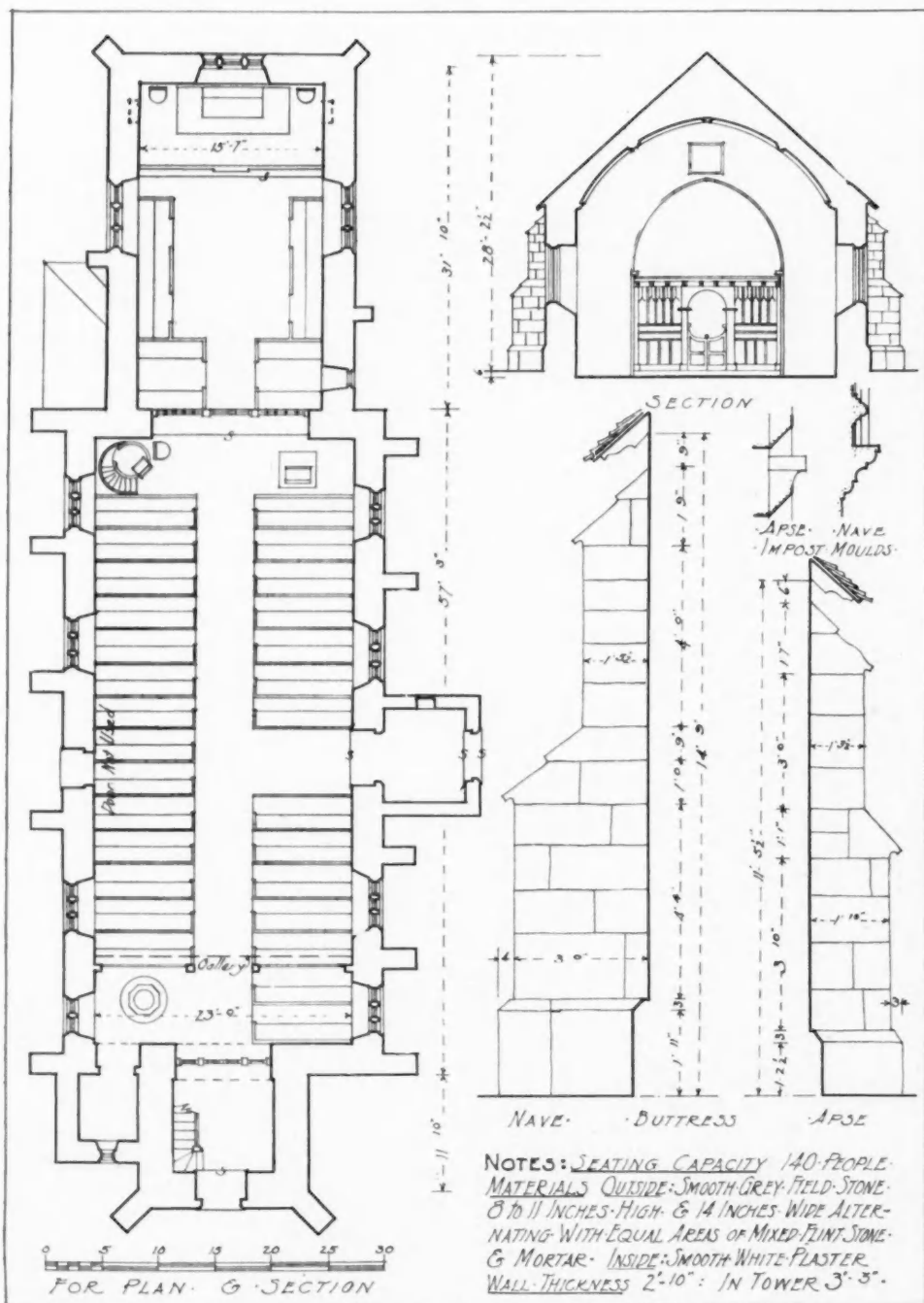
Nave



CHURCH AT STRATFORD-UNDER-CASTLE,  
NEAR SALISBURY

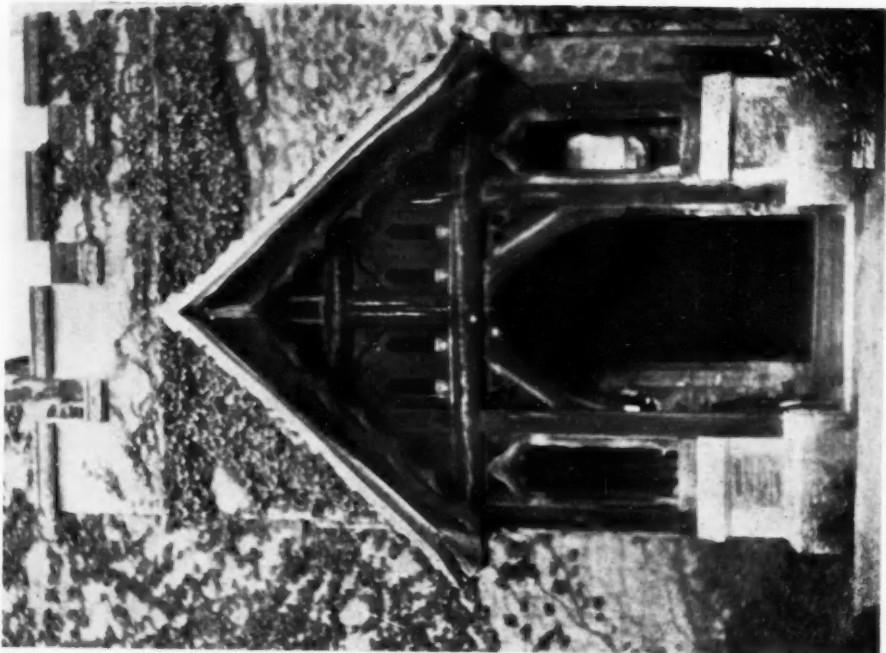
The church of Stratford-Under-Castle, which lies about three miles outside of Salisbury, is dedicated to St. Laurence, and was consecrated in 1326 by Brother Robert Petyt, Bishop of Enaghdone (Ireland), by commission from Robert de Morival, Bishop of Salisbury. However, there is a diocesan record referring to a chapel probably on the same site, in 1226. The bowl of the font is Norman, and may very likely be a relic from this previous chapel.

This church, like most of the English parish churches, contains work of many different periods. The original screen is fifteenth century. The church was re-roofed in the sixteenth century; the oak pulpit is of Jacobean times. In the nave is an interesting series of gilded wood corbels of later date, which with oak panelling and the east wall of the chancel, are after Grinling Gibbons. The grandfather of William Pitt rebuilt the tower. There is a tablet in the chancel to the wife of Admiral Lord Nelson. The clock in the tower is eighteenth century, with two bells, one dated 1594 and the other 1767.



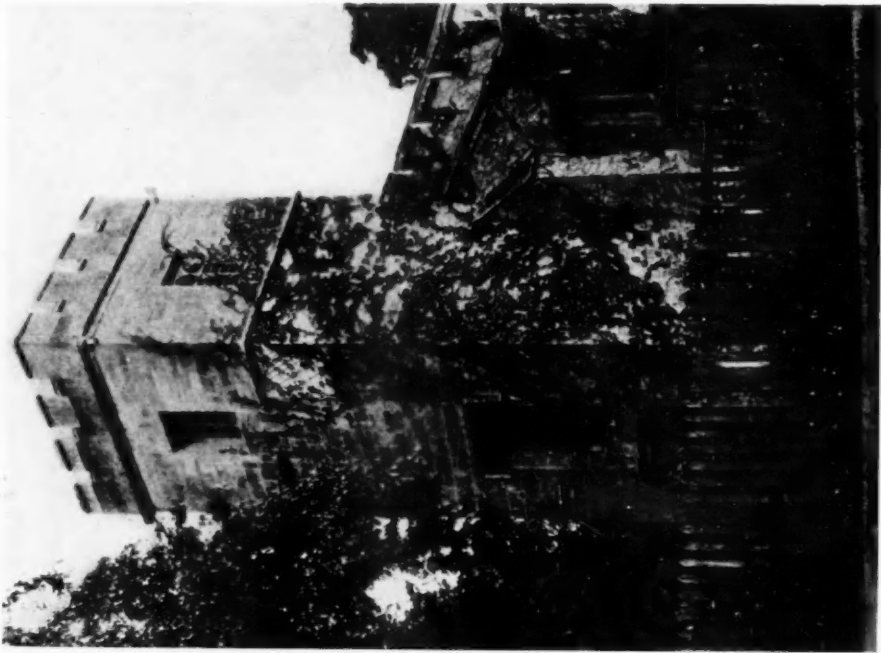
CHURCH AT STRATFORD-UNDER-CASTLE, NEAR SALISBURY

Measured and drawn by Robert M. Blackall



*The Architectural Record*

Porch

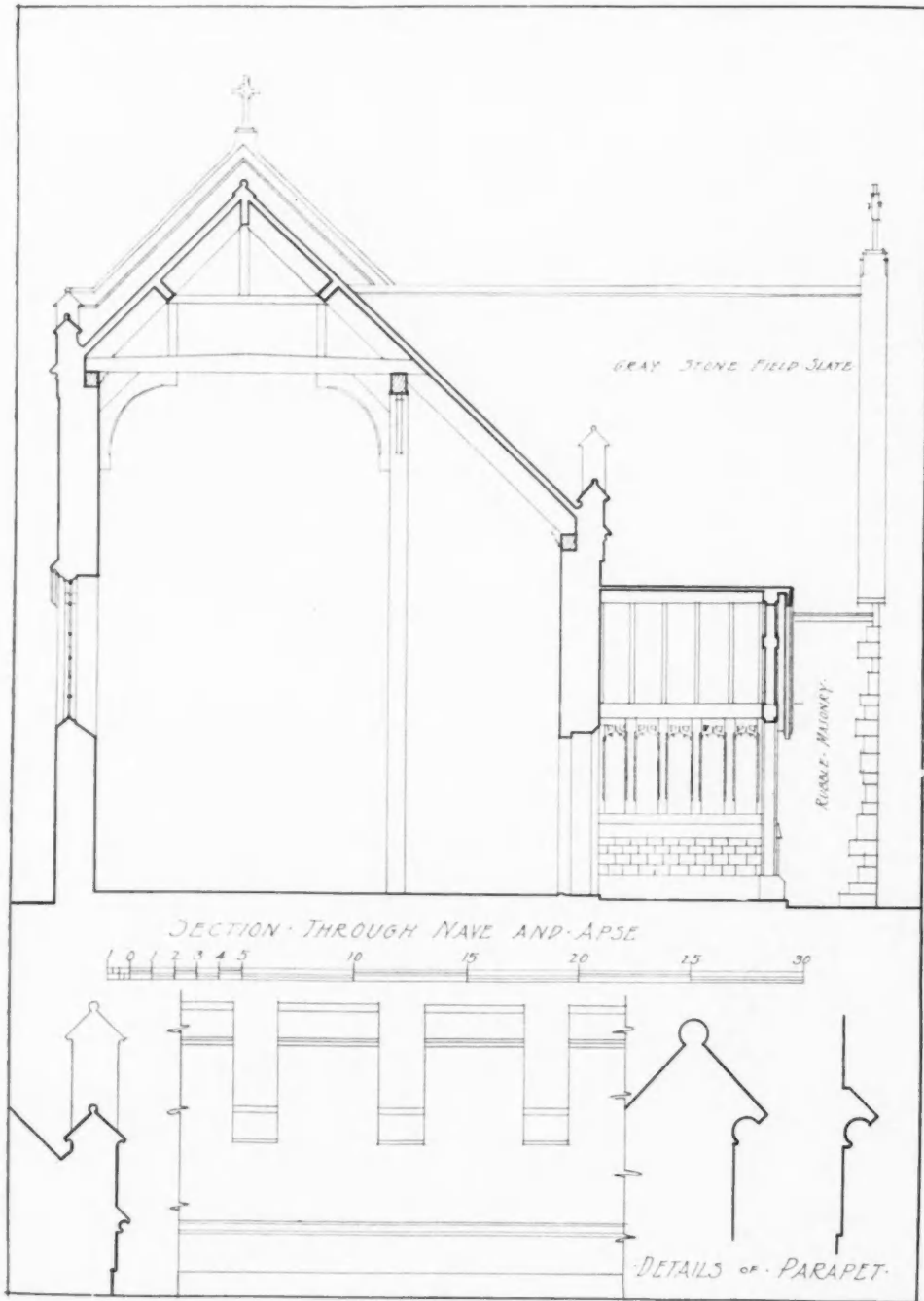


Tower

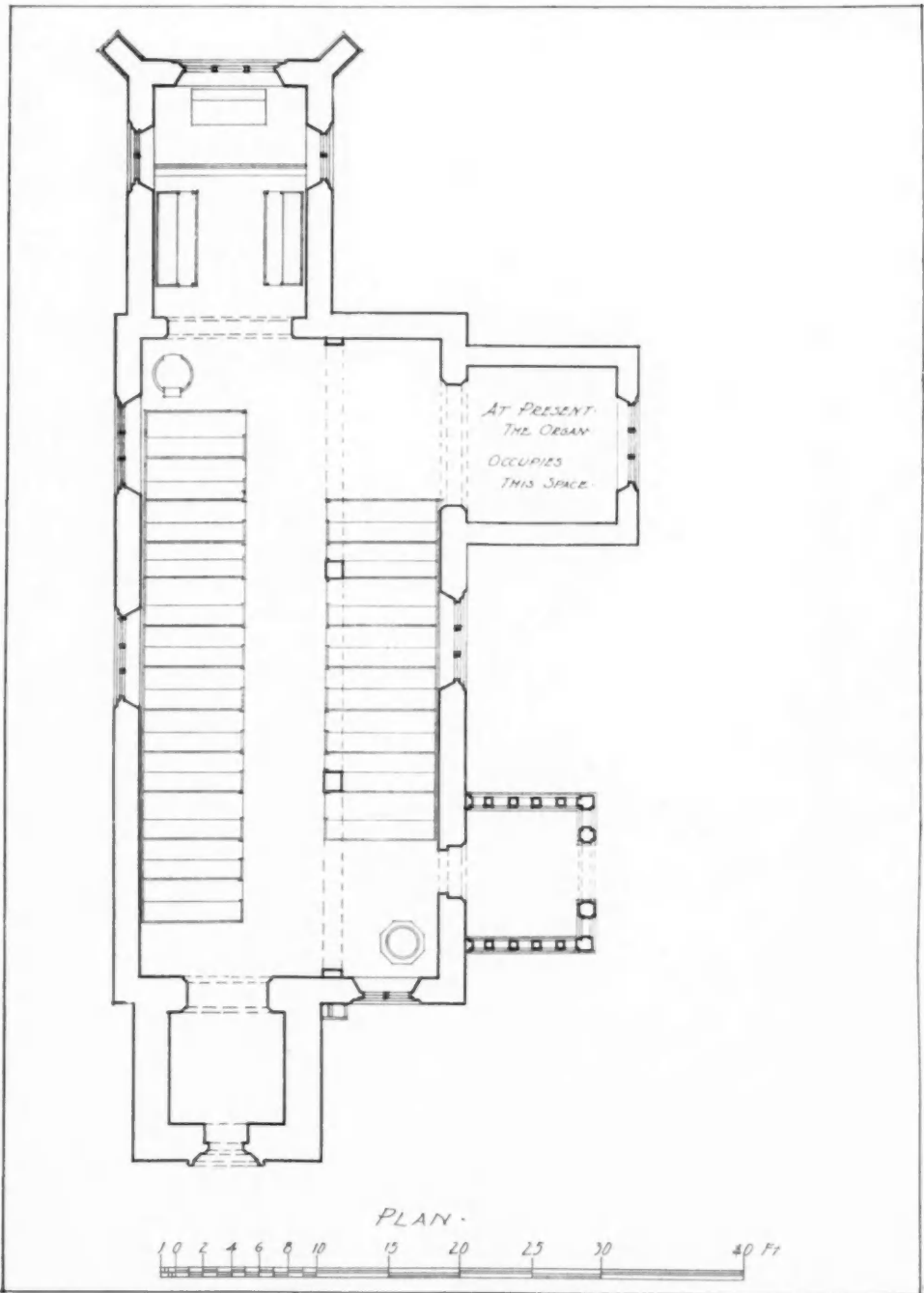
December, 1924

CHURCH AT RADLEY, BERKSHIRE, ENGLAND  
Photographs by Robert M. Blackall





Sectional Drawing  
CHURCH AT RADLEY, BERKSHIRE  
Measured and drawn by Robert M. Blackall



Floor Plan  
CHURCH AT RADLEY, BERKSHIRE  
Measured and drawn by Robert M. Blackall

## THE BUILDING PROSPECT FOR 1925

By THOMAS S. HOLDEN, Statistician

For F. W. Dodge Corporation

THERE WAS a secondary revival of building last winter that was not only great in magnitude but was practically without precedent. Ever since the slump of 1920 there has been organized effort to increase the volume of winter construction, and modify the seasonal irregularities of employment in the building industry. The minor depression of the summer of 1923 had represented a voluntary curtailment of building volume and was not caused by a slackening of the demand for buildings. In fact, the demand kept on growing stronger, while the volume of new work started was declining. An unusually mild winter, coupled with easy money conditions, provided the opportunity for a drastic reversal of precedent. Influenced by the desire to get projects under way before spring, an unusual volume of contracts was let. Aided by remarkably favorable weather, the actual work proceeded through the winter and spring at such a rapid rate that the enormous volume of construction was carried through without causing the serious strain on its facilities that the industry would most probably have felt had a like amount of work been attempted in any previous year.

This unprecedented winter revival had three results. In the first place, coming after the winter's 1924 estimate had been prepared ("The Building Prospect for 1924," as published in *THE ARCHITECTURAL RECORD* for December, 1923) it made revision of that estimate necessary shortly after its publication. That was the least important result, since any estimate, to be useful, must be continually revised in the light of new information. Second, and much more important, the winter revival enabled actual construction to catch up very nearly with the potential demand, for the first time since the war. Third, it probably established a precedent for winter building that alters permanently the normal distribution of building activity through the year.

The second result mentioned in the

paragraph above is the one with the greatest bearing on the present building prospect. Chart No. 1 [page 577], gives deferred construction ratios covering the period from 1919 to date. These ratios are for the 36 eastern states covered by the F. W. Dodge Corporation, similar data on the remaining states not being available. Since these 36 states contain seven-eighths of the total population of the country, the figures are fairly representative of the whole. The deferred construction ratio for January 1, 1919, was the ratio of the total contemplated work in dollars reported during the preceding twelve months to the dollar total of contracts awarded in the same period; the ratio entered for each succeeding month being based on the corresponding record of the twelve months preceding the date of the entry. These deferred construction ratios may be considered as rough indicators of the potential demand. The chart shows how the demand ratio fell during 1919 when construction volume was rising, and rose in 1920 and 1921 while construction volume was on the wane. The big volume of construction during the late months of 1923 and in 1924 to date brought the ratio down to 1.50 on November 1, 1924, and 1.50 is about the normal ratio of work planned to work started in a year's time. There is less planned construction deferred in this country today than there has been at any previous time since the war. In the main, normal demand, caused by the normal growth of population, industry, and commerce, and by normal replacement requirements, will govern building markets from now on.

If the amount of planned work now in sight were the sole factor determining next year's construction volume, it would be reasonable to expect a decided drop from the high records of the past year. But there are other important circumstances to be considered.

In the first place, the status of potential demand is not the same for all classes

THE ARCHITECTURAL RECORD.

TABLE I.

COMPARISON OF PLANNED CONSTRUCTION AND CONTRACTS AWARDED

[The figures, in millions of dollars, are those recorded for the 36 Eastern States, which include approximately seven-eighths of the total construction volume of the country. They are totals for the twelve-month period ended October 31, 1924.]

Classification	Planned Construction	Contracts Awarded	Ratio
Commercial Buildings .....	782.9	574.8	1.34
Educational Buildings .....	431.6	376.0	1.15
Hospitals and Institutions .....	121.9	106.7	1.14
Industrial Buildings .....	569.8	357.6	1.59
Military, Naval and Public Buildings .....	60.0	37.8	1.59
Public Works and Utilities .....	1,269.2	707.6	1.79
Religious and Memorial Buildings .....	167.0	117.2	1.42
Residential Buildings .....	2,946.7	2,001.1	1.47
Social and Recreational Buildings .....	251.2	114.8	2.19
<b>TOTAL</b> .....	<b>6,600.3</b>	<b>4,393.6</b>	<b>1.50</b>

Territory	Planned	Awarded	Ratio
New England .....	439.0	350.5	1.25
New York State and northern New Jersey .....	1,699.6	1,355.2	1.25
Middle Atlantic States .....	803.1	463.0	1.73
Pittsburgh District .....	739.8	539.2	1.37
Central West .....	1,839.5	1,006.6	1.83
Northwest .....	131.2	94.7	1.39
Southeast .....	948.1	584.4	1.62

TABLE II.

ESTIMATED TOTAL CONSTRUCTION VOLUME IN CONTINENTAL U. S.

Year	Total Construction Estimate
1919 .....	\$3,600,000,000
1920 .....	3,500,000,000
1921 .....	3,100,000,000
1922 .....	4,500,000,000
1923 .....	4,600,000,000
1924 .....	5,000,000,000
*1925 .....	4,500,000,000

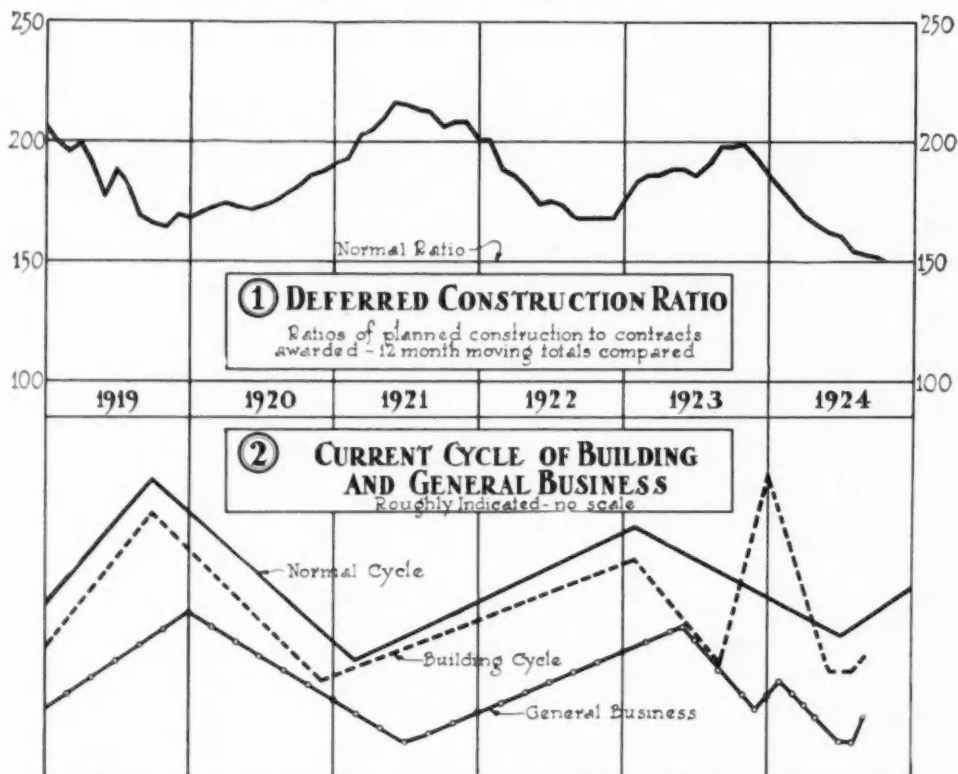
TABLE III.

ANALYSIS OF TOTAL CONSTRUCTION VOLUME

(Figures in Millions of Dollars)

	Average 1919-1924	Year 1924	*Year 1925	Percentage by Architects
Commercial Buildings .....	586	655	585	80
Educational Buildings .....	322	430	315	95
Hospitals and Institutions .....	91	120	90	88
Industrial Buildings .....	464	405	495	49
Military, Naval and Public Buildings .....	44	45	45	85
Public Works and Utilities .....	730	805	900	7
Religious and Memorial Buildings .....	89	135	135	93
Residential Buildings .....	1,593	2,275	1,800	64
Social and Recreational Buildings .....	131	130	135	91
<b>TOTALS</b> .....	<b>4,050</b>	<b>5,000</b>	<b>4,500</b>	<b>61</b>

\*For basis of 1925 estimates see text. All estimates and analyses based on statistical records compiled by F. W. DODGE CORPORATION.

