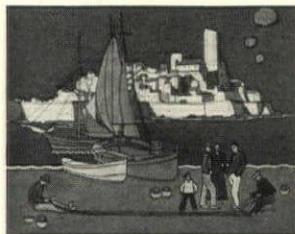


The AMERICAN ARCHITECT

FOUNDED 1876



The Cover

ANTIBES is a quaint fishing town between Caen and Nice, and is one of the oldest on the French Riviera. In the distance is the cathedral, located in the center of the town. The composition was first drawn in pencil and the outlines then inked in. A type of water color pigment made in Germany and little known in this country was then laid on in flat areas.

Millard Sheets, a native of Los Angeles, won the 1929 International Competition for a painting in oils of ranch life, conducted under the auspices of the Witte Museum of San Antonio. He has designed many murals, among which are those in the Chapel of the Pasadena Y. M. C. A. and the Belmont Beach Club, Long Beach, Cal.

Next Month

50 YEARS—*C. H. Blackall tells what he has seen pass before his eyes in fifty years of practice.*

INSULATION—*The first formula showing how much insulation to use.*

HEATING—*An efficient way to heat by electricity.*

COMMITTEES—*Ever have trouble in handling them? An architect tells how he does it.*

BENJAMIN FRANKLIN BETTS, A.I.A., *Editor*

ERNEST EBERHARD, *Managing Editor* H. J. LEFFINGWELL, *Advertising Manager*

RAY W. SHERMAN, *Editorial Director* EARLE H. MCHUGH, *General Manager*

In This Issue

Cover, a water color by Millard Sheets

Do All Contractors Condemn All Architects? <i>By Benjamin F. Betts</i>	19
We Must Reach the Man in the Street <i>By Lancelot Sukert</i>	20
It is Not Every Architect Who Can Design a Church <i>By Luther L. Reed</i>	22
Decorating with Light.....	26
Picturesque California and Historic Maryland <i>Sketches by Thomas B. Owings and Stanley Johnson</i>	28
New Facts About Frame Construction <i>By Frank P. Cartwright</i>	30
Color Gradation of Brickwork in the Northern Life Building, Seattle <i>By A. H. Albertson</i>	34
As It Looks to the Editors.....	36
Glass: An Eight Page Section of Architectural Details.....	38
Once I Had a Client . . . <i>By Bem Price</i>	46
He Couldn't Buy It so He Made It <i>By Myron S. Teller</i>	48
What Architects Are Talking About.....	52
Outside the Office: <i>Sketches by P. B. Parsons, L. A. Lamoreux, and R. Gustofson</i>	54
Writing As It Was Done 1000 Years Ago <i>By Esmond Shaw</i>	56
Are We Architects or Merely Pencils? <i>By Henry S. Churchill</i>	59
1803 Facade Moved as a Unit: The Albany State Bank Building <i>By Henry Ives Cobb, Jr.</i>	60
Protestant Churches Work to Improve Public Taste in Architecture <i>By Benjamin F. Betts</i>	62
Why Man! The House Just Burned Down! <i>By George F. Kaiser</i>	66
The Readers Have a Word to Say.....	68
Alice Hears of a Proposed Building <i>By J. J. K.</i>	70
Books	72
New Materials and Equipment.....	76
New Catalogs	78
In the Epstein Manner.....	80

THE AMERICAN ARCHITECT, *Published monthly by INTERNATIONAL PUBLICATIONS, INC.*
Fifty-seventh Street at Eighth Avenue, New York, N. Y.

William Randolph Hearst, President; Ray Long, Vice President; Thomas J. White, Vice-President; Arthur S. Moore, Secretary; Austin W. Clark, Treasurer. Copyright, 1930, by International Publications, Inc. Trade-mark registered. Single copies, 50 cents. Subscription price: United States and Possessions, \$5.00 per year; \$7.00 for two years; Canada, \$1.00 extra; foreign countries, \$2.00 extra. Entered as second-class matter, April 5, 1926, at the Post Office at New York, N. Y., under the act of March 3, 1879. THE AMERICAN ARCHITECT is fully protected by copyright and nothing that appears in it may be reproduced either wholly or in part without permission.



Eliminates Densest Smoke In One Minute!

THESSE pictures of the chimney on the Father Dempsey Hotel, St. Louis, constitute a record of efficient performance which few, if any, other boilers can equal.

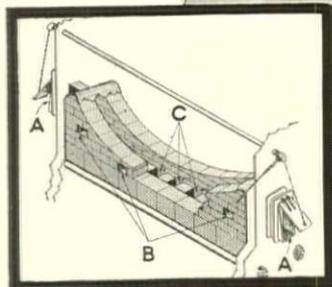
They prove not only how rapidly and perfectly the Heggie-Simplex Boiler eliminates the making of smoke after firing, but also how permanently it maintains smokeless operation.

At 1:00 P. M. the fire was cleaned and twenty scoop shovels of low grade soft coal were added, being thrown on in a manner that would create the maximum of smoke. Immediately the smokeless device of the Heggie-Simplex began to function.

Within a minute all "No. 3" smoke* was gone! A half minute later there remained only a trace of "No. 1." At the end of 2 minutes only a slight haze issued from the chimney. At the end of 3 minutes absolutely all smoke was gone and did not appear again during the remainder of the firing period.

* "No. 3" smoke is that grade of smoke ordinarily termed offensive in city ordinances.

The Heggie-Simplex burns any fuel smokelessly because it assures plenty of air—heated air—over the fire. A smoke eliminating device with intake doors on both sides of the boiler admits the additional oxygen essential to smokeless combustion which cannot be drawn through the fuel bed alone. Built of refractories, this chamber heats the air before passing it down onto the fire, where it is thoroughly mixed with the gases.

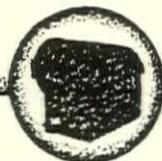


Air is drawn in through intake doors (A). Volatiles arising from the fresh fuel are admitted through ports (B). This inflammable mixture, heated by the hot refractories of the chamber, is ready for instant combustion when it passes through the jets (C) down onto the fire.

For complete facts write Heggie-Simplex Boiler Company, Joliet, Ill.; representatives in principal cities—telephone and address listed under "Heggie-Simplex Boilers."

HEGGIE-SIMPLEX

STEEL HEATING BOILERS



• do ALL contractors Condemn all Architects?

By Benjamin F. Betts

THOMAS THORNE FLAGLER, president of the Associated General Contractors of America, under the guise of, "Give the Contractor a Chance," in the Nation's Business, takes occasion to attack the architectural profession. If, as the author states, he does not desire to reflect upon the skill and integrity of the average architect, it would seem as though he had taken more space than is necessary merely to criticise the minority.

It is admitted that architects' specifications are not always perfect; that superintendents are not always experienced; that irresponsible contractors submit bids; that the present system of estimating is an economic waste; and that evils and abuses exist in our lien laws and surety bonds. But, it must also be conceded that conditions in the building industry are better today, and that plans and specifications are more complete today than ever before in history. "Sleeper clauses" inserted by "tricky specification writers" as a means of graft went out of date years ago. To the charge that ". . . not one set of plans in a hundred is made entirely by the architect and his men," one might ask what business completely makes any of its products. We even have sub-contractors.

WHEN the perfect specification is written it will be done by an architect. Rigid specifications that admit of no freedom in choice of materials or methods by contractors is a complaint that is worn threadbare. If responsible contractors must bid against irresponsible firms, there must be something wrong with a business that contains so many irresponsible men that a few should be obliged to worry about it. In any big industry a percentage of lost motion, unfortunately, is to be expected.

In arguing that the structural frame should be designed as soon as the room arrangement has been determined upon and that the architecture should be made to fit the frame, Mr. Flagler speaks as an engineer and indicates, perhaps, a limited knowledge of how buildings are designed. The structural frame is not and never has been the last consideration. The frame exists for the building—not the building for the frame.

NO ONE is blind to the shortcomings of the building industry. This is the reason for the existence of Building Congresses in various sections of the country, and for other organizations that are working to the end that many of the conditions of which complaint is made may be corrected.

Does Mr. Flagler's opinion of architects reflect that of the majority of contractors? If it does then there may be something in what he says and it would be a good idea to get at the root of the matter. If it does not, the article should not have been printed, for it was then a thoughtless, unwarranted attack upon a profession that does enjoy the confidence of the buying public and merits as a whole a reputation for honesty, skill, fairness, and honor to a degree equaled in few other professional groups.

"We MUST Reach the

..... but
how shall it be done?

Many leaders in the profession realize that architecture should be sold to the public. How architects in the South are doing it was told in the January issue. What the churches are doing is told in the current issue. What is being done in Philadelphia will be told in the next issue. Early issues will contain other articles of equal interest on this subject which requires co-ordinated effort to secure results. The American Architect's pages are open to a free discussion of all phases of this problem.

By

LANCELOT SUKERT, A.I.A.

President, Michigan Society of Architects

work? We have never made the effort to tell him! He represents a cross-section of the general public—the sort of people who make up our list of prospects.

On another occasion an acquaintance buttonholed me on the street. "Tom Jones," he said, "is going to build an addition to his building. Why don't you put in a bid on the job?" When I replied that architects do not get their work that way, he replied, surprised, "Why, you build, don't you?" It was obvious that he had been impressed with advertising he had seen, in which builders represent themselves as architects. Knowing me to be an architect, he assumed that I must be a builder. But he had not the faintest idea of the distinction between the two! There are hundreds of thousands like him.

Is this strange? Not a bit of it! When the building pages of the newspapers carry pictures of new structures, nine times out of ten the accompanying text gives the name of the general contractor and, on an equal number of occasions, omits the name of the architect. Not surprising, since the contractors buy display advertising space on such pages and architects do not!

Last year an architect of my acquaintance was requested by several newspapers to give them a picture of and an article about a new building. Having experienced difficulty before, he fastened a slip to the photograph, stating, "Not to be published unless architect is given credit for building, either beneath picture or in article." All of the papers complied except one, which printed the article, omitting mention of the architect, but omitted the picture and the credit line. Next day's mail brought back the photo with a short note to the effect that this particular paper "Does not permit advertising of this nature to creep into its columns." The same edition, however, carried stories of several other buildings, giving the contractors' names, the same contractors' advertisements appearing in the issue.

EVERY element that enters into the building field has been widely advertised for several years, that is to say, every element *except* the architect. Pick up your daily paper, the Sunday building page, the national weeklies or the better class monthlies. In all of these you will find excellently prepared publicity on the subjects of copper, brass, wrought iron, plumbing fixtures, conduit oak, white pine, wall board, metal casements, steel, cement, elevators, flooring, paints, roofing, glass, stone, tile, hardware radiators, valves, boilers, plaster, financing and, in fact, everything of major importance in the building industry except

(Continued on page 96)

DO you earn your living practicing Architecture? Do you depend upon it entirely for your daily bread? Does new work "walk into the office" or do you have to go out and "dig up new business"? If you do, you have (as salesmen say) "contacted" the building public. You know, then, that the greatest sales resistance you have ever met is not a competitor's selling ability, but the general public's ignorance of the architect; what he does, how he works and the services he renders.

Perhaps you are one of the fortunate, with independent means, practicing architecture because you love it. Maybe you are one of those with an established name and organization, and keep at the game for its own sake and the sake of your associates. In either case you probably do not have to go out and do battle to land a commission. All the more reason why you should know of this vast public ignorance concerning the architect and his work!

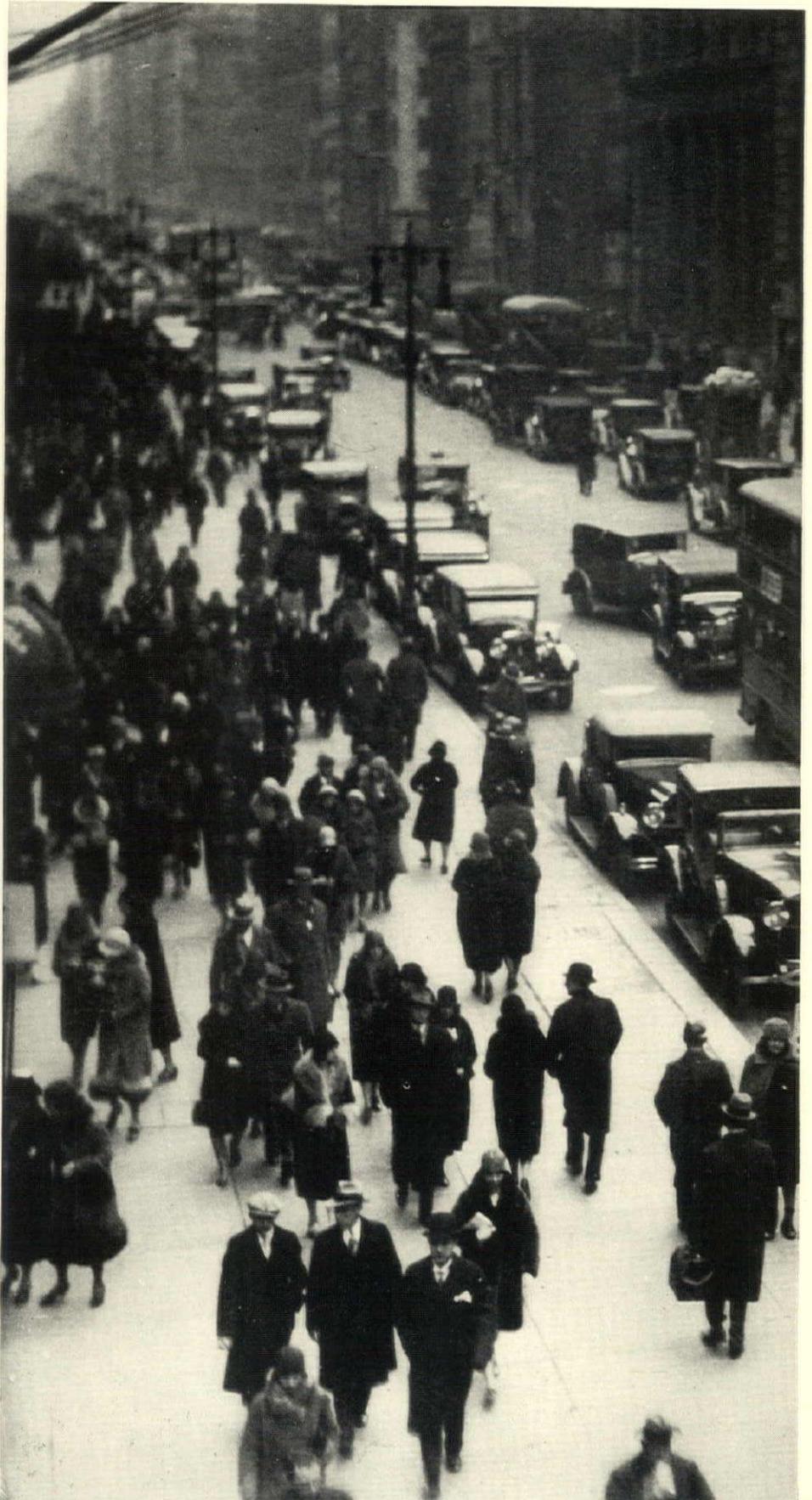
I can recall a conversation with a business man, a university graduate by the way, and a man of standing in his community. We were talking shop. Sensing his lack of information concerning architects generally, I attempted to explain to him the way we work. When I had finished he said: "Why I thought architects made sketches of floor plans and pictures of buildings and the contractor did the rest!" While such ignorance seems appalling, what right have we to expect that such a person should know anything about the architect's

MAN in the Street''

•
HOW
many of
these people
"KNOW"
architecture

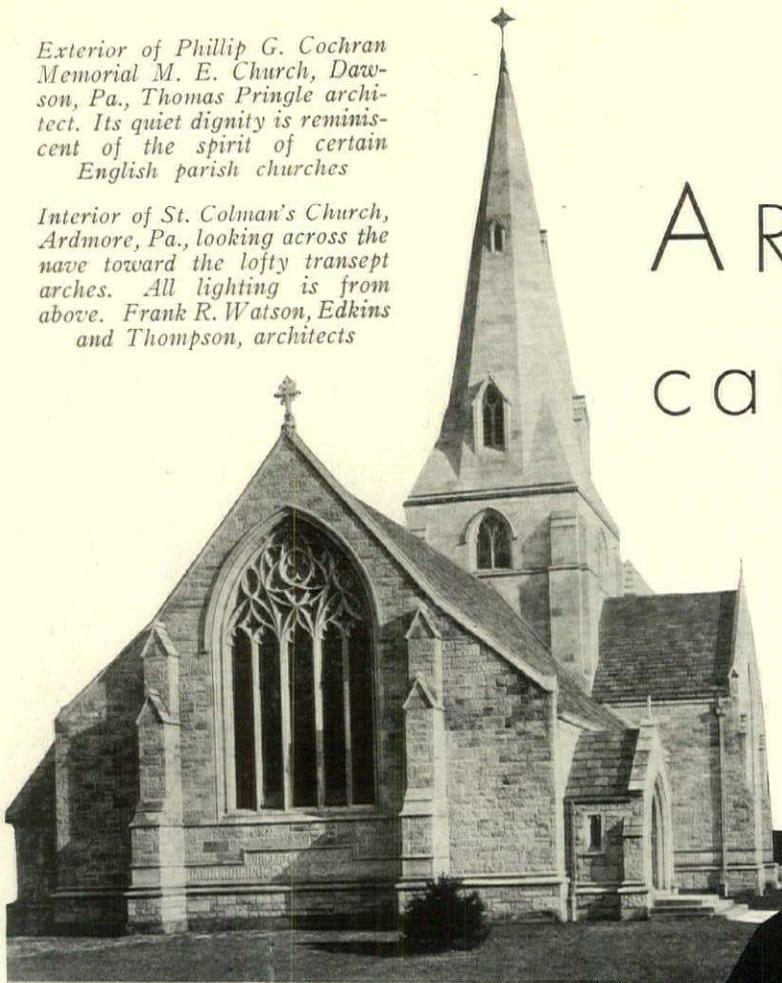
?

HOW
can we
MAKE
them
know
?



Exterior of Phillip G. Cochran Memorial M. E. Church, Dawson, Pa., Thomas Pringle architect. Its quiet dignity is reminiscent of the spirit of certain English parish churches

Interior of St. Colman's Church, Ardmore, Pa., looking across the nave toward the lofty transept arches. All lighting is from above. Frank R. Watson, Edkins and Thompson, architects



Not every ARCHITECT can Design a CHURCH

BY

LUTHER L. REED, D.D.

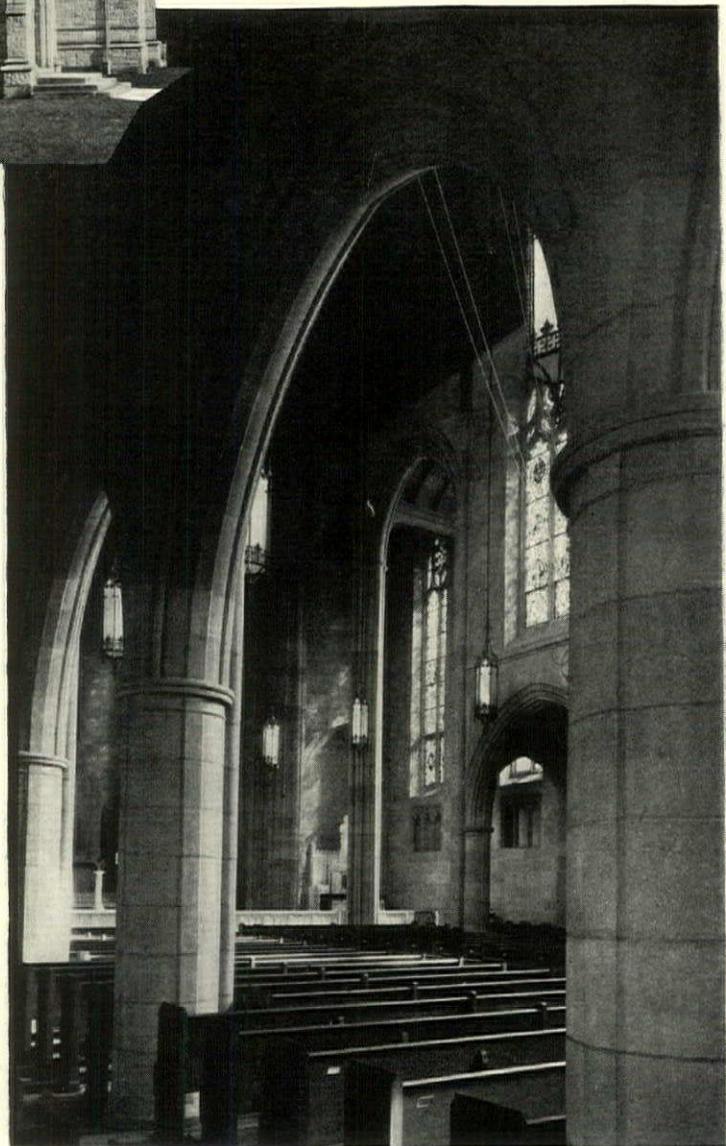
• what a Church MUST BE

The accompanying article is based upon extracts from a paper read by Dr. Reed at the conference on church architecture held in St. Louis, Mo., Dec. 6 and 7, 1929

Churches must be built for worship and should express the church's catholicity, unity, and permanency; its noblest ideals. It should possess dignity, sincerity and durability in materials and construction.

Architectural experiments in the development of new styles expressive of new building conditions should not be attempted in the design of church buildings.

The nave should not be too long and narrow, and must protect worshippers against distracting noise. Acoustics must be good.



• unless he has the spirit of worship in his own heart he will not be able to express it in his church buildings

Dr. Reed is professor of Liturgics and Church Art at the Lutheran Theological Seminary, Mt. Airy, Philadelphia, Pa., and Secretary of the Committee of Architecture, United Lutheran Church of America.



THE modern church plant seeks to meet the requirements of a Christian congregation with a comprehensive program of educational and social, as well as devotional activities. But whatever other things the Christian congregation may do or must do, its primary function is worship. Churches always have been and always will be built first of all for this spiritual purpose, a purpose which must be evident, and which must dominate the entire architectural composition.

We must limit our discussion strictly to the church building proper, and see, if we can, what the practical requirements of the worshipping congregation are, how the architect may best satisfy these and also how he may express in mass, line and proportion the very spirit of worship itself.

The latter is the difficult problem. Practical requirements may be rather easily enumerated, but a discussion of the architectural expression of the spirit of worship is not easy.

In an age of unequalled wealth and secular aggressiveness, Protestantism in all groups is turning from worldly association and suggestion and seeking churchly and spiritual forms in worship and architecture.

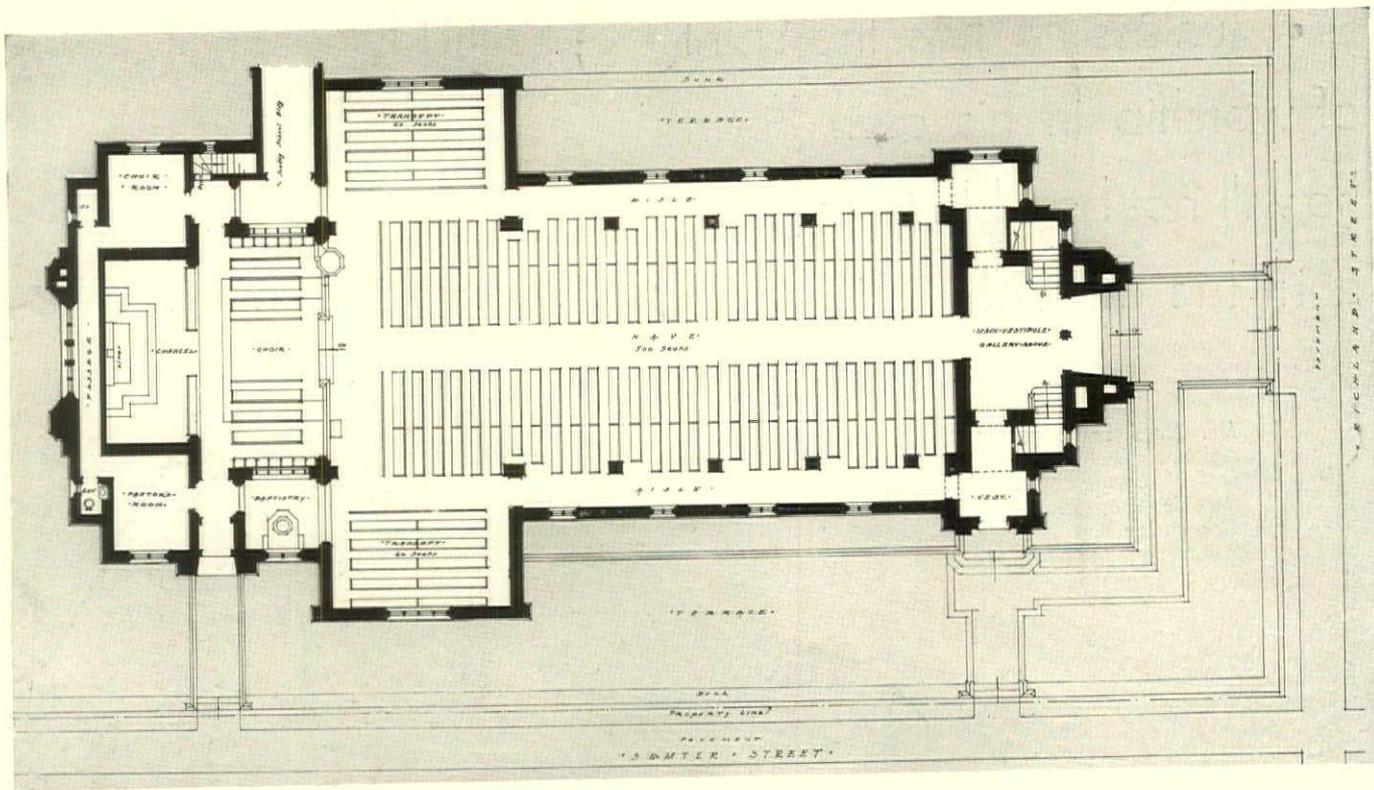
Given the desire to master the spirit of worship and to express it in the church building, how can this be attained? The architect may readily secure expert assistance in solving problems of engineering acoustics, heating and illumination, but what expert can aid him to express reverence and religious emotion in a building? Alas! there is none to help, and he must rely upon his own strength. He may be gifted, he may be well trained, he may have had excellent experience, but

though he speak with the tongues of men and angels, though he have the gift of originality and understand all historic styles, and though he have all faith so that he could remove mountains, and have not the spirit of worship in his own heart, he will not be able to express it in his church buildings. The perfect building includes not only an adequate plan, fine proportion and beautiful sweep of line, but a mastery of detail.

We think first of the church building as a House of God; a structure which expresses and impresses upon the world the Church's catholicity, unity and permanence, and its noblest, highest ideals. From it as a center Christian influence radiates.

These conceptions of the church building at once suggest, if they do not require, a distinctive and churchly plan and style expressive of the Church's belief and history. We are not limited to any one architectural style, period or national development. There is undoubtedly a field in general architecture for experimentation in the development of new styles expressive of new building conditions. The Church, however, has more to lose than it could possibly gain by abandoning the accumulated values of the historic styles, with their wealth of churchly association and their demonstrated beauty and appeal, in favor of untested novelties, whose length of life will probably not greatly exceed the season's novelties in the fashion bazaar.

THE building should express dignity, sincerity and durability in material and construction. It must express lofty ideals, churchly tradition and permanence. Perishable material, flimsy construction, imitation and



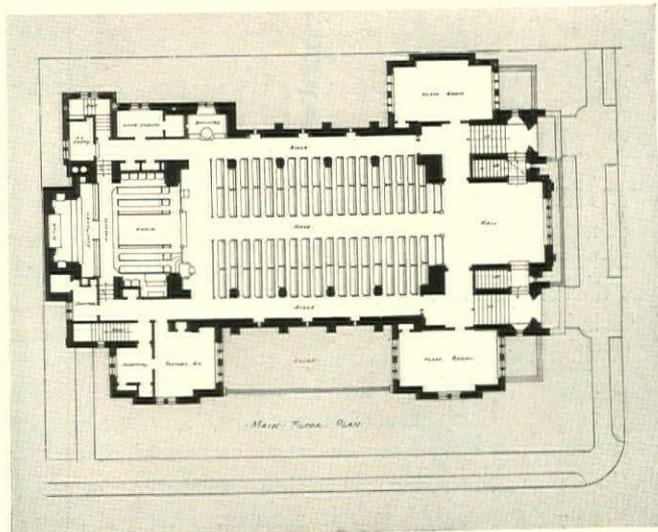
Ebenezer Lutheran Church, Columbia, S. C., Thomas, Martin and Kirkpatrick, architects. The fine perspective of the nave is increased by a chancel of equal width. The length also admits of transepts. Note the excellent and unusual location of the baptistery

pretence, secular suggestion in style or ornament of the moment, must be avoided. The structure must exhibit in plan and elevation an organized and unified group of spaces and features required for the formal services in which minister, choir and congregation unite. The requirements for the educational, social and administrative work of the parish should be met in a separate and subordinate, though organically related, structure.

The nave must not only provide for the comfort of the worshippers. It must protect worshippers against distracting noise or suggestion and afford every facility for hearing. An unobstructed view of the chancel and the altar should be afforded in so far as possible. By arrangement, line, proportion and decoration it should create an atmosphere of separateness, solemnity and spiritual exaltation above the hours of worldly care and interest to be expected elsewhere.

THE historic division of the nave into three parts by columns is most appropriate if it can be secured by the means at command. The clerestory plan greatly increases the interest and beauty of interior and exterior alike. The importance of the congregational element in worship, however, demands for most communions a certain openness in the nave which the excessively long and narrow buildings of an extreme Anglican type often fail to secure.

There must be a center aisle of good width. Freak arrangements, with radiating aisles or diagonal plans with an entrance at one corner and the chancel at the other, etc., are utterly lacking in dignity and historical consciousness and cannot be considered.



Immanuel Lutheran Church, Philadelphia, Pa., Thomas, Martin and Kirkpatrick, architects. The nave, without transepts, terminates in a narrower chancel and a still narrower sanctuary, which has the effect of drawing the eye to the altar. The circulation is excellent

The aisles should be of stone, tile or composition flooring and never carpeted. The church is a public building and not a home. It must be given a formal rather than a domestic treatment even in details.

The inner surfaces of the walls should be of brick, dressed stone or other permanent material in soft color. Wide expanses of plaster should be avoided. High wainscoting in stone, brick, tile or paneled wood may be used to great advantage.

The light from windows or fixtures should in all cases be adequate and yet subdued and soft. Dazzling chandeliers and unprotected electric bulbs are to be avoided. Shadows and

(Continued on page 88)



Trinity Lutheran Church, Fort Wayne, Ind., Bertram Grosvenor Goodhue Associates, architects. A calm and spacious interior whose simplicity is relieved by occasional detail of great beauty. The wide chancel with low chair stalls permits an unobstructed view of the altar. Additional seating capacity is afforded by transept galleries

DECORATING

with LIGHT



F. J. CADENAS,
*illuminating engineer
of the General Elec-
tric Company, who
developed this new
method of decorating
with light*

a revolutionary
IDEA
with unlimited
possibilities

AN entirely new idea in interior decorating through the medium of colored light that paints countless designs and colors on walls and ceilings at will, has been developed by F. J. Cadenas, illuminating engineer of the General Electric Company. The first commercial installation of the system has been made by Mr. Cadenas in the ballroom of the St. George Hotel, Brooklyn, with the co-operation of Winold Reiss, decorator.

The idea, as previously exhibited in model form before architects attending the recent Memphis Exposition of Architecture and Industrial Arts and at various illuminating engineers' meetings, essentially consists of two controllable factors. First, placing colored lights in front of and behind a series of vertically pleated flutes, these lights being reflected on a cove and retaining their pure color or combining with others to produce various shades and tones. Second, these colors form designs changeable at will, or other master patterns, due to the cutting off of the light rays by the flutes.

The result is that one operator may decorate a room for a morning wedding, change the scheme for a luncheon, adapt an entirely new conception for an afternoon bridge party, paint college colors on the walls and ceilings for a fraternity dance, and so on ad infinitum. Colors and designs may be changed at will, the glory of a sunrise merging into the dusky grayness of a

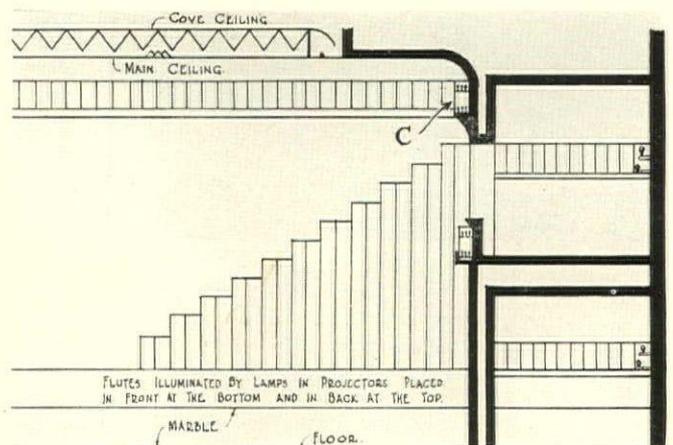
storm at sea; ghastly green faces appearing and disappearing, changing to floral or other designs as the operator wills, and at an instant's notice. It is like a master organist with the whole gamut of colors as his keyboard, combining his tones and harmonies as the spirit moves.

