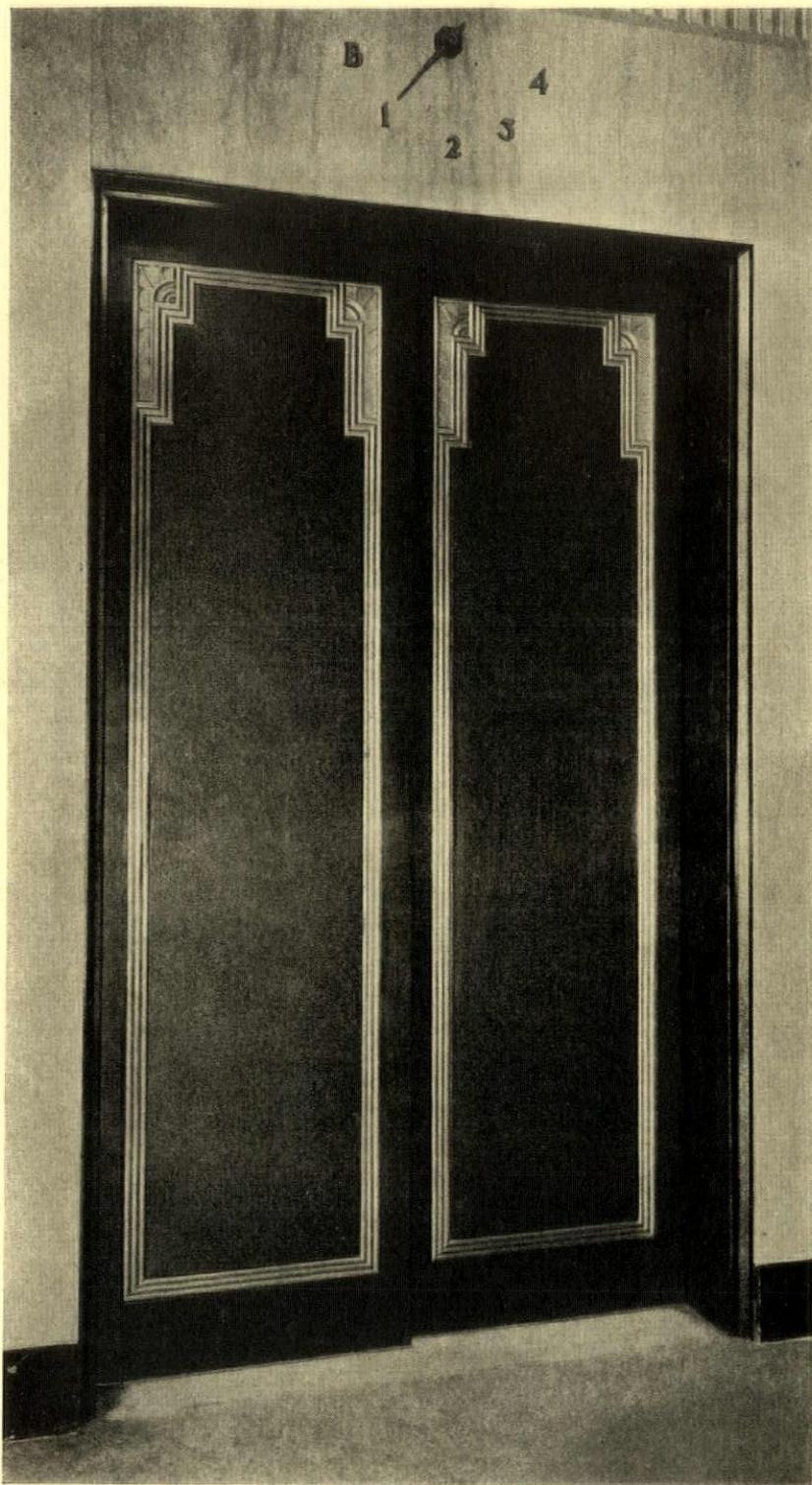




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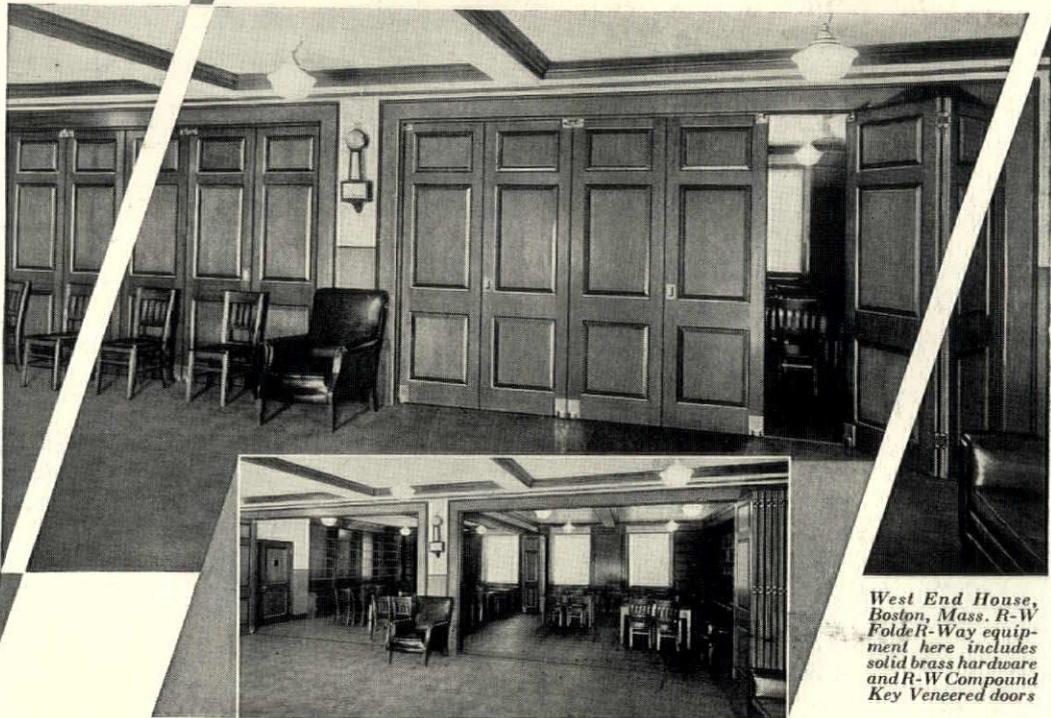
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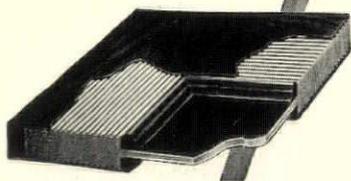
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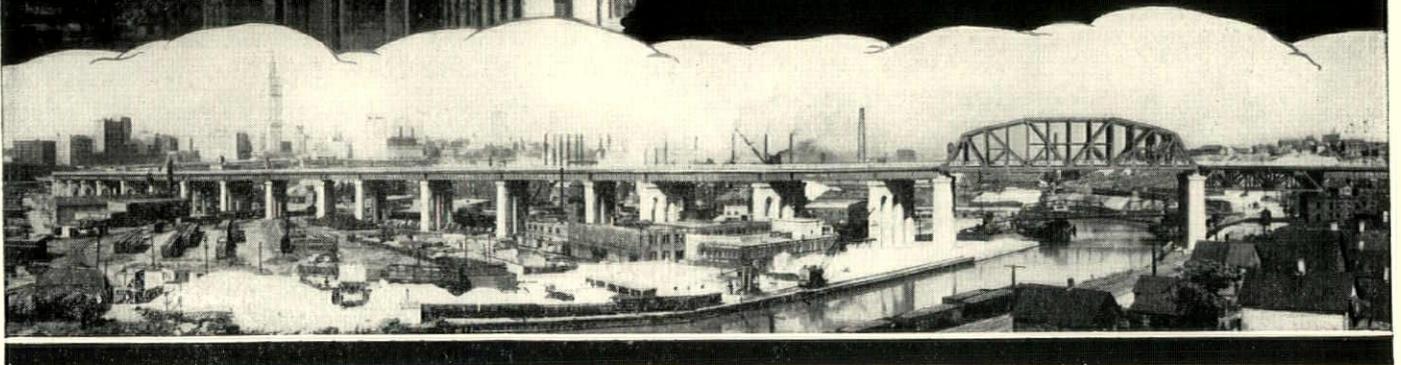
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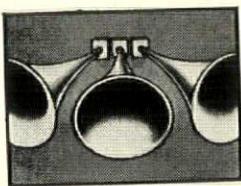
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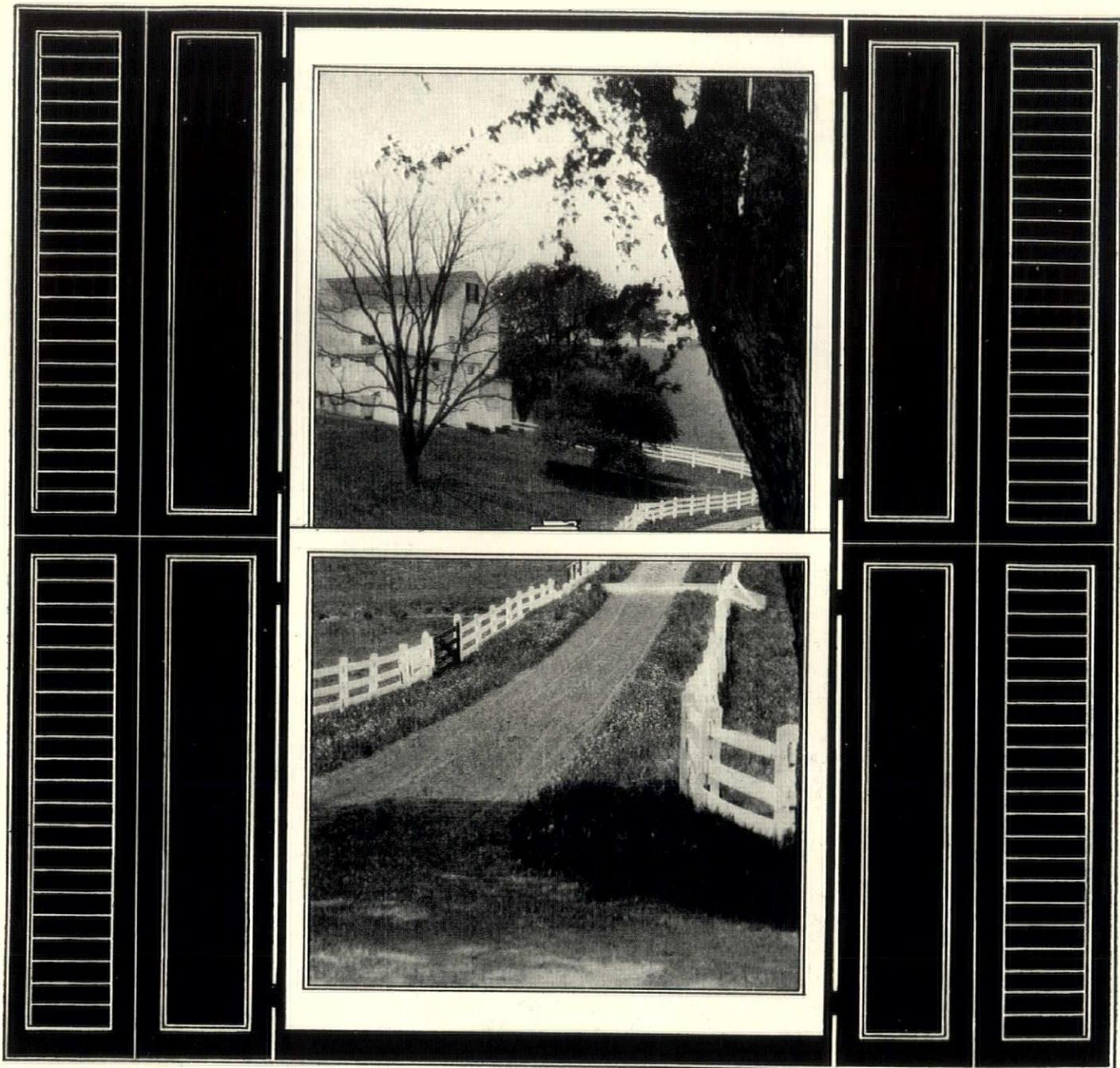
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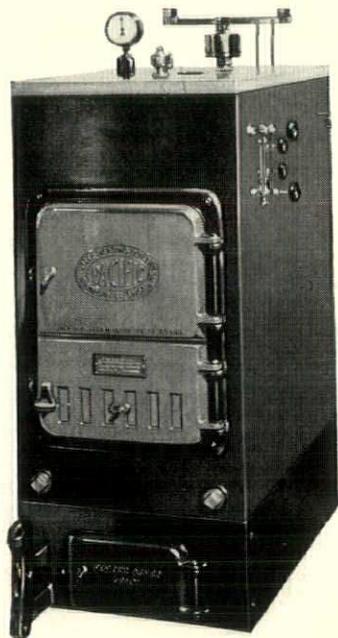


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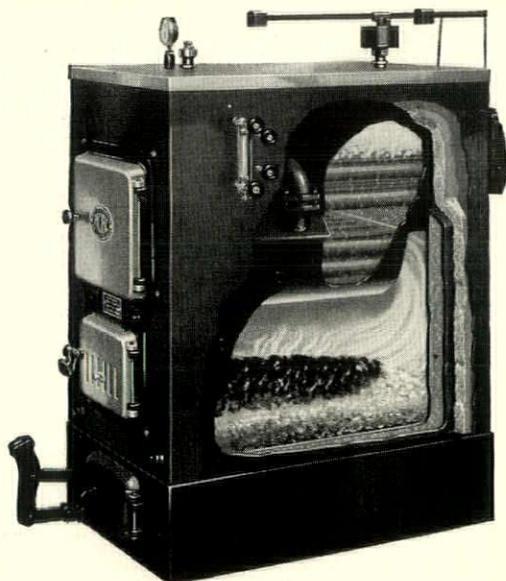
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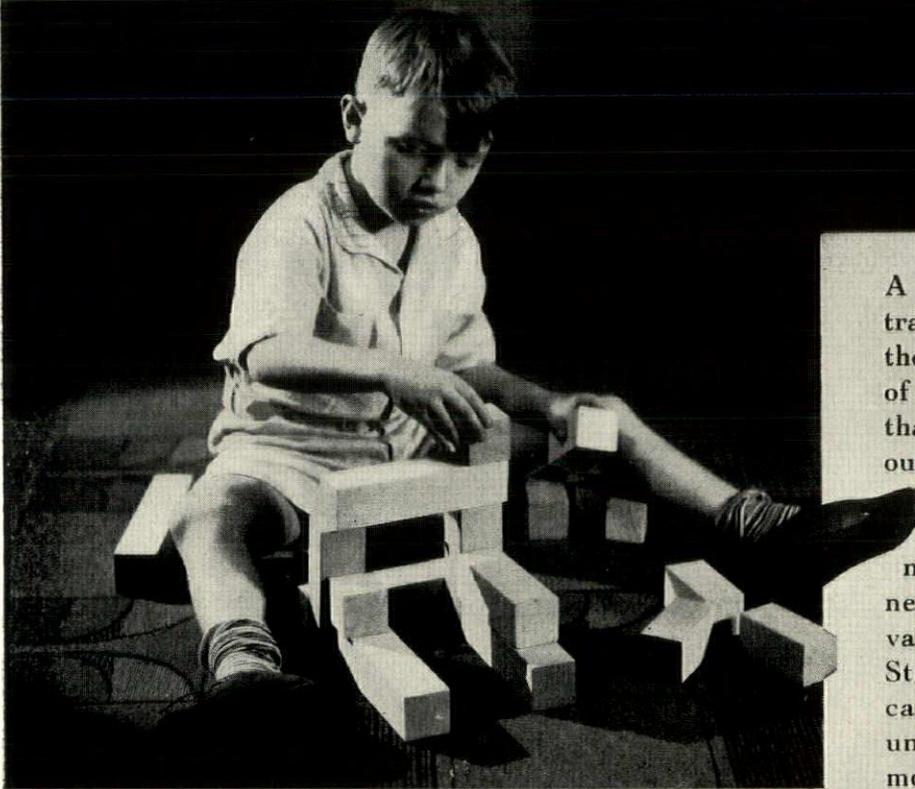
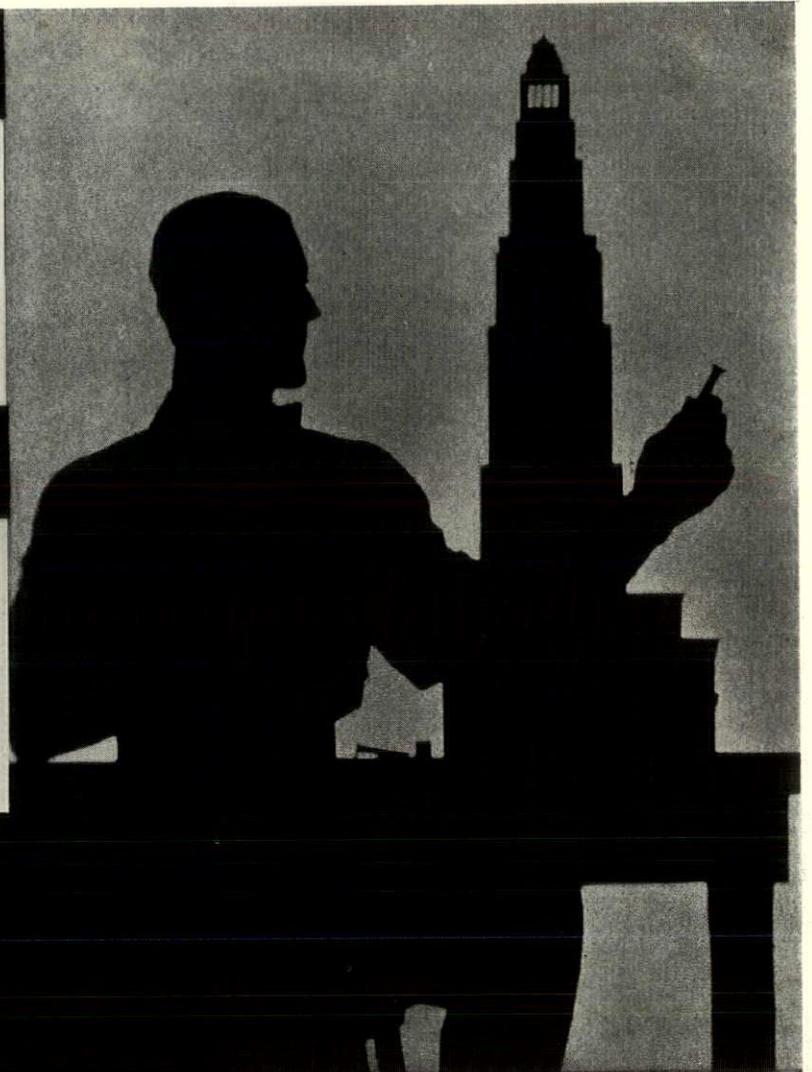
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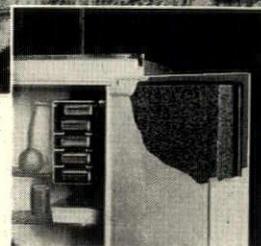
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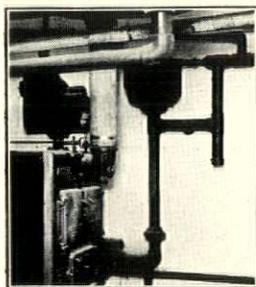
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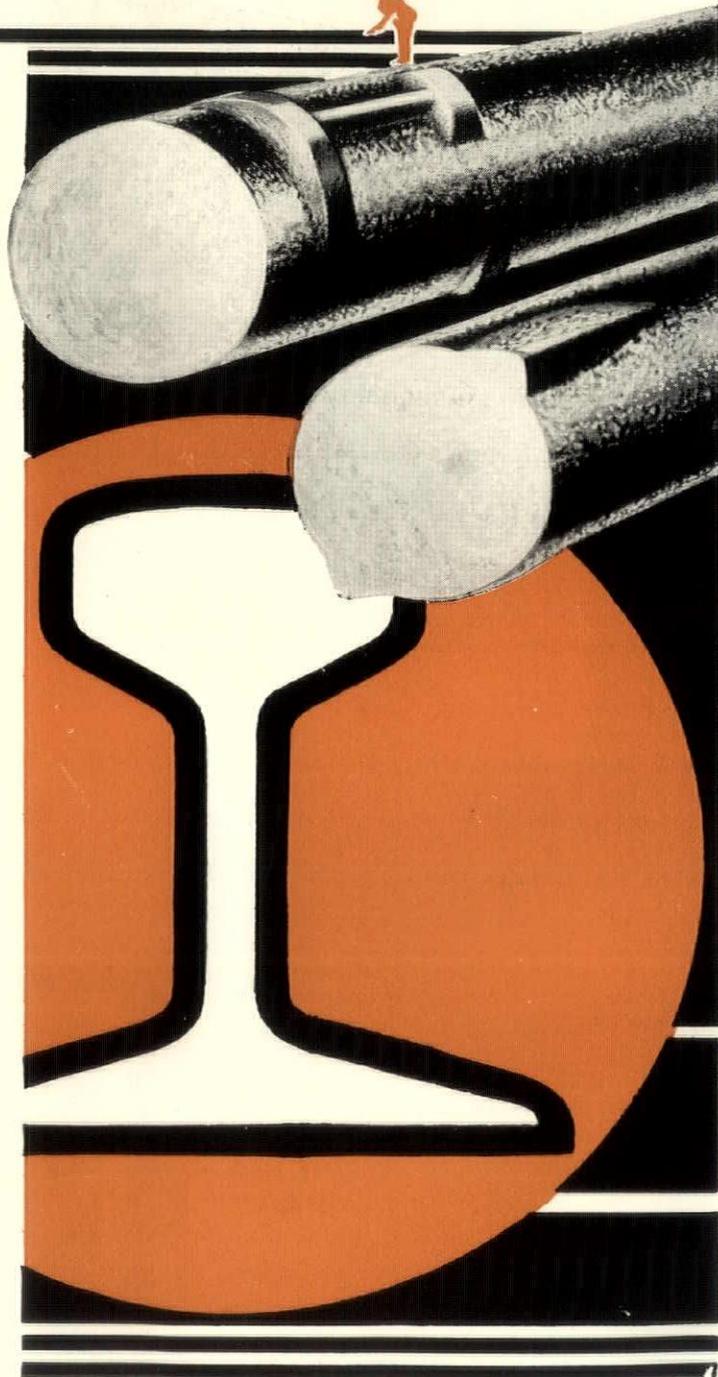
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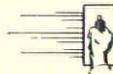
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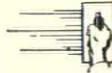


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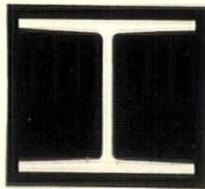
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The Cover

THE Chrysler Building is the subject of this month's cover and also of an article by Kenneth Murchison in this issue. Ernest Born, the artist for the cover, made his sketch from the east side of the building, taking his stand between First and Second Avenue on Forty-second St.

At the Forty-fifth Annual Exhibition of the Architectural League of New York, 1930, Mr. Born was awarded the Birch Long Memorial Prize for Rendering in consideration of his fine drawings, sound knowledge of composition and skill in presentation. He is a native of San Francisco and is at present connected with the architectural office of Gehron and Ross, New York City.

Next Month

ADVERTISING—The vice president of a leading advertising agency tells architects what they ought to know about advertising architecture.

SPECIFICATIONS—How the specification writer can make better buildings possible.

DEVON—A story of this lovely country in England and its quaint cottages.

ECONOMICS—An analysis of the money saved by good construction.

BENJAMIN FRANKLIN BETTS, A.I.A., *Editor*
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THE AMERICAN ARCHITECT, Published monthly by INTERNATIONAL PUBLICATIONS, INC.
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Acoustone Ceiling, Trust Department, Northern Trust Company, Chicago. Frost & Henderson, Chicago, Architects.

A Solution to the Difficult Problems in Architectural Acoustics

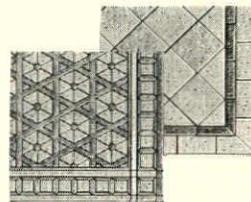
WHILE the problems in Architectural Acoustics have always been perplexing, the demand for comfortable noise levels has grown so rapidly that many architects realize, more than in the past, the need for an organization which can take full responsibility for the acoustical phases of its assignments.

Through the creation of many types of acoustical materials and methods of application and through the development of a competent staff of experts—as well as through the maintenance of skillful installation crews—the United States Gypsum Company has endeavored to make an exact science of what were once vague theories and unreliable opinions.

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A C O U S T O N E

IN THE LANGUAGE OF
The Man-in-the-Street

By BENJAMIN F. BETTS, A.I.A.

SAVING a client money may appear to be an incorrect approach to architecture. To the man who builds, however, it is of great importance. It is a factor that is of prime consideration to him. Every architect knows that the first question asked by the average client is, "What is it going to cost?" The client wants a good building and would like to save money. That is human nature, particularly in this age when there are so many other demands upon his pocket book.

Laymen may not understand beauty, scale, proportion, and what is good or bad architecture but they do understand good business and know when they have saved money. It is a language that few men do not understand. In talking to the layman it is decidedly important to use his own language and to seek his own point of view.

It is true that savings effected for the owner by the architect are not always apparent. But when concealed work requires repairs or replacement the owner is quick to realize that money was not saved in the right place.

ARCHITECTS are agents of owners and are intrusted with the expenditure of a large volume of money yearly. It is incumbent upon practitioners to advise their clients wisely in the expenditure of this money. Saving money for a client does not necessarily mean a reduction in first cost of the structure. For through the use of cheap materials and inferior workmanship the first cost can often be made ridiculously small. At times this method of saving money may be justified. In general it is poor economy, for the owner must eventually pay for good construction. There is no way to "beat the building game."

Saving money for a client is not commonly emphasized as a function of the architect. It is, nevertheless, one of his duties and one that can be used to impress the public with the value of architectural service. The public too long has viewed the fee paid an architect as an expense to be avoided if possible. This idea should and can be dispelled.

BECAUSE THE AMERICAN ARCHITECT believes in the weight attached to this question it has begun a movement to collect data from the personal experiences of architects. These experiences can be utilized where necessary to prove to prospective clients and others that architectural service is not an expense and that in many, many instances it has been an unforeseen economy. When this is thoroughly understood by the public, fewer buildings will be erected without the supervision of a capable architect.

S o o n t h e f o l l o w i n g p a g e s . . .

WHY It Pays to

8 cases that show how an
for a client and give

More House for Less Money

• A firm of architects retained by a southern sub-division development company recently had occasion to refuse an owner permission to build a small house due to its exterior design. The house had been designed by a contractor and was to be built for \$9,000. An architect redesigned the house; gave the owner larger bed rooms; greatly improved the exterior appearance of the house, and, with no decrease in the convenience of the plan, cut the cost to \$7,250.—Case No. 1.

Redesigning Saved \$2,000

• An owner of a property went to an architect with a set of plans for a small store building. The plans had been prepared by a contractor who had agreed to erect the building for \$7,000. The structural design of steel and wood framing was not economically arranged. The architect redesigned the framework of the building and the street facade of the store. The cost was reduced to \$5,750.—Case No. 2.

Architect Adds Space Without Cost

• A multi-story garage building required foundations to rock. Test borings showed rock at a depth that would give an extra storage floor below the curb level by removing all earth down to rock. The architect found that this floor could be added for the cost of excavating by hand the deep holes required for the columns alone. This same architect found that through care in detailing and studying conditions ten per cent of the estimated cost of a large office building could be saved without changing the design or materials of construction.

In designing a gymnasium building, the careful study of existing grades permitted an increased area being added to the building without increasing the cost of construction.—Case No. 3.

Saving Architect's Fee Cost \$10,000

• An architect located in Wisconsin was commissioned to remodel a church building. He was provided with a program and told to proceed without regard for the cost. Plans were completed and accepted by the building committee. The lowest bid received was \$21,400. The committee decided that it would complete at that time only as much of the remodeling as could be done for \$10,000.

At this point a member of the congregation produced a new sketch plan for altering the church and argued that his plan built by day labor would result in marked

In response to a request for personal experiences giving tangible evidence of the value of architectural service, thirty-nine cases have been received. Eight of these experiences are presented here.

More cases are desired, either of the same general character or others that demonstrate great variety of ways in which an architect safeguards owner's investment.

Facts only are desired. These should be stated as briefly as possible without loss of clarity. Names will not be published without written permission.

As soon as a sufficient number of convincing cases have been received they will be published in pamphlet form. The pamphlet will be made available to all architects for private distribution to prospective clients and others.

savings in the cost of the work. This member, with all his good intentions, carried the majority of the committee and they decided to follow his advice.

Before the work was completed difficulties in construction were encountered that the layman advisor had not foreseen. By the time the building had been put into usable condition the committee had obligated the congregation to \$22,700 and required \$8,000 more to make possible the completion of the work.

Had this building committee followed their architect's advice it would have saved about \$10,000 and would have, at the same time, secured the needed building with less effort.—Case No. 4.

Built for \$2,000 Less

• A city in Florida needed a new fire station. The committee in charge requested several contractors to submit plans and estimates. The lowest bid was \$13,200; others ran as high as \$15,000. Owing to the variation

Consult an Architect

architect can save money
him a better building

Have you ever
saved a client money?

By BENJAMIN F. BETTS, A. I. A.

A MANUFACTURER in Buffalo, New York, required a new factory building. Unfamiliar with architectural service, he obtained, without plans, an estimate from a contractor. He then decided that he should have competitive bids. The contractor recommended that an architect be engaged. This was done. The factory was built. The owner obtained a building designed by a planning specialist, planned for future expansion, and of more substantial construction than the contractor had originally estimated. The total cost was several thousand dollars less than the contractor's original price. The employment of an architect saved this man many factory money and he will not build in the future without seeking expert building advice.

In the experience of architects throughout the United States, there are many interesting occurrences, both commonplace and unusual, that are convincing evidence of the value of architectural service. Actual cases such as that cited above have more weight with the building public than all the arguments and abstract statements that can be made on the subjects of planning, beauty, and fitting a building to its site.

The question of properly designed buildings can be safely left to the hands of capable architects providing they are given the opportunity. Savings to the advantage of a client can be accomplished in many different ways, and the man in the street needs to be convinced of this fact.

This can be accomplished by compiling a large number of cases demonstrating that architects have saved and can save money for their clients. The AMERICAN ARCHITECT will publish such cases in book form providing architects will lend their support to the movement by forwarding the required information. Until a sufficient number of these cases have been received to make a booklet feasible, these experiences will be published within the pages of this magazine. Later, the booklet will be made available to architects everywhere for distribution to prospective clients and others who may be interested.

Architects who have had personal experiences that demonstrate the financial value of their services to their clients are requested to promptly forward the facts to the Editorial Department of THE AMERICAN ARCHITECT. Describe the case briefly but clearly and state whether your name and the client's name may be published.

in the estimates and to lack of uniformity in the plans, though all were based upon the same information, a firm of architects were called in and asked to handle the work. A building was designed that met all the requirements outlined by the fire chief. The contract, including the cost of a surety bond, was let for a little less than \$10,000.

The city had appropriated \$12,000 to construct the building. Built for \$10,000, the authorities had a substantial balance to apply to the cost of equipping the building.—Case No. 5.

A Saving of \$12,600

• A man purchased a lot from a development company and was about to have the company build his house. This company was building and selling houses at prices ranging from \$65,000 to \$85,000. The man asked an architect what he thought these houses should cost, and was told that the \$75,000 house desired could be built for \$65,000, including the cost of the land. The prospective owner was unable to understand how this could be possible, particularly if the architect were paid a commission of ten per cent. The architect explained that there was really only five per cent difference, since the salesman who sold the job received five per cent for making the sale.

Investigation by the architect of the development company's houses disclosed that they were built of stucco or brick veneer over a wooden frame, with either shingle or thin black slate roofs, and single-pipe steam systems.

The heating systems required oversized boilers and extra radiation to provide adequate comfort because of the leakage of air around doors, windows, etc., due to the cheapness of the construction methods employed.

The architect designed a house for the owner, giving the same area and same number of rooms; masonry construction; a graduated slate roof; vapor heating; plaster on metal lath, and many features inside and out that were not included in the houses built by the development company. The cost of the house was \$40,000. The grading and planting cost \$4,000, due to a hillside site. The land cost \$14,000. The architect's fees were \$4,400; making a total of \$62,400.

This owner now has a house that is the same size as those sold by the development company for \$75,000. It is a better house both structurally and architecturally. It cost him \$12,600 less.—Case No. 6.

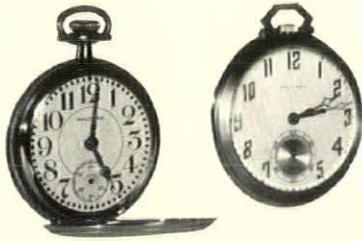
Architects Saved 8%

• A club in Detroit appropriated \$54,000 to construct a club house. The architects took a large number of general and sub-contract bids. Three bids were below \$50,000. The architects considered these bids to be too low to produce a satisfactory job. A contractor who bid \$52,000 was selected to do the work. A meeting was called at the architects' office which included the general contractor and his sub-contractors. Suggestions for reducing the cost of the structure were requested at this meeting. This resulted in minor changes being made without impairing the usefulness of the building and reduced the cost to \$50,000. The building was completed for eight per cent less than the original appropriation.

The architects on this building saved the owners 2% above their fee of 6 per cent. The work was done during a period when contractors were busy and were figuring on a good profit for themselves.—Case No. 7.

Right Materials Saved Money

• Engineers in cooperation with a contractor designed a factory building. The owner engaged a firm of architects to modify the engineers' drawings and to direct the selection of materials. The engineers and the contractor had determined on brick costing \$25 per thousand for the exterior walls. The architects, after visiting several brick yards, selected a more suitable brick that saved \$7.50 per thousand. The saving in this one item amounted to about \$3,750. Savings on other items were sufficient to pay for the architectural service rendered. Minor changes in the design which did not increase the cost of the structure resulted in an improved appearance of the factory.—Case No. 8.



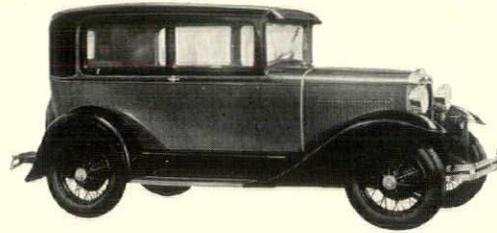
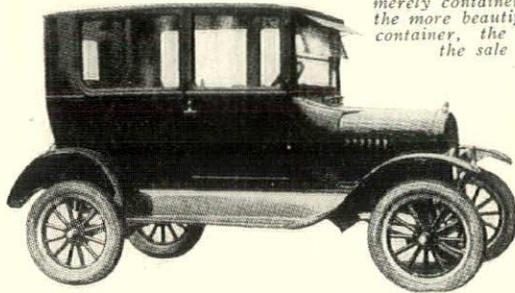
WATCHES must be beautiful, for an ugly timepiece will no longer sell. So manufacturers compete to produce beauty as well as accuracy



BOTTLES may be merely containers, but the more beautiful the container, the easier the sale



ADVERTISING has made tremendous artistic strides, for manufacturers have learned that beauty is a great aid in attracting attention



FORD once sold cheap transportation and nothing else. Today he sells beauty as well, for the public was deserting his models in favor of more beautiful cars

IT TOOK A WOMAN TO TELL US WHAT Inlaid REALLY IS



"This tin has heavier ridges and cord at the end, preventing it against wear for the same reason that your silver is solid at the wear points."

Of course—silverware does have its distinct wear points as a tin. In Holmes & Edwards Inlaid, blocks of sterling silver are inseparably embedded at each wear point of the most used pieces. When considering silverware remember that you can have INLAID something more than plain, and at no higher price. The Holmes & Edwards Silver Co., International Silver Co., Successors, 21 Madison Avenue, Bridgeport, Conn.; Toronto, 111 Queen Street West, Toronto, Canada.

HOLMES & EDWARDS INLAID

Something more than Plain
A PATENT FOR INTERNATIONAL SILVER CO.
The manufacturer is a division of the Inlaid, made plated at the wear point, and independently priced at \$1.75 for six teaspoons, \$2.75 for six

These are Criticised

ART IN INDUSTRY must satisfy the most severe and ruthless critic the world has ever known—public taste. Since the public has begun to demand beauty, manufacturers employ the best artists available and art in industry has made tremendous strides.

ART IN ARCHITECTURE has made little effort to develop the critical standards of the man in the street and, through honest criticism, to teach him to discriminate and appreciate. Has this caused a stagnation of artistic talent in architecture, particularly when compared to the great progress made by art in industry? Are the outstanding buildings of today less beautiful than those of yesterday?

ARCHITECTURE, particularly today, is in the anomalous position of being at once a business, a profession, and an art. It thus embraces a wide range of activity and involves wide responsibilities. As a business, architecture must function under the same legal forms and acknowledged standards of good practice as any other business; as a profession, it aspires to the same high principles of conduct and social responsibility as other professions; as an art alone, architecture eschews the equivalent responsibility which may be summed up in the word criticism.

Criticism performs, in fact, much the same function in art that codes of ethics and standards of good prac-

tice do in a profession. The vast flood of critical literature that accompanies the arts whether in music, the drama, the movies, in painting or sculpture or literature itself, serves merely to stimulate, to appraise, to comprehend, to fashion finer sensibilities and a greater degree of excellence.

The American Institute of Architects has devoted much effort to codifying standards of professional conduct and etiquette; it has said little about standards of taste. The reason is that taste cannot be codified. Art itself creates taste largely through criticism. Criticism might thus be said to be a vital factor in the health of art, and indeed no art could flourish without criticism in some form. Architecture is the only art which has attempted to function without that criticism and it pays the penalty not only in a general public apathy but also in a very low level of architectural taste and understanding even in the profession itself.

The reasons for this negligence are to be found in the triple function of architecture as art, profession and business, on the one hand, and the very real difficulties in the way of significant and disinterested criticism on the other. In so far as building operations represent financial enterprises, it is but natural that any criticism should be looked upon unfavorably by the owners. Yet, in actual operation this attitude is advantageous only in those cases where adverse criticism is most justified. Where architecture is looked upon merely as business it is generally poor architecture and poor business to boot; and it would seem as though the public, which must foot the bill in one form or another, were entitled to the aid



YESTERDAY the Woolworth Building was the tallest skyscraper in the world



TODAY the Chrysler Building tops them all. Does it show progress in design?



YESTERDAY the American Radiator Building was heralded as a dramatic achievement



TODAY the New York Central Building shows the same spirit. Is it more beautiful?

...why not these?

By Roderick Seidenberg



YESTERDAY the Bush Terminal Building towered in the Forty-second Street district



TODAY the Lincoln Building towers in the same district. Is it as well designed?

of disinterested and corrective criticism of this work.

It is true that gratuitous comments on the value of a work of architecture may prejudice a public which is none too well informed. The only real protection is to be found in a public opinion that is thoroughly cultivated, which in turn implies a long tradition of freedom of criticism. The theatre, on this score, is in exactly the same position. Yet no one would suggest that plays should not be reviewed or that there should be no critical literature of the drama. No profession or art or even business, for that matter, gains by imitating the ostrich, and certainly it is difficult to see wherein architecture differs from other arts in this respect.

Indeed the need for higher critical standards is perhaps more important in the field of architecture than in any of the other arts. To begin with, the permanence of a work of architecture has no relation to its aesthetic merit. It endures so long as it remains profitable quite irrespective of any other considerations. But even this phase of the matter might not be so serious were architecture a purely private affair. By and large it is possible to avoid the picture one doesn't like, the books one wouldn't read, the plays one doesn't care to see, but how can one possibly avoid the welter of indifferent, if not positively offensive, buildings that constitute our cities? Architecture is a public art in which, as often as not, the worst examples outlast the best. There is no reason, for instance, under the prevailing system of things, why the fine residences that for so many years graced Washington Square, New York, should not give way to the multi- (Continued on page 84)



EWING GALLOWAY

THE CHRYSLER BUILDING as I see it

By Kenneth M. Murchison, F.A.I.A.

DO you or don't you? That is the question. Some do. Some don't. Some think it's a freak; some think it's a stunt. A few think it is positively ugly; others consider it a great feat, a masterpiece, a *tour de force*.

And I don't mind saying, right out here in the open, that I am in the latter category. To me, it is a very fine achievement. It has great merit; it bespeaks a rich and fertile talent and it represents our modern life, its changing conditions and forces, with more accuracy and clearness than almost anything else in the way of an office building that has lately burst upon the startled vision of the classicists and the columnists.

The Chrysler Building has probably earned more publicity during its short but lurid career than even its own instigators hoped for. And as it is a commercial proposition, embodying the emblazonment of automotive progress, why should the architect have hesitated a moment in being the Ziegfeld of his profession and

glorifying American mechanical genius and incidentally, Mr. Chrysler's output of cars and trucks and boats?

The scheme of decoration of this building, inside and out, is based on *movement*. All the motives used in the enhancement of the pictorial side of the structure are in action. On the thirtieth story, the brickwork wheels revolve under a horizontal mudguard of patterned brick. Just above, the Chrysler radiator emblem raises its silvery head; above the emblems, on the thirty-first floor, great eagles of shining metal stick their heads out and look down upon the ceaseless flow of city traffic.

Perhaps, in the futuristic days to come, many a story will be woven about these eagles. They may become as famous as the gargoyles of Notre Dame; they may have rude jokes and whispered innuendoes thrust in their tin ears, just as has happened many a time to the Luckless Lions of the Library! Those lions, with their air of smug complacency, have materially assisted many



a column writer in getting home in time for dinner. There is always a story in the Library Lions—their expression is *so* ridiculous and *so* human! The more mixed-up the traffic becomes on Fifth Avenue, the better pleased are the brutes, and yet, on parade days, they seem to be openly sneering at the armed demonstrations unfolded in front of them.

The Chrysler eagles are made of polished steel, as is every other bit of ornament on the building. No terra cotta whatsoever was employed, so, if you read in the papers some day that the architect of the Chrysler Building has suddenly disappeared, the first move of the police will be to go to Trenton or Perth Amboy and look among the retorts for the missing one.

No reveals in the windows of the Chrysler Building, readers. And why should there be? The old days of the Keep and the Moated Grange and the six-foot walls are practically over. The big abutments of the Chanin Building across Lexington Avenue are, in my humble opinion, entirely out of place in an office building. Those adjoining offices would seem to me most difficult to rent, with masonry buttresses leaping out several feet in front of the plane of the window, most successfully cutting off the ventilation and the view up and down the street.

THIS question of the lack of window reveals will disturb the classicists to no inconsiderable degree. Not only did William Van Alen, the hero of this bedtime story, abandon reveals some time ago (thereby almost getting a stone facade for the cost of a brick front), but the architects of the new Empire State Building, Shreve, Lamb & Harmon, are actually projecting all their windows a couple of hair's-breadths beyond the stone work, just to show their utter and undisguised contempt for old tacets, gadgets and manners.

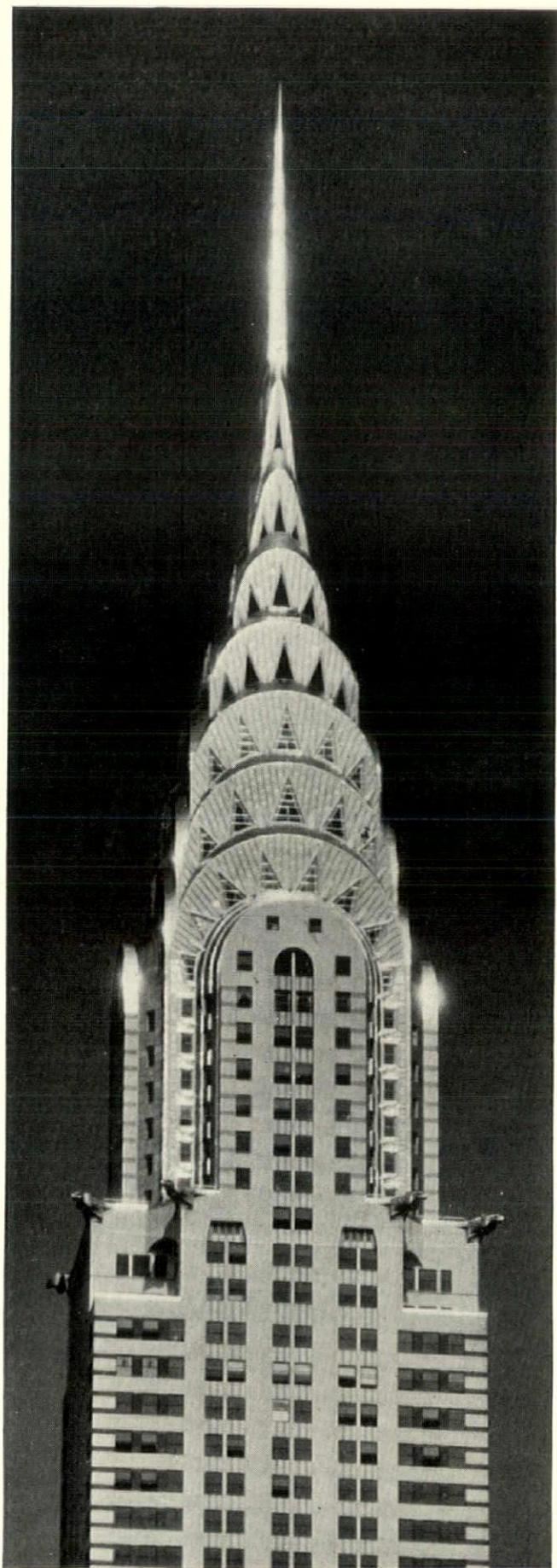
Then too, the up-to-date and money-grabbing moguls of the real estate profession immediately seized upon this non-reveal discovery of our architects and now measure the rentable office space from the glass surface inwards, *not* from the face of the wall below. They probably work on the theory that if a draftsman's arm can project over the end of a drawing board to exactly the number of inches that the window is beyond the wall line, then the tenant should pay for the elbow room!

That theory is a beautiful and well-rounded one except that no architect can probably afford to have an office in the Chrysler Building except its own architect and he is probably only there until the moment when he completes something Bigger and Better.

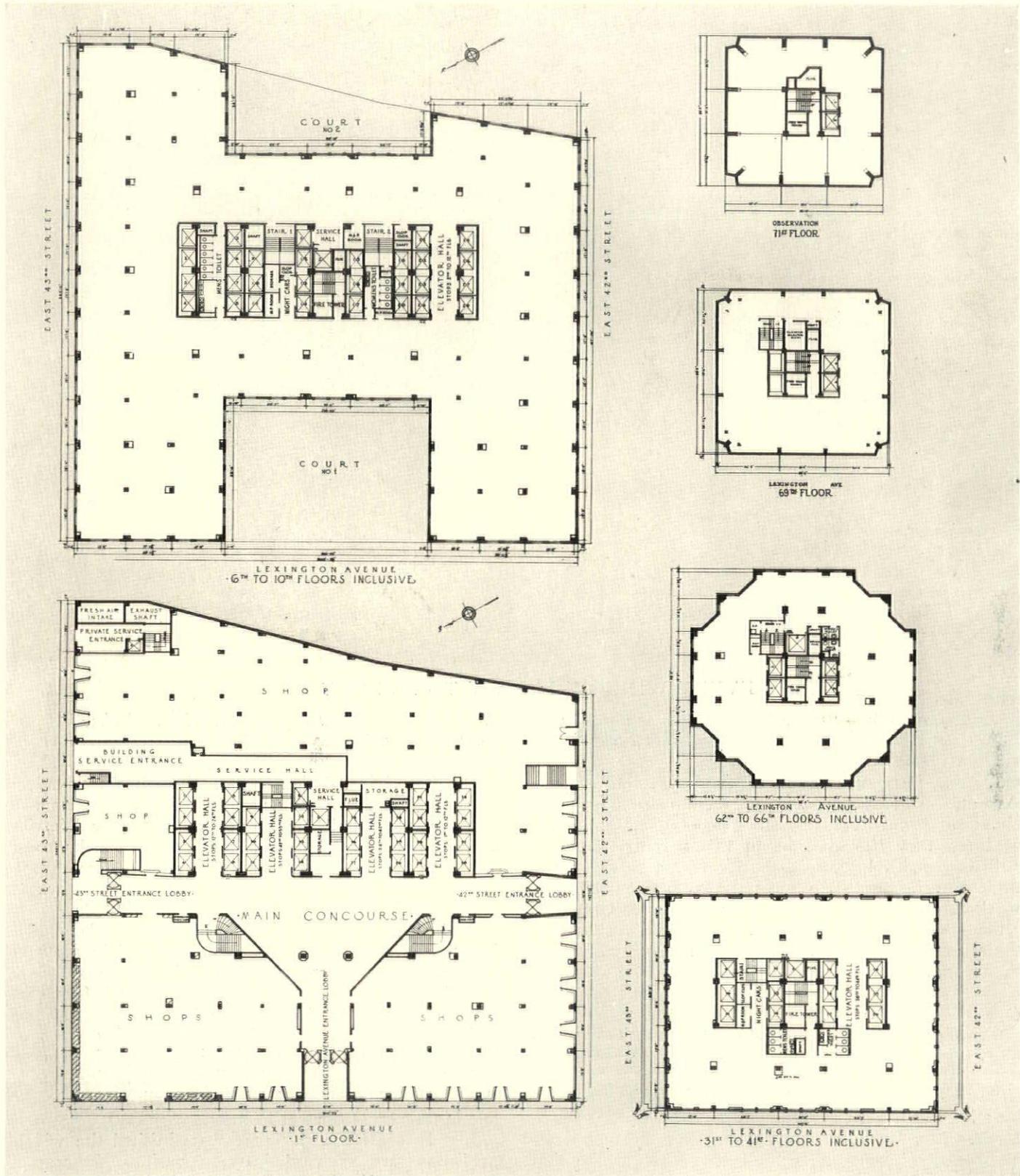
We now turn for a moment from controversy to physical geography. Mr. William Van Alen, the architect of the Chrysler Building, first turned a lot of people against him by winning the Paris Prize of the Beaux-Arts Institute of Design, way back in 1908. He spent three years in the Atelier Laloux and the Café des Deux Magots, a seat of learning attached to the École des Beaux-Arts by means of both being on the Rue Bonaparte. Van Alen was the only American student who returned from Paris without a box full of architectural books. He foresaw the future. He tingled with the touch of approaching modernism. He threw his pencil compass overboard on the way home.

