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In Two Parts .... Part ONE



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John Paul Turner

## The Cover

THE illustration on the cover is a reproduction of a water color by John Paul Turner of St. Paul's Church, New York City, Mr. Turner is a graduate of the University of Illinois. He was for some time connected with the office of Bloodgood Tuttle in Cleveland, Ohio. Previous to joining the staff of James Gamble Rogers in New York City he worked in the office of Hobart Upjohn. In 1927 he "scoured France and Italy in a badly crippled Citroen Auto."
Mr. Turner has played with paints, both oil and water color, since childhood. He likes to make decorative masks, architectural models, and decorative lettering. He claims to be the world's worst golfer and swimmer.

## Next Month

If An easy way to select the right species and grade of lumber for any building purpose.
$\uparrow$ The economics of modernizing an old office building.
$\Uparrow$ Eight pages of architectural details in lead, showing typical handling of the material.
§ Another article on speculative sketches, citing a typical "joker."

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## No Smike Passes

## This Whirlpod:

Like dry tinderthe soot laden gases of soft coal ignite the instant they strike this turbulent whirling mass of incandescent flame!
They burn and their usable heat units are utilized-because in this new Heggie-Simplex Smokeless Boiler there is always the right amount of oxygen to effect complete combustion. The additional oxygen necessary to burn bituminous coal smokelessly, but which can not be drawn through the fuel bed alone, is introduced through a special 'carbureting chamber" over the fire.

Built of refractories, this chamber not only introduces the necessary

additional oxygen but thoroughly heats it before passing it down onto the fire. A refractory bridge wall to the rear of this chamber baffles the fire, creating a whirlpool of flame which consumes all of the smoke and combustibles.


The "Carbureting Chamber" of the Heggie-Simplex Smokeless Boiler
Air is drawn in through intake doors (A) on both sides of the boiler. Volatiles arising from the fresh fuel are admitted through ports (B) in the forward wall. This inflammable mixture is thoroughly heated by the hot refractory walls of the chamber. It is ready for instant combustion when it passes through the jets (C) to mix with the gas stream flowing under the chamber.
Note there are no bothersome ceiling pulleys, long chains,
etc. The operating device is "built in"" etc. The operating device is "built in" the boiler.

## HEGGIE-SHMPIEX



# "TO-MORROW" and the Architect 

By Benjamin F. Betts

CHRISTMAS is a time when the hearts of men turn to thoughts of peace, and as another year draws to a close we are given to taking stock of the present and what the future may hold. As the year 1929 nears its end, we find that world-wide peace is nearer in realization than ever before in history. The acceptance of the Kellogg Peace Pact signifies a new mental attitude on the part of nations and people as a whole that presages much for future years.

We also find the building industry in peaceful accord. Building Congresses are doing much good in uniting all industrial interests in a common purpose. Misunderstandings are being corrected. Factions in the industry are seeing the wisdom of arbitration. They have discovered that a friendly discussion and a calm settlement of disputes pays big dividends. Peace in the building industry is something for which we may well give thanks at this time.

Business this year has been good. It has not surpassed in volume, perhaps, previous record years but nevertheless building generally has been well sustained. The tendency of the building public to speculate in Wall Street has had its effect throughout the country. Recent activities on the "street" may, however, have a salutary effect and individuals having had their "fling" may turn to sounder and saner investments. This should stimulate renewed activity in building. Money rates show tendencies for the better. Our financial structure promises to become stronger and there is every indication that business is good and that we may confidently expect it to continue throughout 1930. The outlook is exceedingly bright.

DURING the past decade we have lived to see the building industry pass through years fraught with trials, dangers, and tribulations. The ship has weathered the storm. Conditions have gradually righted themselves, business has been stablized, and returned to a situation that may be termed normal. During this period we have seen the industry practically revolutionized, and grow from large to even larger proportions.

Architectural practice has kept pace with the spirit of the times and from a position of mere planners of buildings architects find themselves in the field of big business and gradually becoming a more important factor in the economic structure of the building industry. The position of the architect is constantly becoming stronger. The public is becoming better informed of the architect's functions, a fact which augurs well for the future. The profession must prepare itself to assume added responsibilities and to render the service that it will be called upon to furnish in 1930 and the years that are to follow.


## how Airports will affect

 Z○NING LAW SA glimpse at future problems that should be solved today
by FRANCIS KEALLY, A.I.A.
Architectural advisor for the recent Lehigh Airport Competition, and one of the best versed men on the design and construction of airports

ERE in the United States we have seen the growth of towns along waterways, next along highways, and then along railways. Population has always followed transportation. New towns and cities spring up as their location becomes more easily accessible.

Each of the new methods of transportation brought in its wake new living and city problems. With the railroad, buiidings had to be torn down, streets changed, money easily saved by forethought spent to provide a right of way. With the automobile, highways had to be widened and straightened. Hundreds of miles of old roads are being cast into the discard because they are neither straight enough nor wide enough to meet modern traffic conditions. In fact, the older and larger cities cannot cope with the problem of automobile traffic, even though stoops have been ripped off houses and park-
ways have been taken from the center of the streets.
Now with aviation upon us, the old story will be repeated, but with an even more disastrous expenditure of time and money-unless the lesson of the past is learned and we provide for the solution of the problem before it becomes acute.

Quite evidently aviation means new solutions of city planning problems and the drafting of new zoning regulations that will take into consideration the angle of flight that must inevitably influence the height of buildings erected within the airport zone.

The heights of such buildings should be governed by the angle of safe gliding and taking off for planes. This angle is given by the ratio of $7: 1$. Thus, for every foot in height, the building will be set back from the airport 7 feet. In other words, a 50 -foot structure would have



The angle of safe gliding and taking off will make it necessary for structures like the Woolworth Building to be zoned more than a mile away from an airport for safety
to be set back 350 feet from the airport. A high structure similar to the Woolworth Building, which is 792 feet in height, would have to be set back from the airport 5544 feet, or a little more than a mile away. This will make a cross-section of airports and the surrounding buildings similar to that of the Yale Bowl, for the buildings will rise from the sides of the field like stepped terraces.

Laws controlling the heights of buildings and other obstacles in the neighborhood of airports will have to be enacted if air travel is to develop as it has a right to develop. When our early railroads were planned, it was necessary to raze obstructions which interfered with the construction of the roads. Let's control the skyline surrounding our airports before it is too late to do so.

Land surrounding sites selected for airports is destined to be utilized for extensive development, not only for housing and retail business purposes, but for industrial sites as well. Considerable amounts of farm land and even tracts which formerly were barren are being turned into costly landing fields. Thus, inaccessible land is coming into a healthy demand. Hotels, restaurants, and shops will rise on the edge of flying fields. Industries will clamor for adjacent factory sites and will run railroad spurs to the fields to expedite the transportation of industrial products. Many airplane factories will employ thousands of men in the future just as do the plants which turn out locomotives and railroad cars today. Since the families of the workers must live nearby, new com- (Continued on page 100)


## a Main Floor Theatre

In the Contemporary Manner
COMMERCIAL REQUIREMENTS of a suburban theatre are solved by stores, offices and recreation features in the Pickwick Theatre Building, at Park Ridge, Illinois


SIMPLE, restrained and without superfluous ornament, the Pickwick Theatre building yet frankly expresses its purpose. The mass and silhouette were carefully studied in clay before the detail drawings were made. The exterior is Indiana Limestone above a base of Minnesota granite

AT THE LEFT is an unusual sculptured figure by A. Ianelli, forming the fountain that is the main point of interest at one end of the foyer

BELOW is the detail drawing of a typical organ and ventilating grille, designed by the architects and modeled by $A$, Ianelli. It was quite evidentaly inspired by the exterior, being strongly reminiscent of the central part of the tower



Radiator grilles in the lobby, which are in character with the other ornamental details, are of bronze from models by A. Ianelli

C
AST iron lanterns, enclosing red, blue and yellow lights, terminate the tower and flanking pylons. The entrance canopy is also of cast iron, beneath which lightsare set in chevron stripes

BELOW is the foyer, the floor of which is covered with a specially woven carpet. The end of the foyer not shown is decorated with a remarkable landscape of the beautiful country surrounding Park Ridge, Ill. The ceiling treatment shows unusual restraint in its use of ornament




T HE center ceiling of T the auditorium of the Pickwick Theatre is ornamented with a colorful all-over pattern in harmony with the vivid asbestos curtain. Six-inch cut glass gems inserted in chamfers of the ceiling offsets produce a sparkling effect through reffected light



TAPESTRY designed to correspond with the wall decorations covers the seats in the auditorium, which seats two thousand persons. The anditorium is nine-ty-tzo feet wide, one hundred and twelte fect long, and fifty feet average height. The stage is twenty-nine feet deep


## Doing It the Client's W A Y

By James Jennings Bevan

Last month RUTH BOYLE of "Good Housekeeping" told about the difficulties which clients have when dealing with architects. This month Mr. Bevan tells how he avoids these difficulties

FOR some time I have made it a practice to review each job in detail two or three months after it has been completed. Perhaps I find that certain details in design were not as successful as I had hoped or that some change or improvement can be made in future specifications. I study the cost to me, the cost to the owner, the time consumed in construction, and the nature of the extras.

I take particular pains to analyze the relation of the architect, the owner and the contractor to see if some of the misunderstandings which arose during the progress of the last job can be eliminated from the next one for, particularly in small country house work, there are certain difficulties which arise time after time to harry the nerves of architect and client alike. I long ago came to the conclusion that most of these misunderstandings arose from the client's lack of ability to visualize his completed house, and a failure on the part of both architect and owner to discuss thoroughly the question of cost. In this connection it is unfortunate that in manv instances the architect also fails to grasp the client's point of view.

At some time or another we have all heard a layman say that he would rather buy a house all ready built than go through all the trouble of building one. Too often this feeling is inspired by the experience of some friend or relative who fell into the hands of an incompetent architect. Such propaganda is harmful to the profession. I believe that a strong effort should be made to combat it at its source by a thorough discussion at the beginning of each job followed by a business-like handling of the client's affairs thereafter.

It is difficult sometimes for us to realize just how hard it is for a client to realize what his completed house is going to be like. The architect, by virtue of his training, finds no difficulty in forming a mental picture of
the house, but the client may be forgiven if the formation of such a picture is somewhat of a strain on his imagination. He is naturally vitally interested in the appearance of his house, its arrangement and cost, for it not only is to be his permanent house, but represents the largest single investment that he will probably ever make.

To begin with, the client must have confidence in the skill and ability of his architect. This may result from his having seen sufficient examples of the architect's work or in other ways, but in any event such confidence should certainly be established in the client before the architect proceeds with the details of the work.

We all have had experience with the client who asks the opinion of his friends and relatives on almost every

## to Avoid Trouble.....

## Establish confidence of client

Determine exact appropriation
Deduct from appropriation items not included in the general contract to obtain net cost of structure

Decide on general scheme
Accompany 16 th scale studies with budget of items that will be required to complete the house and grounds
Then operate on a business basis
point that comes up, rather than to rely on the opinion of the man whose advice he is paying for. It seems to me that the clients who are particularly troublesome in this respect are those who are comparative strangers. Those who are known personally, or those who come through the recommendation of friends are much easier to handle. Then too, this attitude is often caused by the all too prevalent idea that the client provides the ideas and the architect merely dresses them up and "draws up blueprints."

ONCE confidence is established, I take particular pains to make my sketches understood ; I believe that there should be no difficulty in this respect if the architect tries to put himself in his client's place. A client should be questioned as to sizes and use of such rooms as the pantry and the laundry, the linen room and cedar closet, and nothing should be taken for granted. I remember one experience with a dressing room which impressed upon me the importance of carefully discussing all such details. I had planned it carefully with a view to obtaining good light space for a dressing table and maximum closet room, assuming quite naturally that the room was for the use of Mrs. Owner. When I began to talk about the dressing table, however, I soon found that such was not the case, as my client had appropriated this room for himself. With careful discussion of details such as these, many misunderstandings can be avoided.

I believe that the average client forms a pretty good idea of what his house will look like from constant reference to the drawings. If there are any peculiar conditions which trouble him as when the site is very uneven, or the house itself is of the rambling picturesque type, a model is a great help. By this I mean a scale model reproducing the conditions as closely as possible, both as to color and texture. These models are such delightful things to look at that they not only help to explain things but generally raise the client's enthusiasm to the Nth degree. Good ones, however, are expensive and it is seldom that a client (Continued on page 92)


ELEVATIONS are not easily understood by the average client and he may fail to visualize the house, but....


PERSPECTIVE DRAWINGS make the proposed house more of a living thing to him, while


MODELS like this visualize the new house so vividly that the client can not fail to have the utmost confidence in his architect through realizing exactly how it will look when finished. Of course it should be understood that the landscaping is not included in the cost of the house itself


The American Architect would like to receive sketches. See
announcement on page 43 .

Lithograph of Le Pont St. Jean, Fribourg, by A. Genoud, of the architectural firm of Genoud \& Cuony, Fribourg, Switzerland


Lithograph of the Fontaine Ste. Anne, Fribourg, by A. Genoud. architect. Original size of this and facing drawing is $133 / 4 \times 20$

# at 132 stories Income Disappeared 

\author{

- a study of the <br> Skyscraper Question
}

THE American Institute of Steel Construction will shortly release an interesting and valuable report on the "economic height" of skyscraper office buildings. The investigation, which required about two years to complete, was conducted under the direction of W. C. Clark, chief economist and vice-president of S. W. Strauss Company. Plans and specifications for eight hypothetical buildings to occupy a site in the Grand Central zone of New York City were prepared by J. K. Kingston, architect of the firm of Warren \& Wetmore. Stephen F. Voorhees and R. H. Shreve acted as advisory architects. The elevator equipment, structural steel, and mechanical services were designed and estimates of the cost of the various buildings and estimates of the total amount were made by men recognized as authorities in their respective fields. Two committees of New York building managers prepared estimates of the probable gross revenue and operating expenses.

The investigation was undertaken to determine if possible the "economic height" of tall buildings as a result of the controversy that has been current for and against the skyscraper. Arguments have been advanced for regulating and limiting the height of high buildings ever since the Tacoma building was erected in Chicago about forty years ago. The attack has been directed against them as "strange, unsightly, tradition breaking monstrosities, street disfigurers, catastrophe harborers, blockers of light and air, dangerous fire risks, responsible for traffic congestion and it has even been stated that these buildings do not pay."

On the other hand there are those who defend the tall building and present good reasons to justify its continued erection and existence.

The report points out the amusing angle that enters the problem in the solicitude of the critics for the poor building owners who insist upon putting their money in high office buildings. It states, "obviously if it can be conclusively demonstrated that tall buildings as a class are unprofitable or less profitable than low structures investors will cease to erect these structures."

It is also true that if structures are shown to interfere with the rights of others the law steps in to safeguard the health and safety of the public. "As in other fields of human progress the economic consideration of the skyscraper will be the determining factor."

The economic aspect of these structures has never been thoroughly studied. Available literature was found upon inspection to contain so many conflicting general claims and meager facts that it was apparent that a

```
11 Important Factors
    Influence
Economic Height of Buildings
1. value of the land
2. size and shape of the plot
3. legal restrictions
4. efficiency of the architectural design and
    layout
5. building factors showoing a tendency to in-
    crease the cost
        a. structural steel
        b. elevators
        c. brickwork
        d. plumbing and water supply
        e. heating and ventilating
        f. electric light and power wiring
        g. total mechanical equipment
        h. permanent interior partitions
        i. windows and glazing
    6. building factors showing a tendency to dc-
        crease cost
        a. roofing
        b. excavation
        c. miscellaneous
7. building factors showing tendency to con-
        stant cost
        a. interior finish
        b. concrete floors
        c. exterior finish
8. absorption of rentable area by elevators and
        other service facilities
    9. level of construction costs
10. variations in rentable value of floors at vari-
        ous heights
11. variations in operating costs at various
    heights
```

"first hand investigation" was highly desirable to arrive at a scientific conclusion.

When land values reach $\$ 50, \$ 100$, or $\$ 200$ per square foot it is evident that intensive development of the property is essential to support the heavy "carrying charges" of interest and taxes. It appears logical that a building ten stories high will carry this burden more easily than one of five and that twenty or thirty stories more easily than ten. Earle Schultz of the National Association of Building Owners and Managers has stated "both gross and net income increase with the height of the building." It is known that gross income increases faster than net income and that as a result a point of economic return must ultimately be reached.
As a workable definition of "economic height" the formulators of the report accepted in general a statement of J. Rowland Bibbins: "The true economic height

$W_{\text {eight of elevator }}$ cables, and capacity of average human ear drum to withstand change in pressure, limit skyscraper height to 2000 feet Economicheight is reached before physical limitations become important

Architect's drawing of the seventyfive story hypethetical building upon which this article is based
of a structure is that height which will secure the maximum ultimate return on the total investment-including the land-within the reasonable useful life of the structure under appropriate conditions of architectural design, efficiency of layout, light and air, 'neighborly conduct,' street approaches and utility services. The balance sheet and income account should cover all elements of revenue and expense, including depreciation, obsolescence and/or amortization of structure (27-33 years) and also, where involved, the cost control of adjacent buildings for insuring light and air. Appreciation of land where owned, less cost of carrying the land, is properly part of the 'net return' of the enterprise. Futurities must be estimated to find the proper earning power value of the property as of any year." The writers of the report state that the period of 27-33 years allowed for the useful life of the building is controversial and that this is
influenced by many factors. For this reason it was not taken into account in arriving at the figures used to determine the "economic height" of the hypothetical buildings used as a basis of comparison in the report.