Twenty-eight hundred people attended the opening of the first commercial installation of the system at the ballroom of the St. George Hotel on January 9, 1930,—architects, engineers, bankers, journalists and statesmen. A description of that installation is, essentially, a description of the fundamental principles that permit the system to be adapted to many other locations.

This installation consists essentially of a remote-control switchboard with dimmer plates and a series of light troughs in the room. The troughs contain electric light bulbs covered with color caps arranged in front and in back of vertically pleated flutes which make the shadow and color designs. This equipment permits the use of fixed or moving designs and colors, which may be changed by the control board operator at will, on the walls and ceiling. In addition to controlling the patterns and colors it is also possible to control the intensity of the illumination. The equipment thus serves the dual purpose of illuminating the room as well as decorating it in a manner suitable for the varying purposes for which the room may be used.

The St. George ballroom has no windows. There are no visible ceiling or wall lighting fixtures. The entire room is finished in flat white paint to provide the "canvas" upon which is "painted" with light various patterns

*End elevation and section showing lighting system
of the St. George Hotel ballroom, Brooklyn, N. Y.*



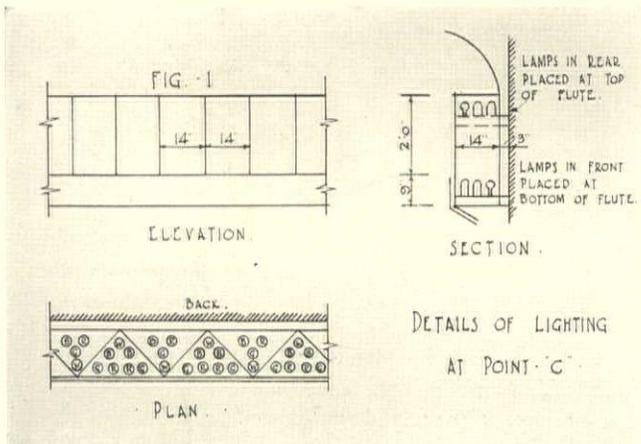


Ballroom of the St. George Hotel using only the white light. As various colors come into play, any desired effect of color or design may be had at the will of the operator

and color combinations. It is estimated that it is possible to secure hundreds of thousands of different combinations of color and light patterns varying from geometrical designs to cloud and other effects. The ballroom has a floor area of 11,000 square feet and a clear ceiling height above the floor of 31 feet. There are two tiers of balconies along the side and back walls.

The lighting system for the walls consists of a series of four separate and parallel coves fitted with vertically-pleated flutes, and clear lamps, of various wattages, equipped with color caps, are placed in both the front and back of the flutes, being capable of separate control.

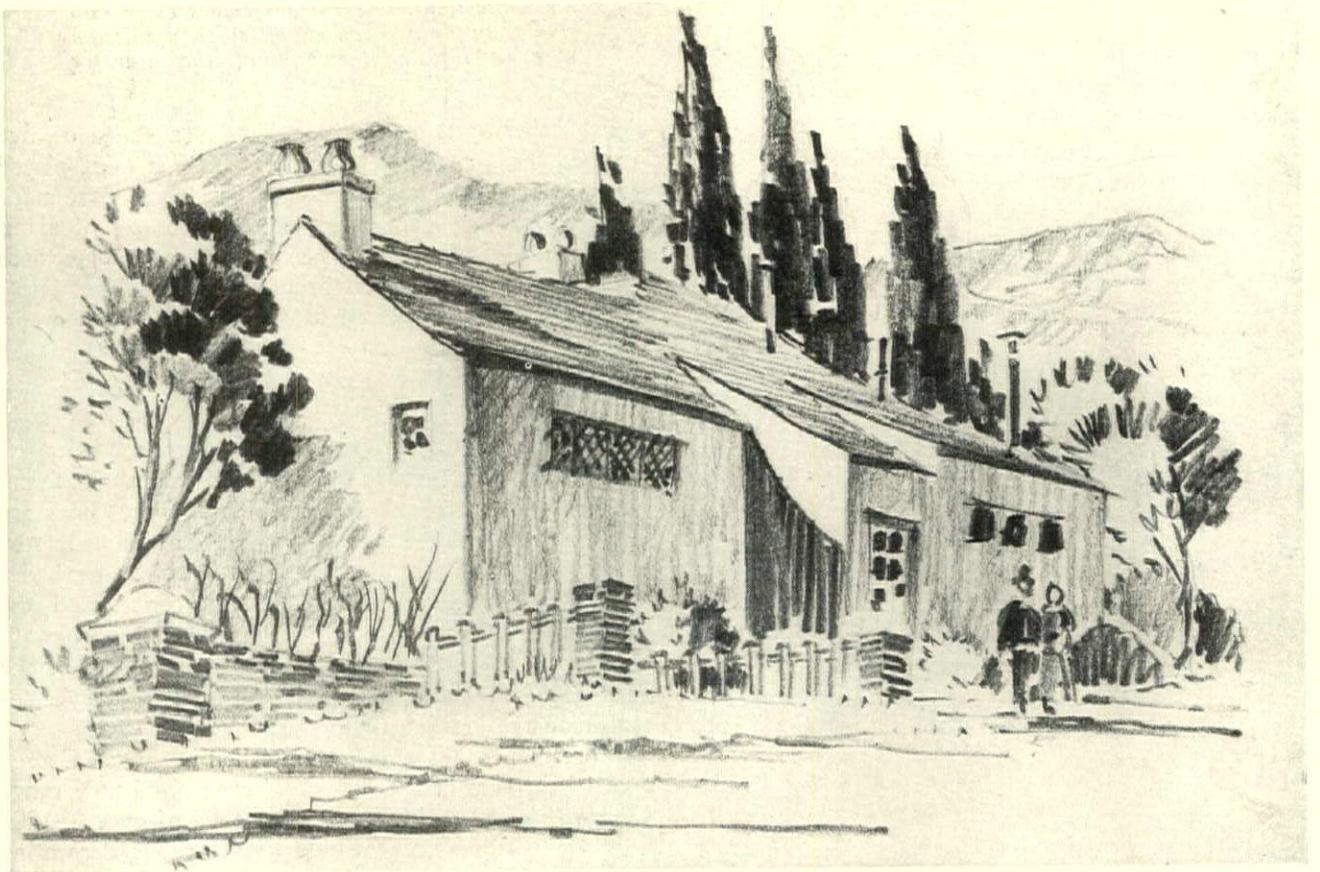
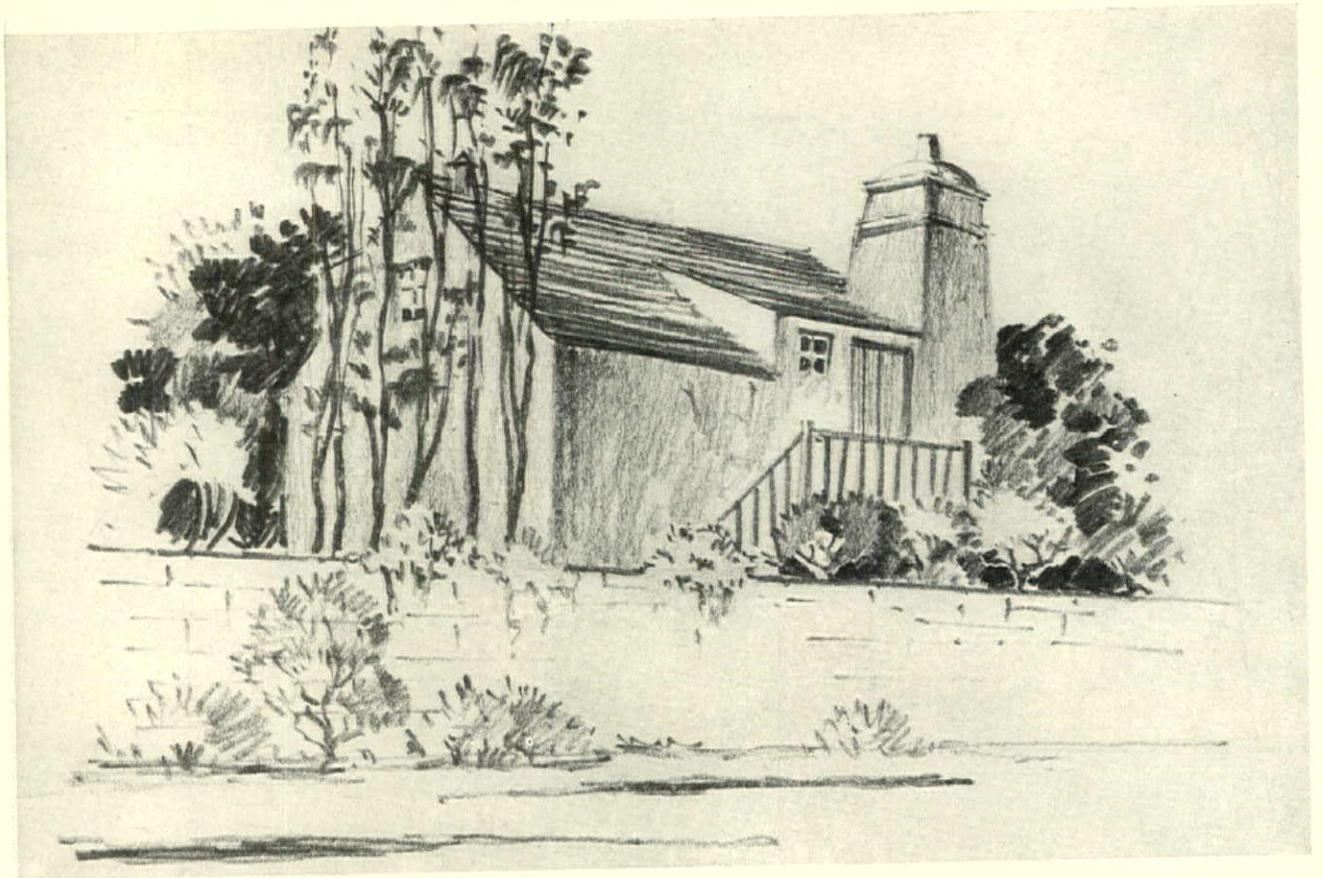
Detail plan, elevation and section of lighting system at point "C" of the drawing at the left



The lighting system for the ceiling is a series of five inverted troughs, 10 feet wide and 60 feet long, placed symmetrically on 20-foot centers. The troughs are made of No. 20 gauge galvanized iron, in sections of about twenty feet in length. The troughs have saw-tooth openings along the sides through which colored lights and shadows are projected onto the ceiling. In the bottom of the troughs are roundels through which may be projected red, blue, green and white light.

COLOR effects are obtained by using inside-frosted and clear electric lamps with color caps and aluminum collars. Only clear red, green, blue and white lamps are used, but the color effects which can be obtained from them are unlimited in number. Black, white and shades of orange, grey, yellow, purple and cerise, and the pastel tints of red, blue, green, yellow and purple are obtained. The result secured depends both upon the wattage of the lamp employed for each primary color and upon the location of the lamp.

More than 7,000 lamps are installed in the St. George Hotel ballroom, in the flutes and coves, and they range in size from 50 to 1,000 watts. A total of over 630,000 watts is required to operate the various decorating effects so far anticipated. The lighting is controlled from a remote-control board that is approximately 4 by 6 feet in area and contains more than 500 buttons. The switchboard proper is 30 (Continued on page 100)



PICTURESQUE CALIFORNIA buildings. Made with black crayon on white drawing paper by Stanley Johnson. The masses are well handled and show an interesting technique with a soft pencil sharpened to a chisel point

PICTURESQUE
California
AND HISTORIC
Maryland

STANLEY JOHNSON
Los Angeles, California

THOMAS B. OWINGS
Washington, D. C.

*Water color of an 1820 house
at Libertytown, near Freder-
ick, Md. Made by Thomas B.
Owings, who is well known
in Washington, D. C., for
his drawings and renderings*



*Office sketch by Thomas
B. Owings of a 1680 build-
ing at Indian Town Farms,
Wycomico River, N. C.,
which is being restored as
a hunting lodge for the
Hon. Thomas W. Phillips by
Arthur B. Heaton, architect*





TESTS MADE BY U. S. FOREST
PRODUCTS LABORATORY REVEAL

new facts

ABOUT

Frame Construction

By FRANK P. CARTWRIGHT

Chief Engineer, National Lumber Manufacturers' Association

They Wanted to Find Out . . .

- *Does diagonal sheathing add enough strength to justify extra expense?*
- *Do wall openings offset benefits of diagonal sheathing?*
- *Are let-in diagonal strips better than herringbone bracing?*
- *Do three nails in each board make a stronger wall than two nails?*
- *Is random end-matched sheathing as strong as ordinary butted sheathing?*

RECENTLY completed tests at the U. S. Forest Products Laboratory, Madison, Wisconsin, answer many long-standing questions about the design of light framed buildings and show how to vastly increase both strength and stiffness over current practice. Prefacing its work by personal investigations in a number of storm damaged areas, the Laboratory decided that the walls contribute most to the strength and rigidity of a building as a whole. The government engineers determined also that typical, lumber framed and sheathed walls are strong enough to resist any pressure likely to be caused by wind blowing directly against them. Wall resistance to end thrust, caused when the pressure against the front is transmitted to the side walls, is a more critical point.

With this in mind, the Laboratory built and subjected to end thrust nearly fifty frame walls of full story height, (8 and 9 feet) and long enough, (12 and 14

feet) to show how a real wall would act under extreme conditions. These walls were framed with 2 x 4's at the usual 16 inch spacing; the sole plate was bolted to a fixed base, and pressure was applied horizontally at the top plate in the plane of the wall surface. End posts, corresponding to the corner posts of a house, were built up in the usual way with three 2 x 4's.

Both the rigidity of the walls, as shown by the end thrust necessary to cause a given movement of the end posts from their upright position, and the strength, as evidenced by the end thrust necessary to cause failure of the whole panel, were measured. The results given hereafter are in pounds, but are far better understood by using the average strength and stiffness of a double-nailed horizontally sheathed panel as a basis. Thus if we take as 1, the strength of the horizontally sheathed panel with two nails in each board at each stud, the strength of a diagonally sheathed panel will be about 8, or eight times as much. If the stiffness of the horizontally sheathed panel is also taken as 1, that of the diagonally sheathed panel with the boards in compression is about 7. (See Tables 1 and 2 on page 32).

The tests covered the following principal factors affecting strength and rigidity of light framing.

1. Frequency of nailing.
2. Size of nails.
3. Inclination of sheathing.
4. Types of bracing.
5. End matching.
6. Seasoning of lumber.
7. Effect of window and door openings.
8. Effect of lath and plaster.
9. Effect of vibration.

Three nails per stud in horizontal sheathing boards do not increase the wall stiffness appreciably, since the middle nail of the three is about at the center of the resistance couple set up by the outside nails. It acts, in other words, just as though it were the only nail used.

BRACING

The best method of bracing a frame wall is shown in Figure 1. Ribbons are let into the studs, increasing stiffness between two and a half to four times, and strength about three and a half times.

Figure 2. Diagonal cut-in braces increase stiffness sixty per cent and strength forty per cent. Tightly fitted ends are essential if the bracing is to be of much benefit. This method of bracing depends on careful workmanship rather than on inherent strength

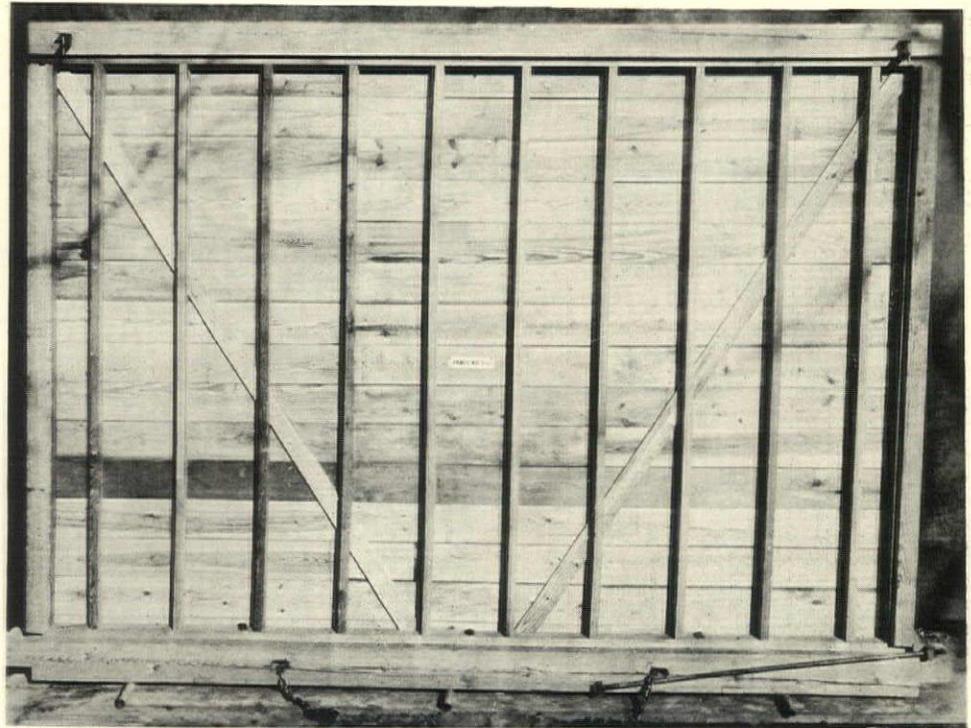


Figure 1

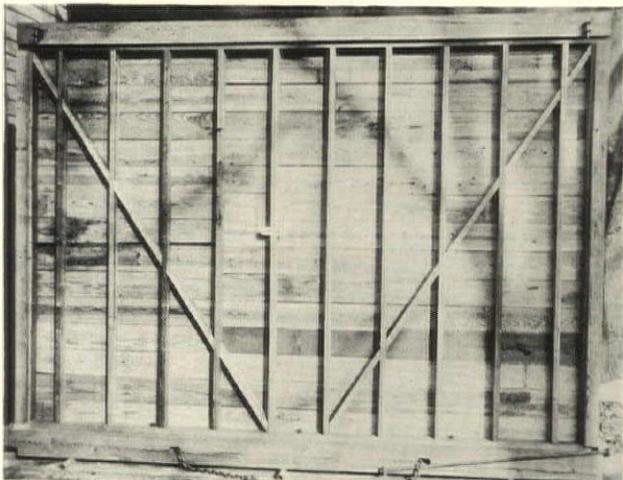


Figure 2

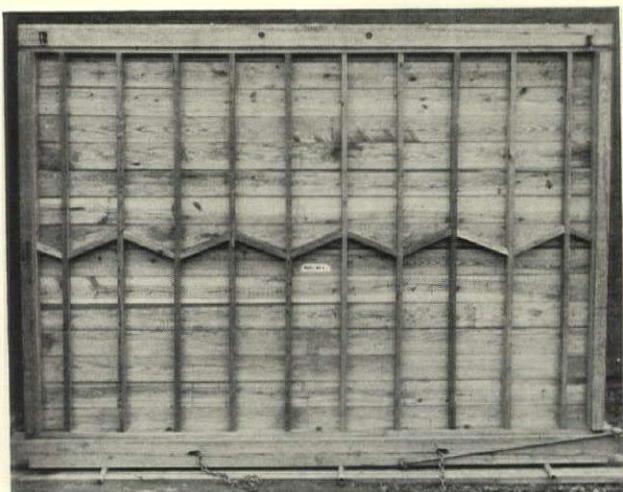


Figure 3

Herringbone bracing adds but little to the stiffness. Its freestopping effect is much inferior to that of similar blocking at story lines

Four nails per stud in 1x8 inch horizontal sheathing increase the strength and stiffness about 40 per cent. The resistance of the inner pair of nails to twisting is naturally less than that of the outside pair.

The effect of more nails on diagonal sheathing is much more important. Here the sheathing boards act with the framing as tension or compression members of a small truss, and each additional nail holding them in place adds considerably to the strength of the whole. Three nails instead of two increased the stiffness from 3.8 average to 5.2 and four nails brought it up to 7.5. Increases in strength were not measured, but were found to tie well beyond any strength likely to be required of frame construction.

WHEN a horizontally sheathed panel gives way, due to end thrust, it is usually the nails which give way first. They bend and twist before the wood splits. Heavier nails therefore might be expected to make a stiffer, stronger panel, and such in fact was the case. Two 10d nails instead of two 8ds increased stiffness of a horizontally sheathed panel 50 per cent and strength 40 per cent. When 12d nails were used strength and stiffness fell off again, perhaps because the large shanks split the boards more seriously.

Larger nails made little improvement in strength of diagonally sheathed panels, because the boards are not twisted about the studs when such panels resist pressure, and the greater strength of the nails was not brought into play.

With two 8d nails per stud, a diagonally sheathed panel is about eight times as strong and from four to seven times as stiff as a similar panel horizontally sheathed. When it is realized that this tremendous increase is secured in the average building with very little sacrifice of time and material, it is hard to believe that horizontal sheathing will continue to be used in any amount.

Several types of bracing are in common use to stiffen frame walls. Three of these methods were tested. Her-

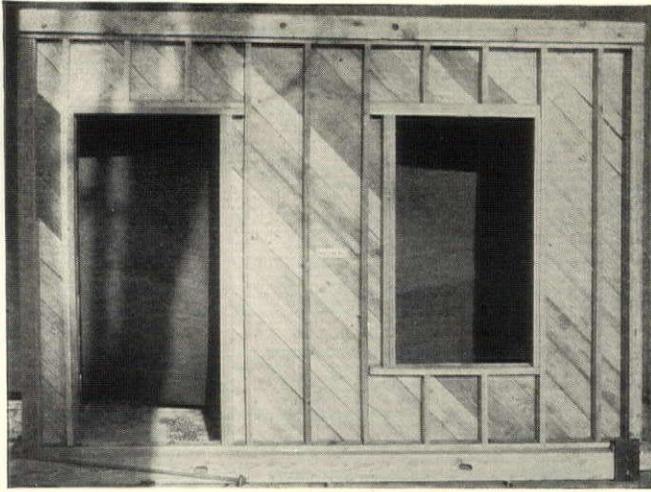


Figure 4

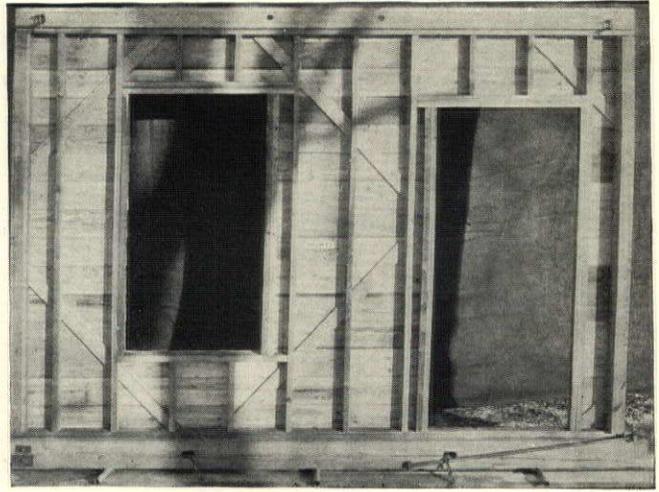


Figure 5

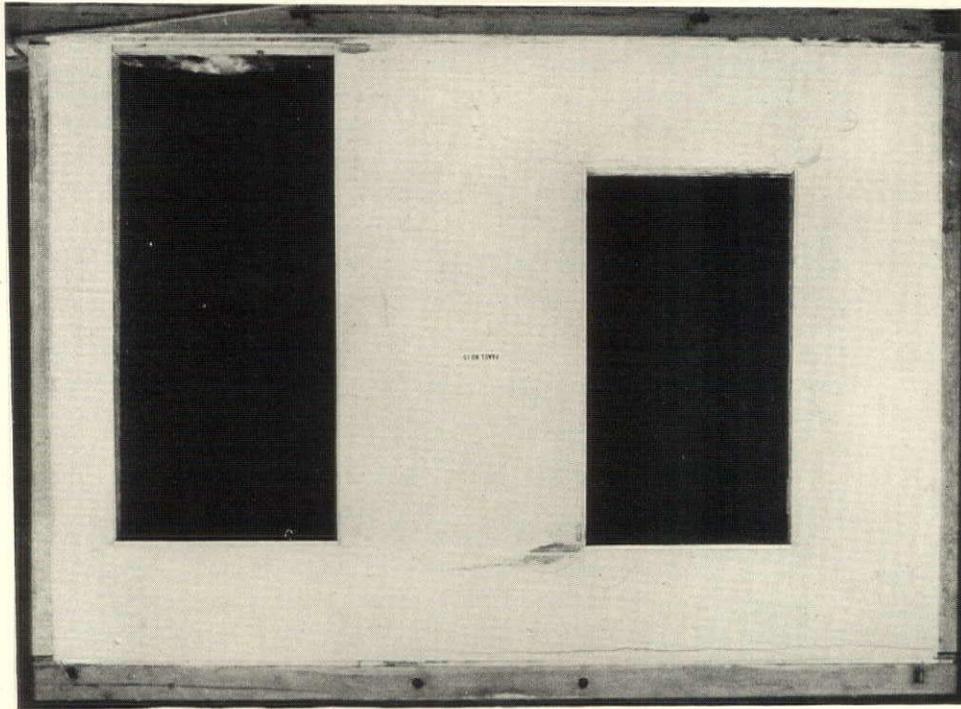


Figure 6

EFFECT OF OPENINGS ON STRENGTH

THE two openings, Figure 4, in the test panel, reduced the stiffness sixty-three per cent. and the strength fifty per cent. In spite of this, the diagonally sheathed panel with openings is better than one horizontally sheathed without openings

BRACES let into the studs on a horizontally sheathed panel, Figure 5, more than made up for the weakening effect of doors and windows as regards both strength and stiffness

WOOD LATH and plaster panel after test, Figure 6. The lath and plaster compensated for the weakening effect of openings. The cracks are similar to those generally attributed to unseasoned lumber and show that many such cracks are due to improper bracing of walls

ing is omitted and siding applied horizontally, the let-in bracing strips offer far the best assurance of stiffness and strength.

Relatively few builders have had experience with the side- and end-matched roofing and sheathing boards just becoming commercially available. Their advantage is that the ends do not have to be butted over the studs and no sawing is necessary except at openings or corners. Waste is almost eliminated.

Tests were made to find out if walls thus sheathed are as strong and rigid as when the boards are butted over the studs. 1 x 6 inch side- and end-matched boards gave as good results as 1 x 8 butt edged boards.

In some parts of the country, and particularly on farms or for low-grade building operations, buildings are often built of green or partly dried lumber. Results are seldom satisfactory. To discover what happens when such lumber dries out, two panels were sheathed horizontally and two diagonally with green lumber. These were given a month under cover to dry out, and were then tested. The horizontally sheathed panels lost

in drying about 40 per cent of the normal stiffness and 30 per cent of the strength of dry-sheathed panels. The diagonally sheathed panels decreased in relative stiffness from about 4. to 1.74. Strength tests were not made after seasoning.

THE test described represents, of course, the most extreme conditions likely to occur as a result of using green lumber, and it would appear that several other factors may have as much or more influence on stiffness and strength than the use of green lumber. Note the results of vibration tests which will be described later.

Openings reduce the resistance of a wall to longitudinal thrust. See Table 2. A double 28-inch window in a diagonally sheathed wall reduced its stiffness about 20 per cent and its strength about 40 per cent. Adding a 3 x 7 foot doorway decreased the stiffness 65 per cent and the strength 50 per cent. The wall was still twice as rigid and several times as strong as a horizontally sheathed wall with the same openings. Certain critical positions of openings may (Continued on page 82)



• A sky like a master's water color Mt. Rainier rising in a glorious gradation of tone—there lay the inspiration for the grading of the brickwork of the Northern Life Tower

color gradation
of Brickwork
in Northern Life Tower

INSPIRED BY NATURE

BY A. H. ALBERTSON, A. I. A.

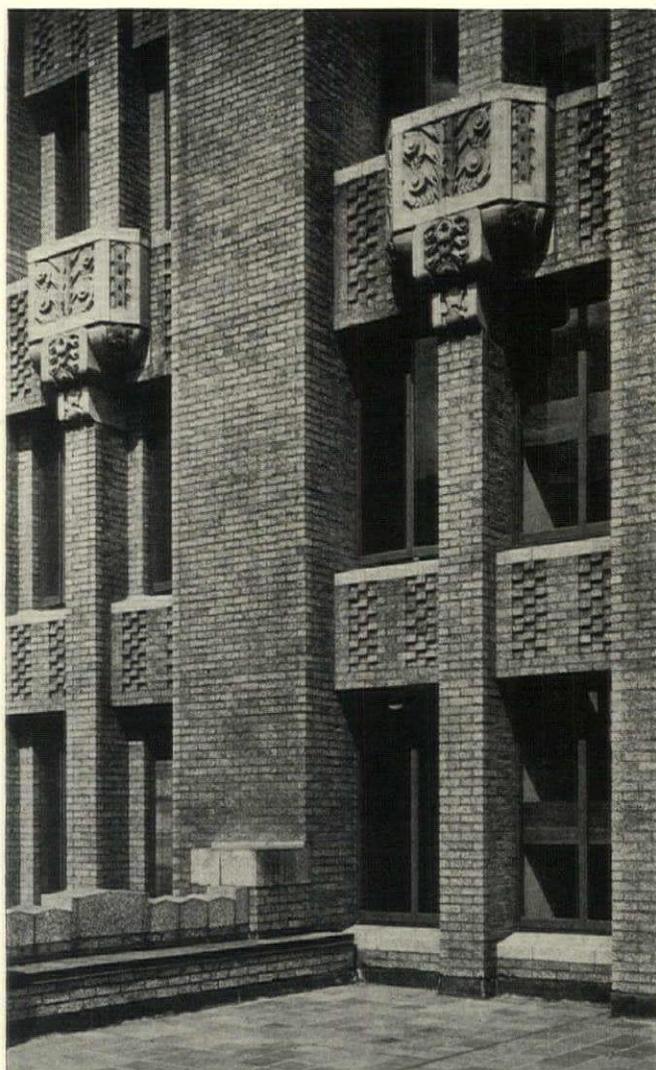
A. H. ALBERTSON, Architect, JOS. W. WILSON and
PAUL RICHARDSON, Associates

ONE Sunday last winter when the Northern Life Tower was emerging from the ground, Lake Washington, which adjoins Seattle, lay under a panoramic play of light. From a bluff above the lake the waters of the far shore glistened in silvery whiteness in response to the pale sun hidden from the observer by a lowering sky immediately overhead. The nearer waters of the shore below were as dark as the rain laden clouds above and from the nearby shore to the farther side the gradation was striking—like an artist's graded water color wash laid down on a four-mile stretch, foreshortened. Here was the cue for the shading of the brickwork of the Northern Life Tower.

And over the Lake, just to the right, stood the Incomparable, the Great Rainier of both heaven and earth sweeping upward in strength and power, forest blue-black at the base, softened at the timber line and paled by the haze up into the eternal whiteness of the snow crown in the skies. Why not grade the brickwork like the shading water of the lake or the black to white sweep of the great mountain? After all, inspiration interprets environment and this would be better done if environment were the mother of inspiration.

All of the architect's instruction in rendering, both at school and in the office, trains him to grade and vary his surfaces. Whoever saw a good perspective without variation of tone! How monotonous are plain flat surfaces! Nature, it will be observed, abhors them.

It was also the feeling of the owners that the perceptions of the public were entitled to consideration—that the structure should be something more than the usual commercial office building with four walls and a



Aspiration is expressed in the design of the Northern Life Tower through uninterrupted vertical lines and color grading of the brickwork from dark at the base to light at the top. Lower and seventeenth stories shown above

roof against the elements. It was more than utility, it was altruism or aspiration, and this might best be expressed by producing a sense of uplift to the eye and mind. Now a sense of aspiration may be induced by architectural means which stimulate and elevate the mental perception.

TO do this, two fundamental ideas were resorted to: first, the production of long uninterrupted vertical lines, and, second, the grading of the color of the building from darker at the bottom to lighter at the top so that the attention when placed upon the building would be compelled to travel upward—upward seeing, upward thinking—aspiration.

The brick is a heather brown or iron ore color at the base of the building decreasing in depth of tone until at the top it is a light tan. The brick is mottled throughout by natural bog iron in the original clay and by the addition of manganese. The mortar color at the bottom is of the same character as the brick but of a deeper tone, decreasing in color strength from bottom to top along with the brick. The terra cotta trim, sparingly used, follows the same general graded tone as the adjoining brick and mortar work.

In order to give an upward motion to the building it

was desirable to keep a monotone throughout the structure and not distract the eye with color contrasts in the various building materials, at least in the vertical elements. For this reason the granite base, the brick, the mortar and the terra cotta, as well as the sidewalk, were kept approximately within the same color values. As an aid to this unity of color mass, the building was conceived as being hewn out of a solid block without horizontal lines, moldings or belt courses.

The design of the building is a composition in piers displacing the usual inclosing wall except for the depressed spandrels, and these piers mount skyward with various refinements intended to increase the apparent height, all with the object of reinforcing the purpose of the graded brickwork to invite the interest upward so that an aspiring sense of elevation may be produced.