"No old stuff for me! No bestial copyings of arches and colyums and cornishes! Me, I'm new! *Avanti!*"

And so it was! Everything Bill did after he got home had a tinge, or perhaps a twinge, of something differ-

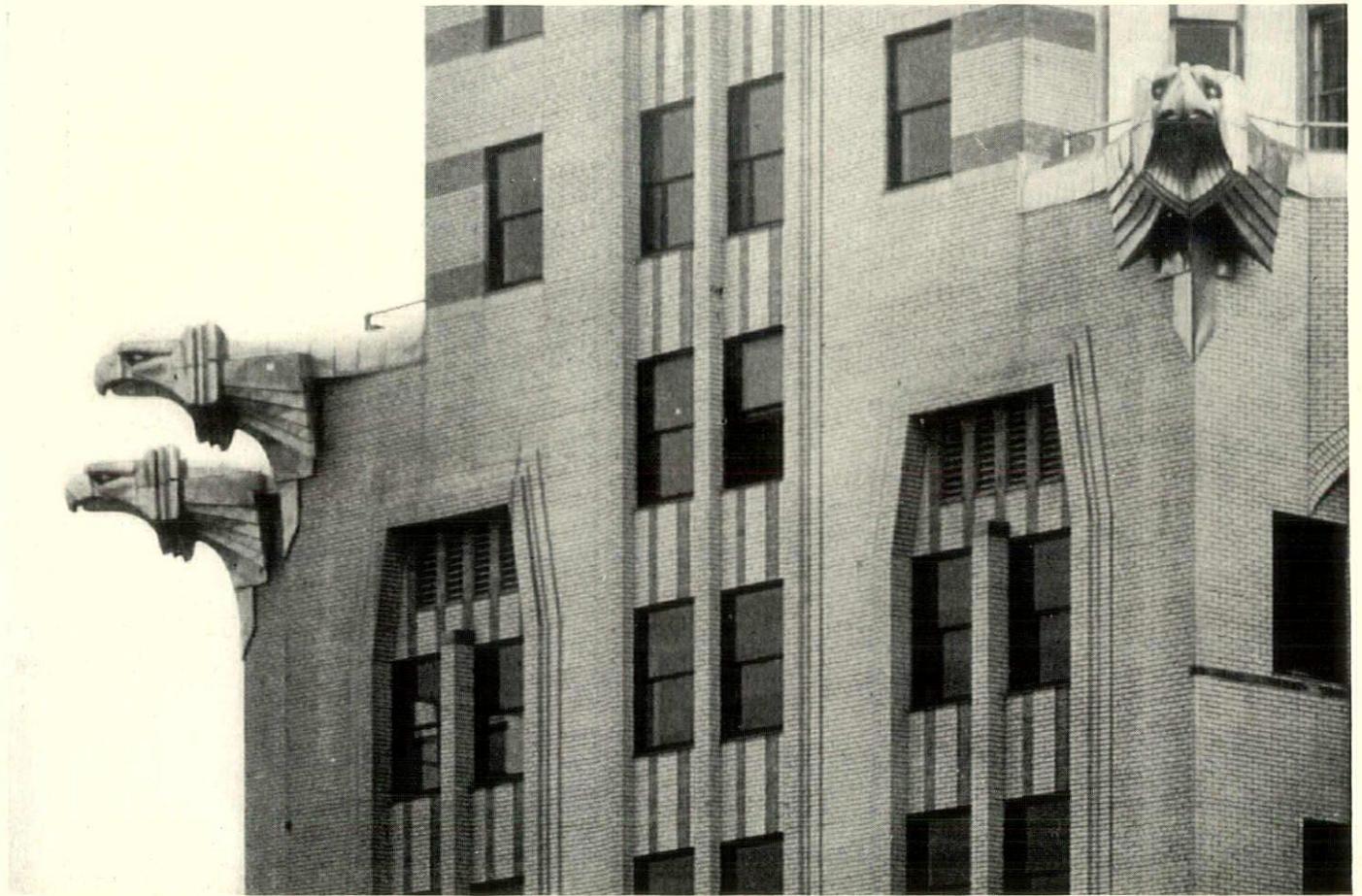


VAN ANDA
LIKE A GLISTENING MIRROR, the brilliant metal of the tower catches the rays of the sun and is visible for many miles



A PLAN FULL OF HIGH SPEED ELEVATORS

Twelve hundred feet a minute is ready for immediate delivery when the building code is revised to permit more than seven hundred feet. The plan takes almost every shape that a plan can take, with more consideration being paid to desirable and well lighted office space than mere cubage



LAZARNICK

EVERY WINDOW IS EASY TO SEE OUT OF

for there are no window reveals or dividing bars. The Chrysler tenant enjoys every inch of view that careful design can make possible

ent. For instance, he did a shoe store on Madison Avenue. Did he put a lot of inanimate shoes in the show windows? No, indeed. Shoes are never still, or at least, they shouldn't be in this moving age. No, Bill designed a large oval marble frame on the second floor of said shoe shop and put two canny cobblers at work cobbling. He attired them in neat blue Greenwich Village smocks (the kind that architects wrap around their secretaries) and made a new moving picture out of a couple of lasts.

OUR hero started this particular building project at 42nd Street and Lexington Avenue for a realty operator, one Ex-Senator William H. Reynolds, and moreover started it off with a bang by fixing the height as eighty-eight stories or 1,040 feet, this being arrived at by adding 40 feet to the height of the Eiffel Tower in Paris. Mr. Van Alen could remember the number 40 quite easily because he was 40 years old at the time. At one time it was changed into a 40-story hotel—again you see the fateful number—and just when they were about to change it again along came Mr. Walter P. Chrysler and bought the lease from Ex-Senator Reynolds.

Mr. Reynolds sold Mr. Chrysler everything, including the architect. Mr. Chrysler liked everything so much that he cut the building down from 88 to 78 stories and got Mr. Van Alen to change the design of that part of the tower above the 61st story, a change which everyone agrees was a good one.

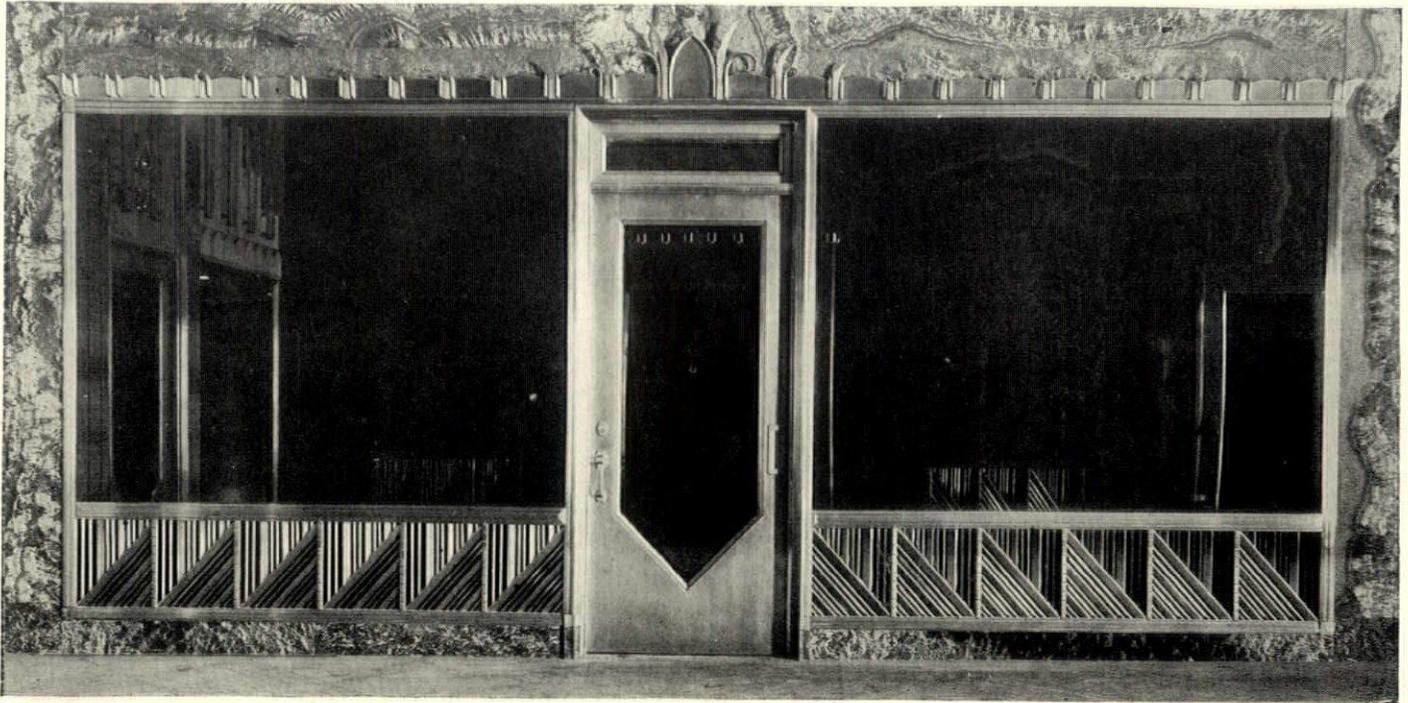
On the original design, the architect had a top piece which looked for all the world like Governor Smith's famous brown derby. But when that Happy Warrior came along and entered the architectural field by being appointed the head of the Empire State Building, Architect Van Alen took off his Chryslerized brown derby and restored it to its rightful owner, Mr. Smith.

And it was a fortunate thing for the Chrysler Building, this change of lid, because it resulted in a stroke of Van Alen genius in the form of a dome of bright gleaming metal, far above any dome ever before constructed, one on which the sunlight flashes and one which returns on every side the astounding plays of light which Nature alone can furnish. A flaming beacon is in truth the dome of the Chrysler Building and it stands out boldly above the forest of spires already visible in the Grand Central District.

Just before the upper part was finished the widely published race skyward between various skyscrapers was announced. So the Owner pushed the button for the Architect. The Architect was, as usual, waiting outside, on the Owner's door mat.

"Van," said Walter P. Chrysler, "Van, you've just got to get up and do something. It looks as if we're not going to be the highest after all. Think up something. Your valves need grinding. There's a knock in you somewhere. Speed up your carburetor. Go to it!"

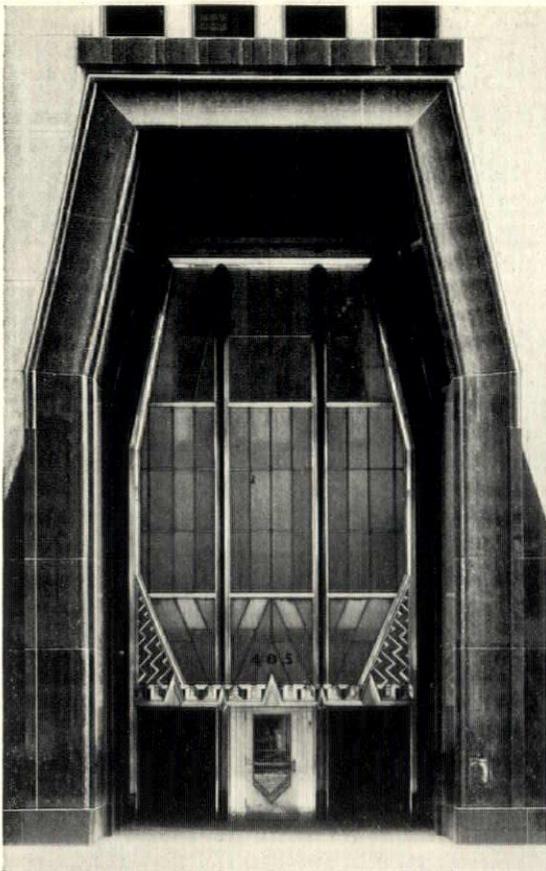
No sooner said than done. The architect examined his plans. Right in the center of the tower he found a



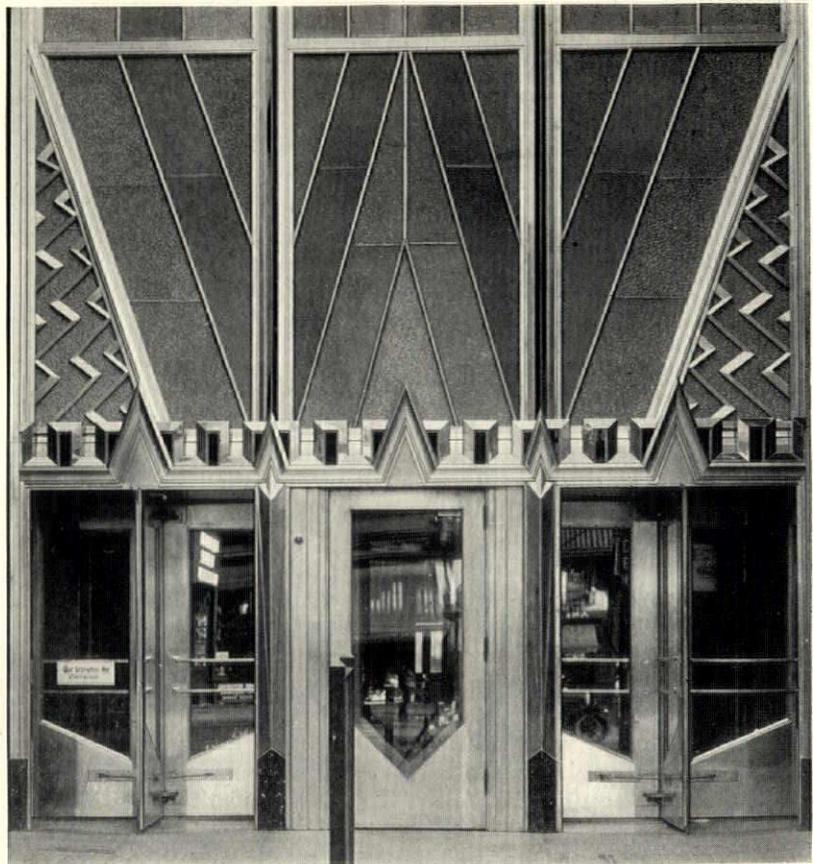
TEBBS & KNELL

POLISHED TO A MIRROR BRIGHTNESS

is the chrome nickel steel which frames the store fronts in the main corridor. The door is of the same metal



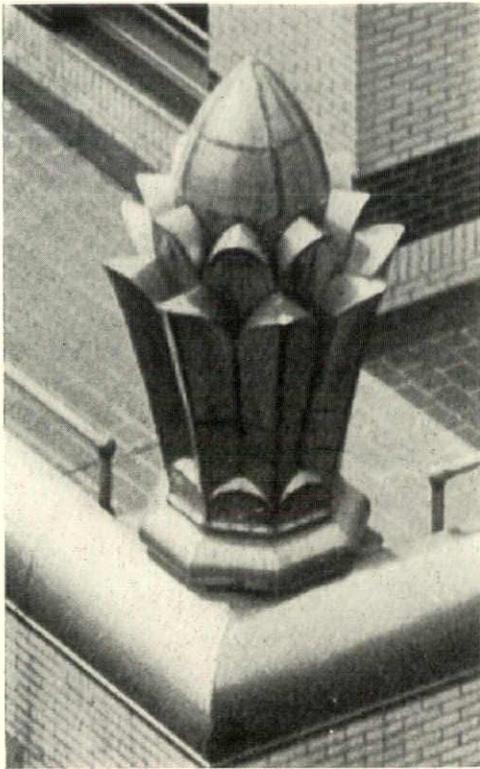
LAZARNICK



DREYER

BLACK MARBLE FRAMES A GEOMETRICIAN'S DREAM

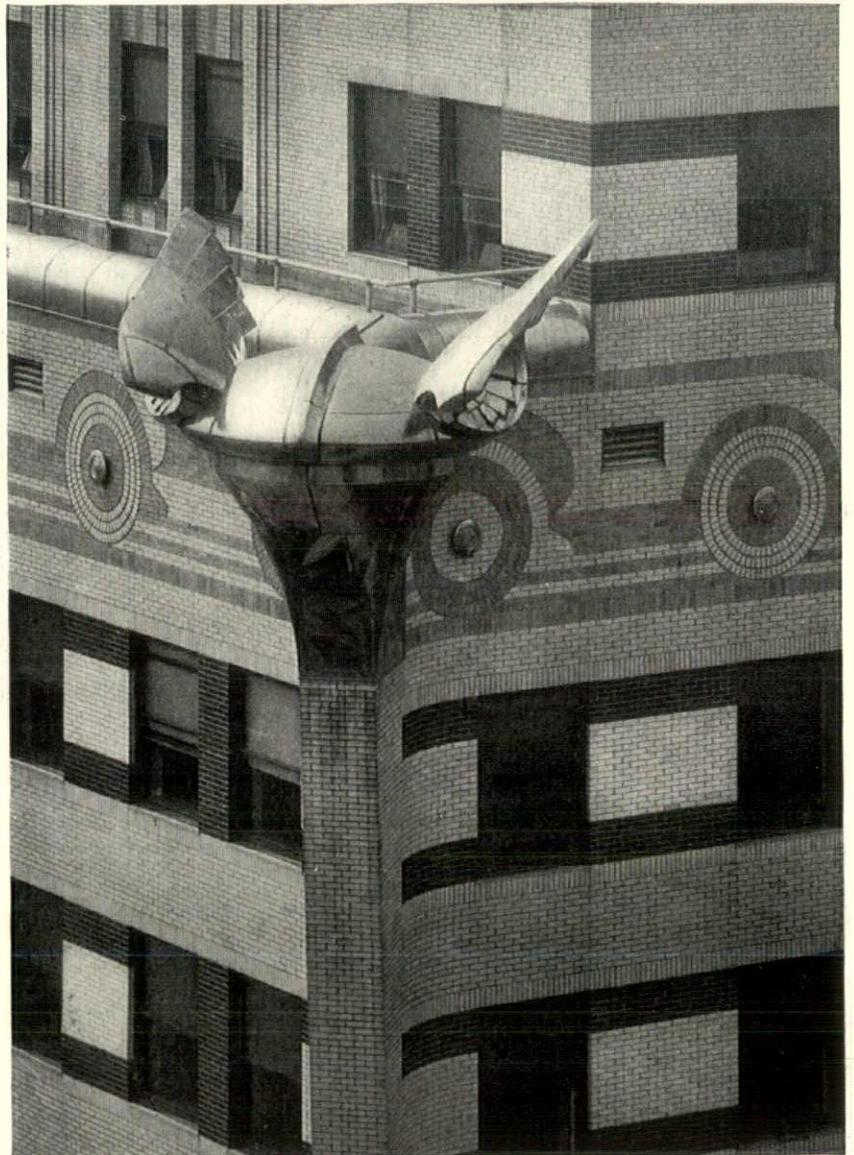
Main entrance of the Chrysler Building. The metal is chrome nickel steel, as is the framework of the exterior stores. The entrance on Forty-first Street is similar in design



LAZARNICK

CONVENTIONALIZED PINEAPPLES is the term which has been applied to the chrome nickel steel ornaments at the top of the first set-back

MR. CHRYSLER'S AUTOMOBILES formed the inspiration for the decorative motif running around the top of the last set-back, the four corners carrying a monster Chrysler radiator cap



LAZARNICK

fire tower which, to the untutored mind, is nothing more or less than a large hole in a building.

"I will build," mused Bill, "something in that fire tower. Then one of these days, we'll lift the thing up and we won't tell 'em anything about it. And when it's up we'll just be higher, that's all."

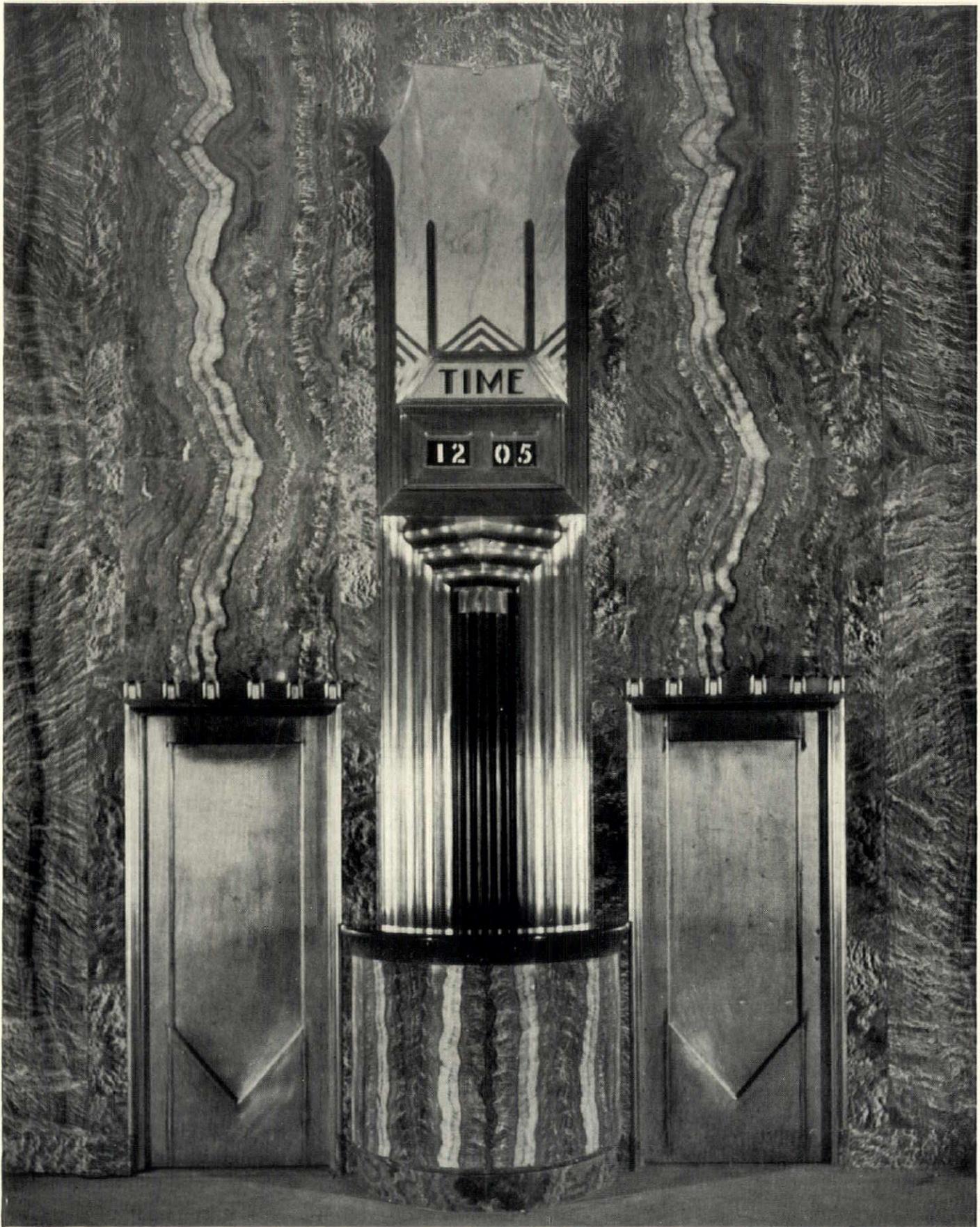
So he got hold of his steel engineer, Ralph Squire, and they evolved a modernistic flagpole, of latticed steel, one hundred and eighty feet high and eight feet seven inches wide at the base. They named the thing a "vertex" just because the name hadn't been used before and they had it made in three pieces by those well-known ironmongers, Post and McCord. They hoisted it up in the fire tower and there riveted it together. Then they built a scaffold projecting out from all four sides of the tower, around the hole. One part held the derrick, the rest was for the support of the guys.

The contractors waited with bated breath for a perfectly calm day, with not enough breeze to stir the few remaining hairs on the Architect's own dome. Finally such a morning came and with a 30-ton derrick, they hoisted the 28-ton vertex into place in exactly thirty minutes! The architect and the engineer, watching it

from Fifth Avenue and Forty-Second Street, had four sinking spells, continuous vertigo, and three attacks of mal-de-mar during the raising of the vertex and the architect is still a bit shaky when he thinks of what might have happened to the innocent bystanders below.

This vertex immediately made the Chrysler Building (on paper) about one hundred twenty-five feet higher than anything else projected at that time and moved Governor Smith into proposing a dirigible mast for the top of the Empire State Building, followed by publicity pictures of the Governor in Washington showing the Under Secretary for Aviation a diagram of the mast and the reasons why the mast would still stay on the building if the dirigible didn't want it to, and vice-versa and so on.

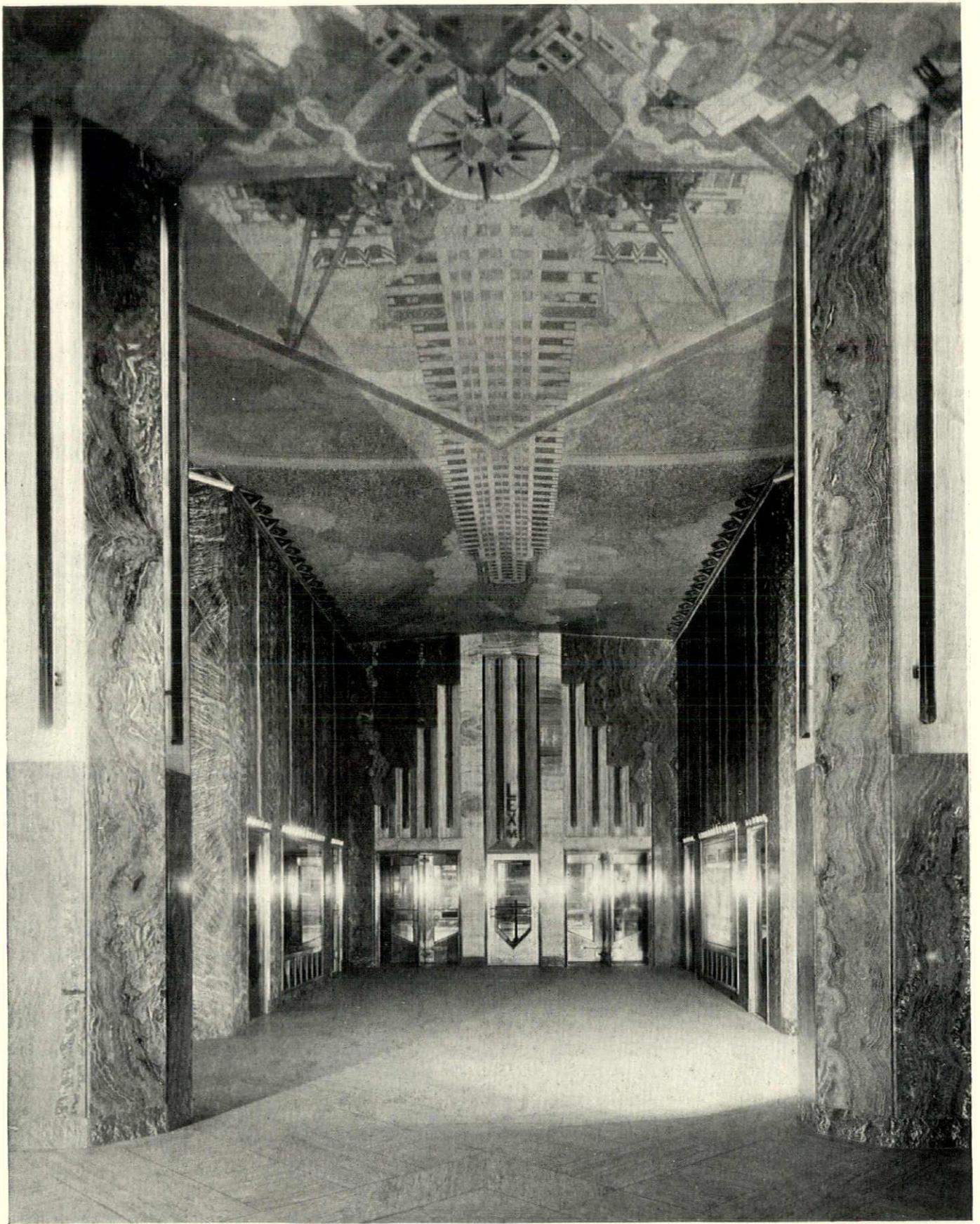
All the metal that Mr. Van Alen has used on the Chrysler Building is known as KA-2 Steel, Krupp's formula. (You remember Mr. Krupp and his Big Bertha.) The material is made in this country by the Crucible Steel Company, Central Alloy and several others. The sheets were fastened on the dome by being nailed to wood grounds let into "Nailcrete," in all respects similar to the methods used by roofers on an



TEBBS & KNELL

NO NEED TO ASK THE TIME

from the man at the information desk of the Chrysler Building, where he sits under a tricky clock with changing minerals. The metal work is chrome nickel steel; the marble is "Morocco rouge flammé," which is streamed with white and other colors



LAZARNICK

THE CHRYSLER BUILDING ITSELF IS THE CEILING MOTIF

Edward Trumbull painted the mural on the ceiling of the main lobby, combining the tower of the Chrysler Building with scenes depicting Energy, Result, Workmanship, and Transportation



LAZARNICK



WURTS BROS.

UNCLE SAM'S EAGLE is conventionalized on the letter box in the main lobby

LIKE AN EGYPTIAN FAN is the design of the elevator doors in the main lobby, which are made of metal covered with vari-colored veneer woods

ordinary metal roofing job. The scaffolding for this work was in place five months and was said to have cost a very tidy sum.

In the working out of the main Entrance Hall of the Chrysler Building, the architect has put a great deal of study. It is of a rare simplicity, being nothing but a triangle, each point showing the way to an exit. The walls are of a beautiful red marble, known in the trade as "Morocco rouge flammé," zigzaggally streaked with white and with colors. The odd-shaped marble frames at the elevator lobbies are of Mexican onyx, a little lighter in color than the Moroccan walls.

The Mexican onyx reflects the light shining on it

from metal channels in such a manner as to give a luminosity throughout the entrance lobby which is most satisfactory to the eye.

And the lighting itself is most logical, too. Over every elevator lobby is a mass of reflected light, immediately attracting the eye and showing the way up, while over every exit is a like mass of light showing the way to go home!

The ceiling of the lobby is covered by a large mural painting by Edward Trumbull depicting Energy, Result, Workmanship and Transportation. (It might just as well have been Chrysler, Dodge, Plymouth and De Soto.) Outside of the fact (Continued on page 78)

Architect Sues Chrysler Building Company; Says \$725,500 of \$865,000 Fee Is Unpaid

A mechanic's lien for \$725,000 against the W. P. Chrysler Building Corporation was filed yesterday in the county clerk's office by William Van Alen, 331 Madison Avenue, architect of the Chrysler Building, the city's loftiest structure. Mr. Van Alen alleges that a balance of \$725,500 is due him on a fee of \$865,000, representing 6 per cent of the \$14,250,000 cost of the seventy-seven-story skyscraper.

Through his counsel, M. Carl Levine, Mr. Van Alen names as co-defendants the Cooper Union for the Advancement of Art and Science as owner-in-fee of the property, and the Reylex Corporation, headed by former State Senator William H. Reynolds of Long Beach, as lessee. Mr. Reynolds sold his leasehold to Mr. Chrysler and associates.

Mr. Van Alen, who lives at 27 Prospect Park West, Brooklyn, says in the court papers that he not only

held the leasehold, had Mr. Van Alen prepare a set of drawings for a speculative office building and agreed to pay him a fixed amount," said Mr. Levine. "When Mr. Chrysler took over the leasehold he retained Mr. Van Alen to redesign the building, and Mr. Van Alen designed an altogether different type of structure. There was no specific agreement for the payment of the architect. When Mr. Van Alen rendered his bill he asked for the 6 per cent fee established by the American Institute of Architects. Many architects charge a fee of 10 per cent.

"Mr. Chrysler said he would not pay such a fee. He offered \$175,000. According to Mr. Levine, Mr. Van Alen, for his services in drawing two different sets of plans for the building, received about \$140,000 to \$145,000.

Before departing for Detroit last

IF the architect of the Chrysler Building had applied the information contained in this article there probably would have been no suit over his fee

What to put in a C O N T R A C T to keep out of trouble with clients

By CLINTON H. BLAKE of the New York Bar



It is many years since I began to preach the gospel that the practicing architect should cover, in contract form, his understanding with his client and the terms upon which his work is to be done. When this thought was first advanced there were few architects who made it a practice to do this. There has since been a radical change of feeling in this connection. More and more, architects have come to realize the importance of the contract. Today a decided majority of them make it a point to secure the contract before proceeding with the work. The number of those who do this is steadily increasing. In a very few years, the architect who proceeds without a contract will be a pronounced exception to the general rule.

The American Institute of Architects has played an important part in this very salutary change. The publication of its standard form of contract did much to break down the prejudice of architects against the use of a contract with the client. It made available to them a contract form approved by the Institute and readily available and it enabled them to present this form to their clients as a basis of operation which has come to be

generally recognized by the profession as fair and proper.

The architects who have been reluctant to adopt the contract idea, or have as yet failed to do so, have been actuated by one of three considerations. Most of them have felt that to present a contract to a client for signature would raise unpleasant issues at a delicate stage of the architect's employment and might jeopardize the securing of the job. This is the reason which has had weight with by far the greater number of those who, as yet, have not been convinced that a contract is necessary or desirable. Many others have failed to adopt a contract because they are naturally opposed to new innovations. They have practiced their profession over a long term of years without employing contracts with their clients, and they are either too conservative or too easy-going to change the habit of a lifetime. There are some, finally, although not many, who have felt that the use of a contract is in some way unprofessional and a cheapening of the architect's professional status.

It has been clearly demonstrated that none of these objections is well-founded. I have had rather unique opportunities over a considerable length of time to

*A*GREEMENT, made 1930

between of
..... herein called the "Client," and
..... of, herein called the "Architect":

1. The Client, who desires to erect a
.....
..... at

at an estimated cost of \$.....
employs the Architect to prepare preliminary sketches,
working drawings and specifications therefor and to
supervise the construction thereof as Architect to the
completion thereof, in accordance with such plans and
specifications.

2. The Architect agrees to undertake and perform
the foregoing services. If the Architect considers it
advisable to employ consulting engineers or to have
chemical or mechanical tests or surveys made in con-
nection with the above work, he will employ such
engineers and cause such tests to be made for the
Client's account.

3. The Architect shall be paid a basic fee equal to
six per cent of the total cost of the work, which total
cost shall include the fee of the contractor, but shall
not include the fees of the Architect or engineers or
the cost of a clerk-of-the-works. Payments to the
Architect on account of the above fee shall be made
as his work progresses and in the following manner:
Upon completion of the preliminary studies, one-
fifth of the entire fee;

Upon completion of the specifications and general
working drawings, exclusive of details, two-fifths
additional;

The balance from time to time as the Architect's
services are performed and in proportion to the services
rendered. Until an actual bid is received, charges shall
be based upon said estimated cost of the work and all
payments received credited to the Client on account of
the total fee. The entire fee shall be paid not later
than the completion of the work.

4. If, after a definite scheme or plan has been ap-
proved, changes in the drawings, specifications or other
documents are required by the Client, or if the Archi-
tect is put to extra labor or expense by the delinquency
or insolvency of a contractor or of the Client, the

Architect shall be reimbursed for such expense and
paid the reasonable value of such additional services.

5. In case the work is abandoned or suspended by
the Client, the Architect shall be thereupon paid all sums
then due hereunder and, in addition thereto, the pro-
portionate amount due for all services then rendered but
payment for which would not have been then due here-
under had the work not been abandoned or suspended.

6. The supervision of the Architect means the cus-
tomary supervision by the Architect or his representa-
tives, as distinguished from the more continuous super-
vision of a clerk-of-the-works. If the services of a clerk-
of-the-works is required, he shall be employed at the
Client's expense, but with the approval of the Architect.

7. The Architect will endeavor to guard the Client
against defects and deficiencies in the work, but does
not guarantee the performance of the contract by the
contractor or guarantee the Client against defective
work or materials.

8. Due to fluctuations and uncertainties in the labor
and material markets, the Architect does not guarantee
the accuracy of any estimate given by him or assume
any responsibility therefor.

9. All drawings and specifications are and shall re-
main the sole property of the Architect, whether the
work for which they are made be executed or not and
shall not be used by the Client in connection with any
other work.

10. The Architect may in any emergency arising in
the course of construction take such action as he deems
advisable for the protection of the building and the in-
terests of the Client. The Architect may also from time
to time authorize such changes in the work as he con-
siders will be beneficial, provided, however, that such
changes do not materially change the plan or layout of
the work or materially add to the expense thereof.

11. This agreement shall be binding upon and
inure to the benefit of the executors, administrators
and successors of the respective parties hereto.

12. As to any matters not herein specifically pro-
vided for, the rights and liabilities of the parties shall
be in accordance with the schedule of practice and
charges of the American Institute of Architects.

(This clause may be omitted if desired)

..... L. S.,
Client.

..... L. S.,
Architect.

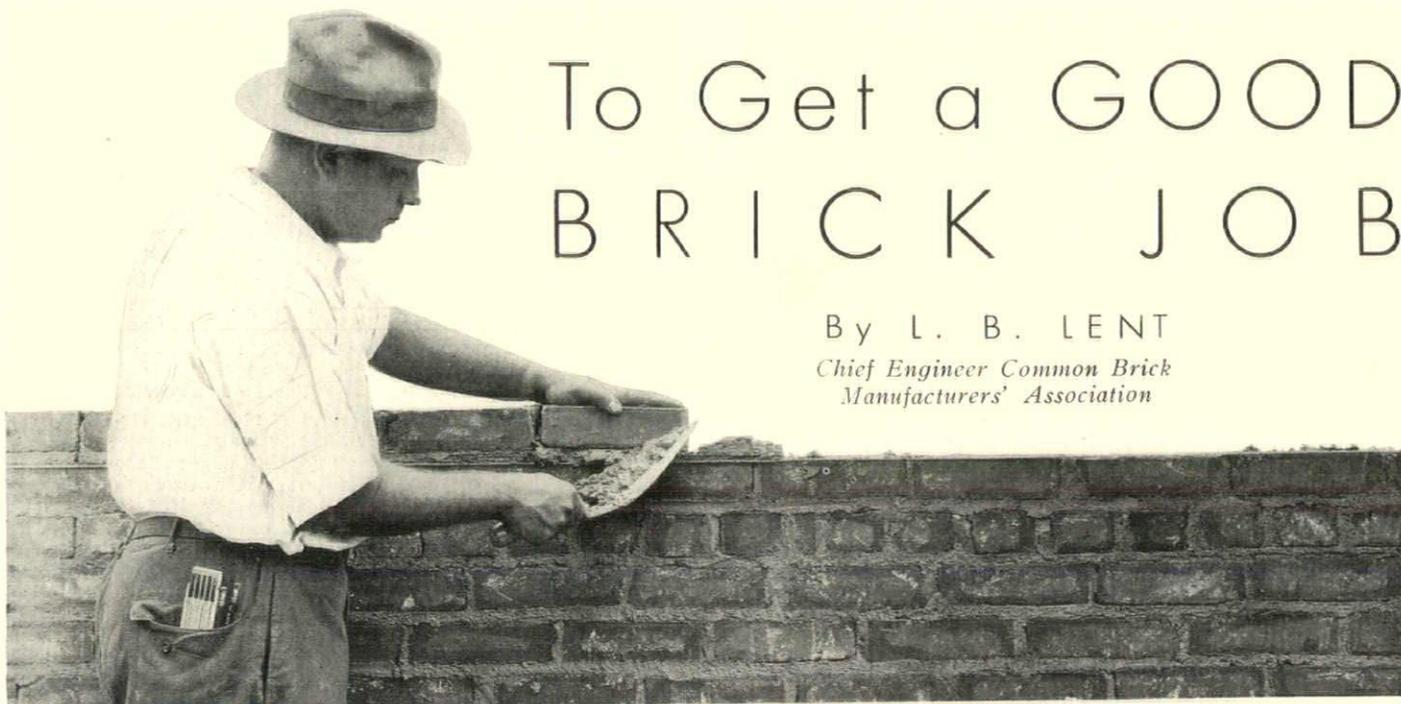
Simple and easy to understand is this suggested form of agreement between architect and client

observe the attitude of the ordinary client toward the
architect and vice versa. It is and has long been my
settled conviction that the client is favorably, rather than
unfavorably, impressed by the suggestion that the re-
spective rights and liabilities between the architect and
himself be reduced to concrete form. Most clients, in
the last analysis, are business men and are accustomed
to do things in a businesslike manner. Many of them are
possessed of the idea that the architect is an artistic soul
with little common sense or business training. They are
favorably and pleasantly surprised when they find that
this idea has no possible justification; that the able archi-
tect may be and often is an exceedingly able business man

and that he expects to place in businesslike contract form
the understanding between him and his clients.

I CAN understand, also, the point of view of those
architects who for many years have proceeded without
a contract and dislike to change their custom. Times
change, however, and methods with them. The rapid
development of the corporation idea, the complexities
of modern business, the development of the speculative
builder, the uncertainties of the material and labor
markets and other similar factors combine to make im-
possible today that which was possible a generation ago.

Contracts may be oral or *(Continued on page 92)*



To Get a GOOD BRICK JOB

By L. B. LENT

*Chief Engineer Common Brick
Manufacturers' Association*

THERE are only three essentials in the production of good brick masonry—good brick, good mortar and good workmanship. Proper supervision of even a large job is not difficult, but it is important, especially where a large number of workmen are employed.

About the first thing that happens on any job is the arrival of materials and right there is where supervision and inspection start.

The quality of the brick is quite evident from a visual inspection. Go over the brick as they are dumped or stacked and carefully examine a few samples from different parts. If they are to be used in the face of the wall, see that they are free from lime lumps or spots, and that they are hard and well-burned. An almost universal and almost infallible test for well-burned hardness is to strike two bricks together, holding each by the end. A resulting resonant, metallic sound indicates a well-burned, hard brick. The lack of such a sound usually indicates a soft or inferior brick, but such a lack is not conclusive evidence, for a few brick produced in different parts of the country are of first class quality and yet do not produce the metallic ring when they are struck together.

If the brick are suspected of being a possible source of efflorescence on the finished wall, a simple test of a few samples of each grade, selected at random, will often determine whether or not the brick contain a sufficient amount of soluble salts to later cause this trouble. This test consists of standing the brick on end in a saucer full of distilled water. If the brick contains a harmful amount of soluble salts, efflorescence should form within 5 days at the line where the brick is dry and where it is wet by suction.

While the brick comes to the job as a finished product, mortar is made on the job and our first consideration, therefore, is to inspect the quality of the materials which

IT IS VITAL TO KNOW

Will efflorescence form?

Is lime properly slaked?

Is mortar mixed right?

Are the right mortar colors being used?

Are brick being set properly?

When may joints be left open?

May masonry metal ties be used?

How are back-up materials bonded?

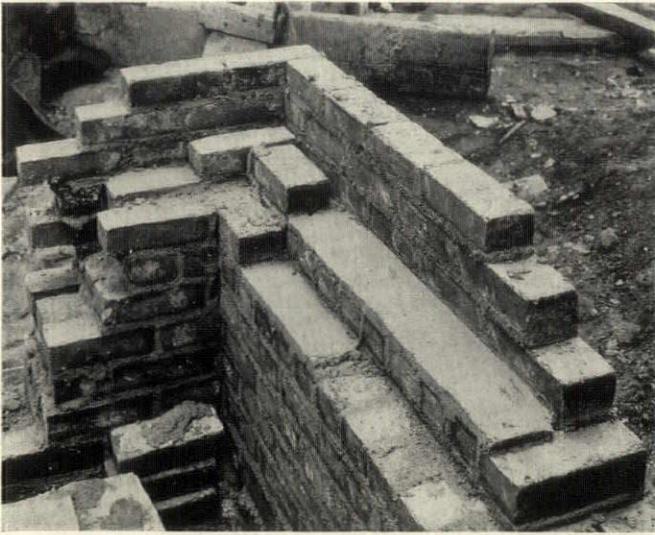
How wet should bricks be?

When are brick set dry?

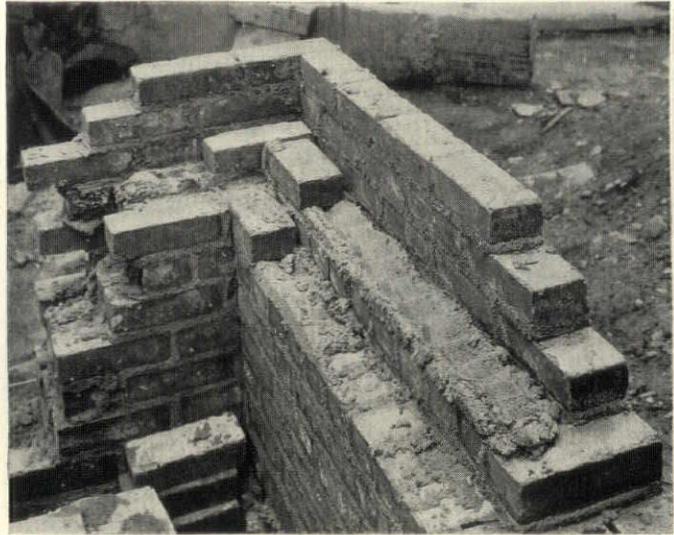
How should unfinished work be left?

are used in mixing it. Sand should be clean and free from vegetable matter, loam, large stones and dust. A simple test for cleanliness is to squeeze some wet sand in the hand. If loam is present the sand will retain its shape; if not present the sand will emit a gritty sound and when rubbed in the palm of the hand will not leave a slimy deposit. Further tests are usually not necessary to the experienced superintendent. Salt-water sands are apt to produce efflorescence and should be avoided.

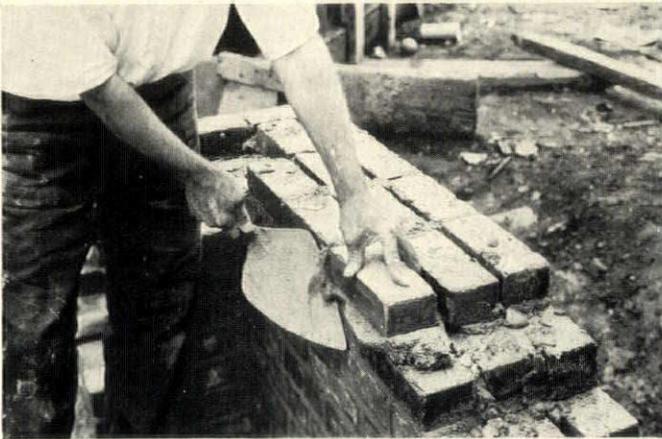
A visual inspection of cement is to see that it comes in unbroken bags or packages with the name of the maker stamped thereon, that it has not been exposed to dampness and that it is stored in a dry place until used.



GREATEST WALL STRENGTH is secured by a flat mortar bed, which gives the brick a more even bearing



AS USUALLY LAID, the mortar bed is left rough. Outside brick should preferably be laid first, this being the weather course. If laid last, it cannot be seen by inspection whether or not joints of the weather course are completely filled from front to back



SHOVED WORK requires close supervision as extra effort by the mason is necessary. This type of work insures full exterior joints



PROTECTING WORK against rain or heavy dew. At quitting time work is left stepped for good bonding

On large jobs, samples of cement are sometimes sent for laboratory tests, but the reputation of the maker is usually a sufficient guarantee of quality.

Lime for mortar should be well burned and picked free from ashes, core, clinker or other foreign material. If hydrated lime is used, it should be of uniform fineness and kept dry until used.

THE best method of safeguarding the proper slaking of lime and mixing of mortar is to be sure that an experienced man is employed, for there are no hard and fast rules by which this part of the work can be done. Some of the things which should, however, be watched, are: the correct proportioning of the various ingredients to see that the mortar is of the required richness; that mortar is mixed only about as fast as it is being used and hence prevent the use of retempered mortar. Mortar which has taken an initial set is not as strong, and the use of retempered mortar should, therefore, be prohibited. See that the sand is properly screened before use and that all materials are stored on wooden platforms and not on the ground, and so prevent the mixture of earth or loam with the mortar.

An experienced mortar mixer usually carefully measures the proper quantities of cement and lime and thoroughly mixes them before adding the sand (some put sand in the mortar box first), later adding a measured quantity of sand and thoroughly mixing it with the batch. Water is then added and constantly mixed until the desired consistency is obtained. Such a method results in more accurate and uniform batches of mortar, and this is important. I have too often seen large patches of "skinny" mortar in an otherwise good wall surface.