THE authors of the investigation determined upon a specific site approximately $200 \times 400$ in the congested high-land-value area of Manhattan adjacent to the Grand Central zone. This was selected as a location calling for a development of maximum intensity. The size of the site was felt to be important as giving the high building a fair chance to demonstrate whether under any condition a very high building was economically justifiable, and would not involve unfairness to the low building.

Eight separately considered buildings were designed for the selected site. These were $8,15,22,30,37,50$, 63 and 75 stories in height. (Continued on page 88)


COLONIAL YET MODERN
A house designed in stone with brick trimmings
by Julius Gregory
The House of Louis Wilputte, New Rochelle, N. Y.


The Problem

- Family consists of owoner and wife, financially well off; two maids; who do considerable entertaining • Large living room - Good sized dining-room • Servants' quarters accessible to main house but not in dircct contact with it • Two master bedrooms and two guest rooms, each with private bath adjoining - Site, generally flat in slightly rolling country • Ozoners had collected fine specimens of English furniture of seventeenth century design and desired a colonial house to harmonize with furniture - In architect's opinion a mere copy of old designs would not be suitable. He desired the addition of a modern touch, to which principle the owners agreed provided it did not interfere with their basic ideas


Reminiscent of early American architccture in composition, this house designed by Julius Gregory has a distinctly modern flavor in its details that is refreshing, rational and individual


ORIGINALITY IN TREATMENT
PHOTOGRAPHS BY GOTtSCHO


A one-car garage is built into the house for the owner's private automobile. A separate garage provides space for extra cars and living quarters for the chauffeur. A restful composition consisting of a dominating mass and subordinate wings is a logical expression of the plan. House of Louis Wilputte, New Rochelle, N. Y. Julius Gregory, architect


Local stone and brick have been combined in an interesting manner. No one can accuse the architect of having copied a house several centuries old. The colonial spirit that is evident satisfied the client's desire for a house that would provide a correct setting for his collection of some very fine specimens of seventeenth century English furniture


Perhaps it is because stone, brick and slate come from mother earth that they invariably look well in combination. In the above instance the difference in the size of the units and the variation and difference in color lends interest to the composition. No cffort was wasted in striving for an effect. The pleasing qualities found in this house are the result of the logical use of materials in a simple composition

True to the COLONIAL yet modern

A designing the interiors of the house of Louis Wilputte at New Rochelle, N. Y., Julius Gregory has maintained more closely the spirit, character and ideals of early American precedent than in the exterior. The interiors shown on this page are the dining-room and one of the bedrooms. The ozener's desire for a setting that would be appropriate for his collection of seventecnth century English furniture established the "style." While the exterior is reminiscent of the Colonial ondy'in general lines and proportions, there is a very definite relationshitp and harmonious spirit, between the interior and exterior-architecture. This has been secured without using sterotyped forms of early origin. Architecture is often described as the designing of beautiful buildings. This might well be restated as the designing of buildings that are as beautiful as possible under imposed conditions


# As 

## Rendering Accounts

FROM the discussion that has occurred in "The Architects' Journal" of London on the subject of when architects should present their bills to clients for their services, one gains the impression that there is no well established practice in this respect in England. For that matter, is it well established in this country? We doubt whether it is. Yet it is a matter that should be clearly understood by architect and client alike from the beginning of their relations. For some unknown reason there seems to exist a certain delicacy and hesitation on the part of members of the profession to discuss the question of fees with the client. It is a matter that can not be taken for granted. It must sooner or later be faced. It is better to have the price to be paid for services rendered, and the time at which portions of the fee are due, understood at the beginning rather than to have an unpleasant and unnecessary misunderstanding later. The Standard form of Contract of the American Institute of Architects is worth having on hand ready to be signed by the client.

## R. I. B. A. Looks Ahead

 N his presidential address to the Royal Institute of Architects, Mr. Walter Tapper emphasized the need of introducing the art of design into the schools and colleges. A committee of the R. I. B. A. recommended that-a list of books on architecture be prepared for the use of school libraries; that an annual prize for an essay, or for sketches, or for other evidence of interest in architecture be made to students in public and secondary schools; that the heads of schools be urged to foster interest in architecture; that a list of lecturers on architecture available to schools be prepared and furnished to all schools; and that schools be approached by means of circulars urging the importance of interesting pupils in architecture as an essential element in any minimum liberal education. This idea is fundamentally good. Children guided in their appreciation of what constitutes good architecture at a highly impressionably age would soon develop a race architecturally conscious. It is a far reaching look into the future.
## The Last Of Five Great Men

DURING the past half century there have been two architectural firms that have exerted a marked influence on the development of architecture in the United States. The original members of these firms can be counted on the fingers of one hand. One by one, they have passed on: White, Carrere, Mead. McKim, and now Thomas Hastings. Through the offices of these two firms has passed a host of men-architects, draftsmen, specification writers, and superintendents-who have spread throughout this country the high ideals instilled by the members
of the firms of McKim, Mead, and White, and Carrere and Hastings. Little did these youthful and courageous pioneers think, when they began their careers, that they would one day be known and their influence felt throughout the world. To them we owe a debt of gratitude for the part they have taken in placing the architectural profession on the plane and in the position it holds today in public esteem. It is with sincere regret that we record in this issue the death of the last original member of these two famous firms, Thomas-Hastings.

## Specifications for Carving Turkey

 F you faced the Thanksgiving Turkey with indecision and came off more or less worsted in the struggle to carve the king of birds with finesse, may we suggest that you approach the Christmas Turkey better prepared to come off with first honors. Plans, elevations, sections, and specifications for correctly carving America's favorite holiday fowl are included in an article entitled "When Father Carves the Turkey" by Allen R. Dodd, published in Good Housekeeping for November. This is not an advertisement but our service would not be complete without informing you where the documents are to be found.
## Alteration Hazards <br> ACCOUNTS in the daily press of accidents that occur to buildings being altered are sufficiently fre-

 quent to serve as a warning to architects having work of this kind in hand. We question whether buildings being altered under an architect's direction are often subject to accidents that could have been avoided by even ordinary care. The number of accidents that do happen, however, should be sufficient to serve as a warning that structural conditions in buildings being altered must be carefully investigated and watched to prevent endangering the stability of the structure.
## Napoleon and Wood Veneer

SOME people still think that veneer is merely a cheap way to make furniture, or an economical use of expensive woods, not realizing that veneer is capable of strength as well as beautiful appearance. The Emperor Napoleon demonstrated this with his desk, which went through several campaigns, was carried on mule's back and artillery carriages, and is now a well preserved relic in the Museum at Fontainebleau.

## Those Colored Telephones

EDITORIAL mention was made last month of the coming of telephone instruments in colors other than somber black. The white telephone in the Grand Central barber shop has since been removed. The color chipped off. It was probably a black telephone painted white. The moral is, the color should go "clear through."

## To the Satisfaction of the Architect

 T is safe to say that few specifications are prepared by architects that do not contain in one or more places the old "grandfather's" clause-"work shall be executed to the satisfaction of the architect." Just what this requirement may ultimately mean to the contractor on the job is worth some speculation. In some cases it means nothing. In others it may work many hardships and be productive of argument. "To the satisfaction of the architect" is susceptible of as many interpretations as there are architects. It is an absurd clause that has no place in a fair and definite specification. It can be relegated to the relics of the past and can properly be omitted from contract documents to the satisfaction of the contractor, without injury to the interest of the client, or to the reputation of the architectImpractical Bathroom Fixtures

THE combination grab bar and soap dish so often used in bathrooms would never be allowed if the architect stopped to think about it. The dish is made without a lip. As a consequence, every time the shower is used the soap dish gets full of water and the soap dissolves unless the bather remembers laboriously to scoop out the water. Why use it, particularly as there are fixtures without this drawback?

This drainless fixture is in the same impractical class as the window at the side of the bath tub. Every time the shower is turned on, the window sill and window curtains get wet. Of course, rubberized curtains can be used, but in most cases the tub can be placed so as to make such a makeshift unnecessary.

## A. I. A. Honor Awards

APPRECIATION of architecture, of allied arts, of design, and of the industrial arts is encouraged by the American Institute of Architects, which has formulated a system of nationwide honor awards. Chapter committees will make nominations of buildings based upon plan, function, and design in dwellings, multiple dwellings, commercial buildings, quasi-public buildings, public schools, and public buildings. Additional awards will be made in group, city, and community planning, landscape, fine arts, applied and industrial arts. Awards will be determined from these nominations by a jury selected by the Executive Committee of the Institute. David J. Witmer of Los Angeles is the chairman of the committee that framed the honor award plan. The idea is commendable and, if properly carried out, as there is every reason to think that it will be, should be productive of much good to the architectural profession as a whole. It will serve to draw the attention of the public to good architecture in every community, particularly in those communities fortunate enough to have buildings in the final award class. It should further serve as
an incentive for architects in every town and city to work to the end of receiving public recognition. By making the awards a coveted honor, the idea can be made a real stimulus for honest effort.

## Advertising Architecture

THE Executive Committee of the American Institute of Architects has received numerous communications relative to advertising architecture and the architect, according to "The Octagon." The Committee is recommending to the Board of Directors of the Institute that the question of advertising architecture and the architect by Chapters of the Institute and by individuals, respectively, be placed on the program of the next Convention for discussion by the delegates. Charles H. Cheney, Chairman of the Committee on City and Regional Planning, has submitted a proposal for the establishment of a Bureau of Architectural Service, which is in effect a great educational program intended to reach the entire public through definite educational and publicity channels. This matter has been referred to the Board of Directors. With sufficient agitation from various channels, something may yet come of the idea. That this matter is one for collective rather than individual action has been clear for some time.

## A Wise Appointment

 N appointing William Adams Delano, F. A. I. A., as a member of the Na tional Capital Park and Planning Commission to succeed the late Milton B. Medary, President Hoover has again displayed the good judgment that has thus far characterized his administration. Mr. Delano by education, experience, and contact with public affairs is well qualified to serve on the Commission and we congratulate the Commission upon acquiring the benefit of his ability. From 1924 to 1928, Mr. Delano served on the National Fine Arts Commission. He is President of the Society of Beaux Arts Architects, Secretary of the Committee on Furnishings for the White House, New York Chapter representative of the A. I. A. Committee on the National Capital, and President of the New York Chapter.Who Says Architects Can't Figure?

$Q$UOTING from an advertising booket, "The Ottober 'Sportsman' brings to light an old formula: Write down the year of your birth; the year of your marriage; the number of years you've been married; and your age. Add them all together and the answer will be 3858 . It really works. But why?" We tried it and found that it worked. What happens in the case of a batchelor is difficult to say, but we can tell 'em why it works. The year of your birth plus your age equals 1929. The year of your marriage plus the number of years married equals 1929 and the sum is 3858. Next year the sum will be 3860.


# SOUND-PROOFING 

IN THE

## Sherman Square Studios, New York

Tillon \& Tillon Architects

WHEN the Studios were completed, a pianist, soprano and tenor were placed in studio $H$ and told to make as much noise as they could. Not a sound was heard in any of the adjoining apartments nor in the corridor.

This excellent job of sound-proofing was secured according to the drawings reproduced at the bottom of this page. In addition to the construction illustrated, the top and sides of each door jamb was felted. Heating supply risers to each apartment are separate so that sound could not be communicated along the pipes to the adjoining apartment. Vent shafts for service pantries and bathrooms are separated from each studio by at least two partitions. Corridor walls are finished in a rough textured acoustical plaster.

Incidentally, the architects had one of their men study sound-proofing for two months before adopting this construction.



Typical floor plan of the Sherman Square Studios


Detail drazwings showing soundproofing of partitions, suspended ceilings and floors of the studios


Two sketches drawn with lithograph crayon by Eldred Mowrey, architectural advisor of the Na tional Lumber Manufacturers Association. That directly above is a fanciful creation done on the back of a mimeographed letter, that to the right above is of an old house in Brittany with highlights touched in with yellow

Rendering by Frederick Witton of a proposed chapel at Saint Joseph's Cemetery, West Roxbury, Mass., McLaughlin \& Burr, architects. Done in pencil on white paper with water color wash, snap and accent being secured by the restrained use of india ink



Cypress Street, toward Juniper, Philadelphia, Pa. Pencil sketch by Allen M. Weary


From portfolio and sketchbook

S KETCHES, fanciful or serious as the case may be, are desired by The American Architect for reproduction in this department of "From portfolio and sketchbook." It is intended that these pages shall represent the work of architects and designers from every part of the United States, men of talent whose work is infrequently published as well as those who are constantly in the professional eye.

Such men are requested to send one or more samples of their work to the editors of The American Architect. Modest payment will be made for those used in these columns. Drawings will be returned with reasonable promptness

# Why speculative sketches 



## Should Not

be submitted

By LANCELOT SUKERT
Formerly president of Michigan Society of Architects


Mr. Sukert read the page reproduced, and sent The American Architect his ideas on the subject

SKETCHES are records of ideas, the architect's solution of a given problem. As such, they represent the most valuable portion of his service, for the balance of his work consists only of the development of the ideas set down in his original sketches. To offer to make sketches without payment is to infer that he places no value upon that ability which he has gained only through years of study and experience.

Speculative sketches are sketches made to assist in promoting new business. They are said to be speculative because, since they are offered to the prospective client with the understanding that he incurs no obligation by accepting them, the architect stakes the cost of preparing the sketches against the probability of their assisting in selling his services. The architect offers to make speculative sketches:

First, as an exhibition of his ability;
Second, because he hopes that, when the prospect sees pictured that which previously existed only in his imagination, he will become so enthused that he will commission the architect to proceed with the work;

Third, because he hopes to create an obligation in the client's mind, even while stating that none is being incurred;

Fourth, because he hopes that the presentation of a sketch will gain him consideration where he might not otherwise receive it ;

Fifth, because, when there are several architects try-
ing to sell their services to the same prospect, the presentation by one of "free sketches" may gain him consideration above the others who have refused to enter a free-for-all sketch competition.

Are any of these reasons justifiable?
No! and for the following reasons:
First, sketches are seldom an exhibition of the architect's ability, except as a draftsman, designer or renderer. Quite often speculative sketches are made by professional renderers called in from the outside or borrowed overnight from a competitor's office. Sketches do not exhibit the architect's practical or business ability.

Second, it is not unusual for the prospective client to have a better "mind-picture" of the proposed new building than the one shown in the sketch, which then disappoints him and discourages his employing the author of the sketch to carry out his project.

Third, the offer of sketches made "without any obligation" creates, in the mind of the prospect, the idea that the job must be a most profitable one or the architect would not be anxious to go to so much trouble and expense to win favorable consideration.

Fourth, where several architects are seeking one commission, the offer by one of them, "to show what he can do" by presenting sketches, leads the prospect to believe that such procedure must be the regular thing, so he makes the suggestion that all the other competing architects also make sketches, in this way creating what the institute terms an "illegal" competition.

"If all the money fruitlessly spent on speculative sketches in one year in the entire United States were pooled in a fund to provide national publicity for the architectural profession, none of us would have any need to go out and sell our services. We would be unable to handle the great volume of business which would walk into our offices."

Do sketches, alone, sell the architect's services to a prospective client?

Very seldom, if ever! The sale is made, consciously or unconsciously, while the architect explains his sketches, exhibits photos of completed work, offers the names of previous clients for recommendation, and states his education, experience and other qualifications. More sales are made on reputation, on completed work or on the architect's analysis and evident understanding of tho prospect's problem than are ever made by the sketches offered as evidence of ability.

Can the architect's services be sold without sketches?
YES, emphatically! The writer knows several very successful architects who have not made a speculative sketch for several years.

Why do some architects refuse to make speculative sketches?

Because they know that the best solution of the pros-

Sketches like this are submitted by Mr. Sukert only after he has been awarded the commission and has thoroughly studied the problem. Proposed churcli and parish building for Christ Church, Flint, Michigan
pective client's problem can not be reached until its various details have been set down, weighed, considered, and a careful schedule of the building's requirements decided upon. Indeed, it is this very portion of the work which requires the advice and counsel of the architect. Speculative sketches are usually offered long before the schedule of requirements has been fully and carefully considered by the prospect himself.

Are sketches, made on speculation, a good gamble?
No, unless the year's net profits on work sold through such sketches is several times in excess of the actual cost of the sketches.

Are speculative sketches costly?

THEY certainly are! If they are intended as an exhibition of aesthetic ability, they should be prepared as well as the architect knows how, else they would be useless. If they are to show evidence of his ability to work out a good plan, they will require a great deal of real study. If they are worth doing at all, they will take a lot of time, and time means pay-roll.

Some architects say that sketches cost them nothing because they make them themselves, while others say that the cost cannot be considered because the sketches are made when there is no other work in the office!

In either case, there is overhead, at least. Overhead includes rent, telephone, materials, depreciation of office equipment and salaries of non-productive employees. The architect who makes (Continued on page 108)

# Stewart \& Co. Building New York Designed to aid sales 

-the Architect becomes A SALES COUNSELOR

Warren \& Wetmore, Architects<br>by<br>R. W. SEXTON

THE merchandising trend of today is very definitely making an ever greater use of the practical relation between architecture and store sales. Customers must be attracted from among the passersby. Those entering must receive and continue to receive an impression which will increase their confidence in the merchant and his goods.

Store competes with store, not only in goods but in pleasure of shopping-and buying. There is a limit to the marking down of prices for, after all, a large part of the population considers other things than price. So atmosphere, an atmosphere typical of the character of the store and its wares, is being sought through architecture and design.

To meet the keen competition of big city stores through creating the most favorable sales atmosphere possible, Stewart and Company sought the cooperation of architects who, in this instance, practically became sales counselors for a merchant dealing in feminine fashions. The resulting building is beautifully feminine with all the tailored exquisiteness of a perfectly gowned woman. It could be mistaken for nothing but what it is and what it sells.