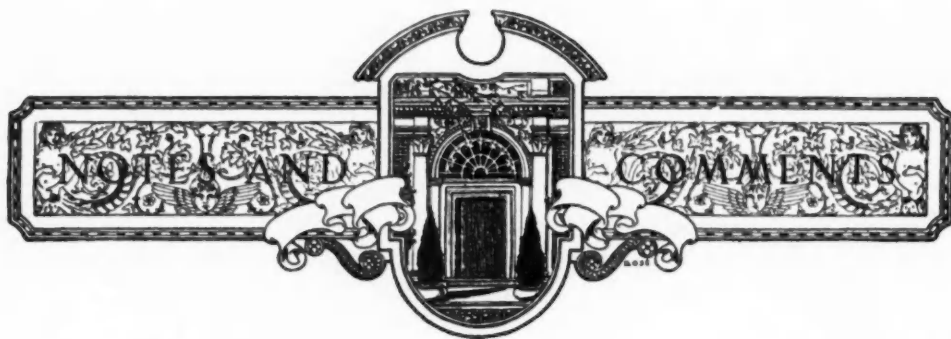


of construction, or for all sections of the country. For this reason, a table is appended to this article (Table I) showing the deferred construction ratios by classes of construction and by territories. A ratio considerably under 1.50 indicates that potential demand has been largely met; a ratio over 1.50 indicates a large demand yet to be filled. Those districts showing the highest ratios are the ones in which recent construction activities have been relatively the largest. Unfortunately, there are no similar records for the twelve western states which are not covered by the reports of the Dodge organization. Apparently the big boom in the Pacific Coast states has subsided somewhat, but activity continues at a good rate. A good rate also continues in the Rocky Mountain states and Texas, such indications as are available pointing to a continued demand for new construction.

Another consideration of great im-

portance is the present phase of the business cycle, shown roughly in Chart No. 2. The so-called normal cycle shows the tendency of general business and of building operations to move in waves which, over a long period of time, average forty months in duration. General business ran about true to form through the depression of 1920 and 1921, with an extended up swing through 1922, culminating in a peak early in 1923. There was a secondary wave in the early part of 1924. At present all the indications are for an upward movement in general business, of some considerable extent, perhaps a steady upward movement throughout 1925. The secondary revival in building reached a higher peak in 1924 than the regular cyclical peak of 1923. Had building activity followed its more or less customary course, without the unprecedented wave of winter building last year, the time would now be about ripe

(Text continued on page 584)



### JOSEPH HOWLAND HUNT

The sudden, untimely death of Joseph Howland Hunt threw a heavy mantle of depression over his countless friends. It was as if, without the usual warning, there had suddenly been an eclipse of the sun. Amazing! Great, virile, handsome, sunny spirited Joe Hunt—gone! For above all Joe was sunny. He radiated joy. His greeting raised your hopes, his presence was a stimulant and his farewell left you sorry at parting, yet optimistic. But now he has gone—for good.

As an architect, he never set the world afire. He was neither a McKim nor a Bacon. Perhaps at the very threshold of his career he was conscious of crossing into the permanent shadow of his father's greatness. But his works were substantial and in good taste. He was a man of broad training and experience, and an able executive.

I like to dwell on his magnetic personality. For who shall say that to the man who designs a great public monument and lives a skunk's life—a tablet shall be raised, but none for him who left his greatness in the heart and memory of all who clasped his hand?

I remember him so well, when we were at the Ecole, twenty-five years ago. He was probably the handsomest thing in the male line that Paris had seen since her nobility were thrown out of office. He wore black velvets, not, however, the usual peg-top, baggy, corduroy trousers—but knickers. He had a pair of legs that brought out all the latent beauty in the surrounding landscape. And Joe apparently believed in art for art's sake. Those legs were magnificent. And he wore a broadish white collar, with a flowing Windsor tie, sometimes black, sometimes a Dempsey vermilion. And always the soft, dark gray fedora, perched at a rakish angle! He looked a young god

—and he was. A leader, a magnet, good natured, kind and thoughtful. Joe Hunt, if you get what I mean, was a great help. He was a great help in his home, in his office, in his club. Wherever he betook himself, his lovable personality added just so much to the pleasure of the occasion. It strikes me that no man could wish for a nobler epitaph: HE WAS A GREAT HELP.

OSWALD C. HERING

Joseph Howland Hunt was born in New York March 6, 1870. He was a son of Richard Morris and Catharine Clinton (Howland) Hunt. He prepared for college at St. Mark's School, Southboro, Mass., attended Harvard University, 1888-1892, and studied architecture at Columbia School of Architecture, and, from September 1894, to 1900, at the Ecole des Beaux Arts in Paris.

While abroad, he traveled through France and Spain. Returning to America in October, 1900, he was taken into partnership by his brother, Richard H. Hunt, (who had been associated with their father during the last eight years of their father's life), and continued the practice of his profession under the name of Richard Howland Hunt from 1895 until January, 1901, when the firm of Hunt & Hunt was formed.

Among the works of Hunt & Hunt in which the late Joseph Howland Hunt was specially interested were many residences, notably in Greenwich, Conn., and numerous alterations. Probably his most well known works were the Fisk Building, at Broadway and 57th Street, New York, and the plant of the Tata Iron & Steel Co. at Jamshedpur, India.

### WHEN THE ARCHITECT KNEW HIS CRAFT

The September 20 number of the Journal of the Royal Institute of British Architects con-

tains an interesting and lucid "Note on Architectural Training in the Past, with Special Reference to England," by Paul Waterhouse, M.A., P. P. R. I. B.A., etc.

The "Note" is in three parts: "The Ways of the Ancients," "The Days of the Giants," and "The Praise of Our Fathers." These are alluring headings. Careful thought and attention now is given to titles, whereas formerly we used to go directly to the counter in the rear of our favorite bookstore to look over the latest number of English "Country Life" and the "Architectural Review," with only a superior look towards the fiction table; now the titles pull us up with a jerk, and we just *have* to stop and read a few sentences from "Peter Whiffle," or "Chrome Yellow." Life, alas, is full of such distractions: but we digress.

In the golden age of Greece and Rome, when Ictinus plotted the Parthenon by means of logarithms (it was the functions of numbers and not the stupid modern juxtaposition of digits that interested the Greeks) and Callimachus modelled the Corinthian Capital from a basket accidentally placed over the root of an acanthus by Thisbe, that famed beauty of Babylon—in those days the architect had to know his craft.

The list of subjects given by Vitruvius contains the sum of human knowledge with nothing missing except ferro-concrete. The ten books of the great master cover the field from the building of cities, with direction for the installation of a water supply, to the principles of gnomonics and the rules for dialing. To each book there is a preface which is perhaps the most valuable portion of the work to us, for in these prefatory remarks we discover somewhat of the personality of Vitruvius, his mode of living, his professional practice and prejudices. Octavia, lovely sister of Augustus, was greatly impressed by Vitruvius' military skill in the African War (46 B. C.) and his subsequent modest bearing and noble countenance, and induced the Emperor to extend to him his constant patronage. While Vitruvius' practice was not extensive, the only public work attributed directly to him being the basilica at Fanum, the whole spirit of the architecture of the first century B.C. et. seq. is epitomized in the "De Architectura."

Although Pliny does not mention it specifically, there can be but little doubt that Vitruvius, possessed of a modest affluence and the leisure allowed by a kindly patron, founded a School of Architecture in the Imperial City. Mr. Waterhouse is convinced, and most of us will agree with him, that "the one abiding principle in the training of the architect, whether in a guild of masons or in a monastery, whether in mediæval times or in the

days of Post Reformation practice, was contact in a subordinate capacity with some men whose independent status as a designer was already won." Personal contact with the magister and the practice of the principles he expounded resulted in the founding of a school or society known as "De Bellis Artibus Architectorum Societas," or as one might call it, the Society of Beaux Arts Architects. This society was composed of architects who, having studied and absorbed the teachings of Vitruvius, went to Athens to perfect themselves in their art. After the required time had been passed in Greece and Lydia, with possibly an apprenticeship in the archaeological expeditions at Cnossos, Persepolis and Memphis, the young architect on his return to Rome was eligible for either a civil or military position, depending on whether he had chosen Option I or Option II.

Unfortunately all but the most fragmentary records of the Society have long ago perished. Frontinus has a reference that might be an allusion, and the Fullerton Collection has a parchment scroll on which can be traced the letters B.A.A.S., with the date (Ides of March A.U.C. DCCCLII), which seems to be an account of the LVIIIth annual convention of the Society.

While Vitruvius speaks with authority on the Laws of Symmetry and Analogy, and attempts to establish the relation between the proportions of the human frame and the lines of the classic temple, declaring that "proportion is the commensuration of the various constituent parts with the whole, in the existence of which symmetry is found to exist," modern research has entirely discredited his conclusion; "not a single Greek example has been found which bears out the Roman writer's theory."\* It is supposed that either the Romans were intentionally misled by the Greek artists and craftsmen whom they employed or that, blinded by arrogance and conceit, they jumped at conclusions and misinterpreted the laws of dynamic symmetry that had been firmly established in Egypt since the first Dynasty. The Greek tradition that Vitruvius thought he was codifying was based on his interpretation of the word "commensurate." The statement that "members of the human body were commensurate with the whole" and that this law, transferred to works of art, showed that they derive their principles from nature (every part being so proportioned to the whole as to bear its just relationship) is now held to mean "commensurate in area, not in line."

On the practical side of architectural training, Mr. Waterhouse draws some very rational

\*Hambidge—"Dynamic Symmetry."

conclusions. He says, "Experience (which is success through failure) and head-knowledge (which is a slow process of advance from ignorance) are the necessary elements of architectural equipment; it is obvious that the failures and the ignorance must not be entirely practiced at the expense of those who pay for our designs." Many architects have built a fine reputation through a strict adherence to this principle.

"Ignorance can be overcome by book learning and other teaching (pre-supposing of course that the books and other teaching are based on true fundamentals), so that as far as that side of an architect's panoply is concerned he might in certain favorable circumstances be made the perfect designer before he was exposed to the risks of practice."

Even the perfect designer is lost and confused without the benefit of experience, when confronted with the actual construction of his first job. He may, it is true, rely on an able engineer or superintendent to see that the work is properly executed but "happy and few are the beginners who can shoulder responsibility alone, without first practicing on a responsibility shared." The joyous thing about architectural practice is that each new job presents many problems that have not been previously met by even the most experienced architect. If a purling spring is discovered in the foundation or quicksands encountered, the spring does not purl like other springs, and everyone knows that quicksand is never twice the same. As for the perfect specification, it is an *ignis fatuus*, commonly called "Will with a whisp."\* If a perfect specification cannot be written, something must be the matter with Option II.

Might it not be well, as long as we are dealing with architectural education, to devote some serious constructive thought to the engineering side of the subject. It is generally assumed that here is an exact science, the details of which may be learned in a curriculum, and that only moderate experience in the "field" is essential. Among the Egyptians and the Greeks, there was no separation of the functions of the craft, and the "cording of the temple" was recognized as a prime requisite of the architect. The profession of rope stretching was a noble one and attended with great ceremony. In Egypt, the Pharaoh himself was the chief actor, assisted by the goddess Sesheta "the mistress of the laying of the foundation Stone."† Splendid processions, solemn pomp, and glad feastings attended these ceremonies. There are many inscriptions por-

traying such scenes and their significance is tremendous. It was to preserve this tradition so that future generations might follow and perhaps surpass them that these masters caused them to be inscribed. Our system of architectural education fails, and the same might be said of other branches of learning, in the tendency to over-specialize, in the acceptance as fact of principles based on a faulty understanding of the law of symmetry, and in a too materialistic, so called scientific viewpoint. The hackneyed phrase "back to nature" is the underlying principle of art; the difficulty being in getting back to nature and recognizing it when it is shown us.

Socrates was a stone-cutter before he was a philosopher; he understood perfectly the laws of proportion. The Greeks disdained arithmetic, but had a great understanding in geometry. Thales, Proclus, Eudemus, Theodorus, Hipparchus, Euclid, and the Pythagoreans used to have delightful discussions, over an amphora of Chian wine, on the properties of rectangles, cubes, and the geometry of art, which knowledge is all but lost to us. Says Mr. Hambidge, "The idea of commensurability or measurability in square is geometrically explained in the tenth book of Euclid's 'Elements.' The artistic use of this fact became lost. This loss was a calamity. We must either blame the Romans for this catastrophe or ascribe it to a general deterioration of intelligence. If this knowledge had not been lost, artists today would undoubtedly have been creating masterpieces of statuary, painting, and architecture equalling or surpassing the masterpieces of the Greek Classic Age."

H. G. R.

### THE RENDERER'S JOB AND ITS IMPORT

Individuality in rendering is growing. Not long ago the renderer's art in this country was characterized by a clean-cut manner that might easily turn into a mechanical convention. Prominent was the work of Hughson Hawley. For the rest of it, there was pen drawing here as in England, as can be observed in the architectural periodicals of the time. It was often quite uninspired, tasting strongly of the draughtsman's table, and not always without an amateurish touch.

It is not exactly to the methods of the draughting room that a renderer should limit himself. If his business is to make a plan and design understandable and palatable to the client, he should use the methods any artist would employ to bring his viewpoint, his mood, the results of his observation, before the public.

\*Bailey.

†"Dynamic Symmetry"—Appendix Note II.





THE ALCAZAR, ST. AUGUSTINE, FLORIDA

Rendering by Robert Blum

From artists who have depicted subjects within his field, or even those skirting that field, the renderer therefore can profit. To him the projected structure, its present and prospective surroundings offer problems in composition and treatment worthy of his best powers. The whole field of graphic art, but especially drawing and the reproductive arts (etching, engraving, lithography), becomes a rich storehouse of suggestions for the renderer. An indication of this is offered in the study of David Roberts, by Leon V. Solon, in *THE ARCHITECTURAL RECORD* for September, 1919. In that article, by the way, we find the pat statement that "pictorial quality is the most natural and direct agent for the transmission of an architectural conception to the lay mind." In the same magazine for May, 1923, was considered "The Architect and the Graphic Arts" and the diversified suggestions that the etcher and lithographer have to offer the renderer. One has but to think of

the etchings of Bone and Cameron to see that.

Much of the product of these reproductive graphic arts is in line, and it is worth noting that the present-day return to the line in illustrating and in advertising art is echoed also in architectural rendering. Many of the examples of architectural sketching, such as those by Samuel Chamberlain and others, published in recent years, are in line. It is significant, too, that in articles such as the series by Jasper Salwey in the *LONDON ARCHITECT* in 1924 ("Sketching in Leadpencil for Architects and Others"), and in the increasing number of books on architectural drawing, the line holds a prominent place. Take that interesting "Book of Architectural and Decorative Drawings by Bertram G. Goodhue" (New York, 1914); or "Pen Drawing" by Charles D. Maginnis, himself a renderer of note; or the volume on "Architectural Rendering in Pen-and-Ink" (New York, 1915) by Frank Allison Hays. These

show examples of the work of Pennell, Herbert Railton, Goodhue, D. A. Gregg, Maginnis, C. F. Bragdon, Harry Fenn, Whistler, Harvey Ellis, Wilson Eyre, an artist of "careless force." How suggestive is even that short list of names! Add to them those mentioned by Pennell and still later ones listed by Frank Chouteau Brown. The rich material that antedates them is briefly reviewed in Reginald Blomfield's "Architectural Drawing and Draughtsmen" (London, 1912). Blomfield takes us through the Middle Ages, the Renaissance, 17th century France, the 17th and 18th centuries in Italy, and England, and gives much space to Piranesi.

One of the most recent books is Arthur L. Guphill's "Sketching and Rendering in Pencil" (New York, 1922). Building up from the elementary facts regarding the use of the medium, it develops, in text and illustration, into a song in praise of the pencil. The illustrations begin with sketches of human figures, animals and landscapes, all of which may well help broaden the knowledge and style of the student, and then offer examples of the work of recent architectural draughtsmen such as Otto R. Eggers. His drawing, as one writer has said (BRICK-BUILDER), "presents so beautiful a blend of pictorial and architectural effects," and his "freedom and ease of delineation" was referred to in THE ARCHITECTURAL RECORD of 1918. The usefulness of books that have to do, directly or indirectly, with rendering will be increased immeasurably if they lead the reader to the original documents, the mass of material to which they point.

Pencil and crayon are coming into vogue today. In the eighties and nineties of the past century it was pen-and-ink, a medium in which a number of our artists achieved more than ordinary distinction. Robert Blum, Pennell, Otto H. Bacher, Kenyon Cox, W. H. Drake, C. S. Reinhart, E. A. Abbey and H. F. Farny were among those whose drawings appeared in Harper's and the Century of that day. Figure drawings mostly, but none the less worth the draughtsman's attention. Usually original designs, but sometimes done from photographs. What can be done in the latter was emphasized by Pennell in his comment on an architectural interior by the whimsical Alfred Brennan: "There is nothing stupid and nothing photographic, and yet it was made from a photograph."

Others beside Brennan did architectural subjects. C. A. Vanderhoof drew delightful pictures of buildings, such as the one of the old Y. M. C. A. on Fourth Avenue and 23d Street, New York City, in pencil, if my memory is not at fault. E. C. Peixotto carries on the traditions of pen-and-ink today. Pennell

mentions also Blum's excellent drawings for Carrère & Hastings's pamphlet on the Ponce de Leon and Alcazar Hotels. And there were men in England such as Alfred Parsons and Herbert Railton; the latter's work includes illustrations for W. Outram Tristram's "Coaching Days and Coaching Ways."

Those were the days when Hughson Hawley reigned supreme as a renderer in water colors, in which medium Charles Graham worked with ease and taste. Their drawings, definite in statement, may again be contrasted with the color-work of present-day Jules Guerin ("an impressionist among renderers," with whom structures recede into the enveloping haze of a personal viewpoint and style), and with the water-color rendering of Birch Burdette Long. Long, author of the "wonderful drawing of the Hudson-Fulton competition" whose "transparent delicacy" has been pointed out, once wrote an interesting article on "Individual Style in Rendering."

There are also the wash drawings of Arthur Byne, whose work called forth the reflection that "color is no longer a mere matter of staining the paper pleasantly, but of building up impressive masses." Mr. Long in 1905 expressed the opinion that the half-tone had "ended the chief usefulness of the pen-and-ink drawing," but he is today utilizing the line of lithography, and line drawing is growing increasingly in favor generally. On the other hand, another statement of his holds good: the work of the present-day draughtsman is a nearer approach to the work of the illustrator than ever before. Most of the artists mentioned in the preceding paragraphs were illustrators and not renderers at all, but they worked in a spirit and with a technique that might conceivably be quite that of the renderer, and that is increasingly coming to be so.

To return to the pencil and crayon, with their staccato softness. Among those engaged in the architectural field, or whose drawing, apart from subject, is suggestive, are: Earl Horter, precise yet free, as in his sketch of the Harkness Memorial Tower at Yale, of a sunny lightness, one of his advertising pictures (January, 1924); Franklin Booth; Hugh Ferriss, who sees, and dreams, in masses rather than detail; Samuel V. Chamberlain; Vernon Howe Bailey, master of sure and subtle draughtsmanship; Louis Ruyl, maker of snapshots in crayon; Chester B. Price, who exemplifies the adaptation of method and mood to the subject, giving the spirit of an office building or a country home, respectively. There's Kenneth Conant, too, of the Architectural School at Harvard, whose drawings in pencil and pen at the Cleveland Museum show delicate shadows and fine aerial perspective.

These, and others, illustrate the increasing use of the line, particularly the broken, quivering line of pencil or crayon.

Similar examples are to be found abroad: F. L. Griggs, whose art Frank Chouteau Brown analyzed in the ARCHITECTURAL REVIEW of August, 1913, and October, 1915; Riffles Davison; Carlton Moorepark, in England. And in New South Wales, W. Hardy Wilson, whose characteristics are simplicity and delicacy. Not so long ago we had Harvey Ellis, whose media were water-color, charcoal and pen, of whom H. M. G. Garden said: "His sense of line has rarely been excelled. . . . In these days of . . . certain rules for the making of certain kinds of architectural drawings, it is pleasant to turn for a moment to . . . a man whose only rule was his fine sense of the meanings and relations of everything within his field of knowledge."

A walk through the Architectural League exhibition in 1924 in New York City brought richly interesting proof of the new spirit in rendering. There were drawings by Chester B. Price, such as the one of the School for Boys near Rochelle, in which trees in broad strokes and dark shadows contrasted with the more delicate treatment of the building: the delicate sketch of the estate of Charles B. Rogers (Prentice Sanger, landscape architect and architect): lithographic drawings of B. B. Long and John Richard Rowe, the latter a wee bit Prout-like: the Shelton Hotel, Arthur Loomis Harmon, architect, treated as a big crayonned mass without detail: the "Study of the Zoning Law: sketches of the masses of various buildings designed in conformity to the law": and the proposed convocation buildings by the late Bertram B. Goodhue: in color, the tinted drawings by Benno Janssen and E. P. Mellon, quiet in tone, a bit like the early nineteenth century British aquatints after Pugin and others. Cheerful promise in all of this and stimulus for yet more renderers to lay aside, sometimes, draughting tools and eye-shade, and get out of the office and see things.

Leon V. Solon once wrote that "professional interest in 'rendering' proceeds from a commercial motive," and assured the reader that art is not degraded by the association. If anything is commercialized it is not art but a poor surrogate. Whatever our job, it is dignified and ennobled by the point of view which we bring to it and the way in which we carry it out.

The new spirit in rendering, or renewed spirit, if you believe with Ben Akiba that there is nothing new under the sun, brings a fine flavor of artistic dignity to the task of enlightening and pleasing the customer.

FRANK WEITENKAMPF

### THE INCREASING IMPORTANCE OF ORNAMENTAL DESIGN IN ARCHITECTURAL PRACTICE

The scope for architectural activity is constantly enlarging in the direction of the applied arts; we see the time near at hand when a general education in ornamental design will be regarded as an essential adjunct to professional information. The younger men, in whose hands the future of American architecture is so securely held, are leaving the petty larceny of the orders to the survivors of the old régime; their sound judgment in the determination of aesthetic ideals, and impartial appraisal of the value of precedent in self-expression, give an added importance to the purely ornamental side of architecture. Precedent and archaeology are no longer the yardsticks of performance, having been retired with honor to the cultural class. With a sense of relief we feel that the future is not overcast with the threat of continuance in the bastard line of St. Peter State-Houses; the old stock-in-trade of dome, colonnade and peristyle, is being relegated to the discard, with that polite toleration that is accorded the survivor of a generation who has outlived serviceableness. Declarations of architectural independence abound, some to delight, others to impart an optical jolt. We share the astonishment of the man-in-the-street at the *tête-de-nègre* tower overlooking Bryant Park, and gaze with wonderment at the brave glitter of this colossal demonstration of architectural dentistry, with its profusion of gold-crowning, bridging and filling.

Scenic effect becomes an increasingly valuable architectural asset, due obviously to its advertising value. As architectural interest is no longer restricted to the exterior of the structure, and interior effect must now be created in a great number of cases, the designer finds himself wrestling with problems which until recently were the sole concern of the craftsman. However extensive this new field of effort may become, there is little probability that the architect of the future will be called upon to control the detail of the associated crafts; but at the present time there is an urgent necessity for cultivating the capacity to express the architect's requirements graphically, in such fashion that the executant will comprehend the quality and value of that effect which is required of him. This calls for a certain degree of accomplishment in the forms of ornamental design. Unfortunately there is considerable difficulty encountered when practical instruction is sought, owing to the scarcity of capable instructors and to the extremely theoretical char-

acter of the text-books. Those works on design which are most extensively used, treat the subject from what is assumed to be an analytical standpoint; but they treat only of the geometrical plan upon which ornamentation aligns itself in composition, completely ignoring mass as the main element of effect. The fact must be recognized that *effect* is a result of the artistic control of optical phenomena, and until those phenomena are identified and their operation comprehended, education in this art must necessarily leave essentials to the mercy of hazard. We feel sure that the most productive art education of the future will be founded upon the *science* of effect, and that intuition will no longer be the main motive power. In the architectural schools a neglect of the art of ornamental design will prove the most serious obstacle to the maturing of those new phases of architectural expression which bear the promise of a national school. We hold no brief for the ornamental extravaganza—on the contrary, if the basis of instruction is sound its

greatest utility will be found in those delicate adjustments in proportional scale which have become a characteristic of the modern American stylistic essay. In ornamental design, effect quantities are stated with the greatest simplicity, and variations caused through schematic adjustment are appreciable with the minimum effort. Any form of education which develops our sensibility to the appreciation of varying quantities in effect-values is vastly important, and for this reason the study of ornamental design has a high cultural worth. It is a fertile field which would well repay cultivation, but unfortunately the literature on the subject has only scratched the stony spots.

LEON V. SOLON

In our Plate Section of the September, 1924, issue we gave the location of St. Mark's School, Jos. G. Steinkamp & Bro., Architects, as Evanston, Illinois. It has been called to our attention that this school is situated in Evanston, Cincinnati, Ohio.

(Text continued from page 577)

for a revival. The movement of the cycle would indicate improvement in the near future.

In fact, it seems that there should be a considerable measure of increase in those classes and territories in which supply has not caught up with demand. Industrial construction has been running very low ever since 1920, and, with improved industrial conditions next year, should show a marked increase in volume. Public works and utilities have already increased considerably and will probably continue on the upgrade. Improved conditions in general business are likely to stimulate demand somewhat in the commercial building group, although present requirements have been largely taken care of.

It seems rather unlikely that residential construction can continue at such a rate as has prevailed through the past three years. There has been a vast amount of speculative building of apartments and dwellings, particularly in the larger centers. Some places are for the moment overbuilt; many have caught up with the demand. Yet there is probably a very considerable latent demand for private work, particularly in the smaller towns and in the middle

western section of the country, that is likely to develop into an actual demand if general business enjoys a reasonable measure of prosperity.