The practical handling of the brick at the kiln and in the building to achieve the desired result was accomplished in accordance with a predetermined program. The brick for the building was made from clays which burn to a wide range of color. This characteristic was manipulated and emphasized as far as possible in burning the brick. The height of the building was divided into ten sections for the purpose of determining approximate levels at which changes (Continued on page 94)

As It Looks

Plan to Reduce Shoddy Building

SHODDY building has been fought to a standstill in Shreveport, La., by the Shreveport Mutual Building Association, which some years ago instituted a supervision service on all houses for which it made loans. The idea was opposed at first by both Jerry and reputable builders; the Jerry builders for obvious reasons, the reputable builders because it was a reflection on their integrity. Within six months, however, the real builders found that the inspection service was forcing shoddy workmanship and materials out of the picture and that Jerry builders could not submit low bids with the thought of getting by with inferior stuff. A condition began to prevail where materials and workmanship were becoming standardized, with real competition based on efficiency and integrity. Which is as it should be. So successful was the plan in building business for the association that the charge of one per cent for inspection service has been eliminated. The plan is a good one, worth emulation by other building and loan associations and deserving of the support of architects in general, for it will help to prevent Jerry builders from unsettling clients on honest bids.

Churchmen Appreciate Architecture

CHURCHMEN, who after all are expert psychologists, seem to realize the importance of good architecture perhaps more than any other one class of men. Not many weeks ago St. Mark's-in-the-Bouwerie, New York, sought to take some knowledge of architecture in that city to members of its congregation by inviting six well known architects to discuss "What New York Is Doing to Us": W. A. Boring, F.A.I.A., Raymond Hood, A.I.A., Kenneth Murchison, F.A.I.A., Litt.D., Dan Everett Waid, F.A.I.A., Ely Jacques Kahn, A.I.A., and Clarence Stein, A.I.A. Each gave an extremely personal talk on the general subject of big city architecture to-day and to-morrow—and each, incidentally, differed from every other speaker in his views. Which, after all, helped to make a more interesting meeting.

Windows Should be Guarded

NEWSPAPERS frequently report persons falling from windows to their death or serious injury, but it is a peculiarity of human nature that little attention is paid to these tragic occurrences until they strike near home. On Christmas morning of last year Benson Boring, son of Professor Boring, director of the school of architecture at Columbia University, was accidentally killed by falling from an eleventh floor window in his parents' apartment in New York City. It is a known fact that window sills are too often placed at a height that is well below the center of gravity of the average human being when standing. As a result it is safe to assume that

this is at least a contributing cause to such fatalities. Since there are numerous ways in which windows can be made safe against persons accidentally falling from them, it would appear that serious thought should be given this subject. Provisions for the safety of the occupants of buildings is a matter that is largely in the hands of architects. It is one of their responsibilities. Safe window openings are to-day a moral responsibility; to-morrow they may be legally required.

An Age of Archæology

ACCORDING to Professor Ferrand of Washington University, St. Louis, architects have been little more than archaeologists during the past century, because construction methods then in use were still the methods used for two thousand years before. He accounts for the revolution that is now taking place in architecture by the fact that new methods of construction—steel and concrete—have been developed and cannot be ignored. Construction work in the middle ages was designed on an empirical and traditional basis, whereas to-day we design scientifically and by formulae. While we cannot go back to the source of the river, or revive the past, fundamental principles are always with us. Masterpieces would not be made if there were no pioneers and daring men to break away from tradition. Professor Ferrand further states that there has not been much architecture produced during the past hundred years that expressed our age or that was new or original. It was an age of archaeologists.

Improvements In Products

FRANK CARTWRIGHT'S article in this issue, "New Facts About Frame Construction," is an excellent example of the way in which rule-of thumb methods and guess work are falling before modern research. There is much need of this kind of information and it is gratifying to observe the efforts being made by manufacturers and trade associations to improve their products and the methods of their use. Incidentally a more detailed report of the tests described by Mr. Cartwright, impossible to give in the space that can be devoted to one article, may be obtained from the National Lumber Manufacturers Association, Washington, D. C.

Architecture and Tableware

THE relationship between architecture and a new sterling silver design of the Rogers, Lunt & Bowlen Co., Greenfield, Mass., is shown in a recent brochure of this company. It gives pictures of tableware together with sketches of old Spanish architectural details that furnished the inspiration for the silver. Where *does* architectural influence stop?

to the Editors

Drinking Fountains

PUBLIC interest in sanitary drinking fountains seems to have waned within the past few years with the result that many fixtures of the condemned center bubble type are still being sold. Such fixtures are recognized as a spreader of throat and respiratory diseases. The angle stream type of fixture is much the safer, but even here the guards placed to keep lips from the fixture are frequently too short and so fail in their purpose. The Public Health Department of the Massachusetts Institute of Technology emphasizes the necessity for a longer shield or cowl than now used. The shield should extend over the jet orifice with the top of the shield shaped downward to drain, and elongated enough to prevent drip on the water opening. And, of course, it should keep the user's lips from contact with the jet opening. A major remedy to prevent the sale of unsanitary drinking fountains lies, of course, in architects' hands, for they merely have to refuse to specify anything but an approved type of fountain.

More Sky-Piercers

FORMER Governor Smith's skyscraper will be tied or exceeded by the proposed eleven hundred foot "Hippodrome Towers" to be erected on the site of the old Hippodrome Theatre, New York. Although Mr. Smith's building with its proposed mooring mast for Zeppelins so far holds publicity honors, there is no telling what trump card the newly announced building will play—perhaps a roof top with airplane hangars. Who knows? And how long will it be before this building relinquishes honors in the face of proposed projects, as have the Chrysler and the Bank of Manhattan buildings. Championship honors, so long held by the Woolworth building, now pass from hand to hand almost every month.

Placing Electric Refrigerators

WHEN an electric refrigerator is placed near a sink, it is not a bad idea to take actual working conditions into consideration. Only too often is the apparatus so placed as to leave a small space between the unit and the wall, with the result that small particles of food slip down and cannot be swept out. The result is an ideal breeding place for bugs. This is particularly true with serving pantries in small apartments, where the unit is next to or under the sink, according to the type used.

Criticized Exteriors

ONE of New York's leading architects recently waxed wroth about criticism of the exterior on one of his buildings near completion. Said he, "They never stop to think that this is one of the most efficient plans in New York. They talk about design in their criticism, that's all. But the guts of the building—they leave that out

of the discussion." It is quite true that almost every bit of criticism deals with design, little with plan. Yet what good is a fine looking building if it lacks practicality? The exterior is like a fine suit of clothes but the plan and equipment is like the man himself. And that, in the final analysis, is the true measure of worth.

Tricks of the Trade

AN enterprising salesman for a popular brand of insulating board recently conceived the bright idea of putting up the usual installation sign on all new houses being erected in his territory. It mattered not at all whether his insulation board, or any insulation at all was being used. He wanted the advertisement—and got it.

Teeth in Building Code

PLENTY of teeth will be placed in the proposed New York building code now under consideration. It is suggested that plans submitted for filing be accompanied by an affidavit signed by the architect and by the engineer stating that the plans conform to the code. Furthermore—that before a certificate of occupancy is granted that an affidavit be filed stating that the structure was built according to the plans. No code, however good, can possibly be better than its enforcement. New York City is to be congratulated for what, if adopted, will be a most important step towards proper enforcement.

British Architects Start Awards

WITH a view to encouraging excellence of design in street architecture, it has been decided to examine annually the buildings completed during the three years ending December 31st, within the County of London, and to award a model for the design of a building of exceptional merit." So reads a communication from the Royal Institute of British Architects. Evidently British architects, too, are becoming aware of the real desirability of encouraging meritorious work through public recognition of it.

Architects Should Promote Architecture

SPEAKING before the conference on church architecture of the Associated Bureaus and Departments in St. Louis, F. John Hoener, A.I.A., stated that the promotion of interest in better architecture is the direct responsibility of the practicing architect. According to Mr. Hoener, the public must be made to appreciate good architecture so that it will demand good and better buildings, but that this demand must not be created artificially. This question has many angles and will require the serious consideration of the best minds in the profession and publicity counsel of high order to achieve prompt, satisfactory, and lasting results.



THE SILVER MIRROR designed by C. Rafil, Munchen, Germany. The design is engraved on the back of the glass which is backed-up with silver leaf. Courtesy E. Schoen, Inc.

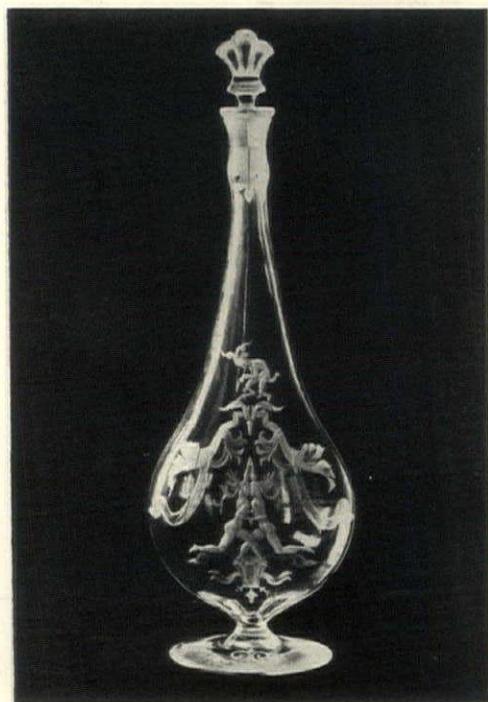
An eight-page section of decorative
GLASS



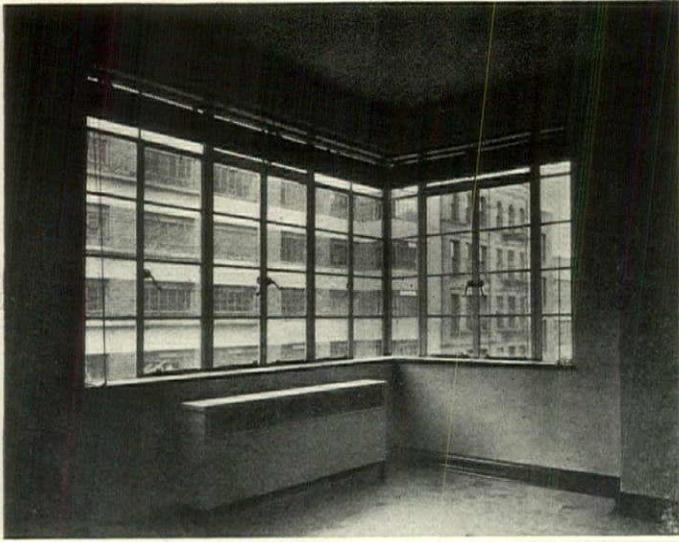
A design by Richard Süssmuth combining leaded and engraved amber glass



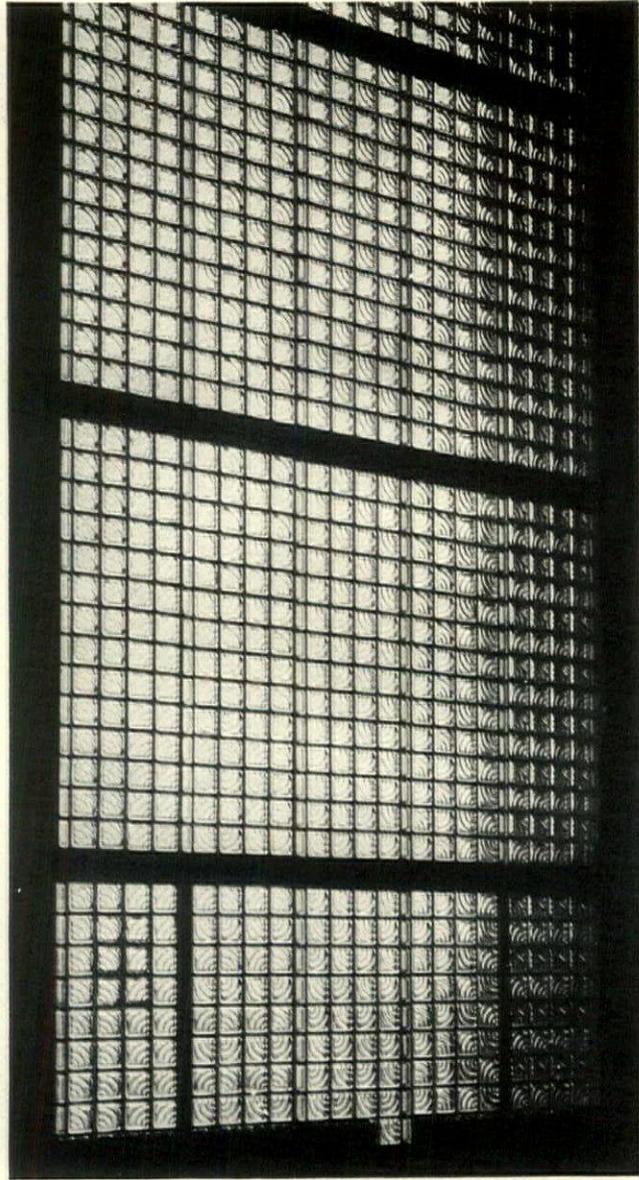
Moulded glass unit designed by Frederick Carder, executed by Corning Glass Works



RICHARD SÜSSMUTH of Pensig, Silesia, a leader in the revival of glass cutting and engraving, uses the glass-cutter's wheel as the painter does his brush. A panel by Süssmuth is shown above. At left is an exquisite decantor designed by Simon Gate of Sweden. Courtesy of E. Schoen, Inc.

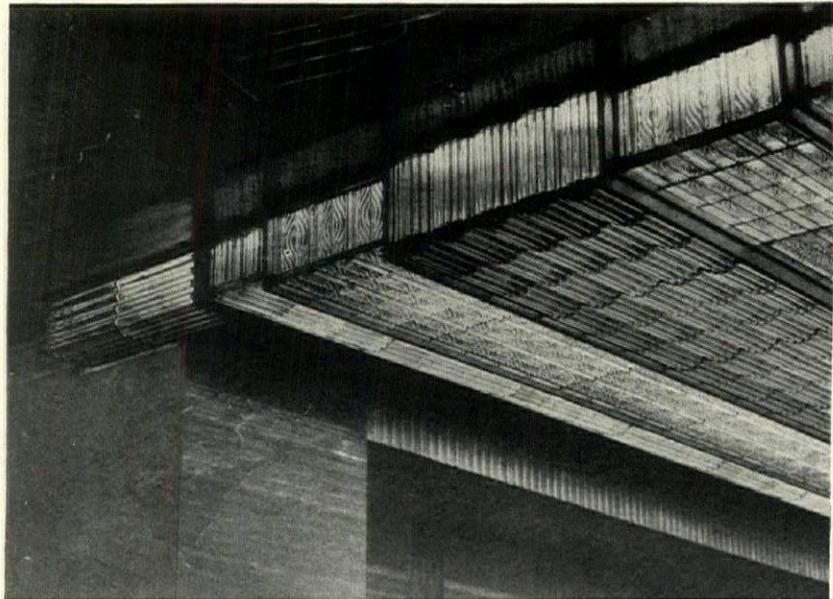


Corner window in the Beaux Arts Apartments, New York City, that shows a modern tendency in design which has a practical reason. Vertical divisions have been minimized to eliminate obstructing vision and simplify glazing problems. Kenneth M. Murchison and Raymond M. Hood, Associated Architects

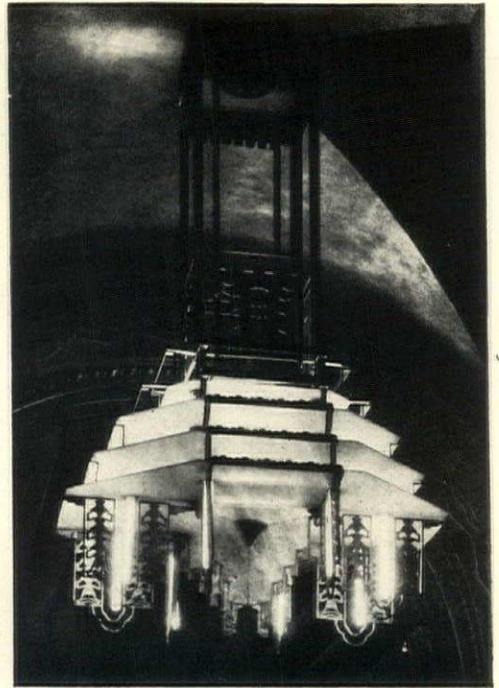
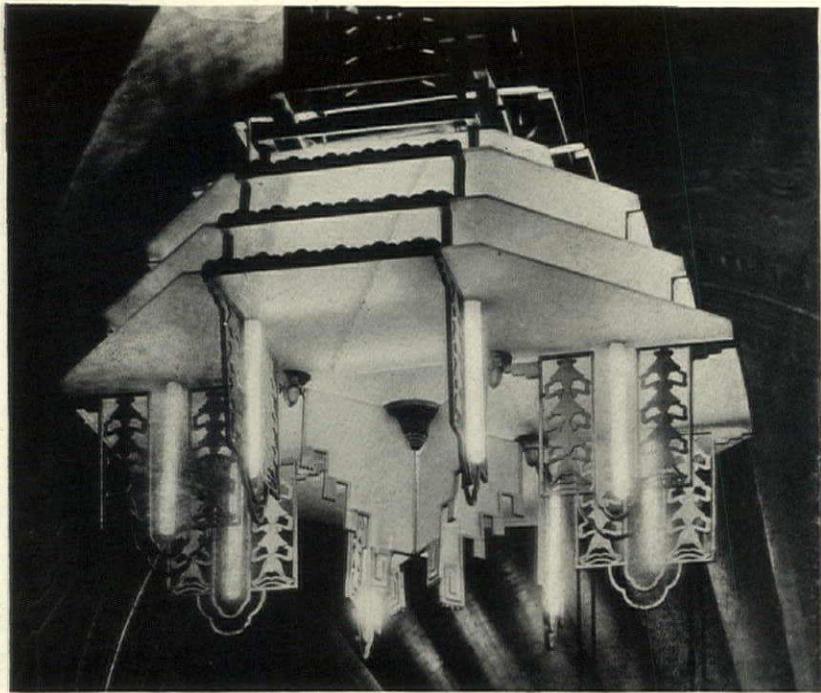


WALLS OF GLASS

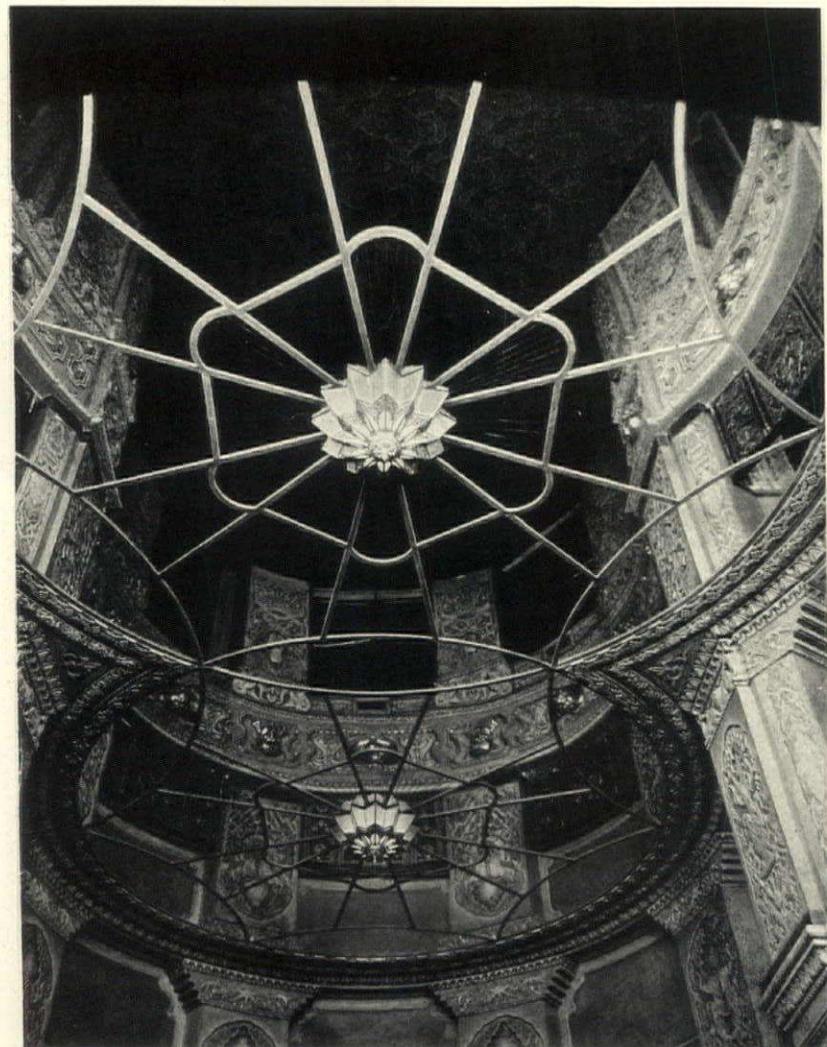
are not beyond the realm of possibility as seen in the above illustration of a public building in Magdeburg, Germany. A detail of the wall lights of relief glass construction is shown at the right, above. The glass wall sections are seen in the general view as narrow areas between massive piers of brick. Thick units of glass and an air space is practical. The type of unit used above obscures the view. Courtesy of Frederick Keppler



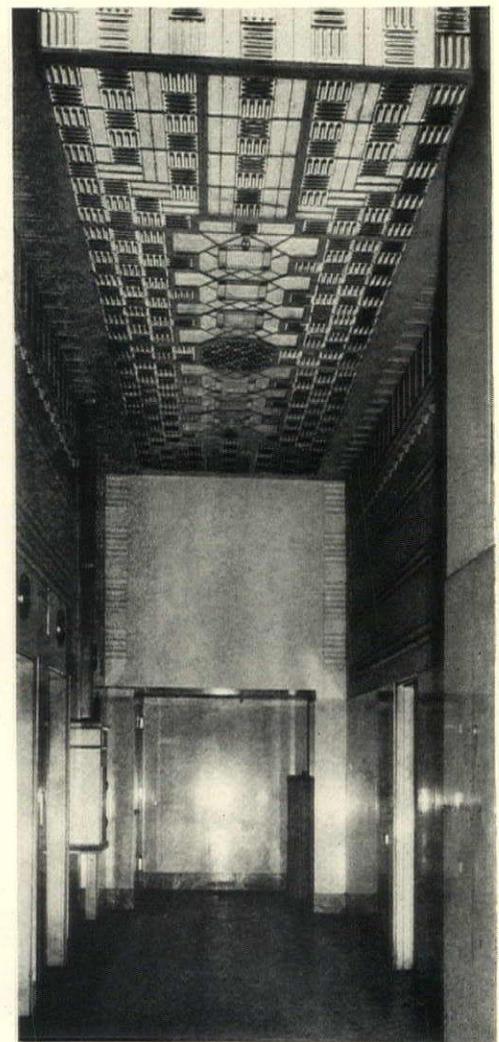
Relief glass ceiling that conceals the illuminating units in the elevator lobby of the building at 530 Seventh Avenue, New York City. Buchman and Kahn, architects



General and detail views of chandelier in No. 2 Park Avenue, New York City. Buchman & Kahn, architects



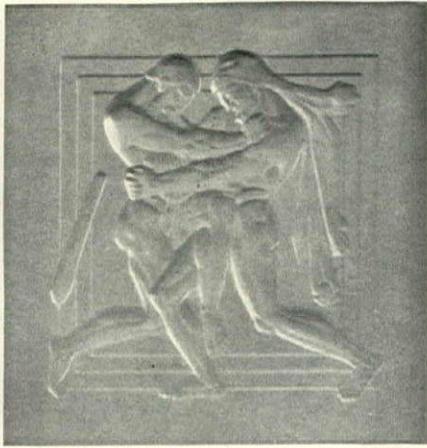
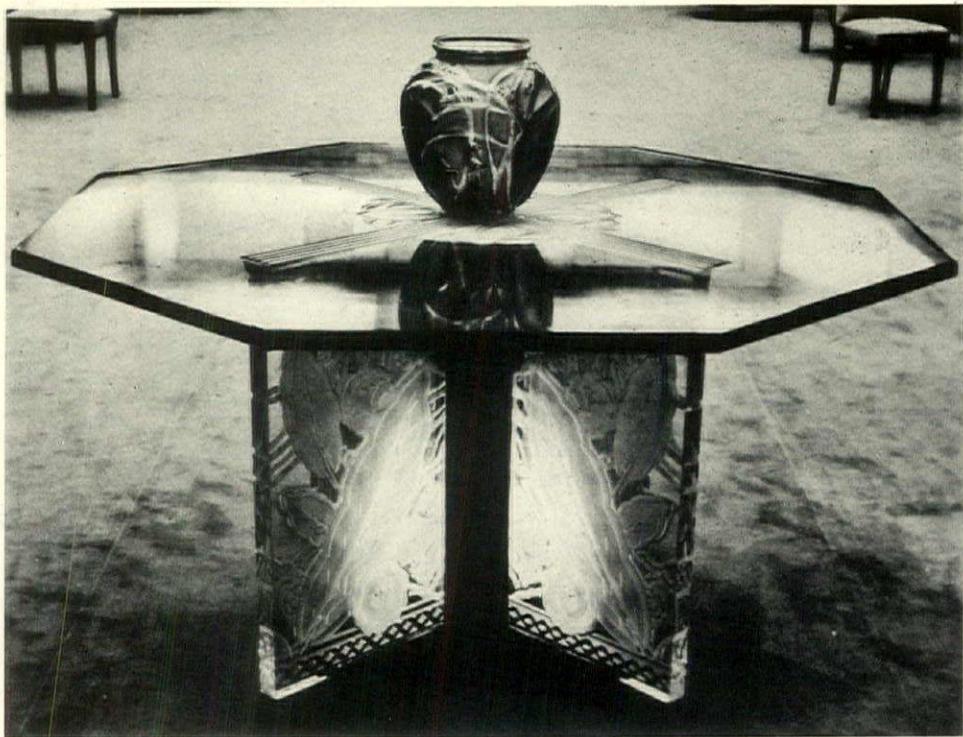
Mirror ceiling lights, 32 feet in diameter, which are designed to give the effect of increased ceiling height to the foyer of the Fox Theatre in St. Louis, Mo. Courtesy of Schwartz and Glasser



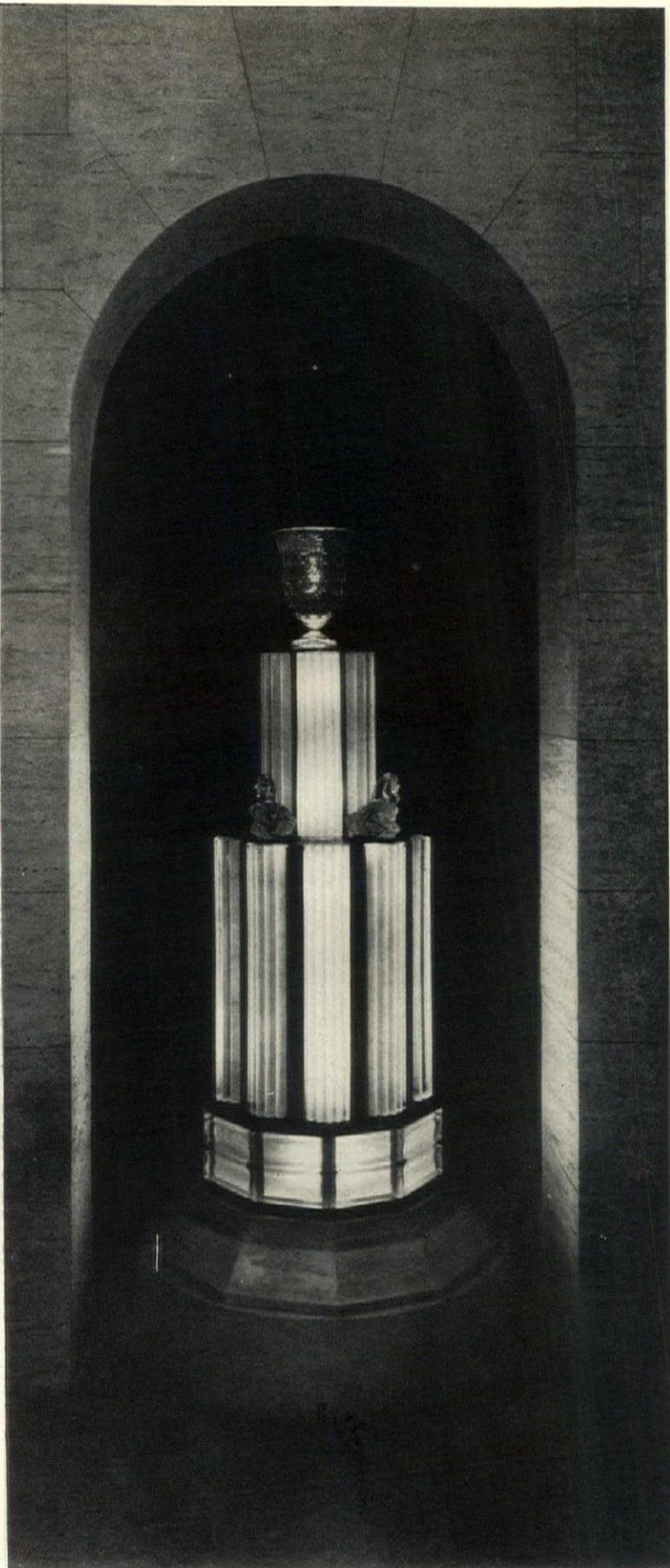
Ceiling of relief glass in elevator lobby of building at 40-42 West 39th Street, New York. Buchman & Kahn, architects

CARVED GLASS

Table showing a practical and decorative use of the material. Note the thickness of the glass and the interesting effect of light on the design. Courtesy of Eny-Art, Inc.



LABORS OF HERCULES. Six pressed glass panels from a set of twelve designed by Walter Gilbert of England for use in a series of bronze elevator doors. From an international exhibition of contemporary glass and rugs which will be shown in Philadelphia, Chicago, St. Louis, Pittsburgh, Dayton, Cincinnati and Baltimore by the American Federation of Arts.

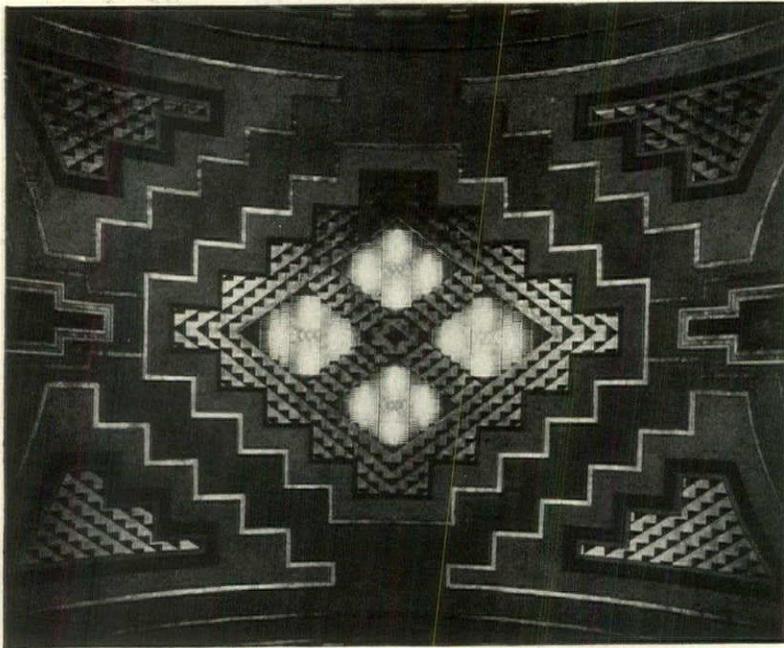


Perforated ventilating grille of moulded glass designed by Frederick Carder. The units are about eight inches square

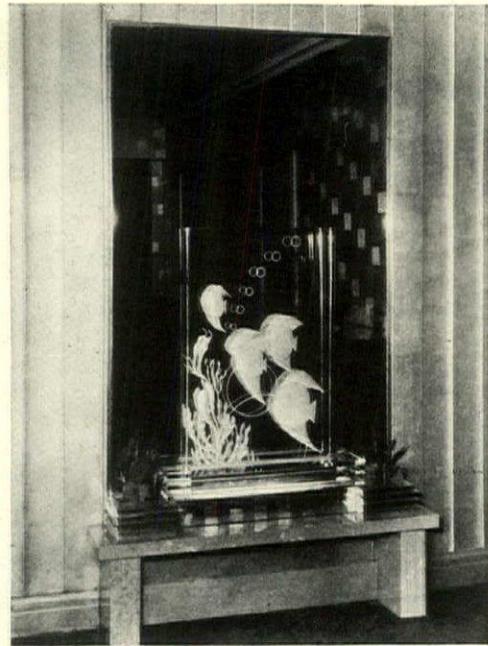


Elevator signal light, about nine by seventeen inches in size, made of moulded glass. Designed by Frederick Carder for the Abraham & Strauss Department Store Building, Brooklyn, New York. Starrett and Van Vleck, architects

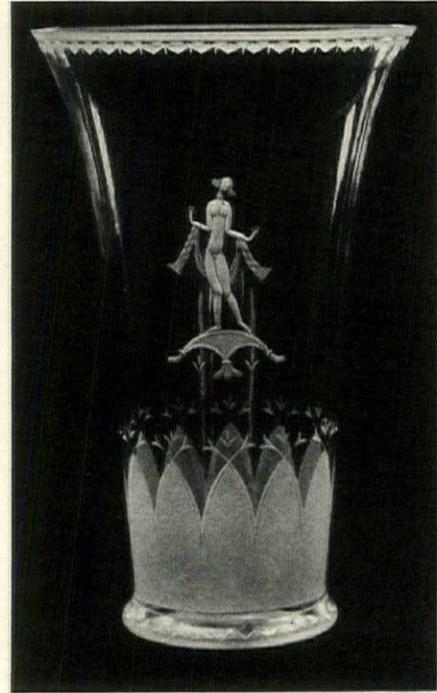
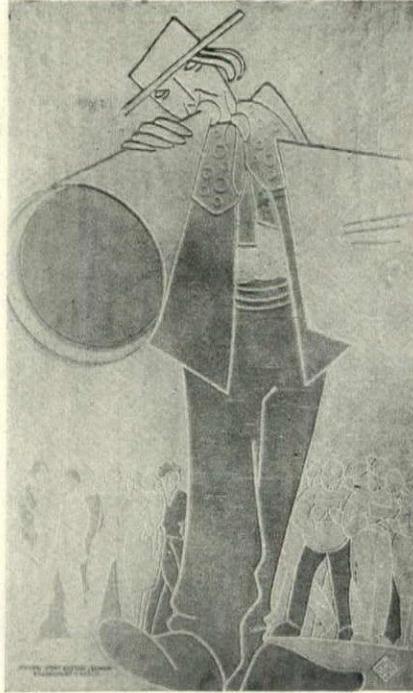
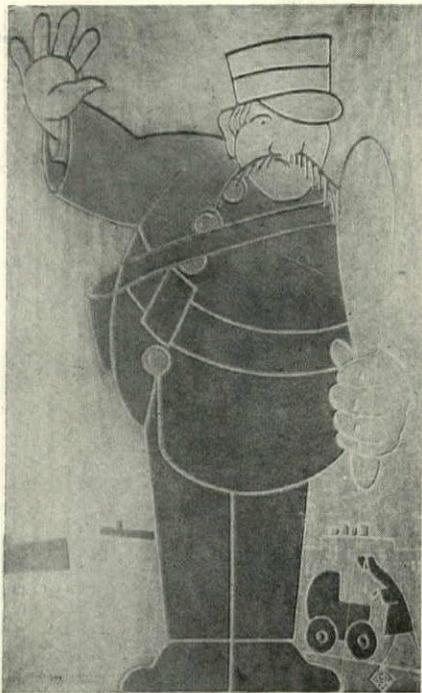
FOUNTAIN OF LIGHT built of glass moulded in corrugated units, matted on back and with polished face. Vase and decorative figures are of rock crystal glass. This fountain, designed by Frederick Carder, is installed in the display rooms of the Westinghouse Electric Company, New York City. Courtesy Corning Glass Works



Relief glass ceiling lights in the lobby of the Union Trust Building, Detroit, Mich. Smith, Hinchman and Grylls, architects



Decorative glass motif in a New York apartment by Buchman and Kahn



Engraved glass panels for a Paris cafe, designed by Gatan Jeannin, which are shown in the International Exhibition of glass and rugs. Panels depict a traffic policeman and a street singer. Courtesy American Federation of Arts



Crystal glassware by Swedish designers. That shown above is by Simon Gate. That at the left is by Edward Hald. Courtesy Eugene Schoen, Inc.