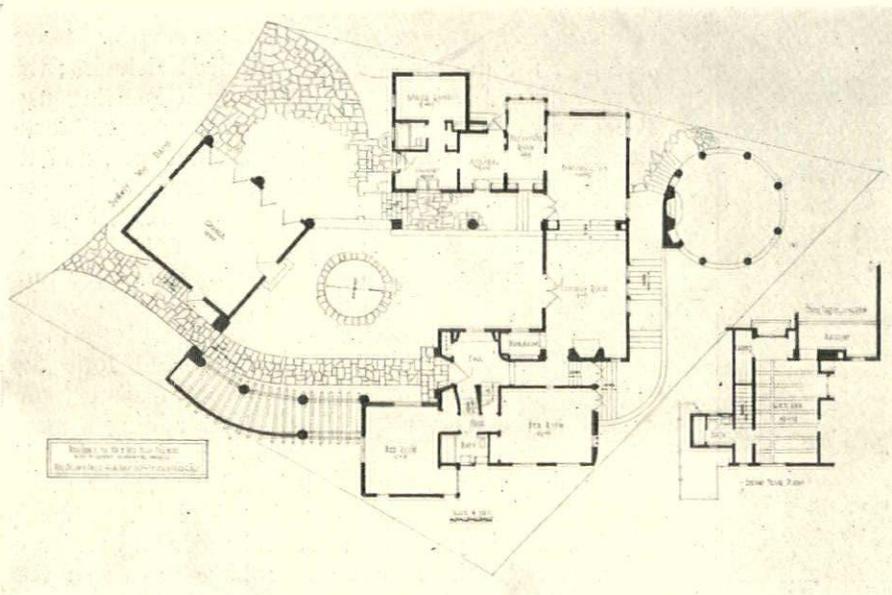
It is assumed that the specifications describe the mortar mixes desired for use in various parts of the structure. This subject is too (Continued on page 88)



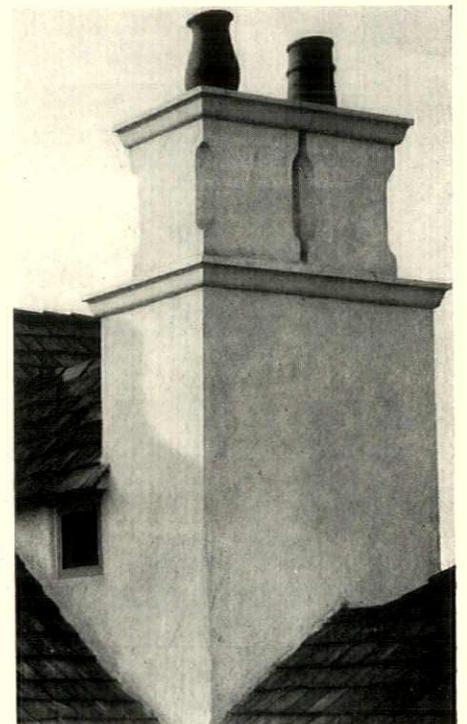
BERNE

BRUSH COATED
CONCRETE UNITS

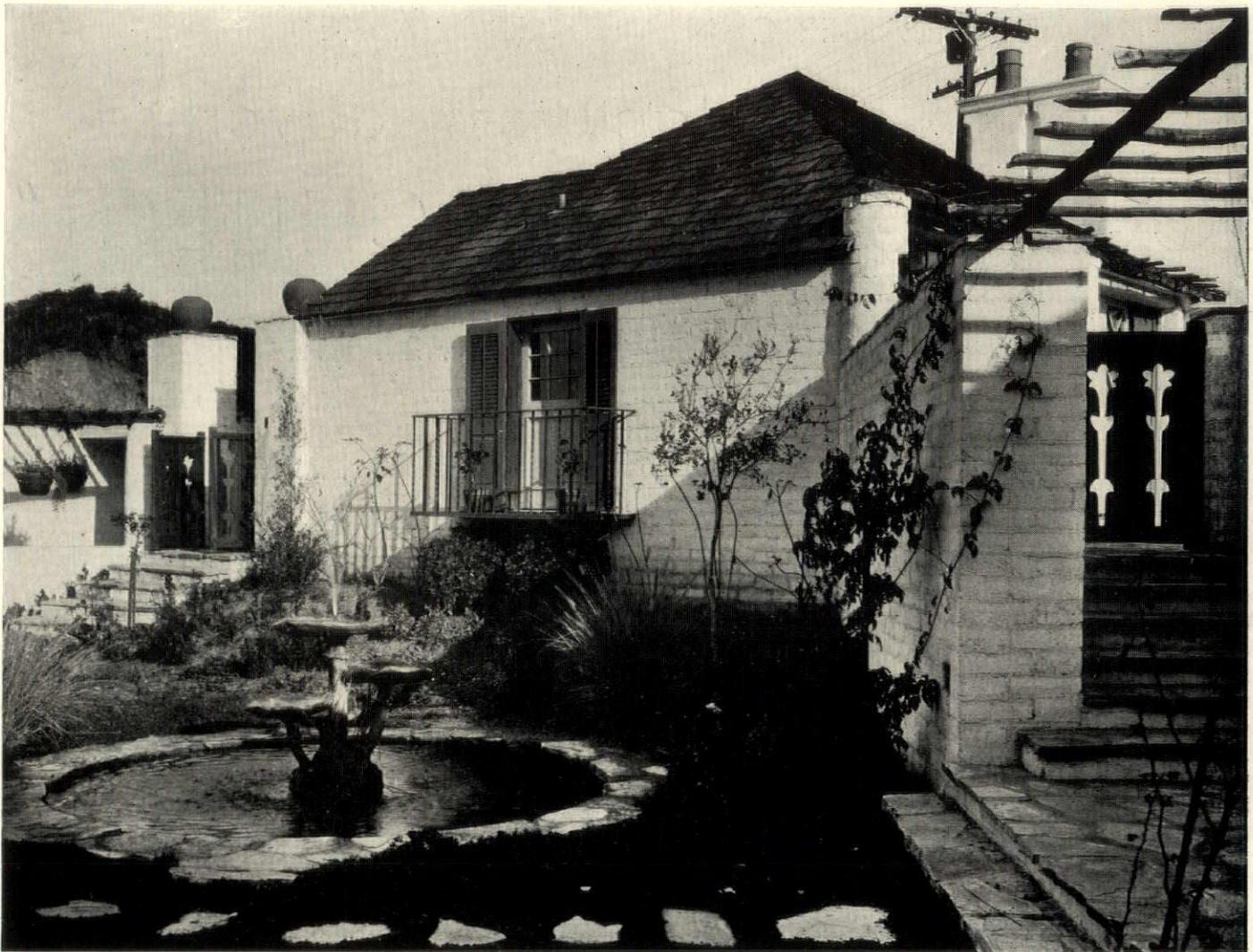
used on residence of Mrs. Margaret Shelby Fillmore
 Lookout Mountain, Beverly Hills, California
 Roy Sheldon Price, A.I.A., Architect



BREEZE AND SUNSHINE are given every opportunity in this interesting plan. A convenient note is struck by the location of the garage, which permits visitors to drive up and immediately be under cover in inclement weather



CAWOOD



CAWOOD

A MINIATURE GARDEN and fountain provide a man-made scene that contrasts charmingly with the mountain top view overlooking all of Los Angeles, Beverly Hills, and the ocean. The house cost \$17,000 and was built for the sister of Mary Miles Minter. Walls are of Stonetile, a hollow concrete brick or tile



BERNE

DETAIL of typical chimney with terra cotta chimney-pots

INFORMAL CHARM is shown in the garage and service entrance. The gate at the left of the garage marks the beginning of a covered passage which leads to the owner's part of the house

THE AMERICAN ARCHITECT ASKED
Should manufacturers advertise
"CONSULT AN ARCHITECT"

BY ERNEST EBERHARD
Managing Editor, THE AMERICAN ARCHITECT

CONFIDENCE in the building industry has been seriously undermined, particularly in residential work, because of frequently inefficient and sometimes deliberately dishonest construction. In St. Louis conditions are considered sufficiently grave to warrant action by the Better Business Bureau, which has established a Construction Industries Section to specialize on building matters. In various sections of the country, bureaus of one sort or another have sprung up to certify to good construction. The fundamental thought of such bureaus is that good construction not only logically entitles the owner to a larger loan but that public confidence in building will be increased by certification through ability to buy on known quality. Conditions have become such, as stated at the recent A. I. A. convention by F. P. Byington, president of the Producers Council, that manufacturers are beginning to fear they will be forced into price competition instead of quality competition. This is as undesirable for the public as it is for the manufacturer and the building industry at large.

There is one answer and one only to this entire question of protecting the good name of the building industry and assuring the public an honest dollar's worth for its dollars spent.

That answer is for the entire building industry to realize what many manufacturers already know—that the capable architect is the man through whom all merchandising of building products should be done. The manufacturer *must* see to it that his product is intelligently specified and intelligently used. If he does not, he must suffer the consequences.

THERE is nothing which will create more ill will for a manufacturer than for his product to be used for a purpose to which it is not suited or for it to be poorly installed. The lay mind is exceedingly apt to blame the product for the failure. Friends hear about it, see it with their own eyes—and definitely enter the classification of prospective customers forever lost to that particular manufacturer. This is a fact thoroughly realized by reputable manufacturers, who often invest considerable money in order to present engineering or other data that shall as nearly as possible guarantee the successful use of their product.

This successful use quite obviously depends on expert specification and supervision. The capable, well trained architect is excellently equipped to render this service. Before specifying a product, he seeks to know everything possible about it. Much as many a manufacturer may deplore the difficulty of convincing an architect, yet this very conservatism of the profession is the manufacturer's own best safeguard. There is little likelihood of failure if a product is specified and installed under the supervision of such a very exacting man as the architect.

Such being the case, the greater the percentage of operations which pass through the hands of the architectural profession, the greater the foundation of public confidence on which the manufacturer may build his business. And, as a natural corollary, the less is the sales resistance to his product, for its reputation is soundly built upon the experience of satisfied users.

22 A.I.A. Chapters
said "YES!"

- * BALTIMORE
- BOSTON
- CLEVELAND
- COLORADO
- * COLUMBUS
- DETROIT
- IOWA
- KANSAS
- KANSAS CITY
- MONTANA
- NEW JERSEY
- NORTH CAROLINA
- NORTH TEXAS
- PHILADELPHIA
- RHODE ISLAND
- * SAN DIEGO
- SOUTH TEXAS
- SOUTHERN CALIFORNIA
- TENNESSEE
- * WASHINGTON
- * WEST TEXAS
- * WISCONSIN
- * *passed a formal resolution*

2 A.I.A. Chapters
said . . .

GEORGIA

Executive Committee feels Chapter should not express itself one way or the other, though considering it would be highly appreciated by the architect.

NEW YORK

Executive Committee feels that action, of their own volition, by advertisers would be helpful in bringing the profession before the public. It feels that it cannot officially approve the idea unless approved by the Board of the A. I. A. and has been taken up with the National Producers Council.



BEHIND THAT

Picture any fine interior—a charming living room, for example—with only an artistic grille in the wall as visible evidence of radiator heat.

Such a picture has been made reality in every room of many homes by the Herman Nelson Invisible Radiator. For this modern, compact heating unit was specially designed to be encased within the wall—not merely out of view but entirely out of the way.

You simply have the Herman Nelson Invisible Radiator installed in connection with a steam, hot water, vapor or vacuum heating system—then plan each room as if you had no radiators at all. Nothing will interfere with the arrangement of

Insulite. A copy of our free booklet, "Increasing Home Enjoyment" will also be sent you.

Mail This Coupon Today

THE INSULITE CO.
1200 BUILDERS EXCHANGE, DEPT. 40G
MINNEAPOLIS, MINNESOTA.

Gentlemen: Please send me your free booklet, "Increasing Home Enjoyment," also sample of Insulite to test.

Name _____
Address _____
City _____ State _____

your f
the ex

Anc
Invisi-
ment's worry or bother. It has no joints of any kind to fail and leak, no parts that can rust or get out of order.

If you would protect your future home against depreciation, consult your architect or heating engineer regarding Herman Nelson Invisible Radiators. Should you prefer, get in touch with our nearest sales office (see list below) or write for our descriptive catalogue.

THE HERMAN NELSON CORPORATION, 7 Moline, Ill.

HERMAN NELSON *Invisible* RADIATOR

McQuay Radiators rapidly transfers its heat to the air passing up through it, forcing the heated air out into the room to circulate completely.

So these radiators are not only "smarter," but heat rooms

capacities and dimensions, there is a McQuay for every heating need.

Ask your Architect or Heating Contractor for the booklet, "Modern Ideas in Radiators," will interest you. Write for a copy.

McQUAY

Modern
RADIATORS

McQUAY RADIATOR CORPORATION
General Sales Offices: 33 East Wacker Drive, Chicago
Branches in Principal Cities

twice the strength of wood lath.

Insulite is economical—it is not an additional material, for it replaces non-insulating materials—and the large, broad panels are easily and quickly applied, thereby reducing labor costs.

Ask your architect, builder and lumber dealer about Insulite—they know. Write for a sample of Insulite to test, and a copy of our free booklet, "Increasing Home Enjoyment."

THE INSULITE CO.

(A Backus-Brooks Industry)

1200 BUILDERS EXCHANGE, DEPT. 40G
MINNEAPOLIS, MINNESOTA

OFFICES IN ALL PRINCIPAL CITIES

that says... "This
home is modern"

ENIENCE

Household utilities has, long ago, of most old-fashioned items of the cistern pump, old-style heat-dry equipment are just history. accomplishment among modern in the better home and apart-e and more the usual thing in

The Kernerator is the modern way. It does away with the inconvenient, unsightly and unsanitary garbage can, and solves the problem of rubbish disposal that is so serious with modern fuels.

Ask your architect about Kernerators or send for attractive booklet.

KERNER INCINERATOR CO., 1226 North Water St., Milwaukee
OFFICES IN 150 CITIES

KERNERATOR

INCINERATION

FOR NEW AND EXISTING BUILDINGS

OIL OR GAS FOR HEATING — WHAT ABOUT WASTE DISPOSAL

An architect insures satisfactory use of a product because

- a . . . he specifies it intelligently for a purpose to which it is suited and where it will give satisfaction
- b . . . he supervises application or installation so that the quality product does not suffer because of inferior workmanship
- c . . . competition among manufacturers is on a quality basis rather than a price basis
- d . . . the public receives greater value for its building dollars
- e . . . public and manufacturers are protected against incompetent or dishonest builders

the Result . . . greater public confidence in the building industry and more desirable business for manufacturers

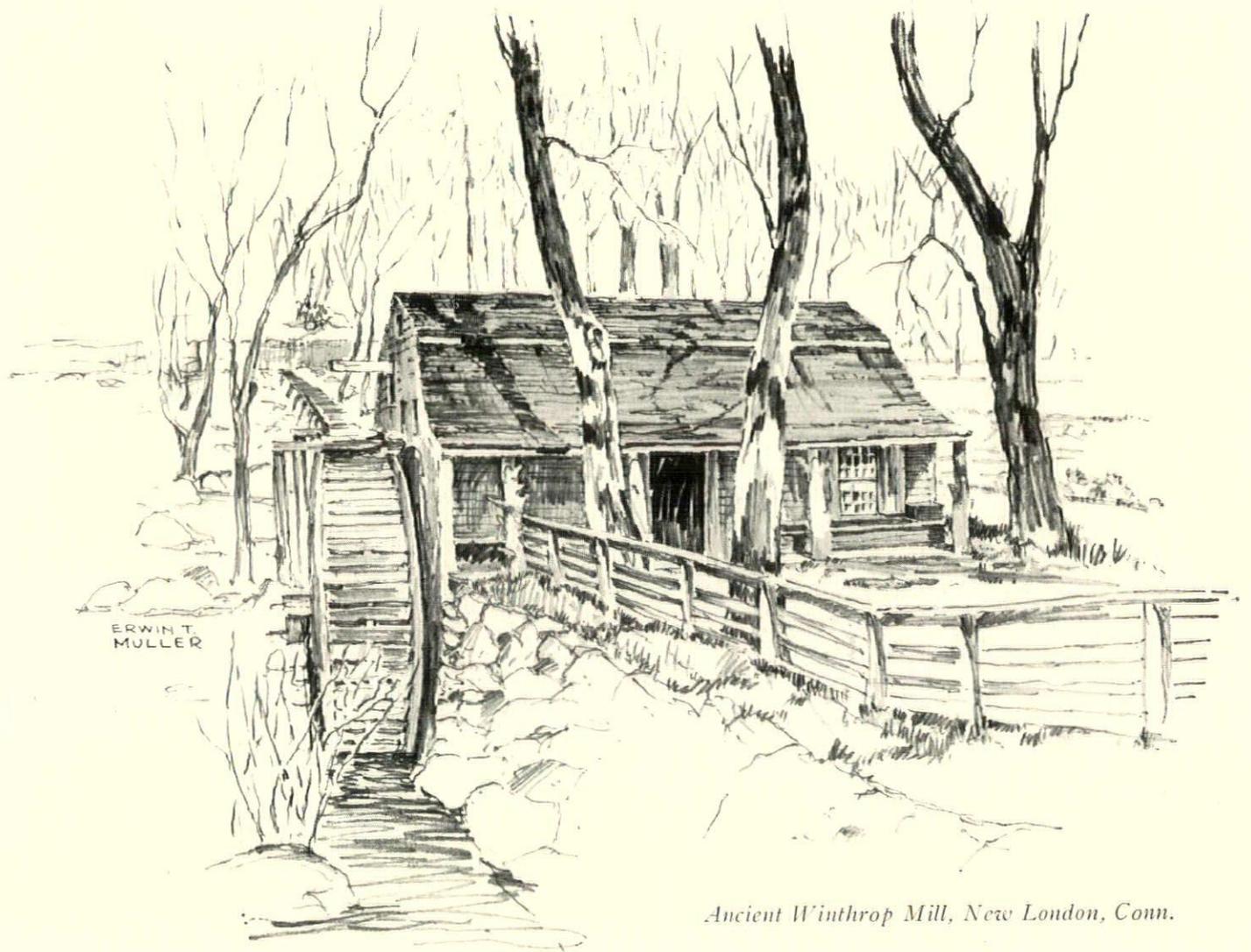
Four manufacturers who are already advising prospective customers to consult an architect. There are others who are doing it and there should be many more

It may not be too visionary to forecast the day when some marketing-wise manufacturer will seek to merchandise his product through the architectural profession alone, discarding all methods of selling which mean a sale today but a lost sale tomorrow; a sale above cost today, but a sale below cost tomorrow.

Since the well trained architect is the man best suited to protect the public interest and to safeguard the manufacturer's own profits, it is thoroughly logical for the sale of building materials to be directed through his hands. It is practical common sense for the manufacturer to have his advertising suggest that an architect be consulted before his product be used in order that the lay customer may enjoy maximum satisfaction. That means that every advertisement, whether in newspapers, magazines, radio, or in direct mail work to the consumer, should embody the thought, "Consult an Architect."

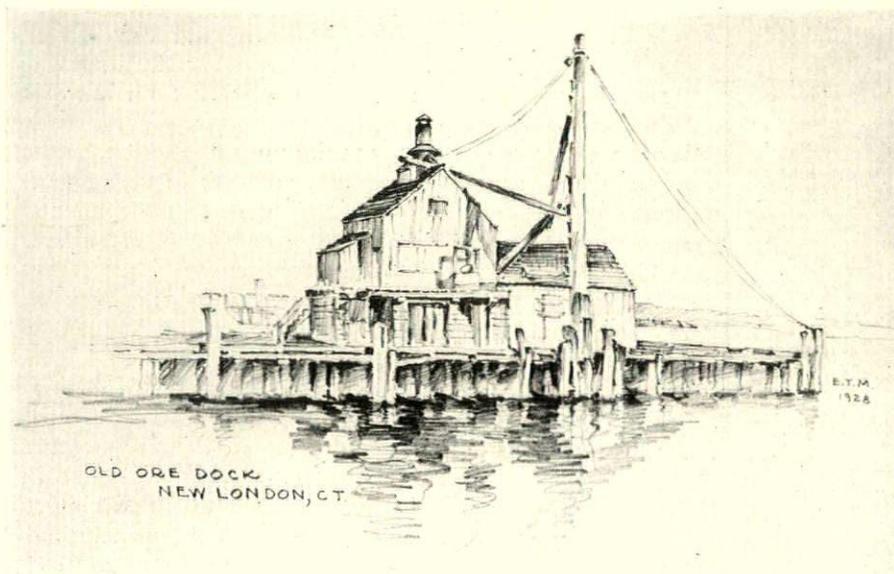
This idea was called to the attention of THE AMERICAN ARCHITECT by the Northern California Chapter in connection with an article published in the April, 1930, issue, "Selling the Man in the Street, a Survey of What 44 Chapters of the A. I. A. are Doing." As a result of this suggestion, THE AMERICAN ARCHITECT wrote the various Chapters to determine if the architectural profession at large felt it wise for manufacturers to incorporate some such phrase as, "Consult an Architect" in their advertising. The result was overwhelmingly favorable.

(Continued on page 104)



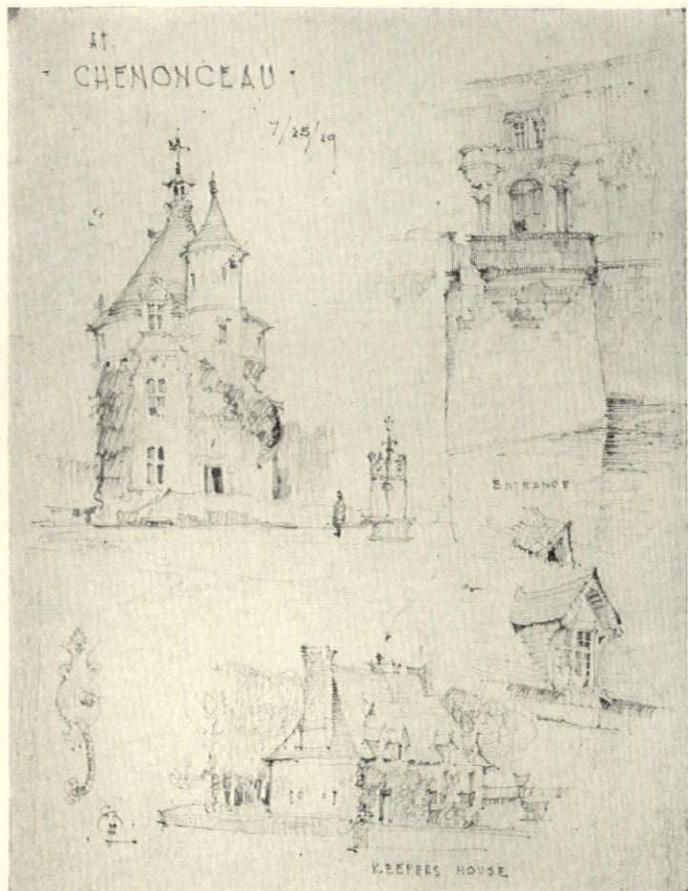
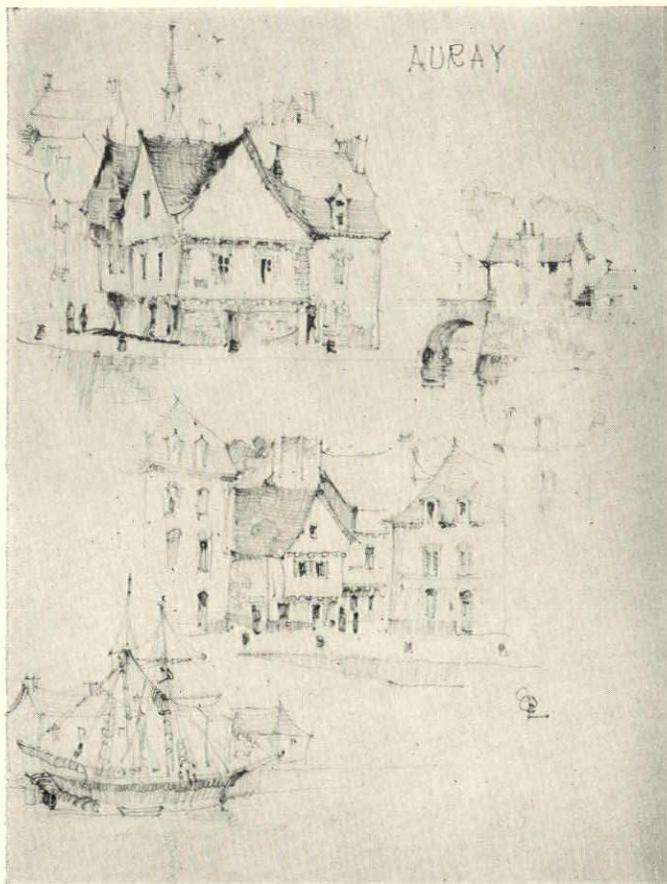
Ancient Winthrop Mill, New London, Conn.

SKETCHES



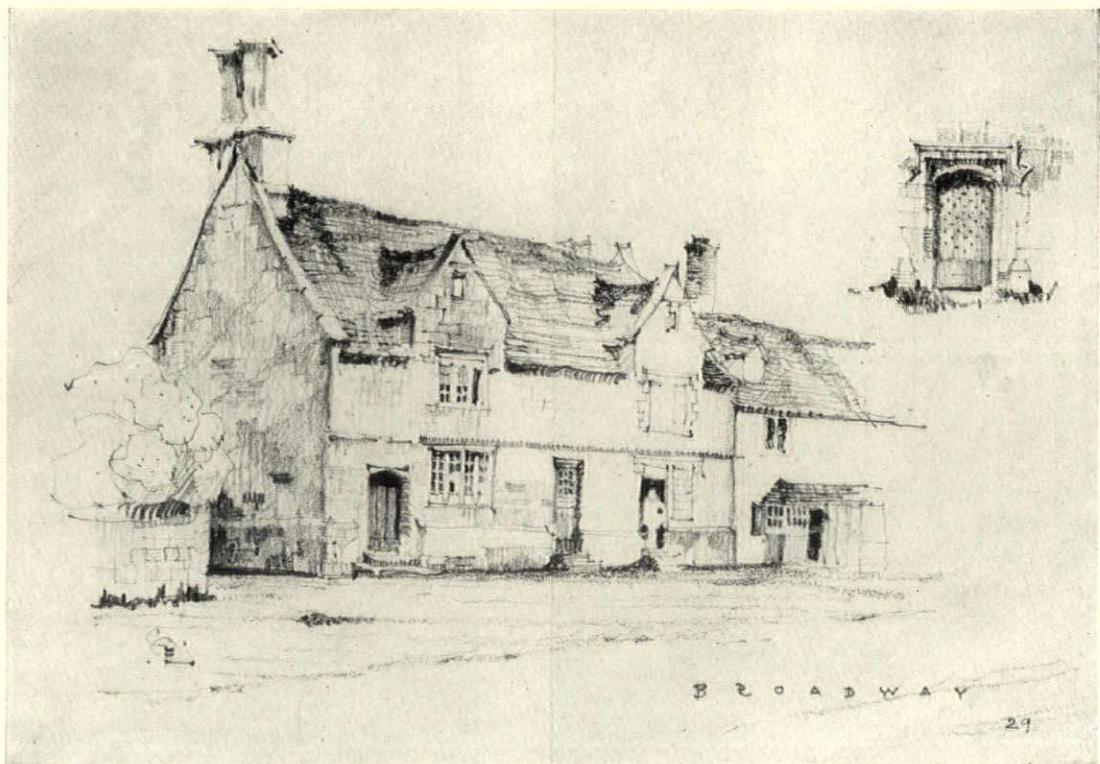
OLD ORE DOCK
NEW LONDON, CT

Sunlight and shadow make the sketches shown on this page of particular interest. They have been made with a sympathetic understanding of the possibilities and limitations of the pencil. They were made by Erwin T. Muller of the office of H. S. Swan, New York City



Auray and Chenonceau. Pages from the sketch-book of Charles G. Eames of St. Louis, Mo. The drawings are executed in pencil on Cameo paper. The size of the sheets are five by seven inches. These field notes have been made with a technique and the elimination of details that make them valuable for future reference and interesting to study

Broadway in the Cotswold, England. A pencil study by Charles G. Eames. Size of drawing is seven by nine inches

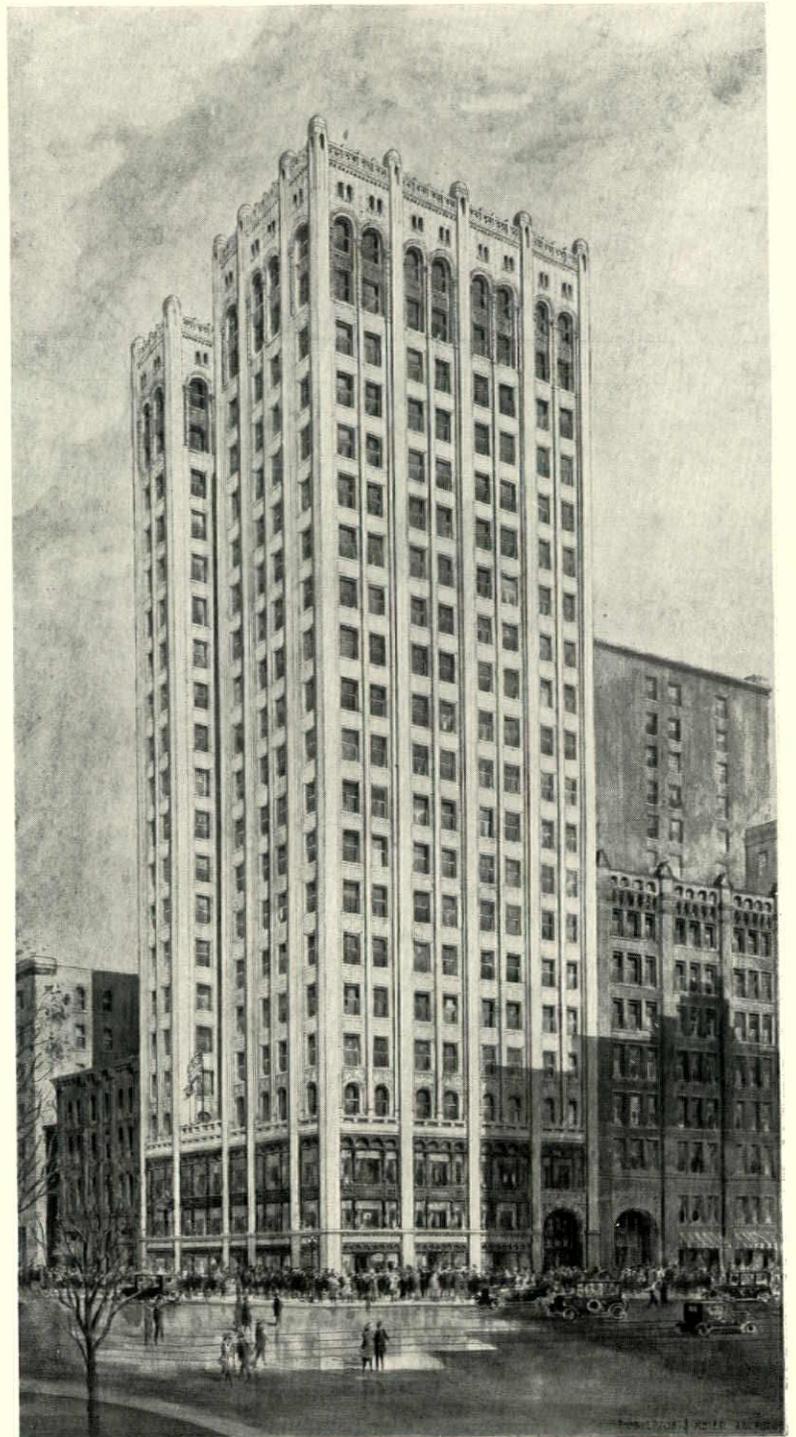




35 stories
completed in 1929

•

15 to 20 stories
proposed in 1920



EIGHT YEARS OF Planning for Profit

THE STOTT BUILDING, DETROIT

DONALDSON & MEIER, Architects

by Walter R. Meier

THE development contemplated in 1920 by the owners of the property on which the Stott Building was erected was an office building of about fifteen stories, which at the time appeared to be a reasonably economic decision considering the valuation and assessment on the property and the manner in which other similar properties were being treated.

An important consideration in the preparation of the first plan studies was the possible and probable development of which the adjoining properties were capable. To the south, on an inside piece of property, stood a very old, seven-story, masonry bearing wall type building occupied by stores, offices and an antiquated theatre; to the east was an old, narrow four story building. Both structures were obsolete and therefore likely to replacement at any time by modern buildings. A study of this question led to the conclusion that a new building to a maximum height of about ten stories might be developed to the east, while to the south some scheme might possibly be devised to warrant a development of fifteen or twenty stories in spite of the fact that but one successful office building on an inside lot then existed in Detroit and this had light and air rights on one side over a low bank building. This situation seemed logically to dictate the placing of the elevators and utility features on the south wall and the first studies show this arrangement. It seemed natural also to endeavor to get the maximum amount of rentable area on the typical floors until it was realized that this had a very detrimental effect on the average quality of the resulting space.

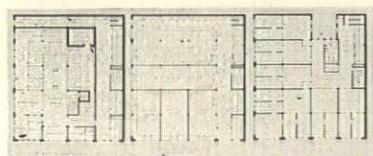
About this time a survey of office areas in Detroit was made and it was discovered that 64% of the space was rented in units of less than 500 sq. ft. and 40% in units of less than 300 sq. ft. It was also observed that prospective tenants in the way of large national organizations, such as insurance companies, generally had district headquarters offices at Chicago or Cleveland

embracing the Detroit area and maintained, locally, only small branch offices. This information had an important bearing on our problem, leading to the realization that the office units in the early studies dated Nov. 1, 1920, were too large in area and too deep. Likewise the bank scheme shown for the lower floor of one of the studies was abandoned because the property commanded much higher first floor rental value than any bank would be willing to pay. The arcade scheme was at first considered because of the heavy pedestrian traffic in both directions from one street into the other but was likewise discarded in favor of a single entrance on Griswold Street, because similar developments in Detroit had not been notably successful and because the new building was intended to attract chiefly a tenancy whose pedestrian traffic was largely confined to Griswold Street.

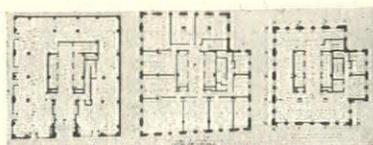
SHORTLY thereafter occurred the post-bellum period of deflation and depression leading to a postponement of the project until the year 1923, when studies were again resumed. These were rejected for reasons similar to those applied to the preceding scheme and because the elevators were thought to be too far distant from the entrance on Griswold Street. A further sketch, dated Feb. 12, 1924, was rejected because of the amount of office space exposed on the inside court, although the remaining space was beginning to approach closely the desired characteristics.

The scheme of Nov. 3, 1924 was discarded for reasons similar to the preceding, while that of Jan. 23, 1925 shows an attempt to reduce the size of the court and get additional office space on the south side of the court, the balance of the space being subdivided in a manner similar to preceding schemes. This shows what inconsistencies will creep in as there had already been objection to a smaller amount of court space.

A number of sketch plans were now developed with

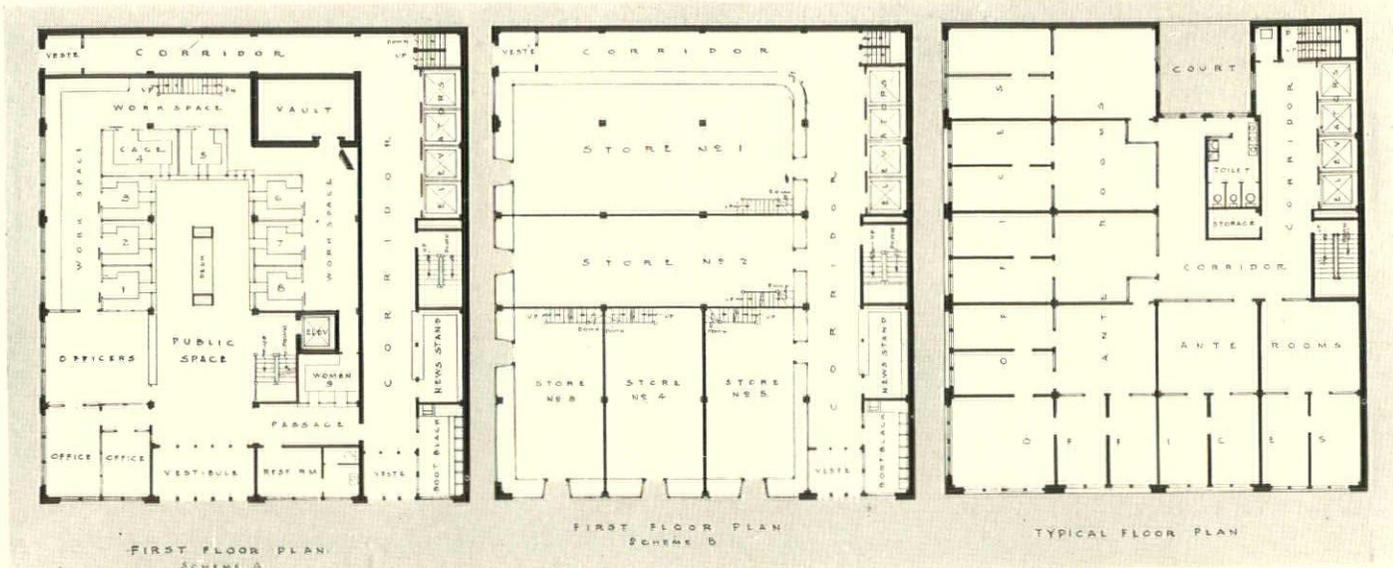


1920

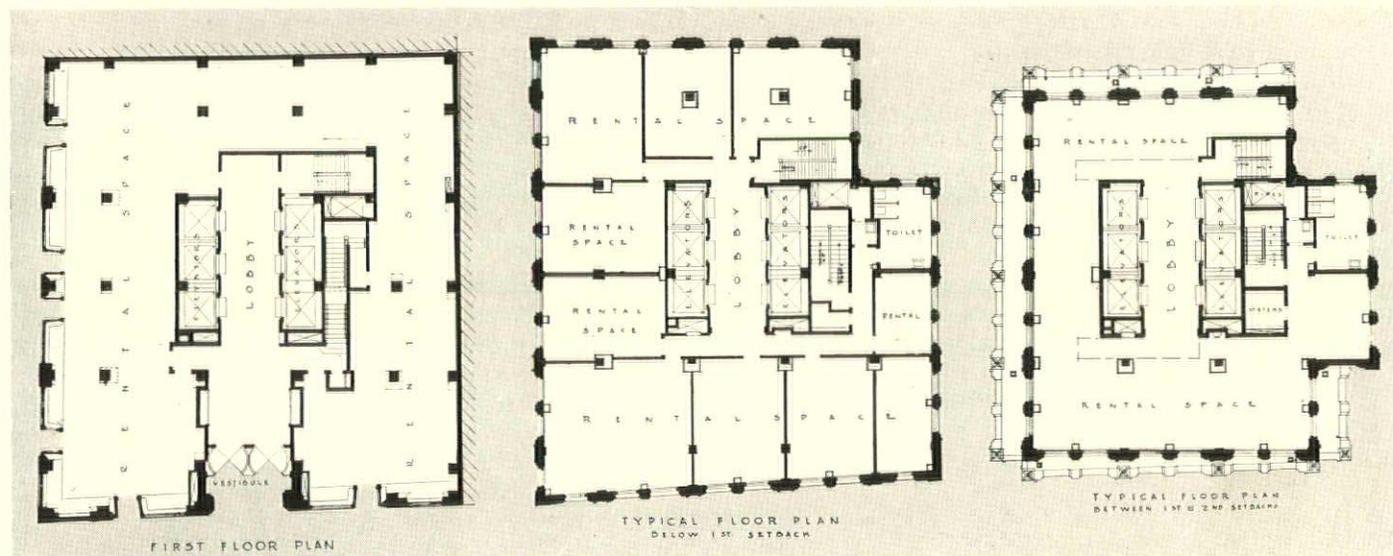


1929

On the pages that follow are the plans suggested over an eight-year period and the reasons for their rejection until final approval was granted



1920...FIRST PLANS, rejected because offices were too large and too deep, and because arcade buildings had not been particularly successful in Detroit. As the first floor rental was too high for a bank to pay, it was decided to use the space for stores



1929...FINAL PLANS, accepted because the elevators were conveniently located, the offices were of a size likely to rent easily, and the location of light court and toilets retained maximum rental value should the adjoining property be developed with high buildings

a court opening off center on the north elevation, but were rejected because they did not permit satisfactory development of the exterior on this side and called for too much rentable space on the court elevations with insufficient natural light.

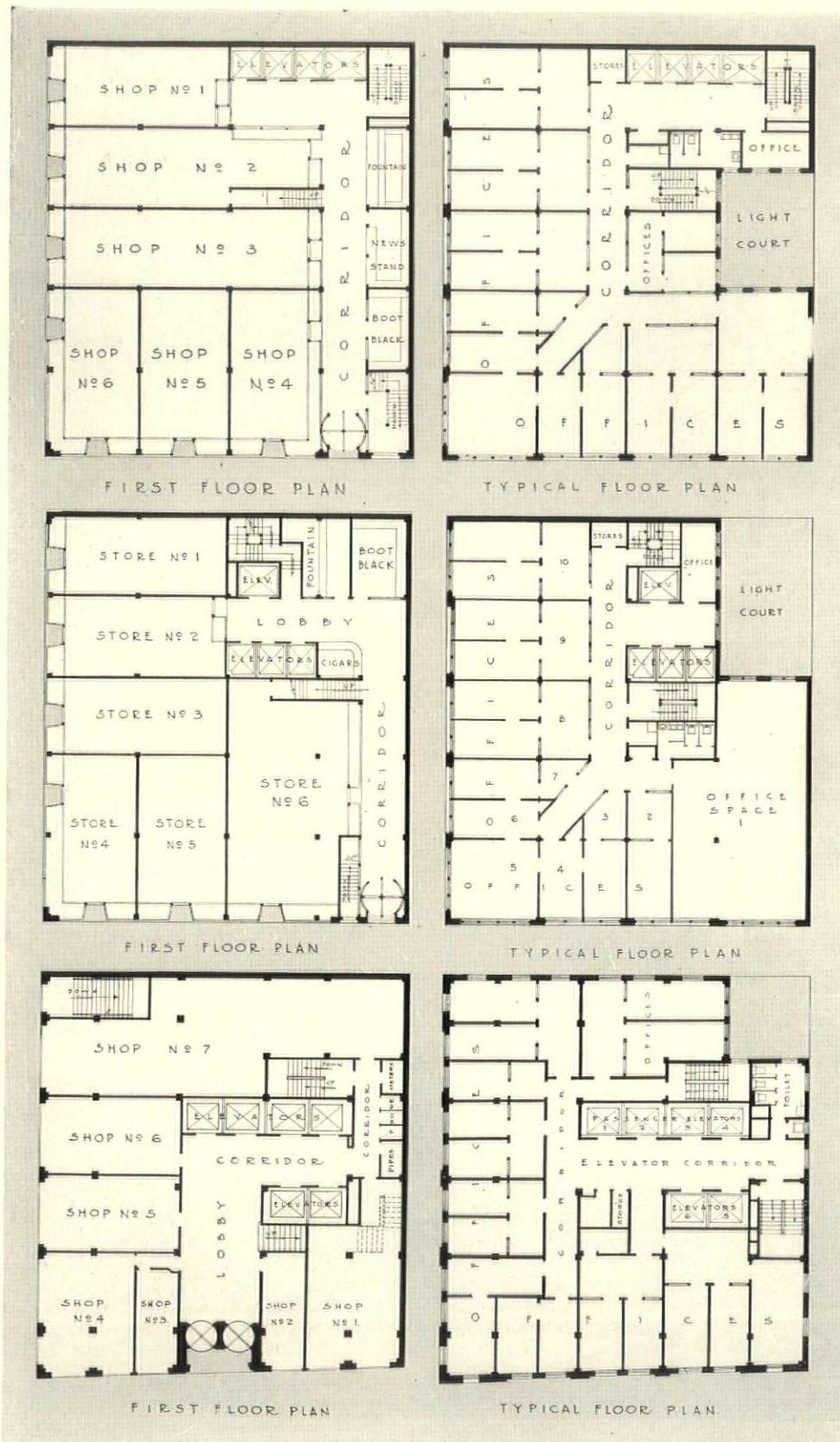
While the plan of Jan. 19, 1926 proved to be an improvement over the several preceding studies and permitted a balanced treatment of the north elevation, it was nevertheless considered unsatisfactory, due to the belief that something better could be evolved.

It will be observed that up to this time it was still the intention to build only to a height of about fifteen stories. The project had once been postponed because of the depression of 1921 and later principally because an urgent demand for office space did not appear to exist.

In 1926 a number of factors began to change the outlook. First, the assessment on the property had recently

been raised 55% in one year. Second, the downtown section of Detroit was being developed at several points with buildings from 20 to 35 stories in height, which had the effect of increasing property value. This made it necessary to consider a higher building in order to bring an adequate return on the increased valuation.

THIRD, it was observed that peak rentals were being secured in the upper stories of the high buildings. Fourth, recent developments in elevator design made available a speed of 800 feet per minute as against a former maximum speed of 600 feet per minute, which made office space in the upper stories of high buildings accessible in no greater time than the upper stories of much lower buildings served by slower elevators. Likewise, 30 second interval elevator service, heretofore considered very good (Continued on page 110)



1923

Rejected because the offices are too large and too deep, and the elevators too far from the entrance

1923

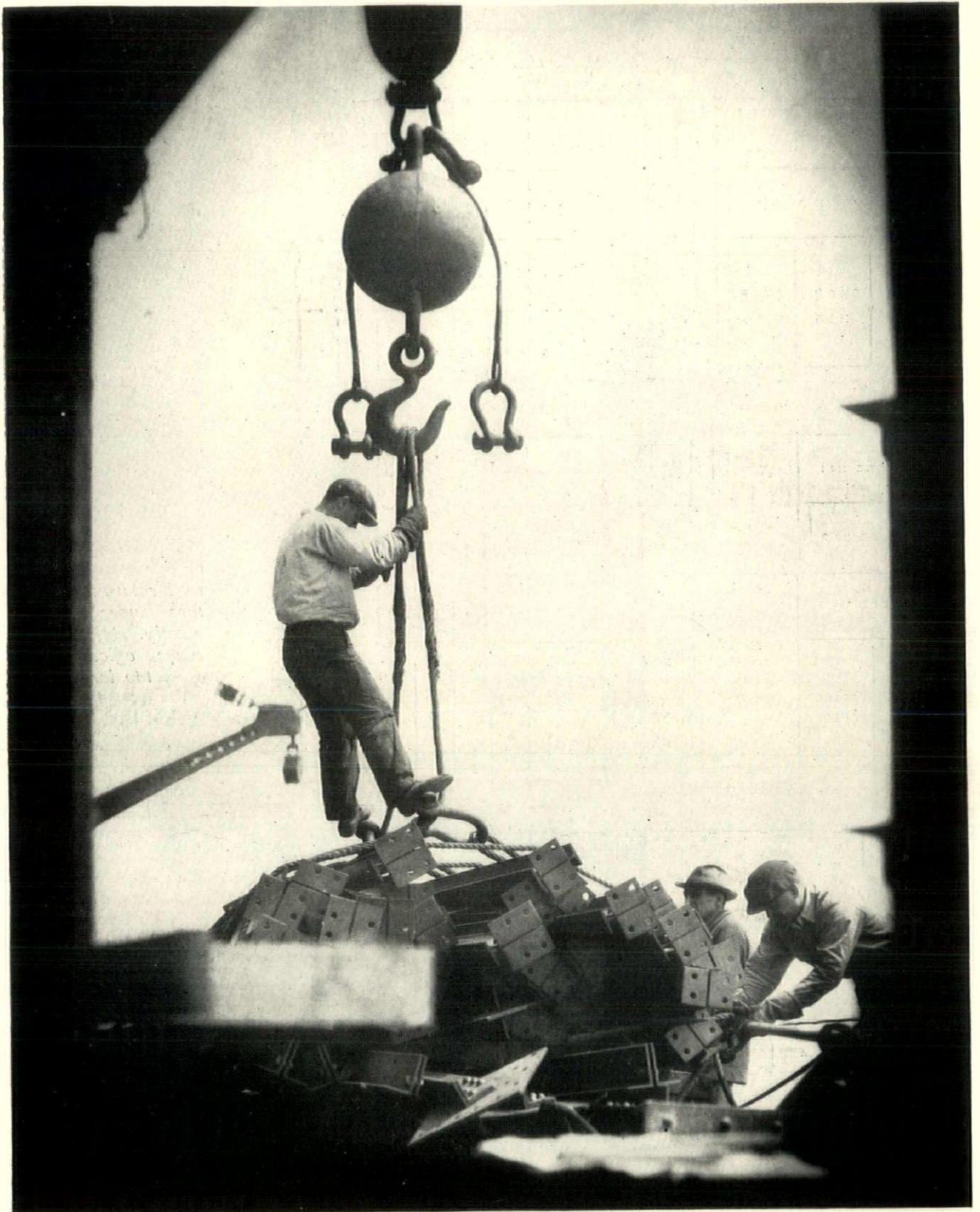
A later study, where an attempt was made to locate the elevators more conveniently. Rejected because offices were too large

1927

Rejected because some office units were still too large. For the first time the entrance is placed in the center

VARIOUS PLANS DEVELOPED OVER 8 YEAR PERIOD

- *Size slightly irregular in shape with two street frontages*
- *Planned first as a fifteen story building but height gradually increased to thirty-five stories*
- *Old properties on inside lines likely to be replaced with modern buildings, one of ten stories, the other of twenty stories*
- *64% of Detroit space rented in units of less than 500 square feet, 40% in units of less than 300 square feet*



BROWNING

STEEL . . . AND! SKY

Landing a load after a fast trip to the top of the world's tallest structure—the Empire State Building



BROWNING

"EASY, THERE!"

*Slipping a limestone slab into a frame of
chrome nickel steel at the Empire State Building*

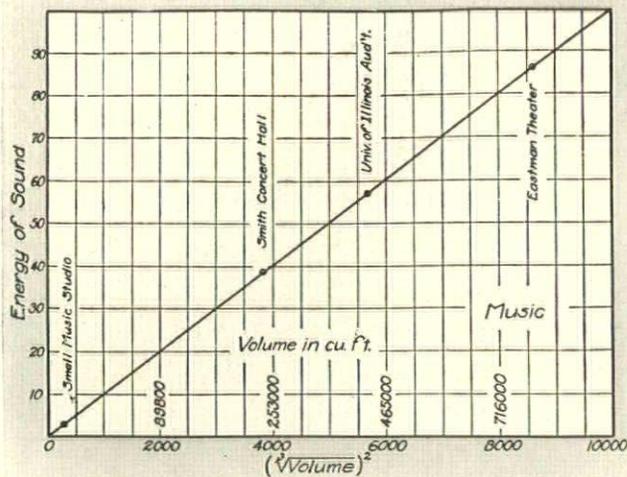


FIGURE 1: This chart shows how many cubic feet are required in an auditorium for a given sound intensity

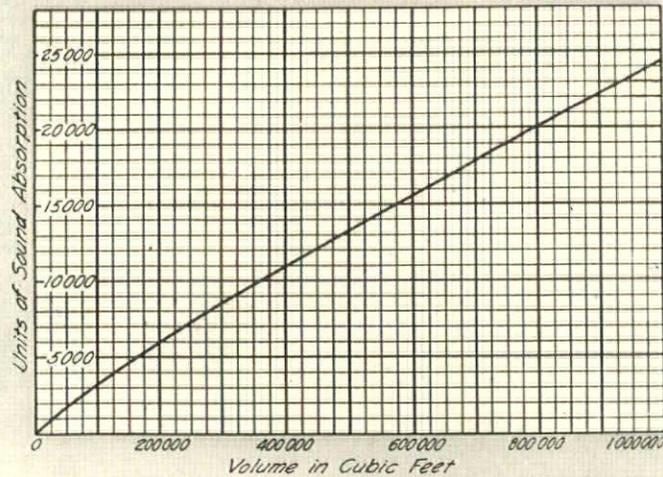


FIGURE 2: Graph showing the amount of absorption needed to secure a satisfactory reverberation time

HOW TO DESIGN AN AUDITORIUM WHERE It is EASY to Hear

STARTING with the classic investigation and extensive research of the late Professor W. C. Sabine of Harvard University in 1895, the subject of architectural acoustics has been developed to a science. Professor Sabine established the foundation for the science in two groups of papers published in *THE AMERICAN ARCHITECT*, the first in 1900 and the second in 1906. From this foundation the subject has been developed to the point where we can now accurately compute the acoustical properties of a room even before it is built, or prescribe its correction after it is built. Suspicion has been removed, and there need be no apprehension regarding the acoustics of a room, providing the architect acquaints himself with a few simple principles and applies them in an intelligent manner.

Acoustics is never the sole consideration in design. At best it is but a factor. The architect is seldom allowed to make free choice, but is governed by fundamental requirements and conditions. There can be, therefore, no rigid rules, no set dimensions, no standard kinds of materials in order to insure good acoustics. The architect can, however, give intelligent consideration to certain factors which govern the acoustics of an auditorium. There are three of these factors, and each will be discussed briefly.