In view of the lessened demand for building, it seems most unlikely that the 1925 construction total can reach that of this year. Yet the other considerations mentioned above do not seem to indicate a big drop. Consequently, in the estimate shown in Tables II and III, the tentative 1925 total has been set at four-and-a-half billion dollars, or something closer to the 1922 and 1923 records than to that of this year or the average post-war year. This 1925 total, as well as the 1925 analysis in Table III, is to be regarded as a tentative estimate in the light of the building record to November 1, 1924. Any one following these estimates must realize that they should be revised frequently in the light of new developments.

Following the remarkable record of last winter, a moderate rise during the next few months seems probable. Should this rise be fairly considerable and a mild reaction follow in the middle of next year, it would not be surprising. In general, the indications are for a moderate upward trend during the coming year.



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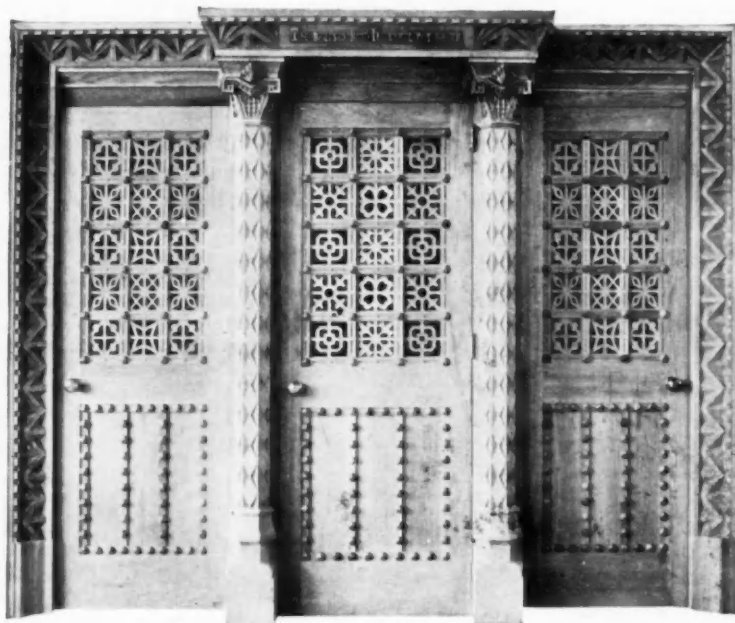


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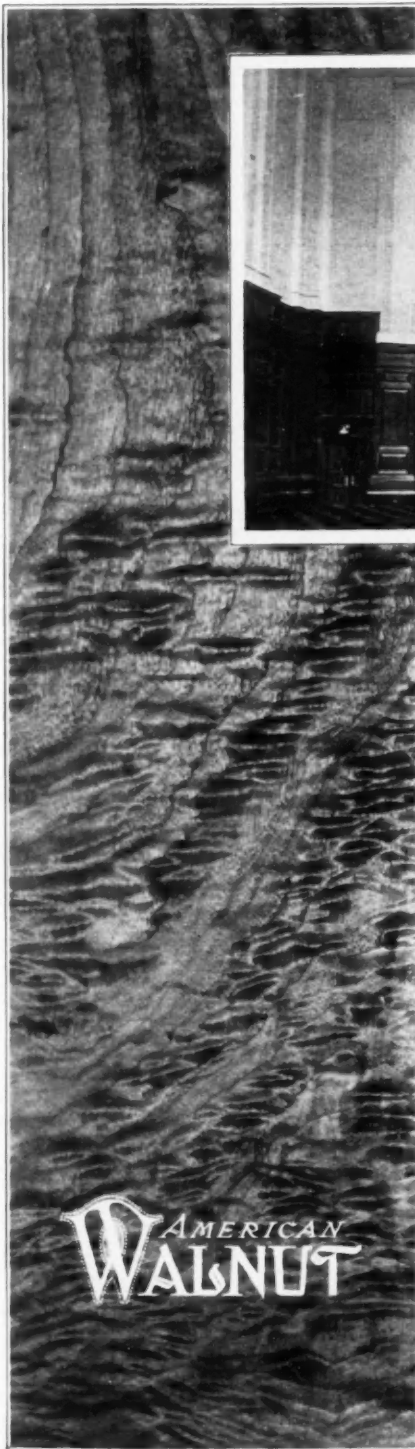
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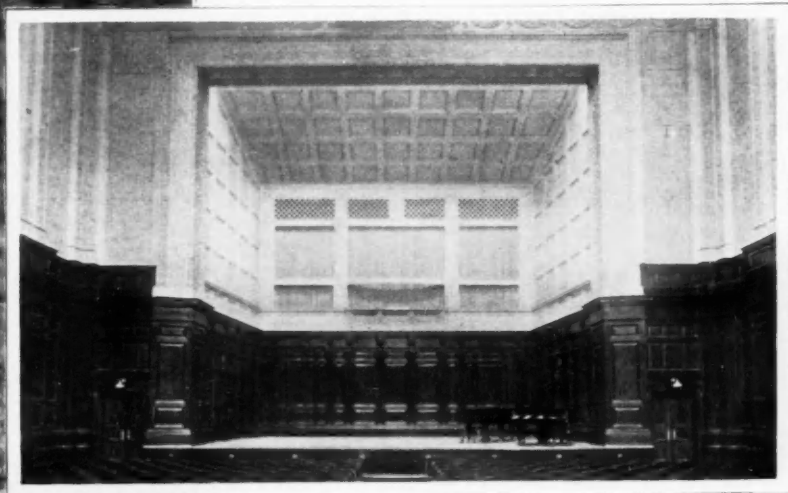
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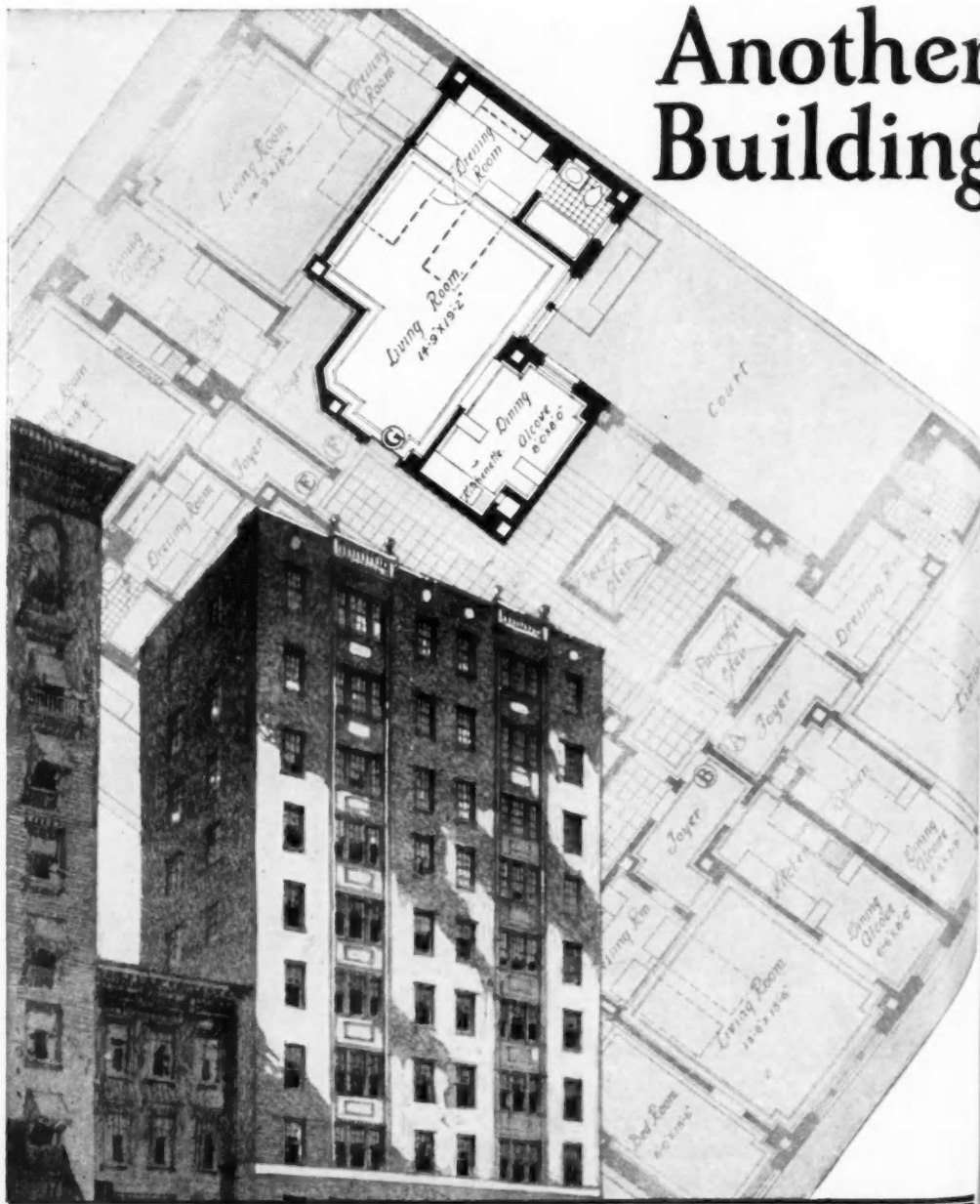
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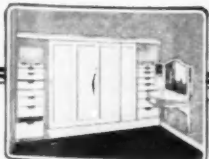
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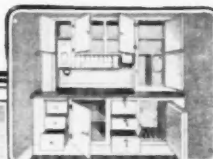
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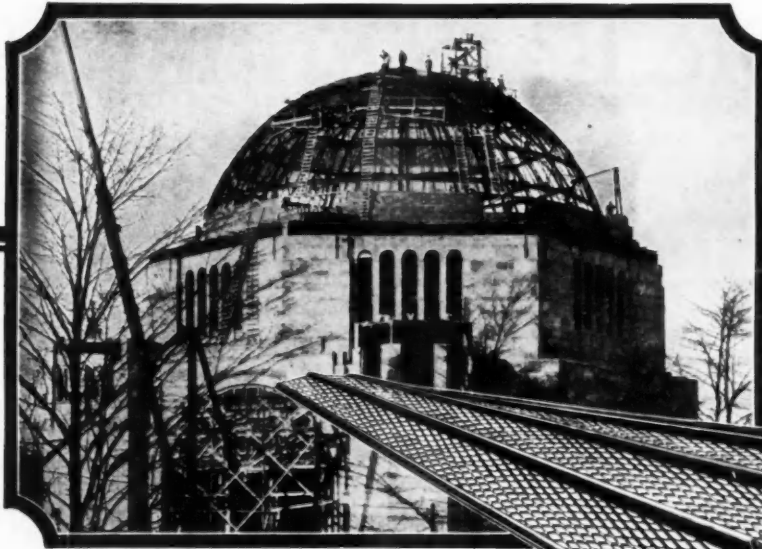


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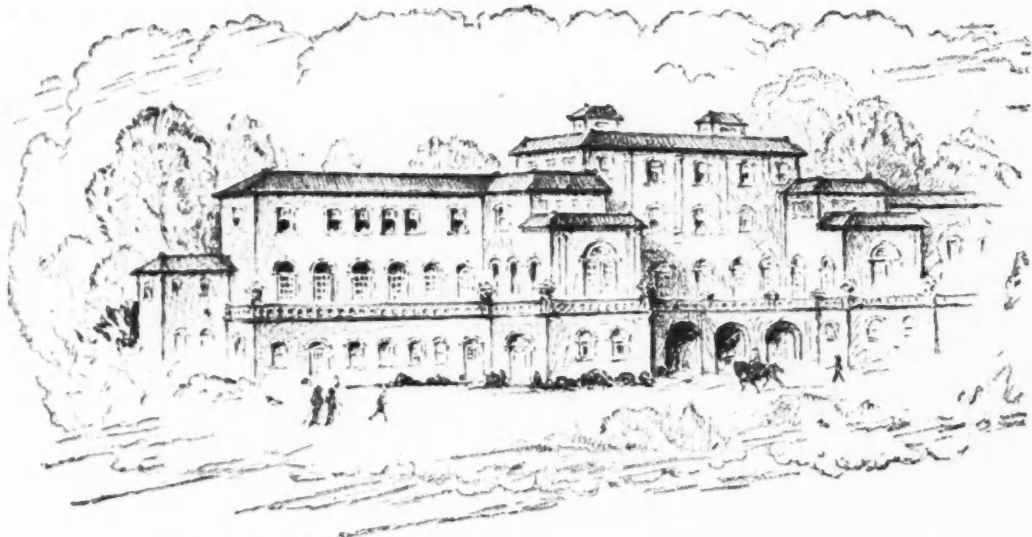
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**GF Self-Sentering**  
A Combined Form and Reinforcement



## Add Permanence to Beauty

WHEN plaster cracks, crumbles, becomes unsightly or falls, the ideals of the Architect likewise fail. If permanence is a desirable adjunct to the standard of quality you strive for in your interiors, you will consider no alternative for these Milcor Products:

**"EXPANSION" METAL CASINGS (Pat'd)**

*Eliminate Costly, Unsanitary Wooden Trim for Doors and Windows*

**"EXPANSION" CORNER BEADS (Pat'd)**

*Prevent Wall Corner Cracks and Ceiling Separation Cracks*

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**STAY-RIB OR NETMESH METAL LATH**

Specify them, without alternative, to perpetuate your achievements and to render the best protection and service to your clients. Investment-return on a building is usually an important factor to your client. By insuring minimum maintenance costs, elimination of fire risk, increased rentability because of crackproof, sanitary, sound-resisting walls, as well as a gain of 6% or more room space for the same building area (using solid partitions of metal lath), you make it possible to earn more for your client on his investment.

Write for our convenient "Architectural Sheet Metal Chart", which provides ready reference to the complete Milcor Line—also write for our two Data Books, No. 20 and No. 24. No obligation whatsoever.

MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wisconsin  
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# MILCOR

## EXPANSION PRODUCTS

### for Crackproof Walls



This illustration is a doorway in the Fairfax High School, Los Angeles, Cal. The tile decoration is a replica of that used in the Casa de Greco, one of the show palaces of Spain.

Tiles of Moorish design are particularly well adapted to the decoration of Spanish type buildings.

Their very distinctive and virile designs, combined with their charm of color and texture, bring a touch of old Spain to the western world.

These tiles permit of the widest scope in their application—wall panels, fountains, stair risers, borders, friezes, pools, mantels and wainscots afford suitable uses for these wonderful tiles.

The everlasting glazes are obtained by long sustained high temperatures in our modern kilns.

**FLOOR AND WALL TILE FOR EVERY PURPOSE**

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ST. LOUIS  
UNIVERSITY  
DENTAL SCHOOL

Roofed with Carey Built-up  
Roof, Specification No. 7

Widmer Engineering Co.  
*Architects, Engineers*



## A Practical Investment

**H**ERE is a college building without aspiring towers, nor verdant campus lawns.

The building is designed to give the utmost service for the money invested. It is permanent. Good materials make it so. The investment has been concentrated on practical purposes.

A Carey built-up roof was the natural and logical choice because it is supremely good, and gives not only the longest service, but the utmost service in the long run per dollar of cost.

There is a Carey roof for every building just as this particular Carey roof is ideal for *this* building.

**THE PHILIP CAREY COMPANY**

506-526 Wayne Ave., Lockland, Cincinnati, O.

**Carey**  
**BUILT-UP ROOFS**

*A Roof for Every Building*

14-24

# We found Laminex panels used for boat bottoms!

Waterproof cemented, yes, but who would expect door stock to withstand such a test?



One of several sectional boats built for officials of Allen Mfg. Co., Shreveport, La., with Laminex three-ply waterproof panels for bottoms. These boats were made for their personal use. They do not manufacture boats commercially.



Showing perfect conditions of panels after two years' use as boat bottoms.

An executive of our company recently stopped off at Shreveport to see the Allen Manufacturing Company, makers and distributors of doors.

"Here are some remarkable tests that have been made on Laminex doors," he told them. "But," replied Mr. Compton, of the Allen Company, "we've done some testing ourselves," and he proceeded to show these sectional boats with bottoms of Laminex three-ply panels. They had been in use over a year—in water part of the time, then left out in the Louisiana sun to dry. Careful examination showed no checking, peeling or separation.

We don't recommend Laminex doors or panels for boat construction. They are built by our special process with waterproof cement, so as to withstand warping, twisting and all other door faults. But this unexpected use further demonstrates how Laminex construction will withstand exposure for which it was never intended.

Look for the gold label replacement guarantee on every Laminex door. If you cannot obtain Laminex readily, write for names of nearest distributors. Ask for catalog and special monograph.

## The Wheeler, Osgood Company

Tacoma, Washington, "The Lumber Capital of America"

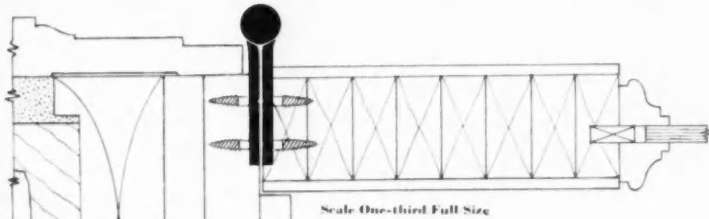
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Manufacturers of  
"Woco"  
Douglas Fir Doors  
and Fir Sash

# LAMINEX DOORS

WILL NOT SHRINK, SWELL OR WARP



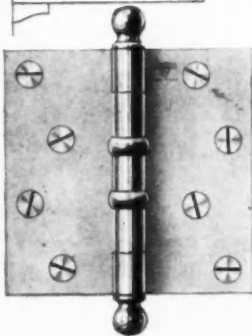
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### World's Largest Building

In the mammoth American Furniture Mart Building in Chicago, containing more than 30 acres of floor space, the doors are swung on

## STANLEY Ball Bearing Butts

This is another instance in which Stanley Hardware has been specified as most fitting for use in a particularly notable building.

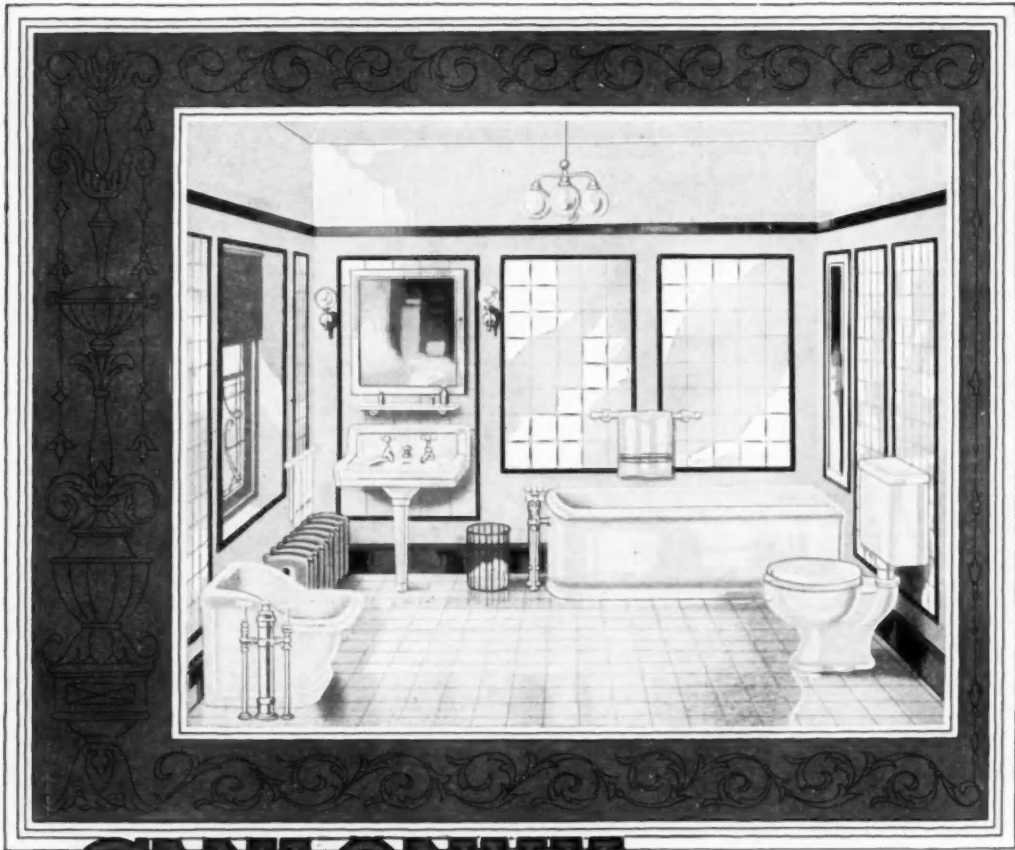


Stanley No. BBZ211A  
4 1/2" x 4 1/2"  
Wrought Steel Ball  
Bearing Butts were used.

THE STANLEY WORKS  
New Britain, Conn.  
New York Chicago San Francisco  
Los Angeles Seattle



Henry Raeder  
Chicago—Architect  
N. Max Dunning  
and  
Geo. C. Nimmons  
& Co.  
Associate  
Architects.



# SANI ONYX

## SAVITREOUS MARBLE

A PRODUCT OF THE MARIETTA MANUFACTURING COMPANY

A Typical Black and White  
SANI ONYX Installation

## Recommended for Beauty and Utility

For bathrooms, kitchens, hallways, in fact every place where a sanitary, easily cleaned wall covering is required, choose Sani Onyx.

Sani Onyx is non-porous, non-absorbent, dense, uniform, acid, alkali, stain and weather proof. Repeated cleaning, exposure and severest service leave its original beauty untouched.

It combines the most desirable features of quarried marble, slate, granite and tile with exclusive and valuable advantages all its own. When once

in place, is as permanent as the building itself. Gray, blue, white and black, in either tile pattern or plain sheets, give splendid decorative effects with no sacrifice of any quality that makes Sani Onyx so satisfactory.

The Marietta Engineering Department is ready to co-operate with you on any size project.

*Complete details gladly sent on request.*

## MARIETTA MANUFACTURING COMPANY

Main Office and Works—91 BROOKSIDE, INDIANAPOLIS, INDIANA

*Distributors and Construction Houses throughout the United States and Canada*

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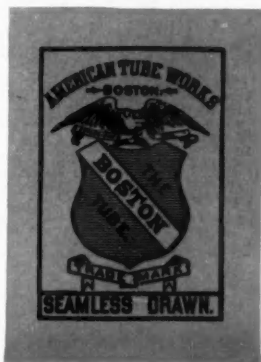
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# AMERICAN TUBE WORKS

BOSTON, MASS.



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1851

ORIGINAL MANUFACTURERS IN AMERICA OF  
SEAMLESS DRAWN BRASS AND COPPER PIPE FOR  
PLUMBING AND STEAM WORK

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ALL Manufacturers of Seamless Drawn Brass Pipe in this  
Country use a process that is *Entirely Different* from that of the  
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WE USE OUR OWN *Exclusive Process*, producing the Famous GREEN LABEL A. T. W. GUARANTEED BRASS PIPE which has been stamped "A. T. W. BOSTON" on each end, labeled with our green *Trade Mark* as shown above, and *guaranteed* for the past fifty years.

## QUALITY vs. PRICE

Our Brass pipe is produced *NOT* to meet the low prices of other makes of Brass Pipe, but to keep up the superiority of our product, which has been maintained for over half a century as endorsed by the leading architects, plumbers and jobbers who have specified and installed it during that period.

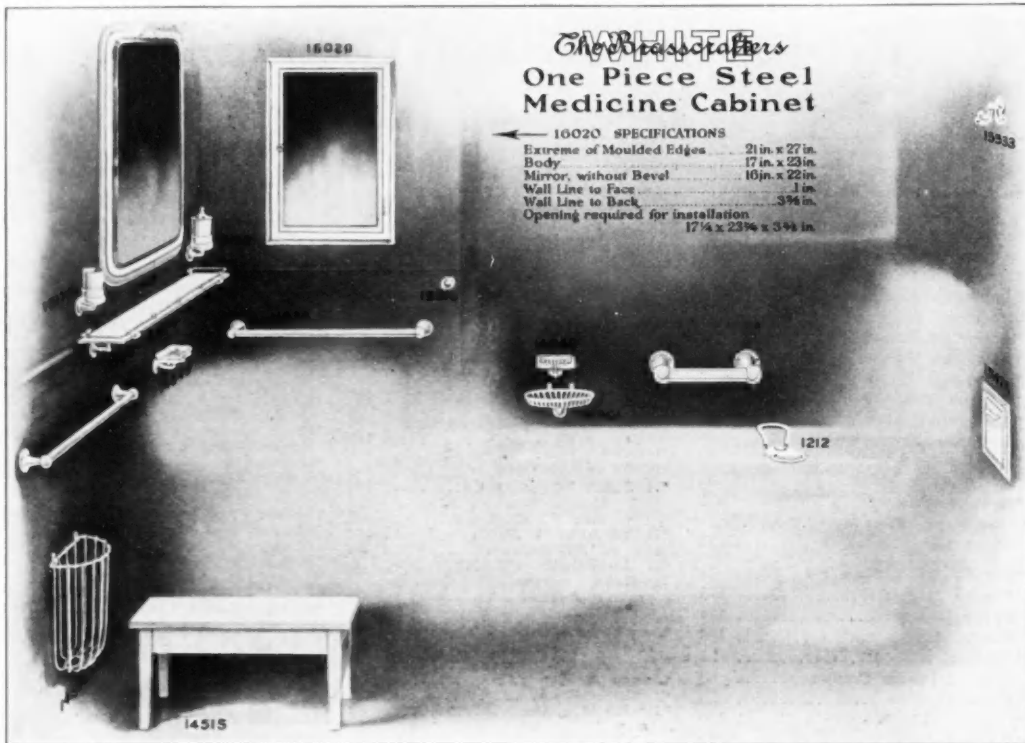
## BATCHELDER TILES



CENTER MOTIF FROM ORGAN SCREEN,  
CHAPEL, COLLEGE OF ST. CATHERINE'S,  
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**BATCHELDER-WILSON CO.**  
2633 ARTESIAN STREET :: LOS ANGELES



*The Brasscrafters*  
**WHITE**

**Bathroom Accessories in the Well-Appointed Bathroom Suggesting  
EXCLUSIVENESS and INDIVIDUALITY**

The SOFT RESTFUL COLOR, the HARMONY of DESIGN, and APPROPRIATE PROPORTIONS, create an atmosphere of warmth and EXCLUSIVENESS desired by those of artistic taste, seeking the INDIVIDUALITY to be found in correct decorations and furnishings.