The building is of a simple mass, with setbacks to conform to the New York zoning law. Ornament above the ground floor is almost completely absent. The entrance and flanking show windows have been logically treated as the center of interest and attraction. The design is modern in character, and is of such a quality that the type of merchandise which the store handles is at once suggested. The use of faience, in bold relief, has afforded a means of introducing brilliant color into the composition.

The exterior walls of the building are of buff Indiana limestone. The bronze entrance doors, finished in Pompeiian green, are set in a recess, the jamb of which is on the flange. Above these doors is a decorative panel of faience and glass. The ground color of the faience decorations is a golden yellow to harmonize with the buff of the limestone. Certain motifs of the


The exterior of the Stewart Building is faced with buff Indiana limestone. Window sash and frames are painted green. Ornament and decoration is highly expressive of feminine fashions
design are treated in platinum. Silver was avoided as it was recognized that the fumes of the passing automobiles would tarnish it quickly. The frame of the glass transom above the faience is of cast aluminum ornamented with appropriate forms of hand-hammered aluminum. This frame is set with leaded glass, partly opaque and partly rippled, all delicately tinted and lighted at night from behind.

ON either side of the entrance doors there is a show window. The crestings are of bronze finished like the doors and the panel above each is also of ornamental faience. Included in these panels is a fresh air intake grille of bronze to which a figure in aluminum is applied. These and several other female figures, introduced into the decorative design, reflect the character of the store.
The production of the faience work was unusual and interesting. In the first place, a model to scale was made of that part of the building which was to be decorated in faience. Sketches were made of the various details and finally, after approval had been obtained, full



The sculptor's model of the entrance and flanking motifs of the Stewart Building is viewed by Isaac Lieberman, president of Stezvart \& Company, Iules Holland of the office of Warren \& Wetmore, architects, and Trygue Hammer, sculptor


The first scheme for the treatment of the entrance motif in metal and glass
size models of the several elements were made in clay. From these models moulds were made, the size of the moulds varying, some being as large as seven feet by four feet. The next process was to make castings in plastic clay from the moulds. Then these casts were cut a la mosaico into sections set as a sectile panel.

The cutting of the casts was a delicate operation. requiring artistic skill as well as a knowledge of the material. The size of the sections varied, some running as large as seventy-two square inches in area. The cutting operation might be paralleled to the drawing of the lead lines in the design of a leaded glass window. The faience ornament is accented by being in relief, in certain details the projection being as great as two inches. The modelling was done by Trygve Hammer and Frank Helving from designs by the architects.

The new building for Stewart's is a particularly successful example of store architecture. Thoroughly dignified, simple, honest and sincere, it accurately reflects the characteristics on which modern merchandising is based. By centering the interest on the level of the eye of the passerby, the architects have taken cognizance of the principle on which store architecture is founded. By eliminating unnecessary ornament and details of socalled period influence, they have designed a building which immediately reflects the character of these times.
To many the greatest appeal of this building will lie in the color of the ornamentation. The fear of color among architects of today is something for which it is difficult to account. Yet color has a fascination, we all will admit, and the architects of the new Stewart Building are to be congratulated on making clever use of it.



## DETAILS

Stewart \& Co. Building
Warren \& Wetmore, Architects


ABOVE is a plaster model of the pedestal on which rests the silver colored female figure of the ventilating grilles flanking either side of the entrance. . . . BELOW is a model detail of the ornamental band above the entrance, which is showen on the facing page.
The entrance makes use of dull yellow faience and a dark silver colored metal. Above the arch is leaded glass lighted from behind at night and giving a sparkling jewel effect in keeping with the character of the store


## What Architects

THE new law regarding registration of architects in the State of New York is explained by Senator Seabury C. Mastick, who introduced the legislation, as follows:
"The Act which goes into effect January 1, 1930, does not apply to any building or structure or the alteration thereto costing $\$ 10,000$ or less, nor to the supervision by builders or superintendents employed by such builders of the construction of structural alteration of buildings or structures.' The bill provides that one cannot use the title of 'architect' unless duly registered, and states that a person is practicing architecture 'who holds himself out as able to do, or who does the work that an architect does in planning, designing or supervising the construction or structural alteration of buildings or structures or appurtenances thereto.'"

AT a meeting of the Jury of Final Award for the Traveling Scholarships of the Foundation for Architecture and Landscape Architecture at Lake Forest, Ill., the Ryerson Traveling Fellowship in Architecture was awarded to Otis Winn. The Ryerson Traveling Fellowship in Landscape Architecture was awarded to Carl E. Berg and the Conde Nast Traveling Fellowship in Architecture to Paul Hefferman, and in Landscape Architecture to Sanford C. Hill. Honorable mention was given to C. P. Weir in Architecture and F. Leland Vaughan in Landscape Architecture. The jury also highly commended the sketches of Jonathan A. Taylor. The Jury of Final Award consisted of C. Herrick Hammond, Frederick Garber, Clarence Fowler, Bremer Pond, and Alfred E. Hamill, Chairman.

SEARS, ROEBUCK \& CO., has announced a new department to take over the complete construction of "Honor Built" homes. The company will handle all finances and every detail of erection. All the customer will have to do is to pay his bills and walk in when the house is finished. It is


Detail of a steel column which was carried through a boiler wall between two fireboxes in a Detroit building. The column was too close to the heat and corrosive gases, with the result shown. Eleven years ago it was reinforced due to the same causes. Now it is being removed entirely and the upper portion will be carried by girders above the boilers

## Air Rights Sold in New York

## Sears Roebuck to Finance and Erect Houses

## Wright Plans Apartment Houses as Inverted Pyramids



This steel girder is said to be the first used as a shore across a main thoroughfare. It is about thirty feet above the level of the pavement. Threadneedle Street, London, England
said that this company handles millions of dollars worth of homes each year, and that nearly fifty thousand families have become owners of "Honor Built" homes.

AIR rights to an existing building have been purchased in one of the most unusual real estate deals ever transacted. When the Harriman Building, New York, was bought by the Fred F. French Operators, Inc., the air rights of the building on the south side of the structure were also purchased. The idea is that this makes it impossible for the erection of a building there higher than that on the present site. The Equitable Building has a lease on the air rights over the Morgan Building, with the same idea in mind.

WHAT is said to be the first modernistic church in the United States has been built at Tulsa, Oklahoma. It was designed by a woman, Miss Adah M. Robinson. The principal sculptural group on the face of the main eightstory tower depicts three circuit riders of the hardy type which brought religion to the Southwest in the early days.

# Are Talking About 

Tulsa Has First Modernistic Church

Wall Paper Design Controlled by Committee

Automobile Door Handles<br>Used for Door Knobs



Royal Edward Hotel, Fort William, Ontario, the first monolithic concrete structure of this type built in the Northern part of the United States or Canada. William G. Dorr, architect

AREVOLUTIONARY idea to control designs in the wall paper industry was proposed at the recent convention of the National Wallpaper Wholesalers. The Style Board Committee suggested that a style board be formed with the power of passing on all designs to be used for wallpaper manufacture in the American trade. The idea would be to raise the standard of design, reduce the number of patterns, and generally dictate the style policy of the industry. Manufacturers would be expected to buy their patterns or have them approved through this board, which would also designate the length of time that each pattern sold should appear on the market. The central board would consist of one architect, three manufacturers, three distributors, and two artists, and be assisted by five regional boards with lesser authority.

THE Builders Council of Pittsburgh recently passed a resolution asking the Chamber of Commerce to give annual awards of bronze plaques for the best institutional building, the best mercantile project, and the best residence or housing development project. The Pittsburgh Architectural Club, in endorsing this idea, requested if it be favorably acted upon that the design for the plaques be under the direct supervision of the Architects and Builders Councils.

FRANK LLOYD WRIGHT states that he proposes to build four New York City apartment houses of inverted eighteen-story pyramids of glass, copper and concrete with steel furnishings. He intends to banish walls in their present form and to substitute vast windows transparent or translucent as needed. The towers will be much larger at the top than at the bottom and stand on a base or pedestal of reinforced concrete; through the center of the building, from base to roof, will be a core of reinforced concrete. The cost for each apartment house will be about $\$ 400,000$. They are to be located on property of the Church of St. Mark's-in-the-Bouwerie.

In discussing the project Mr. Wright said:
"There is a beauty in steel that we have overlooked, that symbolizes our times. We live in a mechanical age, and unless we turn it to our own account it will turn us to its account. So I propose to make my towers of glass and steel


Considered as the most beautiful bridge built of steel during 1928 on the North American continent, and winner of the artistic bridge award of the American Institute of Steel Construction. The suspension bridge at Sixth Street, Pittsburgh. Designed under the supervision of $V . R$. Covell, Chief Engineer, Bureau of Bridges, Department of Public Works, Allegheny County, Pittsburgh


Recent excavations in Herculaneum, Italy, uncovered this detail of what appears to be a garden. The beam at the left is a timber, evidently buried since the cruption of $79 \mathrm{~A} . D$.
with copper floors, and thus get the maximum of light and air. My buildings will be modern-not modernistic.
"The glass will be as thick or as thin as the needs of the room requires. There will be an arrangement of long curtains that can be swung together or opened wide to regulate the amount of light received.
"These apartments will be duplexes and will have the equivalent of five fair-sized rooms. The second floor will run diagonally across the apartment-I mean, so that one can look down from the balcony into the living room. The bedrooms will be on the second floor.
"As for the 'inferior desecrators,' they won't get a chance at the buildings. Our furniture will be designed by myself, made of steel in truly modern patterns (not Grand Rapids moderne). Some of it will be built-in wherever practicable. The rest of it will be light and movable-and very comfortable.
"One thing more. From now on our buildings will be constructed in parts, as an automobile is manufactured, and then assembled. That means they will be carted to the building site in sections and fitted together without the bother of lengthy construction work. It's a big step ahead, we think, and truly representatively American."

THE market value of dwellings will tend to correspond to their original cost only when they are well suited to their sites and to their neighborhoods, so that an expensive house would lose considerable value if it were surrounded by inexpensive dwellings," is the opinion of the National Association of Real Estate Boards. "No matter what it cost its owner, its market value would be based on the surrounding houses.

The layout and equipment of houses should be in keeping with the neighborhood, and a man who puts two bathrooms in his home in a 'one bathroom area' may learn that prospective purchasers there are used to expecting to get along with one tub."

PDRESIDENT HOOVER has appointed William Adams Delano, president of the New York Chapter of the American Institute of Architects, as a member of the National Capital Park and Planning Commission to succeed the late Milton B. Medary of Philadelphia. Architects appointed on the Commission cooperate with the Treasury Department in developing the plan of Washington. The president of the Institute, C. Herrick Hammond of Chicago, has
also announced the selection of Mr. Delano to succeed Mr. Medary as chairman of the Institute's Committee on Public Works.

AS building codes in many sections of the country have become obsolete through developments in building construction and materials, a number of municipalities are revising their codes. To aid in this, Building Officials Conferences have been organized in many places in order to discuss the principles and practices underlaying the laws and ordinances relating to buildings, especially as they pertain to structural safety, quality of materials, fire hazard, and methods of administration of codes.

NIGHT illumination of the Union Carbide and Carbon Building, Chicago, is secured by contrasting lighted and unlighted areas. The building is left dark until the twen-ty-fourth story is reached, which is the start of the tower. The flood lighting starts here and gradually tapers off until, at the thirty-fifth floor, the tower is dark. The brilliantly lighted tower corners rise from this darkness, as does also the foot of the campanile which tops the building.

THAT the individual wealth of the United States is gradually being controlled by women is indicated by the fact that $41 \%$ of that individual wealth is now controlled by them, according to Lawrence Stern \& Company, investment bankers. This firm also states that women are beneficiaries of $80 \%$ of life insurance policies, that they constitute nearly $40 \%$ of the customers of investment bond houses, that they are receiving $70 \%$ of the estates left by men, and $64 \%$ of the estates left by women.

ARCHITECTS interested in the subject of acoustics are eligible to membership in the Acoustical Society of America. This society was recently formed to increase and diffuse the knowledge of acoustics and to promote its practical applications. The secretary of the Society is Wallace Waterfall, and the headquarters are at 919 North Michigan avenue, Chicago.
(Continued on page 110)


A model of the entire city of Nuremberg, of which this is a detail, was recently presented to the Metropolitan Museum of Art, New York


ALEADING personality in the world of art, Thomas Hastings attained preëminence and held it longer than is the lot of most men. The series of great buildings which bear his name are known to his contemporaries at home and abroad. Two of his early works still stand forth as epoch making, the Ponce de Leon Hotel at St. Augustine, Florida, which immediately set a new standard in American architecture, and the Blair Building on Broad Street, New York, which marked the first step in the development of logical design for tall buildings. His most recent work was the redesign and rebuilding of the Senate in the Capitoi at Washington, and at the time of his death he was occupied on the architectural design of a new bridge to span the East and Harlem Rivers.
Although Thomas Hastings has passed on, the rare charm of his personality lives in the hearts of a host of friends in whom, through a peculiar human quality inherent in a vivacious and ever youthful disposition, he inspired real and widespread affection. He loved people and people loved him. Socially and artistically the world loses in his passing, but the spiritual qualities so plainly characteristic will keep his memory intimately alive long after most of his contemporaries are forgotten.
He carried this precious active quality into his work. He believed that no matter how great the demands on an architect's time might become he should always draw and design every day and most of the day, and he lived up to this precept. His work, therefore, bore the unmistakable imprint of his individuality and expressed his own humanness.

He was fond of reading and even in these crowded modern days, amid the insistent social demands naturally made upon a man of his high reputation and great charm, he kept abreast of the best of contemporary thought. Interested in people he was naturally interested in human affairs. These interests were widespread. He never lost touch with the Old World and the Old World delighted to honor him.

# Thomas Hastings 

F. A. I. A. $1860 \cdot 1929$

by

EVERETT V. MEEKS, F.A.I.A.

Chevalier of the Legion of Honor, member of the Institut de France, Feilow of the Royal Institute of British Architects and Royal Gold Medalist in England, the two European countries he knew so well placed him high on their rolls of honor. In America every distinction that can come to an artist was his.


THOMAS HASTINGS, N.A., LL.D., was born in New York City on March 11, 1860. His father was the Rev. Thomas Samuel Hastings, D.D., LL.D., a prominent Presbyterian minister and for many years the President of the Union Theological Seminary in New York. His mother was Miss Fanny de Groot, a descendant of early Dutch and Huguenot ancestors. His grandfather, Thomas Hastings, was distinguished as a composer of sacred music. His earliest American ancestor, Thomas Hastings, settled in the Massachusetts Bay Colony in 1634.
His professional education was obtained at the Ecole des Beaux Arts in the Department of Architecture from 1880 to 1882, in the atelier of Jules Andre. Upon his return from Paris he entered the office of McKim, Mead \& White In the year 1885 he entered into partnership with John M. Carrere, under the name of Carrere and Hastings.
Mr. Hastings received the degree of LL.D. from Lafayette College. He was an academician of the National Academy of Design, and a Royal Gold Medalist of the Royal Institute of British Architects, of which he was also a member. He received the degree of Master of Architecture from the University of Liverpool and was a Chevalier of the Legion of Honour, and a member of the Institut de France. He was a trustee of the American Academy of Arts and Letters; and ex-president of the Beaux Arts Institute of Design; several times a director of the American Institute of Architects; chairman of The American Society for the Excavation of Sardis; a trustee of the Museum of French Art. He was one of the founders of the Federal Art Commission, and was one time president of the Architectural League of New York, one of the founders and several times a director.
Among the important works executed by the firm are the Ponce de Leon Hotel in St. Augustine in 1885, the New York Public Library, the Arlington Memorial Amphitheater and the Senate and House of Representatives Office Buildings in Washington, the Manhattan Bridge, the Victory Arch erected at Madison Square in 1918, the pedestal of the Lafayette Statue in the Court of the Louvre, the Century Theatre in New York, the interior of the Metropolitan Opera House, the Standard Oil Building, Bicentennial Buildings at Yale and the Yale War Memorial ; the American Embassy and Devonshire House in London; and St. Ambrose Chapel in the Cathedral of St. John the Divine.
-an 8 page
section of architectural details showing a correct and varied use of


Sympathetic and intelligent handling of wood with an appreciation of the limitations of the material are characteristic of the work of Colonial designers and craftsmen. Details carefully worked by hand show subtle curves and soft edges


Refinement in mouldings, combined in a dignified composition, offers a pleasing contrast in color, texture, and scale to rough brick. The above doorway of Georgian inspiration in the entrance of the T. J. Bettes house, Houston, Texas; Charles W. Oliver, architect


Wood is a versatile material that lends itself to a variety of uses and treatments. The weathervane at the left above was designed by Charles Wellington Walker, architect for the house of Allan McDowell, at Kent, Conn. Shown above at the right, wood has been used in the house of Howard Coonley, Milton, Mass., in a variety of ways that illustrate its ability to "get on" with other materials. Prentice Sanger, architect. The dormer at the left is a detail from the house of Theodore H. Wielandt, Great Neck, Long Island, N. Y., Arthur Coote, architect


Acanthus leaf scroll bracket, probably of the sixteenth century French Renaissance


Cornice detail in Colonial tradition from the house of Allan McDowell, Kent, Conn. Designed by Chas. Wellington Walker, architect


Fence post finial designed by McIntire for the Jerathmeal Pierce house, Salem, Mass., 1782. From Metropolitan Museum


Wood paneled fireplace end from a house at Woodbury, Long Island, New York. Now in the American Wing of the Metropolitan Museum


Typical fifteenth century carved wood panel of French origin


Chinese carved Nepal Temple window of the seventeenth century. An excellent example of oriental handling of wood. From the Corona Mundi International Art Center, Roerich Museum, New York City


Window shuttcr, sixtcenth century French Renaissance. From the Metropolitan Museum


Carved wood figure from the Idlewild Presbyterian Church, Memphis, Tenn., Geo. Awsumb. architect, that indicates an understanding of the handling of the material in an architectural manner. The detail at the right is from the Trinity English Lutheran Church, Fort Wayne, Ind., Bertram Goodhue Associates, architects. The illustrations on this page are used through the courtesy of the American Seating Co.