The first to be considered is the volume of the room. It is not always predictable just what a room will be used for when completed, whether for band or orchestral entertainment, speech, or reproduced sound.

The acoustic requirements, so far as size of the room is concerned, vary with the intensity or the loudness of the sound used in it. Where a room is used for various purposes it is of course necessary to strike a happy

By
W. K. FRIEND

*Acoustical Engineer,
American Seating Company*



3 FACTORS THAT GOVERN ACOUSTICS

a...volume

varies according to use. An orchestra requires more volume than does a speaker

b...shape

may focus sound. Curved wall surfaces focus sound as a mirror does light. For curved ceiling or walls, radius of curvature should be more than twice height of auditorium

c...reverberation

causes 90% of acoustical troubles. Corrected by materials and furnishings which reduce sound reflection by absorbing sound energy

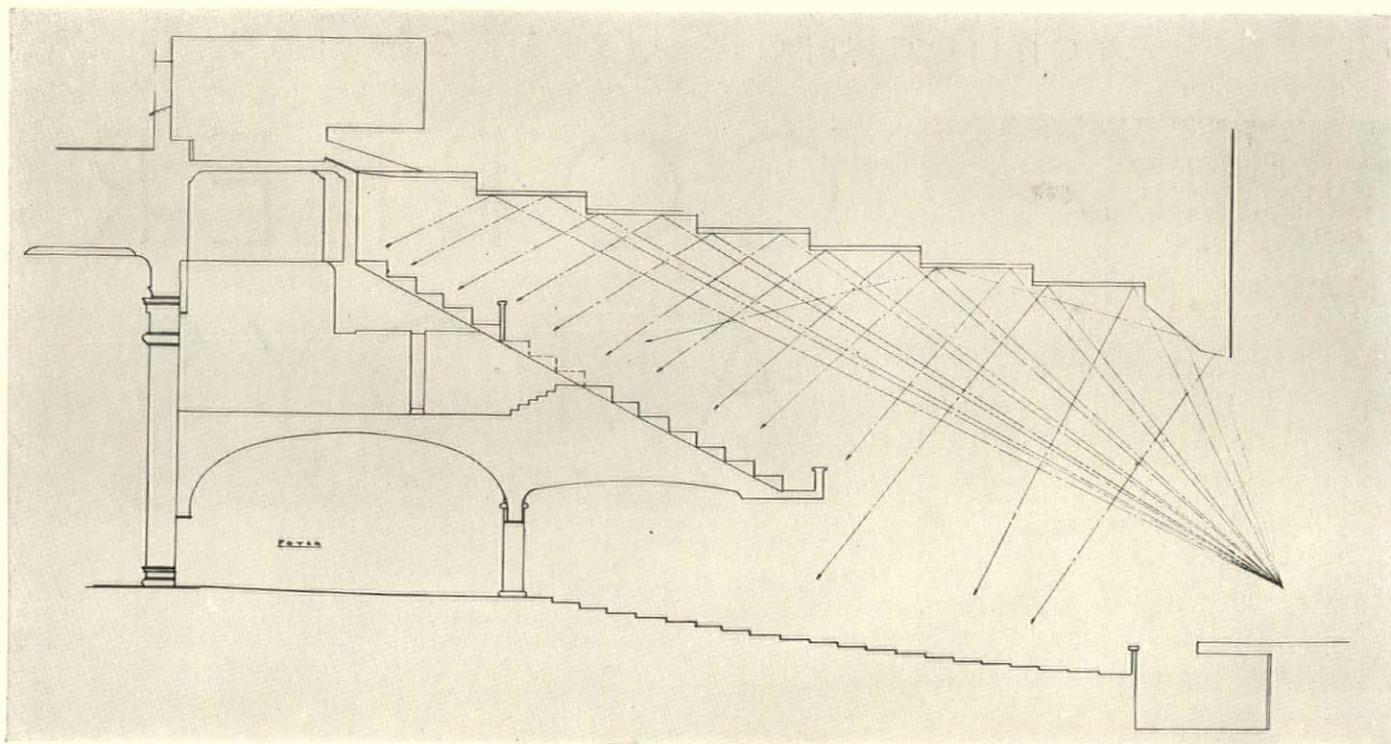
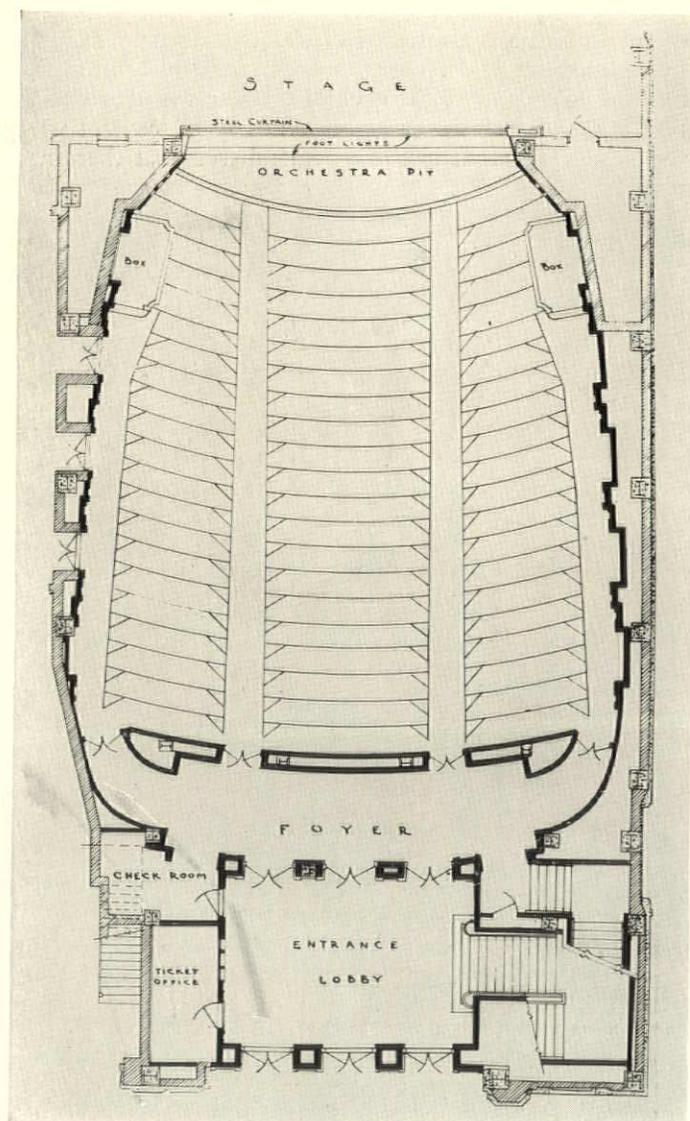


FIGURE 3: One of the finest medium-sized auditoriums in the United States. The ceiling is of flat stepped-up surfaces which reflect the sound waves almost ideally. The Chicago Civic Theatre, Graham, Anderson, Probst & White, architects

medium in its design in order not to favor one type of sound at the expense of another.

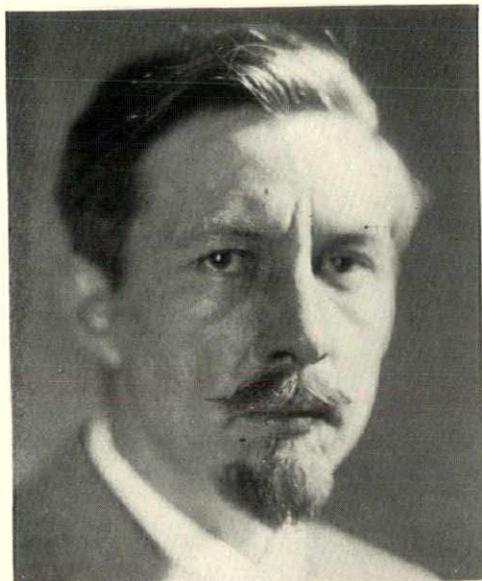
Professor F. R. Watson of the University of Illinois has developed a curve, Figure 1, as a result of his experience in correcting the acoustics of a great many auditoriums that may be used as a guide, in a general way, in determining the suitable room size. For practical use he has expressed the energy of the sound in terms of the energy produced by an average orchestra instrument. Thus the vertical axis in Figure 1, labeled "Energy of Sound," can be interpreted as number of instruments. The volume is not given directly, but is expressed in terms of the square of the cube root of the volume, which is proportioned to the energy of the source of sound. This is given along the horizontal axis. The curve is used as follows: Assume a new auditorium is to accommodate an orchestra of 70 pieces, or its equivalent. An inspection of the curve shows that for 70 instruments (vertical axis) the square of the cube root of the volume (horizontal axis) is 7,000. The volume required would then be $(\sqrt{7,000})^3$ or $(83.7)^3 = 587,000$ cubic feet. Professor Watson states that further investigation of the subject of room size appears desirable, but the above analysis, as a general guide, will be found beneficial.

In rooms where the normal spoken voice fixes the intensity of the sound, the volume should be small. For band music, the volume should be quite large so that the increased intensity of the band music will have sufficient space for proper distribution so that the intensity per unit volume will not be so great as to be undesirable. It is fortunate that the human ear is able to perceive sound over a (Continued on page 80)



Architectural Uses of The

COPPER ALLOYS



By

Harrison Gill

*an architect registered in New York State and
Chief Designer of the Wm. H. Jackson Co.*

THE prevailing concern for color has become a primary consideration in the design of metal work. The relation to adjacent work is not a particularly difficult problem because metallic colors have the characteristic of harmonizing with almost any flat colors or colors without metallic lustre. Often the color quality of other materials is improved by the metals. This fact forms the basis of heraldic design and accounts for the brilliancy of armorial bearings. It is also an important factor in enamelling, as may be seen in Gothic stall brasses or Chinese cloisonné. The use of two or more alloys in one design is a far more subtle problem and cannot be adequately solved without actual experiments with the metals themselves. Damaskeening and inlay are of great antiquity and modern metallurgy has made possible many fine gradations and combinations which are yet to be developed by craftsmen and designers.

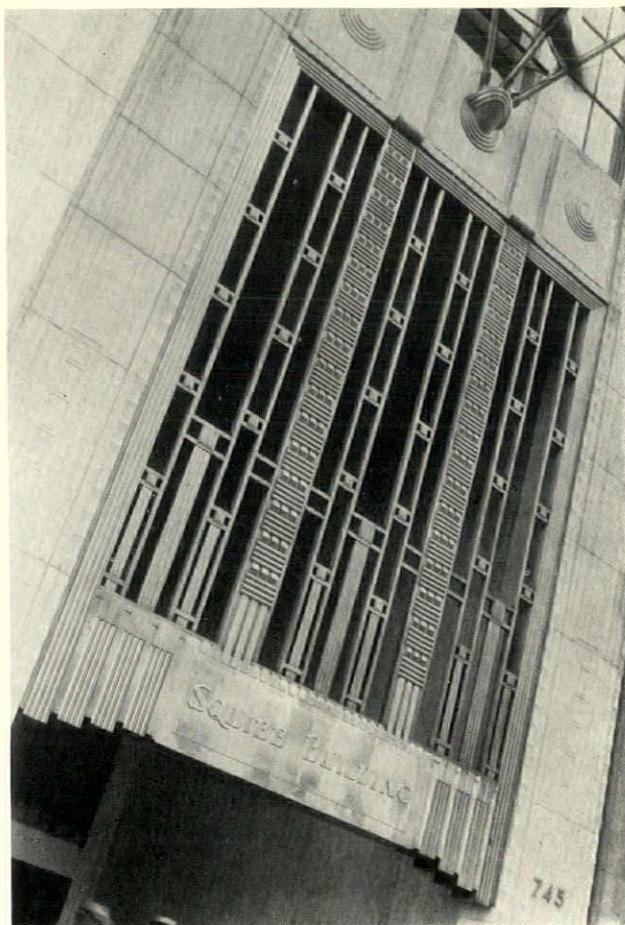
For architectural purposes all metallic colors may be classed in three groups: (a) the untarnishables, (b) those which acquire an unsightly tarnish. (c) those which take on a beautiful patina.

Among the copper alloys which we are considering none are untarnishable. The only yellowish metal which will not change color is gold. The only untarnishable "white" alloys available commercially for architectural purposes are the chrome and chrome-nickel steels and some nonferrous alloys with a very high nickel content.

It may be that an interesting patina will form on any copper alloy if given sufficient time and favorable conditions. For instance, brass is usually polished at frequent intervals because of its ugly tarnish, yet we are all familiar with the beautiful patina of some old brasses.

Many of the alloys we are using today are so very new that we do not know what will take place as to

surface color over a period of years. We do know that the true bronzes, which have been used for thousands of years, become brown or green and, in the case of certain oriental mixtures, a lustrous black. But no true bronzes, in the metallurgical sense, are used extensively in architectural work today. The chief reason for this condition is that the designer has lost nearly all contact with the foundryman. It is to be remembered that there are

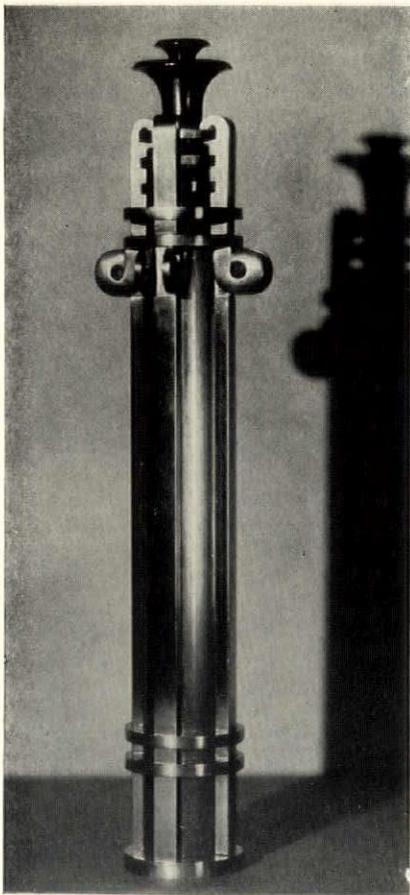


EXTRUDED AND CAST forms of nickel silver designed for easy shop manufacture. Entrance grille, the Squibb Building, New York. Executed by the Reliance Bronze and Steel Corp. Buchman and Kahn, architects

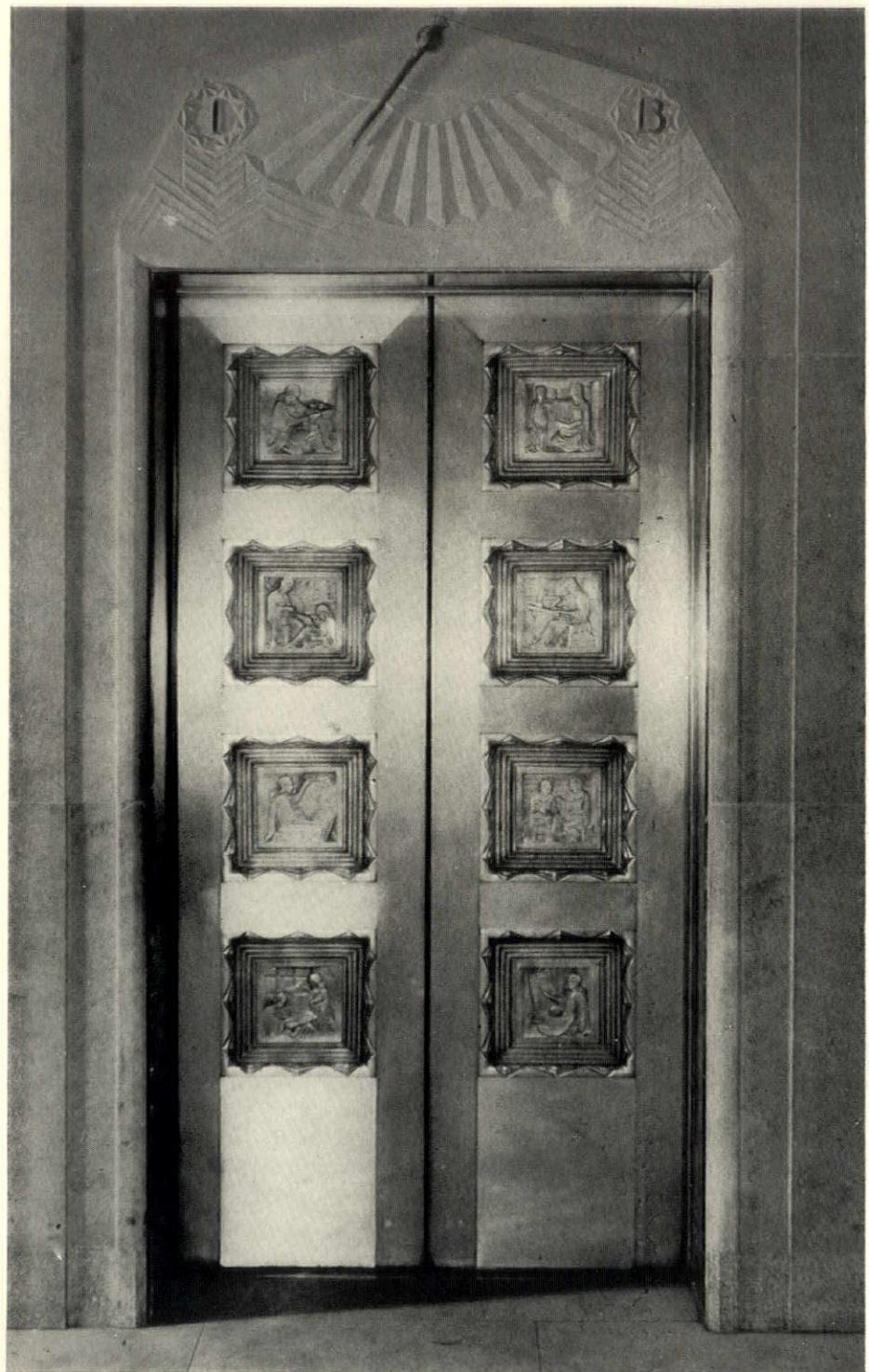
VAN ANDA

Brass
Bronze
and
Nickel Silver
to meet
contemporary
requirements

CASTINGS AND TUBING with the manner of joining emphasized by the direction of polishing and the finish of joints. Elevator door in the N. W. Ayer & Son Building, Philadelphia. Executed by the Gorham Company. Ralph Bencker, architect



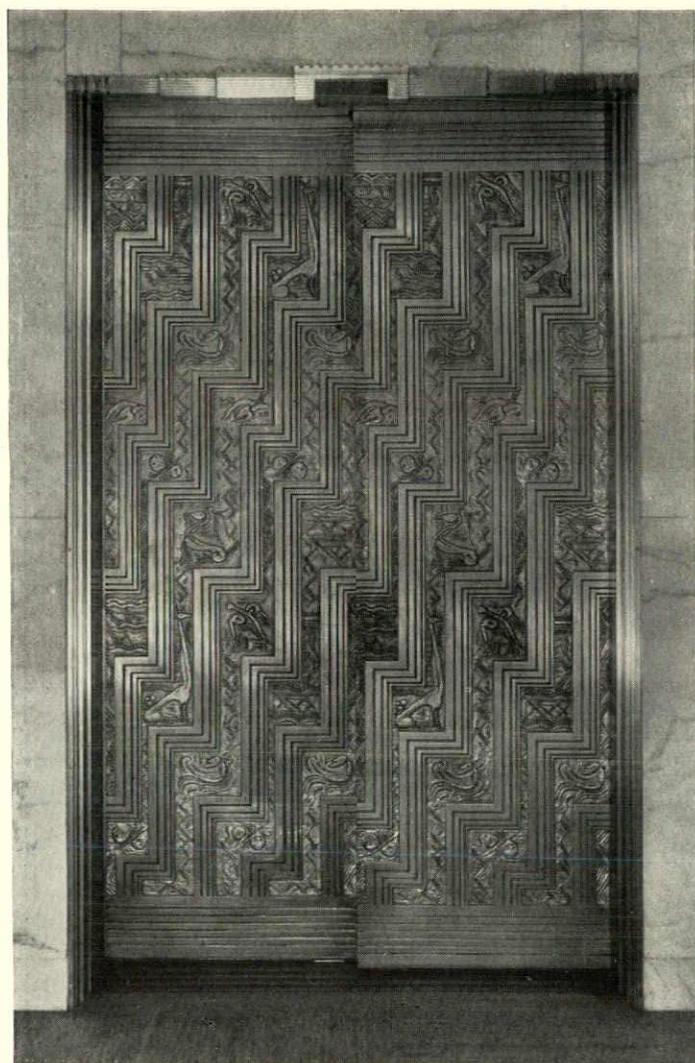
VAN ANDA



MACHINE MADE ornament built up of machine finished bronze and nickel silver. Counter screen in the National Title and Guaranty Building, Brooklyn, New York. Executed by Wm. H. Jackson Co., Corbett, Harrison and MacMurray, architects

no "standard" formulas for the various alloys used in the "architectural bronze" foundries. How many different alloys have been called "pewter"! The efforts of the English guilds to maintain standards for this trade are well known. The term "hallmark" recalls the efforts of goldsmiths and silversmiths to maintain standards in alloying the precious metals.

Yet the standard specification issued by the New York Building Congress merely states: "MATERIALS — All bronze shall be of the best grade of commercial stock, of suitable hardness, and uniform in color." What is "commercial stock," and what makes it the "best grade"? And the hardness—for what shall it be suit-



VAN ANDA

CAST NICKEL SILVER, designed for easy finishing. Elevator door in the Squibb Building, New York. Executed by the Reliance Bronze and Steel Corp. Buchman & Kahn, architects

CAST BRONZE applied to satin finished aluminum sheets, at right. Door in lounge of St. Regis Hotel, New York. Executed by G. E. Walter, Inc. Sloan and Robertson, architects

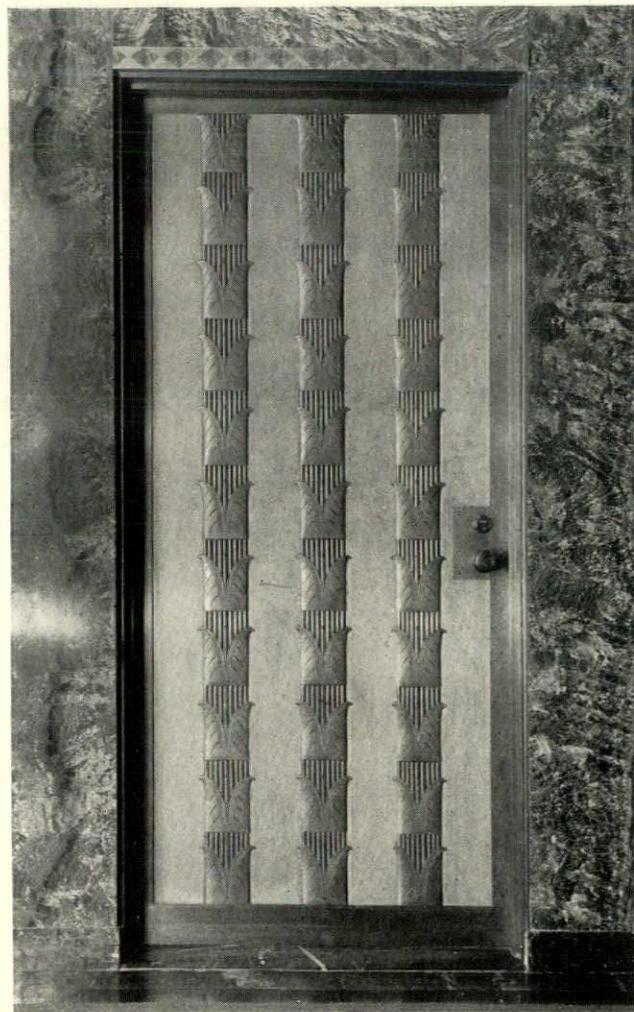
able? How many architects can answer these questions, and how would they enforce this clause? It completely and intentionally ignores the whole question of alloying.

There are three considerations which should determine an alloy used for artistic purposes. First its suitability for various techniques, second its reaction to the elements, and last its cost.

As there are no bronzes, brasses or nickel silvers which are untarnishable, and as we are not using alloys today whose natural patinas and ultimate colors can be predicted, the problem narrows down to two possibilities. Either we use the polished metal, which must be

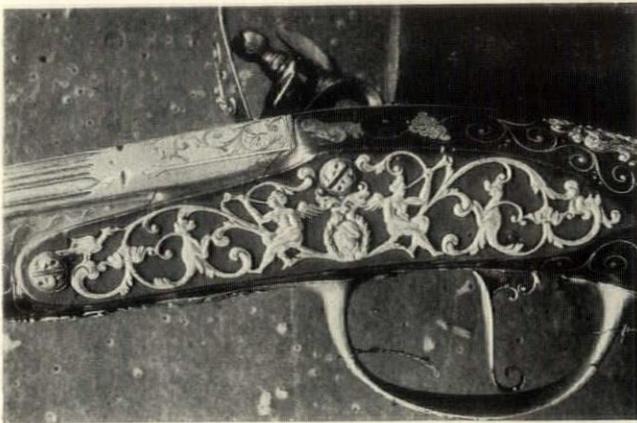


STRUCTURAL RIVETS are made a part of the ornamental motif in this half armor. Circa 1620. From the Metropolitan Museum of Art

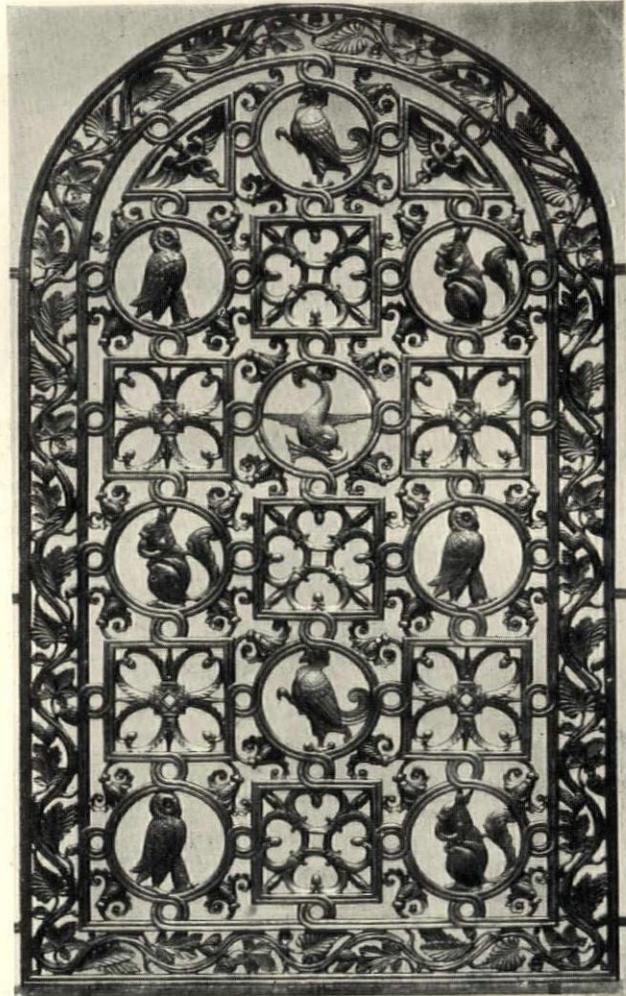


TEBBS & KNELL

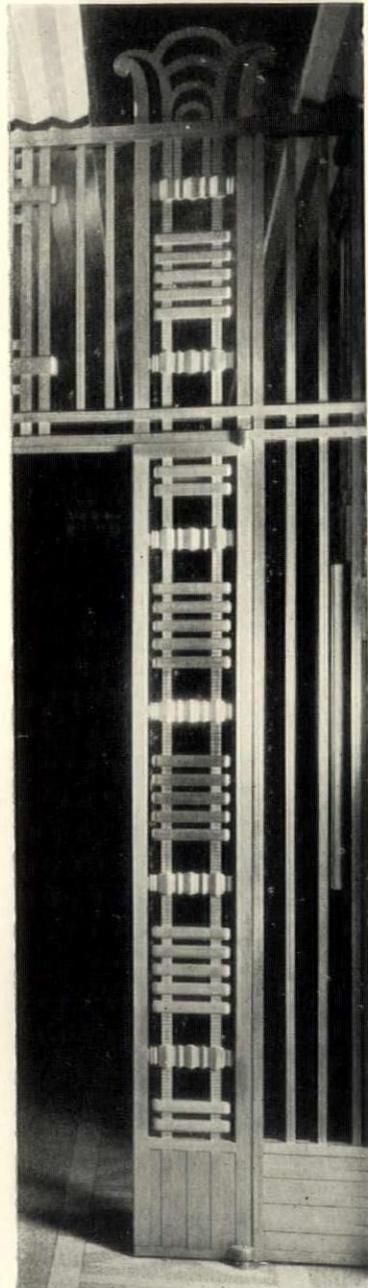
OF THE COPPER ALLOYS



SCREW HEADS form the start and are an integral part of the design on this flint lock pistol. Circa 1700. From the Metropolitan Museum of Art



TYPICAL OF BRONZE and its foundry process is this grille, which in no way is reminiscent of any other material. Window grille in the Bowery Savings Bank. Executed by the Wm. H. Jackson Company. York & Sawyer, architects



BISSINGER

CAST AND CHASED brass handled in a manner typical of the material. A chandelier support from a church in Erfurt. Fifteenth century

UNCONCEALED PIVOTS of nickel silver are made a part of the design. From the National Title Guaranty Co. Building, Brooklyn, N. Y. Executed by Wm. H. Jackson Co. Corbett, Harrison and MacMurray, architects

lacquered or frequently cleaned, or we create artificial finishes by means of chemical solutions or applied coloring matter. Polished silver and brass are familiar, but the combination of various polished alloys into a harmonious design remains to be developed. In some cases the coloring of metals by means of chemical solutions may produce a finish which can be exposed to the weather without becoming unsightly. But no "gold bronze" can be exposed without darkening. When a golden color is required for exterior use the only safe procedure is to use gold leaf, particularly if the surface to be covered is a casting. There are many other considerations affecting color, such as location, accessibility and climatic conditions, but limited space prevents further detail.

Color after all is merely a question of surface, and in the case of the copper alloys it is often a changeable characteristic. The processes and methods of forming the parts and assembling them into the completed work are of far greater importance. If we group the following types of alloys it will be found that they have many characteristics in common; copper-tin, copper-zinc, copper-zinc-tin, each of these (Continued on page 98)

BROWN BROS.

*Eager, joyously,
they bring their ideas,
sketches and clippings*



BUILDING A HOME OUGHT TO BE a happy venture

It is disappointing indeed when the client finds that the lovely thing the architect drew cannot be built after all because the burden of financing is excessive. It is only in heaven that a good architect may build as ambitiously as he pleases without ever giving a thought to money. On earth he must learn to balance his dreams against practice, economy, and the wishes of others concerned. He must discriminate wisely and fairly and often sacrifice one to the other.

When he has proven that he combines artistic ability with good common sense along business lines, when he convinces clients that he knows money really doesn't grow on trees, they will not be so wary of him. They will be willing to consider him as one of their kind. Without fear and trembling, they will engage him and perhaps admit it really wasn't such a foolish thing to do—that the fellow actually did know his business.

A nicely balanced appreciation of beauty and practicability may produce a good architect, but not necessarily a successful one. To succeed, he must have tact. There is nothing in the world so disheartening as to have a client completely riddle some particularly beloved idea of the architect who reasons that, as the finished structure stands under his name, it is his work, the child of his brain. Having to incorporate something he knows is

By
DELIGHT
S.
TRIMBLE

*an architect
practising in the
State of New Jersey*



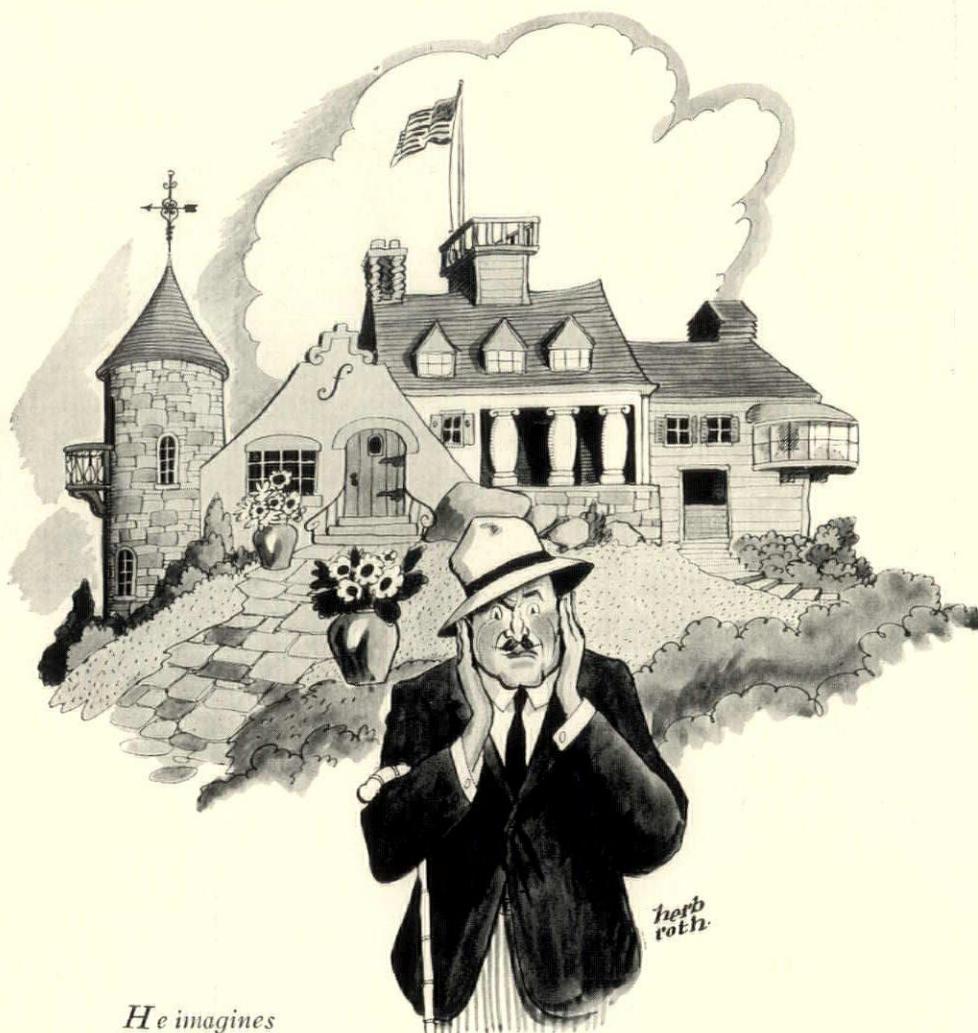
BACHRACH

inherently wrong sears his soul and sours his disposition. He imagines countless voices asking, "Whoever was the architect of THAT thing!" and knows that he will forever protest in vain that it was not *his* idea.

Now, consider the client.

The planning of public or industrial buildings is left, with some exceptions, more nearly to the discretion of the architect. There are conferences, of course, but an amicable agreement is soon reached. Usually the archi-

drawings by
herb roth



*He imagines
countless voices asking,
"Whoever was the architect of that thing!"*

■
tect chosen is one who has had previous experience in such work and has the client's confidence, or the client realizes his own actual lack of knowledge about this type of building and that it were better to leave it entirely to the architect.

But the building of a home is an entirely different thing. This type of building is most trying to both architect and owner. It lies so much nearer the owner's heart. He has probably been considering it for years. He has discussed it with his family and his friends. He has made observations and sketches. With a critical eye he has scanned other houses, noticing both desirable and undesirable features. He has made note of possible improvements. His wife has cut suggestions and details from magazines. Eager, joyous, they bring their ideas, sketches and clippings to the architect. It really ought not to be a hard job at all, one of them explains, since they have done nearly all the work themselves.

There are just a few things for him to do, like figuring dimensions and materials and writing specifications.

They go home to await his sketches and in the meantime read more articles, see more houses, consult more friends, change their minds about certain things—but never mind, those adjustments are easily made.

THEN the preliminary sketches come in. Why, the layout isn't the same as theirs at all! And after they definitely told the architect they wanted it just like that—and that entrance detail, that's not like the one in the magazine! So they hasten to tell the architect where he's all wrong. And perhaps he confronts them and loftily explains that they have presumably engaged an architect to insure their home being architecturally correct; and that they must have confidence in his ability; that the details they have selected are impossible and that he cannot afford to have such a monstrosity attributed to him.

The bewildered client, considering that he is the one to live in the house and that he is the one who is paying for it, wonders just where he comes in. Usually he gets wrathful too and the whole thing has started off on the wrong foot.

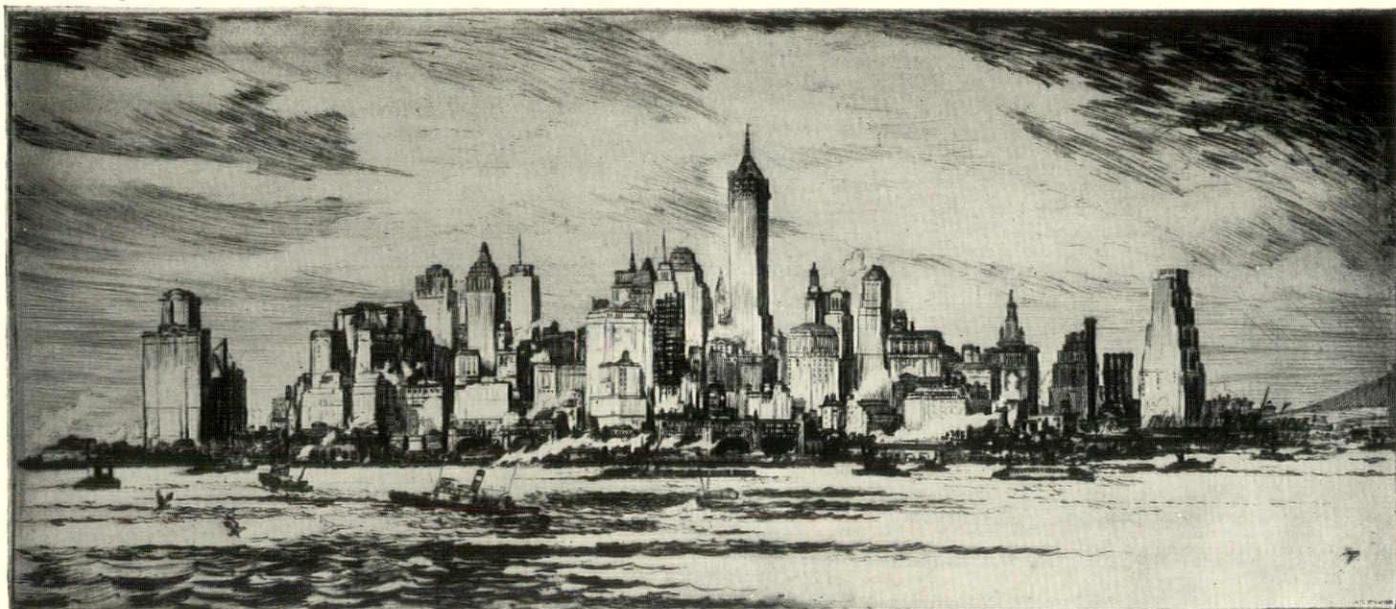
The building of a home ought to be a happy thing. If there is misunderstanding and lack of complete agree-

ment, it is impossible to obtain the best results. If the client is arbitrary, the architect loses interest and doesn't do his best work. If the architect autocratically goes his way, the client is dissatisfied and forms unprintable opinions of architects and warns his friends. In either case, they both lose.

It is an architect's business to remember that he is using the client's money and also that the client will be intimately associated with his house for some time. A client may seem dreadfully stupid and unable to sense a fault which is immediately obvious to the architect. But after all, the client's mind has very probably not been trained to these things. If it had, he wouldn't need an architect. The theory of design, to him, is some intangible thing which he senses but cannot definitely express or put into operation.

Lead him gently. Discuss his plans with him. After all, they are quite as important to him as to you. Find errors and their remedies with him. If he has some particular thing he much desires, don't tell him right off the bat it's impossible. Try to find some way to make it go. You may have to change it somewhat—but let him think about it, too. Explain why it's wrong, suggest a remedy, then let him stumble on the solution himself. Give several hours at the start to discussing things in general

(Continued on page 76)



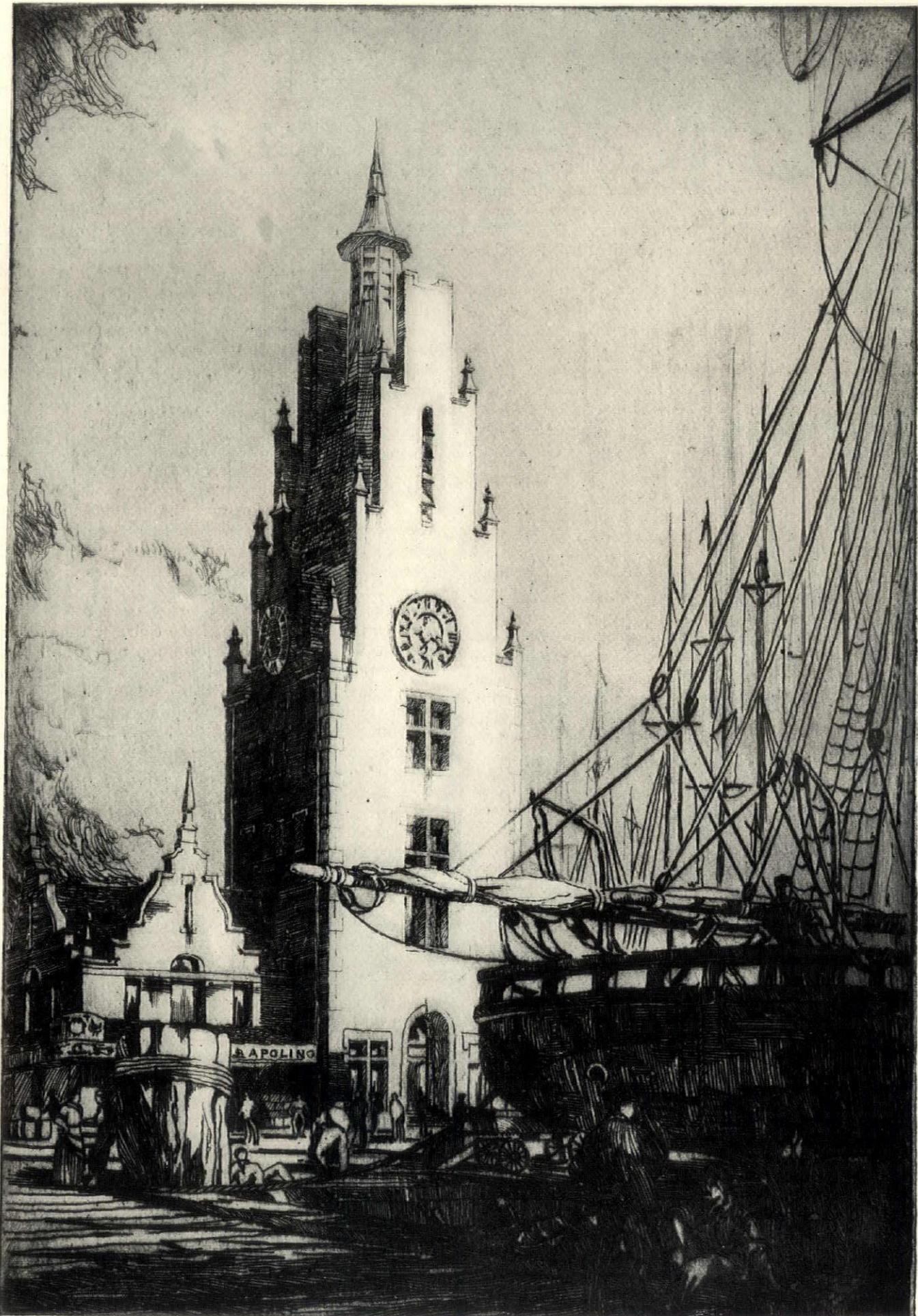
ETCHINGS

NEW YORK
FROM
GOVERNOR'S ISLAND
BY
WM. G. McNULTY

•

RUINS, VERONA
AND
WALLABOUT MARKET
BROOKLYN
BY
MAURICE GAUTHIER





. . . As It Looks

Bank President Discusses Success

"THE most successful men are not necessarily those who know the most. Men who have ideas, and who know how to sell those ideas to others, or win others over to their viewpoint, achieve the greatest success."

So states Arthur Reynolds, president of the Continental and Commercial National Bank of Chicago which, incidentally, is the largest bank in the country, outside of New York. "And," he adds, "sales psychology, after all, is nothing more than an understanding of human nature."

There is a world of truth in those words. Of two architects, equally well trained, the better salesman will be the more successful. And naturally so, for does not every dream, even the most artistic, have to be sold to somebody before it can possibly become an object of public enjoyment.

Dated Catalogues

MANUFACTURERS who issue catalogues and do not date them frequently subject architects to considerable inconvenience and themselves to the charge of poor service. When several catalogues are placed in the files, it is impossible to tell which contains the latest information unless the literature is dated. Specifications may therefore not take note of equipment recently changed, with resultant delay and confusion. The date is as important on a catalogue as the A. I. A. file number and manufacturers by all means should do themselves and the architect the justice of providing that information.

Clean Your Buildings

THE Weiting Opera House on the principal square in Syracuse, N. Y., was recently cleaned, to the astonishment of the entire population of the city. It turned out to be a beautiful light colored brick in a pleasing design which had been there all these years without anybody knowing of its beauty.

There are many cities of an industrial character where buildings have become begrimed with smoke to which great service could be rendered by their architects were they to institute a cleaning campaign. Why let the work of the architect be hidden?

Advertising Ethics and Architecture

ETHICS in the advertising profession are not only fair and honest but lived up to by a surprisingly large number of the profession because founded on good business sense. What Groucho, the nom de plume of a writer in *Printers' Ink*, has to say about submitting advertising plans applies equally well to speculative sketches—and architect's ethics.

"What do I know about advertising ethics? First account I ever made any money on was Painless Dentistry.

The old doc had 'em lined up on the curb waiting to get in and he and his little dope squirter made 'em think it didn't hurt. Doc was supposed to have no ethics and the regular dentists wouldn't pal with him. Doc said his idea of ethics was to do a good job with teeth.

"Advertising ethics! Wrong to submit a plan as a part of solicitation. Why wrong? Who says so? I'll tell you it's wrong 'cause its an expensive luxury and we know the foxier way. Study the account, dig for some little thing they never thought of and tell about it. Sell the idea of research being so much better when it's paid for—then get a job of investigating preliminary to a campaign, and no matter whether you've done the job already or not, *sell it!*"

When They are Easy to Talk With

"CAN afford to be polite," said Jim Corbett. "I've got the punch to back it up."

So read the headline of a recent advertisement which appeared in several national publications. That remark brings to mind the frequently expressed opinion that the easiest men to talk with are those with a record of accomplishment. It is the subway guard, the reception clerk, the switchboard operator who are quick to show that lack of the courtesy which lubricates the wheels of business, not the man whose position is so secure that he need bother his head not at all about impressing others with his importance.

Men are alike the world over, though we like to think, and with good reason, that architects are of a little higher grade than most. Yet even here, those with the greater record of accomplishment are generally the ones easiest to talk with. Many of those with lesser accomplishment are not. And the reason is, perhaps, that the bigger man is honestly trying to understand and be in step with the world rather than to impress his fellows with his own importance.

Small Houses for Small Families

THE average family has become a small unit that accommodates itself to small space—two, three, or four room apartments. Its members average less than five in number. Why not build for these small families tiny houses that are merely individualized small apartments built among trees and beautiful flowers? If a family will spend from seventy-five to one hundred and fifty dollars a month for two or three rooms, why should they not be offered the advantages of home ownership on the basis of small space and many conveniences in restricted sections? One large living room with a fireplace, a moderate sized bed room, possibly another small bed room, with kitchen and bath, are all the average family needs or wants, as is proved by the popularity of one, two and three room apartments. There is a real market here for the building industry, a market that has been but slightly tapped in a few sections of the country.

to the Editors . . .

Renting Easier by Architect's Help

"THE very architectural features which, when expressed in a decorative scheme offer the strongest appeal, sometimes demand the most explicit demonstration through a finished setting. . . . An unfurnished apartment of practically the same design is easier to rent by showing that setting than it would have been by trying to give a verbal expression of the manner in which it should have been furnished."

So speaks John I. Conroy, manager of the residential department of Douglas L. Elliman & Co., in discussing the rental problems of the Beaux-Art Apartments, illustrated in the March issue of *THE AMERICAN ARCHITECT*. Many of these apartments, unusual in plan and irregular in wall space as they are, are unattractive until seen furnished—and then their beauty may be perceived. The show apartments were furnished under the direction of the architects. So it should be with every apartment house project large enough to warrant the expenditure. For who is so competent as the architect who designed the building to harmonize and enhance the apartments by bringing out their beauty through their furnishings?

Conference Says "Better Advertising"

"BETTER merchandising and advertising are needed by the building industry if it is to regain its former volume and continue to hold the position which its leaders feel it deserves," was the opinion expressed by Fenton B. Turck, Jr., vice-president of the American Radiator and Standard Sanitary Manufacturing Company, at the recent National Building Survey Conference. "We have plenty of competition for the consumer's dollar, and more advertising is needed to attract public interest to our field. The third largest cigarette manufacturer spends more for advertising than the entire building industry."

It is true that competition today has passed from that between individual manufacturers to that between industries. The building industry now watches many dollars go for automobiles, motor boats and even airplanes that once went for residential construction.

In all of this competition for the consumer's dollar, the building industry holds a peculiarly difficult place. Its practitioners are assemblers of materials in a more or less efficient manner. Anybody can call himself a building contractor and build a building that somebody, somewhere, will buy—often to his sorrow.

To merchandise the building industry, it is necessary to have a channel of distribution known to be thoroughly honest and capable. Such a channel is the architectural profession which, as a profession, is peculiarly fitted to assume the leadership of building projects in spite of the fact that there are undoubtedly incompetents in its ranks. To assume that leadership, however, architects must more and more assume the rôle of promoters, of business

men of high calibre, of merchandisers who can start and carry through any type of contemplated operation from a development of three-room cottages to the carving of a city out of the wilderness.