Detail of the decorative glass motif which is shown on the facing page. This feature combines an illuminating unit with a plant box and forms a spot of interest in the foyer. The glass is about one inch thick with the design cut on the back and colored green. The design duplicates itself in the mirror before which it stands. Executed by Kantack & Co., Inc.

"ONCE I HAD A CLIENT"

a few words about contractors
and other unimportant matters

by BEM PRICE

an architect of Birmingham, Ala.



PHOTO BY FRANK KNOX

YOU have to handle every client differently because all of them are different. I got a pretty good job some time ago, from a man whom I did not know, by the simple means of one telephone call. A friend told me this man was going to build a residence and suggested I get in touch with him. I telephoned him, introduced myself, told him I was interested in his work, but would not annoy him by further inquiries and suggested that whenever he was ready to go ahead, I would appreciate his calling by my office to discuss it.

Was surprised about ten days later by his calling and, after a brief discussion, he turned the work over to me. Said a number of other architects had heard of the job and had almost run him nutty, so he decided to give it to me, as I hadn't annoyed him. You see, architects in Birmingham do not go after work just as they don't in Boston or Seattle; it is not ethical. This man turned out to be a good client and is still a friend, principally because I helped him to hold his wife down, not literally, because she weighs about 180 pounds, but I mean I had to fight her to keep her from spending about \$6,000.00 more than she had any business to spend. The only thing I have against him is he sings bass and insists on singing—sometimes.

Tried the same thing about six months ago on a church committee. Telephoned the chairman of the building committee, who is really a man of large interests, and told him about the same thing that I told that bass singing fool. He was very appreciative of my consideration, thought I was exactly right and said he would take it up with me in a short time. Drove through the town about three months later and they were starting the foundation. Found out they had hired a church specialist to do their work. I know the specialist and he does a good class of work, in fact I have known him a long time. The last time I ran across him he was a court house specialist, the time before that he was a hospital expert. Several times he was an authority on school buildings. Have you read "The Specialist"?

My wife met a lady at a card party not long ago and she asked my wife in nice card-party language if I was right bright. It interested my wife to find some one who thought the same as she does sometimes, so she inquired just what was meant. The lady told her (I am sure she is a lady because she doesn't smoke) that she and her husband went to see me about building a residence and I advised them not to build, but to buy a house. My wife wanted to know what I was in business for and besides that, she wants to go to the Gulf coast right after Christmas, so I had to explain the situation at great length. These people wanted a modest home to live in, not one to show off in, and I knew they could buy one cheaper than I could build it if I included all the things they thought they wanted. This is not always the case, but right now in Birmingham there are



... will swell up like
a poisoned pup and tell
you he can buy any-
thing he wants



*After the third drink he
agreed to pay the freight*

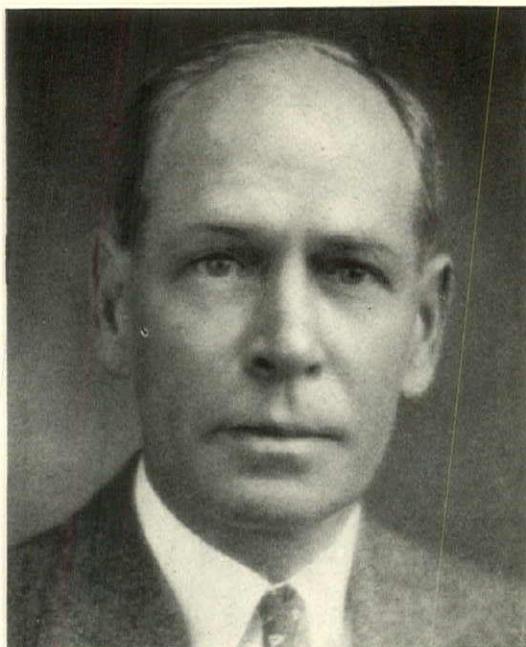
a great many houses in distress because the owners overbuilt. Money was easy, times were good and a great many fellows jumped in and built, say \$35,000 houses without stopping to think what they were doing until the payments began to fall due; then they realized that \$20,000 should have been their limit. I knew this family could get fitted up, lot and all, for about \$18,000, but if they started out to build, her husband and I both couldn't have held her within \$20,000 or more for the house alone, and I was afraid to risk myself to fight her. Boy, she was good looking and that persuasive type—you know. I would have weakened and the first thing I knew I would be lopping off my fee and everything just to keep within the money. They did buy, are perfectly happy and helped some other poor devil to get from under, even though he did sell at a sacrifice. My wife's cold is better and she can get away later.

My advice to this client to buy instead of to build was, I believe, sound. If it wasn't, then I have steered a number of them wrong in the past eighteen months. This section is on a very sound basis, but having a little digestive disorder at present. I blame the first mortgage loan people for this. Whenever and wherever you can borrow enough money to build a residence or apartment or business building, including the lot, I say somebody is going to suffer from it just like a kid eating too much sweets. The architect who boosts his estimates to enable the client to borrow more than he is entitled to ought to have to take his fee in stock—then he'll know

what it feels like when the whole project goes boom.

A nice old fellow came into the office last summer. He has stomach trouble. I guess that was the reason I did not recognize him, as an upset stomach will surely change your expression just like a bad conscience. Anyway, he told me who he was and that he wanted me to look after some work for him down in the Alabama Black Belt. They don't call this the Black Belt because of the negroes, but because the soil is black. Said he came to see me again because about three years ago he was figuring on developing a piece of property he owned here in Birmingham, but I talked him out of it and showed him why it wouldn't pay. Said at the time he thought I just didn't want to fool with it and had in mind to go to someone else, but after he thought it over and discussed it with his wife, he decided I was right and was mighty glad later that he took my advice. You see, honesty is the best politics; ask Al Smith, who is now living on top of the world or the top of a skyscraper or something.

NOW don't get the idea that I turn all my clients away or that they are standing waiting at the office door every morning like they were answering an ad for help wanted. But I do get a lot of fun out of my business. I honestly do not want any more business than I can look after with a few draftsmen and a good outside man, because I want to keep in close personal touch with the clients, the contractors, the material men and everybody all down the line. I forgot to say the salesmen, too. I do like to see them whenever I possibly can. They gang me sometimes and take up most of a day, but when they do, I go back to the office that night to make up the time, and don't feel hard toward them a bit. Learn a lot from them and (Continued on page 90)



He Couldn't
Buy It..... So

H E
M A D E
I T...

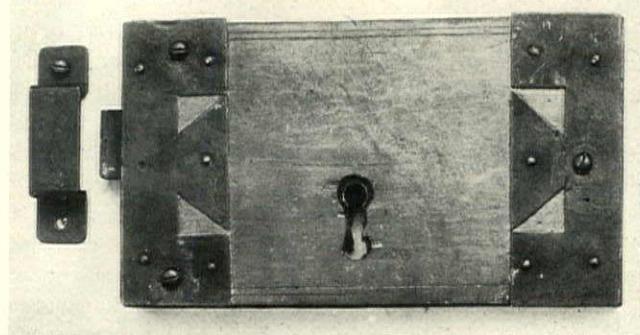
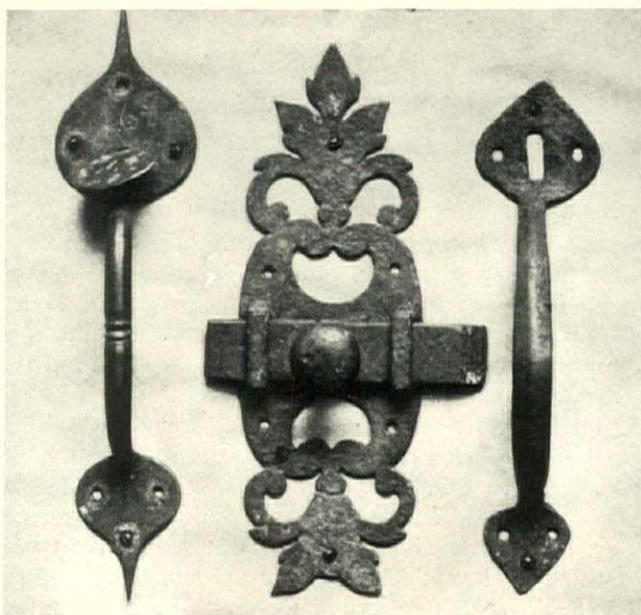
... and now MYRON S. TELLER, architect of Kingston, N. Y., finds that he is also a manufacturer of hand-wrought hardware

THOSE who visited the Sesqui-Centennial Exposition held in Philadelphia in 1926 may remember a little blacksmith shop nestling among the other buildings on High Street, not far from Benjamin Franklin's print shop. This forge was operated by Myron S. Teller, an architect of Kingston, New York, and from early morn till late at night its anvils rang to the tune of hammer and sledge. All of the hardware fittings used in the High Street restoration were hand-forged by craftsmen under Mr. Teller's direction, and faithfully fashioned after types of the ware used in Philadelphia's High Street of Colonial days.

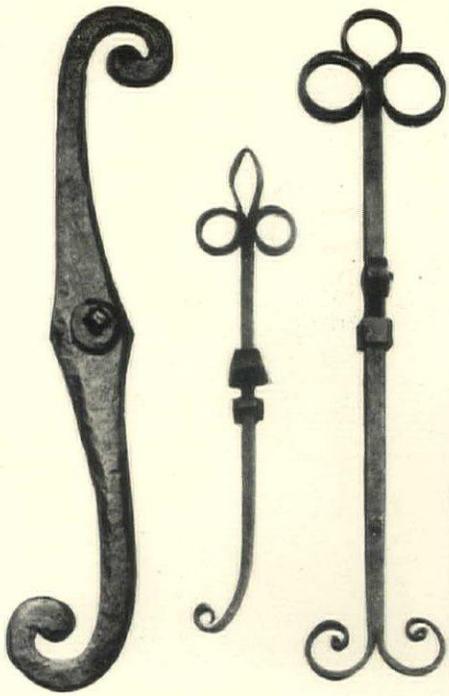
Mr. Teller's interest in Colonial hardware had been fostered through his many restorations of old houses. Unable to find modern hardware that faithfully reproduced the hand-wrought hardware he felt necessary for this work, he established a forge of his own a few years ago and started manufacturing this material for his own use. Other architects with similar problems became acquainted with Mr. Teller's product and requested him to make similar pieces for them until to-day hand-wrought iron hardware has become an important sideline to his architectural practice.

It all started this way: Some years ago when Mr. Teller was given his first commission to restore an old house at Kingston, N. Y., the restoration of the original hardware proved to be the principal problem with which he found himself confronted. For while the planning and designing necessary to the restoration was not a difficult architectural problem, he very shortly learned that the finding of a modern blacksmith having a sufficient knowledge of historic precedent that would enable him to reproduce this hardware in a faithful manner was like the finding of a needle in the haystack.

Crude workman though the early blacksmith may oftimes have been, he was none the less a rather import-



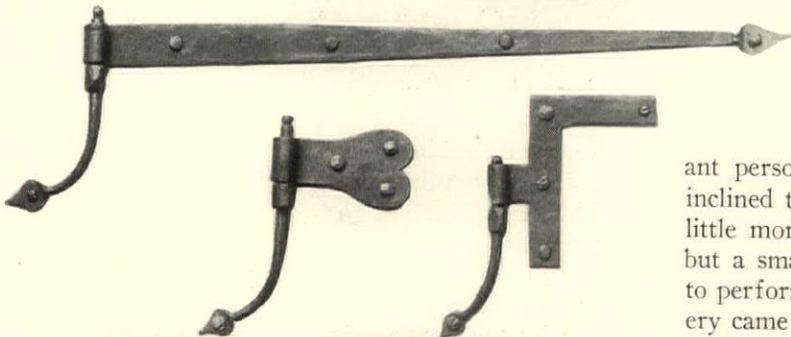
Two latch handles and a sliding bolt from the collection of the late N. M. Seabreeze. Below, a wood-encased lock reinforced with iron plates through which pass the bolts securing it to the door



Dutch beam and chimney anchors are illustrated above. That in the center represented the figure once on an inn built in 1620 at Old Hurley in Ulster County, New York. Hinges on rat tail pins used largely on cupboard and cabinet doors are shown below



George Van Kleeck, descendant of an old Dutch family in which the smith's art is a tradition, is now one of Mr. Teller's hardware craftsmen



ant personage in his community. For though we are inclined to think of his work to-day as concerned with little more than the shoeing of horses, this was really but a small part of the many tasks he was called upon to perform. Living, as he did, at a time before machinery came to take the place of man, his work had largely to do with repairing the implements of farm, mill and factory, and oftimes, indeed, he even produced these tools and implements himself. He hand-forged many of the household utensils that were used in those days, shaped upon his anvil the andirons, tongs, kettle hooks and other requisites of the fireplace, and last, but certainly not least, produced in his shop a great variety of hardware fittings for doors, windows and cupboards.

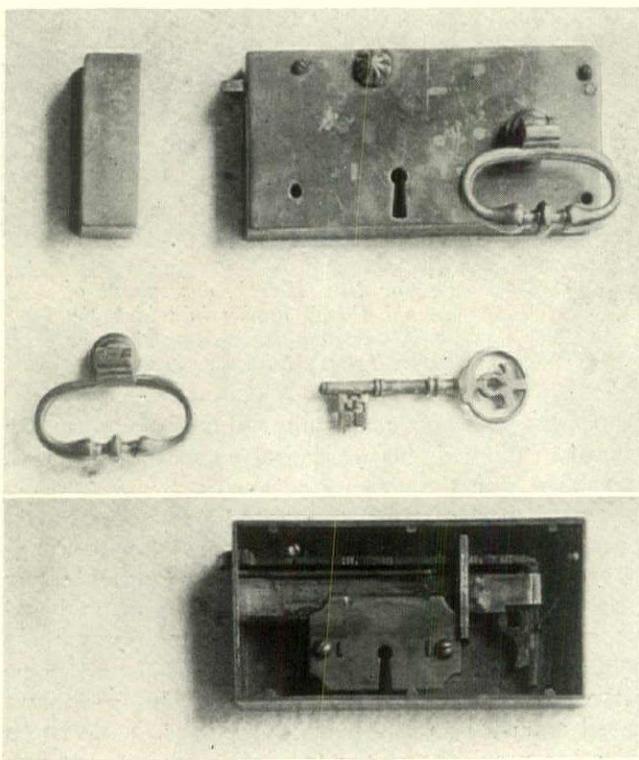
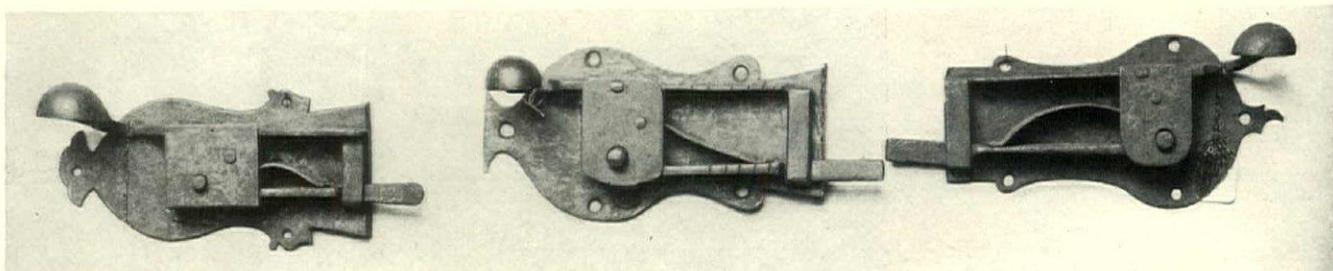
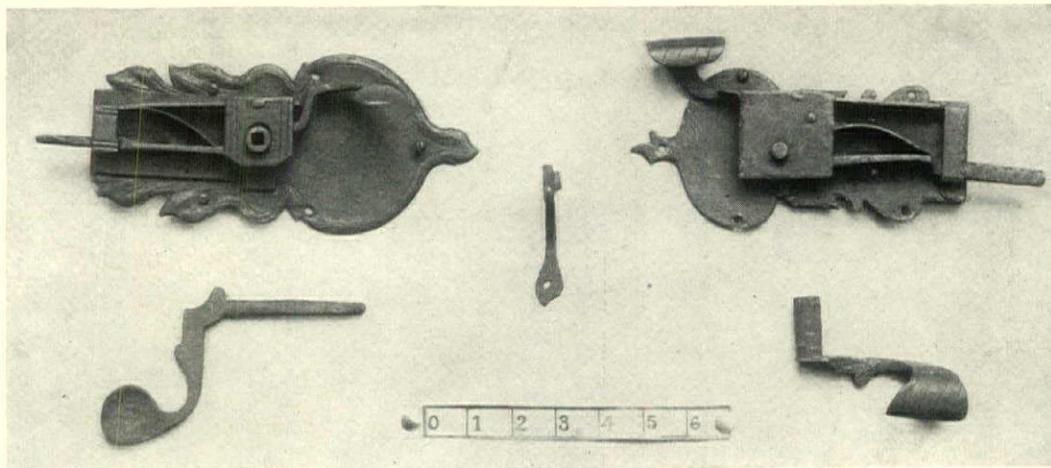


In the foot hills of the Catskills Mr. Teller found a blacksmith who could make hardware

EVEN as recently as a quarter of a century ago the blacksmith was still a man of some importance in most towns and communities. But the rapid march of progress has long since sounded his death knell, and to-day where once stood the quaint blacksmith shop made famous in poetry and song, now stands the modern filling station or the up-to-date garage. And as time has witnessed the passing of the smith, so also has it witnessed—or almost so at least—the passing of his art.

Thus it is not to be wondered at that Mr. Teller, when given a commission to restore a Colonial house, should

German lever or press down latches are shown at the right. The three Pennsylvania German lever latches below are especially fine examples of this type of hardware. The craftsmen's pride in their work is seen in the finish of the working parts of the English brass rim lock illustrated below



have found the restoring of its hardware fittings the most difficult of his problems.

Finally, however, after a search that lasted for many weeks during which he spent most of his time on an automobile tour of the Hudson River valley, he managed to locate, in the foothills of the Catskill mountains some twenty-five miles from the city of Kingston, an old country blacksmith shop that time and progress had not as yet effaced—a dusty, dimly lighted shop with wide swinging doors, its interior cluttered up with the various odds and ends of the smithy's craft, and equipped with the primitive tools of bygone days. And most im-

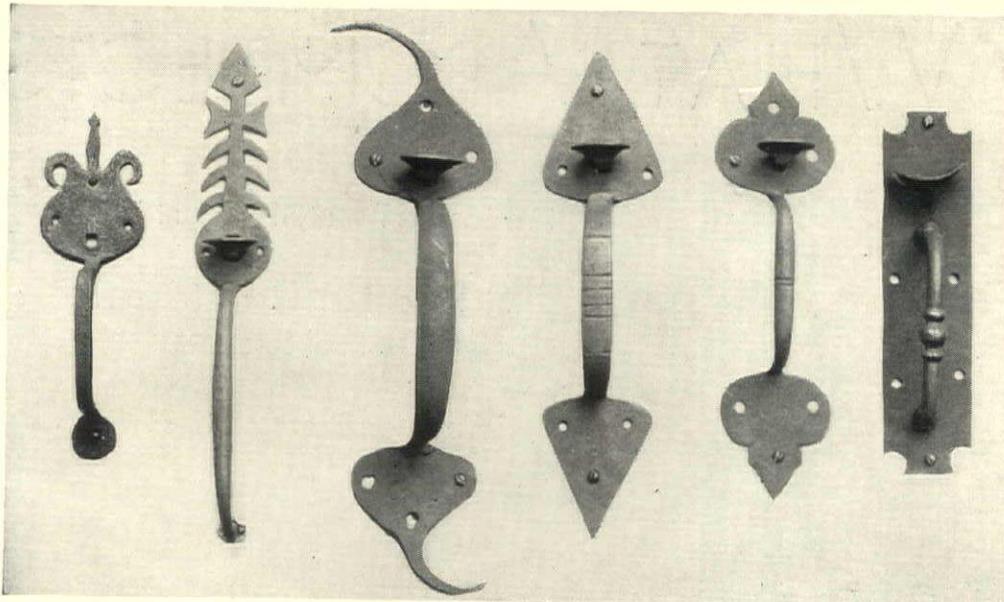
portant of all—a shop that was presided over by a journeyman of the old school, just as his father, and his grandfather too, had presided over it before him.

Needless to state, there followed a conference with the smith, who at once expressed his interest in the proposition that Mr. Teller made him. Together, then, they worked patiently at forge and anvil for many days, and it was not long ere the ingenuity of this old journeyman evidenced itself, and examples of early hardware forms were reproduced that embodied the character and spirit of the old time ware.

FOR some time this old blacksmith shop in the Catskills was able to produce practically all of the hardware that Mr. Teller required for commissions of this nature that came into his office. In the meantime Mr. Teller's reputation had spread and other architects faced with the same problem began to call upon him for assistance, until finally the increase in the demand for hardware of this type reached the point where he found it necessary either to locate another shop, or failing in this to establish one of his own. After considering the matter he adopted the latter plan, leasing a small building for this purpose at Kingston, and installing therein the forges, anvils, and other necessary equipment.

In spite of the fact that there are now three forges in this shop manned by a corps of several expert craftsmen—most of them, by the way, journeymen of the old school—the demand for these early hardware forms has so greatly increased in volume during the past two or three years that Mr. Teller is not only able to keep his own staff of workmen busy at their anvils, but also finds it necessary to place considerable contract work with the country blacksmith who was the first to successfully produce this hardware for him.

One matter of more or less importance that is often overlooked in the adapting of this hardware to a restoration project, is the manner in which the various histor-



Pine tree, heart, tulip and curly lock with numerous variations were favorite designs worked out by the smith on his anvil for the decorative parts of thumb latch handles. The solid plate latches were made in factories or tinker shops from 1825 to 1850. The grips were frequently cast in pewter. These latches were in vogue just prior to those made of cast iron

ical influences affected the design of the original ware, as there are many specimens to be found in these old houses of a nature and style which oftentimes reflects the nationality of the early settlers. Sometimes this style may be quite distinctive, so that even an inexperienced person can probably name at a glance the nationality of the original builder of the house, with nothing more to go by than a specimen or two of its hardware. More often, however, this can only be done by the practiced eye of one thoroughly familiar with the hardware from the historical viewpoint, and with the different styles and patterns that our forefathers brought to this country with them from their native lands. These historical influences are not always clearly apparent, for there are many examples of early hardware that do not seem common to any particular nationality. This seems to be especially true of such items as hinges and latches with their ends shaped in the form of a spear point, an arrow head or a heart, without regard as to whether the original settlement was made by the Dutch, English or French.

IN the eastern section of the United States many specimens of hardware in old houses show clearly the influence of the early Dutch settlers, especially in New York and Pennsylvania, while examples are frequently found in most of the New England and Atlantic states that are suggestive of old England or France. It is well to bear in mind the fact that wherever this historical influence is apparent, it is essential to the success of the restoration that the hardware faithfully reproduce it, just as with the Colonial period itself.

As nearly all of these houses are owned by people of wealth, money that is invested in restoring or rebuilding them is seldom a matter for consideration. Often, too, it is not merely the house itself that is restored or rebuilt but the entire estate, including the various out-buildings such as the stables, the dairy barns, the storage houses, and the like, all of which may require hundreds of separate pieces of hand-wrought hardware. There-



Early house of the type rich in hand forged hinges and latches



Gerrett Van Kenran House, Kingston, N. Y., partly burned by the British in 1776. Recently restored by Mr. Teller for W. Anderson Carl

fore, while Mr. Teller has made little effort to execute such commissions save in a limited territory adjacent to Ulster county, it is not strange that this phase of his business should have developed, and that the demand for Colonial hardware keep his corps of workmen busy

WHAT ARCHITECTS



Rendering by Roger Hayward of the new Los Angeles Stock Exchange. Samuel E. Lunden, architect; John Parkinson and Donald B. Parkinson, consulting architects

ROBERT REID, who had painted many fine murals and was considered one of the foremost American painters, recently died at the age of sixty-seven. Some of his murals adorn the walls of the Congressional Library in Washington, the State House at Boston, the Church of the Paulist Fathers, the Appellate Court House in New York, and the H. H. Rogers Memorial Church at Fairhaven, Mass. His canvasses were hung in such galleries as the Metropolitan Museum of Art, the Corcoran Gallery and the National Gallery in Washington. He had been a member of the National Academy since 1906. Three years ago he was stricken with paralysis on his right side, and learned to draw with his left hand. He was the winner of the Clarke prize in 1897, the Hallgarten prize in 1898, and received the gold medal at the Paris and San Francisco expositions.

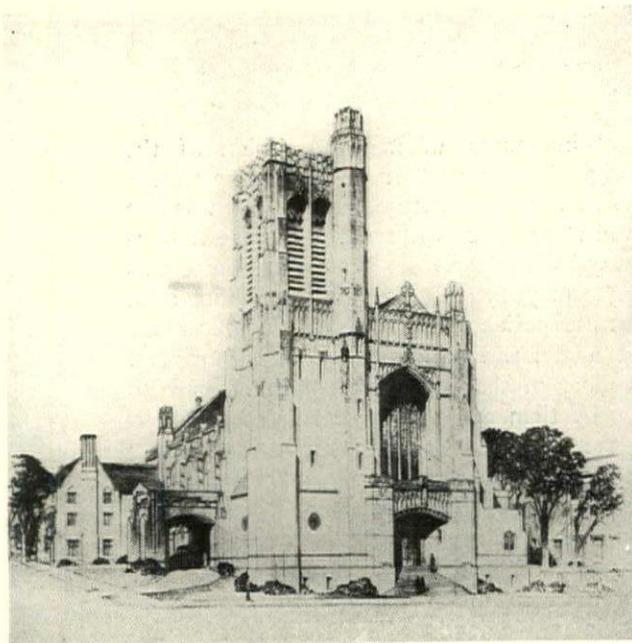
LOUIS J. GILL has been appointed to the California State Board of Architecture. This board consists of ten members, each appointed for a term of four years, and is concerned with the general administration of the state law regulating the practice of architecture in California. Mr. Gill is a graduate of Syracuse University, a past president of the San Diego Architectural Association, and is a charter member of the A. I. A. chapter which he was instrumental in forming in that city.

WRITES Arthur Brisbane: "E. E. Free, able engineer, says 1950 will see electric houses, lighted with artificial sunlight, weather arranged as prescribed

Fire Losses Twenty Per Cent Less

National Banks Lend More
On Real Estate

To Filter Street Noises



Winning design in the competition for the new building for the Church of St. Andrew and St. Paul, Montreal. H. L. Fetherstonhaugh, architect. Estimated cost, including church, manse and caretaker's house, \$500,000

One of the early American architects, B. H. Latrobe, leader of the Greek revival in America (b. 1766, d. 1820). He designed the Bank of Pennsylvania in 1799 and, in imitation of the Parthenon, the Bank of the United States, now the Philadelphia Custom House



ARE TALKING ABOUT

Skyscrapers and Traffic Congestion

Government Issues Study of
Domestic Oil Burners

Boyd Says, "Modernize Cities"



Microscopic photograph of a piece of Georgia marble. The flaky structure forms an interesting picture at the top, slightly to the left of the center, where a perfect head with a kingly crown may be discerned upon close examination, with shoulder, arm and hand on book quite apparent. It gives the impression of a god-like figure appearing in a cloud

by the doctor, like a baby's modified milk, no windows, sound proof and electrically ventilated. The sound proof suggestion is welcome, and the rest NOT. Men are, physically speaking, animals. They want the sun shining irregularly, the air blowing through. They want to come in and go out as they did in the cave days, and do not want the inside made like the outside."

AMERICAN ingenuity often affords an opportunity for humor that the English are quick to grasp, as



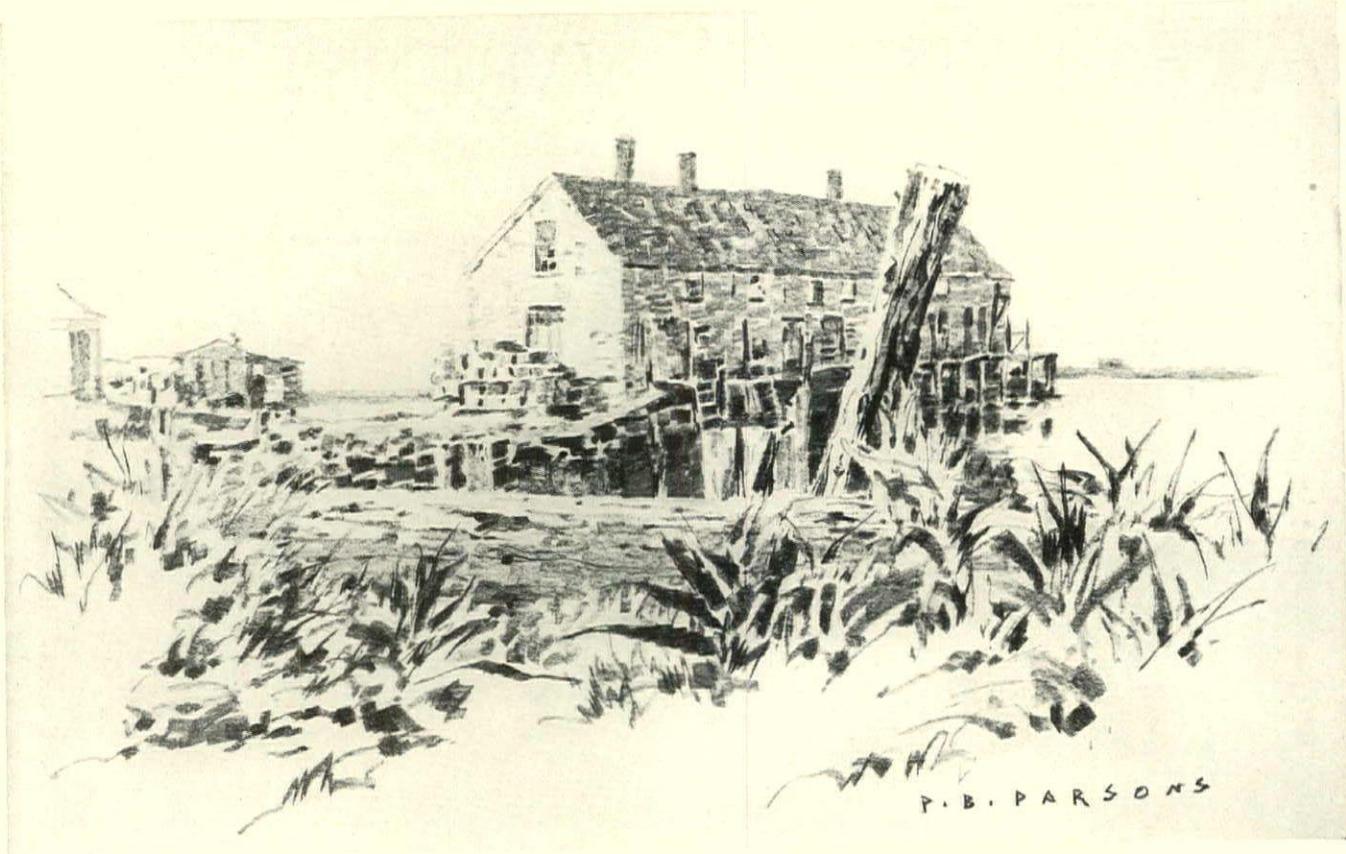
*Courtesy of LIFE
New York Architect (to Christmas shopper):
"Hold it while I make a sketch! That's just
the model I want for my new skyscraper."*

witness the following from "The Architects' Journal": "They are experimenting with the steel-framed, standard houses in America: the kind that you choose from the catalogue—A1 for the newly-wed, C3 for the fully-developed family. By sticking to a few simple shapes, using steel framing, asbestos board walling, sheet plaster, and simple plumbing, they are hoping to reach the stage of being able to ship the whole house, complete with all electric equipment and the hundred best books, from factory direct to site. So simple is the house to be, that if perchance your family increases, you merely wire for a new room or so, which is sent by lorry and 'buttoned' on. The house will thus take on all the dignity of the motor-car, and no longer will architects vie with one another, for all houses will belong to a few really popular standard types (insist on seeing the maker's name stamped on every wall). It needs but the introduction of the policy of obsolescence and it will become common enough to see last year's discarded villas lying scrapped by the roadside."