Detail from the Grace Episcopal Church, Chicago, Ill. Thomas E. Talmadge, architect


The close-up details of handcarved wood panels shown at the right and above are from the Grace Episcopal Church at Chicago, Ill. These have been cut with delicate yet strong assurance that speaks well for today's craftsmen in wood



Hooped treatment of a barrel and tankard of early American origin suggests new architectural possibilities. From the Metropolitan Museum



WHAT HE DID. When Geraghty ordered plans from McPartland for his new garage, he made time the "essence of the contract." Oif course Geraghty didn't use that legal term, but he did provide that the plans must be delivered to him complete not later than December 17 th , or the agreement would be off, and he wouldn't be bound to pay for them. When December 17 th arrived, however, Geraghty was still asking McPartland to make changes here and there, and suggesting additions and omissions, so, of course, the plans were not delivered on that day. Geraghy never claimed a recession of his contract with McPartland on the ground that time was the essence of the contract or on any other ground until some days later when McPartland attempted to deliver the completed plans to him. Then acceptance of the plans was refused on the ground that they were not ready at the time agreed under the contract.

WHY HE DID IT. As a matter of fact, in this particular case, the plot wasn't suited for a garage building at all. Geraghty found this out after he had ordered the plans drawn and so finally abandoned the idea of a garage, intending instead to build a store with apartments above. So he tried to find some excuse to avoid paying for the plans already drawn.
WHY HE SHOULDN'T HAVE DONE IT. If a recession is not claimed and an owner continues negotiations with his architect after the time for the performance of the contract has expired, then the owner is held to waive non-performance within the time specified. Where time is the essence of the contract, this is the settled law invariably followed by the courts in such a case.

## CAN ANYBODY USE FILED PLANS?

WHAT HE DID. When the Central Construction Company decided to build a model house on its suburban development, it consulted the firm of Dielle, Doremus and Drayton, architects. Plans and specifications were prepared by the architects, submitted to the client and accepted. They were then filed with the building department. The house was constructed under the supervision of the architect and the agreed compensation was paid. Then, one day, to the annoyance of the architects, they found that another builder was using the same plans to construct a house on an adjacent development. The more the architects thought about the matter, the more angry they became. "Tell our attorney to start suit," said the senior to the junior partner, so he did.
WHY HE DID IT. Dielle thought, of course, that the builder had no legal right to use the plans, and also thought that if the plans were so used without authority, his firm could collect for such use.
WHY HE SHOULDN'T HAVE DONE IT. Contrary to Dielle's belief, however, his firm had no cause for action against the other builders who had used the plans. The courts have held in similar cases that where architects have prepared plans and specifications for a residence for a client and have filed them with the building department of the city where the house was constructed under their supervision, and they received the compensation agreed on, the filing of the plans was a publication. All the property rights in the plans, if they had any value after the publication, was vested in the architect's client, and the architects had no cause of action against anyone who afterward used them.



The new 43 -story Steuben Club Buildins, Chicaso, is faced and ornamented from street to skyline with Northwestern terra cotta. The light color and rusged texture of the facins, and the lacy beauty of the tower, give to this Cathedral of Fraternity an outstanding dignity. Vitzthum \& Co., Architects.

## ARCHITECTURE Allled ARTS



Project for concrete bridge with shoes, of steel. From "Projects in Design"

## Projects in Design

By Stanislaw Szukalski. Published by the University of Chicago Press, Chicago; 200 pages; size 11 x $121 / 4$; illustrated; price $\$ 20$.

WWHATEVER people may think of Szukalski as a sculptor or as an architect, they at least are forced to give him credit for originality. This present collection of his work with its strong, sometimes almost brutal, conception, bears the impress of one who can never be ignored.

Szukalski, in the text preceding his illustrations, shows little regard for modern art or architects. He says, "The bad taste of architects is as proverbial as that of opera singers and economists. . . American and European polytechnics and academies have a marvelously efficient system for the annihilation of talent. The libraries of these institutions are filled to overflowing with information, data, and measurements of everything man has ever created, but they incubate engineers and technicians, not artist-creators. . . . What new concepts in architecture can we give, when in Poland, my country, the so-called aesthetes and 'cultured' critics proudly proclaim Barocco as an Art, and its earmarks of obsolete good taste as a style; when the museums of Europe and America are still collecting and ponderously admiring the 'beauty' of the dachshund legged furniture of Louis XVI? . . . The creative training, which alone develops the artist, has been neglected. . . . Do not listen to the artificially slobbering enthusiasms of the professional art critics who chatter about the impenetrability of the greatness of great
works of art. Instead, listen to the stone-cutters of the Romanesque churches; look at those simple laborers, eating smoked sausage while carving the eyelids of the little Jesus.
Build the Chinese wall all around the mind of the art student, do not show him the masterpieces of the past until he himself is able to create his own primitives, and you will oblige him to invent a new, worthy, native art. . . . We look at the negro sculpture or any other primi-


Detail of statue "Boleslaz." From "Projects in Design" tive attempt at expression, and we envy the creative daring of the man who, not having our extravagantly vocabularic means, hesitatingly but well describes to us his gods and his longings,


A solo structure. From "Projects in Design" while we, with our academies, polytechnics, universities, lectures, reproductions, measurements, laboratories, stipendiums, medals, have models to sit for us."

Those vivid sentences seem to the reviewer to give the very essence of the drawings and photographs which illustrate the book. Unconventional, sometimes crude, sometimes expressive of the utmost in exotic delicacy, it is a book to laugh at, to take offence from, to dream about, to discuss hotly -and to be inspired by.

## Golf and Country"Clubs

By Clifford Charles Wendehack, A.I.A. Published by William Helburn, Inc., New York; 215 pages; illustrated; size $9 \mathrm{~T} / 2 \times 13$; price $\$ 15$.
FIFTY-ONE pages of text are supplemented by 157 pages of plates covering golf and country clubs, large and small, in all sections of the United States.

The average architect who has occasion to plan and design a golf club is handicapped by the fact that the game is hardly more than a generation old in this



Longue Vue Country Club, Pittsburgh, Pa. Janssen \& Cocken, architects. From "Golf and Country Clubs"
country. There is, therefore, little data on which he can draw, as most of the golf club buildings have naturally been somewhat of an experiment through lack of sufficient experience of the profession as a whole.

Mr. Wendehack has specialized in golf and country clubs, having done many of them in recent years. His comments on their plan and design will be of considerable value to architects engaging in this type of work, for the book is worth while even as only a collection of plates. Subjects covered by Mr. Wendehack in the text include necessary units of the building, flooring materials, location and selection of materials and equipment for locker rooms, dining rooms, water supply, sprinkler systems, distribution of costs, and other pertinent information.


## Standard Practice in Sheet Metal Work

By the Trade Development Committee of the National Association of Sheet Metal Contractors of the United States, and published by the Association, Pittsburgh; 768 pages; size $91 / 2 \times 121 / 4$; illustrated; price $\$ 10$.

THIS is an extremely valuable reference book of standards for the building industry, of practice in fabricating and erecting sheet metal work, prepared for the assistance of architects, engineers, and sheet metal contractors. It contains detail drawings, most of which are to scale, showing how all kinds of sheet metal work
ordinarily encountered should be executed. It will solve many a troublesome sheet metal or roofing problem and should help to eliminate annoyance from work improperly executed.

The book covers roofing, gutters, flashings, corrugated iron work, skylights and ventilators, metal cornices, metal ceilings, warm air furnaces, blow pipe and exhaust systems, fire doors and kalamein doors, hollow metal doors and trim, restaurant and hotel equipment, protective coatings and paints, and many other important items.

There is a good index and the drawings are well made, having been specially done for this book. It will prove a most valuable addition to the architect's library.

## Philip Hooker

By Edzuard W. Root. Published by Charles Scribner's Sons, New York, N. Y 242 pages; size $91 / 4 \times 121 / 4$; illustrated; price $\$ 12$.

THOSE interested in the renaissance work of one of the first professional architects in the United States will find this collection of buildings designed by Philip Hooker of great interest. It is a book that, in its illustrations


Interior cornice in the chapel, Albany Academy. From "Philip Hooker" and in its text, gives an excellent picture of early American design, particularly around Albany, N. Y., where Philip Hooker lived, worked and acted as City Superin-tendent-during which term of office he not only designed the city's public buildings but took the levels for its streets, made the estimates and contracts for public improvements, helped formulate its ordinances, and performed a score or more of other duties.

The text is thoroughly sympathetic in its handling of Philip Hooker, giving a clear idea not only of his work but also of the con-


One of Dykeman's measured drazeings of Hooker's work. From "Philip Hooker" ditions that inspired and directed it as a part of early American architecture. Many of the buildings illustrated are accompanied by Dykeman's measured drawings an I contribute their part towards making this a most interesting and valuable record of the work of one who did much to influence the architecture of his day. It is a comprehensive record of early American architec tural achievemen


## A MIRACLE © F <br> METAL

A latticed tower thrusts its web against the city sky. Quickly it grows . . . up, upward . . . metal ribbed, secure. Suddenly there stands a high, graceful spire rooted to a tiny city plot. Whence came the strength to grow so tall, to house so much, to become so great, on so little . . steel!

Long before a steel member appears on the building site its strength has been proved, through and through, time and time again. Architects and engineers working with steel know steel's every property before it gees into construction. No other building material provides such accurate knowledge of its characteristics-consequently none can be used with the same thorough confidence of strength and security.

This modern age is an age of steel-for every kind of bridge or building, irrespective of its size. Modern efficiency calls for saving of building time and material, more floor space, less weight, less bulk-quicker returns, longer usefulness in structures. Only steel is good enough to provide all these.

A Technical Service Bureau is at the disposal of architects, engineers, owners and others who have need of any information which can be supplied through the American Institute of Steel Construction, Inc.


Free to architects only! This Hugh Ferriss rendering, reproduced on
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## AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC.

The co-operative non-profit service organization of the structural steel industry of the United States and Canada. Correspondence is invited. 200 Madison Avenue, New York City. District offices in New York, Worcester, Philadelphia, Birming. ham, Cleveland, Chicago, Milwaukee, St. Louis, Topeka, Dallas and San Francisco. The Institute publishes twelve booklets,

## STEEL

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## AND SECUITITY

one on practically every type of steel structure, and provides also in one volume, "The Standard Specification for Structural Steel for Buildings," "The Standard Specification for Fireproofing Structural Steel Buildings," and "The Code of Standard Practice." Any or all of these may be had without charge, simply by addressing the Institute at any of its offices.


#  

## over the $\mathrm{R}^{\text {egular }} \mathrm{B}^{\text {ell }} \mathrm{T}^{\text {elephones }}$



Ten telephone outlets, including one in the garage and two in the basement, provide complete telephone convenience in the residence of Mr. A. W. Treadwell, 579 San Elijo Ave., San Diego, Calif Hayward Pierce, Architect, San Diego.


In designing a residence, it is often desirable to provide for communication with in the house . . . bedroom to kitchen, for instance, or library to garage . . . as well as to the outside. Home owners find this especially convenient for conducting household business, receiving incoming calls or talking to people in other parts of the house. Bell System equipment makes it possible to have this intercommunication over certain of the house telephones, without interfering with outside calls.

This is but one of the many features of modern telephone convenience. The basic thought is to have the telephones sufficient in number, and so located, as to bring the greatest possible ease and comfort in the use of the service.

Conduit for the telephone wiring is specified throughout the house, making outlets available in every important room. Telephones can then be had just where the occupants want them. And they can enjoy the improved appearance which comes from concealed wiring.

The telephone company is constantly studying ways to improve its service. It will gladly co-operate with architects in helping to plan the best telephone arrangements for particular building projects. When intercommunicating service is involved, this consultation is particularly important. There is no charge. Just call the Business Office.

## THEREADERS

# Have a Word to Say 



Editor, The American Architect: . . . . Anent your article: "No! No! I Can't Do That-Lawyers Won't Do It . . . Why Should Architects?" It is all very fine to endow the architect with such independence and a superior interpretation of ethics, and the analogy between lawyers and architects is both amusing and entertaining, but what is to be said of architects's daily requests of furnishing contractors, interior decorators, lighting fixture designers, kitchen equipment concerns, laboratory firms, etc., etc., to lay out, design and submit sketches and estimates, even in some cases to write detailed specifications? And, later, these firms discover that the architect has used such specifications, sketches, layouts and estimates as a basis in soliciting bids from competing concerns, frequently excluding the original entry in the final invitation to bid.

Want some specific examples? A typical one:
Mr. Architect has a school, hotel or club project. A kitchen equipment concern is called in to lay out the kitchen in the early stages of the work. The layout is necessary to enable the architect to make provision for rough plumbing. Months later, after the general contract and the plumbing contract have been let, the kitchen equipment house has to beg for the opportunity of submitting a proposal for work which they have laid out for the architect, and they discover that the kitchen contract has already been let to a firm which used the previous specification as a basis.

It would be too tedious to recite further instances that would include the progress of the building up to its completion. "No! No!" the lawyer said, "I can't do that!" The architect smiled, and said-?"
W. Grey Leslie, Crane-Leslie, Inc., Equipment and Furnishing Contractors, New York.

## A <br> BOUT Ruth Boyle's <br> Idea of Architects

Editor, The American Architect:
Ruth Boyle, in your November issue, certainly touched the architect on the raw, especially in regard to "elevation complex." But she also indicated the come-back without realizing it when she cited the case of $\$ 300$ for a model.

When the client is prepared to pay the architect a reasonable fee for his services models might be included, and perspectives-either or both. And detailing special closet equipment costs money. We always got the extra four per cent for all interior work when we had to do anything more than make a few full sizes for trim. And $4 \%$ extra on all interior work, including all trim, stairs, mantels, wainscoting, cupboards, closet shelving and floors, just about covered the extra cost of detailing.

Architects should submit their residence designs to their wives and get the "lay" point of view. How my wife hates the borders drawn in the rooms of a preliminary lay out! To her they simply thicken the walls and reduce the size of the rooms.

And the old cry that the client and the architect are not
frank with each other about costs. I can hear the hoot that would greet a public statement that 1 never had that difficulty but once. I always told the client that I would design a house to fit the price he stated and that it would come within the figure. That if he had a larger house in mind he must make the price fit the size and quality. That if the house I designed was not large enough he would have to pay for a new and larger design. And when he gave me a statement of his requirements, I always told him if they were beyond the price he stated. I told him that $I$ could not reconcile discrepancies between size and price, but that he could and must. "A house to fit the price or a price to fit the house." It was up to him.
And this matter of proper payment of the architect reminds me of the discussion of the $6 \%$ "minimum fee" at the Nashville convention some fifteen years ago. At that time I half-humorously, half seriously, suggested that our statement should read: "The proper minimum fee or rate should be commensurate with the service rendered and the architect's ability, and the client is hereby informed that he will receive service and ability commensurate with the fee he pays." One architect I know always tells the client who can "get the work done cheaper," that he can give him 4\% service, $6 \%$ service or $10 \%$ service, whichever he chooses to pay for and that the $4 \%$ service of the "cheaper architect" will not be $6 \%$ service. . . . Professor Goldwin Goldsmith, Department of Architecture, University of Texas, Austin, Texas.

## $\bigwedge \begin{aligned} & \text { AYBE She will } \\ & \text { but we doubt it }\end{aligned}$

Editor, The American Architect: . . . . I'll answer the query on page 64 of the November issue. Mrs. Kent said: "I won't sign, Mr. Brown. You are my architect and it is your business to keep yourself posted as to the merits of new materials coming into the market. My husband can't afford in his business to close his eyes to new materials and methods coming into his particular field and I don't see how you can either. If all architects took your stand we'd still be living in caves in the hillside.
"If you don't want to see the manufacturers' salesmen about a product, for Heaven's sake get in touch with the trade association of that particular industry. They will either write you or send a man to give you the information you want. I want you to find out where these shingles have been used, how long they have been in use and how satisfactory they have been, before you close a roofing contract. You are going to assume the responsibility because that is what I am paying you to do." . . . . W. F. Lockhardt, National Terra Cotta Society, Nezw York.

## \HAT Is your experience with plate glass?

Editor, The American Architect: . . . . What are the standard properties of $1 / 8^{\prime \prime}$ thick polished plate glass? If other architects have had the same experience as the writer has had, the answer to this question will have to deal not only with transmitted light, but also (Continued on page 90)

## Terra Cotta for the Modern School



A twentieth century school. The architecture is as modern as the curriculum, yet each has its roots in the best of what has gone before.

Terra Cotta offers the ideal medium for the sympathetic interpretation of the architect's design. Ornament is reproduced in the finished product exactly as approved in the model. There is none of the loss of character or feeling which so frequently results from the laborious translation into another material.

Q A new edition of our brochure on schools is in prepar 7 ration. Shall we place your name on the mailing list?

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Building for the
George A. Fuller Company
New York City

## Walker \& Gillette

Architects

## six floors $S H \bigcirc P S$

 and a separate elevator foreach

Plan of Second to Sixth Floors

$\square$ROUND rents in the larger cities are such as to tend to reduce the competition among merchants not only by reason of the larger capital required but also because there is a natural diminishing of desirable store space as population density increases. The consequence has been that small shops have invaded the higher floors of tall buildings, catering to a restricted trade and unknown to the general public.
It seemed quite logical to the George A. Fuller Company that their new building at Fifty-seventh Street and Madison Avenue, New York City, should take note of this tendency and provide for shops with individual show windows for the first six stories. The floors are so laid out that each store above the first may have its own private individual elevator, entirely separate and distinct from the public elevators serving the rest of the building. The plans are flexible enough so that as each shop is rented, its own elevator can be installed within a reasonable length of time. Of course merchants désiring several sections of their shops, one over the other, may be easily accommodated.