These outstanding characteristics enable the architect to design a bathroom which elicits the owner's commendation and affords continuous satisfaction. The fixtures are installed with **CONCHA-HEAD** screws, each is complete in itself, each is right for the purpose, bears our trademark, and carries our guarantee.

*The Architect has only to specify by the plate numbers shown, or make other selections from our Hand Book, which will be sent on request.*

*See Sweet's, pages 1900-1901.*

**J. P. EUSTIS MANUFACTURING COMPANY**

*The* <sup>TRADE MARK</sup> *Brasscrafters*

Cambridge "A" Boston 39, Mass.

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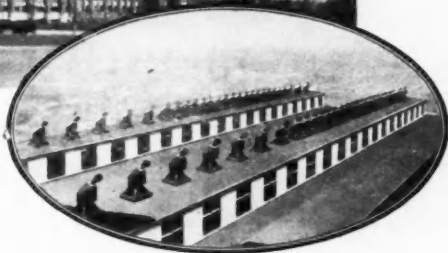
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ABOVE—the handsome new building of the Sears-Roebuck Company in Philadelphia—one of the finest and most modern structures of its kind. Naturally it is Swartwout equipped. Architects, Geo. C. Nimmons & Co., Chicago, Ill.

RIGHT—the great plant of the International Paper Company, Three Rivers, Canada, also equipped with Swartwout Ventilators.



## Ventilation Which Makes Satisfied Clients

The average shop or office requires approximately 3,000 cubic feet of fresh air per hour, for each person. The lack of this adequate ventilation means more than discomfort to workers—it means lowered working efficiency—more "days off"—a whole train of evils.

The inclusion of Swartwout Rotary Ball Bearing Ventilators in building plans and specifications insures for owners complete ventilation summer or winter, regardless of climatic or weather conditions.

With Swartwout equipment, owners incur no operating or maintenance expense as in the case of forced draft systems. Buildings so designed build good will for the architect and builder.

Swartwout Ventilators are built of copper or galvanized rust-resisting metal, over a galvanized frame, mounted on non-corrosive bronze bearings fitted with bell metal balls. They provide continuous suction of air upward and outward. No back drafts.



A Swartwout Ventilator, shown above—permanently storm, dust and rust proof. Stocks carried in principal cities, including the Pacific Coast.

Swartwout Rotary Ball Bearing Ventilators have been specified for years by architects and engineers. Thousands of industrial and public buildings are equipped with them. If you are planning ventilating systems, the advice and service of our engineers, branches and agencies are yours for the asking.

Send for Ventilation Book,  
"The Gospel of Fresh Air!"

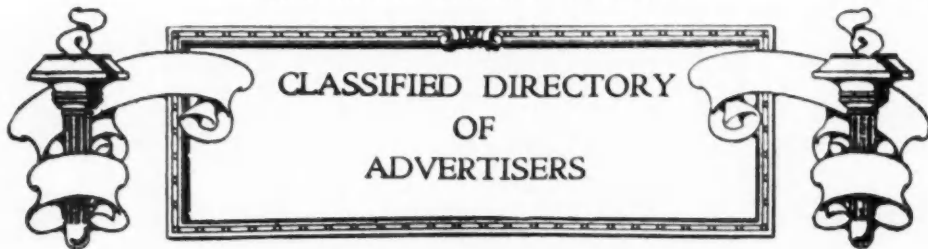
THE SWARTWOUT COMPANY, 18501 Euclid Avenue, Cleveland, Ohio

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# Swartwout

## Rotary Ball Bearing

# Ventilators



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OF  
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Offices of the Olmstead Quabog Corset Co., Springfield, Mass., have a quiet, durable Blabon floor of Plain Linoleum.



## Less noise— better work!

Distracting noises are thought-preventers, time-takers, money-losers, and robbers of physical well-being in such buildings as offices, banks, schools, libraries, and hospitals. They largely disappear when Blabon floors of Linoleum are installed.

Being resilient a Blabon floor of Inlaid or Plain Linoleum absorbs the shocks and sounds of moving chairs and walking feet. It conduces to clearer thinking, and its soft color tones are restful to the eye.

The colors and patterns go through to the burlap back, and last as long as the linoleum itself. An occasional waxing and polishing adds life and enhances its beauty.

The new Marble Tile Inlaid, the Plain colored Linoleums, and the wood effects are particularly adapted to such buildings.

Easy to clean, economical to maintain and adapted to fireproof construction.

Blabon floors are permanent when cemented down over builders' deadening felt paper. This makes the seams watertight and practically invisible.

We will mail, upon request of architects using their business stationery, our reprint from Sweet's Architectural Catalog, and package of quality samples.

Write for our 32-page, 8 in. x 11 in. brochure, "Planning the Color Schemes for Your Home," by Hazel H. Adler. Beautifully illustrated in color. Sent anywhere in the United States upon receipt of 15 cents.

**The George W. Blabon Company, Philadelphia**

Established 73 Years



Look for this label on the face of all Blabon's Linoleum.

**How genuine linoleum is made**

Blabon's Linoleum is made of finely ground cork and oxidized linseed oil intimately blended, and firmly attached to a burlap base. In Inlaid and Plain linoleums the patterns and colors are pressed clear through to the burlap back. In Printed grades the patterns and colors are printed on the linoleum body with heavy oil paints.

# BLABON'S Linoleum



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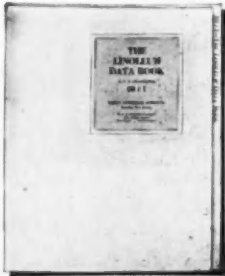
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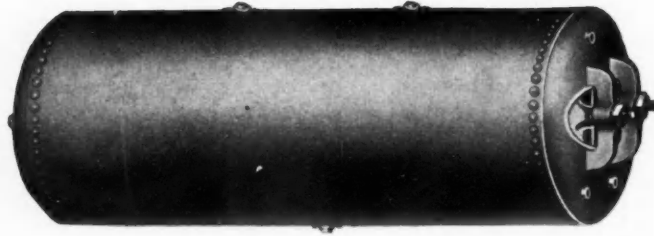
*This linoleum encyclopedia contains practical facts, figures and specifications of value to architects. Write for a free copy. If you already have The Linoleum Data Book, ask for the new Belflor insert, and folder showing the 46 patterns in color.*



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American Tube Works.  
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See "Lath Metal."

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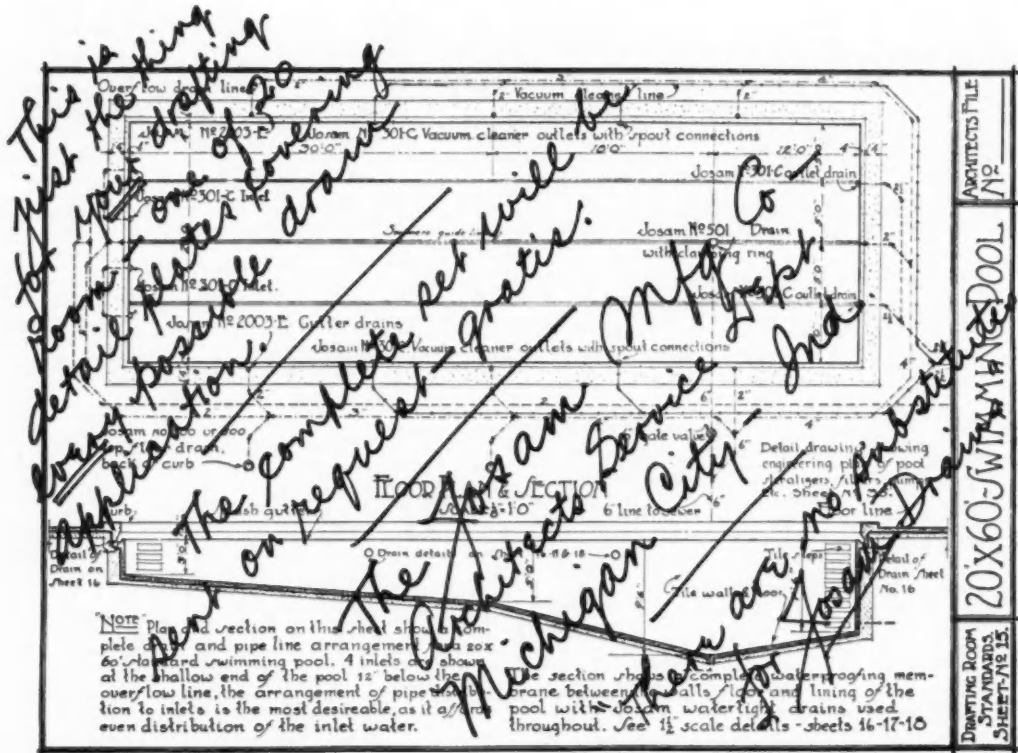
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American Tube Works  
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Rome Brass & Copper Company.
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Todd Oil Burner Eng. Corp.
- Ornamental Metal Workers.**  
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Smyser-Royer Company.  
Stewart Iron Works Co.
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Craftex Company.  
Decorite Company.  
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Glidden Company.  
New Jersey Zinc Co.  
Pecora Paint Company.  
Pittsburgh Plate Glass Co.  
Pratt & Lambert, Inc.  
Toch Brothers.  
U. S. Gutta Percha Paint Co.  
Wadsworth Howland & Co.
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Strathmore Paper Co.
- Partitions—Office.**  
Mills Company.  
Sanymetal Products Co.
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Mills Company.  
Sanymetal Products Co.
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Dixon, Joseph, Crucible Co.
- Pergolas.**  
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American Tube Works  
Bridgeport Brass Co.  
Chase Metal Works.  
Rome Brass & Copper Company.
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- Pipe—Wrought Iron.**  
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Plate Glass Mfrs. of America.
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- Publishers.**  
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Sweet's Catalogue Service, Inc.
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Deming, The, Co.  
Nash Engineering Company.
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Kewanee Boiler Company.  
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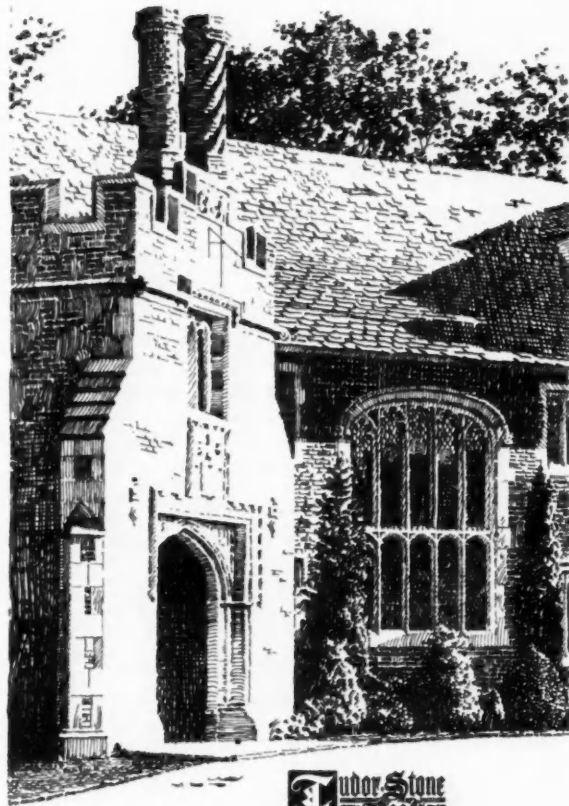
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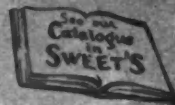
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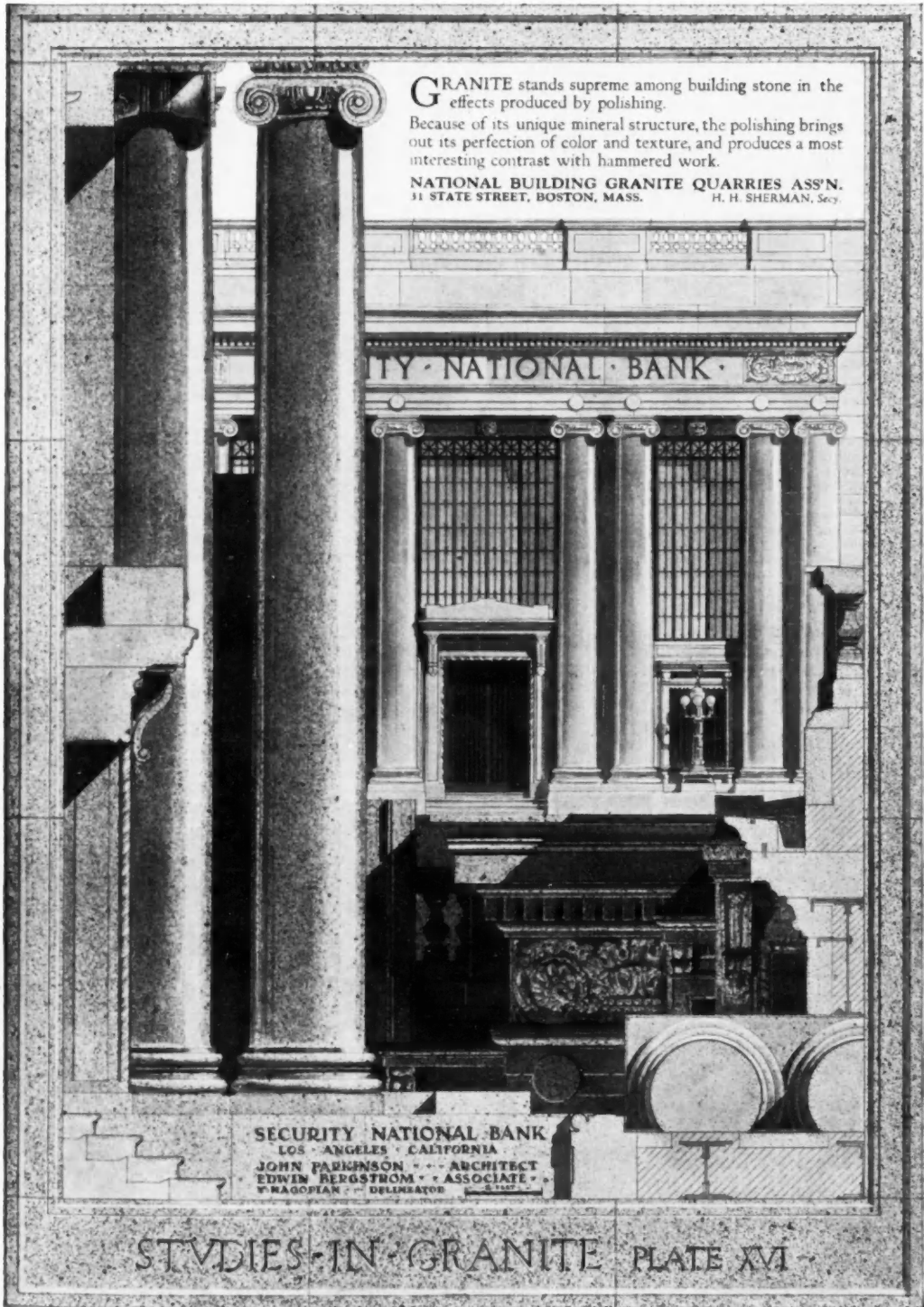


## RECENT PUBLICATIONS of ARCHITECTURAL INTEREST

Under this heading is listed a selection of (1) new catalogues, monographs and reports published by manufacturers, manufacturers' associations, technical societies, educational institutions and government departments, and (2) books on architecture and the allied arts. The manufacturers' publications may be secured by architects from the firms who issue them free of charge except where otherwise noted.

- BOILERS, HEATING.** Bulletin No. B6, Describing the Brownell Firebox Heating Boilers. The Brownell Company, Dayton, Ohio. 8½x11 in. 8 pp. Illustrated.
- BOILERS, GAS.** "Warmth and Comfort Conveniently." The Bryant Gas Boilers. The Bryant Heater and Manufacturing Company, 952 East 72d Street, Cleveland, Ohio. 5½x8½ in. 16 pp. Illustrated.
- BRASS GOODS.** Catalogue "S." Describing Goetz Bath, Shower and Lavatory Fixtures and Brass Specialties. Goetz Brass Company, 630 North Franklin Street, Chicago, Illinois. 8½x10¼ in. 34 pp. Illustrated.
- BRICK.** Alliance Multi-Color Ruff-Face Brick. The Alliance Brick Company, Alliance, Ohio. 9x11¼ ins. 8 pp. Illustrated in colors.
- CERAMICS.** Looseleaf Folder Describing Spartan Ceramics. Catalogue One. The Sparta Ceramic Company, Room 220, 5005 Euclid Avenue, Cleveland, Ohio. 8x10½ in. Illustrated in colors.
- DRAWING MATERIALS, SURVEYING INSTRUMENTS, ETC.** General Catalogue, Including Price List (36th Edition) of Keuffel & Esser Company, Hoboken, New Jersey. 5¼x8½ in. 482 pp. Illustrated.
- ELEVATORS.** Looseleaf Bulletin Describing The Warner Traction Elevators. The Warner Elevator Manufacturing Company, Cincinnati, Ohio. 9x11½ in. Illustrated.
- FIREPLACE FURNISHINGS.** "Cahill Furnishings for the Fireplace." Chattanooga Roofing & Foundry Company, Chattanooga, Tennessee. 6x4 in. 24 pp. Illustrated.
- FLOORS AND ROOFS.** Sheetrock Pyrofl Construction Floors and Roofs. United States Gypsum Company, 205 West Monroe Street, Chicago, Illinois. 8½x11 in. 16 pp. Illustrated.
- GLASSWARE, LIGHTING FIXTURE.** Macbeth-Evans Lighting Glass. Catalog Number 128. Macbeth-Evans Glass Company, Pittsburgh, Pennsylvania. 8½x11 in. 56 pp. Illustrated in colors.
- GUTTERS.** "It is Profitable for Lumber Dealers to Sell O. G. Fir Gutters." E. M. Long & Sons, Cadiz, Ohio. 4x9 in. 12 pp. Illustrated.
- HEATING.** "The Fallacy of 'Air Change' Factors in Figuring Heating Requirements." Monarch Metal Products Company, 5020 Penrose Street, St. Louis, Missouri. 5½x8½ in. 54 pp. Illustrated.
- IRON WORK.** Architectural and Ornamental Iron Work. Catalog No. 6. The Hughes-Keenan Company, Mansfield, Ohio. 8¼x10¼ in. 48 pp. Illustrated.
- LAWNS.** "The Seeding and Care of Lawns." O. M. Scott and Sons Company, Marysville, Ohio. 3½x5¼ in. 24 pp.
- METAL LATH.** Herringbone Rigid Metal Lath. The General Fireproofing Company, Youngstown, Ohio. 8½x11 in. 48 pp. Illustrated.
- OIL BURNER HEATING CONTROLS.** "Making the Oil Burner Practical—Facts About Oil Burner Heating That Every One Interested in Oil Burners Should Know." Minneapolis Heat Regulator Company, Minneapolis, Minnesota. 4½x6¾ in. 12 pp. Illustrated.
- PLATE GLASS.** "The Age of Plate Glass." Plate Glass Manufacturers of America, First National Bank Building, Pittsburgh, Pennsylvania. 5½x6¾ in. 20 pp. Illustrated.
- PUMPS AND WATER SYSTEMS.** Monarch Pumps and Water Systems for City, Town and Farm Homes. Catalogue No. 103. The Monarch Engineering Company, Dayton, Ohio. 7¼x10½ in. 24 pp. Illustrated.
- RADIATOR SHIELDS.** Illustrated Folder, Including Colored Samples of Standard Finishes for "Shapco" Radiator Shields. Sodeman Heat and Power Company, 2300-06 Morgan Street, St. Louis, Missouri. 6x9¼ in. 18 pp.
- RANGES, OIL.** "Vapo—The Year-Round Oil Range." The Vapo Stove Company, Lima, Ohio. 3¼x6¼ in. 10 pp. Illustrated.
- SHEET METAL BUILDING PRODUCTS.** "Milcor" Architectural Sheet Metal Guide. Catalog No. 24. Milwaukee Corrugating Company, Milwaukee, Wisconsin. 8½x11 in. 64 pp. Illustrated.
- STONE, ARTIFICIAL.** Rackle Artstone for Exterior and Interior Architectural Design. The George Rackle & Sons Company, Post Office Box 347, Cleveland, Ohio. 8½x11 in. 30 pp. Illustrated.
- TABLETS, BRONZE.** Newman Bronze Tablets, Etched Brass Signs and Cast Metal Characters. Newman Manufacturing Company, 416-418 Elm Street, Cincinnati, Ohio. 9x12 in. 48 pp. Illustrated.
- TERRA COTTA.** "The Disappearance of Architectural Landmarks." Volume VII, Number 3 of Atlantic Terra Cotta Series. Atlantic Terra Cotta Company, 350 Madison Avenue, New York City. 8½x11 in. 16 pp. Illustrated.
- TREADS.** "The Wear on Stairs." Illustrated Folder Describing the Wooster Safety Treads. The Safety Stair Tread Company, Wooster, Ohio. 3½x9¼ in. 12 pp.
- VAULT DOORS.** Looseleaf Folder Describing The Safe-Cabinet Vault Door (Insulated). The Safe Cabinet Company, Marietta, Ohio. 9¼x11½ in. Illustrated.
- WATERPROOFING.** "Science and Practice of Integral Waterproofing." Fourth Edition. Truscon Waterproofing Paste. The Truscon Laboratories, Detroit, Michigan. 4x9 in. 32 pp. Illustrated.
- WEATHERPROOF COMPOUNDS.** Illustrated Folders Describing Glazetite Weatherproof Compound in Colors for Economical and Attractive Glazing, Caulking and Airproofing. The Sterling Products Company, 605 Euclid Avenue, Cleveland, Ohio.
- WEATHER STRIPS.** Monarch Metal Weather Strip Manual for Architects, Heating Engineers and Building Contractors. Monarch Metal Products Company, 5020 Penrose Street, St. Louis, Missouri. 8½x11 in. 44 pp. Illustrated.





On request a complete folio of these Granite Studies will be reserved for you.

## Book Notices for December, 1924

**The Enjoyment of Architecture**, by Talbot Faulkner Hamlin. New York: Charles Scribner's Sons. 348 p. illus. 5½ x 8½ in. Cloth. \$3.00.

Mr. Hamlin, a practicing architect himself, has vitalized his subject with his own enthusiasm and put before the reader a series of chapters that introduce architecture as a living art. It does not deal with the dry facts of merely historical architecture, but with the underlying things that express the ideals and the purposes of all good architecture, all good art.

**Architectural Rendering in Wash**, by H. Van Buren Magonigle, F.A.I.A. With a Preface by Thomas R. Kimball, F.A.I.A. New York: Charles Scribner's Sons, 1922. xvi, 160 p. illus. 7¼ x 10¼ in. Cloth. \$5.00

A manual for the student in the school of architecture and the draughtsman in the office, the novice and the experienced man, which describes the making of a rendered drawing from the bare drawing-board, through the processes of choice and mounting of the paper, pencilling, and inking in, cleaning and sponging off, the preparation and toning of the ink. The Relative Illumination of Planes, Reflected Light, Reflected Shadows and Shades are illustrated with nine large-scale diagrams, covering a field hitherto untouched.

**Modern Building Superintendent and the Writing of Specifications**, by David B. Emerson. New York: Charles Scribner's Sons, 1921. viii, 247 p. 4¼ x 6¾ in. Cloth. \$1.75.

This is a book for practical service, written by a man of long experience. The author has taken as a topic a modern, up-to-date building, including the new materials, and methods of construction that have been developed in recent years. It starts from the foundation and carries on the construction to the completed building. There is nothing of just this kind in print, and it will take the place of older books on the subject which are out of date on account of the great changes in modern materials and construction.

**Small French Buildings—The Architecture of Town and Country, Comprising Cottages, Farmhouses, Minor Chateaux or Manors with Their Farm Groups, Small Town Dwellings, and a Few Churches**, by Lewis A. Coffin, Jr., Henry M. Polhemus and Addison F. Worthington. New York: Charles Scribner's Sons, 1921. xiii, 275 p. illus. 8¼ x 11½ in. Cloth. \$10.00.