PRISONS in the United States should be modernized, according to R. W. Zimmerman, of the Chicago Chapter of the American Institute of Architects, who says in a symposium to be published in the Chapter yearbook for 1929:

"Experience in recent years has shown that, although escapes have been made from every type of cell-house, the real security lies in a properly designed and guarded prison wall. It is practically impossible for the inmate to construct, secrete and use the necessary scaling equipment in the unobstructed area adjoining the wall.

"The wall should be designed with observation towers not more than seven hundred (Continued on page 112)



An old building at Biddeford Pool, Maine. Made by P. B. Parsons on cameo paper with black crayon sharpened to a chisel point. About seven-eighths of original size

"OUTSIDE the OFFICE"

P. B. PARSONS

BOSTON, MASS.

L. A. LAMOREUX

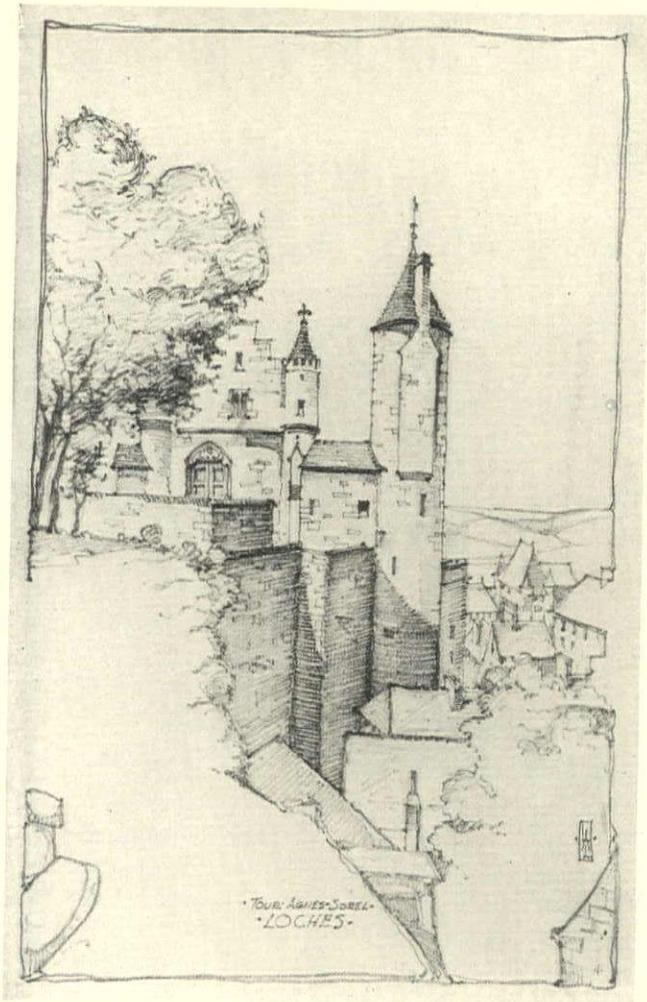
ARCHITECT
MANSFIELD, OHIO

R. GUSTOFSON

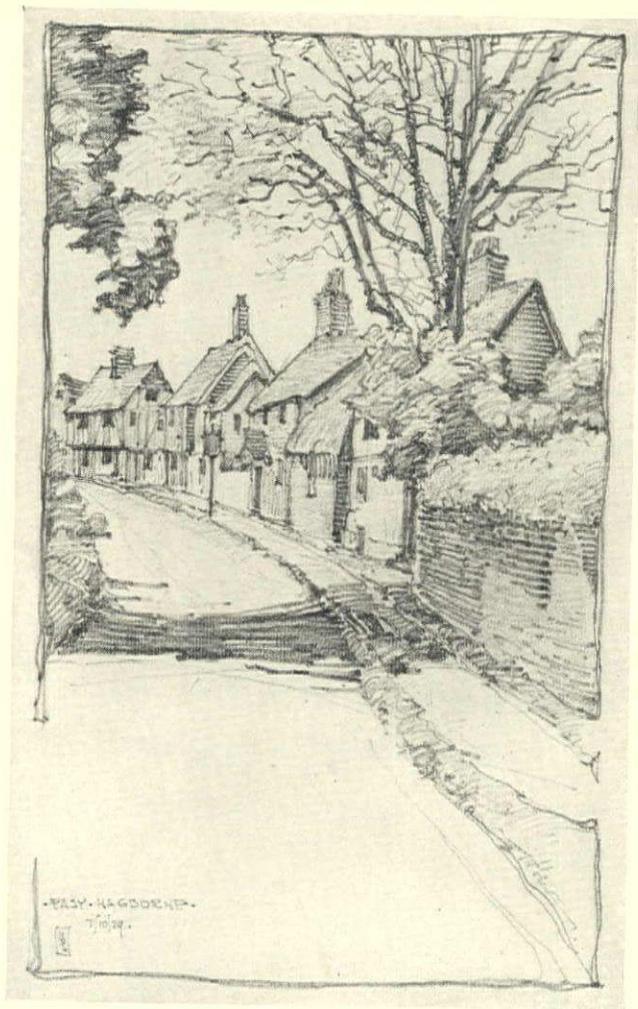
A. BENTLEY & SONS CO.
TOLEDO, OHIO



An oak tree at Waverley, Mass. Drawn with black crayon on cameo paper by P. B. Parsons. Reduced about half original size



Tour Agnes-Sorel, Loches, France. Made with pencil on white drawing paper. About one-half original size. L. A. Lamoreux



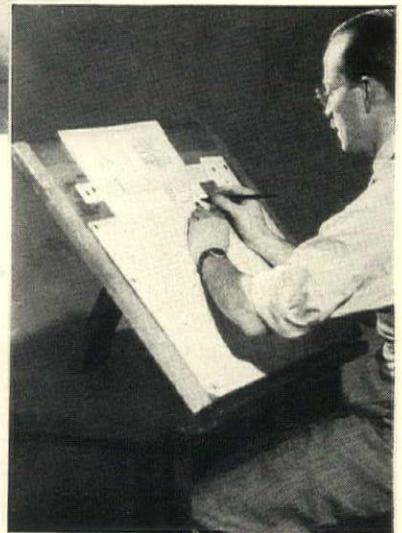
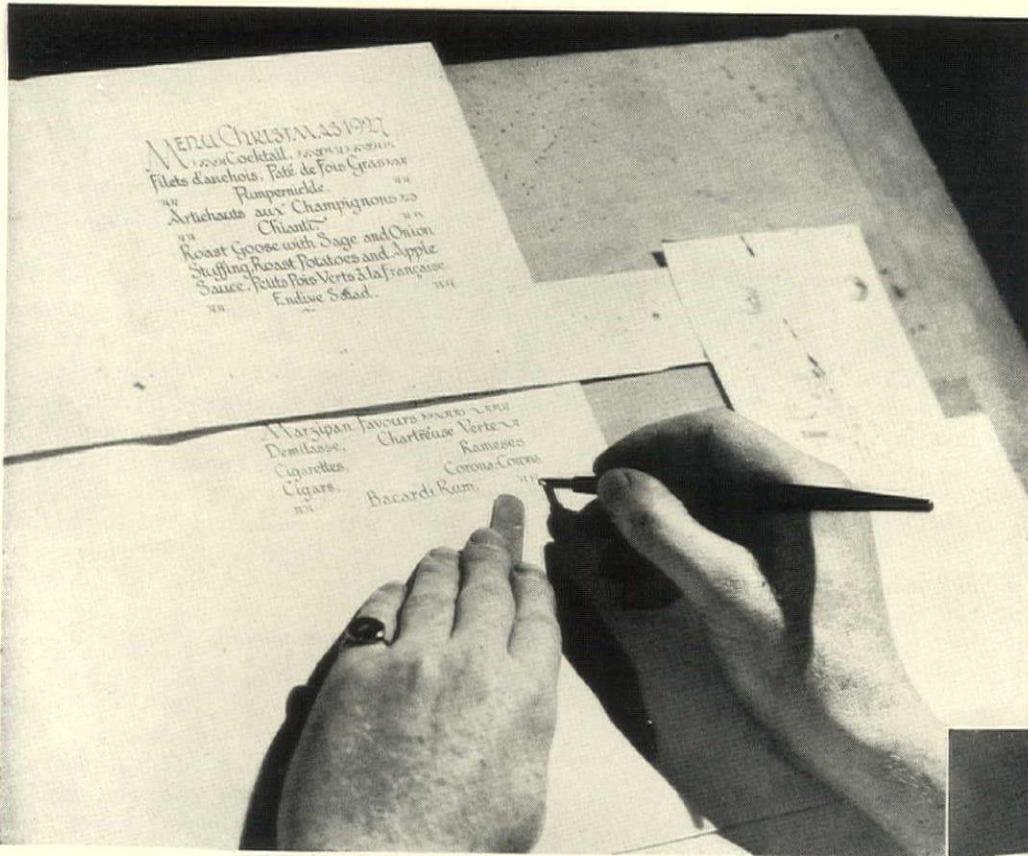
A street scene, East Hagborne. Touched up lightly with colored crayons. About one-half original size. L. A. Lamoreux



An old house in Toledo, Ohio, drawn by R. Gustofson on plate finished paper. Now the home of an aged blind violinist, once a well-known orchestra conductor

Pen, paper, shield and drawing board

are the essential tools required for writing in the manner of several centuries ago. The space to contain the writing should be blocked out and guide lines should be drawn with a hard pencil on the paper. The paper is slipped under a paper shield pinned down on the drawing board. This keeps the writing line always at a convenient, restful height



A small drawing board fixed at an angle of sixty degrees to the horizontal affords a convenient and comfortable surface upon which to write. The steep slant of the board permits the pen to be kept in a horizontal position, facilitating the regulation of the flow of the ink

in the seventh century. It was this period that produced the "Book of Kells" and the "Lindisfarne Gospels" or "Durham Book," the former written in Ireland, the latter in England. Never has writing been carried to such perfection as in these two works; they are superb and it is hard to choose between them but if a slight superiority exists it is in favor of the Irish manuscript. Both books are written in half uncial, a derivative of the fifth and sixth century uncial letter which owed its form to the Romans. The half uncial letter corresponds very closely to present day lower case type. The capitals used were interlacing Romanesque letters freely embellished with animal grotesques and beautifully illuminated. As in all fine writing, each letter was made by several strokes of the pen, the penpoint being lifted clear of the paper after each stroke. Beautiful writing can be done in no other way.

The "Book of Kells" and the "Durham Book" are not the only splendid seventh century works; there are fine examples of Spanish, Scandinavian and Russian writing in existence but the English and Irish manuscripts are generally conceded to be superior.

Manuscript writing continued on the same high level until the end of the twelfth century with very little change in the type of letters used for the intervening five hundred years. At the beginning of the thirteenth century, the black letter was introduced and as the Gothic period came into full swing, the manuscript writers did to their letters much that the Gothic masons did to their stone work; pared them down so fine and twisted them into such shapes that they became restless and forced, although it must be admitted that the illuminated capitals and miniature painting of the middle ages were superb. During the fifteenth century

writing once more became a fairly simple matter, at least in the southern countries of Italy and Spain.

The decline of fine handwriting began in the sixteenth century, for it was at this time that cursive writing became general and the development of printing began to do away with the necessity of manuscript writing. In cursive writing the pen is kept on the paper from the start to finish of a letter, this of course is the precursor of the style in common use today. Sixteenth century writing done in this fashion managed to retain some of its former elegance and it was not until the beginning of the nineteenth century that the art of writing succumbed to carelessness and sloth. It does not yet show signs of improving.

Recently, however, there has been a consistent attempt both here and in England to introduce in the schools writing modelled on the printed page, to teach the child to form each letter separately and to make each letter of separate strokes. In other words to go back to the seventh century for inspiration. This attempt has been fairly successful in the private schools but a complete failure in the public schools. A failure due not to the

children, for it is said they learn to write much more quickly with this system, but to their teachers who consider this type of writing a new fad. Regarding its newness, it was in use fourteen hundred years ago, and as to being a fad it lasted for over a thousand years, so I think that it compares fairly well with our modern script which at most is barely three hundred years old and has never produced anything of beauty or simplicity. Tests have proved that children who are taught to write in this fashion can write just as quickly as those who use modern script.

If I speak bitterly about the teaching of writing it is partly due to my own experience, for I remember vividly the various "systems" by which I was taught to write; one of the most idiotic being that in which the pupil was told to keep his entire forearm, wrist and hand as stiff as a poker and to write with his biceps.

AT the school which I attended it was customary to punish minor offenses by giving the boys from twenty-five to one thousand lines to write, depending upon the seriousness of the offence and the age of the culprit. These lines had to be written on our half holidays, so naturally we wrote them as fast as we could to get them done. What that method of punishment did to our handwriting is better imagined than described. It ruined mine along with that of many other boys, which brings me to the point of this story.

My handwriting is neither better nor worse than the average but when in the course of my architectural studies I came across a facsimile of the "Book of Kells"—published by the Studio—I was overcome with admiration and envy and wondered if it were possible to write even remotely as well as the man who was responsible for that glorious work. I studied the subject and became acquainted with a facsimile of the "Durham Book" printed by the British Museum and my enthusiasm increased rapidly.

For some time I had wished to own a really fine copy of James Joyce's "Ulysses," as I have a great admiration for that eccentric masterpiece. The paper and type used in publishing that book were very ordinary, it being nothing more than the conventional French yellowback. I decided to write it out myself and as I wanted the writing to be both legible and beautiful, in fact worthy in every way of the book, I reached the conclusion that I would have to learn manuscript writing.

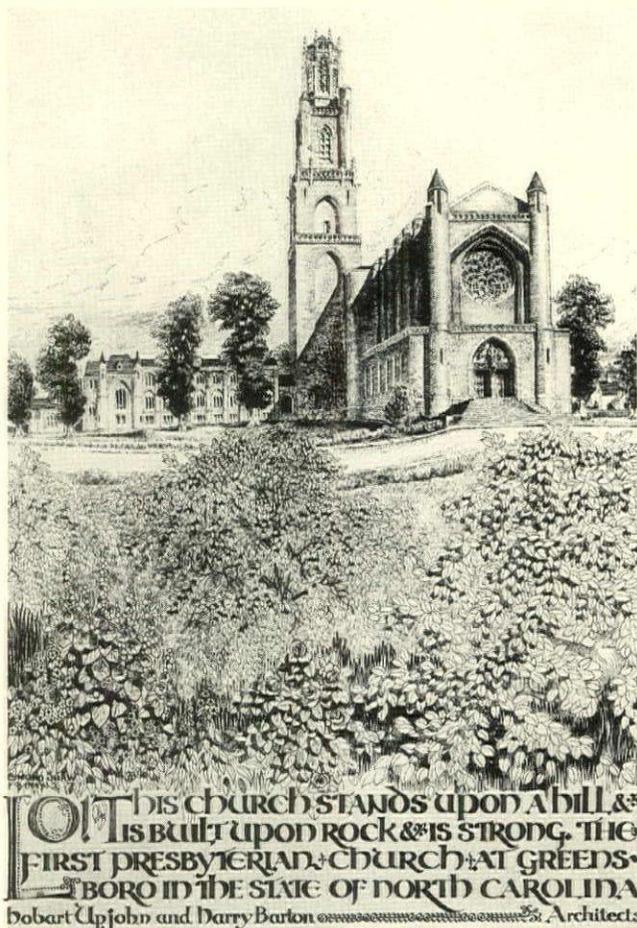
The first thing to learn was, of course, what implements to use. All the fine ancient writing was done with a goose quill, larger writing being done with a reed pen. Both of these pens were cut in the same way, the point being like the blade of a chisel inverted and slit up the centre. The ink was held in a small reservoir on the under side of the nib, formed by a bent piece of metal. The top of the nib was always kept dry and the ink flowed down the under side. I bought half a dozen goose quills and a sharp penknife and set to work. After several attempts I produced a pen which worked excellently. I hadn't, however, experimented with more than half a page of letters before the quill was dull and needed recutting. I recut it and then found that it was not the same width as my first pen. After struggling for sometime I succeeded in cutting one the same width but by this time I had used up all my quills and had to buy more. It occurred to me that if I had to go through the same performance after every twenty words or so of writing, I wouldn't get very far with my manuscript.

As a text book to work from I bought a copy of Edward Johnston's "Writing, Illuminating and Lettering" which is a masterly presentation of the subject. In this book Mr. Johnston admits the ills to which quill and reed pens are heir and expresses the desire for a fountain pen with a gold iridium tipped nib cut exactly like a goose quill. This would naturally overcome all the difficulties of cutting and recutting and cleaning and regulating the flow of ink, not to mention the appalling blots which sometimes happen with the quill or reed pen in the hands of a novice.

I decided that I would have a pen made. Having bought another supply of goose quills I finally cut a pen that suited me perfectly and selected an iridium tipped gold nib of the right width which I had ground down to exactly the chisel shaped point that I wanted, fitted it into an old style fountain pen, one of the slim type which are filled

with a dropper, and I had the perfect pen for manuscript writing. Having got my pen I practised with it until I had acquired a fair degree of proficiency. The next thing to settle on was the paper; after a few trials I found that Whatman, hot pressed, was the finest to write on and I laid in a supply of that.

I chose the Imperial size and cut each sheet in two, each of the halves having four pages for writing when folded down the centre. (Continued on page 84)



In the title of the above perspective Mr. Shaw has made practical use of the early style of manuscript writing

are we ARCHITECTS or merely PENCILS ?

by Henry S. Churchill
Thompson & Churchill, Architects



AN architect is supposedly a man practicing architecture as a profession as well as a business. We have all heard a great deal these past many years of how the architect must get over his silly artistic notions and become a hard headed business man. We have been flooded with dope on how to organize our offices, how to talk finance with the big executive, how to tell the blind mortgages from the equity (if any) and how to produce.

We have also been told how to be ethical and still accept one per cent fees because if we don't some one else will, some one who can and does produce.

It is time to pay a little attention to *what* we produce.

We have, I think, learned our business lesson well. But our professional standing on purely professional matters has gone by the board. We are in danger, serious danger, of becoming nothing but an owner's pencil, and a mighty soft pencil at that.

I don't mean the matter of fees, although that is inevitably tied up with what I do mean, for a profession that loses its self-respect and dignity as a profession must suffer insults to its pocketbook as a matter of course.

The architect who surrenders every shred of professional integrity to the dictates of a builder is in the same category as the shyster lawyer or the advertising medico. This type of architect is more of a danger to his profession because he is not easily recognized and so avoided by the type of builder who is looking for professional service and not for professional servility. On the other hand he is less of a danger to his employer, because his buildings do stand up—thanks to competent, professional engineers.

The public gets the short end as usual. It has to look at his buildings.

There are builders who would not dream of employing any but the best legal talent to handle their real estate and other affairs, and who, while dictating terms and conditions, advising with their lawyers as one man to another, never for a moment consider stepping into

the professional field of the law. They respect their lawyer and the work he does and they pay him well because they value his professional knowledge.

They tell their doctor their symptoms but they don't presume to prescribe.

They tell their engineer their problems but they don't say, "Cut the guts out of that beam."

But their architect they tell *how* to do it, not *what*, but *how*—how to plan and how to design and how to do. And the architect, scared to death that he may lose a client, takes it lying down.

If it is possible to admit that the layman knows more about the profession than an architect does after years of highly specialized endeavor, then the professional part of architecture is bunk and it is only a poorly paid business after all.

SUCH are the views devoutly held by a good many builders and tacitly admitted by a good many architects—architects who are merely pencils for large building projects.

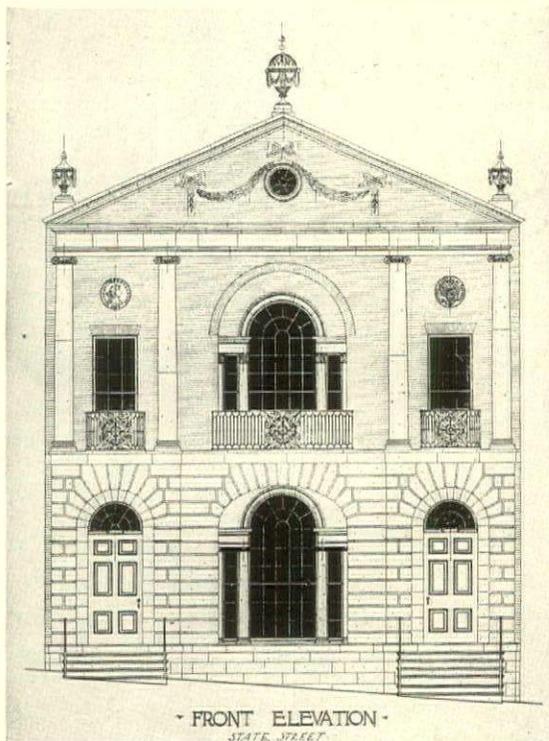
But perhaps if these same business-architects stood up like professional men and fought for their professional integrity, backed by their professional knowledge and their highly specialized experience in a difficult technique, they might command the respect they should have—and the larger fees that go with respect. The large projects might conceivably be built even better than their builders know.

The architectural profession in this country is in serious danger of losing what little professional standing it has left, not because it is unbusiness-like, or incompetent, or economically unnecessary, but because it is cowardly.

That it has stopped being an art and become a business is as it should be. Art can take care of itself without so much blather about it. But if it is a profession, then let us get our backs up and insist on the worth of our profession, and in our dealings with business sit at the board with (Continued on page 120)

1803 FACADE moved as a UNIT

becoming central motif of modern
bank building in Albany, N. Y.



Measured drawing by J. L. Dykeman of the original facade, reproduced from a volume on "Philip Hooker" by Edward W. Root

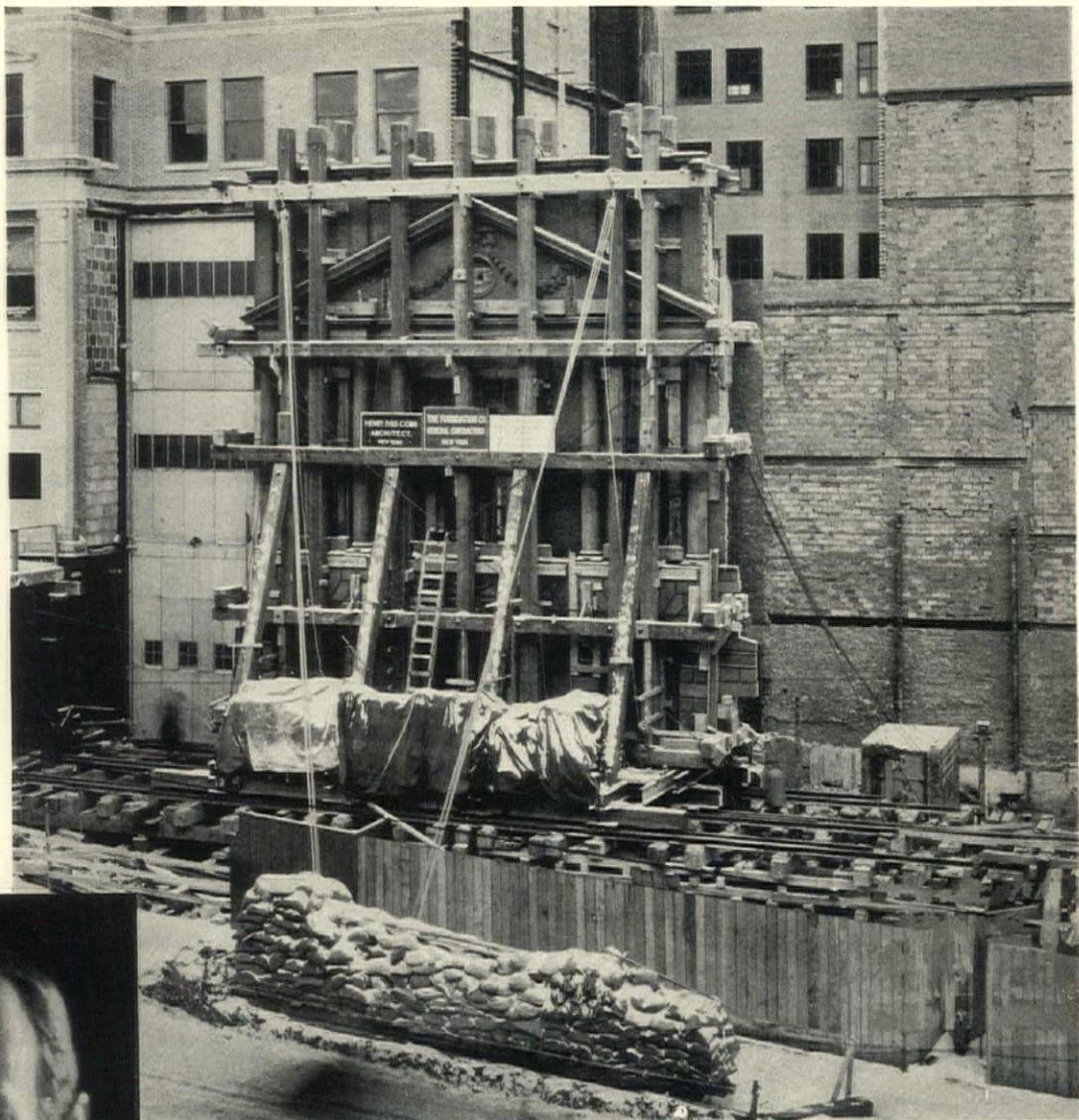
● So little effort is being made to save the few remaining architectural masterpieces of past generations that Mr. Cobb's work on the new Albany State Bank Building is worthy of notice. He took the front elevation of the old bank building designed by Philip Hooker in 1803 and moved it and used it as the central motif for a new sixteen-story building. In every detail of the new structure he endeavored to do as Philip Hooker would have done. Commercially, the idea was an excellent one, for it gave the public visible evidence of the long standing success of the bank as a safe depository.

YOU will find among the records of the Albany State Bank a resolution which reads as follows: "At a meeting of the directors on Wednesday, eleventh of May, 1803, a contract made with Philip Hooker for the building of a banking house was reported to the Board by the Committee appointed for that purpose which thereupon resolved that the same be approved and that the blanks therein be filled up in such a manner as said Committee think proper."

There had been turbulent times over the foundation of the bank. In 1799 Alexander Hamilton, the great financial expert, had established the Bank of Albany. The Republicans disagreed with the Federalists concerning the benefit of banks. Banks were generally regarded with great suspicion. The Republicans, however, were compelled to face the issue that banks would serve them beneficially in competition with the Federalists, so under the guise of a water company Aaron Burr succeeded in having a bill passed which gave this supposed water



Above, the Albany State Bank Building with the facade designed by Philip Hooker used as the central motif. Below, the original building and its additions of 1860.



After part of the new building had been completed, the old facade was cradled, jacked-up, and moved up the street to its location as the central motif of the new bank building



By
Henry Ives
Cobb, Jr.
F. A. I. A.

1865 changes were made in the original pedimented facade itself, but in spite of all this the bank was still "doing business at the old stand."

In 1926 the directors of the bank decided that the old quarters were becoming so cramped that radical enlargements were necessary. As a result they concluded to erect a "modern" bank building which should contain not only ample quarters for the bank but in addition an office building sixteen stories high.

This problem was a far cry from Hooker's two-story forty-foot building. Offhand it looked as if present day requirements had so little to do with those of Hooker's day that Hooker's building would be completely lost in the shuffle.

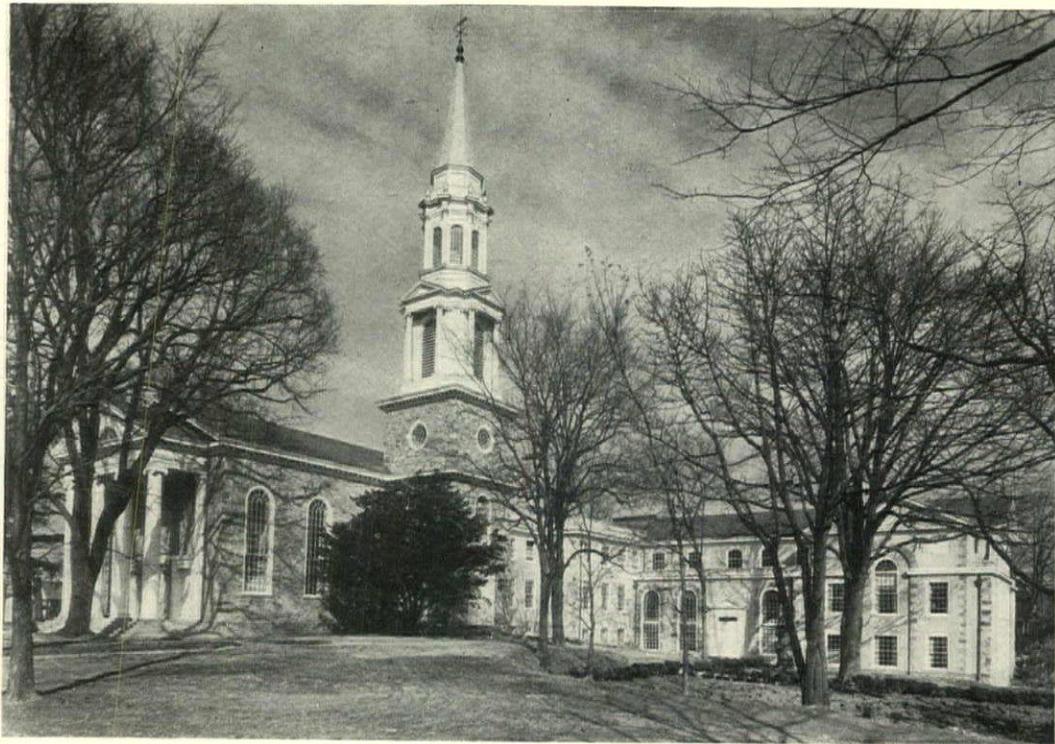
AS the problem was studied, it seemed more and more that Hooker and his little building might be made a help and not a hindrance. Maybe it was pure sentimentality from the point of view of hard-boiled progress, but here was a building, of which there are few enough in this "progressive" country of ours, which had real tradition, whose doors were still open for business to the great grandsons of the men who first passed in and out of them. Should this inheritance be scrapped, even if it were valuable only through sentiment? We thought not. The bank's directors agreed. So far so good. Now then, the problem (Continued on page 84)

company, whose purpose was to prevent yellow fever by bringing pure water to the town, the right to carry on other financial enterprises. Consequently the water company did a small water business and a large banking business. This bill was passed in 1803 and the company started business in the fall.

From 1803 or thereabouts, therefore, there had stood on State street a two-story structure of Massachusetts brownstone and red brick in the "classical mode" of the period, which housed the business of the State Bank continuously until 1926. There had been alterations and additions during this one hundred odd years. The bank had grown until it occupied about half a block. About

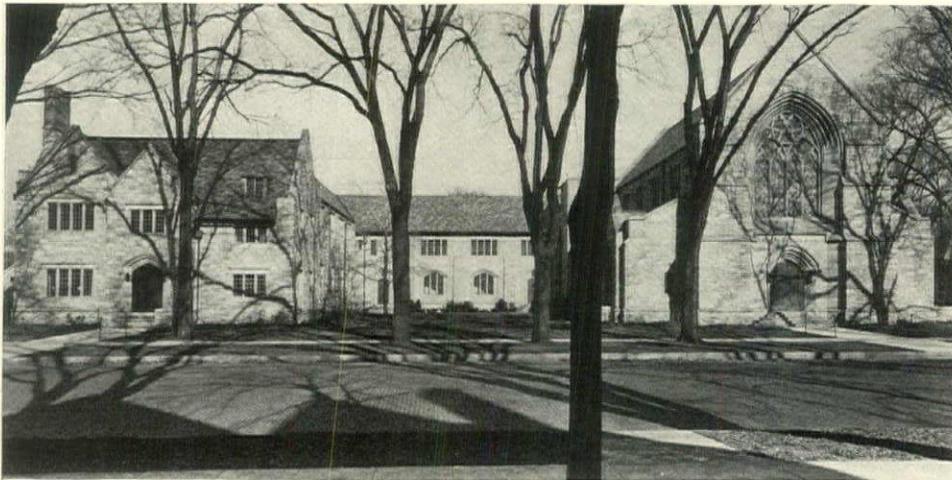
FIRST
PRIZE

First Presbyterian Church, New Rochelle, N. Y., Office of John Russell Pope, architects. Awarded first prize in the 1929 church competition held by the Christian-Herald



Protestant Churches
work to

IMPROVE



SECOND
PRIZE

First Presbyterian Church, Clinton, Iowa. Coolidge and Hodgdon, architects. Awarded second prize in the 1929 church competition

THIRD
PRIZE

First Christian Church, Watsonville, Calif. W. H. Weeks, architect. Awarded third prize in the 1929 competition





Conference of the Associated Bureaus and Departments of Architecture of the Protestant Church in America

PUBLIC TASTE in Architecture

By Benjamin F. Betts

DURING the past few years there has been aroused in the public mind a consciousness and interest in architecture that augurs well for the future. This has been brought about through public education, the press and other agencies. Among the latter there may be cited the work of the bureaus and departments of architecture maintained by several Protestant church denominations. These bureaus are working toward the common end of improving church architecture in the United States and, as an association, meet annually to exchange ideas and discuss present day tendencies and requirements of church buildings. The Associated Bureaus and Departments of Church Architecture and the Home Missions Council of the American Protestant Churches held its third annual conference on church architecture in St. Louis, Missouri, on December 6 and 7, 1929. Previous conferences have been held in Chicago and Atlantic City.