Preservation of Historic Buildings

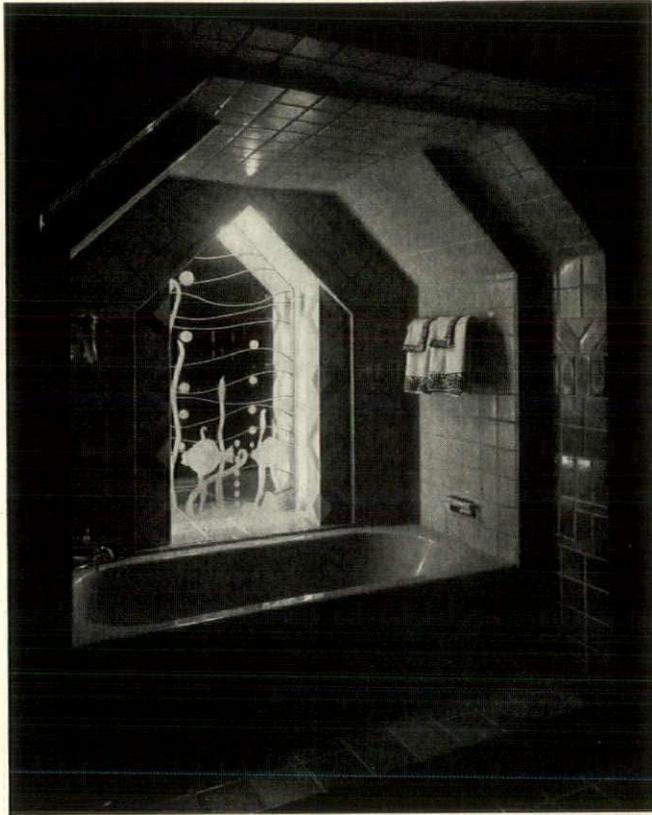
"INDISCRIMINATE preservation of old buildings which have outlived their usefulness is a confession of present failure." Such is the opinion expressed by a writer in *The Builder* of London, concerning which a letter states: "I only admit the qualification to exclude a certain number of old buildings which, although they may have outlived their usefulness, stand for something precious to the neighborhood in which they are situated. . . . It is always a pathetic thing to pass through an old town which has recently grown and . . . to see the feverish efforts by which modern enterprise has borrowed the same note with commercial respect for the modern taste for worm-holes and shabbiness. . . . In such a town, every effort to express the real modern taste is stifled at birth, so that a whole decade or more of the life of that town will be denied to history. . . . Thoughtless sentiment is at the back of most of the outcry which arises when some sensible stroke of town planning involves the destruction of some unsteady groups of buildings, the builders of which probably would be amused to learn how artistic they were. . . . Each of our cathedrals is a record of ruthless replacements and demolitions. Are we worse off for the Norman work which early English builders replaced, or the latter which the Decorated style was thought to better, or the Perpendicular treasures which faced antique shells which modern preservation societies would preserve at all costs?"

This discussion is highly interesting, revealing as it does that the same disrespect for the tradition which demands that we do what our fathers did because they did it, thought typical of the United States, is receiving serious consideration in conservative England. It is a healthy sign. The cleavage with the past demanded by the changes in modern building may well mark our efforts of the next ten years as the inaugurating of an architectural era which shall far surpass that gone before.

Advertises "Consult an Architect"

"CONSULT an architect . . . the service is valuable." This is a phrase appearing at the bottom of advertisements of the Kawneer Company placed in national popular and business magazines. Manufacturers are rapidly coming to a realization of the importance of the architect in regard to their merchandising plans. The more action which is taken upon such realization, the greater will be the growth of public confidence in the building industry and the greater the likelihood of increasing the expenditure by those who hold back for fear that their dollars may be ill spent.

WHAT ARCHITECTS



RAVENSWOOD

IN THE MODERNE MANNER. *Bathroom, house of J. J. Harrington, Glencoe, Ill. R. Harold Zook, architect*

THE close proximity of hot and cold water pipes causes an annual waste of millions of gallons of water. When users turn on the cold water tap they are obliged to let the water run for from thirty seconds to a minute before cold water is obtained. To lessen this waste, the new New York City building code provides for the hot water riser being covered with insulating material, unless the hot and cold water risers are at least six inches apart.

BID shopping and price cutting is being fought by members of the Quad-City Builders' Association, who have pledged themselves not to permit favored contractors to enter second bids after estimates of their competitors have become known.

THERE is a striking parallel between present conditions and those prevailing in 1921, which indicates that a building boom can not long be deferred, according to W. Burke Harmon, a prominent real estate man of New York. He shows that in 1921, 224,545 families were provided for; in 1922, 377,305 families; in 1923, 453,673 families; in 1924, 442,919 families; in 1925, 491,222 families; in 1926, 462,214 families; in 1927, 406,095; in 1928, 388,678 families; and in 1929, 244,197 families. Thus residential construction is practically back to the 1921 level in spite of the increase in population. Although there is not the housing shortage that there was in 1921, public demand and taste have changed so much in the last decade that housing accommodations more than fifteen years old are practically obsolete and can

Water Supply Pipes Separated by
New York Code

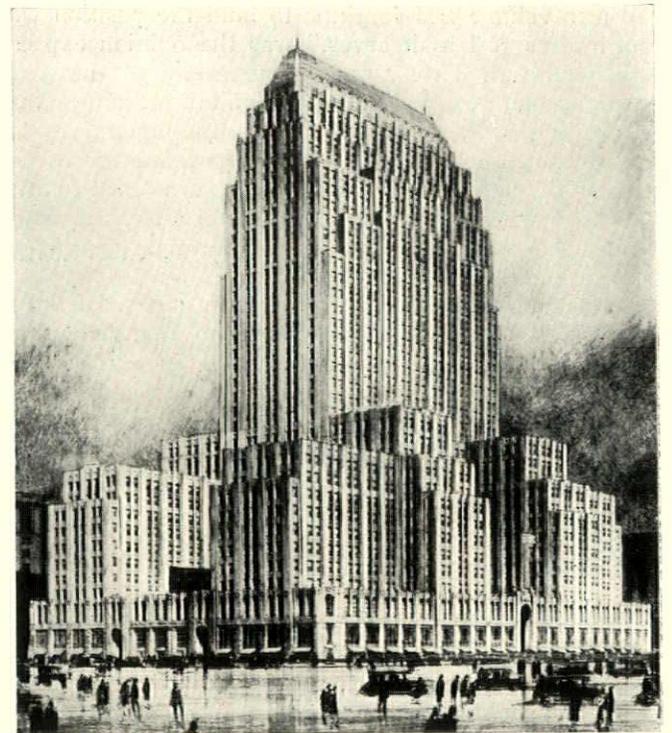
"Even Frozen Real Estate Investments
Profitable," Says Arthur J. Mertzke

"Building Boom Imminent," Says W. B. Harmon

find no market. Thus, if we do not have a present shortage of houses, there is at least a shortage of the sort of houses that people want.

ESTABLISHMENT of a committee on allied arts in each chapter of the American Institute of Architects is advocated by J. Munroe Hewlett. Mr. Hewlett feels that the time is ripe for the Institute to definitely concern itself with the æsthetic quality of products that do much to make or mar the effect of buildings.

PEOPLE who want to buy houses will be given information that will enable them to buy intelligently, according to a plan of the National Committee on Wood Utilization, which has formed a subcommittee to prepare a booklet acquainting prospective home buyers with the various points which should be considered in buying a house. This subcommittee is under the chairmanship of N. Max Dunning, F. A. I. A., Chicago, who says concerning its activities: "A



INTERNATIONAL NEWS

THE LARGEST office building in the world outside of New York State is to be built in Boston, Mass., the New England Building, Boston. Blackall, Clapp, Whittemore & Clark, architects

THE AMERICAN ARCHITECT

ARE TALKING ABOUT

Government to Inform People Buying Houses

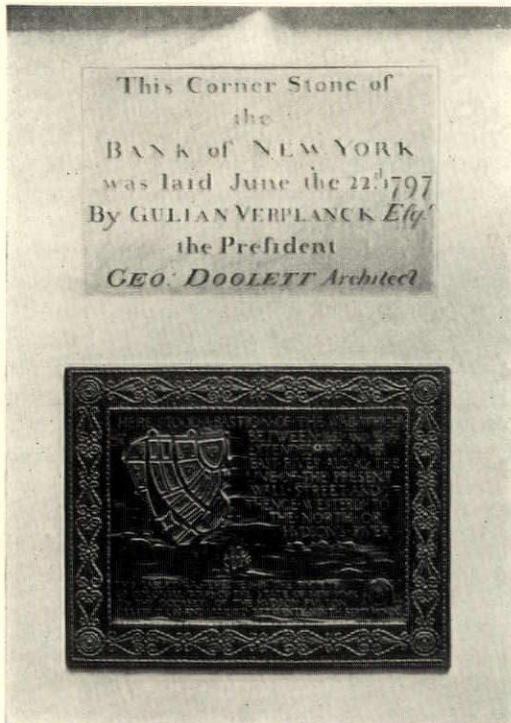
Bid Shopping and Price Cutting Fought by
Quad-City Builders' Association

Committee on Allied Arts Urged for
A. I. A. Chapters

better understanding on the part of the home-buying public in regard to the principal structural and architectural features of a house would give a decided impetus to home ownership. The purchase of a home is the most important investment the average person undertakes. An understanding of materials and workmanship and of what constitutes good architecture, therefore, is of vital importance to him in safeguarding his investment. These factors and many others are to be studied in detail by the subcommittee, and the results of their findings incorporated in a bulletin under the title 'How to Judge a House.'

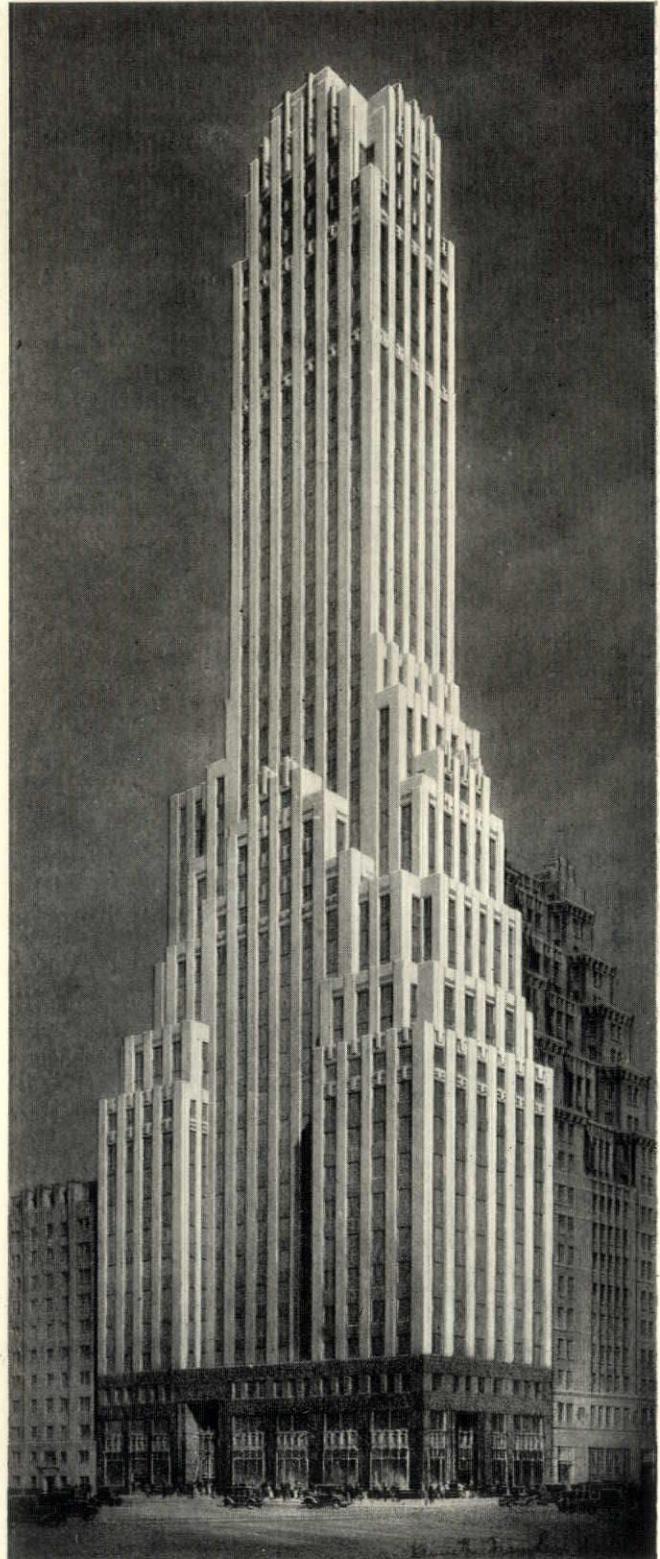
A SIXTEEN story skyscraper is being erected in Athens, Greece, by American capital—and the city is not particularly enthusiastic about it, according to John Vassos, architect of New York. It will rise high above the Athenian skyline to what is felt to be the detriment of ancient Greek masterpieces.

(Continued on page 106)

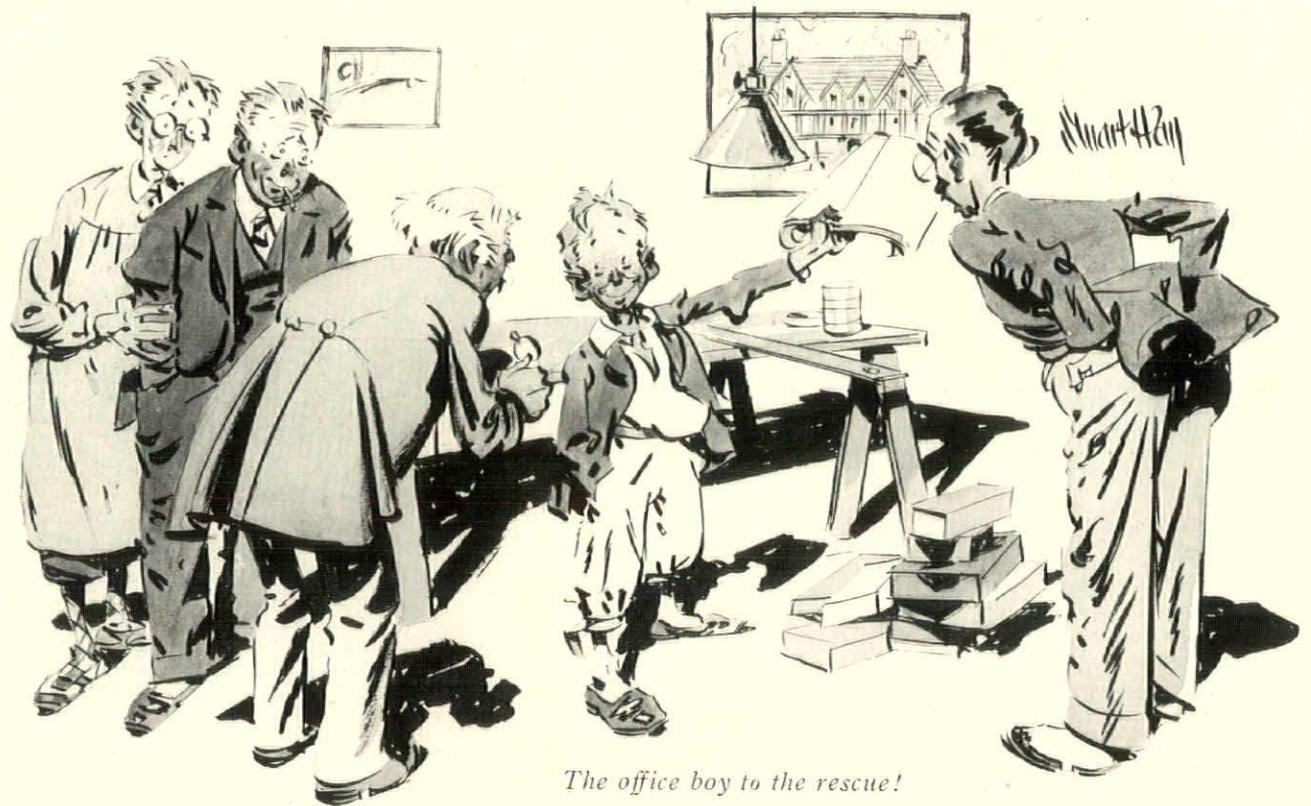


GOODE

THE 1797 CORNER STONE of the old building of the Bank of New York and Trust Company, New York City, is now a part of the new corner stone which has been placed in the present building



SILVER and BLACK to the third floor with black and white above is the color scheme of the new 22 East 40th Street Building, New York City. Window sills and ornamentation are avoided, shadow contrasts depending on materials. Kenneth Franzheim, architect



The office boy to the rescue!

"SPECIPHOBIA"

Drafting-Room Drama in One Act

By HAROLD SLEEPER

SCENE: Any drafting-room at 5:10; draftsmen thinking of the "5:15"; office boy closing windows and looking busy. Drafting-table, front stage. Door to Boss' office, right rear. Filing-table with stacks of unfiled magazines, blueprints and catalogues, left rear.

HEAD DRAFTSMAN starts Junior Draftsman to work on detail of radiator enclosure. Office Boy has spread out all drawings required. Draftsman has span-clean paper ready to mutilate. Head Draftsman stops Squad Boss and asks him to look up radiator enclosures in the specification.

The Squad Boss confidently and gingerly turns to Carpentry and thumbs page after page—now not so gingerly, nearly inquiringly—until Carpentry is passed.

"Give me those specifications," says the Head Draftsman, "of course you can't find it in Carpentry. Those are metal enclosures, dumbbell." He looks under Sheet Metal with confidence and superiority. The last page has been examined and a puzzled Head Draftsman says, "Where in God's earth has this specification writer hidden these enclosures? Where is he anyhow?" The Office Boy chirps up, "He's gone home already, sir." "My God, and it's only 5:15. He certainly doesn't believe in wasting any time."

The Big Boss heaves into sight at this and smilingly and in a large way asks the group, "What's this all about? Enclosures of metal? Why, that's under Ornamental Metal, or should be."

By now, several copies of the specification are being torn apart and all turn to Ornamental Metals. Not any inkling or sign of such an item can be found there. All feel much relieved, however, as they feel that the specification writer has just gone and plumb forgotten those enclosures and everybody can stick to his original conception as to where they should be.

"Never mind the specifications," says the Head Draftsman, "we know our radiator enclosures and we'll detail away."

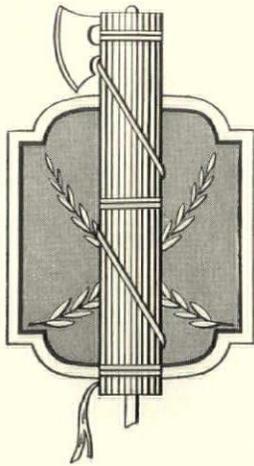
Just then the Office Boy points his black thumb to the last page of the index. RADIATOR ENCLOSURES—Page 116—HEATING.

"What? under Heating?" says the chorus. "Yes," says the Big Boss, "we always place work in the specification of the trade that does it."

"Does what?" says the chorus. "Search me," says the Big Boss.

Sequel: The Office Boy next day asks for a raise and gets fired.

Moral: Let some one else find it in the specification.



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HE WON THE COMPETITION PRIZE . . .

But LOST the JOB

BY GEORGE F. KAISER

WHAT HE DID. When the Royal National Alliance, a fraternal association, decided to build on a site it already owned, a meeting of the board of governors was called to determine how to proceed.

"Let's give our president power to hold an architectural competition and to select an architect to design a building and supervise its construction and actual erection at a cost of not exceeding \$800,000," suggested one member, and the others all agreed.

Howe, a local architect, entered the contest and his design for a building was selected by the committee. He received the association's check for \$1,000 for his winning design, as provided for in the contest program, and he entered into a contract with the association. Though ready, able and willing, Howe was never called upon to do anything more, and finally he started suit for damages. When the summons was received, the association still

refused to pay and took measures to defend the action.

WHY HE DID IT. After the prize winning design had been chosen, one of those who had lost out in the contest offered to carry out the plans and construction for considerably less than the price agreed upon with the successful architect, so the president thought he saw a chance to save money.

WHY HE SHOULDN'T HAVE DONE IT. In a similar case it was decided that an award under a prize contest to select an architect for a building is a mutual contract, if the architect is not merely given a prize for a plan but is to supervise the building. He may be compelled to do so after his acceptance of the award. This holds particularly true where the architect has received and accepted partial payment of the prize award for the work he has already done. The architect's claim for damages was, therefore, allowed by the Court.

. . . fee when zoning law forbids building

WHAT HE DID. An owner of certain real estate in the Borough of Brooklyn contemplated erecting a theatre, so he retained Allen, an architect, to confer, prepare plans and specifications, and all other papers and drawings pertaining to zoning questions and to check details submitted by contractors. Payment was to be made to Allen in stipulated amounts as the work progressed. After Allen's plans had been approved by the building department it appeared that certain zoning regulations forbade the erection of a theatre, so the owner abandoned his plan and refused to pay Allen.

WHY HE DID IT. The owner claimed that as the zoning regulations did not permit the erection of a theatre, the contract was, accordingly, for the accomplish-

ment of an illegal purpose and therefore null and void.

WHY HE SHOULDN'T HAVE DONE IT. The owner should not have refused to pay the architect, for the Court held that the services for which he was engaged were not primarily illegal. It did appear that completion of the work was made impossible through circumstances which were only partially the fault of the owner. As the furnishing of plans and specifications and securing necessary permits for the building were not the sole services to be rendered, the architect had a good claim for damages for breach of contract in view of the fact that his inability to render the balance of the services was due to the fault of the owner and not the architect.



● A charming time-worn texture was given the walls of this and other buildings on the place of Michael Gavin, Jericho, L. I., by using cinder blocks of varying size which had been sprayed with water while still soft. These walls called for a roof that also simulated age, so Hopkins and Dentz, the architects, chose IMPERIAL Shingle Tiles. In color and texture they are amazingly faithful reproductions of tiles which have seen centuries of use.

L U D O W I C I - C E L A D O N C O M P A N Y

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THE READERS

Have a Word to Say

• A PLAN OF CLIENT EDUCATION THAT ANY ARCHITECT CAN USE

Editor, THE AMERICAN ARCHITECT:

I have been reading with considerable interest your various articles on education of the public.

It seems to me that we can do considerable individually at a very little cost.

We all write quite a few letters to people not directly connected with the building business and we all have some type of a duplicating machine in our offices.

Several years ago I worked up the enclosed bulletin describing architectural services in a manner that seemed to me would appeal to the average person.

When I write to anyone that I hear is interested in a new building or to parties that I think should be better informed, I simply enclose a copy of this sheet with the letter.

I think the average person will take time to read it through if he is in the least bit curious.—*V. C. Pettit, Architect and Engineer, Charleston, West Va.*

Following is the bulletin Mr. Pettit writes about. It is entitled "Architectural Services."

Much has been written concerning the question of architectural services and most of it tends to leave the prospective builder with the feeling that it may be all right but he still wants to know just exactly what it is and how it affects him.

Concisely, architectural service is the purchasing medium in the building business, whereby one purchases through an architect the building in mind at the lowest possible price, much as one would employ an expert to purchase a diamond or a piece of real estate.

The architect proper does no building and is in no way interested in the contractors or building firms. His sole source of income is from his client and his only interest is to serve him in the best possible way. He is an expert by training and experience in building.

An architect's work is divided into the preparation of plans and the supervision.

The plans are the money saving and at the same time the satisfaction giving end of the service. They are simply the expression of the client's ideas or requirements in terms commonly understood by the trades, with every detail worked out to the best advantage. Upon the accuracy of the analysis of the clients' wishes and needs and the solution and presentation thereof, the whole service depends. Plans may be bought outright for very small sums. But in the majority of the cases an architect can carefully study the conditions and, by eliminating items not required in the specific instance and making slight changes otherwise, effect savings that will make the architect's fee look small, indeed, compared with what would have been lost on the ready made plans, to say nothing of the returns in satisfaction. The client is

not buying the plans. He is simply paying for the expert service which will enable him to obtain at the lowest possible price exactly the best thing for his individual needs.

After plans and specifications are completed "bids" are usually taken from the various contractors for the furnishing of materials and doing of the work. The plans being complete in every way the building, so far as the bidders are concerned, becomes a standardized project and they know every item that must be furnished and they bid their lowest possible price. Since all have quoted on exactly the same thing, the contract may be awarded to the lowest bidder with the assurance that he has the lowest possible price for the building.

The supervision is simply insurance against defective materials, poor workmanship and of being deliberately or unintentionally defrauded out of what the client is paying for. Considered as insurance and distributed over the life of the building the cost is remarkably low.

The matter of fee is one largely to be settled between the client and the architect, though as a rule architects charge the same for the same class of service. Usually it is expressed in terms of cost of the building, since this offers a means of proportioning the fee to the savings, though fixed fees are sometimes agreed upon. As a rule the larger the cost of any item the greater the saving affected, and consequently the fee charge is greater. In no case is the fee excessive. An architect's service is the only thing I know of that it is possible to get for nothing. A good architect will save his fee and a good portion over, so it is really a case of getting something for nothing.

In closing, my advice to any one considering building even the smallest building is to employ an architect and be sure he is a regular practicing one and a good one.

• WEEP HOLES CAUSE CONCRETE FAILURES

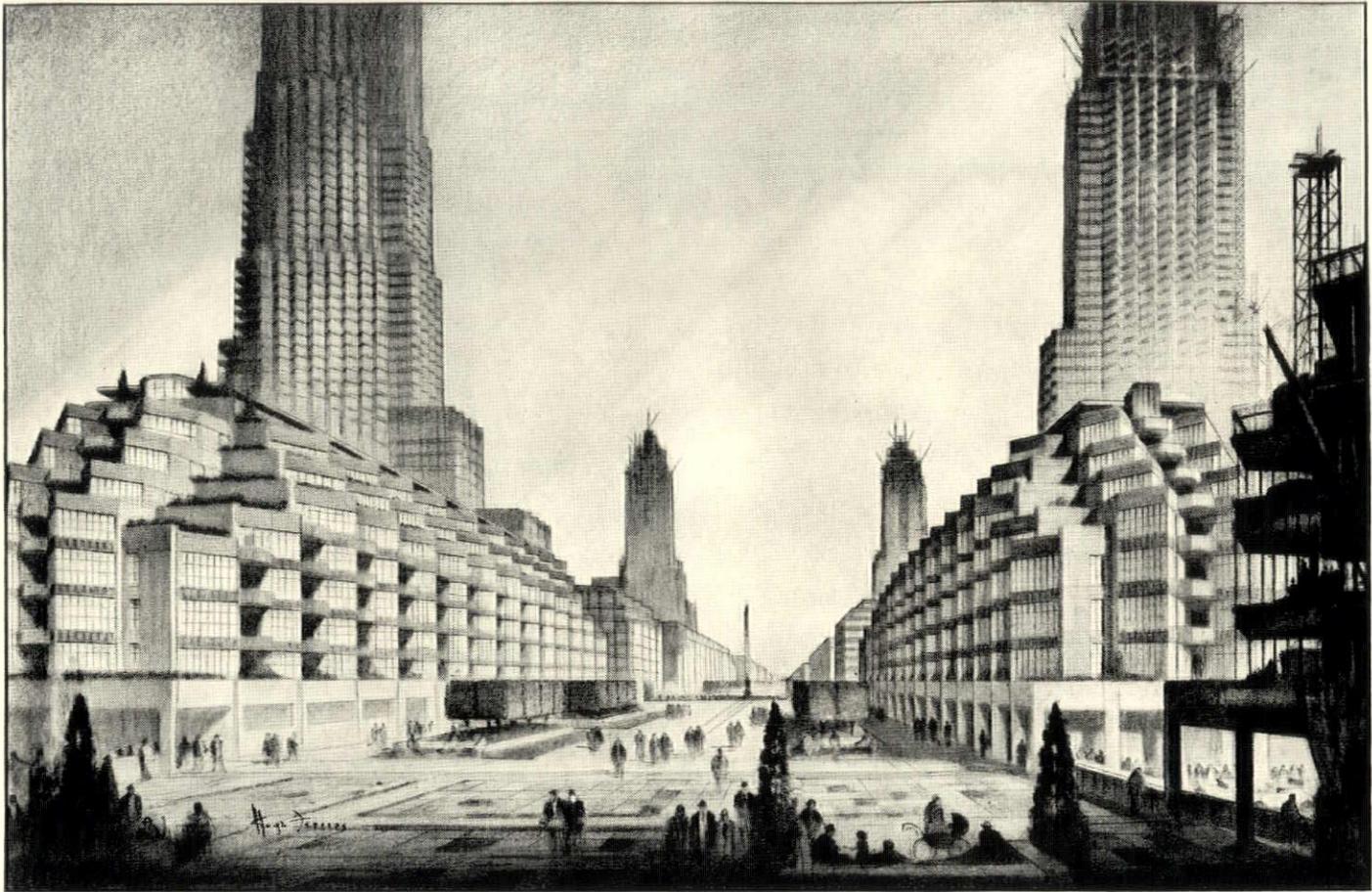
Editor, THE AMERICAN ARCHITECT:

Experience shows me that a common waterproofing practice prevails in New York of leaving weep holes after the waterproofing operation is finished in concrete construction to carry off excess water and I should like to ask through your columns whether this practice is not thoroughly unsound? Does not the water flowing through the weep pipes carry off the lime of the cement and consistently weaken the construction by removing from it the particular elements which are relied upon to give it strength?

I have run across several instances where infiltrating waters flowing out from weep pipes have reduced the concrete to a mass of rubble for which the contractor has been blamed as doing bad work when the cause of all the trouble lay with the weep holes.

STRUCTURAL STEEL CREATED THE SKYSCRAPER

STEEL GIVES DAYLIGHT A CHANCE



"APARTMENT HOUSES OF THE FUTURE." IN THIS IMAGINATIVE DESIGN BY HUGH FERRISS A PROMENADE BRIDGES VEHICULAR TRAFFIC. AN ENLARGEMENT, ON SPECIAL STOCK FOR FRAMING, WILL BE MAILED WITHOUT CHARGE TO ANY ARCHITECT, ENGINEER OR BUSINESS EXECUTIVE.

MIGHTY, modern, adaptable steel . . . it stands alone, needs no bolstering—and when unconcealed by weaker materials brings light and air and majesty to cubist mass, to lance-like tower.

Windows, which in the fledgling skyscrapers were mere slits through heavy masonry, have grown in size and number. Tomorrow, curtain walls will yield to solid-section steel windows, to sheets of glass through which even ultra-violet rays may pass.

In small as well as large structures, steel is an ally of daylight, of speed, permanence and economy. It

permits the most practical design for homes, schools, apartment or mercantile houses, industrial plants and small bridges. Steel has less bulk, greater strength than any other fire-resistive material. It secures more floor space; saves building time and labor; facilitates alterations, additions, removal.

Before building anything, find out what steel can do for you. The Institute serves as a clearing house for technical and economic information on structural steel, and offers full and free co-operation in the use of such data to architects, engineers and all others interested.

The co-operative non-profit service organization of the structural steel industry of North America. Through its extensive test and research program, the Institute aims to establish the full facts regarding steel in relation to every type of construction. The Institute's many publications, covering every phase of steel construction, are



available on request. Please address all inquiries to 200 Madison Avenue, New York City. Canadian address: 710 Bank of Hamilton Bldg., Toronto, Ontario. District offices in New York, Worcester, Philadelphia, Birmingham, Cleveland, Chicago, Milwaukee, St. Louis, Topeka, Dallas, San Francisco and Toronto.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

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FOR SEPTEMBER 1930

A WASTE that STAYS PUT

... and everything is accessible from the front of the tub

Install this pop-up bath waste and you'll never need to get at it from behind in case of trouble. (As a matter of fact, we've done everything we could think of to avoid any kind of trouble. A typical waste taken out of stock has been operated on a testing block, tens and tens of thousands of times—as good today as when first inspected.)

Anyway, this mechanical waste has the stopper in the tub outlet. Should anything go wrong, the trouble can be instantly located. Actually, this waste has all the simplicity and efficiency of the old-style chain and plug, the chief difference being that the chain is inside the waste tube.

FOUR EXTRA FEATURES WITH THE "MANHATTAN"

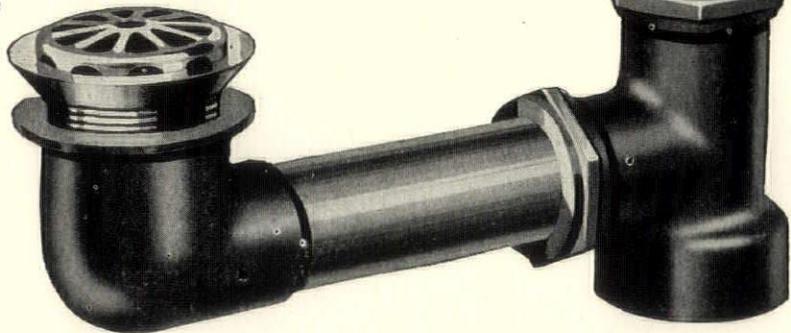
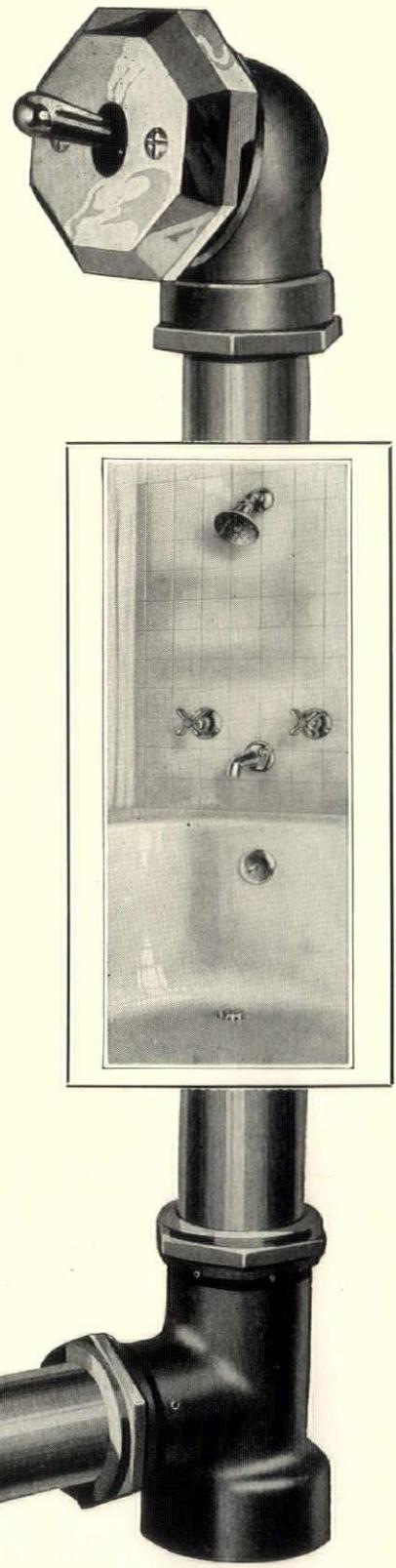
1. Face plate on shower head is removed instantly by simply loosening the center screw.
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3. New 1-piece fitting for tub and shower.
4. Valves equipped with standardized unit which can be renewed as easily as changing a light bulb—costs only a few cents.

Our new 76-page catalog will be sent free. Write today.

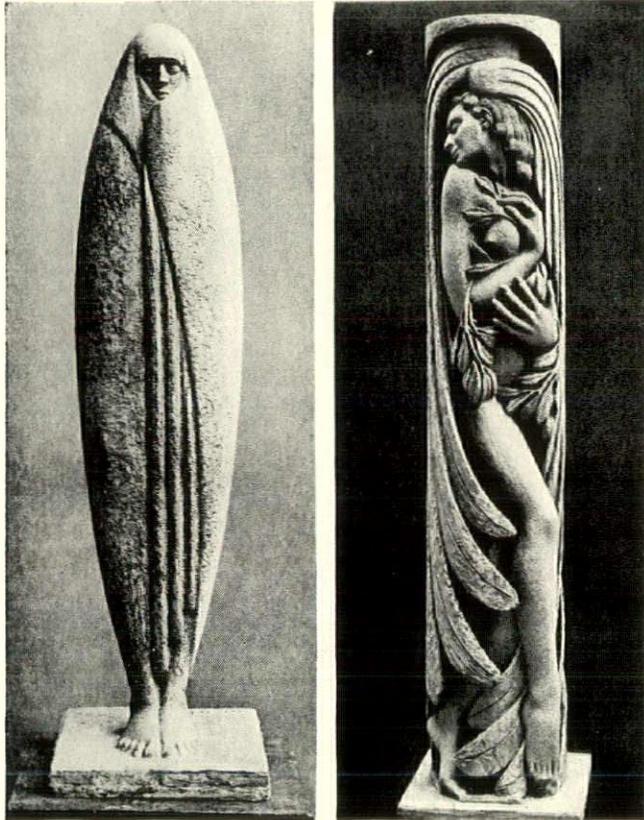
The Chicago Faucet Co.

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CHICAGO FAUCETS



Caryatid, "a Moroccan woman," and a pillar, "Victory," both designed for stone by Celine Lepage, sculptor. From "Modern Architectural Sculpture"

Modern Architectural Sculpture

Edited by W. Aumonier. Published by Charles Scribner's Sons. Illustrated; 160 pages; size 11¼x14½; price \$20.

A NUMBER of examples of the finest present day sculpture or carving which are either decorative or part of an architectural feature are included in this book. It comprises work done by one hundred and thirty-six sculptors in various parts of the world and is a collection of the work seen and admired by the author in his travels. The sculpture is grouped according to the country in which it is found.

Fundamentals of Architectural Design

By William Wirt Turner, M.S., in Arch. Published by the McGraw-Hill Book Company, New York. Illustrated; 175 pages; size 11¼x15¼; price \$6.00.

STATED to be a text book that "embraces those foundation stones of architecture which are constantly used and which are indispensable alike for the beginner and for the profession." Chapter headings include "Shades and Shadows," "Perspective Drawings," "Classic Orders," "Elemental Principles of Architectural Rendering," and "Architectural Lettering." There is a glossary of architectural terms, an index, and sixteen renderings of typical subjects.

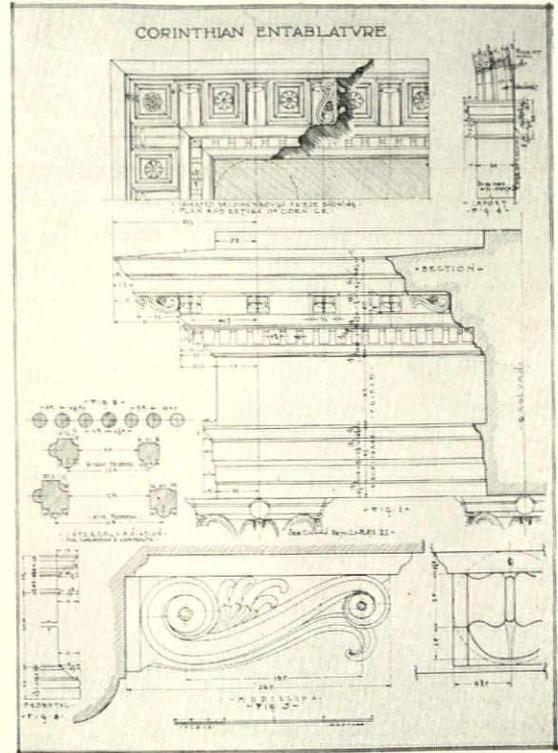
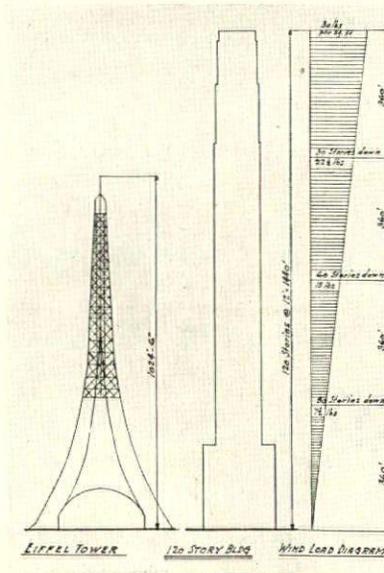


Plate from "Fundamentals of Architectural Design"

The text is very concise. No words have been wasted. The drawings are well made and help to give a clear understanding of the fundamentals of architecture.

Wind Bracing

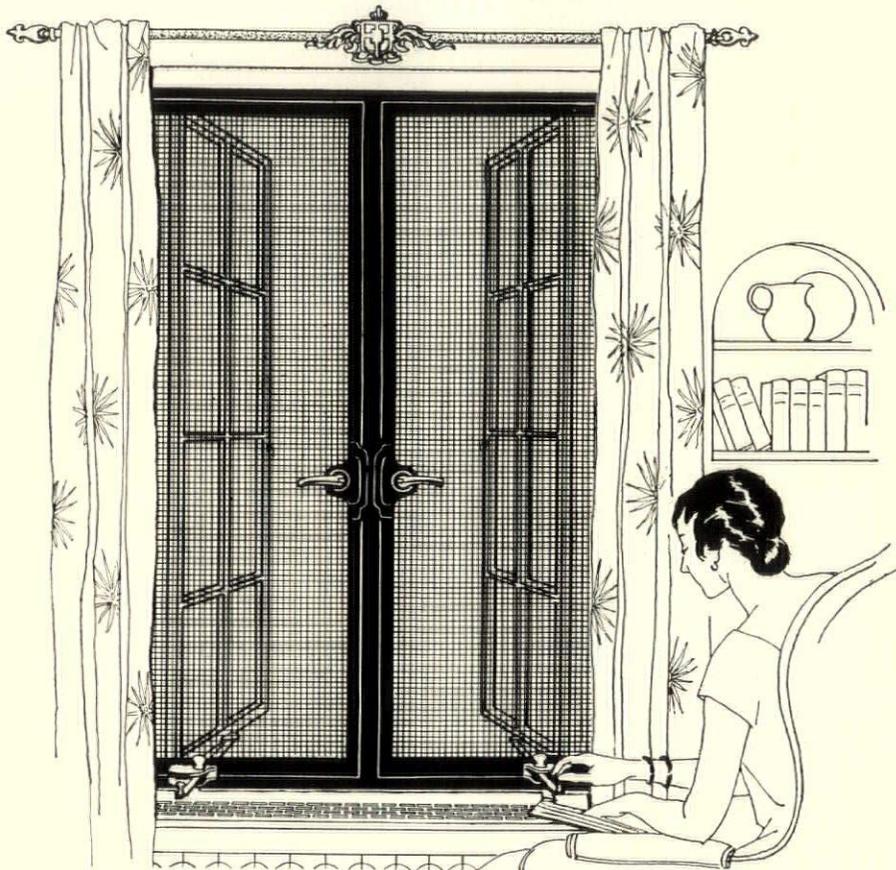
By Henry V. Spurr. Published by the McGraw-Hill Book Co., New York. Illustrated; 132 pages; size 6x9½; price \$3.00.



Wind load diagram of a 120 story building. From "Wind Bracing"

THE subject of wind bracing is treated in two ways in this book. First, in a generally descriptive manner, the author brings out the essential features of the subject which are likely to be of interest to architects and builders as well as to practicing engineers. Second, in a more technical discussion, he develops the fundamental principles of design and shows their application to the problems of the design-

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WITHOUT TOUCHING
Inside Screens



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appointments of solid bronze or nickel silver, in Coinage, Scaly, Sand or Hammered finish. Interior Screens are of bronze. Heavy casement construction favors the use of leaded or plate glass where desired.

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Fenestra
STEEL CASEMENTS (Screened)

ing engineer. As the author points out, "generally speaking, methods of analysis and types of construction suitable for the lower buildings become more and more inadequate as the ratio of height to base increases. The text has been so arranged as to introduce a minimum of mathematics and with simplified formulae for the illustration of discussions.

The author is chief engineer of the Purdy and Henderson Company, consulting engineers, and a member of the American Society of Civil Engineers. He writes well and presents his material clearly and in a manner easy to understand.



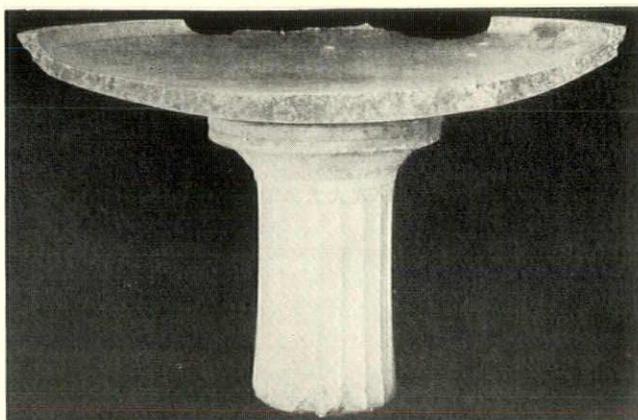
*A town house in Burford.
From "Old Houses in England"*

Old Houses in England

By Rowland C. Hunter. Published by John Wiley & Sons, New York. Illustrated; 128 pages, size 10¾x14; price \$8.50.

THIS book illustrates the less pretentious architectural work of England, principally that found in the small towns and the adjoining countryside of the eastern and southern counties. There are one hundred and fifteen full page plates, most of which are photographs although there are a few sketches, principally of details such as door and window hardware, foot scrapers, chimneys, etc. The photographs comprise buildings as well as their details and are divided according to subject under "Cottages," "Farmhouses and their dependencies," "Small town houses," and "Inns, shops and details." Each of these sections is preceded by brief text explaining some of the conditions influencing the particular class of design discussed.

The book is an excellent collection of its kind and will prove of value to those interested in old English design.



*Marble antefix from a house at Olynthus.
From "Excavations in Olynthus"*

Excavations in Olynthus: Part 2

By David M. Robinson, Ph.D. L.H.D., LL.D. Published by the Johns Hopkins Press, Baltimore, Md. Illustrated; 155 pages exclusive of maps illustrations; size 8x11; price \$20.

ARCHITECTS interested in archaeology will find this book, which is Part II covering architecture and sculpture, of considerable interest. It gives an account of the excavations conducted in 1928 by the Johns Hopkins University expedition which identified the site of Olynthus destroyed by Philip of Macedon in 348 B.C. This city was founded some five thousand years ago.

The book contains chapters on the fortress and barracks, the entrance, the religious and municipal centre, the high class residential section and suburban development, the Macedonian foot, the shopping and trading district including the mint and terra-cotta factory, the outlying district on the east side, Byzantine churches, loom-weights and lamps. Especially interesting are the large Greek houses of the fifth and fourth centuries, with their characteristic rooms and raised borders and bath-tubs (one found in place on the tiled floor). These are the first important houses to be found from the great classical age of Greek culture and fill a gap in our knowledge of city planning.

Unfortunately the upper part of the structures excavated have long since disappeared, but enough fragments remain to give a fairly clear idea of the architecture, sculpture and ornament of the ancient city. There are 307 pages of illustrations, besides various maps, some illustrations in color, and an index.

Modern European Buildings

By F. R. Yerbury, Hon. A. R. I. B. A. Published by Payson and Clarke, Ltd., New York. Illustrated; 144 pages; size 9¼x11½; price \$10.

A VERY interesting collection of pictures, printed on one side of the page only, of modern European buildings of all types including residential, ecclesiastical and commercial buildings, exhibition buildings, public buildings, schools, theatres, etc. In many cases not only the exterior of the building is shown but interiors



Thirteen telephone outlets, including one in the servants' quarters over the garage, provide for complete telephone convenience in the home of Dr. LeRoy Childs, Tuxedo Road, Atlanta, Georgia. Conduit for the telephone wiring is built into the walls and floors. HENTZ, ADLER & SCHUTZ, Architects, Atlanta.

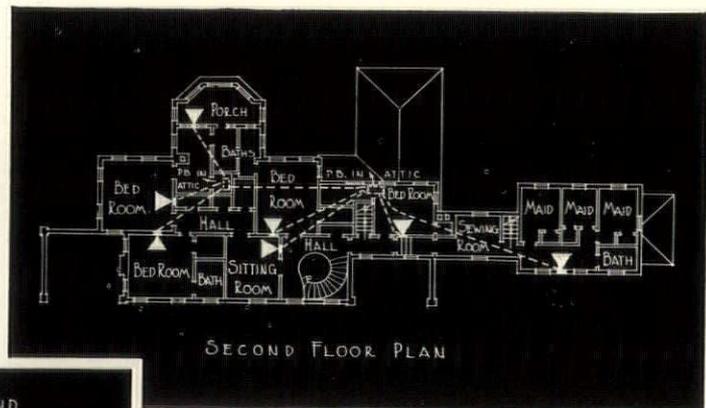
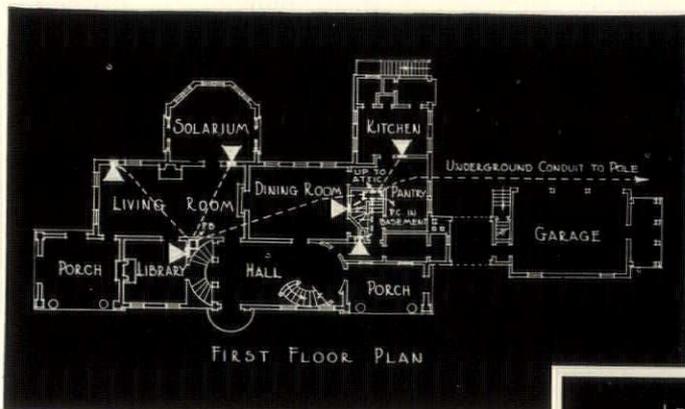
A mark of a well-planned home

AMONG the important features of a home which contribute to the ease and comfort of the occupants is *telephone convenience* . . . that modern note which should be considered in the early stages of planning for a new home or remodeling an old one.

Planning in advance the provision for telephone convenience in a house makes possible the placing of conduit within the walls and floors during construction. This improves the interior appearance by concealing the telephone wiring;

insures against certain kinds of interruptions in the telephone service; and provides for complete convenience by making telephone outlets available in all the important rooms. The occupants can use whichever outlets they wish, and can easily expand or rearrange the telephone service to meet their changing needs.

Your local Bell Company will gladly help you plan the telephone arrangements for new and remodeled residences. There is no charge. Just call the Business Office.



LEGEND

◀ TELEPHONE OUTLET

--- CONDUIT

☐ PROTECTOR CABINET

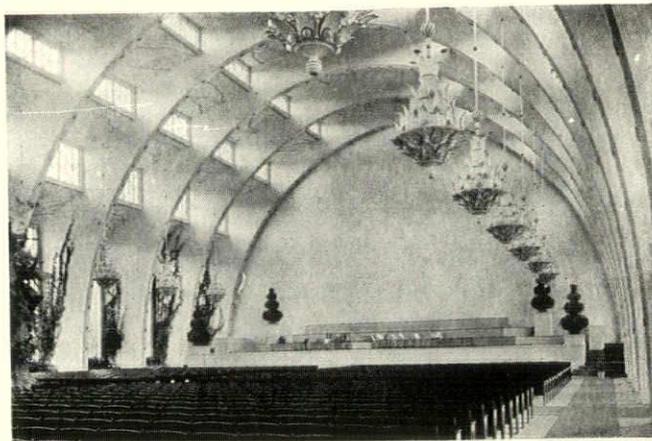
☐ PULL BOX

and details together with plans and an occasional section.