Thus, each upstairs shop is an individual shop with its own private entrance, so that the customers of one do not mingle with the customers of another. Each is practically as convenient as a street level shop, with an added exclusiveness and privacy that make up for any inconvenience incurred by the use of an elevator.

In the picture of the building presented at the left, the shop floors are differentiated from the rest of the building by black marble, the color of which is repeated in the parapet walls necessitated by the set-back design.

This innovation in shop space has a particular advantage as regards the location of the Fuller building, which is in a section devoted to exclusive stores and is considered as the coming fashionable shopping district of New York City.

## That Different Bath Fixture is also made in a round pattern with all-metal trim

YOU have three choices in selecting this unusual bath fixture - the round pattern, illustrated, with allmetal trim, or the same pattern with china trim. Or, if you prefer, Art Chrome, a beautiful octagonal design in lustrous, non-tarnishable Chromium plate. Either of these three styles should satisfy the most exacting requirements in bathroom decoration.

This new bath fixture has more than good looks. There are five exceptional practical features that architects have said are unequalled. They are points that can be appreciated by expert or layman. Here they are:

## $\int$ Exclusive

1Shower Head. The removable face comes off by loosening the center screw, not by unscrewing face plate. Screw cannot fall out. A great improvement that will benefit all who have tried to remove screwed-on face plates.

2 Diverter Valve. The handle on the spout 2 reads, "TURN ON WATER THEN LIFT FOR SHOWER." Before raising the lever, the user can temper water at spout. When HOT and COLD valves are shut off, the diverter drops back, automatically. It is always in position to fill the tub when the water is off. Operates by water pressure and gravity. No rubber-no spring.
3 Mechanical Waste. As simple and efficient as the old style chain and plug, only the chain is inside the waste tube. Nothing back of the tub to give trouble. Minimum waterway restrictions-no dirt or hair catchers. When pop-up is open chain rests snugly against top of waste tube. No seats to become pitted and water cut. Seat and plug in waste outlet. Ball joint head fits slope of any tub-overflow ell held to tub by lock nut. Brass friction rings at every joint to insure permanent tightness. Stopper easily removed by simply lifting out plug.
4 Diverter Valve on face of wall-not in the wall. Readily accessible.

$$
\begin{aligned}
& 5 \text { A faucet with a removable unit that's } \\
& \text { as easily renewed as a light bulb. }
\end{aligned}
$$

Write for a copy of our new folder
on "that different bath fixture"

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# New MATERIALS \& EQUIPMENT 

BRIEF REVIEWS THAT MAKE IT EASY<br>TO KEEP IN TOUCH WITH THE<br>PROGRESS MADE BY PRODUCERS



## Breakfast and Dinette Sets

A new line of "Easy-fold" breakfast and dinette sets for use particularly in small homes or apartments has recently been placed on the market by Schimmel \& Company, Inc., Faribault, Minn. Closed, the set looks like a china closet placed against the wall. Open, it offers a table with a bench on either side. Since the dishes are kept in the set itself, it is particularly handy for light housekeeping. These sets may be obtained in either portable or built-in units.

## Sewage Disposal for Unsewered Homes

Two recent additions to the line of the Chemical Toilet Corp., Syracuse, N. Y., are announced, namely the SanEquip Drain Pool and San-Equip Drain Tile. The drain pool is a scientifically designed seepage pool for use where the drainage area is limited and where there is no danger of water supply pollution. The tile are designed especially for septic and field drainage, being all metal in construction. It is said that special perforations call for from twelve to twenty times more seepage per foot. It is also recommended for draining golf courses, sport fields, and airports. Both pools and tile are made of special rust-resisting, cop-per-bearing iron, rust-proofed inside and out with a heavy coating of mineral asphalt.

## Air Conditioning for Houses

A new device for the air conditioning of houses is announced by the Carrier Engineering Corporation, Newark, New Jersey. It is called the "Weathermaker" and is arranged to function in four ways: first, the air is warmed to the desired temperature; second, moisture is added to the warmed air; third, the air is filtered, that is cleaned of dust and dirt ; fourth, the air is carried by ducts to every
room and distributed under pressure without drafts and without hot or cold zones. The air is kept in constant circulation. Water control is automatic. The apparatus is about $4^{\prime}-0^{\prime \prime}$ high and $6^{\prime} 4^{\prime \prime} \times 4^{\prime}-3^{\prime \prime}$ in plan. It is stated that tests have shown that a relative humidity of 42 per cent is maintained. Any type of fuel may be used.

## Roller Screens Applied to Steel Casements

Application of a roller screen directly to a steel casement window is the principle used by the Truscon Steel Company, Youngstown, Ohio, in developing a new casement and Rolup screen. The screen is contained in a small, inconspicuous hexagonal case at the top of the ventilator portion of the window. When the casement is closed, the window is out of sight. When the casement is opened, the screen may be pulled down and locks at the bottom of the window, the sides moving in grooves. A spring roller in the case holds the screen in tension and acts like a shade roller in raising the screen. The screen does not interfere with the operation of the window's swinging sections. Fittings are of chrome steel.

## New Theatre Light Control

A system of controlling theatre lights from in front of the curtain has been developed by the General Electric Company, Schenectady, N. Y. The system consists of a series of knobs, dials, tumbler switches, etc., simply arranged, so control complex lighting effects such as sunsets, thunder that the lighting director can sit in front of the stage and storms, and ballets. The advantage of the system is that the lighting director can watch the action and his effects, not having to depend on cues. The first installation is in the new Chicago Civic Opera House.

## New Design in Lighting Fixtures

The Edwin F. Guth Company, St. Louis, Mo., has recently brought out a new line of lighting fixtures with designs along "art moderne" lines. The bowl and reflector direct all light to the working plane with, it is stated, an efficiency of eighty per cent. Since the Brascolite, as it is called, carries its own ceiling it is independent of room heights or colors. Fixtures are either plain or in colored designs of various patterns.


## NATIONAL COPPER-STEEL PIPE for soil, waste vent lines and rain leaders

THE increasing number of specifications by architects and engineers for NATIONAL Copper-Steel Pipe in soil, waste, vent lines and rain leaders of large buildings, indicates the wide acceptance of this product as a means of securing greater resistance to atmospheric corrosion in these lines, or wherever pipe is exposed to alternate wet and dry conditions.

That the life of pipe in all such services can be greatly increased by using copper-steel is an established fact, based on tests and actual service records over many years. Therefore, copper-steel superiority for corrosion resistance is not a theory nor recent experiment, but a sound investment in the interest of prolonged life of pipe lines, less interruption to service in the building, and decreased costs of repairs or replacements.

NATIONAL Copper-Steel Pipe is the same high-grade steel pipe which architects and engineers have specified for many years, with the addition of a small percentage of pure copper, which thoroughly alloys with the highly refined steel, making it more resistant to atmospheric corrosion. To secure the benefit of the experience of pioneers in making this product, be sure to specify-

> NATIONAL COPPER-STEEL PIPE
> The Original Copper-Steel Pipe

## NATIONAL TUBE COMPANY • Pittsburgh, Pa. Subsidiary of United States Steel Corporation

## Scutan a New Building Paper

A new building paper consisting of a pure Kraft paper base treated with an infusion of a compound containing a high percentage of mineral rubber is announced by the Scutan Division of the Union Bag \& Paper Corp., New York City. It is called Scutan building paper, and is claimed to be waterproof, moistureproof, and for all practical purposes airtight, and proof against insects and vermin. It is also said to be free from tackiness or odor and to be an excellent insulator. It is easily folded without cracking.

## Andersen Improves Window Frames

Improved box frames with special mortar clinch grooves have just been developed by the Andersen Frame Corp., Bayport, Minn. The three features of the new frame are: first, the frame is made with a large number of
 special mortar clinch grooves which, even on careless jobs, insures contact in a percentage of them so as to avoid infiltration of air. Second, a recess or space is provided for a strip of oakum or caulking compound inserted between the blind stop and brick molding when the frame is nailed up; thus the edge that projects and is not held by the brick molding bulges up to give opportunity to bed the brick in the caulking as laid. Third, an extra plow is provided to permit setting back the extension jamb where a reveal or narrow inside trim is desired. Detail sheets are available showing the construction of the new frames for all types of construction.

## Roofs of Precast Concrete Slabs

A new precast concrete unit for roofs that is light in weight and with considerable insulating value is announced by the Federal Cement Tile Company, Chicago, Ill. The slabs weigh ten pounds per square foot in spans up to $6^{\prime}-8^{\prime \prime}$. It is stated that this light weight is achieved with exactly the same structural strength as sand concrete. The material is described fully in a catalog with the A.I.A. file 12 e 2 .

## New Metal Laths

The Truscon Steel Company, Youngstown, Ohio, has brought out a new Diamond "A" metal lath for interior plastering. It is a flat-rib lath with a rigid base, but has longitudinal flexibility so that it is adaptable for fireproofing structural steel as well as for plastering walls and ceilings.

This company has also recently introduced a small mesh Diamond lath which has $25 \%$ more openings in a given area, with a proportionate increase in the area of steel. The small openings prevent excess penetration of plaster, thus minimizing droppings. It is said that as much as $15 \%$ less plaster is required for the scratch coat for this reason, with a proportionate saving of labor.


## Williams Produces Junior Oil Burner

A new small model called the Oil-o-Matic Junior has just been announced by the Williams Oil-O-Matic Heating Corporation, Bloomington, Ill. It is stated that this apparatus, though small in size, contains all the vital points of the larger burners. The model has been made attractive in appearance and can be made free of radio interference.

## Oil Burner and Boiler in One

A complete heating system in which the oil burner is a built-in and integral part of the boiler is announced by the Leader Boiler and Heater Company, Chicago, 111. The line of units is broad enough to cover the entire domestic heating field, including industrial boilers up to 15 H.P.


## Cypress Floor Blocks

Cypress blocks approximately eight inches square and 13/16 inches thick, made of several pieces of wood glued together so as to form a pattern as illustrated above, are announced by the Seldem Cypress Door Co., Palatka, Fla. The blocks are edge grain and subjected to a special chemical treatment which makes the block moisture resistant. They can be laid on any smooth surface base, wood or concrete, and are set in a special mastic. The blocks are furnished in several different patterns as desired, so as to permit of various floor designs.


STIRLING TOWERS, Toronto ( 827 radiators)
CHAPMAN \& OXLEY Architects
YOLLES \& ROTENBERG
General Engineers and Contractors

# ILLINOIS HEATING SYSTEMS in Canada 

An ILLINOIS Heating System installed in this up-to-the-minute office building (Stirling Towers, Toronto), is giving positive heat in cold weather and mild heat in mild weather, without overheating-and is saving the fuel which overheating uses.
ILLINOIS Systems combine the advantages of quick and positive steam circulation, easy control of room temperatures, noiseless operation, durability of apparatus, fuel economy (approximately 1-3 over ordinary systems), and a minimum of operating expense. ILLINOIS Systems are balanced systems. All valves and specialties are of Illinois manufacture, and designed to operate as a unit. This offers great advantages over assembled systems made up of specialties of various manufacture and design. It also gives unified responsibility and guarantee.
ILLINOIS Heating Systems have long demonstrated their worth with a record of dependable performance in thousands of America's finest buildings of every type. Think of this in terms of client satisfaction.


A complete description of ILLINOIS Vapor Systems is given in Bulletin No. 22 which really should be in the reference file of all who have to do with the Heating of Buildings. Your copy will be sent upon request.

Toronto Representative: Paul E. Cleal, 114 Jarvis Street


A pelican and a panther that are typical of the smooth surfaced animals
portrayed by Pompon


The administration block of the Frankfurt Market. On the left side is the elevator shaft of concrete and glass. Professor Elsaesser, architect. From the Architect and Building News, October 4, 1929

Pompon, at the age of seventy-four, is looked upon today as one of the masters of French sculpture. Thirty-five years ago Pompon exhibited a duck which carned for him the sneers of the critics and public. It was a smooth surfaced animal where nothing remained but the essential structure imprisoning the movement in ample rhythmed nudity. Smooth surfaced animals, essentially Pompon's discovery, are today made in scries in practically all workshops of decorative sculpture. From the Architectural Review
of London, England, issue of October, 1929


The character of the original structure has been maintained in the alterations to Farham Chase, Buckinghamshire, by Adshead and Ramsey, architects. From the Architectural Review of London, England, October, 1929, issue

"Foresters Cot," Walton Heath. Briant Poulter, F.R.I.B.A., architect. From The Builder of London, ussed in October 4, 1929. Half timber has been used in accordance with English precedent which
proclaims the timbers as proclaims the timbers as having stru tural value


Detail drazeing of the fish gate, Kinross House,

A Union building in Briün, Czechoslovakia, designed by Eduard Gottlicher, architect. From Moderne Bauformen, October. 1929. This building is typical of
modern European in the use of plain surfaces architectural design


# mosaic Beauty... <br> Tiles bring New Utility to business establishments 

DOING the unusual - probably breaking precedent-the J. A. Finn Company of New York created showrooms of modern beauty for the wholesale selling of textiles. The decorative medium employed, under direction of Paul A. Faire, was Mosaic Faience Tiles.
Merchandising ability is expected today more than ever of the interiors (and exteriors) of stores, salesrooms and other business places. Store fronts and interior floors, walls and counters must help sell goods-and should be designed with that purpose in view.
To surround merchandise with greater eye value and selling appeal, architects have an exceedingly adaptable and permanently beautiful material in Mosaic Tiles-real tiles.


Almost any desired effect for commercial, financial and industrial establishments may be carried out with Mosaic Tiles. The extremely wide range of colors, shapes, styles and sizes lends itself particularly well to designs that are original and distinctive.

And Mosaic Tiles are economical. They eliminate redecorating expense. Through the years they continue unimpaired by wear, time and weather. To use them is to make one of the best possible business investments.
Write for the booklet "Mosaic Tiles for Stores and Business Houses," and feel free at any time to call on our design department.

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The views above are of the showrooms of the J. A. Finn Co., New York, manufacturers and converters of cotton and silk goods. Wainscots are $4-1 / 4$ inches square MosaicFaience Tiles in green and French gray with black and silver decorations. Panels are special and regular size faience, green, blue and cream with silver, Chinese red and black decorations.

"Mosaic" is the trade name for tiles made by The Mosaic Tile Company and is stamped on all Mosaic Products. This name should be used in writing tile specifications.


## Boiler and radiation costs

 reduced by using
## GYPSTEEL ROOF

WTHEN the American Aeronautical Corporation first planned its hangar and manufacturing plant at Port Washington, L.I., a wood plank roof was to be used.

But when they figured out that a Gypsteel Pre-Cast Gypsum Roof would insulate against heat and cold much better and enable them to put in a smaller boiler and less radiation, the Gypsum Roof went on.

Less coal is needed, too.
Best of all, the Gypsteel Roof cost no more than the plank roof would have.


Not to mention the many other good things about a Gypsteel Roof. Easy and rapid installation. Light undersurface. Sound insulation. Smaller amount of steelwork often required. Elimination of form work.

It it's an airport you're think-
ing about (and what live community isn't) our guess is that you'll want Gypsteel Roofs to give you these substantial savings that Lockwood, Greene \& Co. got at Port Washington.

Let us give you the full facts and figures.


## "Metal Fittings by Fiske"

$\pi^{\mathrm{N}}$ town, and on the country estate, in1 side the house and out, the use of metal, serviceable and decorative, is steadily increasing. Owners, architects, and builders will find FISKE experience of more than three quarters of a century, a most helpful service in the design and execution of ornamental metal fittings of every variety.

The metal work of the interior tennis court shown above, on the estate of the
late James Cox Brady, at Gladstone, New Jersey, is another example of FISKE workmanship, unfailing in results of complete satisfaction to both architect and owner. And this is only one of the many installations awarded FISKE in the past, where experience and specialized knowledge have definitely characterized the result as a FISKE installation. Write for illustrated catalogue of ornamental metal fittings.


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We guarantee such floors to remain wearproof and dustproof for a period of years, dependent on specific conditions of use.

## SONNEBORN INSPECTS

 The JOBIN your client's behalf you are interested in getting a concrete floor hardening job that will give long and satisfactory service. A Sonneborn job will give you such service.

But unless you insist on Sonneborn doing the hardening the chances are that low price will win the order, and at the prices that concrete floor hardening material can now be bought, there can only be one result-quick and lasting dissatisfaction.

Architects who are interested in jobs that will stand up, will realize the ultimate economy and service of intrusting hardening work to Sonneborn, who guarantee every job, and stand behind their guarantee, and always make good.

The Sonneborn Method calls for the use of Lapidolith, the original concrete floor hardener, and for the correct application of Lapidolith by a Sonneborn Service Crew trained to apply Lapidolith in the right way and in the proper amount.

We are prepared to quote a price in advance direct to the architect so there can be no misunderstanding between architect and contractor about the cost of the work. We can compete on price but do so reluctantly, because we cannot give at a low price as fine a job as that which is possible to supply at a fair price.

To get a job that will reffect credit on the architect and contractor by lasting for years, specify Lapidolith to be applied by sonneborn under guarantee.