The origin of these church bureaus and departments of architecture goes back about a decade when church architecture in the United States, except for a few scattered structures, was in a deplorable state. Conditions were all too evident and as a result leaders in the various Protestant denominations, realizing the importance of good church architecture, were responsible for the establishing of bureaus and departments of architecture as a part of their home missions councils.

Fundamentally the work and purpose of these various architectural bureaus and departments is to assist con-

gregations to obtain church buildings that are properly planned to meet local requirements and that are architecturally and economically well designed. While in some instances the services of the bureaus are called upon in the case of churches erected in large cities, they find their greatest field of usefulness in the smaller cities, towns and villages. Their work extends from advice on the financing of new buildings and the guiding of building committees on methods of procedure in the early stages of their work, to suggested schemes for church property development and consultation with architects handling church projects. These bureaus are in effect research departments engaged in the study of one kind of building for a particular purpose, and in the application of their knowledge to the erection of buildings better fitted to their purpose.

THE function of the church architectural bureau does not supplant the service of an architect but rather supplements it. In the first stages of the development the bureau often makes preliminary studies of the building problem to determine what can and should be done by the congregation. From this point these bureaus usually become a consulting service in conjunction with the architect selected by the building committee of any particular congregation. In a few instances, depending upon conditions, some of the bureaus do supply complete architectural service. In others the function of the architectural department is limited to criticism and

suggestions on plans submitted to it. None of the bureaus furnish "stock" plans, but rightly view each project as an individual problem.

Church architecture in the United States has unquestionably improved in recent years. This improvement can, no doubt, be traced to the work of the church architectural bureaus as well as the advances that have been made in architectural education in this country.

THE Protestant denominational churches have in effect undertaken an important educational campaign to improve public taste in architecture. Churches are, or should be, important institutions in every community and as such should express the best in architecture. It is only by seeing good architecture that the public can and will develop an appreciation of the art. A campaign of this kind brings the value of architectural service to the attention of large groups in numerous centers throughout the country. It cannot help being far reaching in its effect and the movement becomes of national importance. Effort concentrated on one type of building is bound to quickly produce results in a field that has been stated to represent an expenditure of approximately \$200,000,000 per year.

Aside from the importance of obtaining church buildings that will function according to the needs of a particular community; attract, hold and inspire people to attend church; and add to the good appearance of our towns and cities, the work of the church bureaus has perhaps unknowingly become a significant part of what is at present a more or less unorganized movement to improve public taste in architecture and stimulate the demand for the services of architects.

Three nation-wide competitions to encourage the building of well planned and designed churches have been conducted by the *Christian-Herald* magazine. These competitions have become an important part of the educational program to bring before the public an appreciation of good architecture.

The 1929 competition resulted in the submission of fifty churches from twenty-one states, the District of Columbia, and two foreign countries. The jury of award consisted of Philip H. Frohman, Washington and Boston; Hobart Upjohn, New York; and Elmo C. Lowe, Evanston, Illinois. The competition was limited to churches built within the past two years and seating 600 persons or less.

THE first prize was awarded to the office of John Russell Pope, New York City, for the design of the First Presbyterian Church of New Rochelle, New York. The second prize was awarded to Coolidge and Hodgdon, Chicago, for the design of the First Presbyterian Church of Clinton, Iowa. W. H. Weeks of San Francisco received the third prize for the First Christian Church at Watsonville, California. The prizes were divided between the architects and the churches. Four honorable mentions and six mentions were also awarded.

In their report the jury stated:

"There is on the whole a trend toward better and more permanent construction, more straightforward and honest methods of structural design and a more careful selection of materials. Better proportions are in evidence, the tendency is toward smaller roof spans and

longer and more lofty interiors. Evidently the short broad interior with sloping floors and curved pews and galleries is steadily becoming obsolete. Chancels are better proportioned and almost every denomination is returning to the traditional location of the altar and arrangement of the sanctuary and choir.

"There is a marked recognition of the fact that greater beauty and reverence is obtained only when we recognize certain fundamental principles which are exemplified by the arrangement and design of all Christian churches up to the sixteenth century.

"Hand in hand with a return to greater dignity in the design of the church, we find the development of more practical and conveniently planned Sunday school and educational buildings, which are better adapted to modern methods of religious education. We also recommend that the placing of Sunday school rooms in church basements should be discouraged except in those instances where a church is built on sloping ground, thereby making a basement necessary and making it possible to have well lighted rooms with windows above grade. Both from practical and architectural standpoints it is far better to have the main floor level of the church only a few steps above grade at the entrances. The raising of a church floor above the ground in order to obtain a high basement is to be discouraged. When possible, the Sunday school should be placed in a separate educational building connected with the church by suitable means of easy access."

SPEAKERS on the program of the church conference on architecture held in St. Louis included A. F. Wickes of Indianapolis, E. M. Conover of Philadelphia, and Elmo C. Lowe of Evanston. P. J. Hoener of St. Louis spoke on the subject of "Promoting Interest in and a Demand for Better Architecture on the Part of the Public." Among other papers read before the conference were those of Dr. Luther Reed, George W. Awsumb, George E. Merrill, and Professor Gabriel Ferrand. Dr. Reed's paper was a valuable contribution to the design of "Churches for Worship." Professor Ferrand's paper was on the subject of "Architecture of Today." Discussion from the floor concerned the tendencies in church building design and matters of particular interest to the Association of Church Architectural Bureaus and Departments.

A FELLOWSHIP with an income of \$2,500 for one full year has been established by Mrs. James Templeton Kelley in memory of her husband, who was a well known Boston architect. The fellowship is to be administered by the Boston Society of Architects—a Chapter of the American Institute of Architects—and is to be assigned to an individual of proved ability, whether a student, an instructor, a draftsman, or a practicing architect, for foreign travel for the pursuit of advanced studies in architecture. It is open to any American man or woman residing within the area under the jurisdiction of the Boston Society of Architects—Maine, New Hampshire, Vermont and Massachusetts—and is to be awarded annually on such basis of evidence as may be submitted by the applicant, and otherwise secured by the Committee on Education of the Boston Society of Architects.

THE QUALITY OF DISTINCTION IN ORNAMENTAL METAL PRODUCTIONS

In this Machine Age, Civilization's great cultural problem and that of Industry particularly is to blend Beauty with Utility—Art and Architecture with Engineering—and to make the Artist also a Master Mechanic.

Architects, Artists and Leaders of Art in Industry have for many years sensed this as a problem to be met some day; but a group of Leaders in the Ornamental Metal Working Trades, where this problem is ever present, have prepared to meet it in a new and modern way. The day is here and finds them ready, united and consol-

idated into a corporate entity—the General Bronze Corporation—in itself to discerning observers—an Achievement of Distinction.

We, the consolidated concerns listed below, now GENERAL BRONZE CORPORATION, operate as Divisions. The increased advantages thus secured we will maintain and expand. Our confirmed Good Will we will further by building permanently into our work Qualities worthy of our claims to Distinction. To that end we have adopted and hereby announce this POLICY:

To hold uppermost in mind this truth—that to achieve success in this work, the spirit of beauty and excellence of structure must pervade; and

To administer our activities with all that experience, understanding, research and tradition can impart; and

To direct those works through the best specialized executive ability in art and invention, in architecture and engineering, in the business of production; and

To support that ability with artisans and mechanics, labor and material, plants and equipment of the best that money can provide; and

To efficiently engineer the details of our manufacture to the end that we may be enabled to apply accruing benefits to the constant betterment of art interpretation, quality of production and service.

This POLICY is undertaken in the firm belief that through it we will be enabled to lower costs to the Purchaser and secure reasonable returns to the Public, our Stockholders.

We are convinced that the Qualities of Spirit brought about by this Policy will be reflected in added Love of Craft and Pride in Accomplishment and be em-

bodied in the worthy and enduring Products of Beauty and Utility which constitute the PURPOSE of this Corporation and its IDEAL.

Our every desire is to aid Art, Architecture and these Trades in particular by the fulfillment of these Efforts, to the high and ultimate end that we may contribute our portion to Industry and its advancement.

JOHN POLACHEK BRONZE & IRON PLANT
TIFFANY STUDIOS BRONZE & IRON PLANT
RENAISSANCE BRONZE & IRON PLANT
AMERICAN ART FOUNDRY PLANT
ROMAN BRONZE WORKS STATUARY PLANT



FLOUR CITY ORNAMENTAL IRON PLANT
WISCONSIN ORNAMENTAL BRONZE PLANT
THE GUARANTY IRON & STEEL PLANT
GUARSTEEL SAFETY STAIR PLANT
THE DOMINION BRONZE & IRON PLANT

THE FIFTY-SIXTH STREET GALLERIES, ART SHOW ROOMS AND SCULPTURE CENTER OF AMERICA

GENERAL BRONZE CORPORATION

LONG ISLAND CITY, L. I., N. Y.

Pay for
remodeling plans?
... why Man,
the House just
**BURNED
DOWN!**

by George F. Kaiser

WHAT HE DID. The first commission Sloane got, as an architect practicing on his own account, was remodeling the residence of a man named Hansen. The latter took up plenty of Sloane's time and put him to a lot of trouble, but finally signed up a contract whereby Sloane was to draw plans and specifications and superintend the remodeling of the house. Hardly an hour after the contract was signed, Hansen was back again, much worried and excited. "We will have to call the deal off for the present," he told Sloane, "for while we were talking, the house burned down." "It's O.K. with me, if you will sign a contract with me for the plans and specifications of your new house," Sloane replied. "But I'm not ready yet," Hansen protested. "Then I won't release you from your old contract," threatened Sloane.

WHY HE DID IT. The architect thought the fact that the building had burned down was Hansen's hard luck. The only thing the architect could see was that he was losing a profit through no fault of his own.

WHY HE SHOULDN'T HAVE DONE IT. It is elementary that if parties contract for a thing which they suppose to exist but which in point of fact does not exist, the contract is void and of no force and effect. Thus, if one man agrees to buy and another to sell a horse they both believe to be alive, but the horse is actually dead at the time of making the contract, it can't, of course, be enforced by either party.

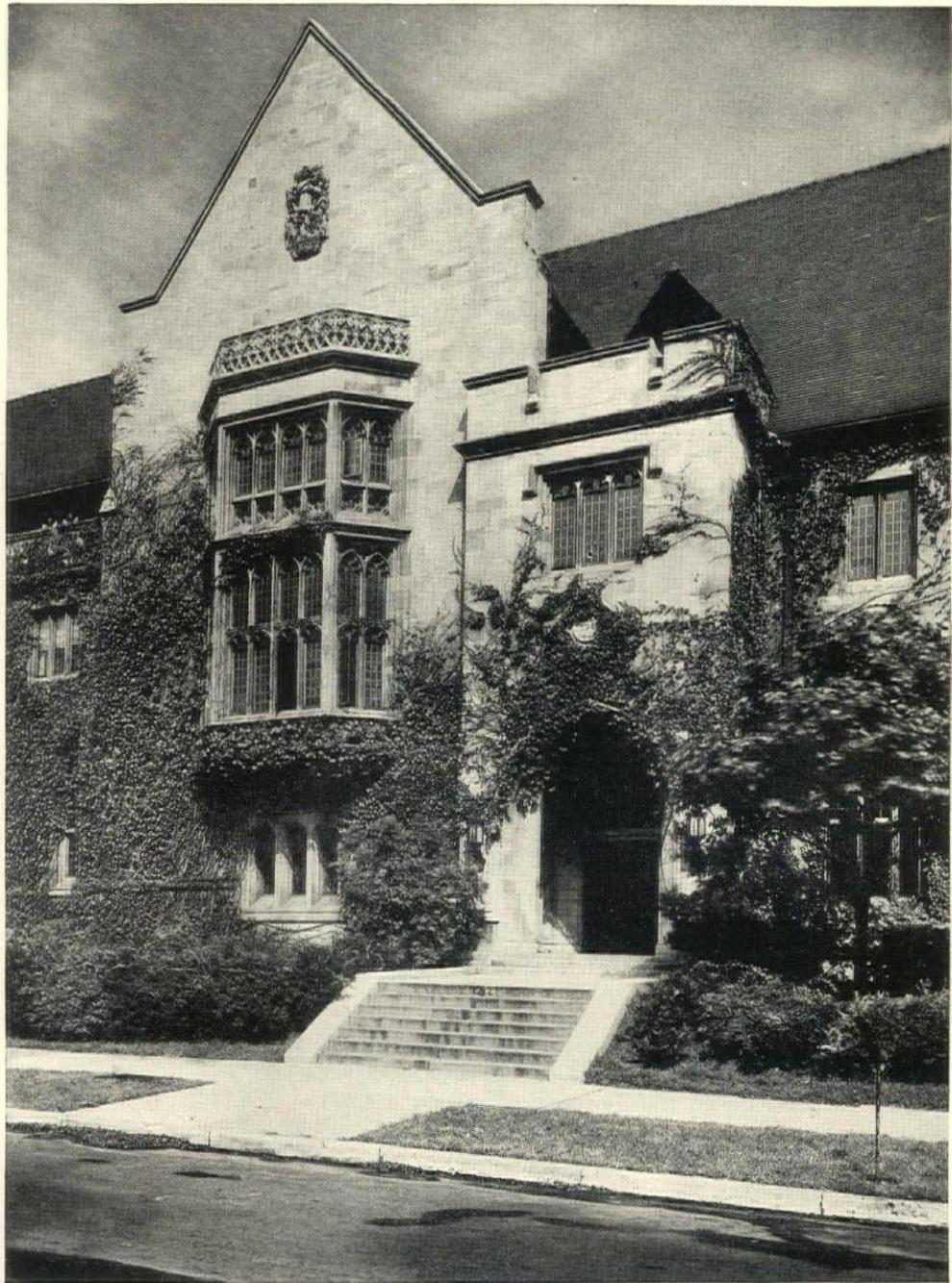


ARCHITECT'S FEE WHEN OPERATION STOPS

WHAT HE DID. Ennis and Dawson had entered into an agreement whereby the former was to act as architect for the latter, draw plans and specifications for him, etc., and superintend the construction of his building. After the drawings were made, Dawson decided not to go ahead with the building and offered to pay Ennis the first installment of his charges under the contract, which was to become due when the drawings were made. Ennis refused to accept the installment as his damages, and Dawson refused to pay anything more than the first installment.

WHY HE DID IT. The client, on his failure to keep his contract, naturally sought the interpretation most favorable to himself, so adopted the theory that the contract was divisible and the first installment was to be payment for the drawings.

WHY HE SHOULDN'T HAVE DONE IT. The fact that an architect is to be paid in installments, the first when the drawings are made, and the balance at specified stages of the work, it not appearing in the contract that the first payment is intended as the price of the drawings, does not make the contract divisible. Though the employer fails to build, the contract price must be held to be entire, and the value of the architect's services constitutes the measure of damages. Therefore, in this case, the architect won his suit.



● Ida Noyes Hall for Women . . . an achievement of the architectural firm of Coolidge and Hodgdon, Chicago . . . is only one of nine important structures at the University of Chicago which are covered with IMPERIAL Roofing Tiles. More than 1,100 squares of these tiles, principally flat shingles, have been laid on that institution's buildings since the year 1914. A warm red tone has been chosen as standard, thus happily averting the monotonous effect which would have resulted had drab, cold roofs been combined with somber gray walls.

L U D W I C I - C E L A D O N C O M P A N Y
Makers of IMPERIAL Roofing Tiles

NEW YORK: 565 FIFTH AVENUE

104 S. MICHIGAN AVENUE, CHICAGO

WASHINGTON: 738 FIFTEENTH ST., N. W.

FOR FEBRUARY 1930

67

Have a Word to Say

PAGE GEORGE KAISER

From Neil McMillan, Jr., Director Architectural Bureau,
The National Council of the Y. M. C. A., New York

Editor, The American Architect: In your October issue, which I as a belated reader have greatly enjoyed, you suggest that you would be glad to have your readers indicate legal questions which George F. Kaiser could write upon. I am taking advantage of your offer to place before you a condition which surprised and puzzled us some months ago. The facts are these:

An architect specified a certain type of waterproofing for the basement walls and added in his specifications a clause that the contractor was to guarantee these walls against leakage. The contractor proceeded to install the waterproofing specified, making no protest as to the method. When the job was completed the walls leaked.

The architect sought to hold the contractor to the terms of the guarantee. The contractor refused to be bound by the guarantee and the owner finally decided to let the matter go to a board of arbitration.

The award of the arbitrators by a vote of two to one was in favor of the contractor, the statement being made that the fact that the architect specified a type of waterproofing relieved the contractor of all responsibility for it and that the guarantee could not hold.

One so frequently sees just this combination of circumstances appearing in specifications that I am led to believe that an exposition of the legal status of the case would be profitable.

"WHAT ARE YOUR FIVE BOOKS?"

From Eric Fleming, Architect and Engineer, New Brunswick, N. J.

Editor, The American Architect: Referring to your query, "What Are Your Five Books?" and the choice for a working library selected by the "one architect" quoted by you, many architects will concur with me in affirming that sixty per cent of the five book library was that of an engineer, and not a structural engineer at that.

While, like that of the architect quoted, my own earlier education was primarily that of an engineer, I feel confident that, if limited to five reference works with which to practice, the following books, because of their fundamental and inspirational value, would be a wise choice for an architect.

1. F. S. Meyer's "Handbook of Ornament."
2. J. H. Haneman's "A Manual of Architectural Composition."
- 3 and 4. Hool & Johnson's "Handbooks of Building Construction." (2 Vols.)
5. F. M. Snyder's "Details of Building Construction."

(Detail Plates 18" x 22" which I would have bound for the fifth book.)

If limited to a "three book" library, items 1 and 2 above plus "Kidder" would be ample. Books which have proved indispensable, and which might supplement the "five book" library and still be housed on a three foot shelf, are Knobloch's Details of Building Construction, two vols., "The American Architect Specification Manual," Sweet's new four volumes, and the proposed new issue of "Steel Construction," by the A.I.S.C. The little book, "Building Age Construction Details," is full of data for the drafting room, and "Engineering and Architectural Jurisprudence," Waite, should also have a place. Too, "Architectural Terra Cotta Standard Construction," published by the National Terra Cotta Society, would find a place somewhere on my limited shelf.

Thus the nucleus of a *working* library of architecture, the creative architecture to come from within, with the aid of the data embodied in this library.

Your editorial, "The Stock Plan House Can Never Have a Soul," should be reprinted and broadcast to the various syndicated press agencies of the land, and framed and hung in every architect's office, or public place where it would tend to discourage the stock plan practice.

SIMPLIFIED PRACTICE ON MASONRY OPENING SIZES

From Leroy E. Kern, Technical Secretary, A.I.A.
Structural Service Department

Editors' Note: Mr. Kern was asked to explain his views concerning the recent proposal to standardize masonry opening sizes. His reply follows:

Editor, The American Architect: Simplified practice on masonry opening sizes at the present time means little or nothing to the architect. The interesting phase of this particular activity of the Division of Simplified Practice is that it furnishes a concrete example of the necessity for coordination of standards. We have been, for a number of years, proceeding to standardize various items used in connection with building and have given but little thought to how these various standards fit together when used in completed structures. Of course, the problem was not serious so long as we had only a few standards, but as the number of standards increased it was a foregone conclusion that at some time or other they would have to be coordinated.

For example, we have standard or stock sizes of glass. If we attempt to hold to standard or stock size glass we encounter difficulty in adopting standard or stock size sash. If we adopt standard or stock size sash we run into difficulty in adopting standard or stock size frames since, depending upon whether the frame is of metal or wood and whether it is

(Continued on page 106)

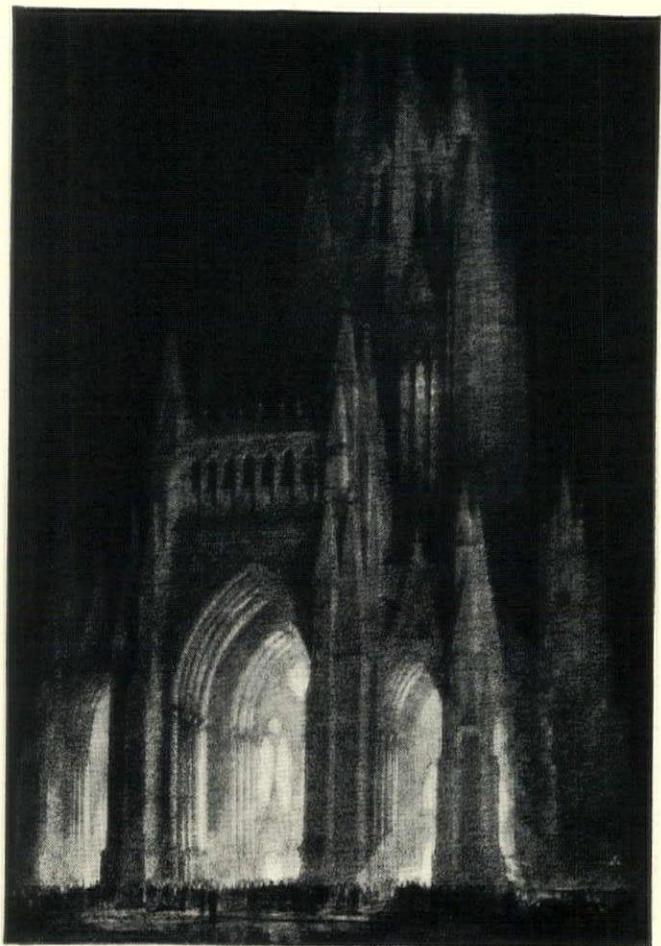


STEEL

BETTERS ANY BUILDING

STEEL is the strongest building material . . . the safest to work with . . . the most adaptable. Steel permits the greatest speed in construction, occupies less space and allows larger interiors. Steel can be erected any time, anywhere, in any weather with expedition. Steel is fool-proof—it will stand more abuse than any other material. The properties of steel are known *before* it goes into construction—and those properties are kept consistent by constant inspection, test and analysis at the mill.

No other building material is so flexible in its application as steel . . . or permits such variety in design. No other type of building is so easily and economically remodeled, removed, altered or extended as a steel structure. Steel provides a



Free to architects only! This Hugh Ferriss rendering will be mailed on request. It is enlarged to approximately three times the size of the above illustration and reproduced on special stock for framing.

stronger, safer, more adaptable building medium for any type of modern building or bridge . . . large or small. Before you build—no matter what the nature of the structure—consider steel.

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

AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC.

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

STEEL
INSURES STRENGTH
AND SECURITY

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



"I was in Rome only a short time," said the Mad Hatter

"**W**ERE going to build ourselves a new headquarters in Washington," said the Mad Hatter.

"I think that will be lovely," said Alice, "When will it be finished?"

"We'll have to raise the money first," answered the Mad Hatter, "We've bought the old house where Barbara Frietchie lived after Jackson's men burned her house in Frederick, and we're going to fix it up and build an addition for our meeting hall and offices."

"Can't you use the old building for anything?" asked the March Hare.

"We could," replied the Mad Hatter, "But it's a historic building, so we want to preserve it for posterity, and not have it all cluttered up with typewriters and filing cases. We had a meeting the other day, and a lot of the biggest hatters spoke in favor of the scheme, Stetson, Dobbs, Mallory, and several others. Think of the prestige it will give the hatters, to have a national headquarters. You know, we're a very important profession, and people don't really appreciate us."

"That's quite true," said Alice, "You really should have it. I'm sure they have them in other countries, don't they?"

"Indeed they do," answered the Mad Hatter, "Why, the Royal Institute of Italian Hatters have a palatial building in Rome. You really ought to see it, if you ever go there."

"What is it like?" asked the Mock Turtle, "You've been in Rome, haven't you?"

"I didn't really get to see it," the Mad Hatter admitted, "But they say it's very fine. I was in Rome only a short time, and what with visiting the Forum and Saint Peter's, and all the other old buildings, I forgot all about it."

"What a shame!" exclaimed Alice, "But of course

ALICE

hears of a
PROPOSED
BUILDING

By J. J. K.

you'll enjoy your own headquarters all the more. The members will spend a lot of time there, won't they?"

"We have a three day convention every year, and delegates come from all over the country," said the Mad Hatter, "So far they've been in a different city each year, but no doubt when we have our own building they'll always be held there."

"How about the other members who aren't delegates?" inquired the March Hare.

"They can't all afford to come, of course," said the Mad Hatter, "But out of three thousand members about two hundred usually attend."

"About one member in fifteen, three days a year. Wouldn't it be cheaper to hire a hall when you want it?" asked the Mock Turtle.

"Perhaps it would," said the Mad Hatter, "But we want to do this right. We're going to raise \$400,000 for the building by subscription among the members, and another \$200,000 for an endowment fund. That makes only about \$200 each for the members, and I'm sure they will be glad to give that."

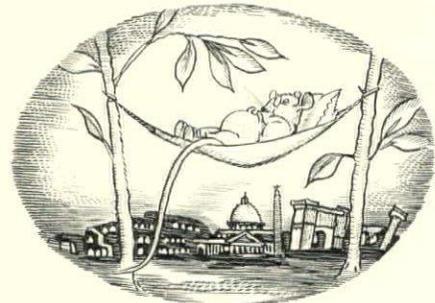
"Why an endowment fund? Can't you take care of upkeep out of the annual dues?" asked the March Hare.

"We could, if the members paid their dues regularly," said the Mad Hatter. "But nearly half of them are in arrears right now. Twenty dollars a year, you know that's a lot of money when business is bad."

"It's too much for me," said the Dormouse, speaking for the first time that day, "They can't pay twenty dollars a year dues, but they can subscribe two hundred dollars to put up a building they don't need and would hardly ever use."

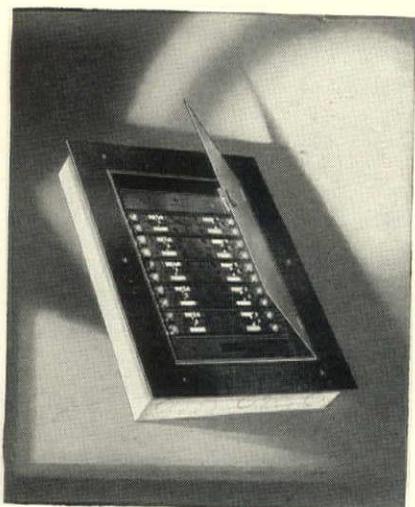
"You be quiet!" cried Alice, "Who asked for your opinion, anyhow? I thought you were asleep, and wouldn't bother us."

And, indeed, he had fallen asleep again, and was already snoring loudly.



Illustrations by
GORDON ROSS

*The only time Quality
imposes a Penalty
is when you don't use it*



Everybody wants quality but not all realize that quality is always worth what it costs and usually costs less in the beginning as well as the end.

ⓕ Standardized Panelboards have always been designed and built with only thought of quality in mind. The entire concentration of effort was to produce the quality at a price that was fair for the service it rendered. The success of the standardized sectional, molded construction originated

by ⓕ, shows the great achievement attained.

By a nationally known cost record system every penny of cost in the manufacture of ⓕ Panelboards is known and all quotations are based on that cost,

plus a fair profit. No other factor in pricing ever effects ⓕ prices.

Every ⓕ estimate is on the right-price-first plan and the product delivered is of a quality that pays the owner to buy.

Send for the newest ⓕ Catalog. Estimates gladly furnished without obligation.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

D I S T R I C T O F F I C E S



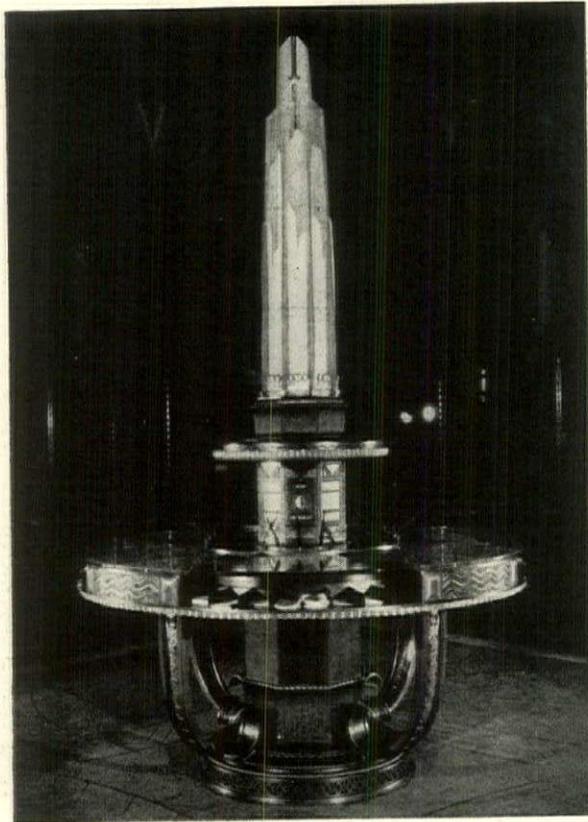
Panelboards
are the sign
of a
Better Job

- Atlanta, Ga.
- Baltimore, Md.
- Boston, Mass.
- Buffalo, N. Y.
- Chicago, Ill.
- Cincinnati, Ohio
- Dallas, Texas

- Denver, Colo.
- Detroit, Mich.
- Jacksonville, Fla.
- Kansas City, Mo.
- Los Angeles, Calif.
- Memphis, Tenn.
- Minneapolis, Minn.

- New Orleans, La.
- New York City
- Omaha, Neb.
- Philadelphia, Pa.
- Pittsburgh, Pa.
- San Francisco, Calif.
- Seattle, Wash.

- Tulsa, Okla.
- Montreal, Que.
- Toronto, Ont.
- Vancouver, B. C.
- Walkerville, Ont.
- Winnipeg, Man.



Check desk, Integrity Trust Company, Philadelphia. Paul P. Cret, architect. From "Year Book of the Annual Architectural Exhibition"

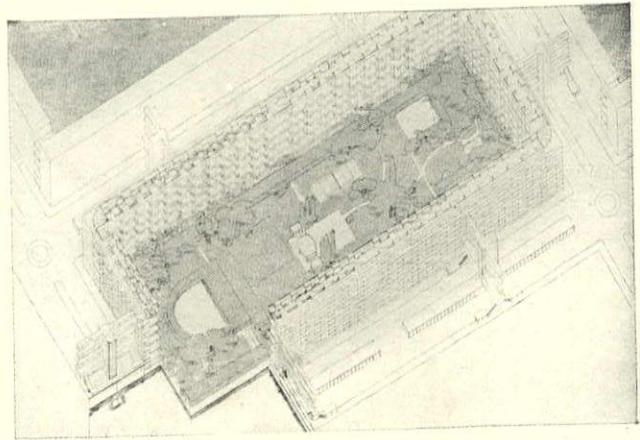
Year Book of the Annual Architectural Exhibition Philadelphia 1929

Published by the 32nd Joint Exhibition Board of the American Institute of Architects, Philadelphia Chapter, and the T Square Club, Philadelphia. Illustrated; size 9½x12; price \$2.50.

ONE of the most successful architectural exhibitions of 1929 was held in Philadelphia by the Philadelphia Chapter of the A. I. A. and the T Square Club. The photographs and drawings selected from the exhibit have been gathered together in this book, which is divided into five plate sections.

The first section of the book covers public and ecclesiastic architecture; the second, domestic and landscape architecture; the third, commercial and industrial architecture; the fourth, studies, sketches and student work; and the fifth is titled "Milton Medary Memorial." This last section is devoted to sketches and buildings by Mr. Medary, together with his biography. Some of the illustrations in the book are in color.

Of interest in the presentation of material is the fact that pages contain an illustration on one side only. On the reverse side of the page there is, in many cases, information about the materials on the work illustrated.



Le Corbusier's conception of apartment houses built around a park. From "The City of Tomorrow"

The City of To-morrow

By Le Corbusier. Published by Payson & Clarke Ltd., New York. Illustrated; 302 pages; size 8x10; Price \$7.50.

THE City of To-morrow and Its Planning" is translated from the eighth French Edition of *Urbanisme* and contains an introduction by Frederick Etchelle. The author is the well known French architect, Le Corbusier, whose real name is Charles-Edouard Jeanneret. Le Corbusier is today recognized as a leader in the modern school of architects.