Their subject is that immense field of most interesting and as yet hardly touched minor architecture of old France: the farm-houses, farm groups, peasant cottages, the manors, the little and more suggestive town houses—a wide and fresh field of study, full of valuable suggestions for the architect and filled with interest for the appreciative layman.

**Styles of Ornament**, by Alexander Speltz, architect. Exhibited in Designs and Arranged in Historical Order with Descriptive Text—A Handbook for Archi-

itects, Designers, Painters, Sculptors, Wood-Carvers, Chasers, Modellers, Cabinet-Makers and Artistic Locksmiths, as well as also for Technical Schools, Libraries and Private Study. Translated from the Second German Edition by David O'Conor. Chicago: Regan Publishing Corporation, 1923. vii, 647 p., 400 full-page illustrations with illustrated descriptive text. 6¾ x 9¾ in. Cloth. \$5.00.

The most comprehensive and exhaustive single volume published on Ornament and Styles of Architecture. An excellent text book for the use of students of design, artists, sculptors, and for any one desiring examples of any period from prehistoric to modern times, this work having been undertaken with the object of representing the entire range of ornament in all its different styles from prehistoric times till the middle of the 19th century, and to illustrate the different uses to which it had been applied.

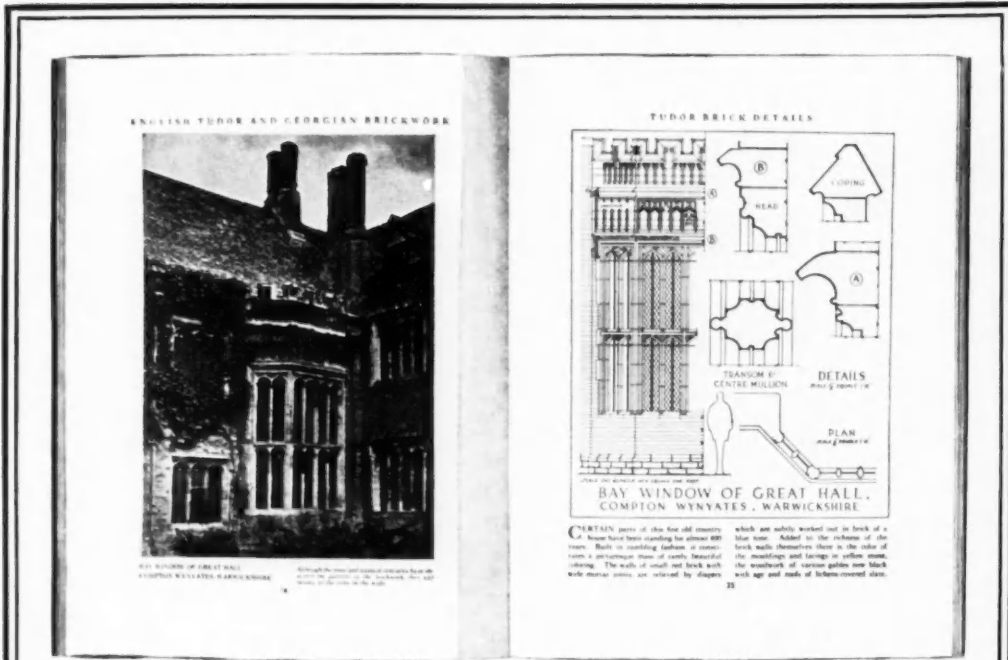
A special chapter has been added to this new edition to exemplify the Colonial Styles of Ornament in the United States.

**Old Domestic Architecture of Holland**, edited by F. R. Yerbury. Being a Series of Photographs by the Editor, with Introductory Notes by Dr. Ir. D. F. Slothouwer, architect, and Measured Drawings by E. R. Jarrett, A.R.I.B.A. London: The Architectural Press, 1924. xv, 102 plates. 9¾ x 12¼ in. Cloth. 25/0d net.

The aim of this book, which gathers together for the first time a representative selection of photographs and measured drawings of Dutch houses, is to illustrate the development of one of the most charming phases of domestic building in Europe, and one which has hitherto been somewhat neglected. In addition to exterior and interior views of varied types of houses, selected and photographed by Mr. F. R. Yerbury, illustrating alternative designs for house fronts and the decorative treatment of rooms, including chimney pieces, furniture, panelling, etc., the volume contains a useful series of measured drawings executed by Mr. E. R. Jarrett, A.R.I.B.A., comprising house fronts, wooden screens, doorcases, doorways and steps, fanlights, ironwork, built-in beds, gateways, etc. The informative and lucid Introduction, which has been specially written in English for the book by the eminent Dutch Architect, Mr. D. F. Slothouwer, B.N.A., deals with the general characteristics of Dutch domestic architecture.

**Reinforced Concrete Design**, by G. P. Manning, B. Eng., Assoc. M. Inst. C. E. New York: Longmans, Green & Co., 1924. xvi, 484 p. illus. 5¾ x 8¾ in. Cloth. \$7.00.

This work aims at establishing methods of design suitable for use in a Civil Engineer's Office, and is based on the methods which the author has found in use and which he has himself used in actual design. The subject matter is treated from the point of view of the engineer designer, and includes the theory and practice of design as generally admitted and employed at the present day. Figured dimensions, sections, and stresses, have been employed to a large extent, although the underlying methods are capable of general application.



Reproduction of two facing pages in "English Precedent for Modern Brickwork."  
The illustration shows the character of the halftone plates and measured drawings shown in the book.

## A NEW BOOK FOR THE DRAFTING ROOM

HERE is a book—"English Precedent for Modern Brickwork"—that will be of real interest to the architect and the architectural draughtsman. The measured drawings will be helpful in the drafting room, while the halftone plates and text give a clear picture of the beauty and craftsmanship of English brickwork.

The book is especially timely since much of the best present-day American brickwork finds its inspiration in English precedents.

Among the subjects discussed in the book are: "An Appreciation for English Brickwork," "Chronology of English Brickwork," "Tudor

Brickwork," "Georgian Brickwork," "American Brickwork," "English Rubbed, Cut, Moulded Brick and Their American Counterparts," and "Bonds and Mortars in English Brickwork."

The text is illustrated by 43 halftone plates and 28 measured drawings. The colored frontispiece is by Otto Eggers.

"English Precedent for Modern Brickwork" will be sent to any address in the United States or Canada upon receipt of two dollars. Address, American Face Brick Association, 1756 Peoples Life Building, Chicago, Illinois.

## News of the Field

**NATHAN MYERS**, architect, of Newark, New Jersey, announces that he is sailing with Mrs. Myers on December 6th to Naples. It is his intention to occupy three to four months in an intensive study of the fine arts of Italy and France.

**DOYLE AND MERRIAM**, architects and engineers, announce the removal of their offices from First National Bank Building to 1408 Smith Building, Seattle, Washington.

**EDWARD GEORGE McCLELLAN**, architect, announces the removal of his office to his new office building and studio at 7441 Cottage Grove Avenue, Chicago, Illinois. Manufacturers' literature requested.

**STEVENS AND LEE**, architects, announce the removal of their Boston office from 9 Park Street to 45 Newbury Street, corner Berkeley Street.

**JACOBSON & COMPANY**, specialists in architectural plaster and artificial stone, of 241 East 44th Street, New York City, announce the Jacobson Annual \$1,000.00 Prize Competition for 1925. The subject is a design for the decorative treatment of a theatre auditorium, and the competition is open to draftsmen, students and others. There are eleven prizes, the first of \$500, the second of \$250, four of \$50 each and five of \$10 each. The jury of award will consist of the following five architects: Harvey W. Corbett, Raymond M. Hood, John Mead Howells, Harry Creighton Ingalls and James Gamble Rogers. The competition closes April 15th, 1925, and full particulars may be secured by writing direct to the Jacobson Annual, c/o Jacobson & Company.

**W. & J. SLOANE**, Fifth Avenue at W. 47th Street, New York City, announce that they have formed a new company, under the name of W. & J. Sloane Manufacturing Company, to manufacture inlaid, printed and plain linoleum. The mills, located near Trenton, New Jersey, will be adequately equipped to produce the finest linoleum in all grades and qualities. The plant is on the Pennsylvania R. R. at Hutchinson's Mills adjacent to Trenton, on a site consisting of 82 acres, where construction work will soon be under way. There will be the most modern type of factory buildings with railroad sidings for shipping and receiving and all

other equipment necessary to the production of linoleum on a large scale.

W. & J. Sloane will act as selling agents for the new manufacturing organization in the same manner as they do for the Mohawk Carpet Mills, Inc., Amsterdam, N. Y., and C. H. Masland & Sons, Inc., Philadelphia and Carlisle, Pa. According to previous announcement, W. & J. Sloane Manufacturing Company expects to have its plant in operation and the linoleum on the market in another year.

**FIRST FORMAL** announcement of the Architectural and Allied Arts Exposition, which will be held in Grand Central Palace, New York, from April 20 to May 2, under the auspices of the American Institute of Architects and the Architectural League of New York, was made recently by D. Everett Waid, President of the American Institute of Architects.

The International Exposition will show almost everything that goes into a home or office building, from the cellar to the chimney. It is believed that it will attract the largest number of home-seekers, painters, architects, sculptors, builders, contractors, and the general public that has ever attended any exhibition of architecture and the allied arts.

**THE Société des Architectes Diplômés**, has awarded its Grande Médaille to Mr. John D. Rockefeller, Jr., in recognition of his gift for the restoration of Rheims, Fontainebleau and Versailles. The medal was presented to Mr. Rockefeller on Wednesday, November 19th, by the officers of the American Group representing the Society in this country, Chester Aldrich of the firm of Delano & Aldrich, President of the Group, Harvey W. Corbett and Edwin H. Denby.

**THE** first preliminary competitions for the 18th Paris Prize of the Beaux-Arts Society will be held on January 3rd, 1925. The winner of this competition receives \$300 quarterly, for two and one-half years' study in Paris, where he is given the privileges of study in the first class of the Ecole des Beaux Arts.

The competition is open to all United States citizens under 27 years of age on July 1, 1925, without any other qualifications. This competition may be taken in any part of the United States. Further information will be furnished on application to the Chairman, at 126 East 75th Street, New York.

## The Architect and The Surety Company

**W**HEN an architect requires or accepts from a contractor a bond guaranteeing the fulfillment of a building contract, four major tests should be applied:

**FIRST:** The bond should be issued by a well-established Surety Company which does not issue such bonds except for thoroughly experienced, well-equipped and financially responsible contractors—a company whose investigation into the standing of a contractor is so very thorough that the architect knows that the existence of the bond, or the willingness of the company to write it, is the highest endorsement of the contractor's qualifications.

**SECOND:** The financial responsibility of the Surety Company issuing the bond should be such that it will without doubt be able to meet any proper claim which may be made against it at any future time.

**THIRD:** The company issuing the bond should be recognized as one which meets its losses promptly and fairly; one which makes an immediate investigation when trouble develops to determine without delay whether the company shall complete the contract, allow the owner to complete it or secure some responsible contractor to finish the work, to the end that the best interests of all concerned may be served.

**FOURTH:** A company whose history indicates a genuine desire to protect the owner, and to cooperate with the architect, to see that the work is completed in accordance with the contract and with the least possible delay.

The Fidelity and Deposit Company meets these requirements. It specializes in issuing to owners the broadest form of coverage and protection that can be obtained. It unconditionally guarantees that the contractor will faithfully and punctually carry out his obligations in accordance with all the terms and conditions of the contract specifications; that he will deliver the building on time; and that he will indemnify, protect and save harmless the owner against any loss he might sustain by reason of the filing of liens for labor and material.

No matter what the language of any bond may be it cannot give the owner and the architect broader protection than this.

The Home Office, as well as the F & D Representative in every community, will be glad to answer any inquiries regarding bonds for contractors.

**Fidelity and Deposit Company**  
BALTIMORE

**Fidelity and Surety Bonds**

## Building Statistics

**T**HE following figures, prepared by the Statistical Division of F. W. Dodge Corporation, cover the construction record of the first ten months of this year and are based upon the contracts awarded during the period in 36 Eastern States (which include about seven-eighths of the total construction volume of the United States).

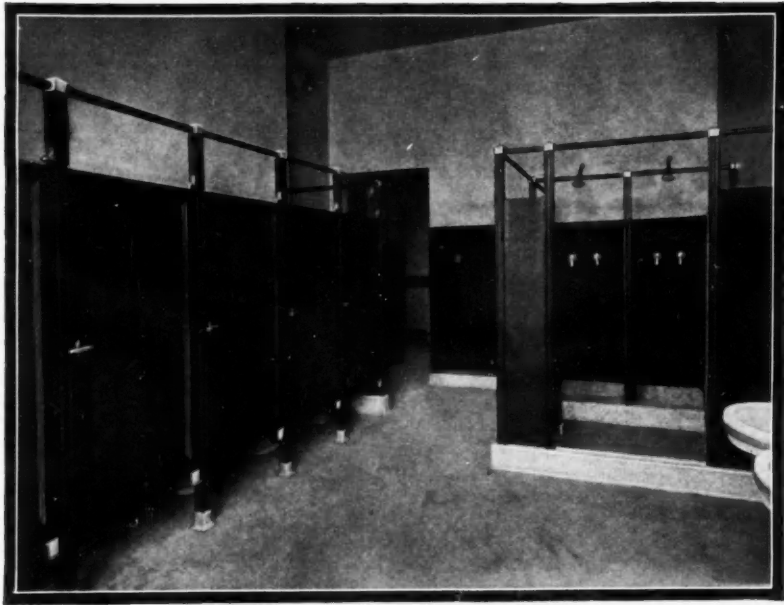
Table X gives the percentage of each valuation figure that may be taken to represent the work planned by architects.

Classification	Number of Projects	New Floor Space in Square Feet	Valuation	X
Commercial Buildings.....	12,798	93,435,100	\$499,817,000	82.9%
Educational Buildings.....	3,334	52,162,100	323,331,300	94.6
Hospitals and Institutions.....	737	13,506,000	97,467,500	87.4
Industrial Buildings.....	3,300	41,013,200	288,000,400	47.3
Military and Naval Buildings.....	50	317,100	1,878,200	72.2
Public Buildings.....	513	4,671,600	30,242,600	91.2
Public Works and Public Utilities..	8,965	6,309,200	630,836,000	7.5
Religious and Memorial Buildings..	1,883	14,004,600	107,095,400	91.6
*Residential Buildings.....	78,540	354,011,200	1,694,417,600	64.7
Social and Recreational Buildings...	1,426	16,177,900	102,007,500	88.8
<b>Total</b> .....	<b>111,546</b>	<b>595,608,000</b>	<b>\$3,775,093,500</b>	<b>61.1%</b>

\*134,580 Buildings.

### Total Contracts by Months

	Proj.	New Floor Space in Square Feet	Cost
1st Half, 1923.....	61,582	367,940,900	\$2,110,025,400
July, 1923 .....	9,367	49,596,700	314,944,200
August, 1923 .....	9,844	48,636,700	298,558,700
September, 1923.....	8,818	45,618,300	288,924,700
October, 1923 .....	11,381	62,851,600	359,454,200
<b>Total, 1st 10 months, 1923.....</b>	<b>100,992</b>	<b>574,644,200</b>	<b>\$3,371,907,200</b>
1st Half, 1924.....	65,956	388,871,600	\$2,321,634,400
July, 1924.....	10,820	49,269,500	344,684,300
August, 1924 .....	11,093	50,754,300	354,442,700
September, 1924 .....	11,230	51,625,500	344,241,300
October, 1924 .....	12,447	55,087,100	410,090,800
<b>Total, 1st 10 months, 1924.....</b>	<b>111,546</b>	<b>595,608,000</b>	<b>\$3,775,093,500</b>



A RECENT INSTALLATION OF SANYMETAL TOILET PARTITIONS

**In what other metal toilet partition do you find these remarkable features?**

Interlocking construction—panels, stiles, and posts locked in one rigid unit.

Drawn trim on both panels and doors.

Concealed metal edges, perfect mitres, concealed fastenings—no unsightly welds, bolts or screws.

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Sunken panel posts. Self-draining aluminum base shoe.

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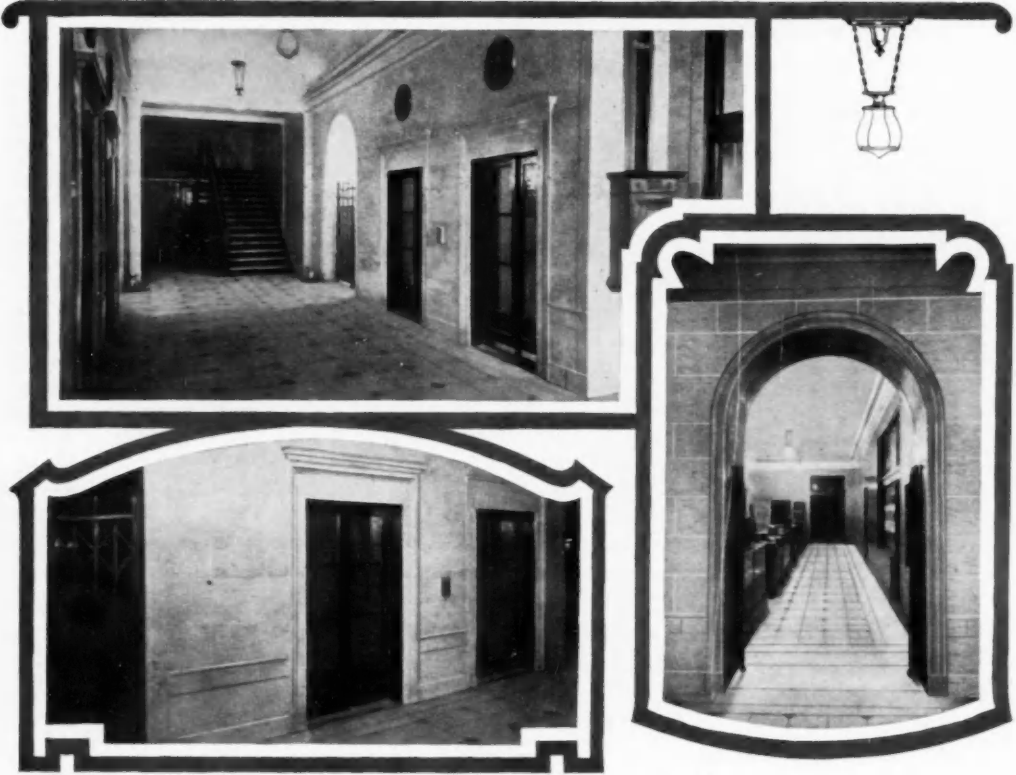
***Sanymetal***  
TRADE MARK U.S. REG. *Toilet and Office Partitions*

Catalog 5 shows toilet and shower partitions.



Catalog 4 shows office and factory partitions.

## LIBERTY BUILDING ~ DES MOINES ~ IOWA



## Appalachian Marble in Des Moines

Appalachian Tennessee marble is used for interiors, such as that of the Liberty Building of Des Moines, Iowa, not alone because of its permanency, but because it can be obtained in a wide variety of colors.

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ville and is reasonable in cost because its huge production is obtained by time and labor saving quarrying and milling methods, and the utilization of all waste. The result is that the many colors of Appalachian marble are used in Iowa and all other states, in Canada, in Europe, and in South America.

Architects are invited to make use of the Appalachian corps of experienced interior marble engineers. Plans and specifications sent for accurate cost estimate entail, of course, not the slightest obligation, and receive prompt attention.

### APPALACHIAN MARBLE COMPANY

KNOXVILLE - *Producers exclusively of Sincere Marble* TENNESSEE





Entrance Hall, Grace Court Apartments, Brooklyn, N.Y.  
Mortimer E. Frechhof, Architect.



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BESIDES simple textured effects in any color, or combination of colors, Craftex produces unusually faithful reproductions of Travertine, Caen Stone, Italian, Old English or Early Colonial Plasters. Enough can be mixed at one time, to finish any required amount of work. It does not set in the pail.

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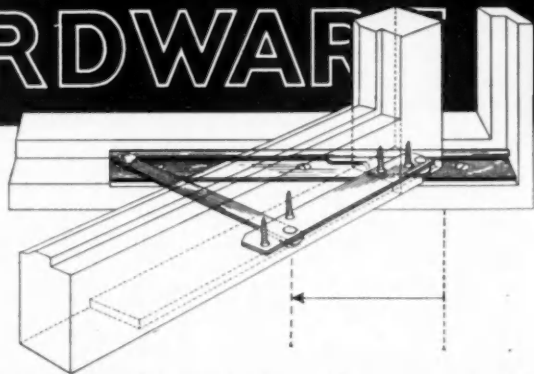
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Together with the way in which its sturdy brass sash-plate reinforces that joint— And the greatly increased holding power of its screws, which are set in at right angles to the strain—

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WHITCO takes the place of butts and adjusters for swinging and controlling casements and transoms. One size fits all sash.

A set consists of two pieces—one for the top and one for the bottom of a casement, and one for each side of a transom. Both are identical, except, that one is the reverse of the other.

The installation is simple. After the carpenter has housed the sash-plate into the top and the bottom of the casement, all he has to do is to turn the sill plate at right angles to the sash, set it into the opening and screw one sill plate to the header and the other to the sill.

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This is the third of a series of pages illustrating and describing the many practical qualifications of WHITCO hardware, in addition to its superiorities as a means of operating and controlling casement sash and transoms.



WHITCO makes it easy and safe to clean the outside of a casement window from within the room.

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IN the Tribune Tower, the "world's greatest newspaper" is seeking to give America its most beautiful office building. The hundred thousand dollars invested in the Tribune architectural competition indicate how far the owners were willing to go in order to find worthy architects.

They were equally as scrupulous in the choice of materials of construction and equipment. In every detail, they sought to preserve the spirit of dignity and fortitude of their newspaper. Cost was not their first consideration, yet the conservative policy of the Tribune forbade lavish expenditures.

The unanimous decision of both owner and architects on Crane plumbing and heating materials is a recognition of Crane quality which is deeply appreciated. To create fixtures, valves and pipe fittings which appeal through their quality, charming designs and economy of lasting service, is ever the rule and guide of Crane design and manufacture.