As the author says in his preface, "Probably the strongest impression which these buildings will convey is one of consistent attempt at simplification. The marked absence of unessentials is apparent, due probably in the first place to the high cost of building and general economic pressure of recent years, which has, perhaps, done more than anything to improve the architecture of today and to force the architect along new experimental lines."

Architects interested in the modern school will find this volume one well worth adding to their libraries.

Concert hall, Gothenburg, Sweden. Arvid Bjerke, architect. From "Modern European Buildings"



A Happy Venture

(Continued from page 57)

Talk over the stock market, golf, your philosophy of life—any old thing. Try to find some interest you have in common. Let each one know the other is only a human being like himself, with his own theories, joys and problems. This may seem like a waste of time, but you will find it more than compensates in the end.

I had a commission several years ago to build a house for a family in which there was a fourteen-year-old son. That son had an electric train which ran on a table sixteen feet long. He wanted it in his room, so we fussed and fussed until we finally managed it, but it necessitated making changes in several other rooms. It was a situation that might easily have proved most irritating, save that I must have been in good humor, for the idea that a \$50,000 house was being built around a boy's electric train highly amused me. Whenever any decision was to be made, someone laughingly asked whether it would affect the status of the train table. It sounds silly, of course, but I never knew of a house that swung along so happily or easily.

WHEN it was finished they went in, completely satisfied. In a year it was necessary for them to move to another town. The house went on sale and in less than a week was sold, I believe, somehow, the very spirit in which it was built made itself felt to anyone looking at it. But the best part of it all is that I met the man on the street the other day and he told me they were coming back and, having had such fun building the first house, they would want to build another and have me work with them on it.

There is much being written on educating the public in things beautiful. Our country has been so busy getting going that it hasn't had much time for these things. Now, however, it is stopping a bit for breath and looking about. Just as tact and patience must be used in teaching a young child, so must an architect patiently explain to his client his reason for doing things a certain way. If he remembers that there is also a client's side to the story, he will more easily attain the end they are both seeking.

If the architect's task were only to draw plans and satisfy his client, it would be comparatively easy. But

his job is not nearly as simple as that. He not only represents the client, but he must also see that the contractor is fairly treated. Haggling over money usually does much more harm than the saving warrants. If there is a clear, fair contract to both, there will be few occasions for misunderstanding. When they do occur, regardless of whom it hits, the architect must make a fair decision. When he realizes just how important and how disagreeable it is often likely to be, he will take greater care in preparing his specifications and contract.

It is true the contractor does not pay the architect in so many dollars and cents to attend to his interests, but he does pay him in good will and work well done. If a builder is so inclined, he can easily make things most unpleasant and difficult. He can use inferior materials and do poor work in places not easily noticed. Further, the architect never knows when he may have future work with the same man. Once he establishes confidence in his fairness and integrity, work will go along quite smoothly.

He must develop a pleasant manner. It is not necessary that he come skipping on the job, smirking and slapping the workmen on the back. He must maintain a certain dignity. They must understand that he knows his work and that he will not tolerate irregularities. But he must not go to the extreme in this and be inordinately austere, frowning and fault finding.

He will find that if he notices and comments on some of the things well done first, it will be much easier to rectify mistakes and his criticism will be much more kindly taken. Almost any man takes pride in his work—develop it and he will work his fingers off to please you.

I remember going on a job several years ago where the foreman was an old man. He had been doing carpenter work for forty-five years. He was tired. He wanted to stop work, go live on the Jersey coast, and just smoke, watch the sea and fish occasionally. But his wife wouldn't hear of that lonely existence and he couldn't afford to live here without working, so he kept on—weary, discouraged, and very irritable.

The first time I saw him I knew I didn't like me. He didn't like architects anyway—what could they tell a man about building when he had been doing it for

■
**AN APARTMENT...
 HARDWARE...
 LOCKS...**

MODERN TO THE Nth DEGREE

THIS new apartment, 55 Central Park, West, exemplifies fully modern life in New York City. Outside and in, the latest tendencies in design have been followed, though tastefully restrained. Unusual comforts, conveniences, protections have been installed to make city life in 1930 most attractive.

Hardware by Sargent deserves its share in finishing so completely this outstanding building accomplishment. The design shown used on exteriors, blends perfectly with the architects' decorative plan. Within the apartments a Sargent design in Colonial style adds to the graciousness and charm of each well-arranged room. The high quality of Sargent solid brass and bronze hardware gives a perfection of operation that is lasting.

The new Sargent locks, Nos. 6880 and 6885, are specially designed for apartments. They are the embodiment of strength. Both bolts are operated from the outside by the key. The dead bolt is operated from the inside by the turn knob. The outside knob is set by the stop in the face of the lock. No. 6880 may be so arranged that the janitor's master key will not open it.

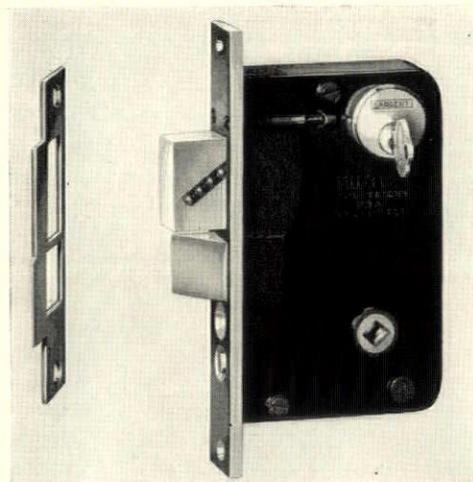
SARGENT & CO., NEW HAVEN, CONN.

In New York City — Builders Hardware Division and Showroom, 295 Madison Avenue; Warehouse, 94 Centre Street.

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55 Central Park, West, New York City,
 Schwartz and Gross, Architects



An attractive Sargent design, Escutcheon No. 7876ME — modern and appealing without being extreme. The Sargent cylinder lock is inserted in it.

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 Sargent special apartment locks Nos. 6880 and 6885. Unusual sturdiness features the face and case. Remarkably large dead-bolt with longer throw. Hardened steel balls set in the bolt make hack-sawing impossible, giving utmost security.

SARGENT

LOCKS AND HARDWARE

forty-five years! And I had not only the disadvantage of being an architect, but a young one—and a woman!

Every change I wanted to make had to go through him. I lived in mortal terror of making a mistake, myself, or of having him find some dimension that didn't check. I trod a precarious path whereon I should be neither too pleasant and easy, nor too forbidding and fault finding. When the work neared completion, after surprisingly even going, I began to breathe more easily and could even smile.

Chrysler Building As I See It

(Continued from page 33)

that most of the airplanes depicted in the mural (or ceiling) are doing stunts and are flying upside down, the result of Mr. Trumbull's standing on his head for several weeks is really most pleasing.

THE floor of the lobby is of Siena Travertine, cut up into patterns which point the way to the elevators and to the exits; in other words, all you have to do is to follow the silver line. The vestibules of the revolving doors are patterned in a whirling design and the architect even put paths of alternating colors in his sidewalk design just to keep the people in line!

In the elevator layout and design, Mr. Van Alen put a yearful of thought and study. He was assisted by L. T. M. Ralston, M.E., in this as well as in the other mechanical parts of the building. There are thirty-four of them—elevators, not Ralstons—arranged in banks of six and eight, the cars being 5'-6" by 8'-0" and the speed 700 feet a minute in accordance with the present allowance of the Building Code of New York City. Mr. Chrysler, however, being somewhat of a mechanic himself, had the machines all fixed up so that when the city solons wake up to the fact that the horse age is over, he can shoot his elevators up to 1200 feet a minute. What with the present gentle starting and stopping device and with completely closed cabs, the passengers have no idea of speed or distance or even direction. So 1200 feet a minute will be, in the near future, an ordinary express speed.

All the passenger cars are of different design and color, a good idea to our mind and one tending to relieve the drab monotony of business life. The cars are very attractive and are made up of all sorts of strange and fearsome woods such as Japanese hardwood, plum pudding, myrtle burl, Oriental walnut and other unheard-of novelties.

Imagine waiting for a car only to find that a myrtle burl had arrived when you distinctly wanted a plum-pudding! However, the elevator men are not to be caught napping, for they have a different uniform for each of the four seasons, practically matching the foliage of the cars.

The elevator doors are unusual in design. If they weren't, they wouldn't belong in the Chrysler Building! They are known as "metyl" (pronounced metyl) being of metal covered with vari-colored veneer woods, such as bird's-eye maple, ebony, myrtle, and, thank God! more plum pudding. The up-and-down signals above the doors are triangular in shape, the ceilings of the elevator lobbies on the ground floor are of varying heights according to how high the elevators run, the outside

The last morning he came to me and smiled shyly, a sort of embarrassed little smile, saying he found something on his way to work, and thinking I would like it, he had picked it up and brought it along. What do you think it was? A robin's egg that had fallen out of the nest!

I think I never had anything that so genuinely pleased me, and underneath it all I felt very humble, and glad beyond words that there had been no difficulty with that old man, who already had enough to bear.

door frames are of KA-2 steel, with glass reflecting the passing traffic of Lexington Avenue, and so on, and so on, novelties, innovations, ideas without end.

There are, in the Chrysler Building, seventy-one rentable floors and two for pipe galleries. On the fifty-sixth floor, the Chrysler Automobile Company has its main office and on the fifty-seventh and fifty-eighth floors, Mr. Chrysler has his own apartment, where he will have comfort within and vertigo every time he looks out of the window. These windows will have screens to keep the clouds out.

On the sixty-fifth floor, the gentle and retiring architect of the building may be found entrenched behind two firm and unyielding secretaries, both of them ex-shotputters from the Vassar College team and both of them signed up to protect Mr. Van Alen from all hazards emanating from either sex.

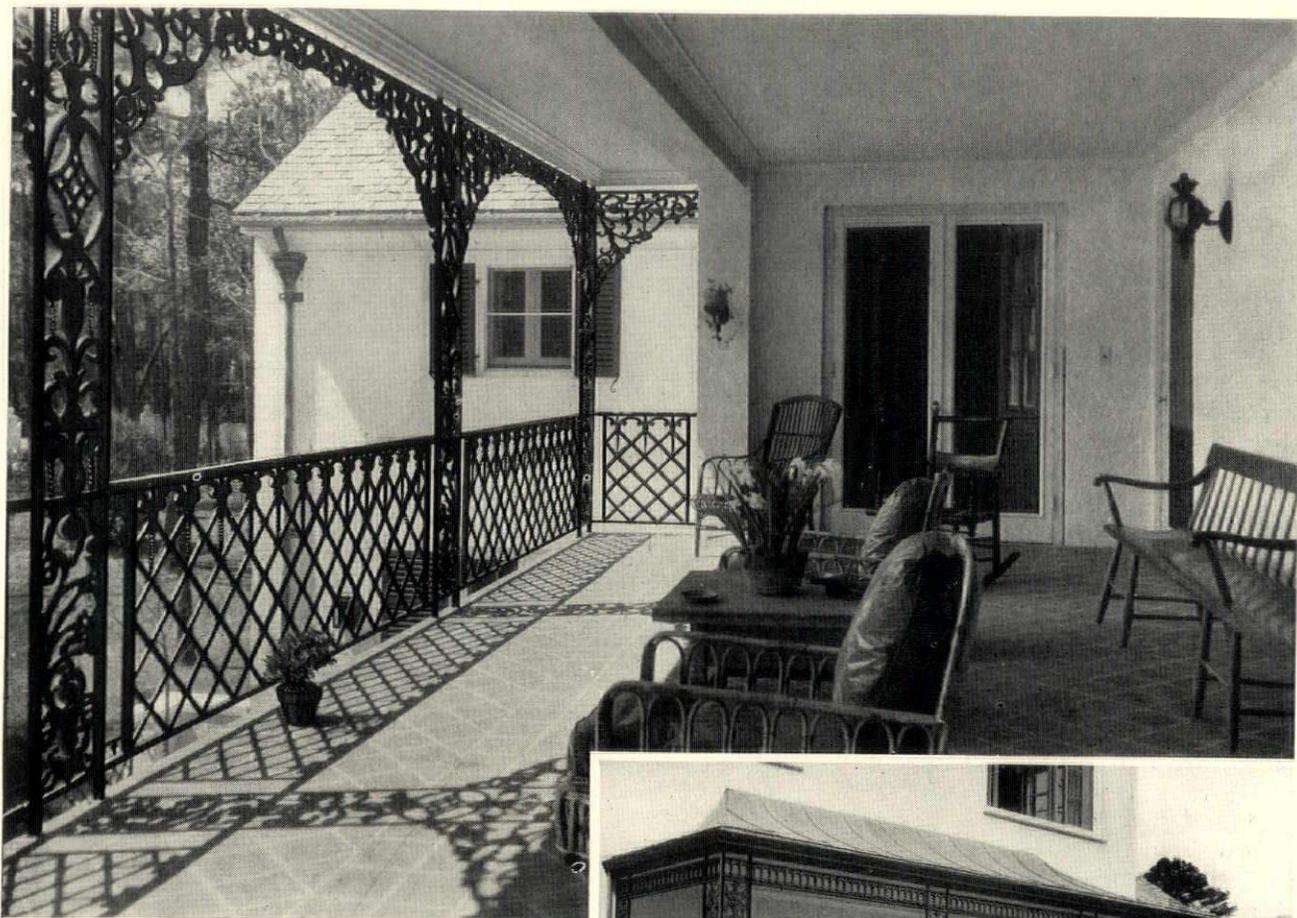
Above Mr. Van Alen and his two huskies, on the sixty-sixth and sixty-seventh floors, the newly-formed Clouds Club will have its aerie home, the highest clubhouse in the world, a club which will, in fact, have no difficulty in looking down upon its neighbors.

Down in the basement are shops and soda bars and subway entrances and passageways and a beautiful still! Alas, however, it only distills water; water, which delivered to the offices at sixty cents for a big fat bottle, will probably succeed in making a big fat profit for the building company.

AGAIN, as at first, the question arises, Do you or don't you? Criticism is easy, achievement is difficult. Mr. Van Alen has done something out of the ordinary; he has abandoned all the old tacets and principles; he has originated something startling, something distinctive and something about which discussion will rage for some time to come.

As for me, I consider this architectural performance a fine one. It teems with the spirit of modernism, it is the epitome of modern business life, it stands for progress in architecture and in modern building methods. Fred T. Ley and Company, Inc., were the contractors who lifted this gigantic structure from a hole in the ground to a height greater than that of the Eiffel Tower in the short space of sixteen months and put the first tenants in the building some six weeks ahead of schedule.

Indubitably, the Chrysler Building will be surpassed in bulk and in height but as the others rise, watch out and see if they exhibit the originality, the sense of action and the spirit of movement that William Van Alen has put in his design.



Seymour H. Knox Residence, Aiken, South Carolina

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SPECIALISTS IN ORNAMENTAL METAL WORK

What An Architect Should Know About Acoustics

(Continued from page 51)

large range of intensity and is provided with a means of protection as the intensity increases. The ear hears what is termed the loudness of sound, which is proportional to the logarithm of the intensity. A band of 100 pieces would be ten times as intense as a band of ten pieces, but the ear listening to loudness, not intensity, would hear the 100-piece band as only twice as loud as the ten piece band. This explains why a room of proper size for speaking can be used acceptably for an orchestra of several pieces.

The second point to be considered in the proper acoustical design of an auditorium is the shape of the room. This phase of the discussion must of necessity be even more abstract than that of size, but there are a few fundamental rules that have been found by various observers, from the study of auditoriums possessing good acoustical qualities, which have proved helpful.

Because of the infinite number of possible paths of a complex sound in a room due to reflection, it is impossible to avoid some distortion of the original sound, but the distortion need not be noticeable if the proper conditions prevail. The main condition to be guarded against is the concentration or focusing of sound. Curved wall surfaces have a tendency to focus sound in much the same way curved reflectors focus light. This causes the sound to concentrate in some parts of the room at the expense of other parts. A good general rule to follow in planning a curved ceiling, if one is preferred, is—the radius of curvature should not be less than twice the height of the room. This also applies to curved walls, in relation to their corresponding dimension of the room. Sabine cited the case of a room having plain side walls and ends with a barrel or cylindrical ceiling, where the sound was so loud as to be disagreeable along the axis of the cylinder, which paralleled the long dimension, near the floor line, and so low at other points as to be scarcely audible. This indicates the advantage to be gained in increasing the radius of curvature, as given in the above rule.

A good outline for an auditorium is rectangular, or slightly spatulated. The spatulated shape is better in the case there are large, unobstructed areas of plain wall surface opposite each other, because this condi-

tion is apt to cause a multiple reflection of sound back and forth between such surfaces, if they are parallel. Such a cross reflection is termed a "flutter." Floors should be inclined at least at the rear in long narrow rooms, and the platform or stage elevated. This avoids what is called a shadow effect, or the hindrance of the

free passage of the direct sound waves by auditors seated in front. Conditions which produce good sight lines usually produce good "sound lines" for the direct sound waves. Unusually wide, shallow rooms generally produce poor hearing conditions at the extreme front on either side of the stage. Openings under balconies should be high enough to let sufficient sound energy through to the seats near the rear walls.

Figure 3 shows a plan and sectional view of the new Chicago Civic Theatre, Graham, Anderson, Probst & White, architects, which together with the new Chicago Civic Opera House, has received much comment concerning its remarkable acoustical properties. The new Chicago Civic Theatre may be considered as an example of one of the

finest, medium-sized auditoriums from the acoustical standpoint. It will be noticed that the spatulated plan is used here. The balcony gives ample space below for sufficient sound energy to reach the rear seats. Novel means of providing beneficial reflection of sound from the ceiling is found in the flat, stepped-up surfaces. The sectional view indicates how this construction has influenced the distribution of sound waves striking the ceiling. The theatre seats 878.

The third and most important factor governing architectural acoustics is that of reverberation. Excessive reverberation is the cause of probably 90% of the acoustical troubles encountered in auditoriums, and consequently more has been written on this particular phase of the subject.

If the extensive research work being carried on by building material manufacturers in quest of substitutes is successful, the construction industry will see the application to building methods of many "new-fangled" ideas. Most of the work is being done with a view to cutting construction costs.

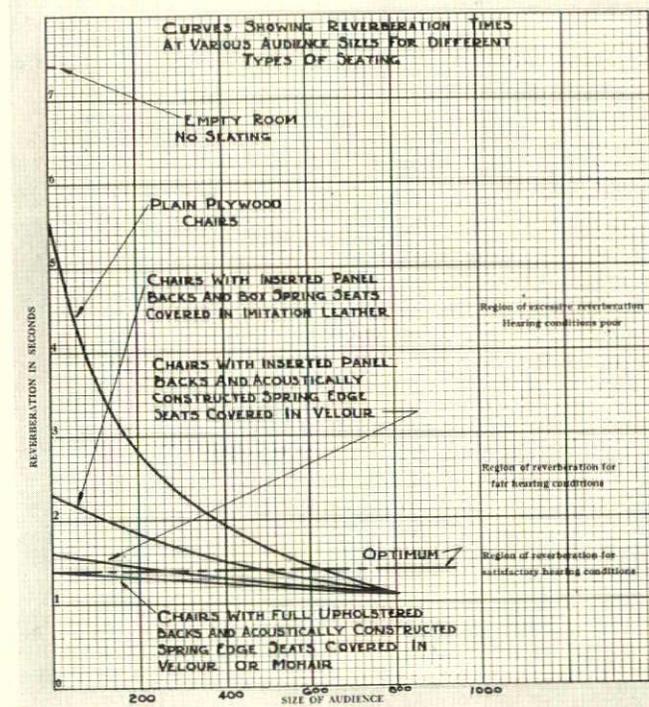
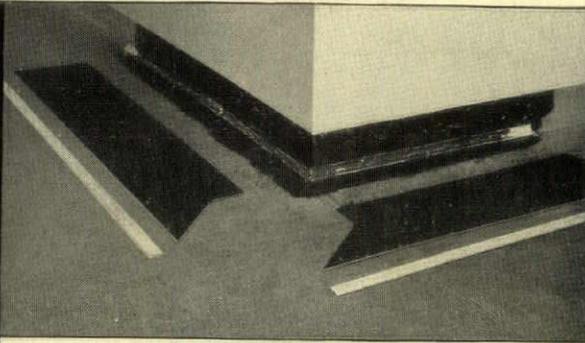
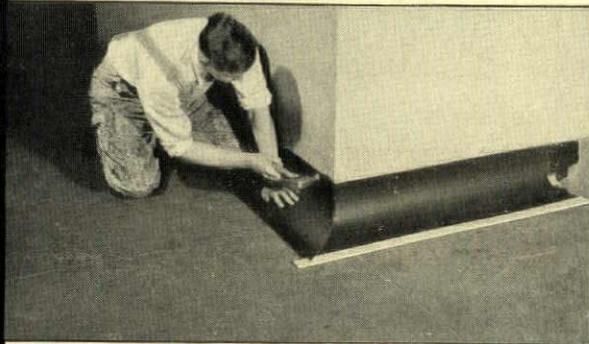


FIGURE 4: Effect which different types of seating can have upon the reverberation time in an auditorium with various sized audiences

THINGS every linoleum contractor doesn't know



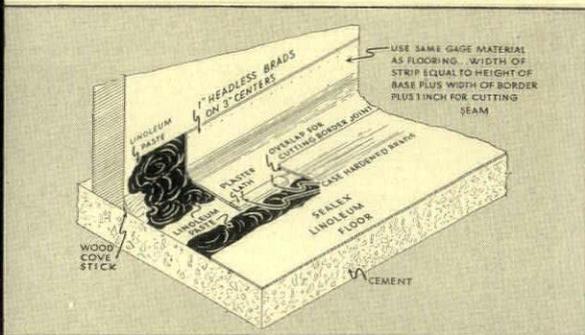
Materials assembled for laying one-piece cove-base and border in an "outside" corner. The cove-stick has been installed and Sealex Linoleum Paste has been applied on the wall.



Here we see the mechanic fixing the cove-base and border in place by means of headless brads, placed on 3" centers, 1/4" below top of base.



Picture shows mechanic completing the job, spreading linoleum paste under edge of the border and the patterned linoleum used for the floor.



The diagram above shows the materials required for a one-piece cove-base and border, and the mechanical details of assembly. The cove-stick is merely a piece of soft wood, triangular in shape, with 1 1/2" legs rabbetted to a concave face. This method of construction gives a neat, sanitary effect at comparatively low cost. It was developed entirely within the Bonded Floors organization and is available through Authorized Contractors of Bonded Floors.

THE pictures on this page show three steps in the installation of a *one-piece border and sanitary cove-base* in Sealex Linoleum. Constructing this as one unit is one of those fine points of craftsmanship that mark the difference between a good floor and a fine floor.

This one-piece border and cove-base was developed by the engineers of the Bonded Floors organization. The men best qualified to install it are the Authorized Contractors of Bonded Floors, located in principal cities throughout the country.

Everyone admits that the customary factory-made cove-base furnishes a satisfactory job. The one-piece base, border and cove, however, possesses certain definite points of superiority. It lends itself to a much greater variety of decorative effects. It makes possible a border of any width, in any weight of material and in any color—as opposed to the strictly limited assortment of effects in the factory-made cove.

Furthermore, this Bonded Floors cove-and-border is structurally sounder than the old-style type. The number of cove cross-joints is reduced. It is less expensive to construct—and can readily be installed

(See next page)

on the job by a skilled mechanic. We recommend it for commercial and business installations and particularly for schools and hospitals. Not to mention kitchens in private homes.

We have described this Bonded Floors improvement in some detail because we consider it a typical example of the progressive flooring service offered by Authorized Contractors of Bonded Floors. The ready-cut borders illustrated on the right are another service feature available through Bonded Floors contractors. These strips can be combined into a great variety of attractive border effects—without the expense and wastage of material that is inevitable when the border is cut out by hand on the job.

Still another field in which our Authorized Contractors have a distinct edge on their competitors is in designing and laying custom-made floors. Our designers have had conspicuous success in creating floors for all types of buildings. The most conservative period design and the most radical modernistic effect can be carried out with equal ease in Bonded Floors.

May we send you the names of Authorized Contractors near you?

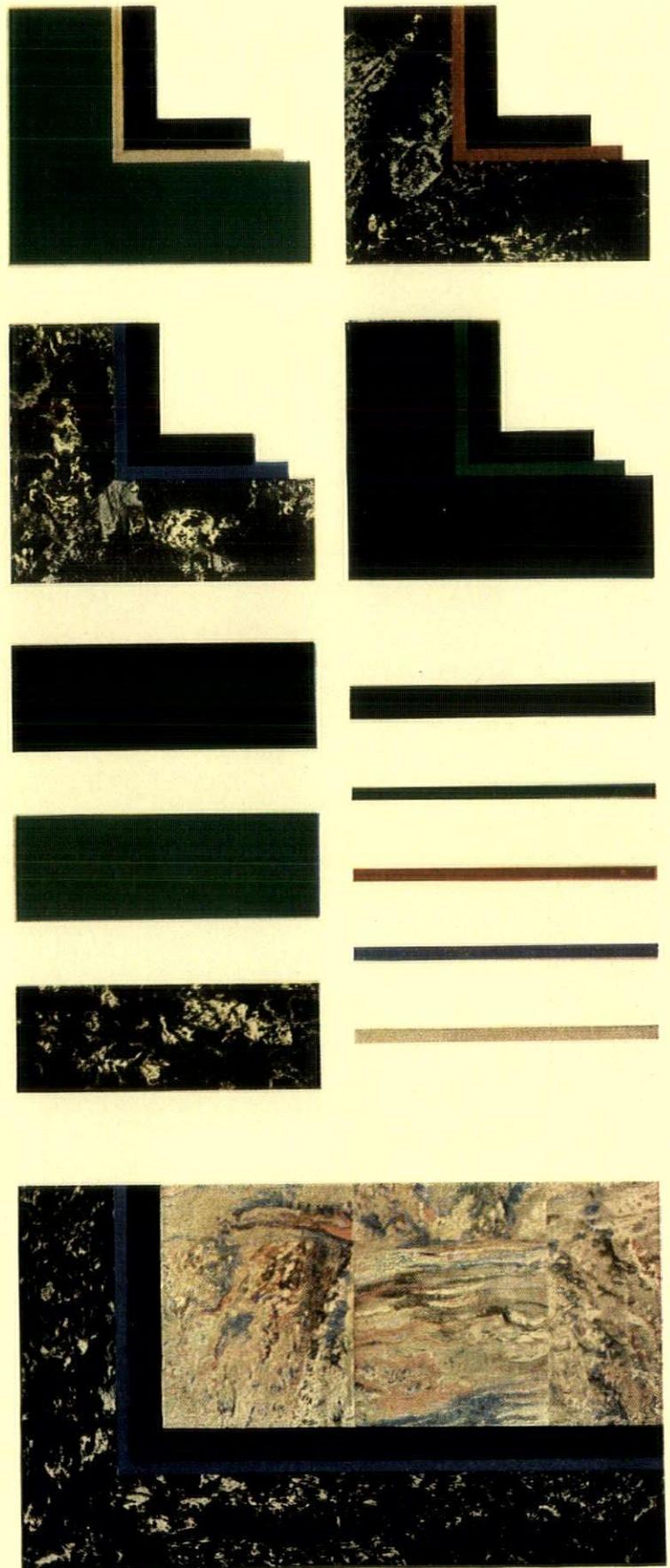
CONGOLEUM-NAIRN INC. . . . General Office: KEARNY, N. J.

BONDED FLOORS



Bonded Floors are floors of Sealex Linoleum and Sealex Treadlite Tile, backed by a Guaranty Bond issued by the U. S. Fidelity and Guaranty Company. Authorized Contractors of Bonded Floors are located in principal cities.

(See preceding page)



The decorative possibilities of linoleum floors may be greatly enhanced by the use of either ready-cut or custom-cut borders. Directly above, for example, is our "Leonardo" pattern (No. 3225) used with a ready-cut border assembly of black marbled, blue and plain black strips. Other border strips and border assembly suggestions may also be seen above.



The Modernistic Movement

Plate 2

The Blackstone Shop is known as one of the most exclusive mercantile establishments on Michigan Boulevard, Chicago. The building itself—modern in design and flawless in craftsmanship—has brought additional distinction to the business. It was designed by Philip B. Maher and constructed largely of Neshobe Gray marble.

VERMONT MARBLE COMPANY—PROCTOR, VERMONT

Branches in the larger cities

See Sweet's Catalog for Specifications and Other Data

VERMONT MARBLE

These Are Criticised, Why Not These?

(Continued from page 23)

family apartments which have replaced them, ruined the foliage, destroyed the charm of the locality and cast a frigid gloom over the whole neighborhood. Neither, on the other hand, is there any valid reason why one shouldn't object to this form of real estate "development" and more particularly to the total lack of architectural sense displayed.

NUMBER One Fifth Avenue shows clearly enough that a tolerable solution of the architectural problem involved in the high apartment dwelling goes a long way toward relieving the sense of change and loss which has come over the neighborhood of the park. But not even this fair example, nor the Washington Arch itself, nor even the remaining residences on the north side, can hold out against the architectural trash which has sprung up on Macdougall Street on the west side of the park. The public at large is the loser, and the fault lies precisely in the sacred ban on criticism which has permitted not only the public to remain architecturally uneducated, but architects and clients as well. Yet, I dare say, these buildings are destined to remain for years, for decades perhaps, ruining a fair spot without hope of relief. We have come to object to loud and unnecessary noise; it is time we objected to loud and unnecessary architecture.

The public at large is victimized in a peculiar sense by the pernicious examples of architectural incompetence which abound everywhere. It is victimized in the sense that it cannot escape them. Exposed to their steady influence, the public has taken recourse in complete indifference which is broken only now and then by some outstanding building. But just as noise is a costly waste, however much we may appear to be indifferent to it, so aesthetically, the meaningless, dreary streets exert a detrimental influence and help in that paralysis of the spirit which hardens all urban life.

Where the public can exercise choice, it clearly does so and in a direction that is healthy and creditable. A striking example of this is to be found in the design of Mr. Ford's new car. Not only was it necessary to improve the older model along mechanical lines to the very highest point of efficiency possible without increase in cost, but it was equally necessary to improve its design. Were this the highest priced, instead of the lowest priced car on the market the argument would still show which way the wind blows; as it is the argument is final and conclusive.

Indeed, the Ford car is merely a conspicuous example of a tendency that is everywhere in evidence. Window display has become almost an art, exhibiting in the best examples a very high degree of taste, composition and design. Advertisers who, it may fairly be said, wish to appeal to the public, have steadily improved the appearance of advertising matter. They are responsible, in conjunction with publishers, in developing the highly varied and improved typography and set-up of printed matter. There is frequently more careful design, more thought and taste in the composition of a page of printed advertising matter of building materials than is evident

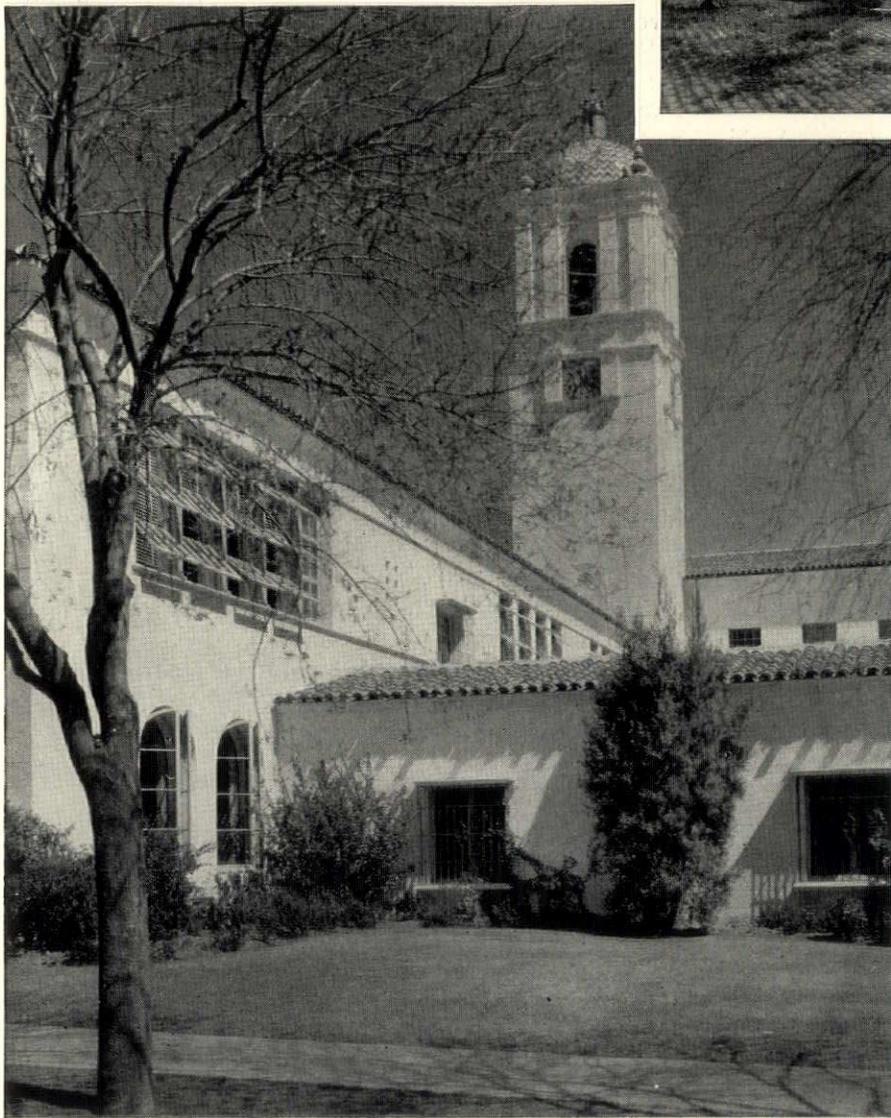
in the finished building using the advertised article. Looking at many of our buildings one might almost be inclined to think that advertising matter addressed to architects and clients should preferably be as ugly and meaningless as possible.

The truth of the matter is that the public expresses its taste and its criticism by the simple expedient of buying the best designed article. The public as a whole is the critic, and a severe one, for general merchandise. Manufacturers and advertisers have come to recognize the economic value of design in the appearance of their articles, whether it be watches or furniture or motor cars or cups and saucers, or perfume bottles or plumbing fixtures. It is not only that here and there these things have been improved, that for example Rockwell Kent, or in a more jovial vein, Peter Arno, have added to the interest, amusement and general appearance of advertising matter, but that the entire field has undergone definite development, consciously fostered. Among architects these principles are too often taken for granted and forgotten; to the modern manufacturer and the modern industrialist they are alive and vitally important.

In architecture alone the public must accept what is put before it. In the fine arts as well as in the commercial arts, if one may make this distinction, the public exercises its choice and its taste freely and effectively; in architecture it can have recourse only to apathy and indifference by way of escaping an otherwise intolerable situation. This indifference is fostered by the prevailing lack of serious criticism. After all, architecture is a vast and complex field embracing a thousand diverse factors of science, art, business, law and industry, not to mention human psychology. Despite the fact that it is everywhere in evidence it is more readily overlooked than understood. In general we do not "see" buildings; we simply use and accept them. This uncritical attitude is doubtless due to the complexity of architecture not so much in its visible forms as in its significance. A picture, a novel, a play, a musical composition, is presented in its entirety as conceived—not so a building.

ARCHITECTURE differs from the other arts in being above all utilitarian—in serving a purpose, or at least, in solving a given problem or condition. Thus it is essential, in order to understand a work of architecture, to understand the given problem, to perceive its solution in plan, in mass, in circulation, in the general disposition of the parts and in its relation to the business and financial side of the operation. The "design" in the sense of facade must be deeply related to all these factors. Finally a work of architecture implies a specific client—whether an individual, a corporation or a government, and here again architecture is radically different from most of the arts in that the personal equation of the client with all the psychological conditions which this implies, enters in before the work is even begun. All these factors, including a mass of legal restrictions which are technical, serve to make architecture a separate art—something recondite and unapproachable for the lay person. Thus we have the spectacle of an art which

ARCHITECTURE
finds full expression
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These views are of the Hawiborne School, Beverly Hills, California, of monolithic construction throughout, with decorative details cast in place. R. C. Flewelling, Architect.

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by its very nature is present for everyone and concerns everyone, but which, nevertheless, is the least appreciated and understood of all the arts.

THIS paradoxical situation can only be resolved by a free expression of the critical spirit. But such a movement must be undertaken by the profession itself. The Architectural League of New York, for instance, should not merely present a medal for the best example of architectural work for the year, but likewise, and for exactly the same reason, mention should be made of the best critical comment on contemporary work. Anatole France and Bernard Shaw were themselves critics of literature; and while architects occasionally write eulogistic and otherwise harmless articles about each other, I recall only Mr. Ralph Walker's estimate of a League Exhibition in *THE AMERICAN ARCHITECT*, issue of February 5, 1928, as in any way an effort toward a truly critical estimate of the work presented. In so far as architecture is an art, it needs the stimulus, the restraint, the appreciation and rewards which can only come from candid and intelligent criticism.

The effect upon the architect will be as potent as the indirect effect upon the public and the owner. Architecture is today in a great transition period. Conceptions which have long held sway are giving way while newer trends are in a wholly experimental stage. The relation of architecture to life, to a slowly but steadily changing economic system, to a new order of organized and corporate business world, to a highly intensified mechanistic system of things, in a word, to the machine, is a real challenge to architecture. This means new conceptions, new thoughts. It is essential that they be expressed—not in the bastard and fumbling experiments which many of our houses and skyscrapers present, but in a clearer comprehension of these new factors, a sharper and more critical understanding of their efforts.

The critical contributions of Mr. Lewis Mumford are more important for the profession as a whole than the great mass of structures that, having just been completed, count as the latest thing in architecture though generally, by any sane standards, they are a jumble of recent mechanical improvements and the discarded experiments in design of ten or twenty years ago. The pity of it is that we have not more critical writers whose work should not be confined merely to theoretic principles, but to the critical estimate of actual buildings with all the freedom of expressions accorded to critics in other arts.

Looking at some of the recent buildings in New York one cannot escape the impression that the solution of the skyscraper problem, heralded a decade or two ago, was but tentatively accepted by a few bolder architects; for the rest of this progress in ideas was blandly passed by. While even these architects have accepted, so to speak, the latest motor, they still insist that it be installed in a good old-fashioned carriage. Without in any sense attempting a definitive criticism of recent work it is interesting to note this lapse in the development of skyscraper architecture.

It would seem as though, at the moment, but few architects were on sufficiently sure ground to forge ahead into newer and sharper interpretations; the re-

mainder, one is forced to observe, are content to muddle through an elevation as though it were a kind of minor evil for some junior draftsman to struggle with. Nor will the pretext of economy cover the sins of commission rather than omission for, often as not, the most lavish and luxurious "temples" of business are the worst architecturally. The only economy, if there be any, is on the score of design. The writer knows of a New York building costing over \$12,000,000 where neither the architects nor the owner could be prevailed upon to spend a hundred dollars for a sketch model in order to study the complex problem of the set-backs and pent-house masses.

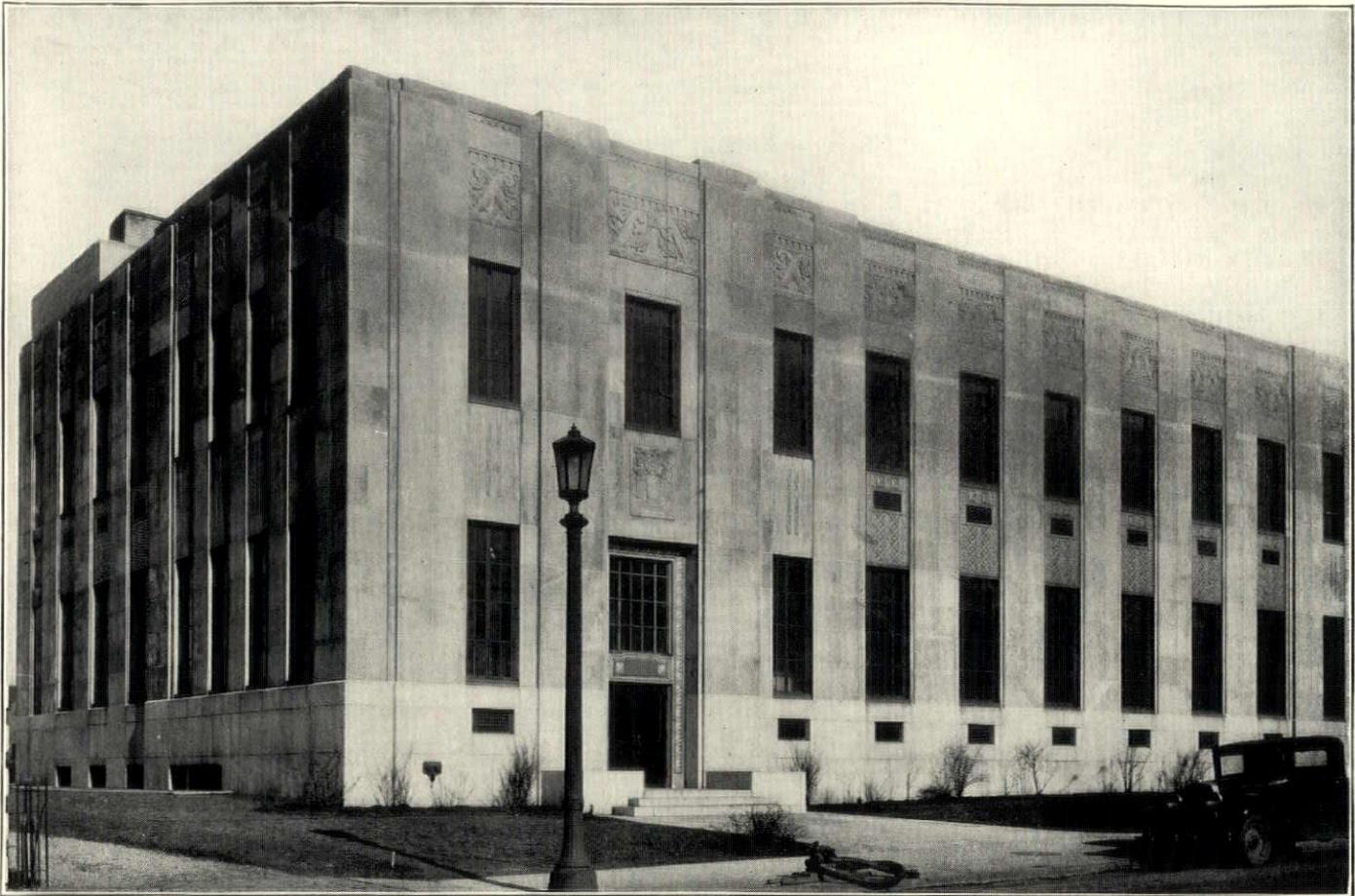
It is difficult to believe, certain architects and owners to the contrary notwithstanding, that poor architecture is good business. Yet such an attitude prevails in circles far removed from the taint of speculative operations. No money is spent quite so carelessly and ignorantly, and no money is saved so unscientifically, as the amounts involved in questions of design.

Wise economies are axiomatic in good architecture, yet it can hardly be maintained that the modern skyscraper suffers from excessive economies in building materials or workmanship. The difficulty lies elsewhere. It lies in the appalling nonchalance with which buildings of forty or fifty or any number of stories are rushed through the process of being "designed"—that is, of receiving a coating of nondescript ornament over that unstudied mass, a mass unstudied except for a hunt for "cubage." Such conditions, it is evident, are due almost entirely to the low state of architectural understanding and appreciation on the part of society in general, and, one is tempted to add, architects in particular.

In this matter there is no escape through the agency of art commissions, juries or any other form of semi-official approach. The effort to standardize taste is always negative in effect and achieves at best a questionable state of tension. In such an atmosphere initiative and imagination are inevitably stifled rather than encouraged. Criticism, on the contrary, by its very freedom serves at once to encourage and to chasten and above all to help in the creation of values without which art and architecture alike become meaningless.

Tests on White Paints

WHITE paints for outside use have been tested by the Bureau of Standards, which has exposed panels on the roof the bureau's chemistry building. Invariably these have been applied in either three coats on well-selected wood or in two coats on carefully cleaned metal panels. Repeatedly, straight white-lead paint has shown good durability. Likewise lead-zinc paints, provided the zinc-oxide content of the pigment does not exceed 30 per cent, have shown good durability. On wood panels, increasing the zinc-oxide content up to 50 per cent has resulted in rather bad cracking and scaling of the paint. On metal, the lead-zinc paints containing not over 30 per cent zinc oxide are more durable (prevent rust) than straight white lead. Coming to the newer type of outside white paints on wood, the titanium-zinc paints show good durability, provided the zinc-oxide content does not exceed 30 per cent. (*Cont. on p. 96*)



*Michigan Diamond Office Building, Cleveland, Ohio. Hadlow, Hughes, Hick & Conrad, Architects.
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To Get A Good Brick Job

(Continued from page 37)

involved to allow any discussion of it at this time.

If mortar colors are specified, they should be preferably mineral colors and purchased from a reputable source. To produce uniform colored mortar the ingredients should be accurately proportioned by weighing and thorough mixing before adding the water.

Having thus made sure that the quality of the brickwork are of the desired quality, it only remains to insure that the work specified is properly done.

For the strongest and best brickwork, brick should be laid in what is called "shoved" work, which means that all brick are pushed into place on a full bed of mortar and that all vertical joints are filled with mortar. Brickwork which is done in this manner with good mortar will develop tremendous strength and stand the onslaught of the elements indefinitely.

WHILE shovel work is best, it is not always necessary and on most jobs is not required. It is essential, however, that horizontal and vertical joints in the outer tier or wythe of all exposed brickwork be filled with mortar. Such filling with plastic mortar is good insurance against wet walls.

The vertical joints back of the outer tier may be left quite open with advantage. The small air space produced tends to stop water travel through the wall and adds somewhat to the heat insulating value of the wall. Its presence appears to detract but little from the compressive strength of a properly bonded wall.

The type of bond is usually specified but in any case sufficient headers or header courses should be used to thoroughly tie or bond the masonry together. Metal ties are never as good as headers of brick used where end walls are jointed at the corners and also where cross walls meet and tie into side walls. Don't allow metal masonry ties to be used if they can be avoided. Metal bolts for roof plates, stirrups for joists and beams are, however, permissible.

When hollow tile or other material is used as a backup for facing, use brick headers for bonding. Metal ties are even less desirable in this type of construction.

Except in winter time, all brick should be well wet before laying and laid while wet. This prevents the brick from absorbing water from the mortar and so assists in developing strength in the mortar joint. However, do not soak the bricks, for they can be made so wet that they will slide on a bed of mortar and get out of alignment; and this may also thin the mortar so that it will run down the face of the wall.

In winter bricks should be laid dry. Bricks and mortar should be kept above the freezing point (by preheating when necessary) until they have been in place long enough for the mortar to take an initial set. Otherwise, the work may move out of place and so have to be rebuilt.

Do not allow the brick tenders to throw down the brick on the scaffold, causing them to break or even chip. The scaffold should be kept clean and orderly, for this not only prevents the breakage of brick but increases the efficiency of the bricklayer. Every "bat"

or broken brick can, however, be used in the interior of the wall as the work goes along.

Brickwork should, of course, be laid smooth, plumb, straight and true. The brick foreman is responsible for this part of the work, but it is well to watch his methods and see that walls are plumb, especially at the corners, that "trig" lines are properly placed and the work is done. In skintled work and other special effects, brickwork should be plumb, as a whole, but may depart much from being straight and true.

The wall should preferably go up at a uniform rate all round and not one section much in advance of the other. If the latter method has to be employed, see that the unfinished end is left so that the adjoining section may be securely bonded and built into it.

It pays to carefully lay out the initial courses of brickwork, taking into consideration the bonds, openings, ornamentation, etc., which may be built into the work at higher elevations. The work is thus expedited and later errors oftentimes avoided.

The unfinished wall should always be protected at night from the elements, no matter in what season of the year, and this is particularly important during a rainy season or in the winter time. Walls should be covered with boards or other substantial protection with bricks piled on the top to prevent them from blowing off, so that rain water is entirely prevented from entering the top of the wall. The entrance of even a small quantity of water at the top of the wall will not only affect the quality of the workmanship but may later cause efflorescence on the outer surface.

THE work should be checked with the drawings as often as is necessary to see that all openings and chases are built into the wall as indicated, and also that the masons are building in the necessary nailing blocks, strips, plugs, etc. for the later attachment of interior trim and woodwork by the carpenter.

In brickwork, the courses can easily be so adjusted that the courses supporting joists will be at the exact height required. No "shims" or blocking under the joists are needed nor should they be allowed.

Particular attention should be directed to see that all brickwork at floor levels constitutes an effective fire-stop and that where wooden members are framed into the brick wall sufficient brick, not less than 4 inches, separates such members. This precaution applies particularly to woodwork adjacent to fireplaces and chimneys.

Although door and window frames are usually set by the carpenter, it is the duty of the brick mason to see that they are properly set; careful supervision at these points will go far to insure weather-tightness of all doors and windows. The space between frames and brickwork should be thoroughly filled and slushed with mortar. Whether shown on the plans or not, wind stops should be built on the outside of all frames, especially under the sills where such provision oftentimes proves to be overlooked.

Brickwork over windows and doors of moderate

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width, 3 feet or less, is commonly supported by wood lintels at the front and the back of the wall. Better practice is to use steel angles, especially for wider openings.

In building a brick arch over windows or doors, it should be laid on a proper wooden centering, and the brick should be laid in rolok courses with sufficient rise to preserve the integrity of the arch after the centering is removed. The common rule requires 1 inch of rise for each 1 foot of span of the arch.

FOR all arches except the full elliptical arches (such as the segmental arch), the abutments as well as the arch should be carefully built. Segmental arches should not be used unless there is a sufficient mass of masonry on each side to take the thrust and carry the load.

A residence foundation wall, 12 inches thick or over, will seldom require a footing if built upon firm ground. When footings are used, see that the ground has been leveled all around the foundation and that the lowest course of brick is laid in a bed of rich cement mortar. Foundation walls, both with and without footings, should be carried down well below the frost line.

If foundation walls are in moist or wet ground, drain tile should be laid all around the footings, giving an even gentle slope from the high point (not above the basement floor level) to the low point (not below the bottom of the wall or footing).

Except in very dry soils, it is much safer to waterproof the outside of foundation walls. This can usually be accomplished by a half-inch coat of rich cement plaster, one part cement to two parts coarse sand, put on as the wall is laid up. Hot asphalt mopped on the outside or a mixture of three parts of tar and one of pitch will provide a good waterproofing.