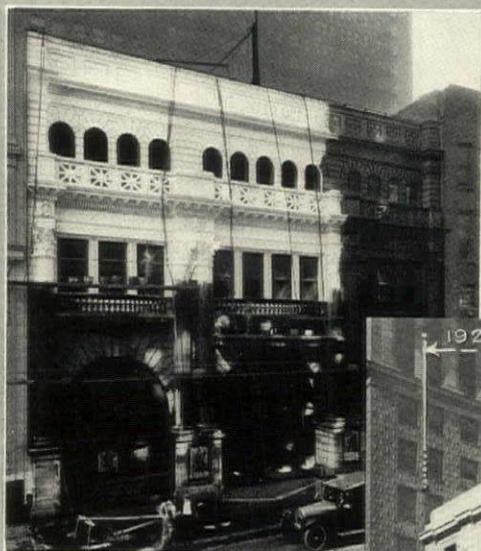
A woodcut of Le Corbusier

In a previous volume, "Towards a New Architecture," Le Corbusier advanced the theory that houses are machines for living in. That volume has been much discussed and has been the subject of much controversy. In the present book he advances the theory that the city is a machine for working in. He states, "The great city of today as it exists is actually an absurdity. In actual fact, it is using up and slowly wearing out millions of human beings; and the surrounding country on which it feeds is doomed to decay."

There are many who will agree with his statement. There are perhaps many who will also agree with his solution of the problem, which is to make the city and houses within the city an efficient machine, standardized and produced by mass production. The solution as set forth in "The City of To-morrow" indicates a well studied and careful analysis of the problem. In spite of this it is difficult to visualize cities rebuilt to meet Le Corbusier's ideas or new cities planned along such radical lines. Yet there have been greater wonders than this that have come to pass. Certainly, if our future cities are to meet the demands placed upon them and human beings are to inhabit them some revolutionary plan will no doubt be required. A start must be made

TERRA COTTA Buildings

Clean Like New



Above: Old Inter Ocean Building.
Chicago, Ill.

Exterior readily made new by simple washing after long neglect.



Below: Pacific Mutual Building, Los Angeles, Cal.
John and Donald Parkinson, Architects.

Built in 1908, 1915, 1929. Terra Cotta of all three sections matches perfectly after a simple cleaning.

*A*LL architectural materials can be cleaned to the extent that some part of the accumulated grime can be removed.

But only in Terra Cotta can the original color and freshness of surface be fully restored, as is apparent every time an addition is made to an existing building.

The old structure however cleaned never quite matches the new work except where both have been executed in terra cotta. This is of outstanding importance where future additions or extensions may be involved.

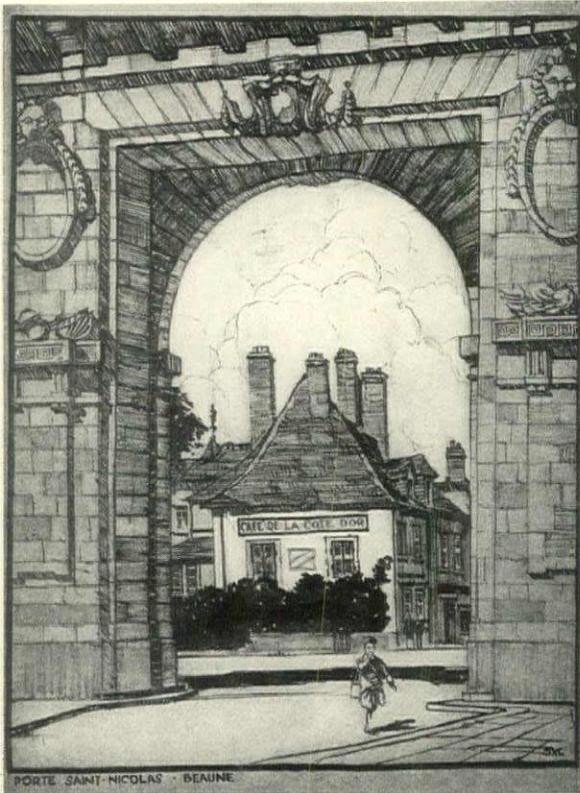
Strong cleaning acids are unnecessary and injure the terra cotta. Write for our circular on cleaning.

NATIONAL TERRA COTTA SOCIETY
230 PARK AVENUE NEW YORK, N. Y.

(On behalf of the Terra Cotta Manufacturers throughout the United States)

and Le Corbusier's plan is worth studying in preparation for the planning of to-morrow's cities.

The author has presented a close survey of the existing conditions in our great cities and of their functioning under the state of things that has arisen in this machine age. The volume is profusely illustrated. The subject is one that is of vital interest to owners of land, architects, municipal workers, city-planners, and city-dwellers. It is worth reading and considering.



Sketch by Chamberlain of Porte Saint Nicholas.
From "Through France with a Sketchbook"

Through France with a Sketchbook

By Samuel Chamberlain. Published
by Robert M. McBride & Co., New
York. Illustrated; 109 pages; size
9x11; price \$6.00.

THERE are few men who write and draw with the freshness, warmth and gayety of Samuel Chamberlain. To him France holds no secrets. His roving have taken him through Normandy, Brittany, Touraine, the Riviera and out of the way corners of Paris. In the medium of the moment he sets down his impressions in pencil, pen and ink, water color, lithography, or an etching for others to enjoy looking at. Again he bursts forth into word pictures that kindle the imagination and cause a fellow artist to once more live in the picturesque haunts of those who sketch and draw or travel.

The present volume by Mr. Chamberlain consists largely of a series of articles that have been rewritten from those that have appeared in "The American Architect" and in "Pencil Points." The illustrations in black and white are characteristic of the author's best work in recent years. The text is as easy to read as the

drawings are to gaze upon. The work of Samuel Chamberlain is too well known to architects to require comment that could only be superfluous.

Patio Gardens

By Helen M. Fox. Published by
The Macmillan Company, New York.
Illustrated. 228 pages; size 8¼ x
10; price \$6.

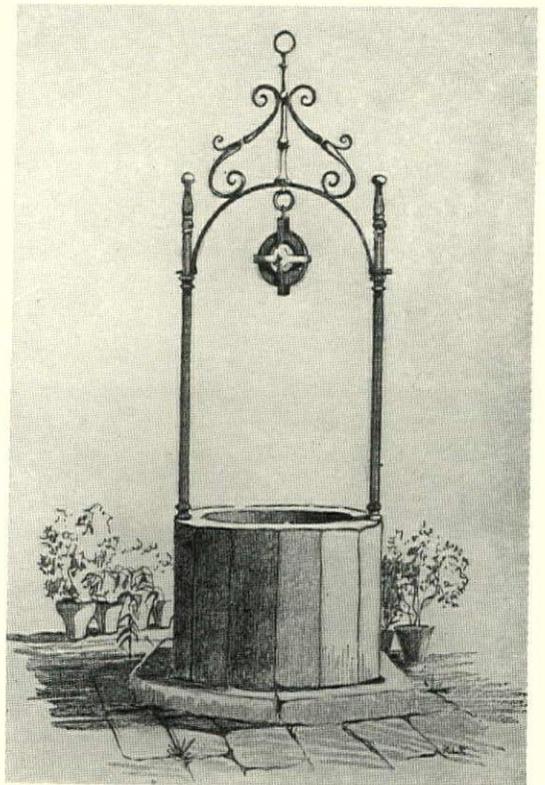
SPANISH gardens are meant to be lived in; each is like a room in a house, but with the sky for a roof, the walls hung with vines, a tiled floor for a carpet, and pots and beds of plants, and a fountain or marble basin for furniture and ornament."

Such is the spirit of "Patio Gardens," the story of one who wandered through Spain looking for the unusual and beautiful in the architecture and ornament of garden stairs, wells, benches, and so on.

Illustrations are mostly pencil drawings, excellently done by Ralph L. Reaser. The subjects are well chosen and give an excellent idea of how the Spanish handle their gardens.

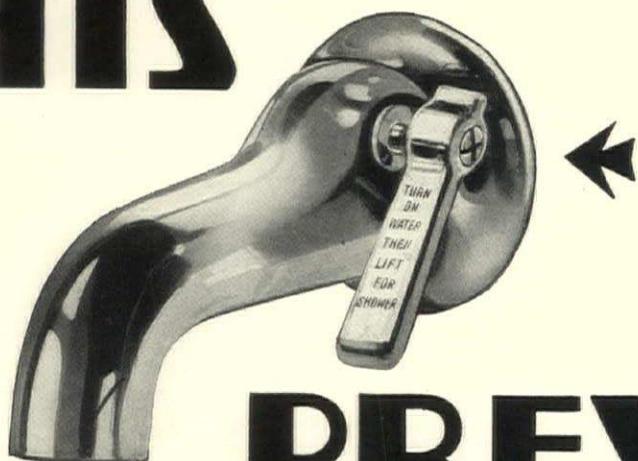
The following recapitulation of the subjects illustrated gives an idea of the wealth of material presented pictorially: wrought-iron designs, 13; gates, 4; wells, 4; fountains, 5; benches, 6; tiles and pavements, 19; balconies, 4; stairways, 4; flowerpots, 10; detail plans of various subjects, 18. Other subjects are flower stands, garden houses, cypress arches, pergolas, swimming pools, patio gardens, walls, windows, lamps, waterspouts, gloriets, and weather vanes.

The text is of a rather popular nature, but contains much of value from the standpoint of showing how gardens in Spain are a reflection of the life of those who used them. There is a good index. (Cont'd on page 110)



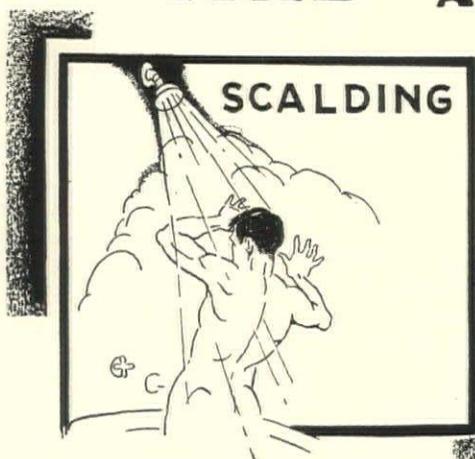
Well in a Salamanca patio. From "Patio Gardens"

THIS



PREVENTS

THIS AND THIS!



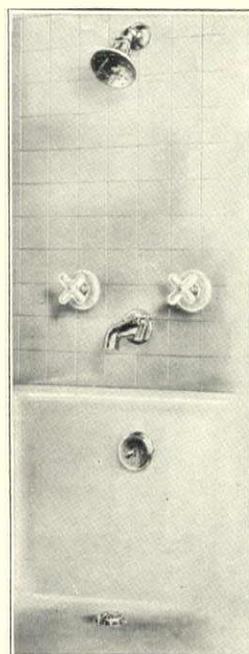
When these accidents happen, you, the architect, get the blame for specifying such hazardous equipment. No architect ever risked his reputation by specifying a Chicago Faucet product.

Here is a new bath fixture that has many distinctive features — listed herewith—which any architect, engineer and owner can appreciate. They are mechanically sound—foolproof in operation—inexpensive to maintain.

Write for complete information and copy of new catalog E—just off the press.

A NEW BATH FIXTURE WITH 10 GOOD FEATURES

1. Only two valves, separate HOT and COLD, in the wall.
2. The shower bather tempers the water at the spout, then switches the same water up to the shower head. No accidental scalding as with mixing valves.
3. When the shower bather turns off the HOT and COLD valves, the diverter automatically returns to the tub position. No unexpected showers.
4. A 4" cast brass shower head so constructed that none of the holes will stop up. Always 49 streams shooting in the proper direction.
5. A shower head face plate removable by loosening one center screw with a screw driver. The screw cannot drop out of the face plate and go down the drain.
6. Asbestos shower face plate washer—not rubber.
7. A shower head ball joint, all metal, perfectly machined. No packing washer to break up and clog the holes in the head.
8. A diverter valve in the spout on the wall, not in the wall. All metal—no rubber—no spring. Gravity holds it in the TUB position because the handle outweighs the flapper. When the water is on and the handle is raised, water pressure holds it in the SHOWER position as long as there is water in the riser.
9. HOT and COLD valves with the standardized working unit that's renewed as easily as a light bulb. All wearing parts come out with the loosening of the cap. Seat is of monel metal. Costs four cents.
10. A pop-up bath waste with the stopper in the outlet of the tub. No need to get at it from behind.

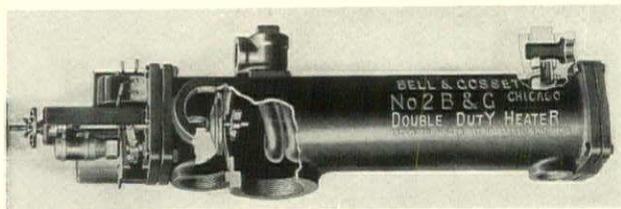


THE CHICAGO FAUCET COMPANY
2700-22 North Crawford Avenue, Chicago, Ill.

CHICAGO FAUCETS

NEW MATERIALS & EQUIPMENT

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

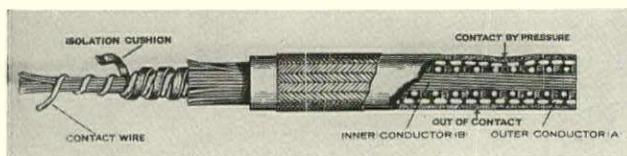


Indirect Water Heater for Oil or Gas Fired Hot Water Boilers

Bell & Gossett, 225 North Michigan Avenue, Chicago, have announced the "B & G Double Duty" indirect water heater adapted to oil or gas fired hot water boilers. The heater, in addition to supplying hot water indirectly from the hot water heating boiler, makes use of an aquastat that maintains a constant boiler temperature. This is in addition to the usual room thermostat, and is claimed to avoid the usual lag in systems where the boiler temperature falls before that of the room.

Improvements in Balsam-Wool

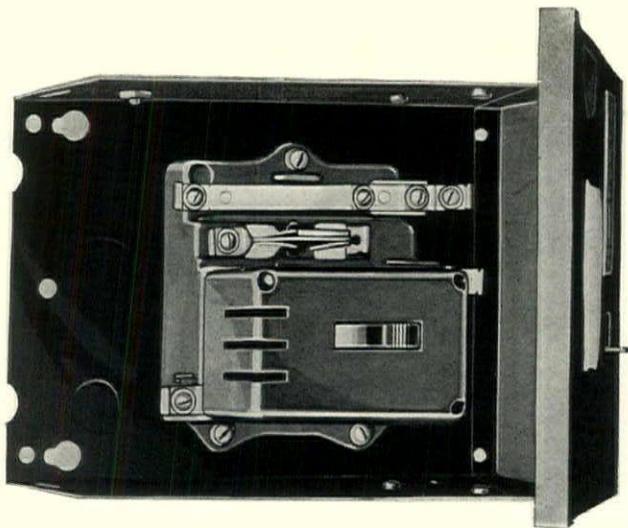
Seven new improvements have recently been made to Balsam Wool blanket insulation, manufactured by the Wood Conversion Company, Cliquet, Minn., namely: heavy water-proofed creped paper liners giving 25% stretch; increased flexibility, toughness and strength, making it easier to tuck in; stronger binder between liner and wool mat, due to use of creped paper; all 17" and 25" material increased $\frac{1}{4}$ " in width to make application easier; trade-marked every six feet for identification; all 17" and 25" widths ruled and scored for quick and easy flanging between framing members; and a mark every 12" in length, simplifying measurement of the material.



Electrical Cable Acts as Switch Along Entire Length

The Bishop Wire and Cable Corp., New York City, has brought out a water-proof, dust-proof and acid-proof cable about the size of an ordinary lead pencil which, when compressed at any point in its entire length, throws on a switch turns on a light, sounds a signal or does other things which heretofore have required direct contact with a button or switch at a stationary point. In other words, the cable is one continuous switch. The cable is composed of two conductors, enclosed by an outside insulation, which are left bare but separated from each other by an "isolating cushion" of rubber. When pressure is applied, this "isolating cushion" yields and permits the outer conductor to contact with a wire which, in turn, is always in contact with the inner

conductor, thus closing the circuit. When pressure is relieved, the "isolating cushion" returns the outer conductor to its normal position. Used with a relay switch, the Bishop Control Cable becomes operative at the point of pressure, which is wherever the operator happens to be standing. Suggested uses include electrical devices in houses, such as lights and radios; in banks and other commercial places as protection against holdups; in mines and other underground places where, in an emergency, signal buttons may be handy; in power plants as life and time savers; and in automatic traffic control.



Square D Meter Circuit Breaker

Fuses are eliminated in the new Square D meter circuit breaker, made by the Square D Company, Detroit, Mich. The handle indicates the on, off and tripped positions, and can be locked or sealed in the off position; it is toggle-operated and can be reset as easily as an ordinary toggle switch can be operated. Works like a fuse, either opening a short circuit or closing on one. The box is arranged for ordinary meter trims and banking troughs.

Machine-Made Tiles

Faience effect in a machine-made tile called "Flintcraft" is announced by the Flint Faience and Tile Company, Flint, Mich. The tiles are declared equally suitable for wall or floor surfaces, and are available in a number of colors and standard shapes.

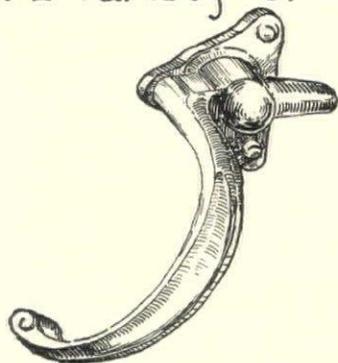
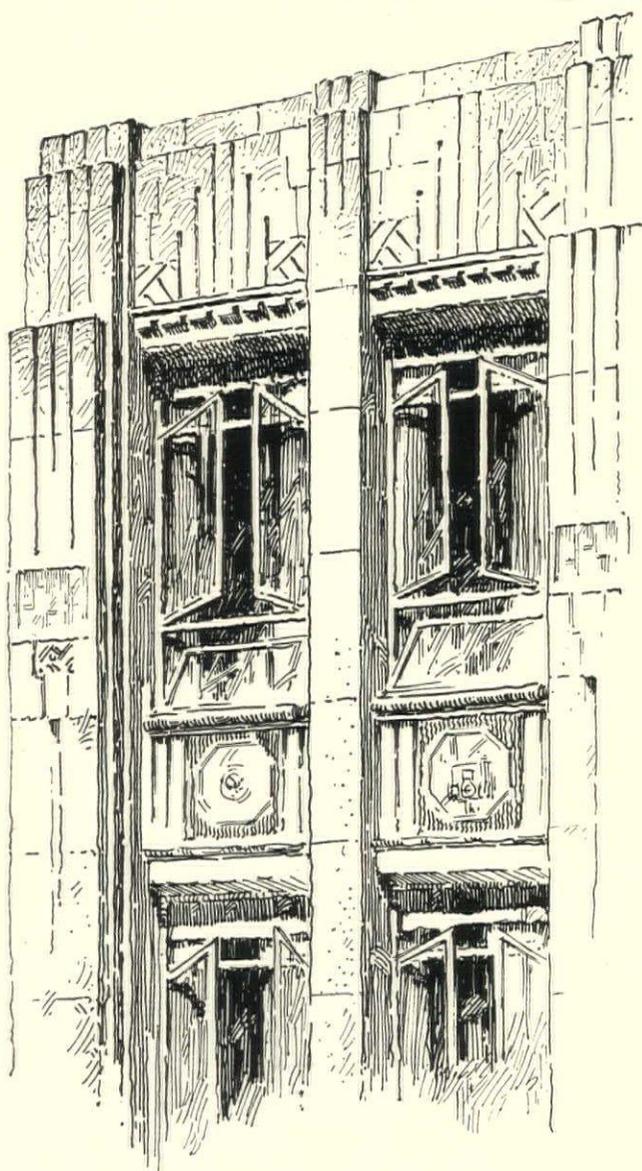
Burt Ventilators of Aluminum

Burt ventilators, manufactured by the Burt Manufacturing Company, Akron, Ohio, can now be had in aluminum and are particularly suitable for direct contact with fumes of ammonia, sulphuric acid, acetic acid, nitric acid, formaldehyde, tannic acid, sulphur, and many other highly corrosive gases. Made in various types, such as fan ventilators, cone damper ventilators, revolving ventilators, and metal and glass top ventilators with sliding sleeve damper.

another new
Fenestra
steel window

The
Fenmark

Designed to harmonize with the architecture of monumental buildings. Vertical leaves swing outward on friction, extension hinges. Lower leaf tilts inward acting as a windguard. Glazed on outside. Heavier sections of solid steel accurately assembled and carefully finished. Hardware of solid bronze. A variety of standard types and sizes. JJJ



DETROIT STEEL PRODUCTS COMPANY
Oldest and largest steel window makers in America
East Grand Boulevard ~ ~ Detroit, Mich.

NEW CATALOGS

Covering What Manufacturers Have to Say About
the Advantages and Uses of Their Products

AWNINGS: A GUIDE TO THEIR SELECTION

Colored illustrations of houses with awnings as made by the Otis Company, 32 Thomas Street, New York City. Bound in boards, and aims to make the selection of correct awnings comparatively easy for any house. Illustrations for important general types of houses are shown in color and appropriate awnings for each type designated. A triple folded-in sheet gives samples of the awning cloths and tells what types of houses each design is suitable for. Explains how to choose suitable valances.

AND NOW DRY LUMBER

An illustrated booklet of much practical value issued by the Southern Pine Association, New Orleans, La., describing the advantages of the adoption by this association of a definite moisture content as part of their grading rules. Explains the advantages of dry lumber, qualities added by proper seasoning, effect of transit on moisture content, the new specifications for southern pine lumber, and a graph giving the comparative values of the southern pines and other softwoods used in the trade.

ROE SAFETY DOOR

Folder describing this entrance door, made with an exterior wrought iron or other metal grille, copper screen, and central opening panel that enables the door to be left wide open and yet retain all the protection of a door that is closed and locked. Suggested uses include apartment houses, private front and kitchen entrances, etc. Describes various types of these doors, made by the Roe Safety Door Company, 228 North LaSalle Street, Chicago, Ill. A.I.A. file no. 19 e 15.

INSPIRATION OF THE PENNSYLVANIA COLONIAL FARM HOUSE

Folder showing examples of Pennsylvania colonial architecture with details of their roofs and issued by the Pennsylvania Slate Institute, Pen Argyl, Pa. A.I.A. file no. 12 d.

IMPROVED GENERATING SETS FOR STATIONARY SERVICE

Bulletin No. 106 of the Troy Engine & Machine Co., St. Joseph, Mich. Covers Engberg direct current generating sets, describing their various parts.

ELECTRIC LIGHT ON THE FARM AND IN RURAL DISTRICTS

A thirty-six page illustrated booklet issued by the Edison Lamp Works of the General Electric Co., Harrison, N. J., information being compiled by A. L. Powell and A. D. Bell. Explains how

the various rooms should be lighted, lighting of the farm buildings, and yard lighting. There are many illustrations showing the lighting in typical rooms and farm buildings.

DOMESTI-GAS

"Domesti-Gas for Hotels, Clubs, Restaurants, Schools and Public Institutions Beyond the Gas Lines," as manufactured by the Gas Research Company, Dayton, Ohio, is illustrated and described in a number of loose-leaf sheets. Gives illuminating gas from charcoal at a cost said to be less than the average city manufactured gas. A.I.A. file no. 29 f 1.

WILLIAMS REVERSIBLE WINDOW EQUIPMENT

Illustrated booklet of the Williams Pivot Sash Co., Cleveland, Ohio, describing this company's double hung and plank frame types of reversible window equipment. Gives details of construction of these windows in the wall, manner of weather stripping, and similar information. A.I.A. file no. 27 c 1.

CONCRETE JOIST CONSTRUCTION

"The Shurebond Unit System of Concrete Joist Construction" is described in a folder of the Goldsmith Metal Lath Company, Cincinnati, Ohio. Explains how the metal tile for forms which act as molds are incorporated with the structure. Has progress pictures. A.I.A. file no. 4 e 53.

FLOODLIGHTING FOR RECREATION

Bulletin 2173 of the Crouse-Hinds Company, Syracuse, N. Y. Has pictures and informative information about floodlighting stadiums, athletic fields, tennis courts, parking space, swimming pools.

CRITTALL METAL WINDOWS

Catalog of the Crittall Casement Window Company, Detroit, Mich., which is reproduced from Sweet's 1930 Catalog for the benefit of those who desire to have the catalog in separate form.

LUMINOUS HARMONY IN THE HOME

Illustrated booklet of the Edison Lamp Works, Harrison, N. J. Discusses lighting each room in a house, written from the popular point of view, from both the illuminating and decorative standpoint.

SWARTWOUT EXCESS PRESSURE REGULATION

Bulletin 3-19 of the Swartwout Company, 18511 Euclid Avenue, Cleveland, describing and illustrating pressure valves manufactured by this company.

LOOKING AHEAD IN AVIATION LIGHTING

Illustrated booklet of the Edison Lamp Works, Harrison, N. J., by C. E. Weitz in collaboration with L. C. Porter and D. C. Young. Purpose of bulletin stated to be a summary of the part light is already playing in the service of aviation and to call attention to requirements of airport lighting that are likely to be encountered in the future. Covers lighted airways, airport beacons, boundary lights, airport and airway lighting, airport building lighting, airplane lighting equipment.

WESTINGHOUSE COMMERCIAL LIGHTING

Catalog 219-B of the Westinghouse Electric and Manufacturing Company, South Bend, Ind. Describes and illustrates lighting equipment for commercial interiors of any size. Included is the procedure for designing a lighting system and a list of some of the more prominent Westinghouse installations. Sizes and prices of all different types of lighting fixtures are given with information for ordering. A.I.A. file no. 31 f 2.

ECONOMY PUMPS

Booklets of the Economy Pumping Machinery Co., Chicago, Ill., illustrating and describing the various types of pumps manufactured by this company. Gives details of construction of these pumps, and describes the company's engineering department serving all types of pumping problems. The booklets are in a series of three, respectively covering open shaft vertical and horizontal non-clogging pumps, split case multi-stage centrifugal pumps, and non-clogging sewage ejectors.

ARCHITECTURAL REVIEW OF GASEOUS TUBE LIGHTING

Booklet of Claude Neon Lights, Inc., 41 East 42 Street, New York City. Shows the possibilities of lighting with luminescent tubes and tells how architects in many cities are utilizing this type of decorative lighting for different purposes.

NEWMANCO BRONZE STORE- FRONTS, WINDOWS AND DOORS

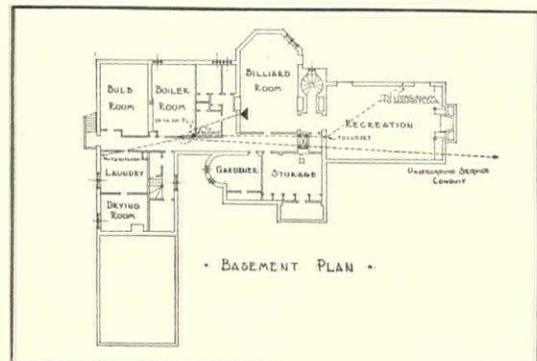
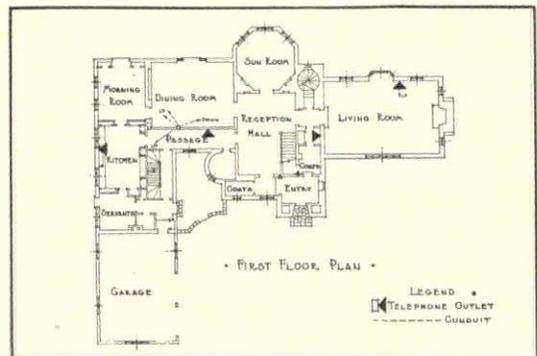
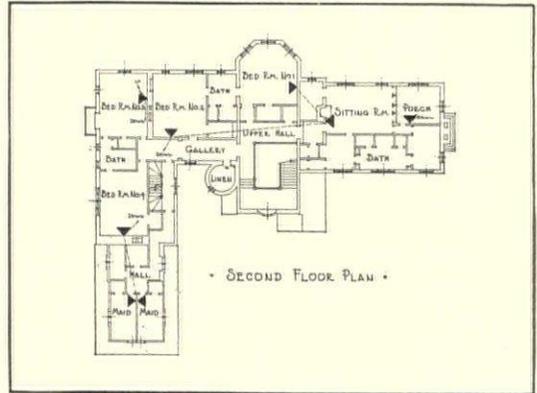
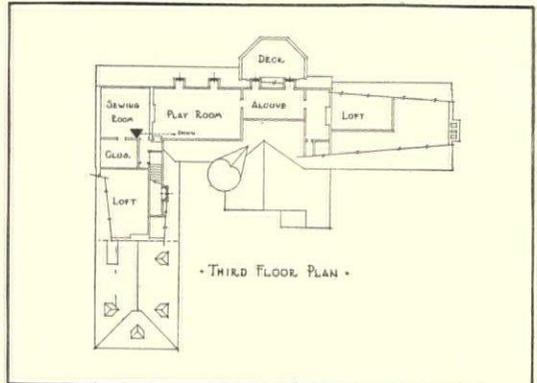
Reprints from Sweet's 1930 Catalog illustrating, describing and giving construction details of bronze storefronts, windows and doors manufactured by the Newman Manufacturing Co., Cincinnati, Ohio. A.I.A. file no. 15 a.

DESIGNING FOR ARC WELDING

A sheet issued by the Lincoln Electric Co., Cleveland, Ohio, containing illustrations and text showing the comparative design of riveted and welded joints. A.I.A. file no. 13 c 2.

★

For Distinctive homes... Telephone Convenience is especially Important



Complete telephone convenience is provided in the residence of Mr. Wallace D. Bowles of Seattle, Washington, by fourteen telephone outlets, including one in the basement billiard room. The telephone wiring is carried in conduit built into the walls and floors.
 GEORGE WELLINGTON STODDARD, Architect, Seattle.

IN HOUSES of marked individuality certain things stand out . . . beauty and smartness of design . . . durability of materials . . . provision for the convenience and comfort of the occupants . . . anticipation of future needs. These latter are things to which architects today are giving particular attention. That is one reason they are increasingly interested in *telephone convenience*.

Home owners everywhere are welcoming this modern note: *telephones throughout the house*, wherever they will save steps and time and effort in placing and answering calls. Many architects are providing for it in new and remodeled houses by specifying conduit for the telephone wiring during construction. Telephone outlets are thus made available in nearly every room; the owner can use as many of them as he desires, and he can have the improved appearance and protection against service interruption that come from concealed wiring.

The Bell System is constantly studying matters pertaining to its service, and has much data of interest to architects. It is desirable that you consult freely with representatives of the local Bell Company in planning the telephone arrangements for specific projects. There is no charge. Just call the Business Office.





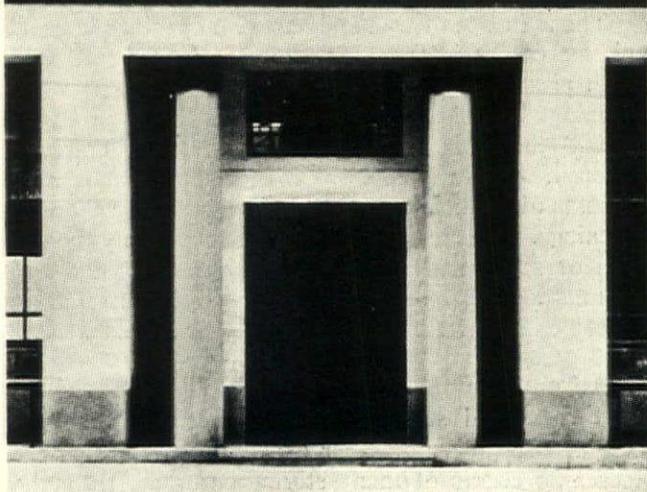
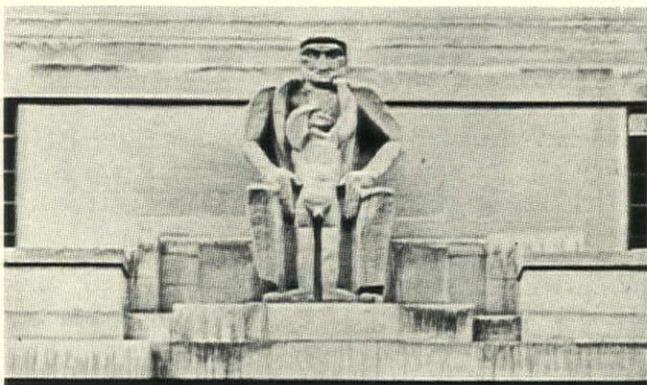
THE NEW HEAD OFFICES OF THE
UNDERGROUND RAILWAY, LONDON

A NEW NOTE is struck in the architecture of London by the severely modern design of the new head offices of the Underground. Adams, Holden & Pearson, Architects. From The Architectural Review, Nov., 1929

...In the EPSTEIN manner

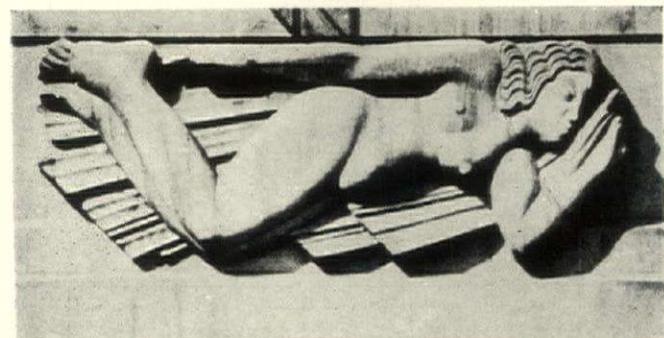
Sculptured figures on the new head offices of the Underground Railway, London, arouse much comment

FIGURES of the winds carved in stone on the job have given the title of "The Temple of the Winds" to the new office building of the Underground Railway in London. "MYRAS," in the November, 1929, issue of *The Architectural Review of London*, says, "The building is perpendicular; the sculpture is longitudinal and not sufficiently extended. There is nothing incongruous between the upright and the horizontal except in proportion... Yet the building is a noble one, and in its simplicity and severity offers an opportunity for exercising principles evolved by the new sculpture."