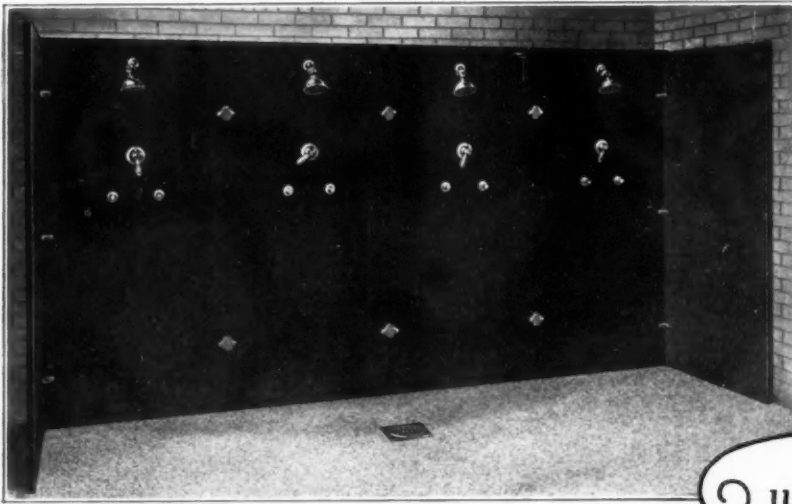
*Tribune Tower, Chicago. Architects, Hulls and Hood; General Contractors, Hegeman-Harris Co.; Plumbing Contractors, F. Biggs Co.; Heating Contractors, Mehring & Hanson.*



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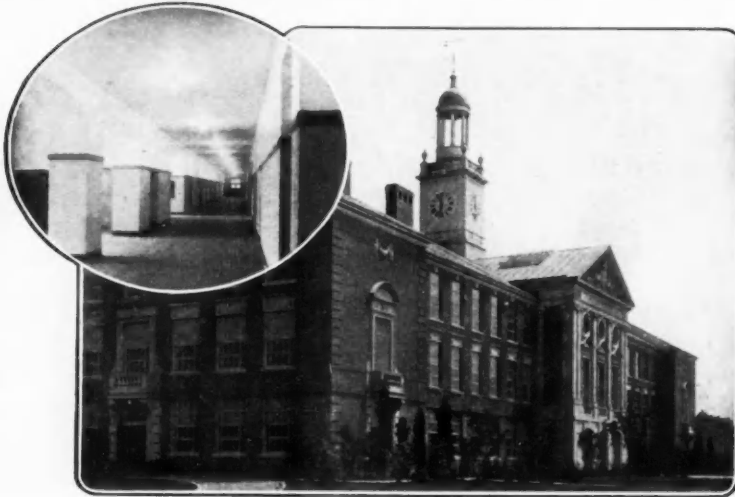
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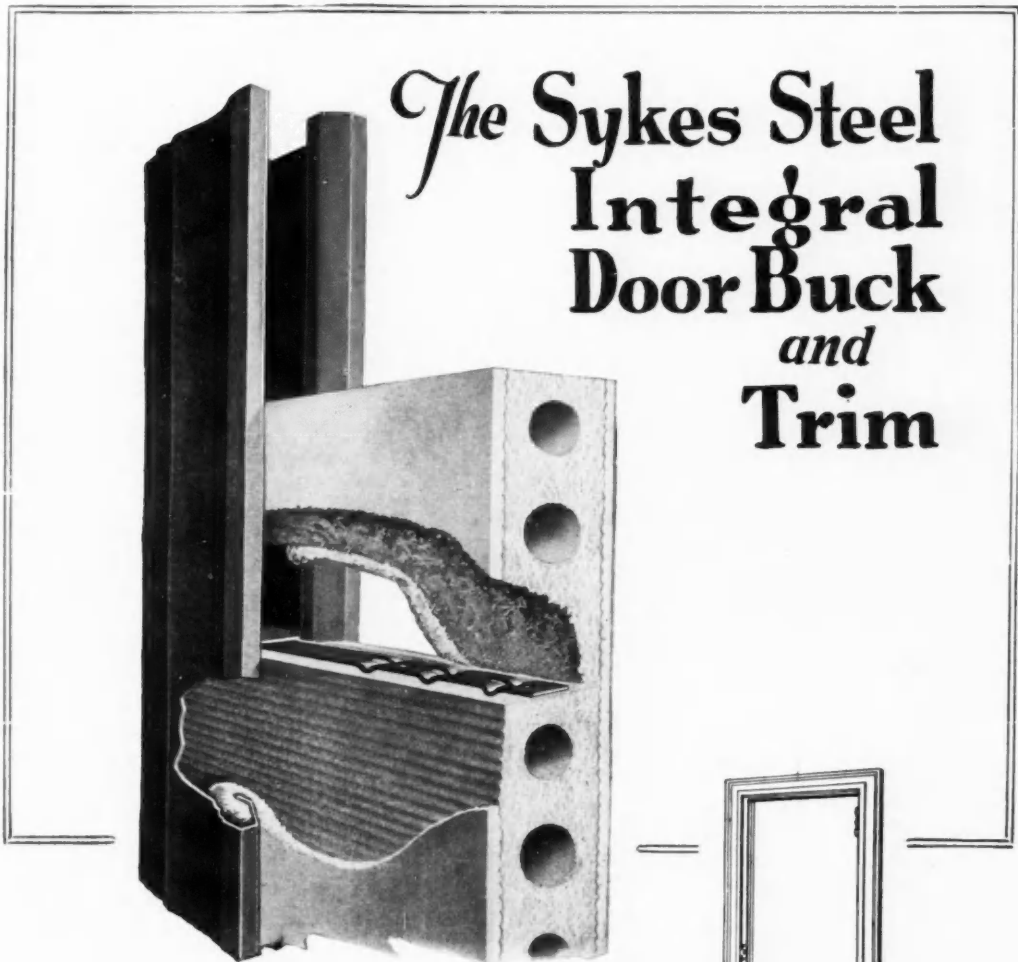
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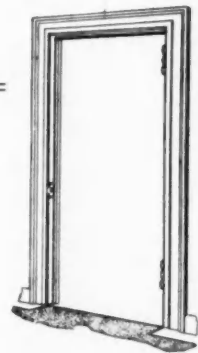


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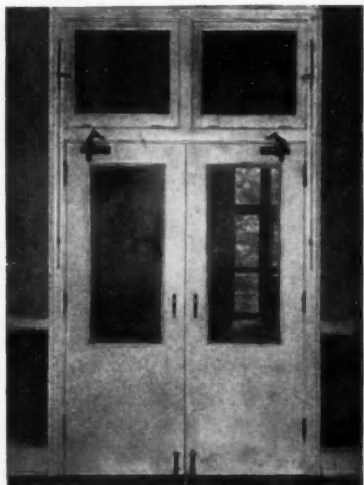
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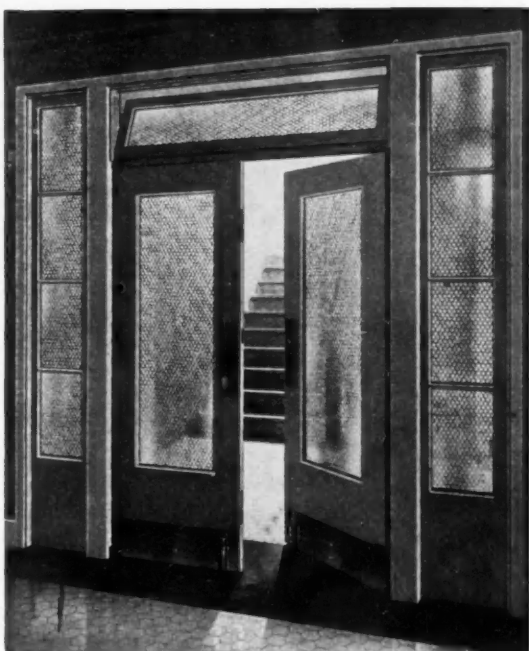
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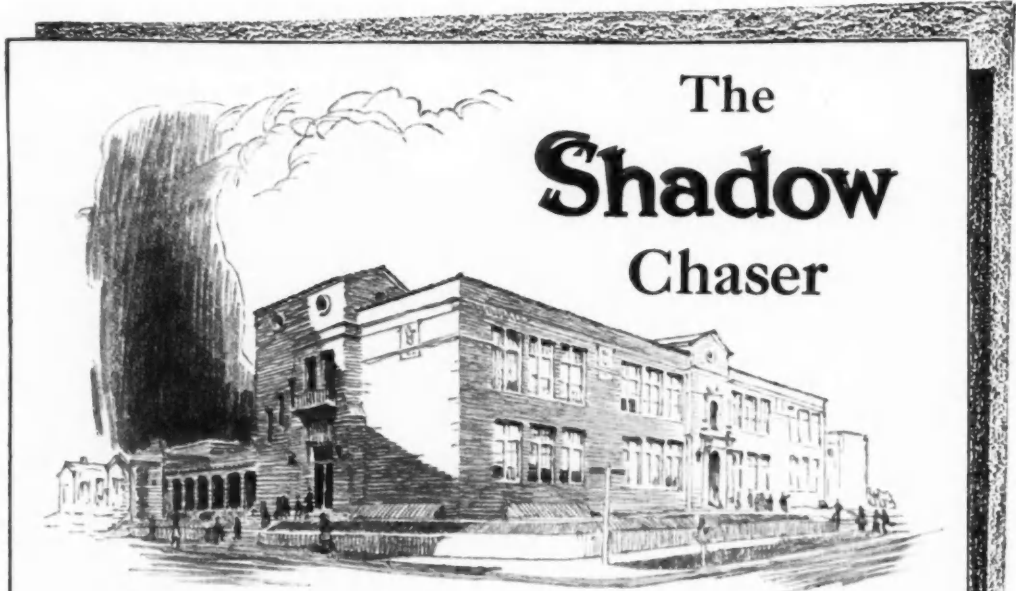
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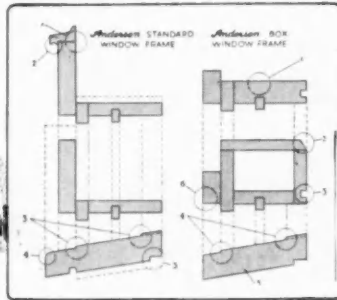


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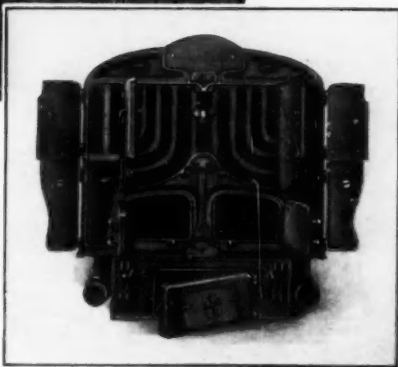
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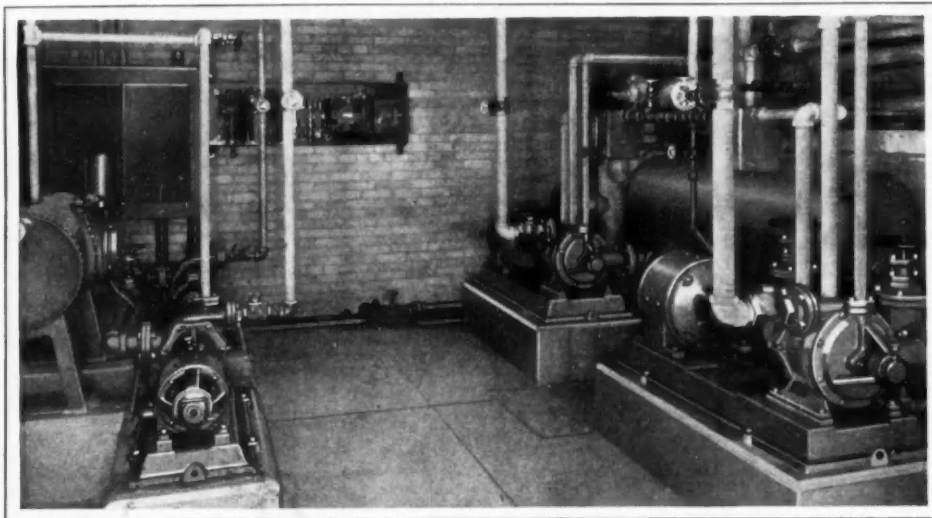
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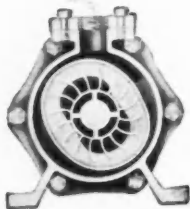
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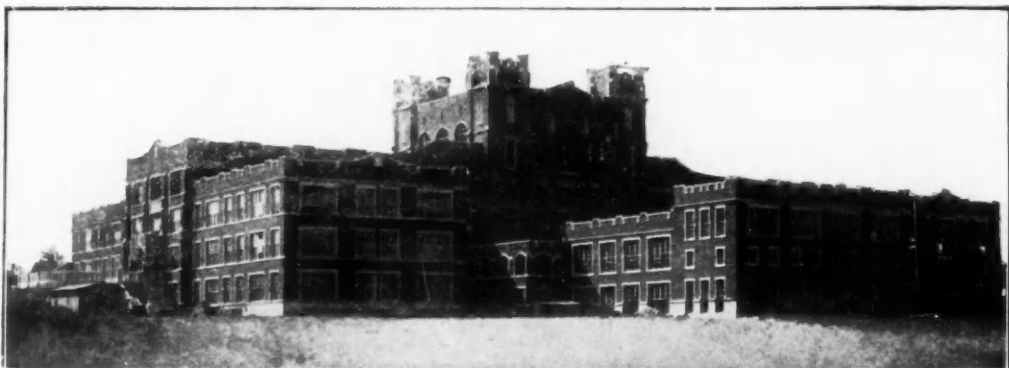
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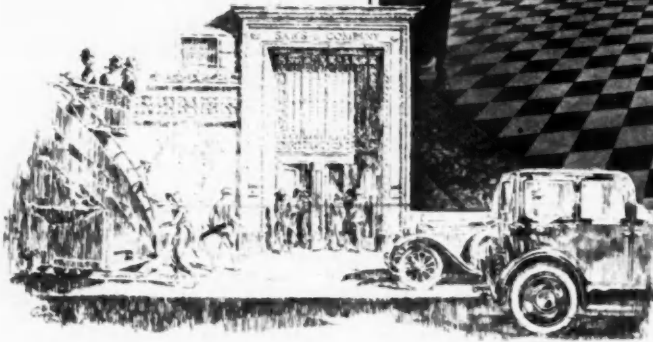
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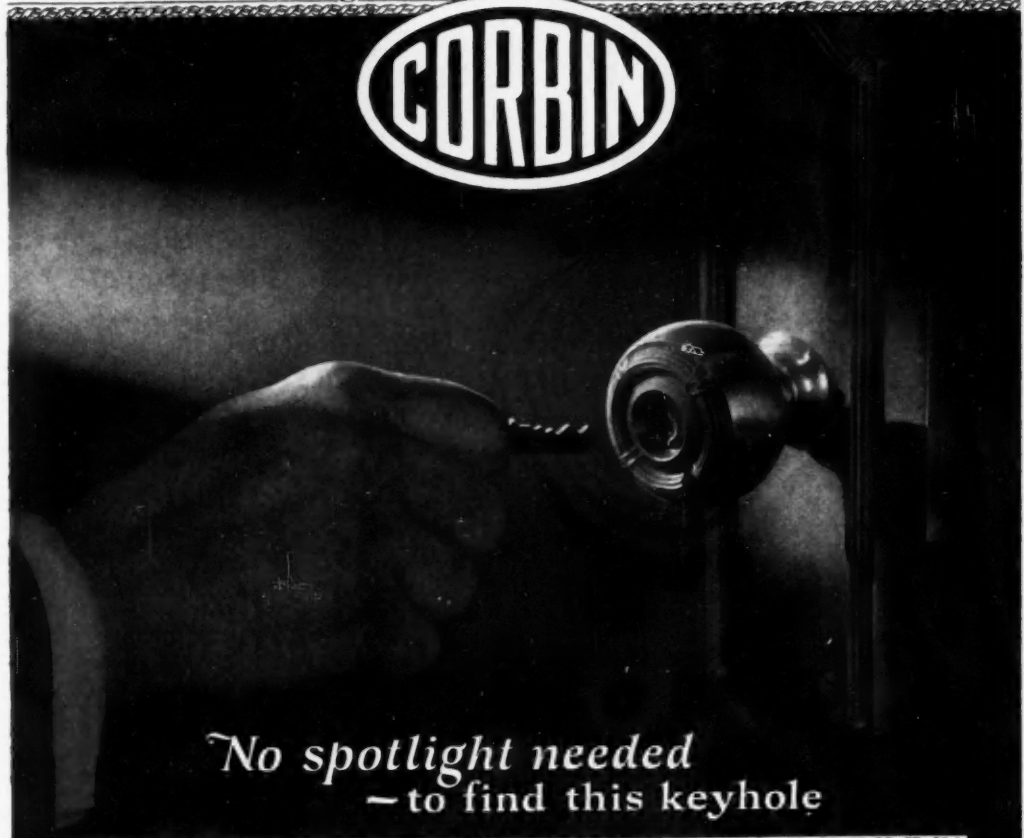
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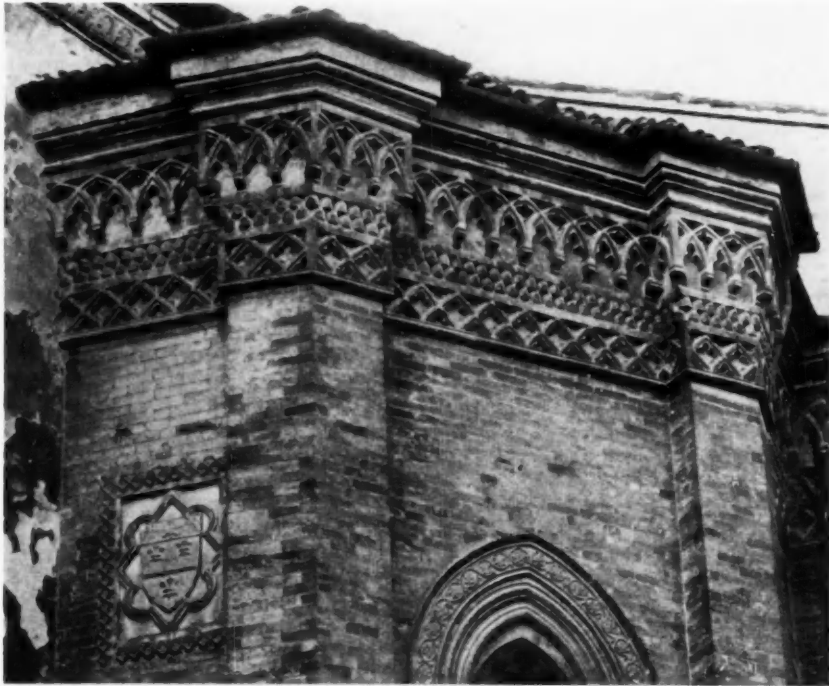
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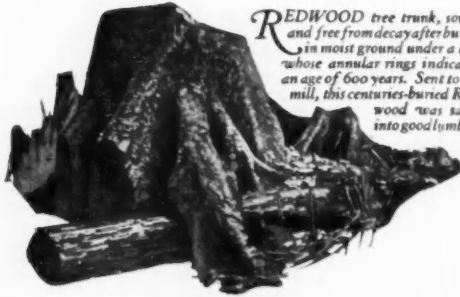
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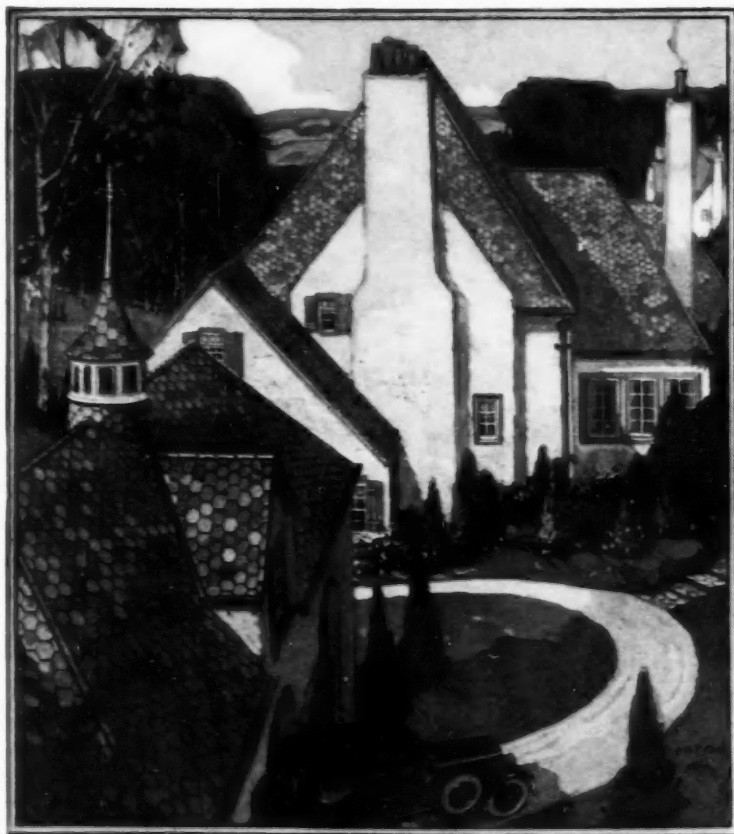
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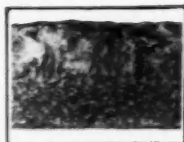
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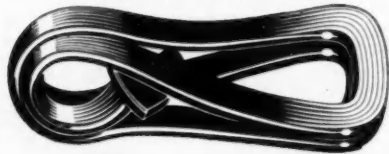
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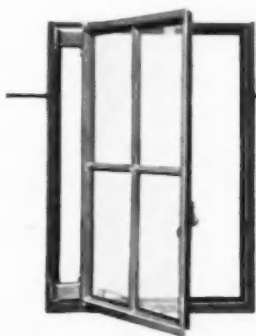


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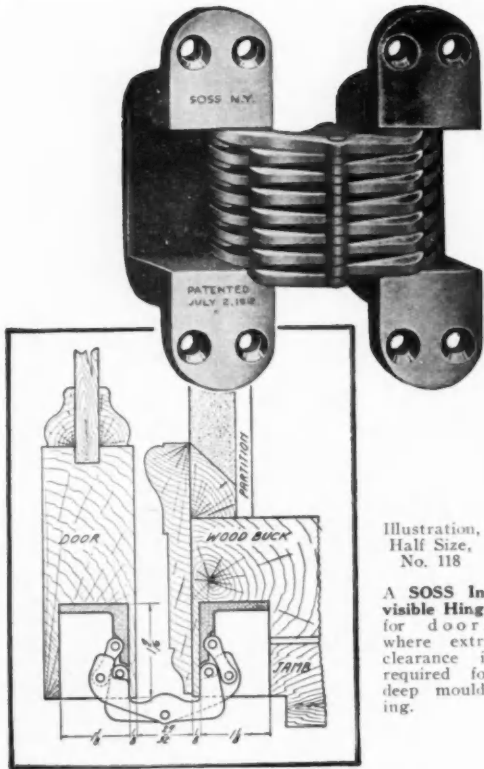
By specifying Union Metal Columns made of copper bearing steel you will protect your work against the disfiguring effects of time and weather. Besides, your client will make an investment in beauty, strength, durability and lifetime satisfaction.

Weatherproof, fireproof and everlasting, Union Metal Columns add hundreds of dollars to the value of any building on which they are used.

Send for "Colonial Entrances," a valuable book every architect should have in his file.

THE UNION METAL MANUFACTURING CO.  
CANTON, OHIO

# UNION METAL COLUMNS



Illustration,  
Half Size,  
No. 118

A SOSS Invisible Hinge for doors where extra clearance is required for deep moulding.

**T**HE SOSS Invisible Hinge was invented and developed on the premise that a hinge should be HIDDEN. There are two reasons for this. ¶ First, it is good practice to *hide* working parts in all mechanical contrivances. ¶ Second, HIDDEN hinges cannot interrupt the lines of fine woodwork. ¶ Hence—the SOSS Hinge—*specified everywhere, for the best work.*

Soss Manufacturing Company, Inc.  
594 Grand Avenue Brooklyn, N. Y.

**INVISIBLE HINGES**  
**SOSS**

**R.I.W.**  
REMEMBER IT'S WATERPROOF  
**R.I.W.**

REG. U.S. PAT. OFF.

General Motors Company Building, Detroit, Mich. Albert Kahn, Architect. Thompson Starrett Co., Contractors. Concrete floors protected and decorated with "R.I.W." Products.

**THERE IS NO CEMENT "DUST" IN THIS BUILDING**

Whether there are twenty floors of vast expanse, or a few square feet in a single private office, there is just as great a surface wear on every square inch. And every square inch of concrete floor should have "dusting" and disintegration *stopped* with

**R.I.W.**  
MAKING THE CONCRETE LAST  
**R.I.W.**  
A TRADE MARK

**Cement Filler and Cement Floor Enamel\***

"R.I.W." Cement Filler penetrates and hardens concrete—makes it oil-proof, water-proof and wear-proof—prevents "dusting" and abrasion. "R.I.W." Cement Floor Enamel adds durability and gives a semi-gloss or high-gloss finish in any standard shade or specially selected color.

Write Department K, for information on the proper "R.I.W." Product to employ for any purpose of decoration or straight protection.  
\*Patented.

*Loch Brothers*

INC.  
Established 1848  
Technical and Scientific Paint and Varnish Makers  
110 EAST 42ND STREET, NEW YORK  
Opposite the Grand Central Terminal  
Works: Long Island City, N. Y.



Dr. Charles V. Paterno's Hudson View Gardens, Pinehurst to Northern Aves. and 182nd to 186th Sts., New York City.

George F. Pelham, Architect.

## Why Dr. Paterno's Masterpiece is Kernerator-Equipped

MAGNIFICENT Hudson View Gardens, Dr. Charles V. Paterno's new 354-apartment achievement, is 100 per cent Kernerator equipped! Naturally, the time-proven economy and convenience of the Kernerator exactly fitted Dr. Paterno's intention of creating a truly modern apartment community. Three hundred and fifty-four handy hopper doors—one in each kitchen—mean instant, right-at-hand garbage and waste disposal to every owner-tenant.

What an attraction to the buyer—and what a tremendous saving, too! No ill-smelling garbage pails at kitchen doors. No double or treble handling of garbage within the building before it is finally disposed of. No waiting for the tardy call of the janitor. No replacement of garbage pails either, for there are none. Just a neat, metal door into which every bit of household waste is dropped as fast as it accumulates—and then forgotten!

### No Operating Cost—No Fuel Required!

The Kernerator, as the cut-away view shows, consists of a brick combustion chamber, built in at the base of the chimney in the basement, and connecting with hopper doors on floors above. It handles all garbage, waste, tin cans, bottles, broken glass, crockery, papers and magazines, razor blades, sweepings—in fact, trash and refuse of every description. A patented, scientifically designed by-pass feature quickly air-dries the accumulation, so it lights easily and is readily burned. Non-combustibles (metallic objects, etc.) are flame-sterilized and removed with the ashes.

For more detailed information, consult Sweet's (1924), Pages 2536-37, or write

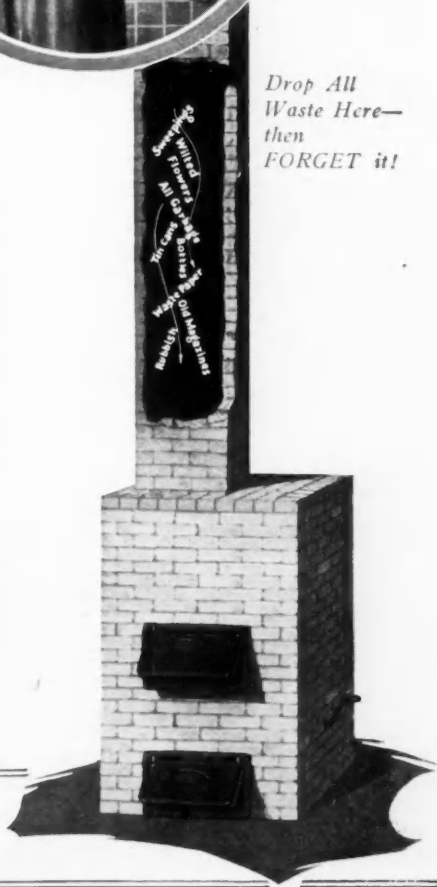
KERNER INCINERATOR COMPANY  
1017 CHESTNUT STREET MILWAUKEE, WIS.