Parapets and copings, very important parts of a structure, are often slighted because they are the last parts of the work. The rush to finish the job sometimes results in improper building of these essential constructions. Extraordinary precautions should be used to prevent water entering the wall at these sections above the roof. See that all joints are well filled and that roof flashing is carried entirely through the wall two or three courses above the roof elevation. Counter flashing may be necessary.

A proper coping which keeps water out of the top of the parapet is also essential.

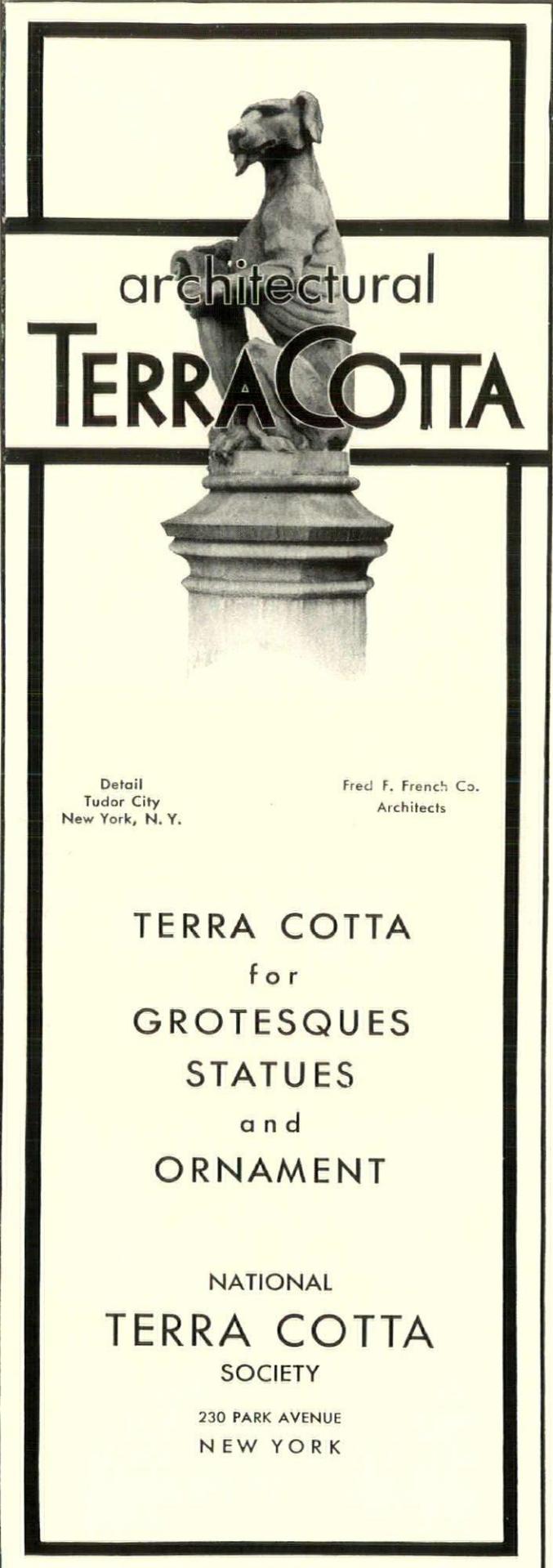
A metal or membrane waterproofing directly under the coping is good practice. And the best coping for a brick wall is either brick or some other burned-clay material, such as special coping tiles. Concrete or cast-stone copings experience so much alternate swelling and shrinking, as they are alternately wet and dried, that they occasionally open up large cracks between the coping and the brickwork below.

• P E R S O N A L S •

FLINT and Broad, architects, have moved to 406 Burt Building, Dallas, Texas.

M. Louis Kroman has opened offices at 180 North Michigan Avenue, Chicago.

Jas. L. Gatling, architect, has opened offices at 811 Bankers Bank Bldg., Birmingham, Ala., and requests manufacturer's catalogues.



architectural
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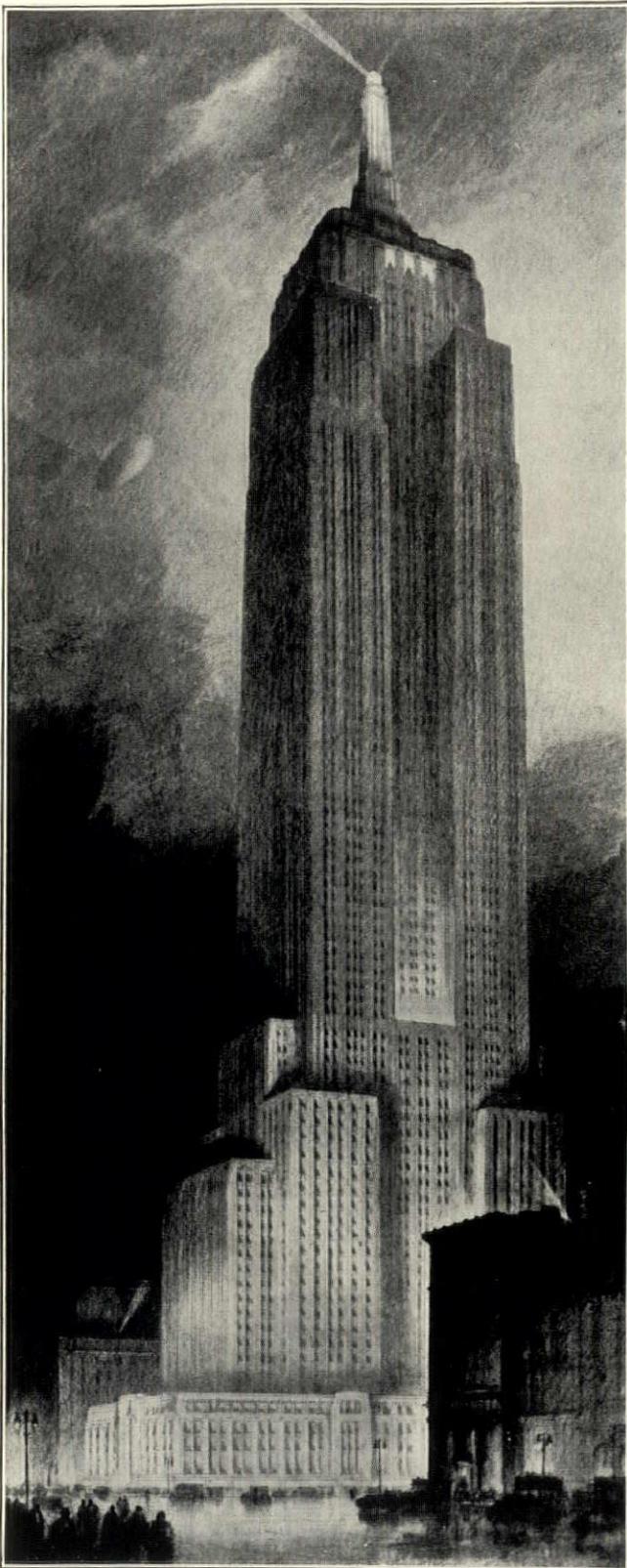
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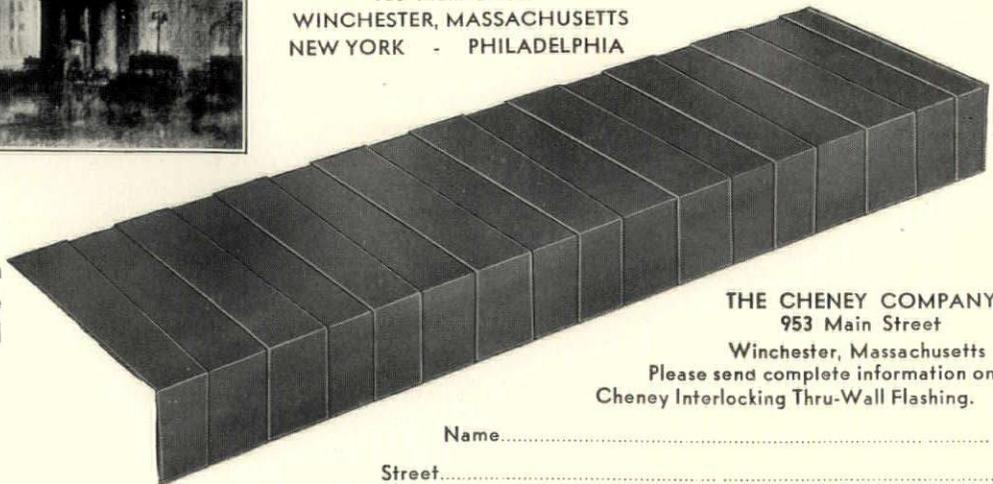
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The Contract Between Architect and Client

(Continued from page 35)

written. The obvious deficiency of the oral contract is that it leaves the door open to misunderstandings, lapses of memory and honest differences of opinion. It is a simple matter for two men, each desiring to do what is right as he sees it, to differ after a lapse of months in their recollection of the terms of an oral agreement. It is an equally simple matter to reduce the contract to writing, and the written contract is the only contract which, in the last analysis, is really worth while and thoroughly effective.

THE contract, again, may be what the lawyer calls an express contract or what he calls an implied contract. An express contract is one which sets forth definitely the terms which it embodies. An implied contract is one which rests on implication resulting from the actions of the parties. If the client and architect agree, for example, in so many words that the architect shall be paid a fee equal to six per cent of the cost of the work, payable on certain dates or under certain contingencies, we have an express contract. If, on the other hand, nothing is said as to the fee or when it will be paid, the law will nevertheless raise an implication that the architect shall be paid a reasonable fee within a reasonable time. Obviously the express contract, which is really another way of saying in plain English a contract definite and complete in its terms, is the preferable form.

The standard contract form of the American Institute of Architects is the result of an effort to produce a form which shall be applicable, so far as possible, to the practice of the ordinary architect. On the other hand, the practices of architects differ widely. A form which will meet the needs of one architect will often be quite inappropriate for the needs of another. A form which will apply to the practice of an architect engaged primarily in residential work will in many particulars be inapplicable to the practice of an architect engaged in work of a commercial type, such as apartment houses, office buildings and the like. Each architect will develop gradually and according to his own experience his own ideal form of contract. It is desirable, however, that all contracts with the client be tied up as closely as may be practical with the standard form of the Institute. In proportion as the customs of the profession are established and adhered to, the position of the architect will be made more secure and more definite.

A FEW years ago I had occasion to point out a few points which I considered dangerous in the standard form of contract. One of these was the provision that estimates were to be considered as approximations only. The danger of this provision lay in the fact that the clear inference from it was that any estimates given by the architect would be approximately correct. In the latest form of the Institute contract this danger point has been done away with and the standard provision now reads as follows:

"When requested to do so, the architect will furnish the preliminary estimates on the cost of the work, but he does not guarantee the accuracy of such estimates."

This is as it should be. At a conservative minimum probably sixty per cent. of all serious disputes between

architect and client are related in some way to this question of cost. There is no point, throughout the relations of the architect and his client, so full of dynamite or unpleasant possibilities for the architect. It is imperative that it be made clear beyond any possibility of misconception that the architect's estimates are in effect merely his best guesses and that his rights and liabilities shall not be affected by the fact that his guesses may be wrong and that the cost may be more than he has believed it would be.

ANOTHER point of some importance is that the contract state what the estimated cost is. The standard form does not do this. The payments to the architect, until the receipt of definite bids, must necessarily be based on the estimated cost. It has always seemed to me bad practice to include in the contract a statement to this effect, and at the same time to omit from the contract the estimated cost figure. The effect of doing so is to leave the estimated cost in the air. This puts the architect in a position, when he sends out his bill for preliminary studies, of basing it on an estimate which he himself makes at that time and to which the client is not in any way, ostensibly at least, a party.

There is another danger point in the standard form which has not as yet, I think, been corrected. The clause relating to the termination of the contract is so worded that it is susceptible to the interpretation that, if the contract is terminated midway between two of the stages of the work at which payments to the architect fall due under the contract, the architect will be entitled to only the payment which was due him at the time that the last completed stage of the work was finished. As the standard form now reads, it might be claimed, for example, (and has been claimed in a case in my own practice) that if the client abandons the work when the preliminary sketches have been prepared and the working drawings and specifications proceeded with, but not completed, the architect should be paid only the one-fifth of the basic fee which accrued on the completion of the preliminary studies. This, of course, is not the intent, but a discontented client does not always consider too scrupulously the question of intent as distinguished from the question of his technical legal rights.

FIND it helpful, also, to provide in the contract that the architect may order such changes as he considers beneficial, provided that they do not materially change the plan or add to the expense. This is an exceedingly valuable provision oft times and the client does not usually object to it.

It would not be difficult to write a book on this one question of the contract between the architect and the client. In the present space, it is impossible to do more than to sketch the highlights. It has been suggested that it might be helpful, however, if I were to append to this brief discussion a suggested condensed form of contract embodying the specific points which I have discussed and available for use in cases where a form of contract other than the standard form is desired. In preparing this form it has been my aim to make it as brief as possible

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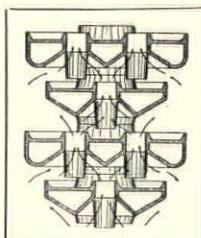
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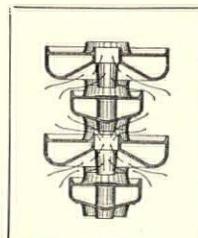
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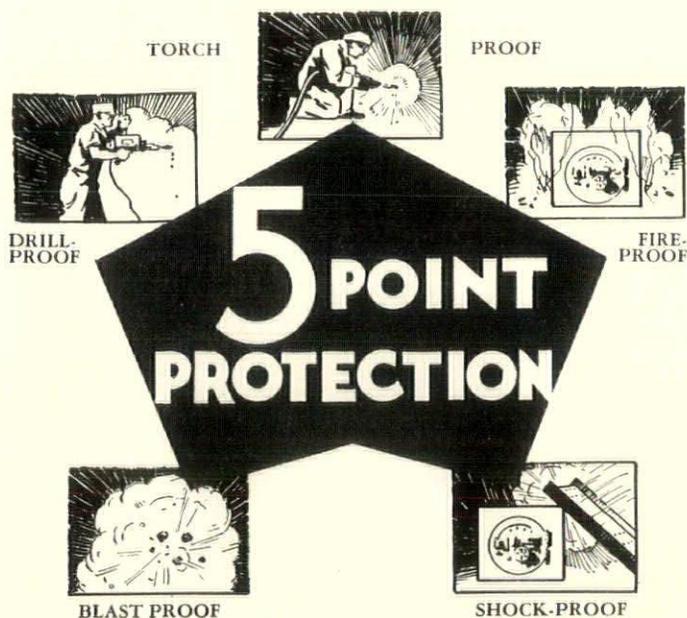
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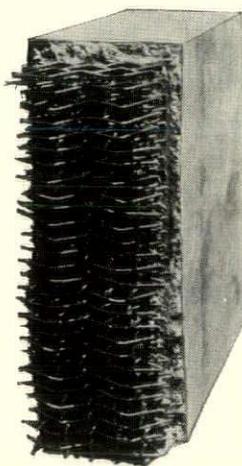


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consistently with the protection of the architect on fundamental points. There are many points of lesser importance which might, of course, be added to advantage in a more detailed form of contract. In the accompanying form all trimmings have been eliminated and only those provisions retained which experience has shown to be of special importance.

THE architect who proceeds under a written contract in definite form—whether it be in the present form, in the Institute form, in the form of an exchange of letters or in any other suitable form—is in an incomparably stronger position than he who proceeds without such an agreement or on the basis of only a verbal understanding. The preparation of drawings, details and specifications is an expensive matter. The architect who incurs this expense without knowing exactly where he stands is taking a gamble which is both dangerous and unnecessary.

• BULLETINS •

PROTECTION of log cabins, rustic work and unseasoned woods from injurious insects is described in Farmers' Bulletin No. 1582, issued by the United States Department of Agriculture, Washington, D. C.

"Tests of Composite Beams and Slabs of Hollow Tile and Concrete," by D. E. Parsons and A. H. Stang, is the title of research paper No. 181 recently issued by the Bureau of Standards, Washington, D. C. Price 15 cents.

"Tension Tests of Rivets," by Wilbur M. Wilson and William A. Oliver, is the title of bulletin No. 210 issued by the Engineering Experiment Station, University of Illinois, Urbana, Ill. Price 25 cents.

Standards Yearbook, 1930. Compiled and published by the National Bureau of Standards, U. S. Department of Commerce, Washington, D. C. 301 pages; 6x9 1/8. Price 75 cents.

Preventing Cracks in New Wood Floors. Leaflet No. 56 of the United States Department of Agriculture, Washington, D.C. By L. V. Teesdale, senior engineer, Branch of Research, Forest Products Laboratory, Madison, Wis. Price five cents.

Laboratory Tests of Reinforced Concrete Arch Ribs. By Wilbur M. Wilson. Bulletin No. 202 of the Engineering Experiment Station, University of Illinois, Urbana. Price 55 cents.

Dependability of the Theory of Concrete Arches. By Hardy Cross. Bulletin No. 203 of the Engineering Experiment Station, University of Illinois, Urbana. Price 20 cents.

Transverse Tests of H-Section Column Splices. Research Paper No. 157. By James H. Edwards, H. L. Whittmore, and A. H. Stang. Issued by the Bureau of Standards, U. S. Department of Commerce. Price 10 cents.



ITS 20 YEARS OF SUCCESSFUL USE PROOF ENOUGH?

TWENTY years ago we gave the building field a new waterproofed cement and said, "This waterproofed cement made by the Medusa Process will break down capillary attraction of the concrete or mortar and make it permanently impervious to either slow seepage of water or hydrostatic pressure." It was our belief that the "grinding in" of Medusa Waterproofing with cement clinker at the mill was better than using ad-mixtures on the job. Time has proved the "Medusa Process" right. Today, waterproofing on countless jobs where Medusa Gray Portland Cement—waterproofed—or Medusa White Portland Cement—waterproofed was used, is still giving satisfactory service. Consider this record when working out specifications for waterproofing on your next job. Send and get the latest waterproofing information and specifications in our new book entitled "How to Make Good Waterproofed Concrete."

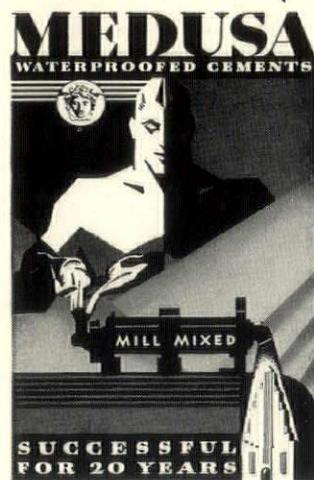


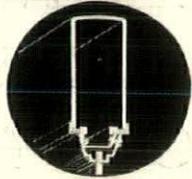
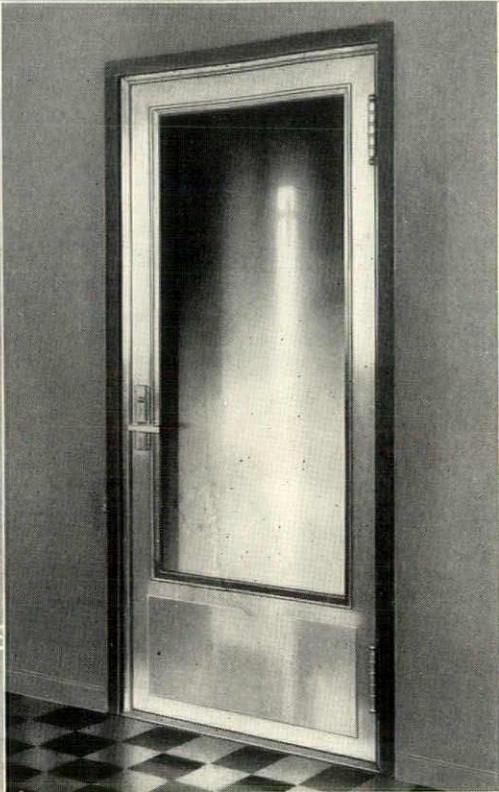
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Manufacturer of Medusa Gray Portland Cement (Plain and Waterproofed); Medusa Waterproofing (Powder or Paste); Medusa White Portland Cement (Plain and Waterproofed); Medusa Portland Cement Paint and Medusa-Mix, the Masonry Cement.





Heavy tubular frame
strongly welded

WELDED BRONZE DOORS for COMMERCIAL BUILDINGS

The rails and stiles of this door consist of heavy tubular members, the joints of which are strongly welded. The inner edge of the frame is trimmed with shapely mouldings used for securing the center panel. With necessary hardware furnished and applied the complete ensemble presents a unit appropriate for use in the finest commercial buildings.

Send for complete description and F. S. details.

THE
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Subsidiary: Berkeley, Calif.

ALSO SHOWER STALLS AND SHOW CASE DOORS

Tests on White Paint

(Continued from page 86)

These paints stay cleaner and whiter than lead-zinc or white-lead paints. In May, 1927, a variety of experimental titanium-zinc paints were exposed. Some of these included in the pigment a mixture of titanox, zinc oxide and white lead. After nearly three years of exposure, some of these paints are showing unusually good results. A mixture of about 45 per cent titanox, 35 per cent white lead and 20 per cent zinc oxide is among the best. This paint is free from cracks, and has simply worn, by mild chalking, to a smooth, clean surface. Keeping the ratio of titanox and white lead about the same as in the paint just described, but increasing the zinc oxide to 30 per cent, resulted in a few cracks. Increasing the zinc-oxide content to 50 per cent resulted in bad cracking. Straight titanium-oxide paints, straight calcium titanox paints and straight barium titanox paints were not successful, due to excessive chalking. The liquid in these paints was 60 raw linseed oil, 20 heavy bodied linseed oil, and 20 turpentine and drier.

Ten Rules For Good Organization

Ten rules for good organization were suggested by Colonel M. C. Rorty, vice-president of the International Telephone and Telegraph Corp. He stated that the greatest problem of management is to safeguard and develop the human element in the upper ranges of company.

1. Definite and clean-cut responsibilities should be assigned to each executive.

2. Responsibility should always be coupled with corresponding authority.

3. No change should be made in the scope or responsibilities of a position without a definite understanding to that effect by all persons concerned.

4. No officer or employee, occupying a single position in the organization, should be subject to definite orders from more than one source.

5. Orders should never be given to subordinates over the head of a responsible officer. Rather than do this the officer in question should be supplanted.

6. Criticisms of subordinates should, whenever possible, be made privately, and not in the presence of officers or employees of equal or lower rank.

7. No dispute or difference between officers or employees as to authority or responsibilities is too trivial for prompt as well as careful adjudication.

8. Promotions, wage changes and disciplinary action should always be approved by the officer immediately superior to the one directly responsible.

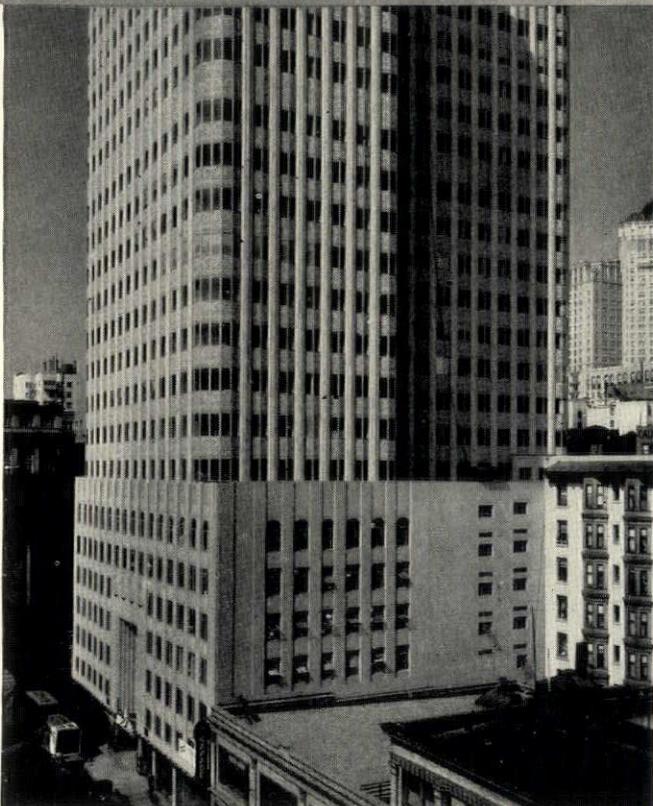
9. No officer or employee should ever be required, or expected, to be at the same time an assistant to and critic of another.

10. Any officer whose work is subject to regular inspection should, whenever practicable, be given the assistance and facilities necessary to enable him to maintain an independent check of the quality of his work.

Comments "Printers Ink": "It is interesting to note that all these rules are founded on human experience that began hundreds of years before large corporations were known. They have always been effective in developing leadership qualities."



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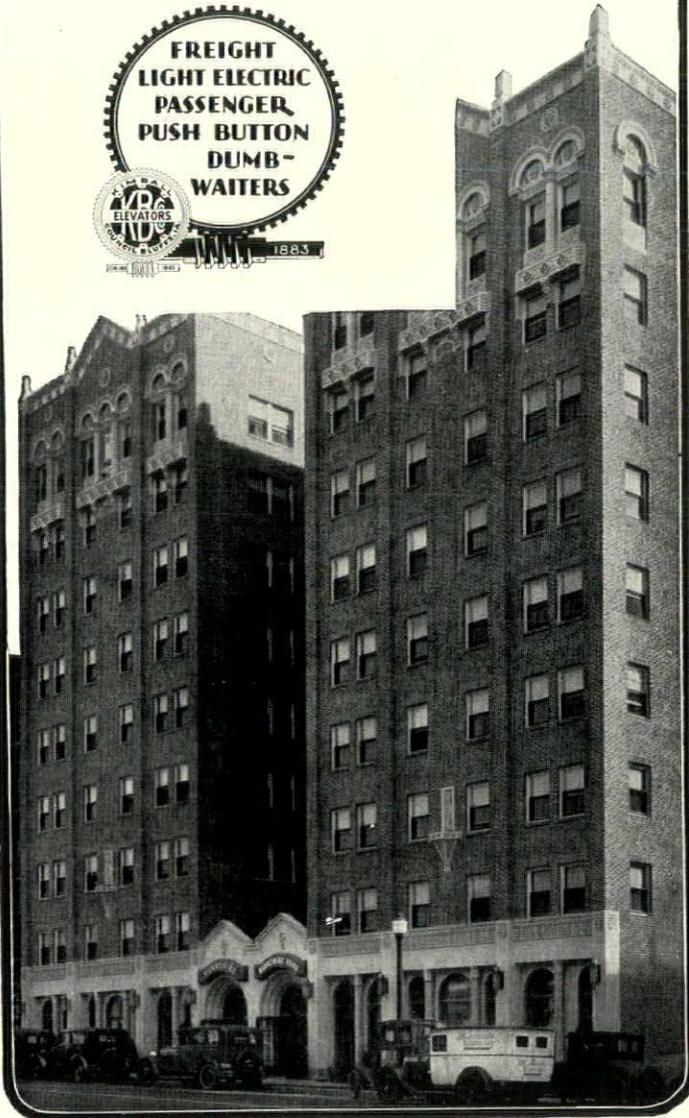
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3-29

Write for data on Kimball Elevators and stipulate the type you are interested in.

Berkshire Arms Apts.
Kansas City, Mo.
Philip T. Drott,
Architect



The Copper Alloys

(Continued from page 55)

with lead and minor percentages of other elements, and copper-nickel-zinc. All of them can be cast, rolled, drawn, machined, spun, turned, chiselled, chased and repoussed without much difficulty, though they react to these processes in slightly different ways. Some of these alloys can be forged, but the character of such forged work is fundamentally different from iron. Iron is the only metal which can be forge-welded so that no true wrought iron design can be executed properly in any other metal. Two of the copper alloys can be extruded: one is bright yellow and the other yellowish white.

Cast work is dependent upon three things: first, the characteristics of the metal in its molten state; second, the extent and nature of the filing, buffing and chasing which is to be done after casting; and finally, the character of the model. It will be evident that the nature of the model should be largely determined by the first two factors. The most important process in the foundry is the moulding. The most simple and inexpensive method is that in which the two halves of the flask are completely filled and rammed before the model or pattern is removed. This is the only method used on the machine-moulder. If this process is to be used it should control every phase of designing and modelling. Heavy castings in the full round must be cored and castings without draft must be false cored. Very often false coring is required on work which can ill-afford the expense, due to the fact that the designer is not familiar with elementary foundry practice. The finest castings for undercut work are obtained by the lost wax process. The extent to which finishing is done after casting is determined by the hardness of the alloy, the character of the design and distance from the eye when placed.

The techniques of spinning, repoussing and chiselling have not been used to any great extent in contemporary architectural metal work. There are few craftsmen in America who are capable of executing chiselled brass and only a limited number are competent repoussé workers. Spinning has been restricted to lighting fixtures and minor articles. Turned work is very similar to turning any other material except that when there are several pieces of the same profile it is customary and most economical to cast the member first and shave off a small amount of material by turning afterward. It should be remembered whenever a wood or plaster model for turned work is inspected that it cannot have the same profile as the finished piece. The difference is very marked wherever it is necessary to thicken the model so that the metal will run freely through the mould.

When we come to the use of sheet bronze, drawn bronze and extruded bronze we are entering the field of machine production and the use of techniques which were unknown in former times. When the term "bronze" is used in referring to these materials it is used in the commercial sense, not as a metallurgist would use it. Extruded bronze is a field whose artistic possibilities have been barely tapped. Its technical limitations are definite and known, its vast possibilities for realizing forms and combinations of forms which cannot be produced by any other method ever discovered have never been exploited. (Continued on page 102)

No. 6 of a series illustrating: "Thoughtful decorative hints to help the architect."

He didn't mark it "Entrance Hall" *and let it go at that..*

WHERE does your job as an architect end? Is it finished when structural details are complete, or do you go further and make very definite suggestions for decoration? Many architects have decided in favor of the latter, and have won new clients and pleased old ones by so doing.

Consider the entrance hall shown here. If the architect had retired content when the walls were up, it might have suffered by inadequate decoration. By staying on the job, he made sure of a finished work that reflected nothing but credit upon his ability.

The decorative effect is based upon one of the newest Armstrong designs (Marble Inlaid No. 172). No matter what type of interior you plan, you will find some Armstrong Floor well suited to the effect you wish to create.

By specifying an Armstrong's Linoleum Floor, the architect assured himself of the client's satisfaction from a practical as well as a decorative point of view. An Armstrong Floor is easy to clean, enduring in service, and comfortable under foot.

There's a lot of usable floor information in our new file-size specification book. Sent with colorplates and samples of modern linoleum upon request. Look for us in Sweet's. Armstrong Cork Company, Floor Division, Lancaster, Pa.



Armstrong's Linoleum Floors *for every room in the house*

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This Armstrong Floor (Marble Inlaid 173) furnishes the keynote for the whole decorative scheme. The floor in the outer hall is plain linoleum with a special star Linoset of contrasting color.

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Foremost in the field of pre-built forms for concrete joist floor construction are Meyer Steelforms—installed and removed by an organization that is equipped by

experience to render the most effective cooperation to your superintendent and the contractor on the job.

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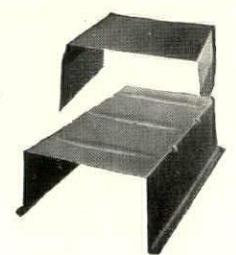
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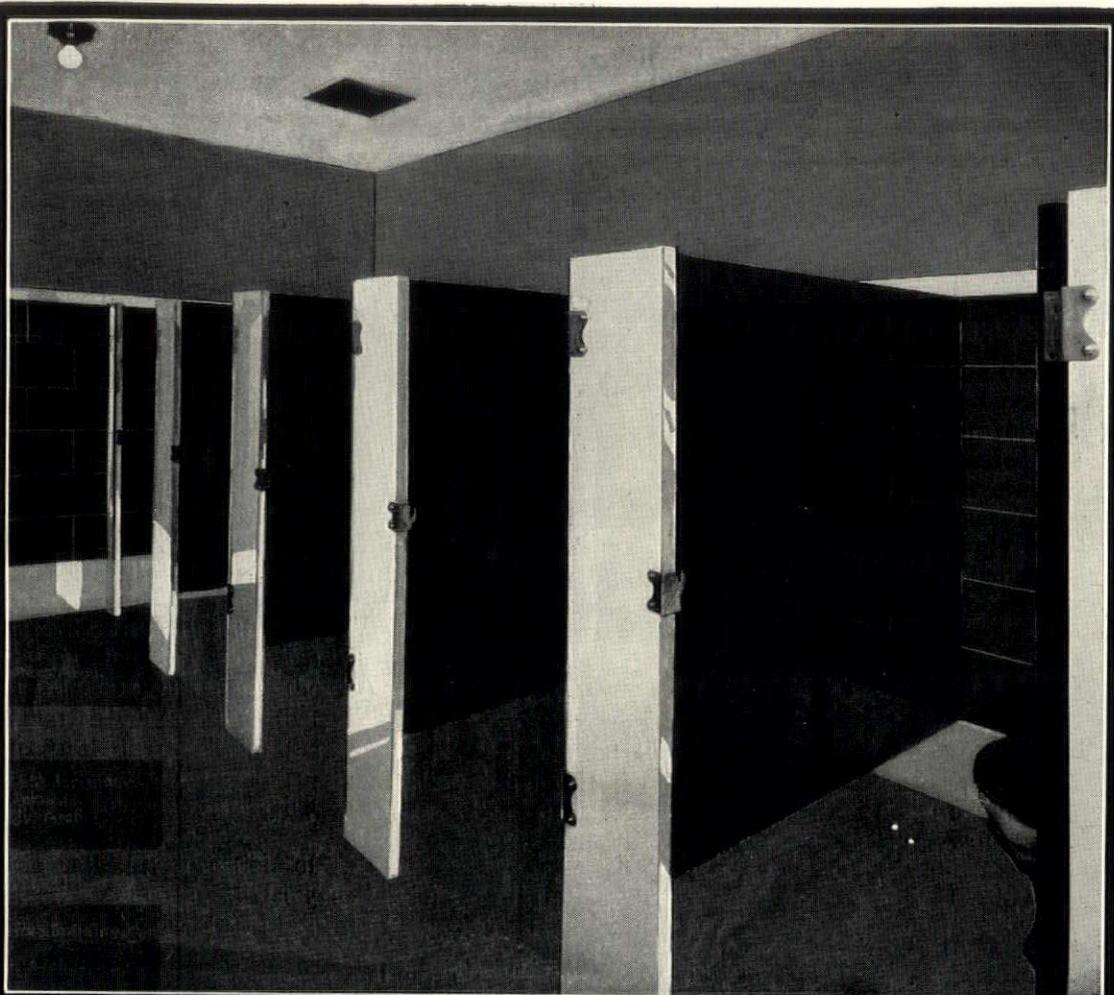
Mills Building
San Francisco, Cal.
A. Terrigino, Arch.

American Bank Building
New Orleans, La.
Morie Goldstein, Arch.

Barlum Tower
Detroit, Michigan
Bonnah & Chaffee, Arch.

Mutual Benefit Life Ins. Bldg.
Newark, New Jersey
J. H. & W. C. Ely, Arch.

One Park Avenue Building
New York City
York & Sawyer, Arch.



VITROLITE

IN BLACK AND WHITE . . . the newest decorative theme in modern toilet rooms

A NEW beauty of contrasting effects . . . modern in design and color . . . creating an atmosphere of great decorative appeal and yet of unusual simplicity, is finding its way into both old and new toilet rooms in the nation's most modern structures. For now — VITROLITE PARTITIONS may be had in lovely color combinations of deep black and ivory — or pure white — clean, sanitary, impervious to odors or stains.

This fused rock, abreast the new age in design and sanitation, is sought by architects as

the one material which, because of its adaptability, inexpensively permits of new ideas and unusual artistic treatments.

Among the exclusive Vitrolite features will be found 1 1/4" stiles — no head rail — minimum exposed metal — rigid construction — absolute sanitation.

A brochure of black and white and colored installations, including construction details, will be sent you upon request.

Look for the Vitrolite trade mark on every slab.

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A. W. Hall, Arch.

Smith-Young Tower Building
San Antonio, Texas
Ayres & Ayres, Arch.

17 Court Street
Buffalo, N. Y.
Bley & Lyman, Arch.

The full realization of this most modern and intriguing technique will only come from the master craftsman using machines as his tools, tools which he knows as intimately as he knows his pencil or his brush.

All of the foregoing is concerned with individual parts which go to make up the completed work, but before it becomes a piece of architectural metal work the parts must be assembled.

The various methods of assembling consist of: brazing and the use of soft and hard solders; riveting; screwing and bolting; and finally, in the case of extruded work, a mechanical fitting together in which no fastenings are used at all.

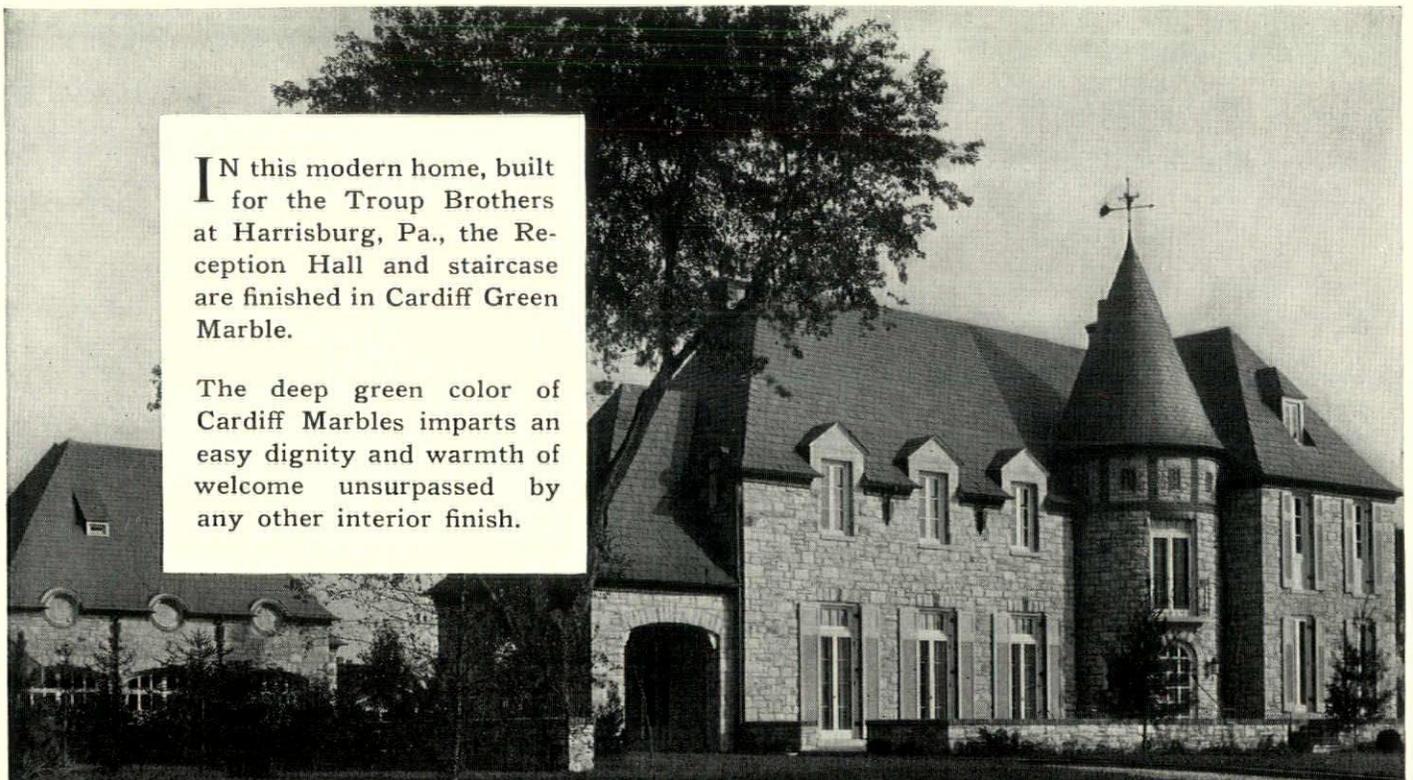
The problem of assembling may be divided in another way. There is the rigid assembling of parts done in the shop, the assembling of large units at the job and the fastening of the metal work to masonry or other structural material.

During all periods of fine craftsmanship the methods used to assemble the work form an integral part of the design. This, of course, requires a very thorough knowledge of the metal crafts, so that none of the work illustrated shows a perfect example of the decorative possibilities of methods of assembling; they are put together as specified with the structural basis concealed. There are many examples in existence where the screw heads and rivet heads show but, not having been placed with any knowledge of or feeling for design, they are considered indicative of inferior work, though not inferior because a screwhead is necessarily ugly. Even a

casual visit to any good collection of armor and fire arms will show that screws and rivets, being placed only where they are needed, can become very decorative things, at times determining the whole ornamental scheme.

All of our metals are formed or treated at some stage by machinery; some of the elements in architectural bronze, brass, and nickel silver are not worked by hand at any stage. In planning the design of any large feature or series of features the greatest artistic results can be obtained by the intelligent intermingling of hand-made and machine-made elements.

A part of a design which occurs only once or a very few times can be more economically made by hand than by machine. Such an element should become a gem of the finest craftsmanship set in a machine-made foil. Even the most commercial projects could be embellished with metal work designed on this principle. It would be more economical than most of the metal work which is fabricated today, wherein primitive methods are required to execute work which can ill afford the expense involved. For instance the clean straight lines which we associate with modern machinery and skyscrapers can be finely and beautifully done by machine processes but very often the nature of the design makes it impossible to use the natural and economical method. What appears simple on a drawing may be very difficult to manufacture and what might seem too extravagant for the building is often more easily done than what the designer has conceived.



IN this modern home, built for the Troup Brothers at Harrisburg, Pa., the Reception Hall and staircase are finished in Cardiff Green Marble.

The deep green color of Cardiff Marbles imparts an easy dignity and warmth of welcome unsurpassed by any other interior finish.

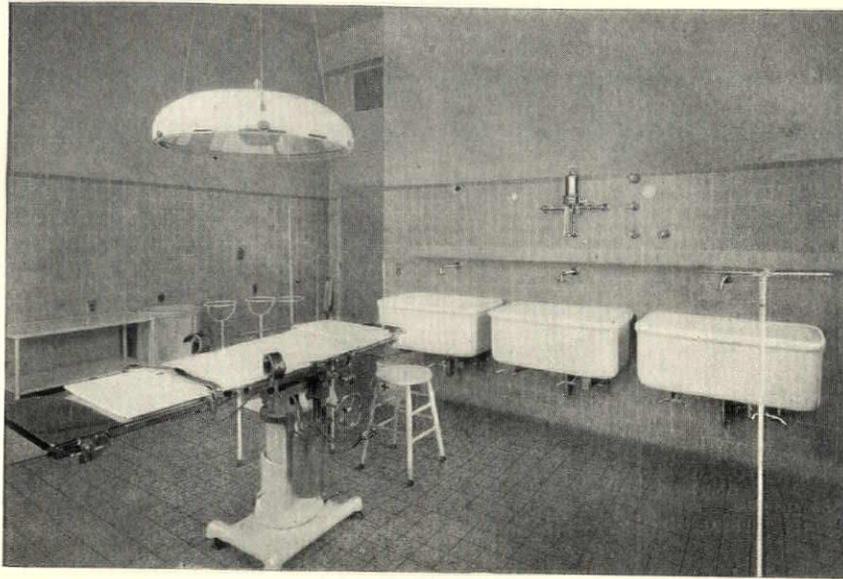
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A Te-pe-co Hospital Infant Bath with Drain Shelf. An indispensable fixture in maternity wards.

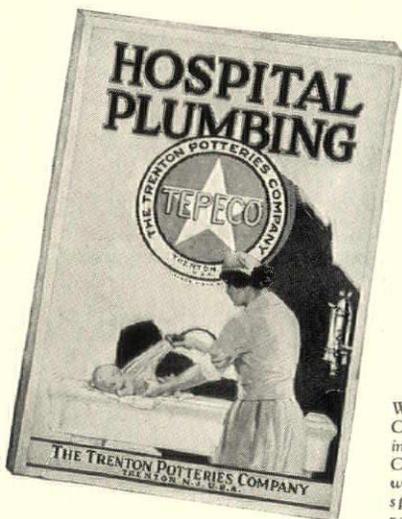


Installation of Te-pe-co in the new Northwestern Hospital Operating Room, Minneapolis, Minnesota



Besides its normal functions, the construction of this Te-pe-co Hospital Closet includes a B-d Pan Jet, operated by a separate mechanism.

TE-PE-CO All-Clay Plumbing Fixtures meet the exacting requirements of Hospital Plumbing. The Te-pe-co Line was designed only after exhaustive investigation and consultations with the leading surgeons and experts.



While this Hospital Catalogue Section is included in our new Catalogue T, we will gladly send this special book on request.

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Our Guarantee: We make but one grade of ware—the best that can be produced and sell it at reasonable prices. We sell no seconds or culls. Our ware is guaranteed to be equal in quality and durability to any sanitary ware made in the world. The Te-pe-co trade mark is found on all goods manufactured by us and is your guarantee that you have received that for which you have paid.

advertise "Consult an Architect"

(Continued from page 41)

There is no question but that the architectural profession feels that public, manufacturer and architect would be benefited by the use of such a phrase, although the Southern California Chapter feels that any slogans used by manufacturers should not imply that the architectural profession has endorsed the product.

In some cases the expression of opinion received was the thought of the executive committee of the individual Chapters; in other cases, it was the expressed opinion of those present at a regular meeting. Six Chapters passed a resolution to the effect that the Chapter was favorably inclined towards the use of such a phrase and that THE AMERICAN ARCHITECT be informed accordingly for such public action as it might take. The Detroit Chapter immediately got in touch with its local Producers Council; the Tennessee Chapter took the matter up with local members of the Producers Council and are receiving promises of cooperation.

A diffident note was struck by New York and Georgia. New York seemed to desire action to come from Institute headquarters rather than from individual Chapters, while Georgia hesitated to express an opinion one way or another, though the sentiment was that architects would appreciate the idea.

There is little question but that the architectural profession has suffered too much from modesty which,

though a fine thing in an individual, ill befits a profession that is hemmed in on every side by those who are continually seeking to take business from it by offering services which, when analyzed, only too often indicate that the interests of the general public are being unhesitatingly sacrificed.

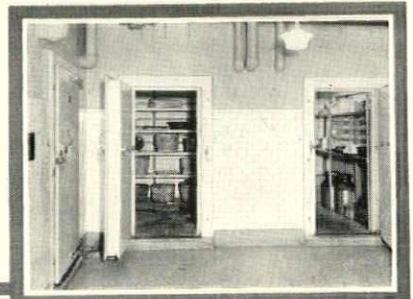
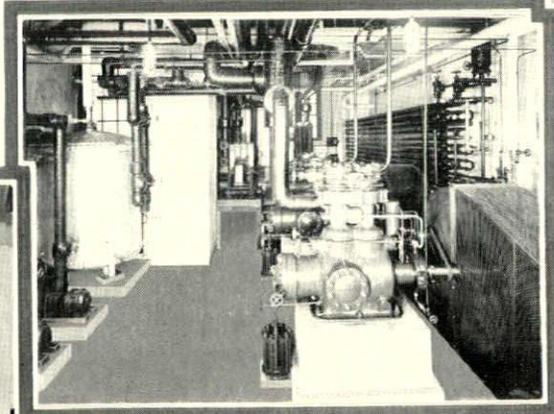
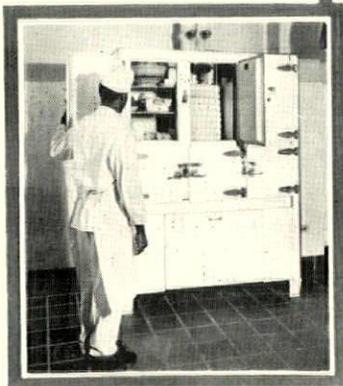
The architectural profession prides itself, and rightly so, on its honesty and integrity. Yet frequently this very fine ethical sense has reacted to the profession's disadvantage. In this fast moving age, the public has little time or inclination to seek out the maker of the world's best mouse trap; it expects to be told and is inclined to feel that the product or service which prints no sales arguments has none to print.

The advertising and publicity campaigns that are now being run by architectural societies or Institute Chapters are a healthy and encouraging sign that the profession is awakening to the necessity of protecting itself and the general public. Let the public once really understand that such protection is honest and sincere and that, in the long run, it costs nothing, then the architectural profession will enjoy the public esteem and patronage that it deserves.

A long step in that direction is the cooperation of manufacturers, for their own advantage, in advising prospective customers to "Consult an Architect."