## L. SONNEBORN SONS, Inc.

 114 Fifth Avenue, N. Y. paints turn yellow.
# At 132 Stories Income Disappears <br> (Continued from page 31) 

Their design was made in accordance with existing zoning regulations for the selected district. The heights determined upon were governed by the economical levels for reducing elevator service. Seventy-five stories was taken as the maximum because it was believed that this would be well beyond the point of economic return. To secure a fair comparison all buildings were designed upon the same "parti" throughout. The character of the tenants to be attracted was given careful consideration in the study of the buildings.
| N connection with the planning of the buildings it is interesting to note the following statement: "The plot must be large enough to carry the legally necessary substructure for the tower portion of the building, which tower must in itself constitute an office building. . . This condition stated in terms of planning means that the plan at the level of transition from the setback portion to the vertical tower shaft should be of a size sufficient to accommodate the needed elevators rising to that level plus a surrounding belt of rentable area approximately 25 feet in depth."
As the height of the building was reduced, space was reclaimed by the omission of elevators and reduction in column sizes, and similar saving in space was made revenue producing. Each building was treated essentially as a separate economic problem.

It was estimated that the population of the 75 -story building using elevator service would be 16,000 persons. As a result the highest type of elevator service available was determined upon and designed for operation at 750 to 1000 feet per minute, with cars leaving the ground floor at the morning peak load period at an average interval of 21 seconds. Elevator interval of operation was calculated on the basis of a diversified tenancy with a population when fully rented of 1 person per 100 sq . ft. net rentable area 2 to 37 floors

1 person per 110 sq . ft. net rentable area 38 to 50 floors

1 person per 115 sq. ft. net rentable area 51 to 63 floors

1 person per 120 sq. ft. net rentable area 64 to 75 floors.

After the plans, specifications, estimates of cost, total income and operating expenses had been secured it was a simple matter to determine the net income and to figure the net income percentage of the total investment in the case of each of the eight buildings. It is a striking fact that under the assumed conditions the point of highest economic return was reached in the 63 -story building.

The estimated cost of the eight-story building was $\$ 22$,193,000 , with a net return upon the investment of 4.22 per cent.

Investment Return

|  | Buildin | g s of |
| :---: | :---: | :---: |
| Var | ious H | e ights |
| Height of building in stories | Actual per cent return upon total investment | Normal computed per cent return upon investment |
| 8 | . 4.22 | ... 4.69 |
| 15 | .. 6.44. | .. 6.10 |
| 22 | .. 7.73. | .. 7.31 |
| 30. | ... 8.50 | ... 8.45 |
| 37 | ... 9.07. | . 9.23 |
| 50 | ... 9.87. | .... 10.13 |
| 63 | ... 10.25. | ..... 10.33 |
| 75 | . 10.06.. | ..... 9.90 |
| 85 |  | ..... 9.08 |
| 100 |  | .... 7.08 |
| 110 |  | ..... 5.22 |
| 115 | ........... | ..... 4.14 |
| 120 |  | ....... 2.95 |
| 125 |  | ...... 1.66 |
| 130 |  | ... . 27 |
| 131 |  | ..... . 02 |

It thus becomes apparent that the "carrying cnarge" imposed by the high value of $\$ 200$ per square foot is responsible for the low building being highly unprofitable.

The 63 -story building was found to be the only one in which the total cost assignable to the land was equaled and exceeded by the total cost assignable to the building.

In the 75 -story building the total building cost exceeded the aggregate land cost, but the extra cost of constructing the last 12 stories and loss in rentable space was so great that the average return upon the total investment was slightly less than that for the 63 -story structure.

Another interesting fact is that while the eight-story building indicated a net return of $4.22 \%$, the addition of 7 more stories at an added cost of $\$ 2,860,000$, increased the net income $\$ 677,000$ or a return of $23.69 \%$ upon the extra cost.

An addition of 7 more stories produced a return of $21.51 \%$ upon the increased cost.

THE net return upon the next two "increments" of stories showed a decline due to zone setback restrictions, but still indicated a highly profitable investment. Above the 37 th story setback restrictions ceased to play an important part "with the result that the addition of 13 more stories is rewarded by an $18.13 \%$ return upon the extra investment."

From this point on the increased cost of construction at great heights and the loss in rentable area apparently begins to have an important effect.

The report points out that, providing factors governing the relationships between story height and per cent return do not change, the following formula may be used for estimating the return upon the investment for varying heights beyond the limits of the present study. $y=2.81986+.24985 \mathrm{x}-.0020728^{2}$
in which $y=$ per cent return on investment and $\mathrm{x}=$ story height.

Upon the basis of the figures arrived at in this study the tendency to diminishing returns would continue from 64 stories until "net income would vanish at the height of 132 stories."

A warning is sounded in the projecting of the curve beyond the limits of the present study and particularly in attempting to apply the formula to other sites. It must be impressed upon the reader that "each building plot presents an individual architectural problem which must be solved by careful study of a complicated set of physical and economic factors peculiar to the particular plot at the time when it is proposed to develop it . . . No matter what the size or value or location of the plot or character of the building, the law of diminishing returns will
has brought a sunny charm to this design of a French Provincial breakfast corner by his excellent use of Keramic Tiles. Utterly charming in itself-the room assumes a sparkling note of gayety and vivacity that would be entirely lacking were it not for the rich hues of the tiles
in the floor, sills, and bench base. Here Keramic Tiles have added real character and personality to an already delightful nook - have given Mr. Forster the most perfect medium possible for interpreting his own ideas of design and color - of penning his signature - as it were - to a lasting piece of his work.


YOU DERIVE the greatest benefit from Keramic Tiles when the tiles are set by experts. Their skilled workmanship is instantly apparent. Select your tiling contractor on the quality of his work.

The floor of this French Provincial breakfast corner by Frank .J. Forster is of hexagonal tiles in varied warm, rich lines. The square tiles of the window sills are emerald and turquoise, while those in the base of the set-in breakfast bench are blue, yellow and white.

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## STRAIGHT LINE DRIVE ELEVATOR MACHINE

Sturdy, compact and vibrationless this pow erful straight-line drive machine is the most modern elevator machine made.
With motor and machine aligned and bolted together as one complete unit there is no chance of misalignment. The electric brake magnets are submerged in oil, eliminating the noise of contact so objectionable in other machines. All vital points are housed and run in oil.
The mobile parts of Kimball Straight Line Drive machine are reduced to a minimum with very little to get out of order. A machine of long life that will give continuous and snappy service.

Write for literature on the Kimball Straight Line Drive Machine.

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set in at some story height and sooner or later, a point will be reached beyond which it will not pay the owner to build under the existing conditions."

S TUDY shows that a multitude of casual factors bear upon the net return which may be expected from an investment in a modern building. The study emphasizes that the high cost of land plays a dominating role. In the present case the value of the site at $\$ 200$ per square foot totaled $\$ 16,200,000$. In the case of the 75 -story building interest and taxes on the land during an unproductive period of two years, estimated as required for construction, adds $\$ 2,644,000$ or $16.3 \%$ to the original cost of the property.
The important conclusion disclosed by the investigation is that "in the strategic centers of metropolitan cities where land values are high the private owner of an office building site MUST build a skyscraper. He must develop the land to its maximum economic intensity if he is to have a most profitable investment."

This is a factor that opponents of skyscraper construction will find hard to combat for "no profit, no building."

## The Readers Have a Word to Say <br> (Continued from page 72)

reflected light from both surfaces and reflected light from the farther surface transmitted through the glass.

Should distorted reflected images of moving objects, or (which amounts to the same thing) distorted reflected images of stationary objects seen by a moving beholder be allowed for $1 / 8^{\prime \prime}$ polished plate glass?

If nine lights out of an installation of 176 lights give a perfect reflection, would it be just and reasonable to reject the remainder and demand that all lights be like the perfect ones?

Moreover, at a residence now under construction, which the writer has planned, it was found that a light of glass from the cellar windows, which was specified to be A-1 d. s. American sheet glass, and delivered for such, gave perfect transmitted images of moving objects as well as perfect reflected images of moving objects and, upon further examination, was found to give a reflection from the farther surface entirely free from refraction, which latter was not the case with a sample of $1 / 8^{\prime \prime}$ polished plate glass.

The writer feels that your opinions on these matters will be of great value and interest to the architectural profession. . . . Erik Strindberg, Architect, Portsmouth, Ohio.

## ARPENTRY <br> Specifications

Editor, The American Architect: . . . . I have carefully read "Carpentry Specification (N. Y. Bldg. Congress Spec.)" in your September number.
In paragraph No. 21, under the heading "WorkmanshipRough Carpentry," the wording as is refers to "Joists, beams, girders and rafters to be splayed $3^{\prime \prime}$ on walls, with bearings of not less than $4^{\prime \prime}$; but actually should only refer to beams. Girders would not bear $4^{\prime \prime}$ on walls and splayed $3^{\prime \prime}$.

This I believe is an oversight and should be corrected. .... Charles C. Wagner, Koch \& Wagner, Architects, Brooklyn, New York.



> Most walls decay from the top down unless they have permanent clay wall coping

Clay Products Association CONWAY BUILDING Chicago

## Doing the Customer's Way

(Continued from page 27)
building a small house can be induced to spend the money. The poorer models, such as are often used by real estate developments, are practically worthless and I think that the same is true of "sketchy" plaster and clay models.
Through sketches, perspectives, the development of working drawings and the use of models, I cannot see how any client can fail to form a clear picture of the final result. I really believe that most popular criticism arises from experiences with the so-called architect and builder who rehashes an old set of drawings, or from the practice of buying a set of plans by mail.

PERHAPS the greatest source of misunderstanding is
the question of cost, and I know that it can be eliminated if given sufficient thought in the beginning. It is hardly necessary to say that most clients are more or less definitely limited as to the size of their appropriation. It is also true that most of them expect much more for their money than it is possible to give them. With a knowledge of all these things gained from past experience, I talk cost in the first interview. With the first 16th scale studies I present a budget, which lists the cost of the land, the contract price, screens and weatherstrips, financing, finished grading and landscaping-in short, everything not included in the general contract necessary to complete the house. I even list the cost of the refrigerator and gas range, and in one or two cases included the shades. The reason for this is of course that architects are prone to think of the cost of a house as represented by the contract price, but the owner wants to know the total expenditure.
Let us consider the case of the man who feels he can afford to invest not more than $\$ 30,000$ in a house. Perhaps he has paid $\$ 6,000$ for his lot, leaving $\$ 24,000$ to complete the operation. In all probability he will tell his architect that he has set aside $\$ 24,000$ as the cost of his house, which the architect will take as meaning contract price. When the client discovers, as he eventually will, that there is nothing left to pay even the architect's fees, there is bound to be trouble which could easily have been avoided had the matter been thoroughly discussed and a budget made in the beginning.
THERE are, of course, clients who with a mistaken trader instinct, or through lack of confidence in architects in general, deliberately understate the amount to be spent. In cases of this kind a showdown at the beginning is particularly important. If such a client is shown studies of a house which is perhaps smaller than he had visioned and the architect sticks to his guns and tells him that if the size is increased the cost will increase also, the real appropriation is apt to come to light. When I find a client of this trader type, I usually, unknown to him, get a lot of fun out of the situation. He seems to feel that, by describing a $\$ 40,000$ house and telling you that he can only spend $\$ 30,000$, you will be enabled to perform miracles for him. When with a great deal of tact you have convinced him that you can't pull rabbits out of a silk hat and that he will get only what he pays for, he usually raises the ante.
In discussing the making of a budget, I think it is

## THE IRVING TRUST COMPANY BUILDING

At One Wall Street, New York City, is rising this magnificent 50 -story structure. Carnegie Beams were chosen for its structural steel framework. Naturally we are proud to add this beautiful building to the imposing list of structures in which these beams have been incorporated since their introduction in 1927.

Literature on request

Voorhees, Gmelin E Walker, Architects H. G. Balcom, Structural Engineer Marc Eidlitz E Son, General Contractors American Bridge Company, Fabricators
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## Swish . . .Wall-Tex walls are sparkling clean



Architects, builders and decorators are more and more realizing the importance of Wall-Tex. For WallTex, a durable, attractive wall covering, corrects a most annoying interior decorating trouble, the difficulty of keeping walls spotlessly clean.
Walls, in time, are bound to become spotted and soiled. If they are covered with Wall-Tex the cleaning requires a damp cloth and a moment. This, plus the fact that Wall-Tex will never crack, peel or discolor, assures fresh, clean walls ten years after hanging.

Recommend Wall-Tex as an ideal wall covering, as a base for paints and finishes, and as a strengthener for all cracked plaster. Those tiny cracks, which so often mar walls, may be completely and permanently hidden by an application of Wall-Tex. Costs no more than any very ordinary wall covering. Architects, builders and decorators should note their name and address in the margin of this page, and write for samples and complete information and name of nearest Wall-Tex distributor.

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safe to say that the so-called contract cost is the most difficult amount to handle. From previous experiences, it is not difficult to list the miscellaneous items; in most cases these costs can be pretty accurately assumed in advance. In determining the construction cost, I have found that a unit cost per cublic foot does very well, but its use requires a great deal of discretion. Clients, however, have to be continually warned about the addition of details which tend to increase the cost of the building.
In considering any unit cost basis, the specification plays an all important part. By this I mean that there are not merely well built and poorly built houses, but many perfectly legitimate varieties in between. Most of us cannot afford the best make of automobile but, while admitting its superior qualities, have to content ourselves with one of the lower priced ones, and it seems to me that most of our country house clients are in a similar position.
$\bigvee$ ERY often a client cannot afford the best and sometimes it isn't advisable, even though he has the means. It may be that the cost should be limited because of resale conditions, but there are of course many other factors. Even though a simple specification is used, workmanship can still be good and I find many advantages in building up from the simple to the more elaborate, explaining to the client just what he fिs to get.

Once the contract price is estimated, the budget is not hard to complete. If a mortgage is necessary, the amount can be assumed and an allowance made for the cost of financing. The cost of screens and weatherstrips, the decorating, the amount to be expended on the grounds, the architect's fees and other such items can either be definitely determined from previous experience or a reasonable allowance can be made. I always make an allowance for extras, explaining to the client that while the house will be completed with no additions to the contract price, nevertheless he may decide to make minor additions as the work progresses.

PERHAPS an extra closet may be added in the attic or a space partitioned off in the cellar, or he may decide to have his library panelled. In discussing items of this kind, I try to impress on the client's mind that such changes usually are more expensive, not because of any attempt on the part of the contractor to take advantage of him, but because they usually delay the work and often involve the actual tearing out of something that has been finished. Few clients realize that the builder and his subcontractors may spend a great deal of time preparing an estimate on a twenty-five dollar item, and that when the architect's fee is increased twenty dollars by another item there may actually have been spent several times that amount in telephoning, letter writing and general wear and tear on the nervous system.

The design of small houses is certainly fascinating, if not always profitable to the architect. The client has every right to expect not only a skillful interpretation of his requirements, but also a business-like and efficient handling of the financial side of the transaction. Occasional failure of architects to give sufficient thought to the latter phase has worked untold harm to the profession. I believe it is the chief reason why speculative builders can sell houses costing as much as $\$ 100,000$.

## DLASTERED THROUGHOUT <br> with <br> BEST BROS. KEENE'S

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Architects, Young \& Myers. Gen. Contractors, Bartleson \& Ness. Plastering Contractors, Wilson \& Long

# New Catalogs 

## Covering What Manufacturers Have to Say About

the Advantages and Uses of Their Products

Story of American Walnut
This is the seventh edition of a booklet published by the American Walnut Manufacturers' Association, Chicago, Ill. It illustrates walnut furniture of various periods, paneling, interiors, etc. Tells how to identify the wood. Contains a chronological table showing the order of styles from the beginning of the Renaissance to the nineteenth century.

## Greenhouse of Quality

Sixty-two page illustrated booklet of the William H. Lutton Company, Jersey City, N. J. It describes and illustrates a number of greenhouses built by this concern with particular reference to private estates. Sections showing the standard sizes in which the greenhouses are given are illustrated, together with points to consider when planning a greenhouse.

Radio Convenience Outlets
For use in homes, hotels etc., described in a booklet of the Yaxley Manufacturing Co., Chicago, Ill. Explains how radio outlets can be plugged in anywhere, gives pictures of buildings in which these conveniences have been installed, gives illustrations of bits of equipment, and shows wiring diagrams.

Architectural Faience
Booklet of the Flint Faience \& Tile Company, Flint, Mich., containing illustrations in colors of these tiles available in some 150 plain colors, and also in tiles which individually have several colors. Contains pictures of interiors showing the use of tile.

## Garcy Store Reflectors

Catalog of Garden City Plating \& Mfg . Co., Chicago, I11., illustrating and describing reflectors for store windows, show cases, desks, etc. Gives wiring plans and fixtures necessary. Also signs with reflectors. A. I. A. file No. 31 f1 and f 2 .

## Patina Glazes of Batchelder

 TilesBooklet with various tile designs in colors, particularly for bath room use. Illustration of different types of bathroom wall fixtures, figured borders, figure tiles, etc. Also sketches of bath rooms. A. I. A. file No. 23a.

Donley Book of Successful Fireplaces
Sixth edition of a sixty-page book on fire-places, their design and construction. Contains over one hundred designs covering fireplaces for the living room, dining room, bed room, basement, porch, public buildings, summer cottages and cabins, using various types of materials.

A section is devoted to the actual building of a fireplace, giving detailed drawings and a table of dimensions so presented that an architect knowing the size of the finished opening can tell the dimensions of any detail in the fireplace construction. A section is also devoted to fireplace equipment, also cause of smoky fireplaces and how to cure them. Two pages of cartoons on what not to do.

## Cork Insulation for Roofs

Bulletin issued by L. Mundet \& Son, Inc., New York City, giving specifications for Mundet Jointite Cork board over wood deck construction, over concrete, and over steel roof decks. Also explains advantages of cork as a roof insulating material. A. I. A. file No. 37 b 4 .