**KERNERATOR**  
Built-in-the-Chimney

Reg. U. S. Patent Office



Drop All  
Waste Here—  
then  
FORGET it!





## Easy to Put In

**T**HRIFFY clients of yours will be particularly interested in the fact that Ric-wiL Underground Conduit is unusually easy and economical to install. It does not require even supervision by the manufacturer. For Ric-wiL arrives on the job complete in every detail and goes in quickly and smoothly—with savings of 58 cents a foot and more in labor and materials. We shall be glad to give you the figures.

*Give your client advantage of the kind of sound modern engineering that saves his money—in the beginning and in the years of efficient service Ric-wiL gives him.*

The Ric-wiL Co., 1577 Union Trust Building  
Cleveland, Ohio

# RIC WIL



UNDERGROUND

CONDUIT ~ ~

### The Dole Syphon Air Valve Test

The above illustration shows how every Dole Syphon Air Valve is tested before it leaves the factory. Each valve is tested individually for expansion and strength under 10-lb. pressure of live steam and 10-lb. water pressure. Each valve is individually inspected and any valve showing any leakage at all is rejected. That is why every Dole Syphon Air Valve functions with 100% efficiency.

**THE DOLE VALVE COMPANY**  
1923 Carroll Avenue CHICAGO



## Three Provable Claims

We make the following claims for Todd Fuel Oil Burners, which are substantiated by the experiences of over 2,000 ships, and many well known industrial plants:

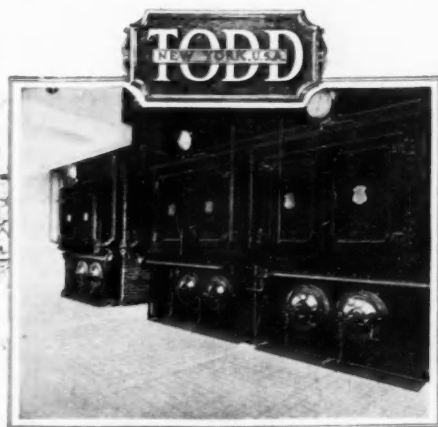
1. As against coal—Todd Fuel Oil Burners will save the cost of their installation in a short time.
2. As against other burners—Todd Shipyards Corporation will be glad to make an installation which can be compared in the cost and efficiency of its operation with any other oil burner made.
3. In solving the various problems brought up by the various types of oil available, including the heavy Mexican Oil, which is high in fuel value and low in cost, Todd Fuel Oil Burners will prove their adaptability and efficiency.

The Todd Burner is the result of many years of experience, both in the marine and industrial fields; it is the result of a specialization on oil burning equipment. We shall be glad to correspond with you as to the desirability of the mechanical pressure atomizing type, and the effectiveness of these burners in reducing your fuel cost and increasing your plant efficiency.

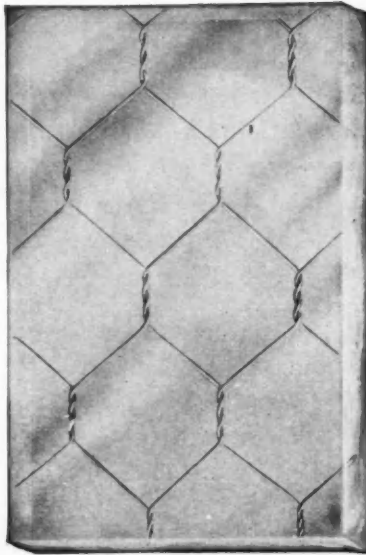
### TODD OIL BURNER AND ENGINEERING CORPORATION

742 East 12th Street, New York City

Todd Mechanical  
Pressure  
Atomizing  
Fuel Oil  
Burner



Todd Oil Burner  
Installation in the  
Brooklyn Edison Co.'s  
New Building,  
Brooklyn, New York



Mississippi Polished Wire Glass

### *The Real Worth of a Building Is In Its Construction*

if it is to be a permanent investment built for real service, with maintenance cost reduced to a minimum, so as to secure the maximum of service and income.

### *It Must Be Fireproof*

for such construction cannot be perishable. Therefore, the cost of maintenance must be low, so don't be influenced entirely by first cost, but bear in mind the future, and remember:

No building of fireproof construction is completely equipped unless it has approved metal frames and

### *Wire Glass Windows*

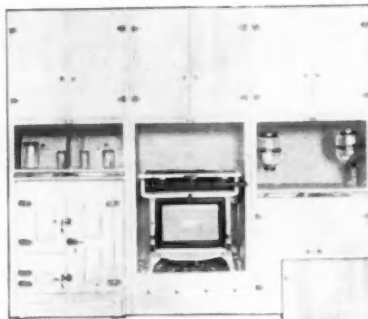
To secure the standard which is always preferable, specify the product of

Mississippi Wire Glass Co.

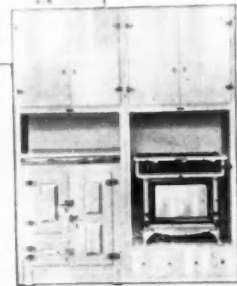
220 Fifth Avenue, NEW YORK

CHICAGO

ST. LOUIS



Cabinets can be arranged to accommodate space for the sink.



## *What the Women Want*

THE American housewife says, "The old work-making pantry must go." And she's dead right. Unnecessary steps and waste of time have no place in present day household efficiency.

Architects and contractors now utilize this space to greater advantage and also to cut building costs. The Majestic Steel Kitchen not only pays for itself but actually saves \$100 and upwards over the cost of ordinary pantry construction. Yes, sir—the old pantry must go. Builders of modern residential hotels, apartments, dwellings and housing projects know that it pays to satisfy the women.

**MAJESTIC**

## Steel Kitchens

are built with every appointment a woman wants. They are built up of standard units to fit every requirement. With or without stove or refrigerator, outside icing or artificial icing as desired. All units are 18 inches deep, assuring maximum storage space.

Every Majestic Steel Kitchen and Bathroom Cabinet is built of heavy, high grade furniture steel. All joints are electrically welded. Every stove unit is ventilated. Latches and hinges are heavily nickel-plated. Doors latch independently of each other and fit with dustproof snugness. Three coats of high grade white enamel are applied and baked, thus assuring a permanent and pleasing finish.

Majestic prices are low, quality considered. Our engineering department will gladly cooperate with you on any installation. Our illustrated catalog will justify its place in your files—write for a copy today.

### Majestic Steel Cabinet Co.

"Household Steel Cabinet  
Headquarters"

4217 Belle Plaine Ave., Chicago, Ill.



# Von Duprin

TRADE MARK REG. U. S. PATENT OFFICE

## Self-Releasing Fire Exit Latches

### *When the Door Warps*



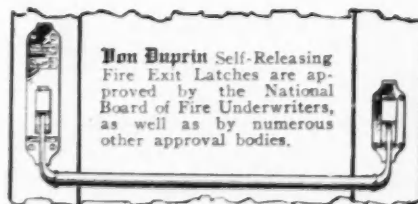
*See Page 28 in the  
New Catalog*

One of the great difficulties of self-releasing panic devices of the older types having vertical rods lay in the top and bottom latches refusing to operate when the doors warped or shrank.

In the new model **Von Duprin** latches this difficulty is entirely overcome by the patented ball compensating device shown in the illustration.

This simple device permits the distortion of the vertical rods out of the plane of the mechanism case without interfering in the slightest with the positive, easy action of the device. It is one of the important improvements which make **Von Duprin** latches reliable at all times, even under panic conditions.

*This is the seventh of a series of announcements showing recent improvements in **Von Duprin** devices.*



**VONNEGUT HARDWARE CO.**  
Indianapolis, Indiana.  
Manufacturers

**Von Duprin** devices are made better than is necessary for every day service; they are made to work perfectly under emergency demands—to save lives!

**ANCHOR**  
Galvanized after weaving  
CHAIN LINK FENCES

**Protection**  
that is sure and lasting.

**Sure**—because this Anchor Fence is high and unclimbable. Its strong chain link fabric affords no foothold, cannot be forced.

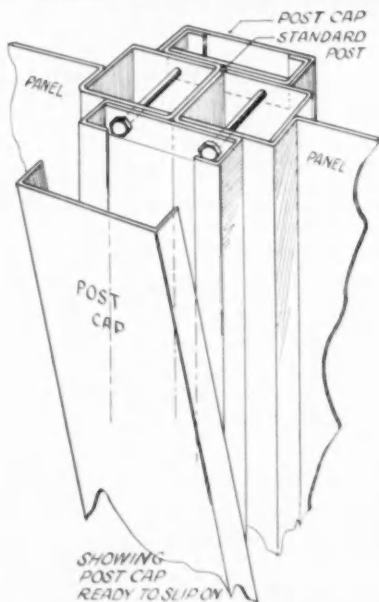
**Lasting**—because this Anchor Fence is firmly set and thoroughly galvanized to resist corrosion. The posts are *drive-anchored*. The fabric is made of rust-resisting copper-steel alloy—*heavily galvanized before weaving* as a double safeguard against corrosion.

Anchor Fences of all types are described in our Architect's Specification Manual. Write for a copy.

**Anchor Post Iron Works**  
52 Church Street New York, N. Y.

*Branch Offices and Sales Agents in Principal Cities*

**ANCHOR Fences**



**Rigid Construction**  
**Economically Achieved**



### Mills Metal Partition Posts

are built with twelve right angle bends, bolted and capped to make one compact inflexible pillar.

**Quickly assembled**  
**Inexpensively installed**  
**Permanent as the building itself—yet,**  
**Interchangeable and**  
**Movable later if desired.**

Consult our Engineering Department or have our complete descriptive literature sent for your consideration on Mills Factory, Office and Toilet Partitions, Mills Metal Bins and Shelving.

*Offices in the principal cities.*

**The Mills Company**

5325 ST. CLAIR AVENUE



CLEVELAND, OHIO

The first  
toilet paper  
advertisement



**A**BOVE is reproduced the first toilet paper advertisement to appear in any national magazine, published in Harper's Weekly of February 9, 1884, by the A. P. W. Paper Co. It will be noticed that this first announcement is a *service* advertisement, for at that time roll toilet paper was little known, having been invented only eight years before by Mr. Seth Wheeler who was then (and still is) president of the A. P. W. Paper Co. And *service* has been the key-note of the company's advertising ever since. For years, now, the ONLIWON system of toilet paper and paper towel distribution has been offered as a hygienic, dependable and economical service.

But the expiration of ONLIWON patents now gives other manufacturers the opportunity to manufacture similar products, although the name ONLIWON continues to identify only the output of the A. P. W. Paper Co. and still stands for that forward-looking policy that has characterized the Company since 1884.

**A.P.W. PAPER CO. ALBANY N.Y.**

**Onliwon**  
REGISTERED IN U. S. PATENT OFFICE  
**TOILET PAPER AND PAPER TOWEL SERVICE**



State Capitol Building, Salem, Oregon

**A beauty that time  
and weather can't  
wear off!**

**B**AY STATE Brick and Cement Coating gives to stucco and cement a remarkable beauty that is long lasting and absolutely weather-proof. Stucco is porous, so is concrete—moisture will seep through them. But the hardest rains cannot get through a cement or stucco wall finished with a Bay State Brick and Cement Coating. This master finish creeps into the pores, hardens and permanently seals them.

Bay State Coating is made by a special formula known only to ourselves. It comes in a complete range of tints and in a pure, rich white. Let us send you samples and color-chart.

Wadsworth, Howland & Co., Inc.  
Brooklyn BOSTON Jacksonville



*Our new booklet No. 5 shows many actual photographs of Bay State coated houses. Write for these to-day.*

**BAY STATE**  
*Brick & Cement Coating*



## CLINTON Welded Fabric

*The Ideal Mesh  
Reinforcement for Concrete*

Bridges  
Buildings  
Docks  
Flumes  
Grandstands  
Levees  
Pipes  
Reservoirs  
Roads  
Sewers  
Subways  
Viaducts

**Wickwire Spencer Steel Corporation**  
General Offices

**41 East Forty-second Street, New York**  
Worcester Buffalo Philadelphia Detroit  
Chicago San Francisco Los Angeles Seattle




# The secret is in the PIVOT

THAT IS, there are *two* secrets in the pivot. ¶ The first is that the pivot system makes both upper and lower sash instantly reversible for cleaning. ¶ Ask a building or hotel manager what it means to have from 50 to 2000 windows cleaned. ¶ The second secret is that the conical design and wedgelike action of this same pivot make the window weathertight at all times *by the action of gravity alone*. ¶ Note the full ventilation and control of air currents illustrated by the sketches above. ¶ Both can effectively be *shaded*. ¶ Satisfactory operation is assured because the installation of *WILLIAMS* Reversible Window Fixture is made by trained mechanics. ¶ Twenty years' actual service has firmly established this device.

**WILLIAMS PIVOT SASH COMPANY**  
EAST 37th STREET AT PERKINS AVENUE  
CLEVELAND, OHIO

*The DOUBLE HUNG Williams Reversible Window fixture saves its slight extra cost in two to three years, in cleaning economy. So does the PLANK FRAME type, which also saves the cost of weights, cords, pulleys and their installation, cost of and space taken by box frame. No special sash or frame construction required.*

# WILLIAMS PIVOT SASH COMPANY



*For Every Type of  
Building under the Sun*

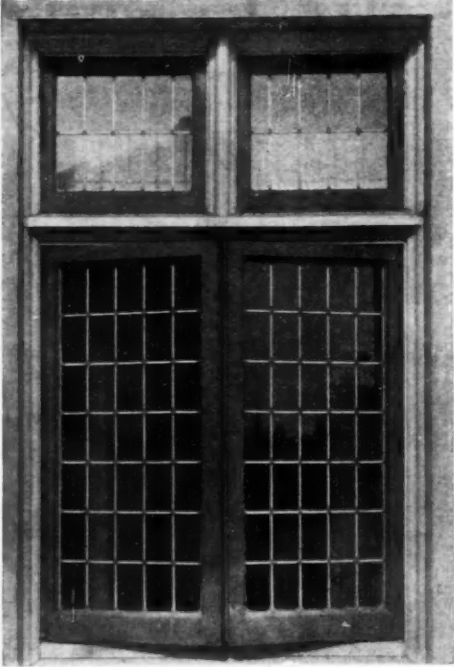
## WINTER TIME

tests the real worth of a ventilator. Never have we had a complaint of a snow-clogged

### "GLOBE" VENTILATOR

"GLOBE" VENTILATORS are constructed to give perfect ventilation at minimum expense and they require no attention whatever.

**GLOBE VENTILATOR CO.**  
Troy, N. Y.



## HOFFMAN CASEMENTS

Folding wood casement windows, hinged together in pairs, but not attached to either jamb; providing when set in the position shown, an abundance of fresh air without any direct draft. Installed to open either in or out, weather tight both ways, clean from inside.

Hoffman Casements are efficient windows for all types of buildings.

**Andrew Hoffman Mfg. Co.**  
901 Steger Bldg., Chicago

*Sweet's Catalog, pp. 1394-99, 18th Edition  
Portfolio of details upon request*





View of Morrowfield Apartment Hotel, Pittsburgh, Pa., and twelve of the thirty-two Brunswick Alleys that comprise its bowling facilities.



**F**ACILITIES for healthful, invigorating indoor recreation are essential to the successful operation of Hotels, Apartment Buildings, etc. They make the property more attractive to guests and tenants. They augment rental values. They enhance the income derived from the total investment.

As makers of the world's finest equipment for billiards and bowling, we are in a position to render valuable assistance in planning billiard rooms and bowling alleys for such enterprises. A letter to our home office will enlist our fullest co-operation without in any way obligating architect or owner.

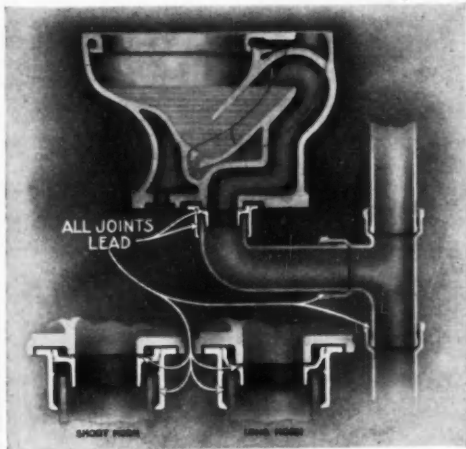
**The BRUNSWICK-BALKE-COLLENDER Company**

*Branch houses in the principal cities  
in the United States and Canada*

623-633 South Wabash Avenue, CHICAGO

**billiards**  
*a gentleman's  
game*

## How to assure GOOD PLUMBING



### GROENIGER TESTITE

#### CLOSET BOWL CONNECTIONS

TESTITE all-metal closet bowl connections provide a positive pressure tight joint between the closet bowl and soil pipe. They eliminate entirely the use of putty and other non-dependable plastic materials and provide a permanent leak-proof earthenware-to-metal connection by seating the horn on a hollow lead gasket.

The special hollow lead gasket is an exclusive TESTITE feature. The flexibility in this gasket allows it to conform to any irregularity in the end of the horn and permits the bowl to be re set many times; each time assuring a pressure tight joint.

TESTITE connections provide the simplest and easiest means of connecting closet bowls. They have many years of satisfactory service to their credit and have proven themselves to be durable, economical and labor saving.

Can be used with any standard two or four bolt closet bowl. Are made for long or short horn bowls; for cast iron, screwed and lead pipe and in combination with bend.

Let us send you our catalogue illustrating our full line of closet bowl connections.

"None can equal Groeniger Testite Products."

# TESTITE

"QUALITY—PRESSURE TESTED—GOODS"

The Groeniger Manufacturing Co.  
Columbus, Ohio



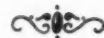
Ben Franklin Hotel, Philadelphia, Pa.  
Horace Trumbauer, Architect.  
Leased and to be operated by the United  
Hotels Company.

THE SPENCER TURBINE SYSTEM of Vacuum Cleaning as installed in the Ben Franklin Hotel exemplifies the pains nowadays taken to make the modern hostelry as nearly perfect as engineering skill can effect. Designed on the scientific proportion of vacuum to volume—which always remains uniform and therefore always operates with uniform efficiency—the SPENCER SYSTEM is more than equal to the most exacting conditions and has never yet failed to give 100% satisfactory service.

*Our booklet on the theory of Vacuum Cleaning is full of vital facts. May we send it?*

## The Spencer Turbine Company

Hartford, Connecticut





### *Ted Starr doesn't want a cuff on his trousers*

Jenkins, salesman at A. De Pinna, recognized his signal and stepped to the city phone. "Hello, Mr. Starr—Oh yes—you don't want a cuff? All right, hold the wire—I'll fix that in a minute." Setting down the receiver of the city phone, Jenkins dialed two figures on a handy P-A-X phone and spoke directly to the alteration department. "Never mind about the cuff on 7444A—" Then turning to the city phone—"All right, Mr. Starr—No trouble—Tomorrow sure. Goodbye."

Whether your client makes clothes, rubber tires or chewing gum, he will find that, like De Pinna, Goodyear and Wrigley, his organization will profit by the P-A-X.

By means of the P-A-X, customers may talk to his entire organization through him. While they hold the city wire he can dial any department and get information for them. No calling back. Service like this builds business.

For 24 hours a day the P-A-X handles all inter-communication calls instantly and accurately. There is no operator to delay connections, give the wrong number, or to "listen in" on conversations.

Besides Interior Telephony, the Automatic Electric Services of the P-A-X include Code Call, Conference Wire, Executives' Priority Service, etc. For nearly 2,000 organizations in every field of business, the P-A-X has proved itself a vital necessity and actually paid for itself in a short time by saving operators' salaries.

## Automatic Electric Company

Originators of the P-A-X. For more than 30 years the engineers, designers and manufacturers of the Automatic Telephone in use the world over. Home Office and Factory, Chicago, Ill. Branch Offices: NEW YORK, 21 East Fortieth Street; CLEVELAND, Cuyahoga Bldg. Representatives in all principal cities. In Canada—Address: Northern Electric Co., Ltd., 121 Shearer Street, Montreal, P. Q. Abroad—Address: International Automatic Telephone Co., Ltd., Norfolk House, Norfolk Street, Strand, London, W. C. 2, England. In Australia—Address: Automatic Telephones, Ltd., Mendes Chambers, Castlereagh Street, Sydney, Australia.

The P-A-X is similar to the Automatic Telephone equipment being so widely adopted for city service. It augments and completes, but neither supplants nor connects with local or long distance telephone service.



THE PRIVATE AUTOMATIC EXCHANGE



Safety Tread requirements of modern buildings, wherever consideration must be given to the protection of public and employees, can best be met by

## Universal Safety Treads

Furthermore

Where material is required to withstand excessive wear of any character on stairways, doorsills, passageways, and loading platforms, etc.

## Universal Safety Treads

completely meet the needs



The Grand Central Terminal, New York City, Twenty Public Schools in Cleveland, Ohio; Soldiers' Home, Hampton, Virginia, and the Boston Lying-In Hospital, Boston, Mass., are a few of the hundreds of buildings that Architects and Engineers deemed it necessary to equip with UNIVERSAL SAFETY TREADS.

Samples and our bulletin No. 40 giving detailed information will gladly be sent on request.

We have some territories open where Agency connections will be established. Write for particulars.

Factory at Waltham, Mass.

**UNIVERSAL**  
SAFETY TREAD CO.  
40 COURT ST., BOSTON

## "A CREDIT TO GOOD TASTE

now so happily spreading among American home-builders." Thus an architect alluded to the strong trend of popular favor toward



Indeed, those who suggest its use these days are likely to find their judgment in happy accord with the preference of the client, and when they recommend Northern Michigan or Wisconsin

## birch

for doors and standing trim to those not so familiar with it, they are counselling wisely.

*The hardest hardwoods grow in the North.*

**birch** rotary cut veneer doors do not check as do some other woods.

**birch** stands up on the job so thoroughly well that those who suggest it get a lot of credit.

*Will you write us your experiences and ask us any questions? We are here to help in any way.*

THE BIRCH MANUFACTURERS  
202 F. R. A. Building  
OSHKOSH, WISCONSIN

"Beautiful Birch for Beautiful Woodwork"





Thomas Jefferson High School, Brooklyn, N. Y.

C. B. J. Snyder  
Architect

Gillis & Geoghegan  
Contractors

## In the Borough of Brooklyn

HERE, again, Sturtevant Heating and Ventilating Apparatus efficiently supplies adequate heat and ventilation to those who use this institution of learning.

Of course, the agreeable atmosphere in the Thomas Jefferson High School was made possible by the installation of our supply and exhaust systems.

Thruout this building, over 300,000 cubic feet of air per

minute is constantly circulated by Sturtevant Supply Fans, and the vitiated air is completely carried away by the Sturtevant Exhaust Units.

Architects and engineers who specify Sturtevant Heating and Ventilating Apparatus for their buildings get reliable equipment that performs properly in accordance with their plans.

## B. F. STURTEVANT COMPANY

### Sales Engineering Offices

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UNIQUE IN THE  
MOSAIC INDUSTRY

## An Interesting Monograph

54 Pages and 38 Color Plates

**T**HIS MONOGRAPH is published at \$5, but is sent free to architects.

A comprehensive exposition of terrazzo and mosaic in the light of the best modern practice.

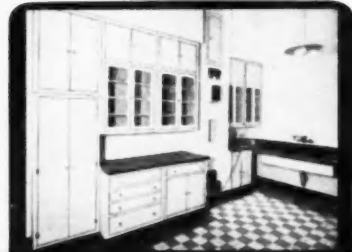
Send for your copy.



**L. DEL TURCO & BROS.**  
Inc.

Harrison, N. J.

## The Kitchen that pleases a woman

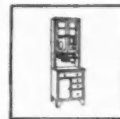


The **WHITE HOUSE** Line

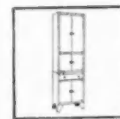
SECTIONAL UNIT STEEL DRESSERS

**S**O much of a woman's life is spent within the four walls of a kitchen, that beauty and convenience in this room make an instant and almost irresistible appeal.

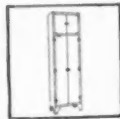
Working with the White House Line of Kitchen Dressers, Cupboards, Closets, and Tables you can easily attain this beauty and convenience in a way that is both economical and enduring.