Refrigeration at St. Lukes Hospital, Philadelphia, Pa. ~

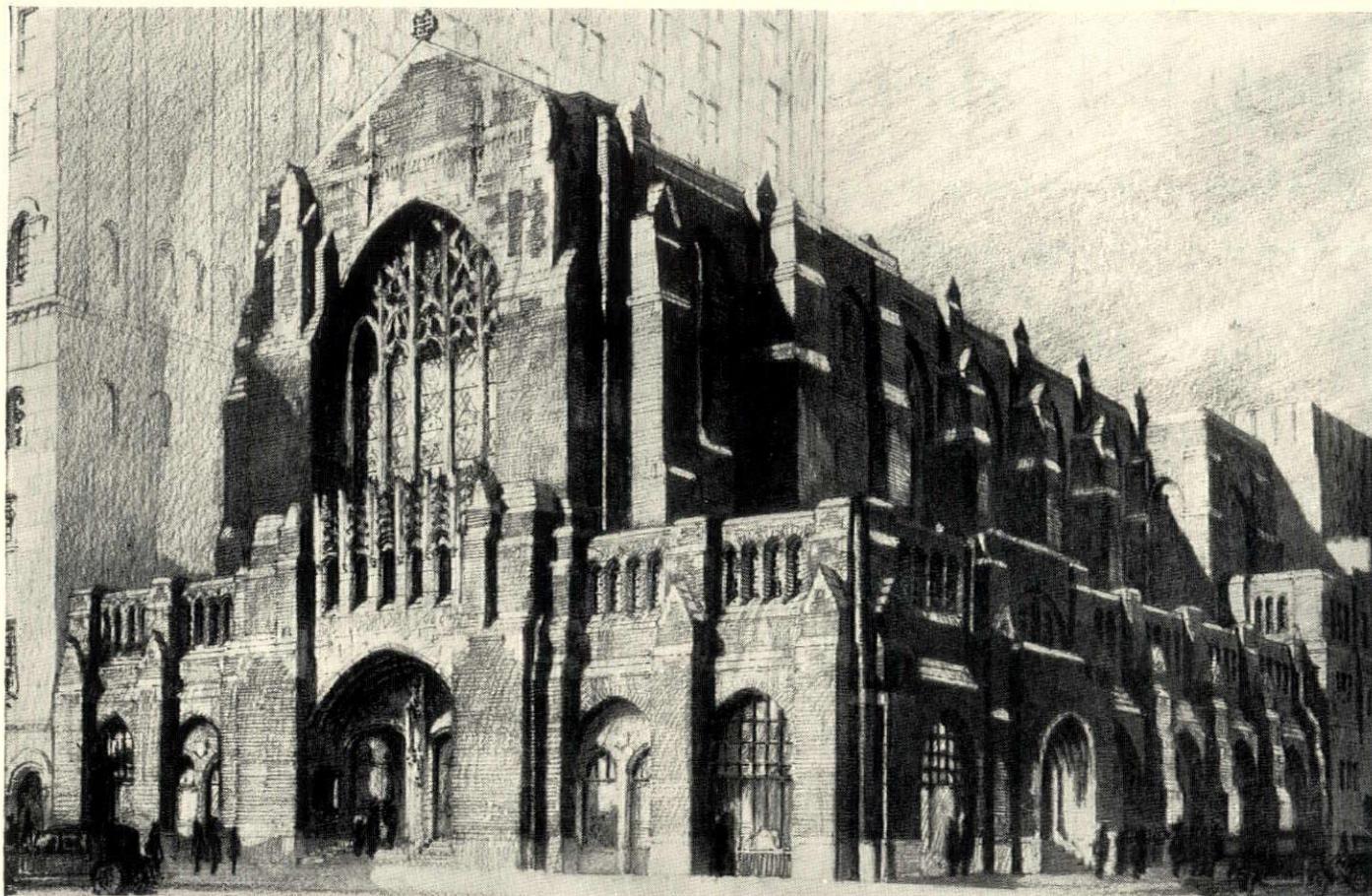
*is a source of much
satisfaction to the
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TWO Frick Carbon-Dioxide Compressors furnish refrigeration for Drinking Water System, Ice-Making System, and Brine System for cooling boxes and refrigerators throughout the building.

Let us supply your requirements. Estimates gladly submitted.

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ICE MACHINERY SUPERIOR SINCE 1882



DESIGNING A MODERN LIGHTING SYSTEM IN HARMONY WITH PERIOD ARCHITECTURE

*Methodist Episcopal Church
Hanson Place and St. Felix St.
Brooklyn, N. Y.*

*Architects: Halsey, McCormack
& Helmer, Inc.
New York*

Church lighting, under ordinary circumstances, offers many problems which require careful study. The illumination of the Methodist Episcopal Church at Hanson Place in Brooklyn, New York, presented

a typically modern problem: the design of a modern lighting system in harmony with period architecture.

The architects sought a lighting scheme which would blend modern appointments with old Gothic design.

The lighting bureau of the utility supplying the electric service placed at the disposal of the architects, Halsey, McCormack and Helmer, the entire facilities of their department. The bureau made helpful suggestions regarding the

location of outlets, the selection of luminaires, recessed reflectors and ceiling panels.

This service was accepted because the bureau was able to present the latest scientific achievements in the various branches of illumination involved. In accordance with the chief motif of the building as conceived by the architects, the lighting system helps to make this church an outstanding example of Gothic Architecture fitted to our modern needs.

For information about trends in lighting standards and about adequate wiring, call on the lighting bureau of your local electric service company, or write direct.

NATIONAL ELECTRIC LIGHT ASSOCIATION, 420 LEXINGTON AVENUE, NEW YORK CITY

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Cabot's Quilt is now available in a new INCH thickness, designed to meet the growing demand for greater effectiveness of insulation. Specify INCH Quilt for all heat and cold insulation, and sound-deadening, where maximum results are required. One layer of INCH Quilt takes the place of several thicknesses of thinner material, thus reducing installation costs. Rolls contain 125 sq. ft. instead of 250 sq. ft., because of greater bulk. Cabot's INCH Quilt is also available on special order made with waterproof paper in place of Kraft.

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Gentlemen: Please send me a free sample of your new INCH Quilt.

Name

Address AA-9-30

What Architects Are Talking About

(Continued from page 63)

THE fundamental soundness of real estate investments and the profits derived from them even in times of stress is emphasized by Arthur J. Mertzke, director of Research, National Association of Real Estate Boards. He says:

"There has been too little discrimination between the fundamental soundness of the mass of real estate assets of the country and the small minority of ill-conceived and over-developed properties which have temporarily frozen the market and resulted in deflations of excessive values.

"Uncertainty in the minds of buyers and sellers with reference to real estate conditions will cause them to defer action in the form of buying and selling, but at the same time all of the properties which would normally be bought and sold may actually be in use producing profits for their owners and may even be increasing in earning power. A falling off in the number of real estate sales is, therefore, no proof that real estate is falling in value even though there may be a considerable volume of forced sales of various kinds at prices below the real values of properties, based on the returns which these properties will produce."

WELDING instead of riveting in New York City is recommended by the Noise Abatement Commission, which urges an amendment of the Sanitary Code to limit riveting in residential districts to daylight hours.

THE Philadelphia Chapter, A. I. A., and the T-Square Club will hold their thirty-third architectural exhibition on the twenty-fourth floor of the new Architects Building, November 17th to 29th, 1930.

THE Brazil exhibit in the Pan-American architectural exhibition, held jointly with the fourth Pan-American Congress at Rio de Janeiro, has been awarded the first prize, a gold medal.

• COMPETITIONS •

A COMPETITION for bathrooms is being held by the Standard Sanitary Manufacturing Co., Competition Committee, 106 Sixth Street, Pittsburgh, Pa., with the approval of the Pittsburgh Chapter, A. I. A. There are two classes: One for the design of a bathroom suitable for houses costing not more than \$15,000 to build, and the other for the design of a bathroom suitable for houses where cost is not a major consideration. The competition closes October 30, 1930. The professional advisor is Howard K. Jones, A. I. A., of Alden, Harlow & Jones. The jury of awards consists of William H. Beers, A. I. A., of Beers & Farley; Addison B. Le Boutellier, A. I. A., of Ripley & Le Boutellier; Eugene H. Klaber, A. I. A., of E. H. Klaber & E. A. Grunsfeld, Jr.; Louis C. Mullgardt, F. A. I. A., and Allison Owen, F. A. I. A., of Diboll & Owen.

THE competition for the seventh Paris prize in sculpture of the Beaux-Arts Institute of Design has resulted in Leonard Mitchell winning first place; Michael Lantz, second place; Ray Wever, third place; George J. Sklarf, fourth place; Meredith Cramer, fifth place; and Ottavio Mastrovito, sixth place.

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of its resistive qualities when coming in contact with sulphurous gases, each hub acts as an expansion joint, it is practical to tie in Cast Iron Soil Pipe with masonry walls or tile partitions, without disastrous results.

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ASSOCIATION**

BIRMINGHAM, ALABAMA



Illustration from A New England Type of Colonial Architecture by Dwight James Baum, A. I. A. in September Good Housekeeping

Good GOOD HOUSE OF

WITH the publication of Good Housekeeping for September, Good Housekeeping Studio of Furnishings and Decorations becomes "Good Housekeeping Studio of Architecture and Furnishings." This change marks the beginning of a new editorial service on house planning and building of a kind never before offered by a magazine of large circulation.

Helen Koues, director of Good Housekeeping Studio, will be aided in this work by a board of distinguished architects. Dwight James Baum, A. I. A., heads this board and his associates are C. Herrick Hammond, F. A. I. A., Myron Hunt, F. A. I. A. and Henry Ives Cobb Jr., A. I. A.

Under the guidance of this board the many interests and problems of building houses and gardens will be illustrated and discussed by foremost architects. The practice of good architecture, rather than the theory, will be presented. Houses actually built and being lived in will be used as subjects. Costs will be given and build-

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GOOD

Housekeeping Announces KEEPING STUDIO ARCHITECTURE AND FURNISHINGS



A room of the Pennsylvania farmhouse described by R. Broghard Okie, A. I. A. in September Good Housekeeping

ing material, fixtures and equipment will be mentioned by trade name.

In short, Good Housekeeping Studio will apply to architectural design and construction the same practical method of realism by which it has been so influential and

successful in creating a widespread appreciation of good taste and correct design in interior decoration. The architect and the manufacturer of building material both will be strongly supported in their efforts to teach the American family to build with beauty and for permanence.

HOUSEKEEPING

Everywoman's Magazine

Eight Years of Planning

(Continued from page 46)

was beginning to be reduced to meet public demand, calling for larger banks of elevators. Fifth, a zoning ordinance was being agitated, proposing to limit rather drastically the height of buildings in certain cases, causing owners to consider the maximum development of their properties before it might take effect.

Up to this time the typical floor layouts persistently showed the location of the elevators along the south wall because of the fear that the property to the south might be developed to a considerable height, thus cutting out natural lighting from many floors, as well as in the desire to preserve the valuable first floor space in one unbroken area if possible.

In the two schemes of April 13, 1927, studies were made placing the elevators toward the center of the building. The plan of April 18, 1927 shows the first attempt to place the entrance exactly in the center of the Griswold Street elevation leading to an installation of six elevators. The latter plan was nevertheless abandoned because some office units were still considered too large.

The scheme of May 10, 1927 shows the first attempt to place the banks of elevators in the center of the building parallel with the line of approach from a center entrance on Griswold Street. The office units in this scheme became very satisfactory in area and shape with the entrance located where it could be made prominent as an architectural feature and the general disposition

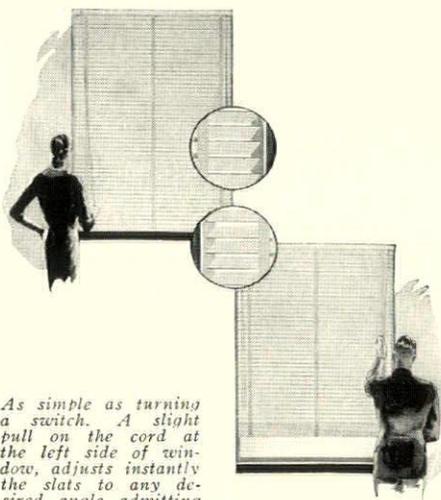
of parts compact and convenient. The plan had at last the simple and direct appearance of a real solution.

The final plan shows the manner in which the light court was reduced in length from east to west and the toilets so located that in case an adjoining development took place no valuable space or light would be lost. It was considered that in this event the middle space along the south wall would become reception or anteroom space for the offices in the southwest corner of the building. On a number of floors this space is occupied by house tanks.

When the last sketch plan calling for the development of a thirty-five story building was presented to the owners, they were at first skeptical of its wisdom as they had previously not contemplated such a limit. It was determined, therefore, to ask the advice of experts in the field of office building management. Accordingly, two series of meetings were held, attended by the owners, a number of building managers, the consulting engineers, and the architects, in the first series of which all of the schemes proposed for the development of the property from the very beginning were thoroughly discussed and analyzed. The building managers approved the proposal of the architects to construct the building to a height of thirty-five stories as the maximum economic development possible under existing conditions, and endorsed the architects' layouts with some minor changes.

DAYLIGHT and VENTILATION

Turn them on or off with Victoria Venetian Blinds



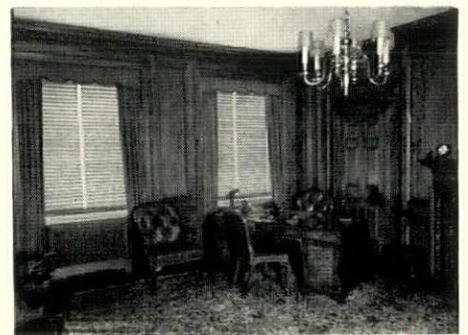
As simple as turning a switch. A slight pull on the cord at the left side of window, adjusts instantly the slats to any desired angle admitting as much or as little light and air as you wish. The cord on the right is to raise or lower the blinds.

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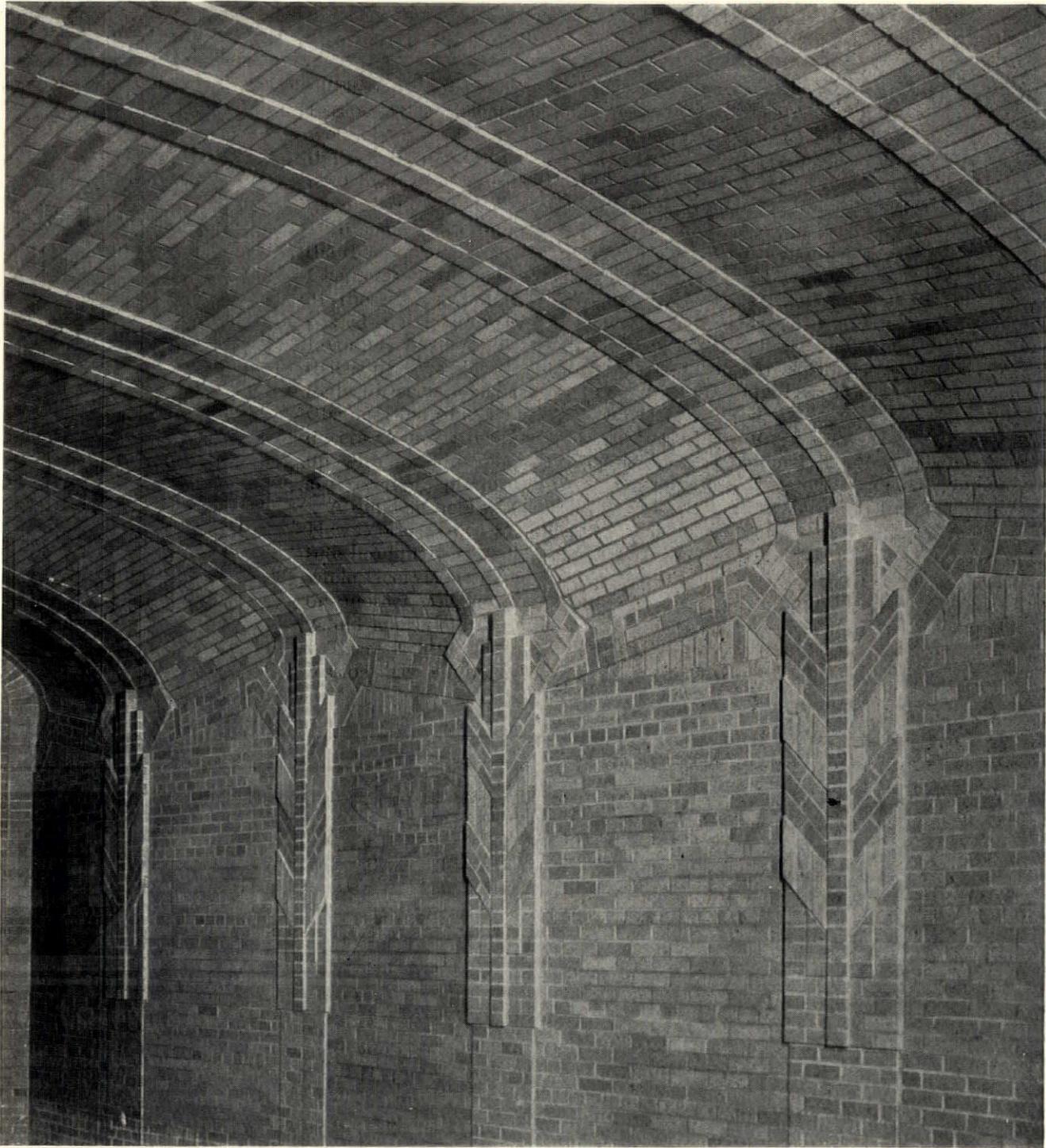
Like the buildings he creates, he may have his head in the clouds, but his feet, like their foundations, are on the ground. Common sense is his watchword, practical results, tempered with beauty, his achievement.

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CORRIDOR, WESTERN UNION BUILDING
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VOORHEES, GMELIN & WALKER
Architects

An example of vaulted ceilings with soffit tile one inch thick constructed and designed to correspond with the general style of the building

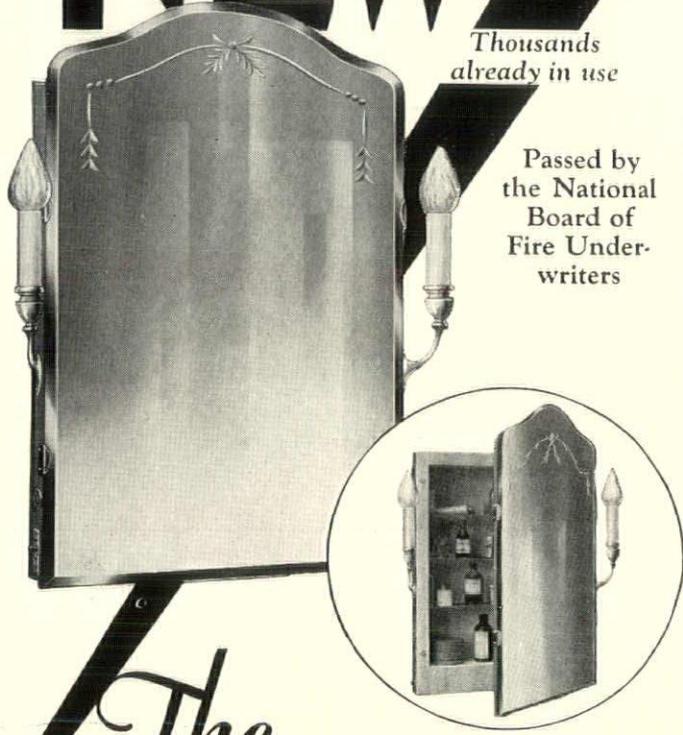
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As Seen by an Englishman

"SEEING AMERICA" is the title of an article by E. Wamsley Lewis that recently appeared in "The Builder" of London. The article contains comments on architecture and architects in America and suggestions to architectural and engineering students who plan to visit the United States. The author states that there is an unlimited fund of information to be gathered by such a visit, for unlike the conservative English, "Americans are always willing to experiment with new ideas." He contends that while the English house is "still by far the finest in the world" for the climate and mode of living in England, much can be learned from Americans in the matters of central heating and efficient planning of even small houses. The economy of planning the kitchen quarters particularly impresses Mr. Lewis and he confesses that it is something of a mystery to know how the housewives in America do all the cooking and cleansing of a whole household from one cupboard.

Ecclesiastical architecture in America he views as generally disappointing and states, "Too much reliance has been placed on earlier forms from other spheres which do not 'belong' . . . often they (the churches) are built in a style of Gothic either English or French, or mixed as the fancy please. The architecture, and the whole composition is merely an assembly of details taken directly from books of drawings by Pugin and others, and the spirit entirely lacking owing to the fact that all the masons in America are Italians, a race that never could understand Gothic. . . . Some students, however, may be amused by them, for after having worked out complicated vaulting diagrams with much patience, they will see in America the same result aimed at by steel-framed structures all covered with imitation vaulting in fibrous plaster, or occasionally, in more ambitious schemes where steel groining can be seen being gradually covered with stones." In spite of this Mr. Lewis admits that English architects can learn much about acoustics, heating and ventilating from our church buildings.

THE skyscraper is looked upon as a profitable source of research, not because of the possible application of the high building in England, but because of the highly efficient systems of construction, heating, ventilation, sanitation and "lift engineering." The visiting student is also recommended to study our office blocks, stores, hotels, blocks of apartments, railway stations and factories. In addition, this writer states that the most useful thing for the Englishman to learn is the method by which the American gets things done; the organization of the office, the systems of schedules, and the treatment of contractors and sub-contractors. A gentle hint is conveyed in the statement that slackers will not like working in America.

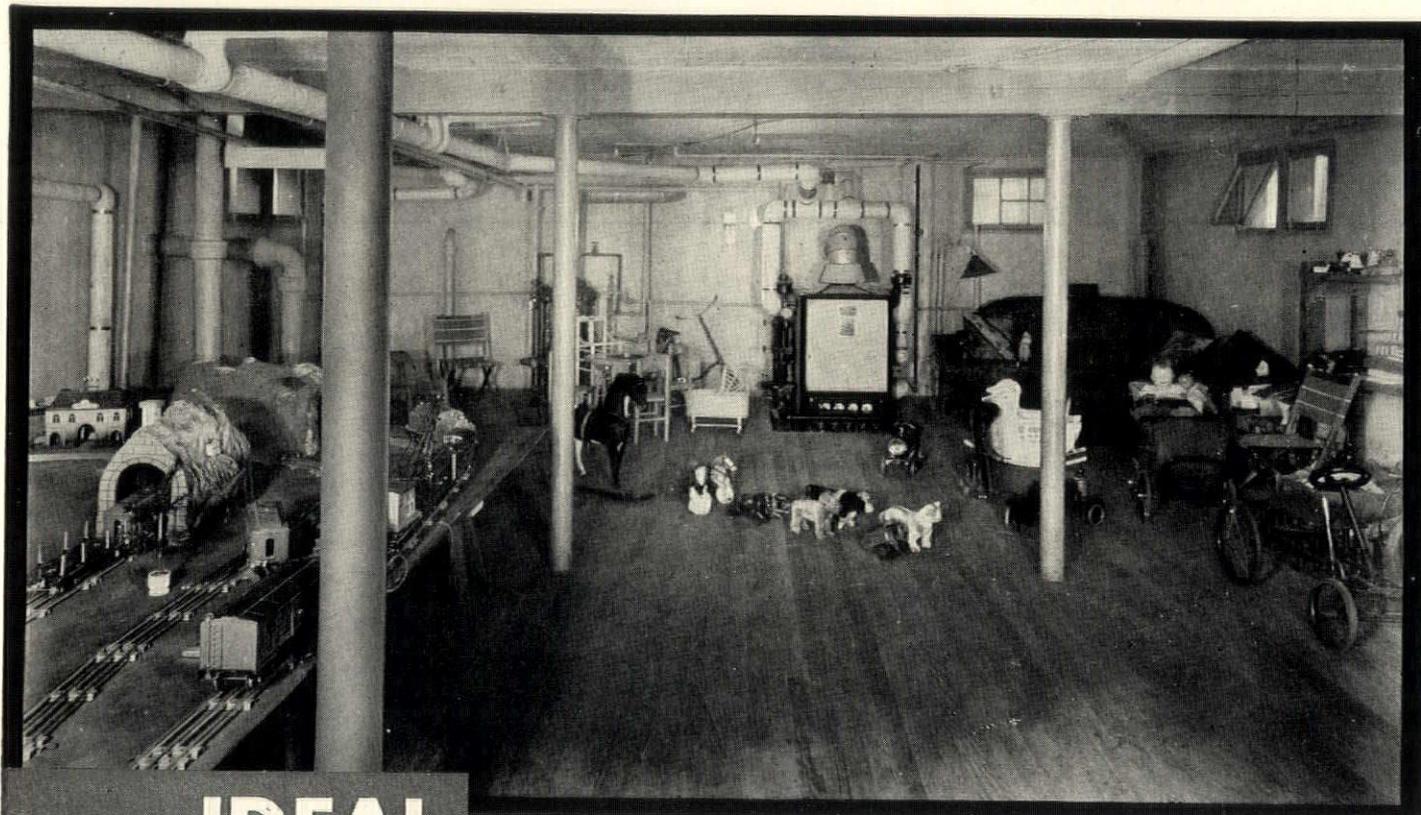
Mr. Lewis pays us a very nice compliment in admonishing the student visiting the United States to avoid putting American architects to any considerable inconvenience for, "The American is so kind that he will stop at no limit to assist a visitor. He is so eager to help that it is difficult not to impose merely on his generosity. . . . The American never admits that anything is

(Continued on page 118)



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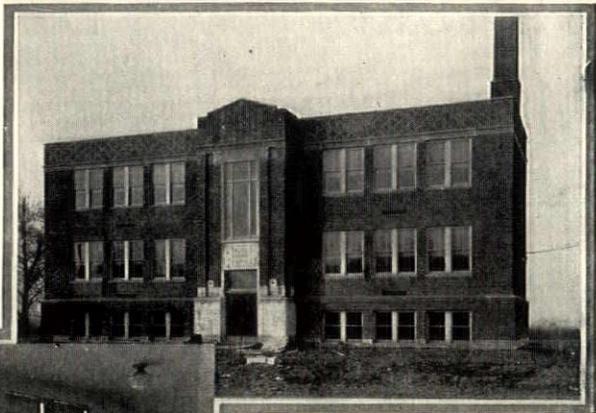
Another Indiana School Adopts BUCKEYE HEATOVENT VENTILATION

MAPLE AVENUE SCHOOL, TERRE HAUTE, INDIANA

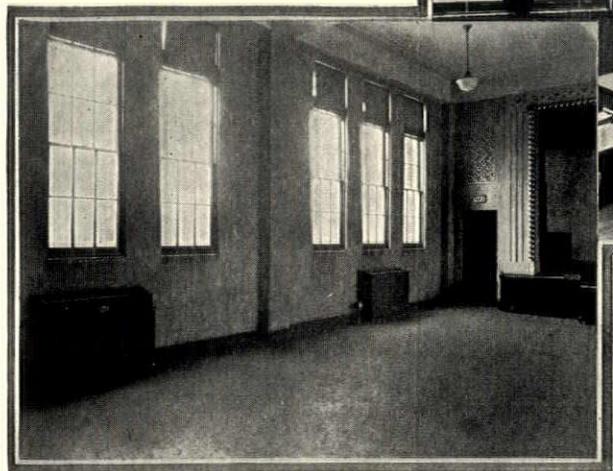
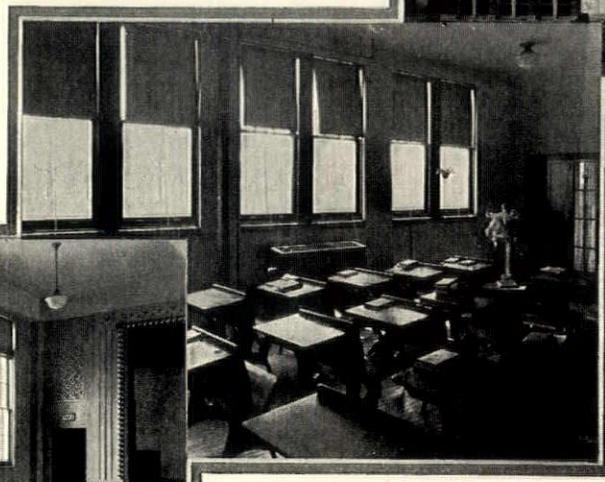
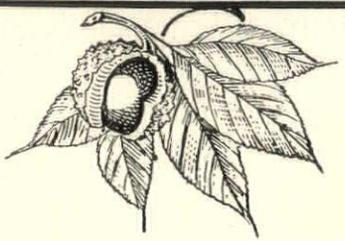
Architects: George Stoner & Co., Terre Haute, Indiana

Engineer: R. A. Stuart, Terre Haute, Indiana

Heating Contractor: O'Laughlin Bros., Terre Haute, Indiana



Notice the intake openings under the windows in the picture above? That is where the fresh outdoor air is drawn into the class rooms. These openings indicate that the health of pupils and teachers has been given prime consideration by the Architect and the School Board.



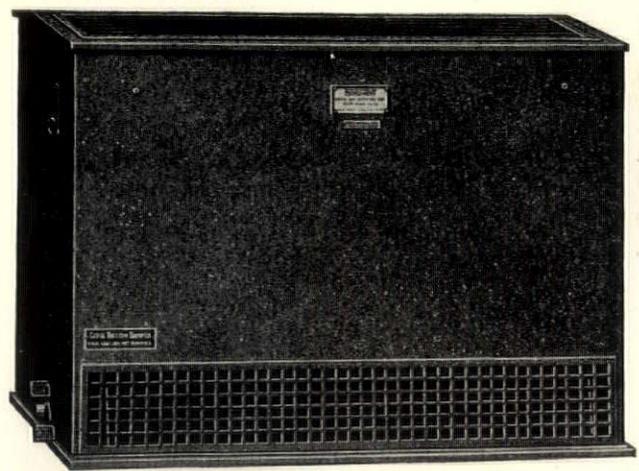
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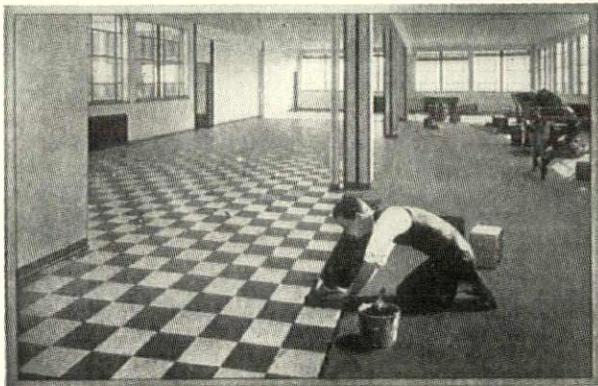
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In conclusion Mr. Lewis writes, ". . . I had never had an architectural thrill so great as when I saw from the water for the first time the majestic masses of skyscrapers at the end of Manhattan Island. Such an experience helps to vitalize an architect's work, his enthusiasm soars higher because of it, and even if clients are not forthcoming to provide him with exercises for the play of his powers of dramatic imagination, he will have the greater joy in creating whatever opportunity brings him."

Smallest Theatre has Largest Mural

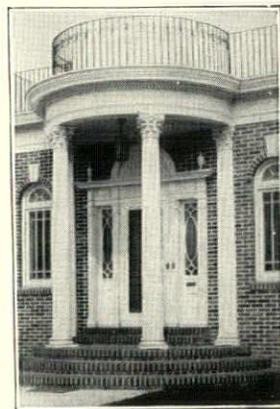
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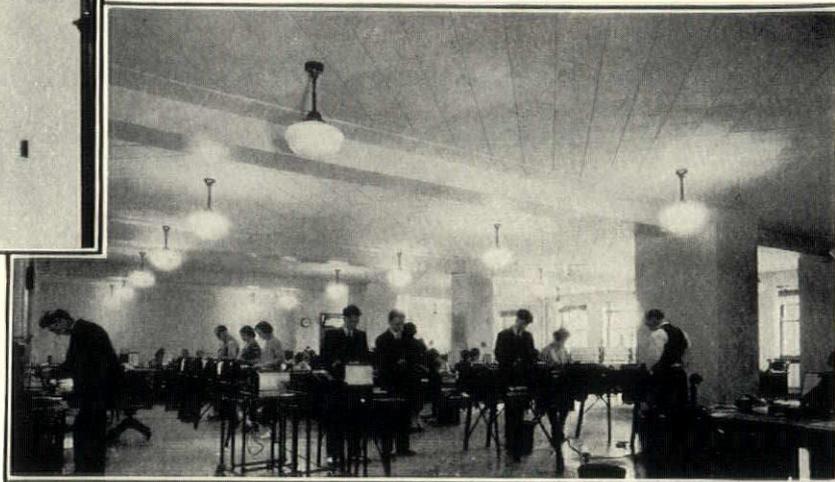
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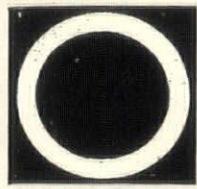
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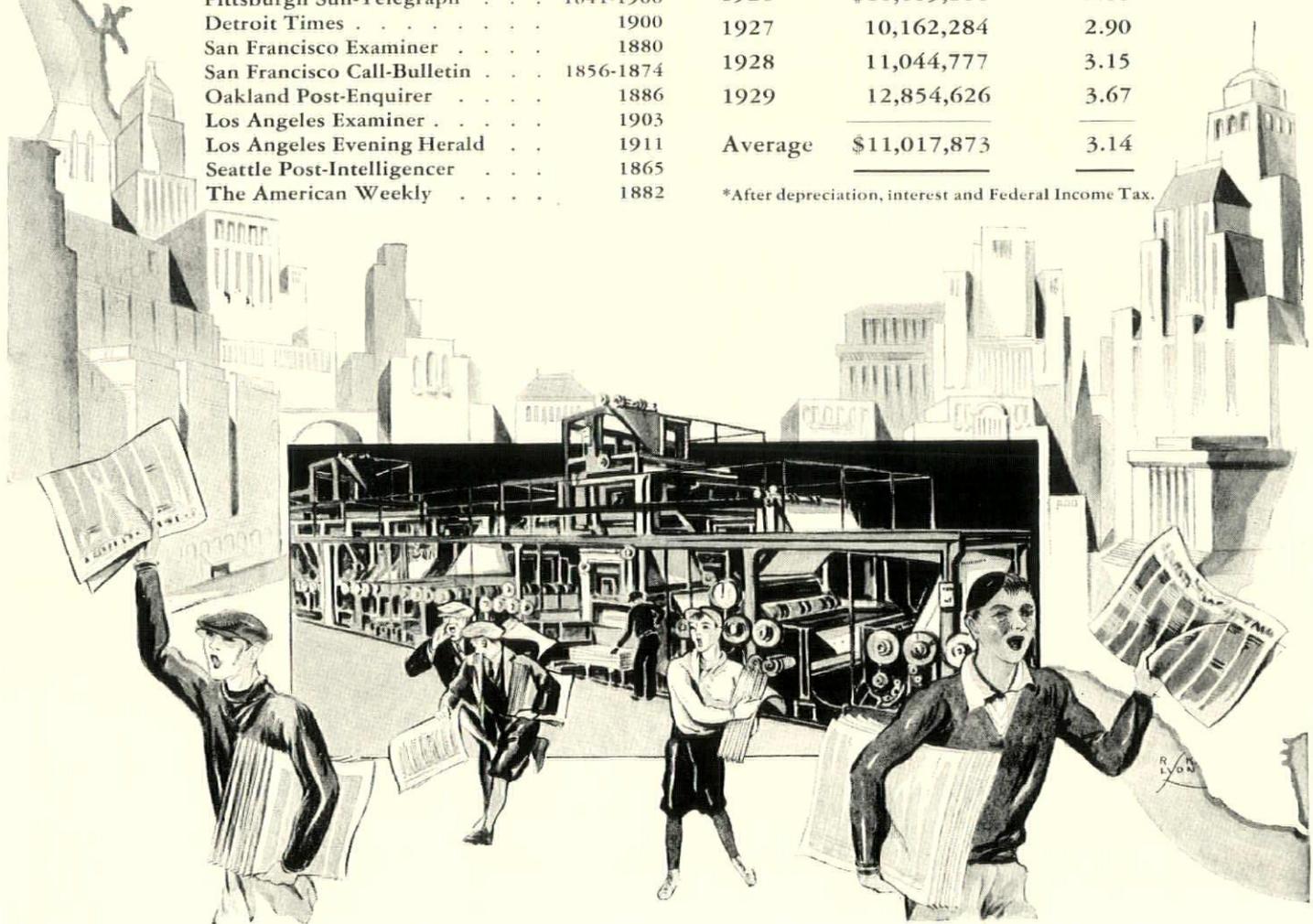
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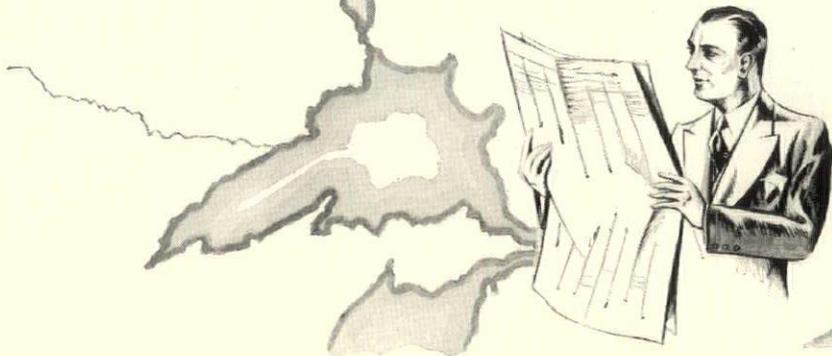
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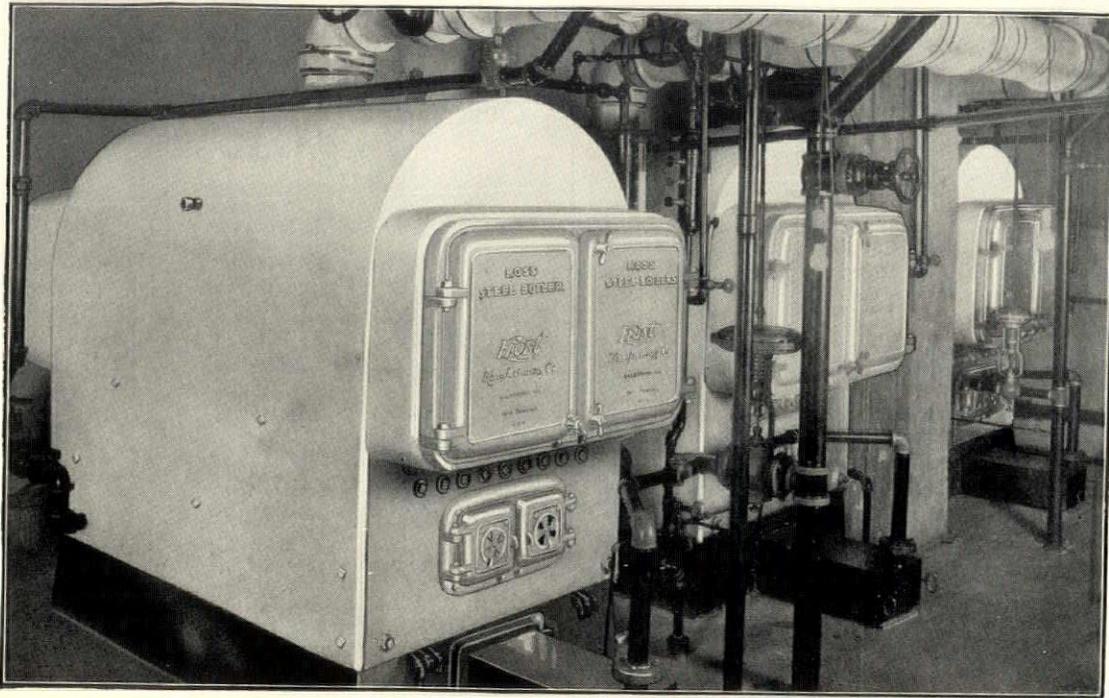


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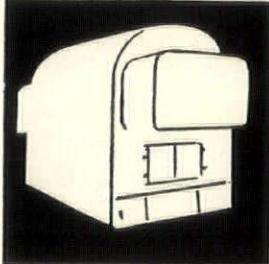
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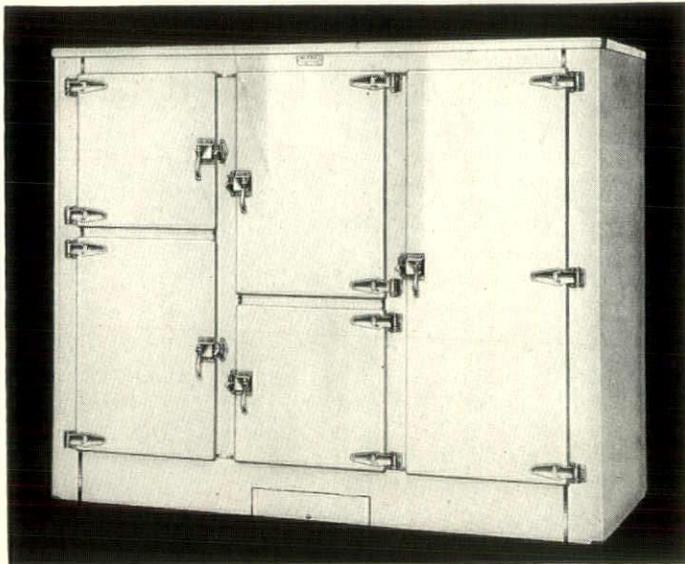
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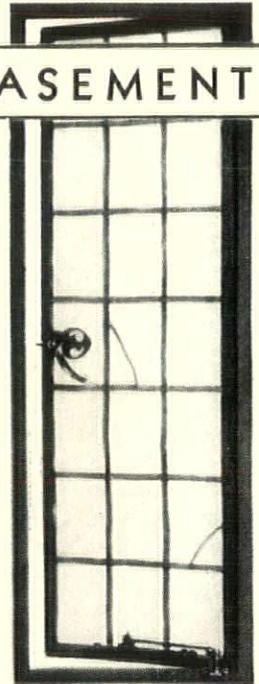
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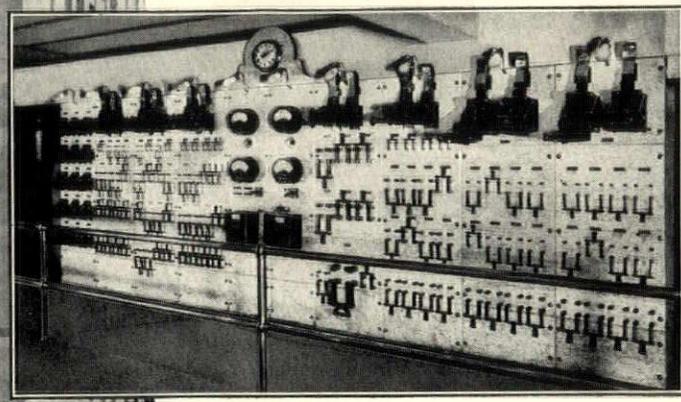
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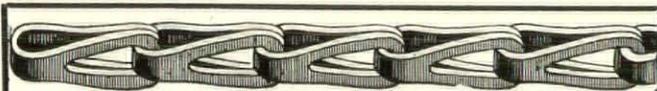
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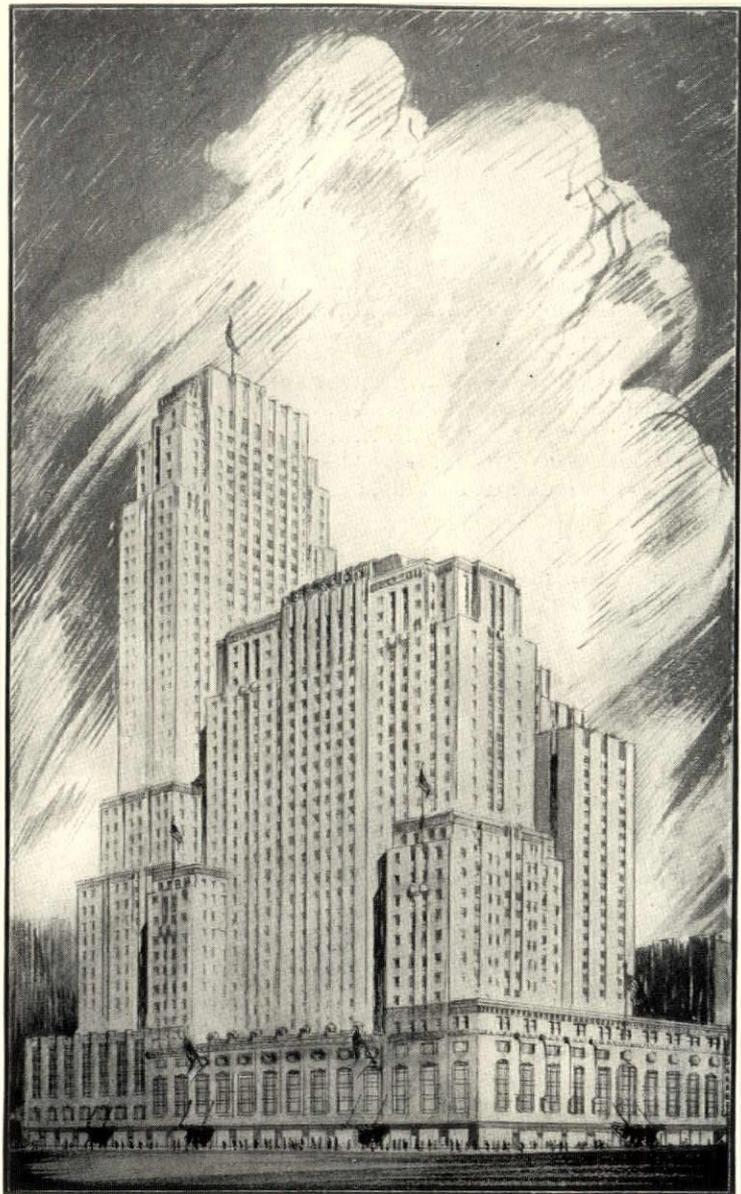
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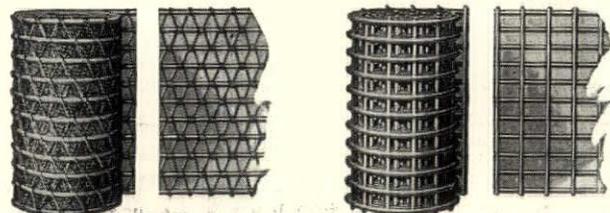
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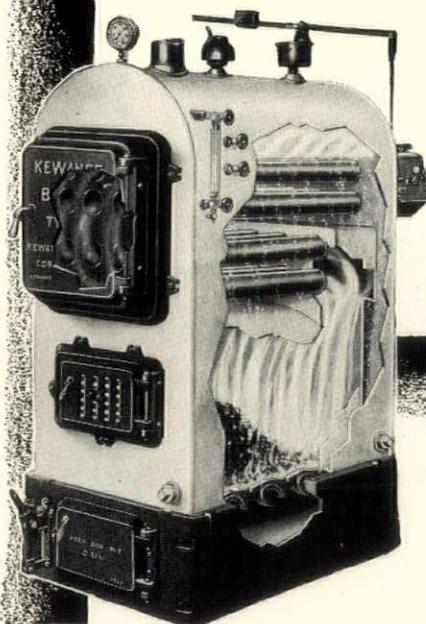
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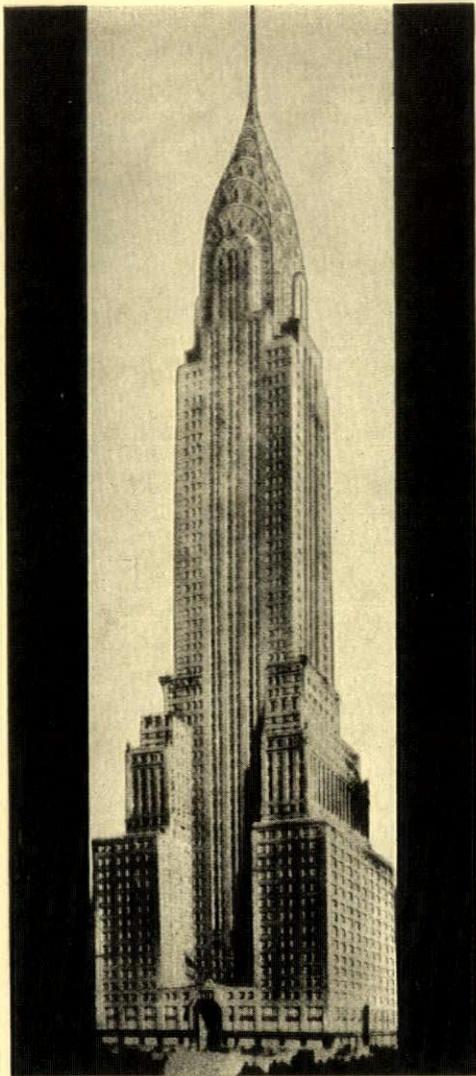
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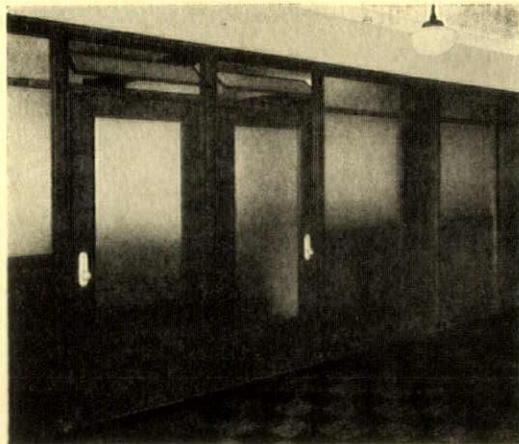
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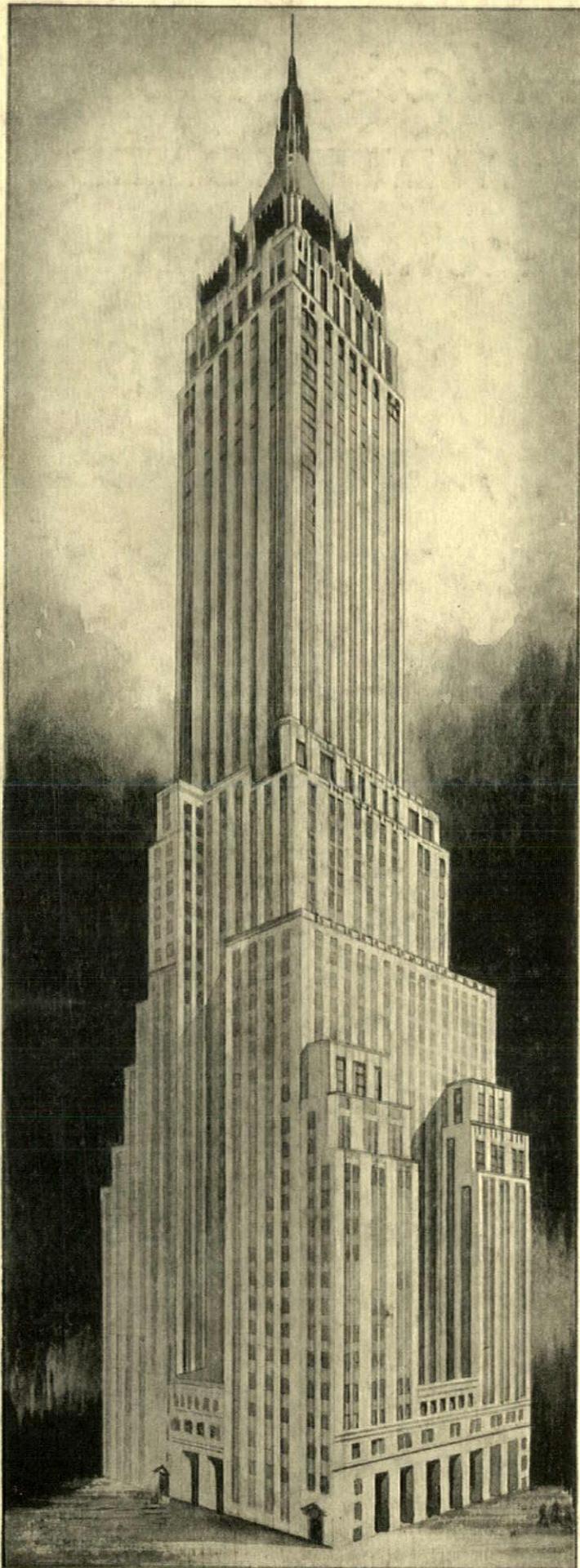
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