## The Artistic Bridge Reward

The bridge which won the 1928 award of the American Institute of Steel Construction, New York, is illustrated and described in a booklet issued by that organization. Detail photographs are plentiful, together with the reasons for the decision of the judges.

## Welded Steel Arch ConstrucTION

Illustrated and described in a booklet of the Arch Construction Co., Inc., New Orleans, La. Many interiors in which welded steel arches are used are shown, also detail drawings. Unusually interesting as descriptive of a little known and new type of construction.

## Wet Cellars Made Dry

Bulletin of United States Department of Agriculture, Washington, D. C., called Farmers' Bulletin No. 1572-F and titled "Making Cellars Dry." Tells how to avoid wetness and dampness, both in new and old houses. No charge.

Disappearing Door Wardrobes
New catalog No. A 53 of the RichardsWilcox Co., Aurora, Ill., illustrating and describing their disappearing door wardrobes. Some illustrations in color. Plans suggesting use of these wardrobes. Specifications.

The Mastbaum Theatre
Booklet of the Frank Adam Electric Co., St. Louis, Mo., describing the electrical equipment of the Mastbaum Theatre in Philadelphia, Pa. Illustrated. A. I. A. file No. 31 d 22.

Pneumatic Tubes for Hospitals Blueprint sheet showing use of pneumatic tubes for message purposes in hospitals, issued by G \& G Atlas Systems, Inc., New York City, similar to the installations used in department stores.

Lutton Greenhouse Specifications
Descriptive specifications for a Lutton solar V-bar greenhouse and also typical details of an $18 \times 33 \mathrm{ft}$. greenhouse and a $25 \times 33 \mathrm{ft}$. greenhouse are given in an illustrated booklet of William H. Lutton Company, Jersey City, N. J. Discusses framework, hardware, ventilation, glass, etc. Illustrated by pictures and detail dimensioned drawings.

## Kayline Lighting

Catalog of the Kayline Company, Cleveland, Ohio, illustrating and describing the various types of ceiling and wall fixtures manufactured by it, particularly with regard to commercial structures. Shows how to locate outlets and determine the amount of illumination required. A.I.A. file No. 31-F-23.

## Summer Cottages by Essco

A sixteen-page booklet illustrating summer cottages published by the Exchange Sawmills Sales Co., Kansas City, Mo. No text. Designs and sketches are by Harry L. Wagner, president of the Kansas City Architectural League, and show plans, perspective sketches, and architectural details.

## Modern Interiors

A booklet issued by the Murphy Varnish Company, Newark, N. J., describing the modern interior. There is interesting text to supplement well chosen interior subjects of various types such as boudoirs, dining rooms, studios, bedrooms, etc., together with pictures of modernistic furniture.

## Specification Data on Iron

## Roofdecks

An illustrated booklet issued by the Truscon Steel Company, Youngstown, Ohio, giving erection data and specifications for Truscon Ferrobord Armco Ingot Iron Roofdeck." Contains progress photographs of erection with detailed description explaining the various steps.

Standard Steel
Partition Details
A booklet issued by the Dahlstrom Metallic Door Company giving dimensioned drawings of the steel partitions and doors manufactured by this firm. Contains typical partitions layouts, wardrobe and lavatory enclosures, etc. Contains specifications of the partitions.

## Arco Texture Finish

A folder of the Arco Company, Cleveland, Ohio, illustrating various textures of this oil plastic paint. Gives specifications. Tells the advantages of the product.
(Continued on page 98)

## Perfect Drawing Pencils Give Wings To Your Work

## Venus

 The perfect drawing pencil
thin-lead colored pencils

Evevss Especially for field sketches where a more bulky color medium is inconvenient, UNIQUE thin-lead Colored Pencils are a joy to work with. You take along a complete palette of colors when you slip a box of UNIQUE Pencils into a coat pocket.
Vexus $\Rightarrow$ UNIQUE Pencils have leads as thin and strong as Venus grade $B$ black-lead pencils-firm enough to resist breaking and to hold a needle-sharp point; soft enough to respond perfectly to the varying pressures of the sketcher's hand.

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All primary shades and colors
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Anvis A draftsman's pencil should be so good that he is unconscious of it while he works.

That is a high ideal for a pencil, but the VENUS lives up to it.
Venus VENUS pencils just glide on any paper, due to the matchless smoothness of VENUS leads.

Venus VENUS pencils have the strongest lead of any pencils in the world.
$\Rightarrow$ VENUS pencils not only set the standard for grading, but are themselves unvaryingly true to their grades.

17 shades of black, 3 indelible
Send \$1.00 for sample box of a dozen assorted styles

AMERICAN PENCIL CO., 506 Venus Bldg., Hoboken, N. J.

[^0]
## Marquette Super Cement Concrete

A booklet of the Marquette Cement Manufacturing Co., Chicago, Ill., giving recommended construction practice for stucco, preventing joint leakage in either old or new work, waterproofing of old or new basement floors and walls, new top courses on old base slabs, etc. Information is also given on various other details of concrete work, including colored concrete, together with pictures of buildings in which Marquette cement has been used. A. I. A. file no. 7.

## Wood Floors

A booklet prepared by the National Lumber Manufacturers Association, Washington, D. C., to meet the increasing demand for information on wood floors for interiors. Has many excellent detail illustrations and gives drawings showing manner of use. Tells how to make a good floor, discusses hardwood and softwood floors and the various species and sizes. Treats of finishing floors, wood floors on concrete, porch floors, and resurfacing old floors.

## Book of Vermont Marble

A forty-six page booklet describing and illustrating the manufacture of marble. (Third edition.) One section is devoted to estimating, and explains what requirements of the architect are likely to result in high cost. This section is extremely valuable. There are pictures of finished details as well as those of the quarry and shop workings. Published by Vermont Marble Co., Proctor, Vt.

## Underfeed Stokers

Catalog S-51 of the Brownell Co., Dayton, Ohio, describes and illustrates this company's underfeed stokers and gives their details of construction. Contains pictures of buildings in which the stokers have been used and steam pressure charts showing comparative efficiency of hand fired and stoker fired boilers. A. I. A. file no. $30-\mathrm{c}-1$.

## Monolithic Concrete Buildings

A forty-eight page booklet illustrating buildings of monolithic concrete construction erected on the Pacific Coast is published by the Portland Cement Association, Chicago, III. The text covers new styles in monoliths, basis for designs, treatment of exteriors, molded decorations, etc.

## Rubber Mastic Flooring

Specifications and information about Selbatex, a rubber mastic flooring manufactured by Selby, Battersby \& Co. Philadelphia, is contained in an illustrated folder. A. I. A. file no. 24-b-2.

## Desks and Office Suites

Catalog L of the Clemetsen Company, Chicago, I11., illustrating and describing their line of desks and office suites for banks, professional and business offices. This company also issues a sheet of illustrations in plan of office furniture to
scale, which can be used in laying out an office. It has recently published a beautiful de luxe brochure of its finest office furniture, entitled "Reproductions of a Clemco Desk," which shows sketches of offices in various periods and detail photographs of each piece of furniture

## Chicago Pumps

"What capacity house pumps, sump pumps, or sewage ejectors will I need?" is one of the questions answered in "Chicago Quality Centrifugal Pumps," a catalog of the Chicago Pump Company, Chicago, Ill. This catalog is full of valuable data, its various sections being divided by heavy colored paper. Contains 196 pages, and tells about the proper choice of a pump for every purpose. A. I. A. file no. 29-d-5.

## Federal Interlocking Tile and Glass Tile

Folder describing the roof tile and glass tile used in combination manufactured by the Federal Cement Tile Company, Chicago, Ill. Contains sections of details showing construction with this material. This company also issues a booklet entitled, "Examples of Theatres and Theatre Roofs Designed by Some of the Country's Leading Architects." Both publications are A. I. A. file no. 12-e-2.

Tests on Wrought Iron Pipe
The United States Bureau of Standards recently completed a test on the Byers new process for manufacturing wrought iron. Details are published in an article called "Comparative Properties of Wrought Iron Made by Hand Puddling and by the 'Ashton' process," reprinted from "Metals \& Alloys" by A. M. Byers Companv, Pittsburgh, Pa. A. I. A. file no. 29-b-2.

## L'Art Moderne, by Macbeth

Contains illustrations of interesting and unusual lighting fixtures made by the Macbeth-Evans Glass Co., Charleroi, Pa. Another interesting catalog by this company is, "Enclosing Globes for Commercial Lighting," which is catalog 202.

## Steel Industrial Doors

Details and specifications of Lupton steel industrial doors are giveng in a booklet issued by David Lupton's Sons Company, Philadelphia, Pa . Detail drawings are many and interesting. A. I. A. file no. 16 d 1 .

## Brownell Steel Heating Boilers

Catalog M65 and catalog S65 illustrate and describe the boilers made by the Brownell Company, Dayton, Ohio. Gives specifications of the various types and fuels. A. I. A. file no. 30-c-1.

## Automatic Electric Clocks

Bulletin No. 60 of the Standard Electric Time Company, Springfield, Mass., illustrating and describing this firm's two wire automatic resetting electric clock system. A. I. A. file no. 31-1-2.

Brasco Metal Store Fronts Catalog No. 33 of the Brasco Manufacturing Company, Chicago, Ill., describing and illustrating series 500 all-copper or all-bronze sash for store fronts. Illustrates and describes sash and gutter construction, head and side jamb construction, division bars and three-way bars, transom bar construction, adjustable transom bar moldings, etc. The company also issues a portfolio of full size details showing dimensions of wood work, recessing of backing strips, etc. A. I. A. file no. 26-b-1.

## Steel Windows

"Lupton Commercial Projected Windows" is the title of a twenty-four page booklet giving details and specifications of these windows, as manufactured by David Lupton's Sons Company, Philadelphia, Pa. These windows are essentially the same in construction as the company's pivoted windows, but are balanced to permit the ventilator to swing out at the bottom and remain open. The booklet reproduces full size section details as well as scaled drawings showing installation. A. I. A. file no. 16-e-1.

## Kalmantruss Joists

Tables giving the safe load for Kalmantrus Joists for various spans are contained in this booklet of the Kalman Steel Company, Chicago, which also gives their dimensions and various engineering data. Photographs showing the various steps of construction are included, as is also information concerning accessories such as floor lath clips, bridging anchors, etc. Specifications are given. A. I. A. file no. 13 .

Antenna Systems for
Multiple Receivers
Issued by the Radio-Victor Corporation of America, New York. It describes the company's systems of centralized radio, the equipment itself and the method of installation for apartment houses, hospitals, hotels, schools, etc. A. I. A. file no. 31-i-6.

## House Comfort That Pays FOR Itself

An illustrated booklet of the Wood Conversion Company, Cloquet, Minn., describing Balsam-Wool, a blanket insulation. Gives data on the value of insulation and why it will save from $20 \%$ to $40 \%$ on fuel bills. Shows manner of application.

## Automatic Gas Fired Boilers

Automatic gas fired high pressure boilers made by the Steam and Combustion Company, Chicago, Ill., are illustrated and described in a folder issued by this company.

Battledeck Floor Construction
This is a technical bulletin issued by the American Institute of Steel Construction, New York City. The bulletin describes a floor made of steel plates welded to I-beams. Load tables are given, figured for both web shear or flexure.


Mechanical Ensineers: Mayer \& Valentine, Cleveland, Ohio
Heating Contractor: A.S. Garvey, Erie, Pennsylvania

## "Known by the Company it Keeps"

The beautiful and dignified new $S_{\text {trong - Vincent }}$ High School to be built in Erie, Pennsylvania, is typical of the fine new school buildings that are ventilated and to be ventilated with the . .

## 900 SERIES BUCKEYE HEATOVENT

the heating and ventilating unit that performs its full heating duty in sub-zero weather without cold drafts, and yet does not overheat in mild weather. The 900 Series Buckeye Heatovent represents a distinct achievement in the field of unit heating and ventilating.

## WRite for Bulletin 124



> Main Office \& Factory

The 900 Series unit is designed for automatic control through any approved standard automatic temperature control system. It projects only $91 / 2$ inches into the aisle and is only 34 inches high. Time tested Buckeye and is only 34 inches high. Time tested Buckeye
$\mathrm{M}_{\text {ultiblade Fans impel fresh air through the Buckeye }}$ Sectional Copper Tube Radiator and diffuse it throughout each room without draft.
A pictorial bulletin, including cross section views, instal-
lation details, capacity tables and dimensions as well as
A pictorial bulletin, including cross section views, instal-
lation details, capacity tables and dimensions as well as a complete word description of design, installation, opera-
tion and results is ready for distribution. Write for a complete word description of design, installation, opera-
tion and results is ready for distribution. Write for your copy.

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| BOSTON | DALLAS : | HARRISBURG | LOS ANGELES | PHILADELPHIA | SALT LAKE CITY | TOLEDO | OFFICE |
| BUFFALO | DENVER | HEMPSTEAD, L.I. | MILWAUKEE | PITTSBURGH | NEW YORK CITY | YOUNGSTOWN | TORONTO |

munities will arise. Real estate values follow the flux of population and one has but to watch any airport today to become convinced that the airplane is the greatest of our modern popular interests.

Our future cities will spread out over great areas like monstrous eagles. One hundred years from today we shall have no batteries of skyscrapers to point out to our trans-atlantic visitors. On the contrary, our future cities, because of the aerial age, will be flat-topped, and two out of every three buildings will serve as some kind of landing area for a super-auto gyroplane or a transcontinental air express. What towers there are will be built at a great distance from the airports and will serve as mooring masts for giant dirigibles. The architects of our future aerial cities may have to go back to places like Constantinople and Fez for their inspiration of these future flat-topped aerial cities, where one finds a low horizontal character to the entire city, occasionally vertically broken here and there by a praying tower or minaret.

It is not unreasonable to visualize the appearance of the United States, seen from the air, as an enormous checkerboard. Such a checkerboard finds its counterpart in a plan whereby landing fields will appear every ten miles in favorable country. Such a plan has already been discussed in aeronautic circles. Offhand this seems to be a stupendous waste of land. But it is insignificant compared to the land already occupied by the automobile highways and the railroads. The railroads and their stations alone occupy about 21,550 square miles in the United States. The sum total of these two major arteries of transportation occupy more than 50,000 square miles. Landing fields of normal size placed at intervals of 10 miles throughout the United States in


Cross-section showing underground control with field glass and periscope vision to observe all movement on the landing field and provide for the proper traffic control
territory applicable to commercial flying would require no more than 1,544 square miles.

In New York State alone, if airports were established on a checkerboard plan every ten miles, there would be 560 fields. Thus, a plane flying practically anywhere above New York State, at an altitude of four or five thousand feet, would never be out of safe gliding distance from an airport.

The plan recently made public by the Regional Plan Committee of New York recommends forty-six landing fields within the metropolitan area. Space has already been selected for these fields to take care of the aviation development that will take place in New York within the next thirtyfive years. New York City, in 1965, according to the Regional Plan Committee, will have a population of about $20,000,000$. Its present systems of transportation will seem puny.

$A^{1}$IRSHIPS, such as that of Claude Dornier which carries 169 passengers or those proposed by the Imperial Airways, Ltd., of England, with a forty-passenger capacity between Africa and England, are certain to have a strong bearing on changes that will come in the next fifty years in our architecture and domestic life. People will want their roof tops beautifully designed. Today it is the front of the house that is given attention. But when you are well up in the air and looking down you do not see the front of a house-you see only roof tops.

Another phase of the air age is the new perspective of the effect of sunlight on the tree tops and foliage. We have been accustomed to seeing nature illuminated by the sun at an angle of 45 degrees. But now with the view of the sun striking the landscape directly from


Cross-section of an airport of the future, with all buildings underground so that planes have an unobstructed landing field. Entrance is by ramps through trap doors

## Just Off the Press!

Write for your copies of these interesting booklets on Economy Non-Clogging Pumps for drainage and process work.

ALMOST every engineer is called upon at some time to select pumps for handling liquids containing a large percentage of solids. The development of the Non-Clogging Pump has been one of the most sensational recent advances in the pump manufacturing industry. In this field, as in others, Economy is


Two Illustrated Booklets of NON-CLOGGING Sewage Pumps and Model Sewage Lift Stations.

Economy Pumps include all standard types-also specially designed pumps to meet any condition. Send coupon below for further information.
pioneering in design and efficiency. Rags, coarse refuse and stringy materials that might well choke the average pump slide through the new Economy Pump's water passages with perfect ease. The descriptive bulletins shown above contain specific data that you will find useful in solving your problem.


House in Sleepy Hollow Manor, new development at North Tarrytown, New York. Architects, Farrar of Watmough; Builders, Henry Mandell Associates. Insulated with Cabot's Quilt.

## Built-in Comfort

This is one of the many beautiful new houses in Sleepy Hollow Manor, where year round comfort is built in. Walls and roof are insulated with Cabot's Quilt to keep it warm in winter and cool in summer.
Cabot's Quilt is quickly and easily installed, pays for itself in initial cost by reducing the size of heating plants, and assures lasting comfort for your client.

> Be sure to specify

## Cabot's Quilt

Send in the coupon below for full information

above, as seen from an airship, the color effects become increasingly more brilliant and more gorgeous.

There will be underground airports, as predicted by Harvey Wiley Corbett. These airports may take a conical shape-with the hangars, waiting rooms, rail and motor terminals, and all approaches underground. With a scheme of this kind, a plane landing at such a port will have no landing obstacles of any kind. By placing all hangars in the center of this future underground airport, planes will be able to land and take off in the same direction at the same time, without any danger of accident. Planes entering or leaving this airport will pass through trap-doors in the field. The trapdoors will be connected by ramps to the underground facilities in a manner not dissimilar to the layout of the Grand Central Terminal, New York City.