Dresser  
No. 27



Side Unit



Broom  
Closet



Sink Unit

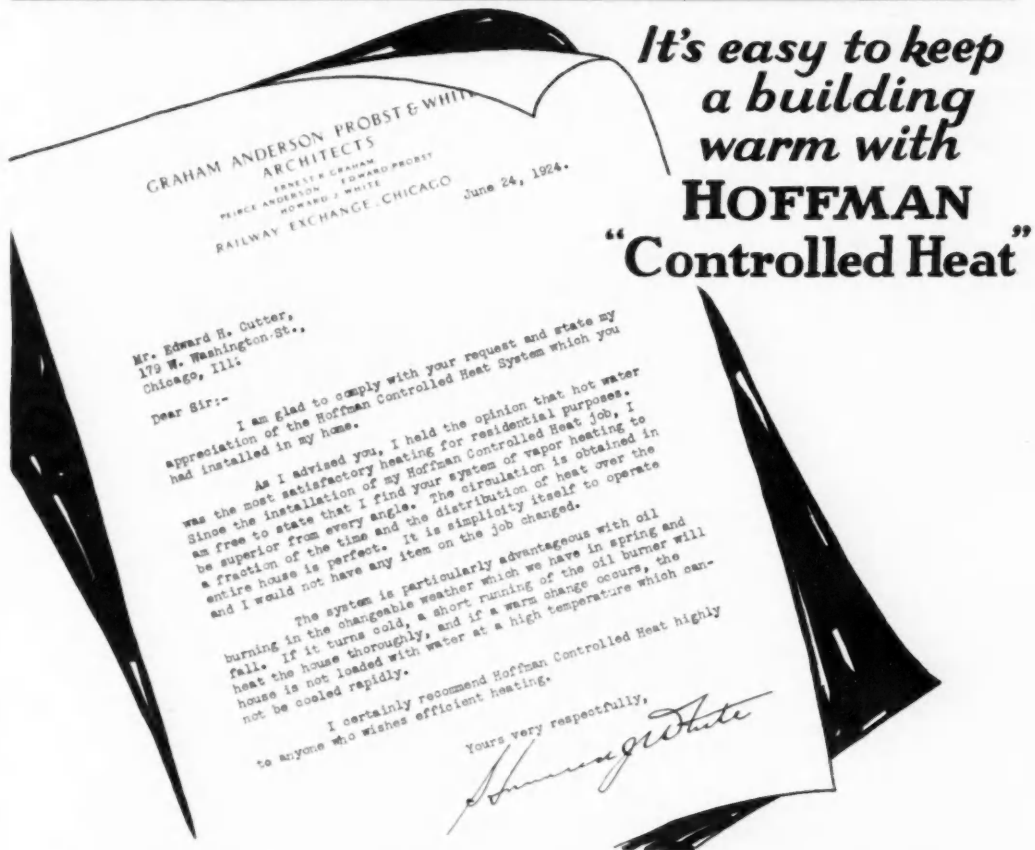
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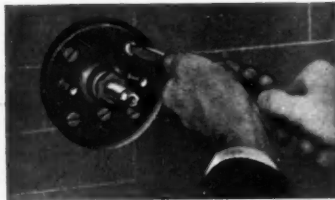
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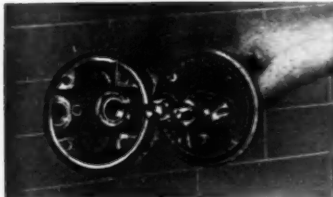
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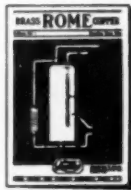
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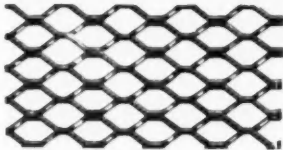
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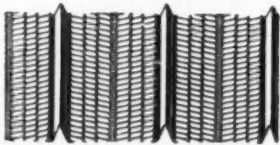
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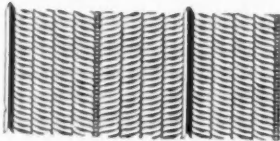
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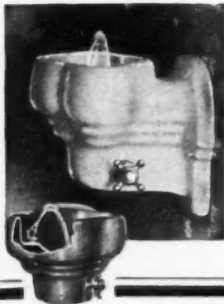
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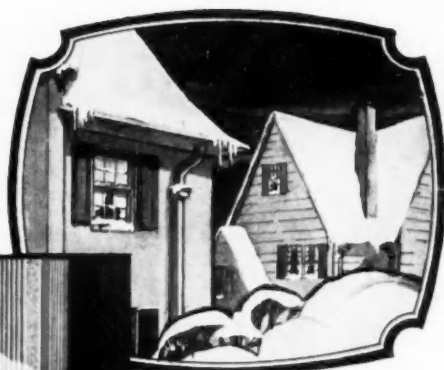
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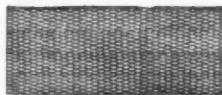
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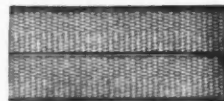
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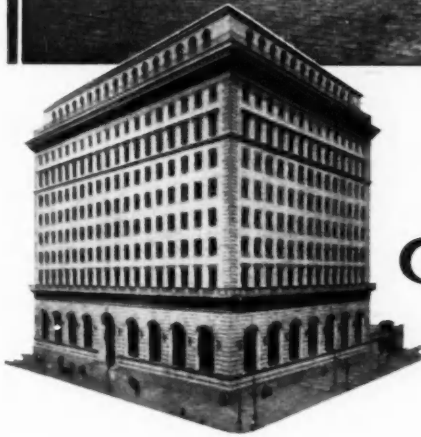
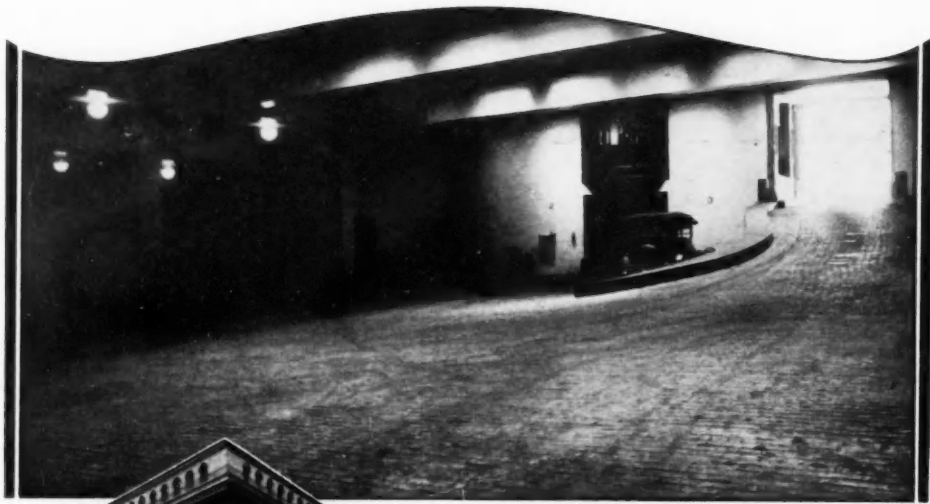
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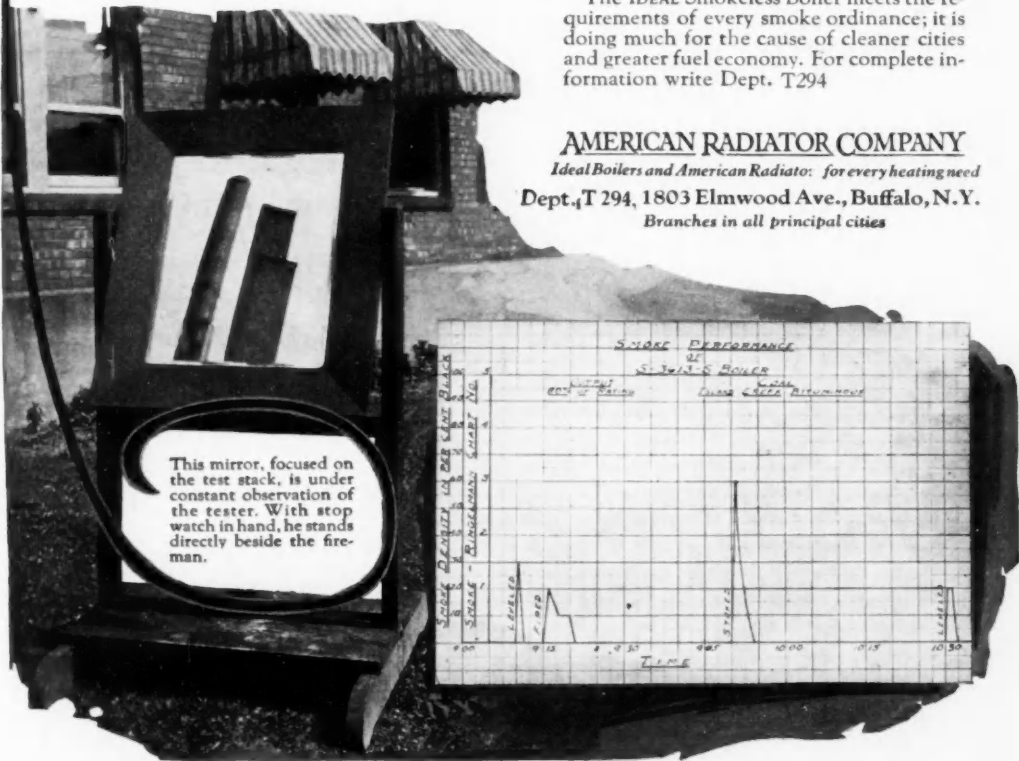
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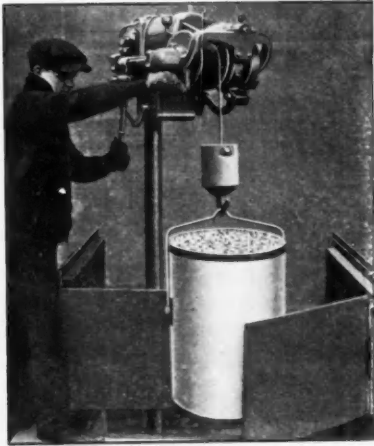
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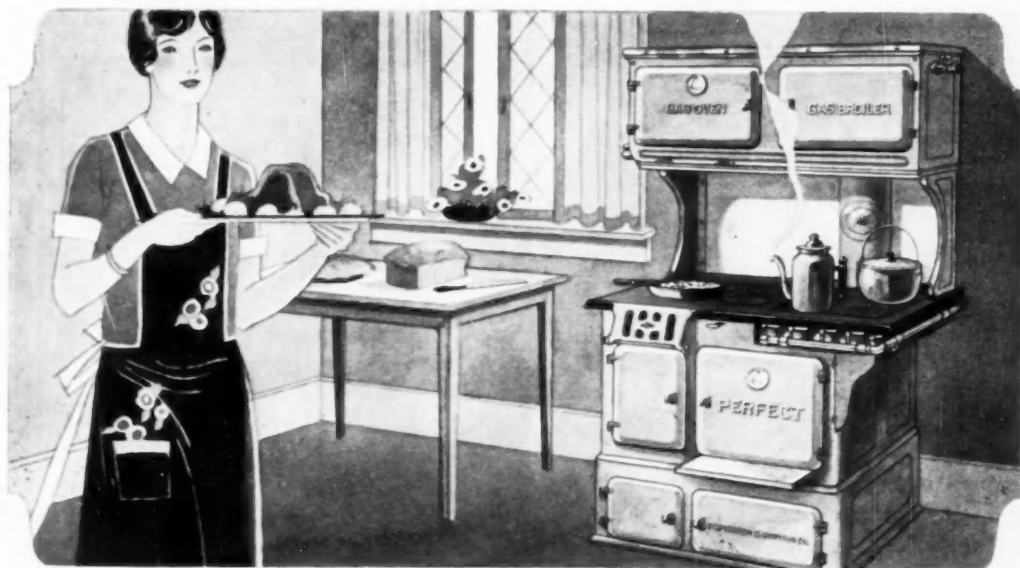
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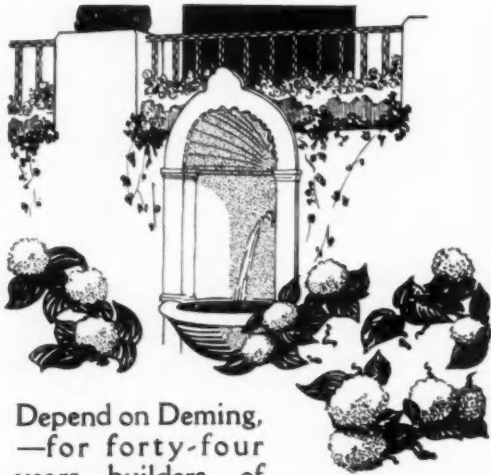
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A-B-2

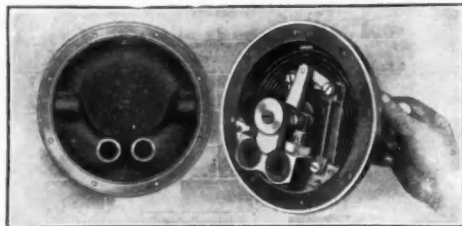




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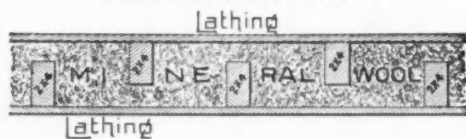
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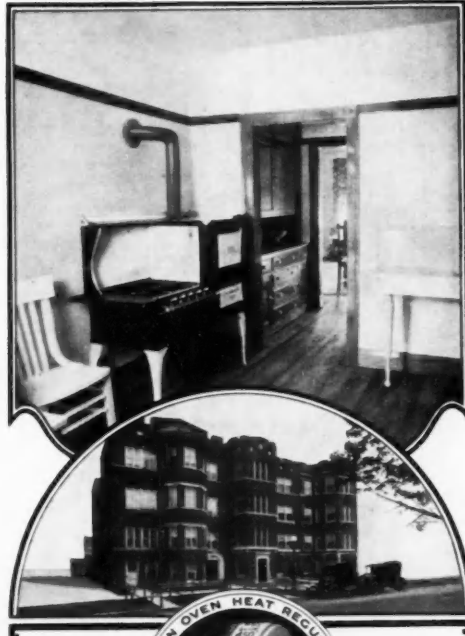
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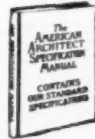
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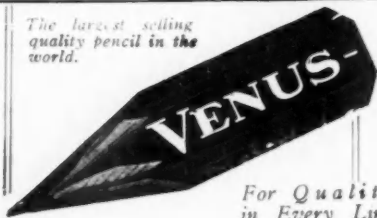
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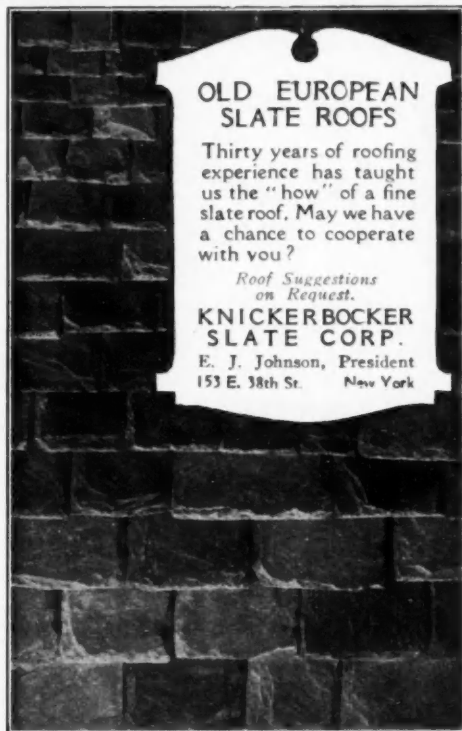
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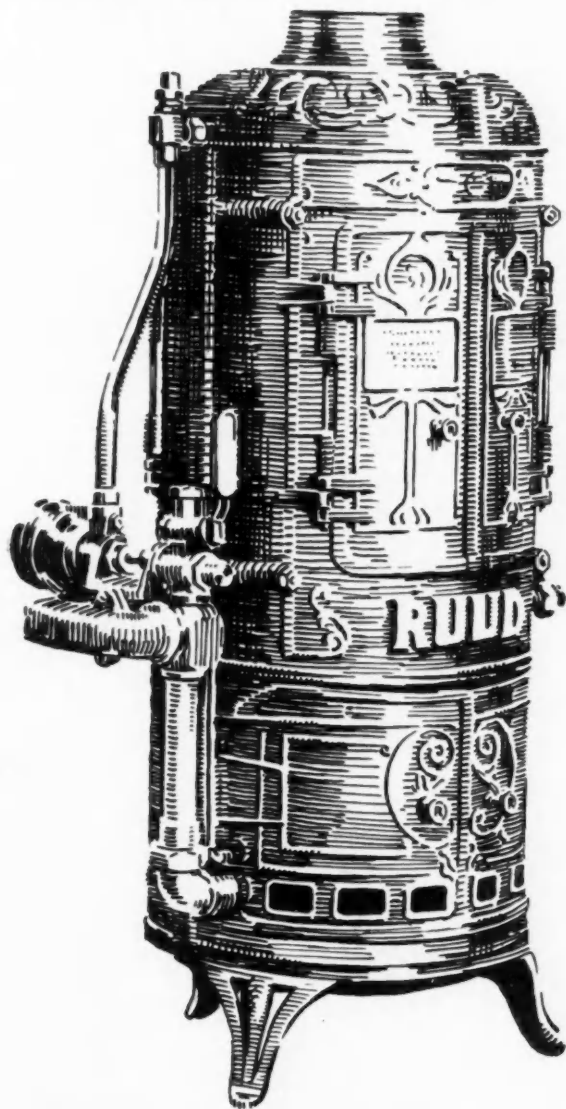
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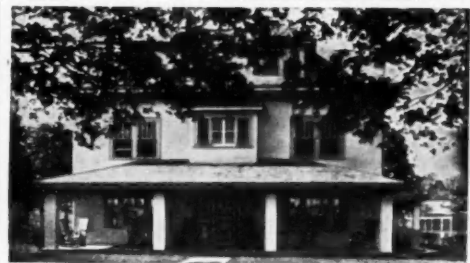
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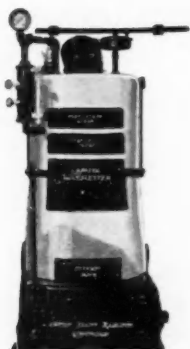
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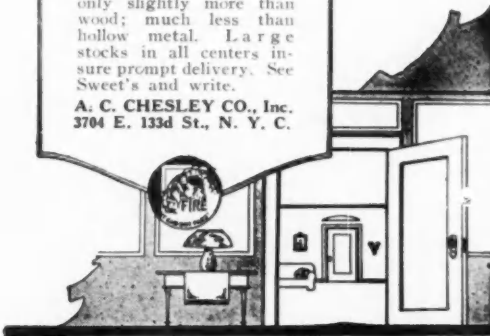
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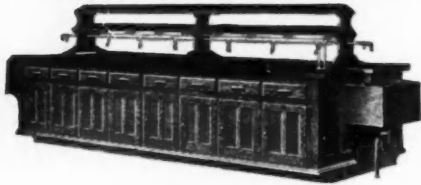
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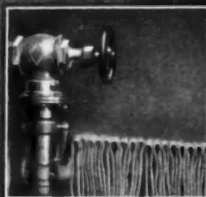
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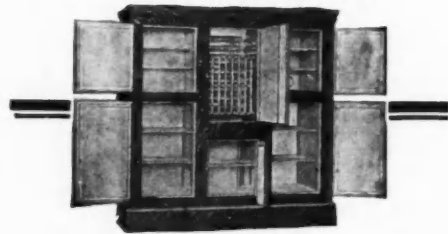
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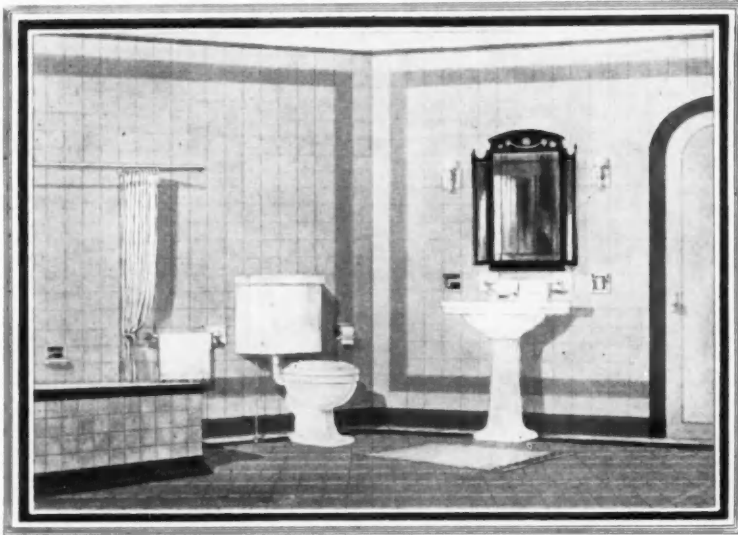
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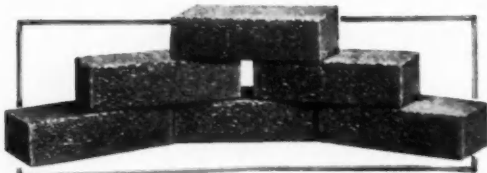
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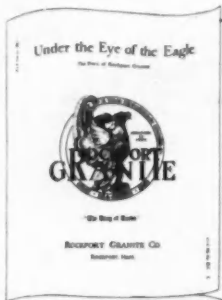


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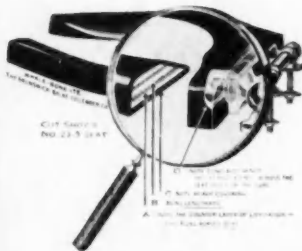
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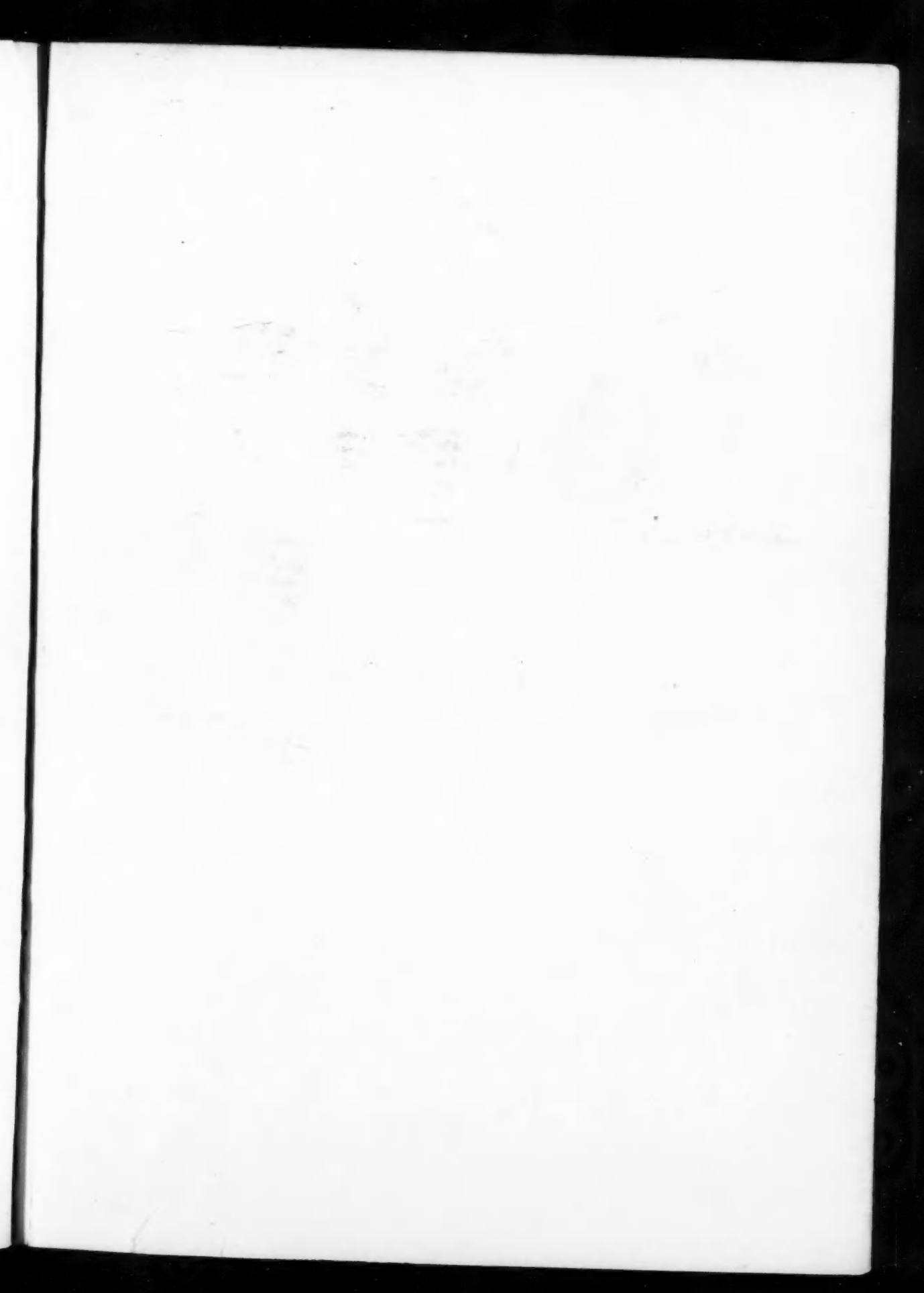
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AN ILLUSTRATED MONTHLY MAGAZINE OF ARCHITECTURE  
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