0UR future airports themselves will take on the appearance and size of our largest railroad terminals, but naturally these will be planned to meet the requirements of this new architectural and engineering problem. Perhaps entirely new methods of construction will develop as the result of necessity. Spans of enormous size may become realities. It was recently reported that an engineer is developing a clear span one quarter of a mile wide, based on the underlying principle of the suspension bridge.

What the future holds by way of development in this field seems to be unlimited, and I believe that we shall live to see a complete revolution in architectural design and construction to meet these new demands, to solve these new problems. And perhaps, out of it all, will come a new renaissance in architecture-a renaissance of the twentieth century, simple, honest, and beautiful, which will reflect the day and age in which we are living.

## Le Brun Scholarship Award

THE Le Brun Travelling Scholarship competition for 1930, under the trusteeship of the New York Chapter of the American Institute of Architects, has been announced. The program will be issued about January 15 calling for drawings to be delivered about March 15. 1930. Those desiring to compete should arrange for nomination by a member of the American Institute of Architects, blanks being obtainable from the secretary of any chapter of the A. I. A. Nominations should be received by the Le Brun Scholarship Committee, Room 530, 101 Park Avenue, New York, before January 15. The scholarship allows fourteen hundred dollars to pay for a trip abroad, the trip to be of not less than six months' duration.

## Advertising Association Passes Survey Resolution

OUTDOOR advertising, commonly known as billboards, will cooperate more closely with civic improvement projects in suburban and rural districts, according to a resolution passed at the recent convention of the Outdoor Advertising Association of America. Inc. The resolution called upon the United States Department of Commerce to undertake a survey outlining the manner in which advertising companies should proceed in suburban communities.

立. serve you during the past year - how good to know you and do business with you. "Again the Yuletide, with its inspirations of good cheer is almost with us the New Year approaches - and we sincerely extend to

you our best wishes for a very
 HAPPY, PROSPEROUS NINETEEN THIRTY

## American Steel \& Wire Company

$\triangle$ SUBSIDIARY UNITED STATES STEEL CORPORATION

208 S. La Salle Street, Chicago
Dallas Oklahoma City

The historic Charleston Museum, which houses the oldest natural history collection in America, now rests on an underpinning and foundation of "INCOR" Brand Perfected High-Early-Strength Portland Cement.


## 75\% Saving in Forms effected with "INCOR" Brand Portland Cement in new foundation work for Charleston Museum

THE thirty-year old Charleston, S. C. Museum of Natural History is built over the site of an old creek bottom. The building originally rested on timber sills supported on wood piles. After thirty years, however, it was found necessary to remove the wood sills, cut the piles, and place new underpinning and foundations of concrete under 900 linear feet of wall. "INCOR" Brand Perfected High-Early-Strength Portland Cement was used.
By using "INCOR" the contractor not only completed the job two weeks sooner, but did so with a
saving of $75 \%$ in the forms that would have been required had ordinary Portland cement been used. The saving in forms alone more than offset the additional cost of "INCOR".
"INCOR" Brand combines the outstanding quality and uniformity of LONE STAR Cement, with the added advantage that "INCOR" produces concrete ready to use in 24 hours.

Specify LONE STAR Cement for all work where time is not the principal factor. Whenever time is important, specify "INCOR"*.

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One of the world's largest cement producers-13 mills ...total annual capacity 21,000,000 bbls.

The Bridge...Rochester, New York
Old Timers...Lexington, Mo.

TWO
SKETCHES

By
A. V. DeFondt


# The RADIO and theTALKIES Bring New Acoustical Problems Solve them with, INSULITE acoustile 

DON'T blame the architect if, when trying to enjoy a "Talkie," your eardrums are abused. The movie theaters of yesterday were never designed from the acoustical standpoint . . . no one ever dreamed that some day speech amplifiers would be installed.

In the movie theater of today acoustical correction is essential. Insulite Acoustile has solved the problem, and proved more efficient than other forms of material now available.

Insulite Acoustile has a very high and uniform sound absorbing coefficient. Its rigidity-light weight-attractive cream color-rich looking burlap texture-convenient sizes and low cost of application and upkeep make Insulite Acoustile the ideal acoustical correction material either for new or old theaters and auditoriums.

In the radio world too, Insulite Acoustile is the recognized acoustical material. All over the country it is being used in radio broadcasting studios, radio cabinets and for dynamic floor screen radio speakers. In fact, Insulite Acoustile is a superior material in all places requiring acoustical treatment.

Our Engineering Department will be glad to co-operate with architects and engineers in solving acoustical problems. May we send you our booklet-"Facts You Should Know About Acoustics." Ask for A. I. A. File No. 39.


ATTRACTIVE DESIGNS ARE POSSIBLE

INSULITE Acoustile can be secured in any size up to $24 \times 24$. beveled on all four edges. These many and various sizes and shapes may be arranged in an endless variety of attractive patterns. Acoustile can be artistically decorated by using either water or alcohol stains.

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This new small job unit is a low cost, high quality dis-
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## Why Speculative Sketches Should Not Be Submitted (Continued from page 45)

 his own sketches and therefore considers that they cost him nothing would hardly give a similar amount of his time and effort for nothing if he were temporarily employed by another architect on a profit-paying job. "Time" is the architect's only stock in trade. If he gives time to making sketches, he should charge himself just as much for it as he would if he were spending it on work for which he expected payment.WHEN a busy office makes speculative sketches, time is taken from income-producing work to gamble on prospective work. On the one hand, there is a client paying for service while on the other hand, a prospective client is receiving service for nothing. Not only is the cost, per hour, to the architect, the same in both instances but a situation is created which is not only unfair to the paying client as well as to the architect, but which is an economic fallacy.
Why are competitive speculative sketches valueless?
They are valueless to the prospective client because, first, they are not based upon a thoroughly and definitely decided-upon schedule of requirements for the building; secondly, because no two of the competitors have been given a definite cubic foot cost, or cubic foot content to work to, hence there is no assurance that the building illustrated can be built for the expected cost; thirdly, because the skillfully executed draughtsmanship and coloring is no insurance of equally skillful supervision of work or handling of the owner's funds. Many a skillful draughtsman has no knowledge of, or ability for, the practical or business side of architecture.

Competitive speculative sketches are valueless to the architect because:
First, there is no assurance that the author of the sketch displaying the greatest ability will be selected, indeed, there is no assurance that any of the competitors will be awarded the commission;

Second, because the architect offering the cleverest sketch may be the least competent to perform the work;

Third, because the building illustrated by the winning sketch may be one which could never be built for the intended cost ;

Fourth, because the selection of the winner may be influenced by other considerations (and usually is).
${ }^{\mathrm{S}}$ there any difference in fundamental principle between sketches made to sell merchandise (such as furniture), and those made to sell architecture?
Yes, a great difference; furniture is merchandise and the sketch shows the article which is being sold, whereas the architect is offering ability and service, and is not selling the building but the ability and service which are required to bring about its completion.
The writer has tried out the use of speculative sketches as an assistance to selling and has tried out selling without the aid of sketches, with the result that he no longer spends the time, money or thought on making sketches. In one year over $\$ 3,000.00$ was spent in his office on fruitless sketches. In one instance eight competing architects spent upwards of from $\$ 500.00$ to $\$ 1,000.00$ each, or a grand total of at least $\$ 6,000.00$ on elaborate sets of sketches for a $\$ 300,000.00$ project, the entire com-

## "Selling On Sight"

## with

## Dzes Store fronts



Desco Store Fronts installed in Cadillac-La Salle Showroom, Jersey City, N. J. Chas. G. Eicholz, Jr., Architect. James Billington ©o Sons, Inc., Builders

MODERN merchandise is made to sell, when possible, on sight. Hence the added importance of attractive, compelling window displays. This explains the increased popularity of Desco Store Fronts, whose sturdy elegance increases the "pulling power" of handsome display windows, to the profit of owners and tenants. In addition, Desco Store Front construction protects the glass against abnormal wind pressure. Made in a wide variety of finishes, they harmonize with any architectural style. Write for further information.

For full architectural details see Sweet's Catalog. Write us for complete working data and price list. Remember, too, wherever you are there is a distributor near you. We also carry a complete line of "Desco" construction material in our New York City warehouse.

DETROIT SHOW CASE CO.

New York Office and Warehouse-344-346 East 32nd Street
Pacific Coast Office-450 Skinner Bldg., Seattle, Washington

## RESIST



DRILL


EXPLOSIVES

> Drill and Explosives and Cutting Flame by

\{Cross section, partially exposed skeleton)

## Building Your Vault with STEELCRETE

## A Triply-protected Specification!

Chief among the many reasons why consulting architects for Federal Reserve and Commercial banks are specifying Steelcrete Vaults is the utmost protection which this modern construction offers against attack of all kinds.

One of the best appreciated features of Steelcrete Construction is its moderate cost. It brings within the reach of the smallest country banker the same 3 Point Protection which protects the gigantic assets of the Federal Reserve Bank of New York. Any building contractor can erect a Steelcrete Vault. And our entire Engineering and Designing Staff is always ready to work with architects when special requirements come up.

You are invited to send for Certified Fndorsements from Bankers and Architects who thoroughly investigated various systems of vault design before selecting the Steelcrete System. Write to us today.

## Massive Strength

A Steelcrete Vault is erected by building up walls, roof and floor with layer upon layer of heavy Steelcrete units tied together with steel rods. Concrete is then poured through and around the entangled steel-forming a solid mass several times strongerthan usual Bank Vault walls.


The Consolidated Expanded Metal Companies Steelcrete Building, Wheeling, W est Virginia Boston Cleveland Philadelphia Pittsburgh Chicago New York Buffalo


[^1]mission for which would not exceed $\$ 15,000.00$ to $\$ 18,000.00$. It was finally awarded to an architect with a big reputation, a lot of excellent completed work, and the abiiity to prove to the prospective client that the type of building he thought he wanted was not at all the type best suited to the problem!

If all the money thus fruitlessly spent on speculative sketches in one year in the entire United States were pooled in a fund to provide national publicity for the architectural profession, none of us would have any need to go out and sell our services. We would be unable to handle the great volume of business which would walk into our offices.

## What Architects Are Talking About (Continued from page 53)

EDGAR V. SEELER, F. A. I. A., who designed many of Philadelphia's most notable buildings, died of heart disease on October 26. He was a graduate of the Massachusetts Institute of Technology and of the Ecole des Beaux Arts in Paris, where he won three silver medals in competitions. For several years he was assistant professor of architecture of the University of Pennsylvania.

THE following classic paragraph from specifications written by a large architectural firm is quoted by the Structural Steel Board of Trade, New York. "The intent of these specifications is to cover the complete steel work for the first operation and any work called for in the specifications and not shown on the drawings or vice versa shall be furnished the same as if it were shown on the drawings and called for in the specifications. Also any material which has been omitted from both drawings and specifications, but is

## Conventions and Expositions

Ianuary 18-30 International Exhibition of Building Trades and Allied Industries, Brussels, Belgium.
January 27-31 $\begin{aligned} & \text { International Heating and Ventilat- } \\ & \text { ing Exposition. Commercial Mu- }\end{aligned}$ seum, Philadelphia.
January 28-31 Anmual Meeting American Society of Heating and Ventilating Engineers, Philadelphia.
February Convention American Concrete Institute, New Orleans.
March - April International Exhibition of Housing and Modern Industrial Applied Arts, Nice, France.
March 31 - April 5 Twelfth Annual Home Show, Grand Central Palace, New York.
May 20 - October 1 Exhibition of Modern Industrial and Decorative Arts, Stockholm, Sweden.
May 21 - 23 American Institute of Architects, sixty-third convention, Mayflower Hotel, Washngton, D. C.
May 26-30 International Congress of Building and Public Works, London.

June $19-30$
September International Architects' Congress, Budapest, Hungary.



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evidently necessary for a complete building, shall be furnished the same as if it were shown on the drawings and called for in the specifications."
M OST of the preventable heat loss in the average house is through the roof, states the Wood Conversion Company, which compiled the following table showing the amount of heat passing through roof sections of various materials, expressed in B.T.U's.

|  | not insulated | TED |
| :---: | :---: | :---: |
| Wood Shingle Roof | . 304 | . 190 |
| Asphalt Shingle Roof | . 526 | . 258 |
| Slate Shingle Roof. | . 482 | 48 |
| Zinc Shingle Roof. | 564 | 267 |
| Copper Shingle Root | . 515 | . 256 |

THAT the Federal Government be petitioned to create in the Bureau of Standards a division to diagnose demolished buildings and that an expert investigation be made of the effect of the tall building on taxation, health and society are recommendations made by Charles N. Fitts of the New England Structural Company, in speaking before the recent convention of the American Institute of Steel Construction.

APLAN to conduct a competition to award certificates to the owner, architect, and builders concerned in the best building of any kind, built during the last few years in Minneapolis and its immediate vicinity, has been agreed on by Minneapolis members of the Minnesota Chapter of the American Institute of Architects. Roy Childs Jones is chairman of the committee in charge.

AGGRESSIVE campaigns to induce people to heat by gas are being carried on in the middle west by several gas companies. Newspapers, direct mail and outdoor advertising is being used extensively to bring the comforts and conveniences of gas heating to the attention of the public.

THE University of Illinois has published a bulletin called, "The Plaster-Model Method of Determining Stresses Applied to Curved Beams." It is illustrated, contains tables of tests, and sells for twenty cents. The authors are Fred B. Seely and Richard V. James.

AUTOMOBILE door handles used for door knobs in an apartment in the new Hotel Delmonico, New York, were used by Leo Simonson, interior decorator and designer of stage settings for the Theatre Guild. All of the important pieces of furniture used were built in as an integral part of the decoration.

THE maximum water pressure on the Boulder Dam will be approximately fifty per cent greater per square inch than the leading railroads set for their safety valve on their locomotive boiler," is a statement by Lee H. Miller, chief engineer of the American Institute of Steel Construction.

THE Twelfth Annual Home Show will be held in the Grand Central Palace, New York, March 31 to April 5. It will visualize a broader interpretation than heretofore of what constitutes a home, and include city apartments, suburban homes, and country estates.

THE Supporting Strength of Concrete-Incased Clay Pipe,, by W. J. Schlick, is the name of a bulletin recently issued by Iowa State College, giving the results of an investigation made in cooperation with the Clay Products Association.

## 5 gool reasons fior

## specifying <br> Calubra for interior walls

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BRADLEY BEACH, N. J.: La Reine.
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Write Now for this Interesting Johnson Book


## Dare One Criticise Architecture?

THE American public seems to be looking at the subject of architecture with an increasingly curious eye. Articles on it are finding their way into the more serious minded publications. Among these is "The New Republic," which has been printing a series of architectural criticisms by Lewis Mumford. In a recent issue, Mr. Mumford made the following remarks that are well worth serious consideration by those who feel that the architect and his client both owe an aesthetic debt to their city and to the general public.
"Among the receding glories of American civilization one will presently have to add, I fear, those gains in the construction of skyscrapers which were registered in The Shelton, the Barclay-Vesey Building, 2 Park Avenue and 1 Fifth Avenue. Between 1924 and 1928 it seemed that American architecture had at last emerged from its feeble, romantic, pseudo-historic posturing, and was creating something that, however, harsh and dehumanized, represented what was vital and effective in our civilization. The past year, alas! has been marked by a series of retreats, or one had better say atavisms.
"I have never expected very much from the American skyscraper, in view of the conditions under which it is produced; and these new buildings confirm my skepticism. Their owners and architects-it is hard to apportion the blame-have confounded height with importance, bulk with dignity, and flashy-feeble ornament with grace. The result is a species of architectural malapropery. They are not merely impoverished in thought: they lack an elementary acquaintance with grammar and syntax, and their vocabulary would be painful in its illiteracy if it were not so funny.
"Who or what is responsible for this backward step?
"I have no explanation, except the fatal absence of critical standards in our architecture, which has permitted the very best and the very worst examples to be smothered in the same praise. This in turn is related to our law of libel; for architects, unlike authors, are not used to a frank critical judgment on their works, and they have been so tetchy about one or two efforts in this direction that no professional journal dares print it, This fact explains, perhaps, why our poetry is on the whole so much better than our architecture, and why genuine poets have some little chance of being recognized whilst our most vigorous architects are forced again and again to give way to duffers who have not even the intelligence to employ competent designers and draughtsmen to eke out their own lack of talent.
"Something might be done to improve matters if a group of able architects would get together and pledge themselves to abstain from entering a libel suit against any honest criticism of their work. This might make any other architect think twice before taking advantage of the law to protect his professional position ; and it would put architecture alongside painting, sculpture. drama, and literature in general.
"Such an innovation would do more to set good architecture before the public than any amount of professional publicity; and it would be worth a dozen educational campaigns, for it would educate the architects themselves a little, as well as their clients!"

Note: The American Architect would like to hear from architects who have ideas upon this subject.
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## The President Who Counted the Second Cost

Number 11
of a series of historic structures, illustrating the varied ways in which American marble has contributed to the development of our national architecture. The fictures on this page, both of the Old Post Office and President Van Buren. are reminiscent of the styles of other days.

In 1839 when the Old Post Office was built in Washington there was much discussion in Congress as to what building material should predominate in the new Capitol. Even then the followers of L'Enfant were arguing for the city beautiful. In the case of the Post Office the choice of material was left to President Van Buren. He decreed that marble should be used, not because of its beauty and dignity, but because with marble there would be no painting, no cost of upkeep. He looked at it purely from the standpoint of economy.

Robert Mills who designed this old Post Office was the architect also of the Treasury Building, the Patent Office and the stately Washington Monument. He was the first native-born American architect to be regularly trained for the profession.

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