DAY, sculptured by Jacob Epstein, is shown at the right. Located over the Southeast entrance

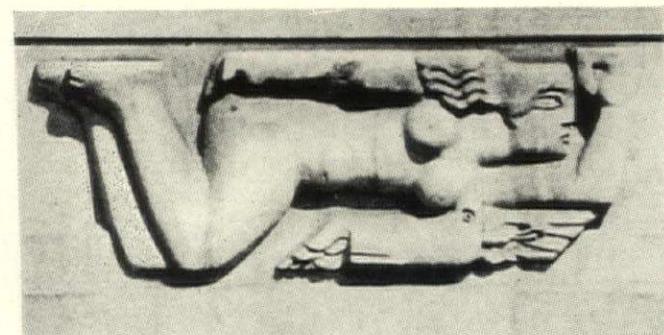
NIGHT, over the Northeast entrance and executed by the same sculptor, is illustrated at the left



South Wind—Eric Gill, Sculptor



North Wind—Eric Aumonier, Sculptor



West Wind—F. Rabinovitch, Sculptor



East Wind—Allan Wyon, Sculptor

New Facts About Frame Construction

(Continued from page 33)

cause even greater reductions but are not likely to occur under practical conditions.

Framing a door and window into a horizontally sheathed panel, as shown in Figures 4 and 5, decreased strength and stiffness 20 per cent and 30 per cent respectively. Results of numerous other combinations may be seen in Table 2.

WOOD lath and plaster, according to the tests, contribute surprisingly to strength and stiffness of a building. Installed on a panel without sheathing it afforded seven times the stiffness and four times the strength to be expected from horizontal sheathing. It increased the stiffness of a horizontally sheathed panel with window and door openings over 200 per cent. Wood lath and plaster with horizontal sheathing and let-in braces around openings, as in Figure 6, made a panel slightly stiffer than diagonal sheathing with the same openings, and nearly as strong.

The influence of wall and partition openings in causing plaster cracks is thoroughly apparent from the results with plastered panels. The top plates of those without openings moved about $\frac{3}{8}$ inch and a thrust of 8,000 to 12,000 lbs. was necessary before plaster cracks developed. 800 to 1500 lbs. thrust and only a few hundredths of an inch movement caused cracks in those with openings. The cracks in Figure 6 show plainly the direction of stress and the tendency towards plaster cracks around openings. Cracks like those in Figure 6 are observable in almost any poorly framed or braced structure.

THE question naturally occurs as to whether the extra stiffness and strength of walls, secured by bracing, diagonal sheathing or other expedients, will survive the loosening effects of many storms occurring throughout the life of a building. To discover what these effects might be, several panels were set in a vertical position on the table of a large box-testing machine. This machine is designed to jerk a box of merchandise, placed on its table, sharply back and forth, imitating the racking and swaying effect of railroad or truck transportation.

In this instance the "throw" of the machine table on which they were placed was such as to jerk the panel out of plumb at each vibration about two-thirds as far as it would go under the regular pressure test without sustaining permanent damage. Two horizontally sheathed panels and two diagonally sheathed panels were thus subjected to 50,000 cycles of vibration. One panel was horizontally sheathed with green lumber, and after being allowed to dry out one month, was given one million cycles of vibration.

50,000 cycles, 100,000 severe endwise jerks, did not decrease the stiffness or strength of the dry-sheathed panels perceptibly. The losses in stiffness and strength of the green-sheathed panel after 2,000,000 jerks was only what might be expected of a green-sheathed panel subsequently dried out.

Over four-fifths of the houses in this country are of frame construction. When the number of garages, shops, barns and other farm buildings built of lumber are added to this total, the significance of the tests described above becomes apparent. Easily a billion dollars is expended on lumber farm buildings annually. Perhaps another

billion is spent on small garages, on airplane hangars and on other light framed structures. Much more is expended on dwellings. A few simple precautions, such as use of diagonal sheathing; or effective let-in bracing, the use of heavier nails on horizontally sheathed structures or of more nails on those diagonally sheathed; the employment of wood lath and plaster with its tremendous stiffening influence on the structure; and of reasonably dry lumber, will increase the strength and stiffness of these buildings many times over that now generally realized, and will extend their consequent prospect of structural durability correspondingly.

IN portions of the country threatened constantly with earthquakes or destructive winds, the further consideration of safety to life makes it almost imperative that the benefit of such precautions be widely advertised and certain features perhaps included in building codes.

Commenting on the tests, the Forest Products Laboratory's report states:

"Plaster on wood lath may furnish all the rigidity necessary for most purposes under normal conditions. However, as the plaster begins to crack from shrinkage, settlement, or other causes, the rigidity of the sheathing comes more and more into play, thus in violent winds or earthquakes it is the sheathing that becomes all important in preventing complete destruction. It is logical too that slightly more resistance than is necessary to resist ordinary distorting influences will in the long run more than pay for itself through diminishing, if not entirely eliminating, needless annoyances and frequent maintenance costs that result from the structure getting out of alignment. Diagonal or well-braced horizontal sheathing affords far more rigidity than horizontal sheathing without bracing. Either diagonal or horizontal sheathing is important from the standpoint of insulation and also assists in distributing concentrated loads. The amount of stiffness essential to good construction is not yet known and must be determined by experience.

"THE old 'braced-timber' frame which originated in New England had far more rigidity than was needed perhaps, but the hundreds of old houses still standing bear witness to the fact that rigidity went hand in hand with permanence. Today we cannot afford to use in moderate priced houses the heavy type of construction employed then. The modern adaptation of the braced frame with its small built-up corner posts and light corner bracing, or the present-day balloon frame with the studs carrying through for two stories, represents a great economy of material over the old style of braced frame.

"Through a modern tendency to cut costs, bracing is often omitted and horizontal sheathing is used because it is cheaper to put on. Although the inexpensive house is not necessarily an unsound house, nevertheless certain fundamental principles should be kept in mind so that when construction methods are employed to reduce costs the methods will be such that will result in no harm to the structure. Further, the added cost of adequate bracing is so small that it can hardly be felt in the total cost of the building."

“Well, GEORGE,



—how do you like the new floors?”

THE architect sees the floor as part of the decorative scheme. Building owners and managers look on floors as an investment factor. But the one who takes care of the floor—be he janitor, porter or domestic servant—is usually concerned with just *one* thing—will the floor make *his* work easy, or difficult?

And since the question of care and cleaning has a definite bearing on floor cost, appearance and usefulness—let us consider floors, for a moment, from the human angle of George, the janitor. The easier the cleaning process, the more likely your floors will be properly cleaned, retaining their original attractive appearance.

Install floors of *Sealex* Linoleum or *Sealex* Treadlite Tile and George's toil is considerably reduced—for *Sealex* floors are surprisingly easy to clean. They are spot-proof and stain-proof. No need to use expensive, powerful cleaning agents. Sweeping with a push-broom or a light mopping is all that is necessary to remove dirt and spilled things. Waxed occasionally, the smooth, lustrous surface of a *Sealex* floor is a thing of beauty.

Sealex Linoleum and Tile are modern floors—handsome, resilient, prac-

tical, durable. Buildings which serve residential or business tenants are using them more and more to attract tenants and cut costs.

They may be as elaborate and luxurious—or as simple and inexpensive—as you desire. Solid-colored floors of *Sealex* Battleship Linoleum, for example, are probably the cheapest good floor money can buy; whereas floors of *Sealex* Treadlite Tile are “custom-laid” floors of great beauty which make possible the reproduction of any pattern, motif or design, in plain or marble-ized materials.

When *Sealex* floors are installed by an Authorized Bonded Floors Contractor, the owner is assured of highest quality materials and expert workmanship. The work of our Authorized Bonded Floors Distributors—located in all principal cities—is backed by our Guaranty Bond, issued by the U. S. Fidelity and Guaranty Co. of Baltimore, Md.

Let us tell you more about our Bonded Floors Installation Service. Write for our booklet, “Facts You Should Know About Resilient Floors for Offices, etc.” Address Department K.

BONDED FLOORS
Sealex Linoleum and Tiles  *Backed by a Guaranty Bond*

CONGOLEUM - NAIRN INC., 195 BELGROVE DRIVE, KEARNY, N. J. AUTHORIZED CONTRACTORS ARE LOCATED IN PRINCIPAL CITIES

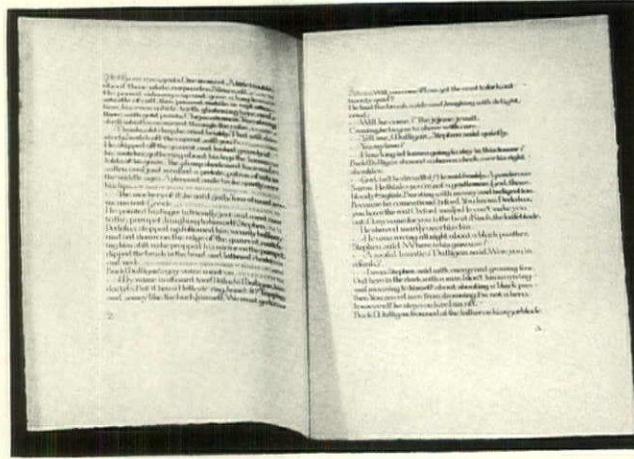
Writing as it was done 1000 years ago

(Continued from page 58)

There is a rule for the proportion of the margins of the writing—equally applicable to printed books but seldom used—which is as follows:

When the book is opened the relation between the top, side, and bottom margins should be 2:3:4; the space in the centre of the two pages between the writing being equal to the side margin.

It is not possible to write well without guide lines and these lines should be drawn on the paper with an extremely hard pencil or ruled on with a metal buffer. In either case they are not erased after the writing is done but always left as they add to the appearance of the finished page. The vertical guide lines are ruled from the top to the bottom of the page and the horizontals are ruled between the verticals without crossing them.



A small drawing board fixed at an angle of about sixty degrees to the horizontal will be found most convenient for comfort and ease in writing. A piece of paper should be pinned down completely across the board and about one-half way up. The writing is done on paper slipped beneath this shield; this keeps the writing line always at the same height. The steep slant of the board is used so that the pen will always be in a

horizontal position thus enabling the writer to regulate the flow of ink. I started to transcribe "Ulysses," nine hundred odd pages of fine type. Did I finish it? No! But I did learn how to write in the old manner and the modern adaptation of the goose quill pen I used constantly as I found that I could produce good lettering with it far quicker than with an ordinary pen.

1803 Facade

(Continued from page 61)

was how to make a sixteen-story bank and office building look as if it had anything to do with 1803. Archeology is well enough but archeologically "correct" steel and concrete, plate glass and elevators do not make much sense, and the renting agent has very little sympathy with sentiment if it cramps his "rentable areas".

ADDED to this there was the fact that the bank did not wish to move into outside quarters during the building operations. This meant working out a building which could be built in two parts. The bank was to continue business in its old quarters until half of the new building was built, giving new quarters in part of the new building so as to leave the old free to be destroyed.

Gradually the plan took shape. The requirements of renting the upper floors brought about a U shaped plan with a central open court on State street and side wings on Pearl and James streets.

But then, what of Mr. Hooker's facade? It was not half-way between Pearl and James streets. It fell on no axis of the plan. But that is where modern methods took charge of archeology. Why not make the old front the central motif of the lower floors between the wings?

Why not indeed? And that is just what happened to Mr. Hooker's building. All parts of the exterior which had been built subsequent to 1803 were wrecked. The old front was stripped down to its wall thickness, which was carefully braced, cradled and moved up State street until it came to rest on the main axis of the building. So the little old front took its place in the scheme as the "entrance feature" of the new building.

The front was literally moved "up" too, because the slope of State street from Pearl to James streets is

quite steep and the moving from east to west necessitated elevating the level of the ground floor about four feet.

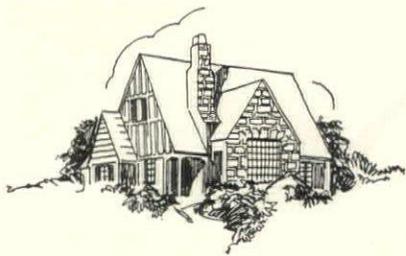
This is briefly the story of the exterior of the new Albany State Bank, the reason it looks the way it does.

The exterior walls from sidewalk to water table are of Massachusetts granite; from water table to third floor level of Massachusetts brownstone; the remainder of the building of Ohio red face brick, with trimmings of Massachusetts brownstone. The exterior store front windows from basement to first floor, inclusive, are of bronze, the rest of the windows of hollow steel.

The building was erected in two sections. The bank business during the process of construction was carried on in the old building located at the corner of State and James streets. Temporary banking quarters were provided on the first four floors of the new building on Pearl street, and after the bank moved to these temporary quarters, the old structure was demolished.

ALL these statistics do not sound much like the early nineteenth century and perhaps, considering how little was really left to Hooker's original building, it is stretching a point to say that the present building has anything at all to do with 1903. But we did attempt to put ourselves in the frame of mind which might have been Hooker's if he had had our problem to solve and, while the result is perhaps rather stiff and "old fashioned" compared with what one might have done in this early twentieth century, the fact remains that there was a charm in the very stylistic stiffness of the late eighteenth and early nineteenth century, and that there is something to be said for not ruthlessly scrapping whatever tradition is left to us. At any rate, that is the reason for the brownstone and brick of the Albany State Bank.

The ENGLISH COTTAGE *in* MODERN COLOR

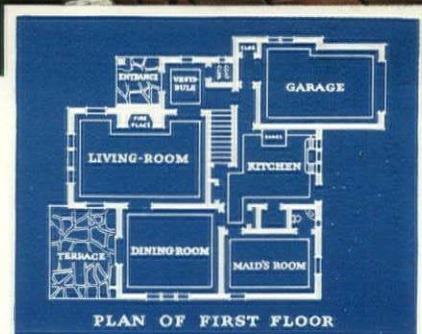


Austerity is relieved by color and design
in the Embossed Armstrong's
Linoleum Floor

PLAIN walls with ceilings structurally simple characterize the English cottage. Interesting, the effect, but lacking in vitality if based upon a plain floor—lacking in what this color-conscious day calls zest, pep, verve! First visualize the appearance of the room on this page with a plain monotone floor. Then compare with that picture, this other. Put a modern floor of colorful Armstrong's Linoleum in this room and notice the effect. No loss of the essential air of quaint countryside quiet—rather the emphasis of contrast.

No matter what interior effect you create, no matter what color scheme you carry out, you will find an Armstrong pattern admirably suited to your purpose. And your selection will be practical as well as decorative, for every Armstrong Floor is foot-easy, permanent, simple to care for—made spot-proof, stain-proof, worry-proof by the new Accolac Process, which produces a satin-smooth surface sealed against dirt with a tough nitro cellulose lacquer.

Let us send you a folder of complete linoleum information for your files. Ask for our new file-size specification book. You can also consult our specifications in the current



LIVING-ROOM AND PLAN OF FIRST FLOOR. ENGLISH COTTAGE BY ARCHITECT WILLIAM CLIFFORD, JR. THIS FLOOR IS ARMSTRONG'S LINOLEUM, NO. 6042.

Look for the
CIRCLE A
trade-mark on
the burlap back



"The English cottage type of interior can meet the present American demand for color by the use of modern materials."

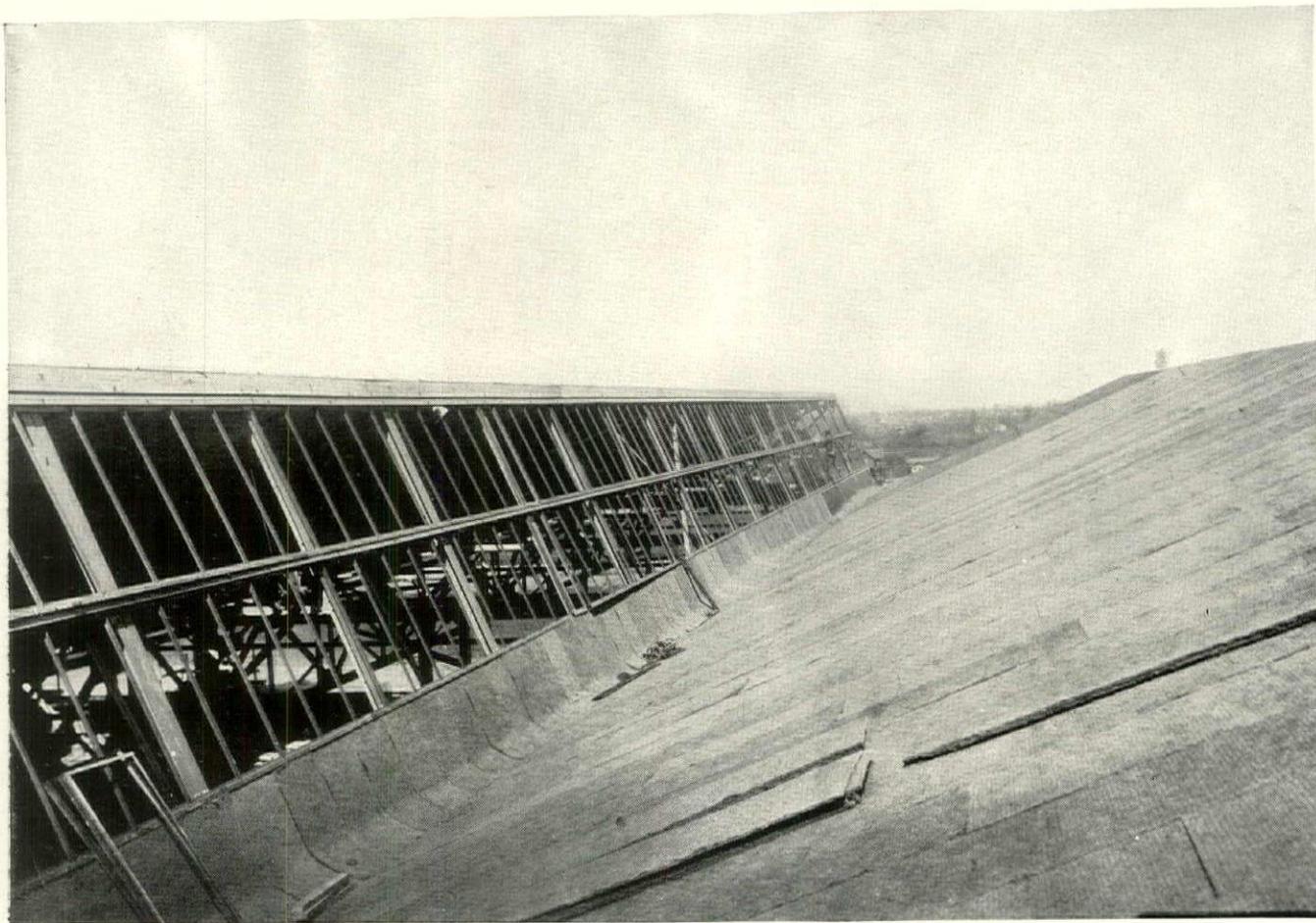
ROGER BULLARD, A. I. A.

edition of Sweet's Architectural Catalog. Ask for samples and colorplates of designs if you want them. Discover for yourself how much these modern floors offer you—in beauty, practicability, and economy. Address the Armstrong Cork Company, Floor Division, Lancaster, Pennsylvania.

Armstrong's Linoleum Floors for every room in the house

PLAIN · · JASPÉ · · INLAID and EMBOSSED · · also ARMSTRONG'S LINTILE AND CORK TILE

O n the building... off your mind



It may be a Carey Feltex Built-up Roof that best "fits" the building you are designing. It may be a Carey Asbestos Built-up Roof. Or, perhaps, in a single specification, a combination of the two. But whatever it is, you can be sure that the number of plies, the weight of the plies, and the thicknesses will be *right*. The application, too, for Carey's own experts will do the work. And, as every architect knows... once the Carey *gold bond* Built-up Roof is on the building, it's completely off your mind!

Have us tell you, in detail, about Carey Roofing Specifications.

The tough, long-fibred felts are Carey-milled. The asphalts are Carey-refined. And into every Built-up Roof Carey builds a fifty-year experience.

Carey
BUILT UP ROOFS

"A ROOF FOR EVERY BUILDING"

THE PHILIP CAREY COMPANY Lockland, CINCINNATI, OHIO

The Ten Year Test...

Proof in a Decade of Service



Architects:
Smith, Hinchman & Grylls
Contractors Lower 7 Floors
Pontiac Construction Co.
Contractors
Upper 12 Floors
H.G. Christman-Burke Co.

TEN years ago, the Michigan Bell Telephone Company erected seven stories of its building at Detroit, Michigan.

Ten years later, twelve floors were added to the original structure.

Different contractors were employed on each job but on both jobs—ten years apart—Meyer Steelforms were used.

Today, as ten years ago, Meyer Steelform service

meets the most exacting requirements... just as concrete rib floor construction is meeting present day demands for lower construction costs and greater speed of operation.

CONCRETE ENGINEERING COMPANY

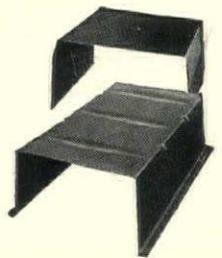
General Offices: Omaha, Nebraska

Sales Offices and Warehouses: Chicago Detroit Milwaukee
Minneapolis St. Paul Des Moines Kansas City St. Louis
Dallas Houston San Antonio Oklahoma City Los Angeles
Pittsburgh Oakland San Francisco



MEYER

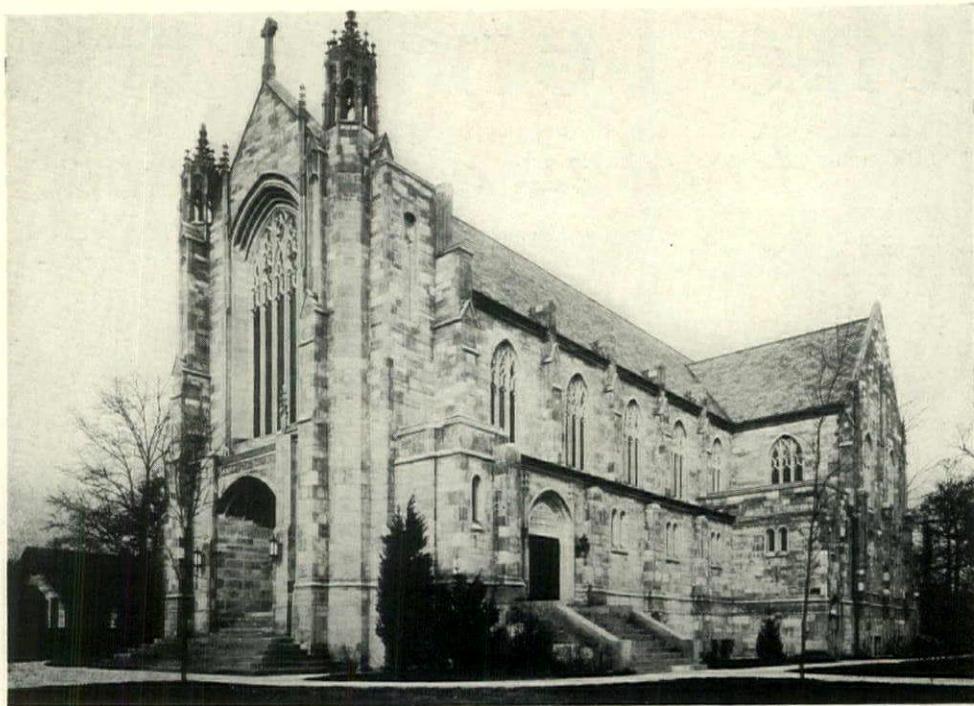
Steelforms



THE STANDARD

THE ORIGINAL REMOVABLE STEELFORMS FOR CONCRETE JOIST FLOOR CONSTRUCTION

A fine type of city church, with admirable proportions, excellent detail and workmanship. The nave is lighted from above by clerestory windows. Tabernacle Presbyterian Church, Indianapolis, Ind. Designed by Corbusier, Lenski and Foster, architects, of Cleveland, Ohio



Not Every Architect Can Design a Church

(Continued from page 24)

soft lights create impressions of beauty and mystery impossible in the glare of uncovered lights. High windows, which introduce light from above and shut out sights and sounds below, are desirable.

Vestibules should be used to protect the nave from distracting noise and from draughts.

In large buildings, portions of the transepts and aisles may be treated as chapels, being combined with the nave proper for general services attended by the entire congregation.

IN planning a church we should begin with the chancel, for the building may be thought of in terms of the human form. This implies an architectural termination of dignity and impressiveness, well proportioned to the scale of the building itself and dominating all other parts by an evident supremacy. Have adequate chancels with the pulpit on one side and the lectern on the other, and a communion table, if not an actual altar, centrally placed in the rear as the dominant feature.

The chancel must be of ample proportion, and elevated so as to give an impression of dignity and exaltation above common things and to render liturgical acts visible to all. It must, however, not be so high as to appear "stagnant" or steep. In churches seating 400 or even more, three steps will usually be sufficient. These must be wide and low, never more than six inches in height nor less than fourteen inches in width. They should run across the entire front of the chancel, or at least cover the space between chair stalls if the choir be placed in the chancel.

Experience shows that many architects are not fully informed as to the practical requirements of chancel planning, and their first sketches often indicate unstudied space which later proves inadequate. If we begin with the rear wall and go forward we must allow for the altar and its retable a depth of at least two and a half feet. The predella or platform on which the altar

stands, and which also serves as a foot space for the minister, requires at least two feet. A space of two feet and a half is required on the level below this for two ministers. The communicants' rail, and the kneeling space in front of it, require an additional twenty inches or more. The chancel proper, one step below the sanctuary level, should be at least six feet deep in the smallest church and considerably more in a larger one. Thus, practically fifteen feet, in addition to the entrance steps, must be allowed for the chancel of a small church. If choir stalls are to be placed in the chancel an additional depth of six or eight feet will of course be required.

The square east end with a large altar window is characteristic of English Gothic. Whenever such a window is employed it must be filled with rich, deep-toned glass to cut down the light and reduce the importance of this feature in the composition.

The chancel should never be carpeted. Chancel floors should be covered with stone, tile, slate, terrazzo or similar material. "Ecclesiastical tiles" made especially for church use, are almost noiseless, being laid solidly on concrete beds, and they constitute perhaps the finest material for the chancel.

THE lighting should be ample, yet soft and well distributed. Effective natural lighting may be secured by relatively small windows high in the side walls. The altar should be the brightest place in the chancel, but the use of spot lights and similar theatrical devices is not good.

The altar should be of ample size, at least six or seven feet long, even in the smallest church. In form and material it should be substantial, permanent, monumental. The best material is stone, but hard wood is permissible if construction be massive and thorough. A reredos adds architectural dignity and character. The general effect of the latter should be vertical rather than

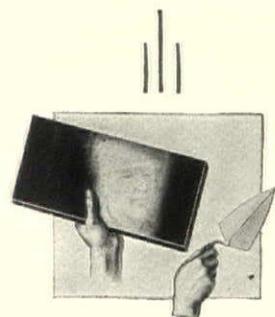
VITROLITE



A TYPICAL VITROLITE KITCHEN
IN A ST. LOUIS RESIDENCE

The O. K. of the owner is easy to win for an easily kept wainscoting and ceiling material like Vitrolite. Fresh and glistening for the life of the building. It can not stain, craze, discolor or ever grow dull. A damp cloth instantly restores its newness.

The wide range of colors in Vitrolite, and unlimited flexibility for design, invite architects to employ this fused, vitreous slab in forthcoming residential and industrial construction. Detailed specifications showing how it is installed sent on request.



THE VITROLITE COMPANY

ROOM 1101-F, 120 SOUTH LA SALLE ST., CHICAGO, U. S. A.

FACTORY: PARKERSBURG, W. VA.

Akron • Atlanta • Baltimore
Billings • Birmingham • Boston
Brooklyn • Buffalo • Cincinnati
Cleveland • Dallas • Denver

Detroit • Houston • Jacksonville
Kansas City • Los Angeles • Milwaukee
Minneapolis • Nashville
New Orleans • New York

VITROLITE
"BETTER THAN MARBLE"

Omaha • Philadelphia • Pittsburgh
Portland • Providence
San Antonio • San Francisco
Seattle • St. Louis • St. Paul

Havana • Calgary, Alberta
Toronto • Mexico City • London
Colombia, S. A. • Johannesburg
Osaka • San Juan • Melbourne

horizontal. A broad and low reredos surmounted by a large window dwarfs the altar. Where a reredos cannot be obtained a dorsal hanging is effective as a background.

The pulpit must not be an insignificant or movable piece of furniture, but an organic part of the building, monumental in form and material. It belongs in the nave or room of the congregation. It should be elevated, though not too high, should not obstruct the view of the altar, and should be closed or solid in design. The lectern should stand in the chancel near the nave and opposite the pulpit.

Sedilia, or clergy stalls, must be provided in the chancel in sufficient number. They should be of solid and substantial construction and churchly design, giving the impression of being permanent and organic parts of the building. They should be in the chancel proper, and not in the sanctuary. They should not face the nave, but should be placed at right angles to the seats occupied by the congregation, so that the minister, when seated may be inconspicuous.

One of the most difficult problems is the right location of the choir and the organ. Organist and choir are properly members of the congregation and lead it, and do not play and sing to it as at a concert. They interpret the Church's spirit and forms of worship and bind together the different elements and groups. The personalities of the organist and of the choir must not be allowed to obtrude themselves upon the attention of the congregation.

It is my judgment that the trend in all Churches is away from the quartette choir to the chorus choir; and that, unless the Church at large can be convinced that the chancel choir is a real and not an imaginary violation of something fundamental, the future will see a greatly increased number of church buildings in all Protestant Communion with choirs in the chancel or immediately beside the chancel.

A baptistery, either a room separate from or connected with the nave, or another place in the building given especial architectural treatment, should be pro-

vided to contain the font. The best location is probably in a transept, or at one end of the aisle which crosses the chancel, or at one side of the chancel itself.

A sacristy of ample size is required. Too little consideration is usually given this important feature. It must be in organic connection with the chancel and, if possible, should be roomy, well lighted and well heated, with provision for the care of clerical vestments, with washstand and toilet, etc. It should under no condition be so situated that it can be made a thoroughfare.

Provision for altar and chair vestments, sacramental vessels, care of flowers, etc., should be made in a separate or working sacristy. The sacristies, adequate in size, arrangement and equipment, must be taken into account in the original planning of the building.

The architectural development in America during the last thirty years has been more significant than that of three centuries preceding. Nowhere in the world today are buildings being erected which surpass the best work by our ablest men. Unfortunately an enormous amount of commonplace and inferior work is still being produced, but our best is gratifyingly fine.

Church and collegiate architecture have fully shared in this notable advance. Too much credit cannot be given the architects who have been the leading spirits in this program—men like Henry Vaughan, Ralph Adams Cram, Bertram Grosvenor Goodhue, Charles Z. Klauder, James Gamble Rogers. A long line of others almost as important might be mentioned. But I am certain that you will all approve public mention of two whose recent death has been a distinct loss to the profession and to the Church. I refer to J. W. C. Corbusier and Milton B. Medary.

In Church architecture, as in every other field, distinction can be reached only by distinctiveness. The Church makes its best appeal to the world, not by a compromising spirit of worldliness, but by the sincere, dignified, yet humble qualities of reverence and churchliness. Such a true spirit of worship men everywhere instinctively understand and respect.

Once I Had a Client

(Continued from page 47)

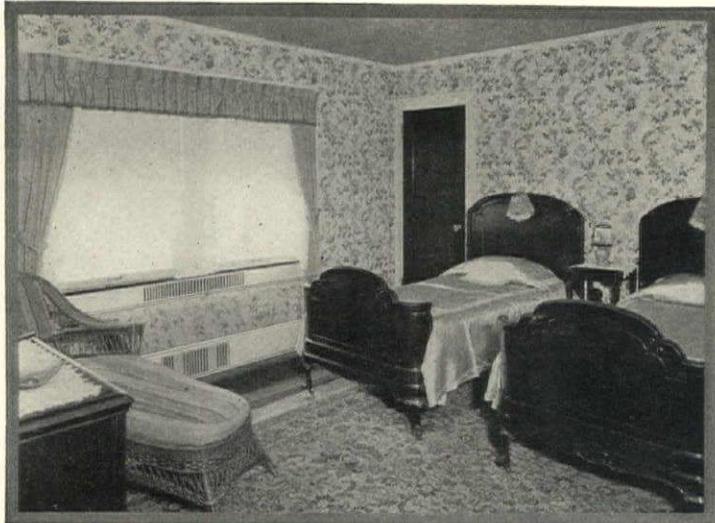
keep up with what is going on in each particular line. If you run across any of them, tell them I will see them on business any time between 8:30 and five. If I get to know him real well and like him, I will *invite* him to come back at five and not later than 5:30 because I go home usually about that time and have to get sort of primed for dinner. But anyway, we can decide by six o'clock whether I stay down town to dinner with him or he goes home with me.

The hardest fellow to go up against is the client who insists your estimates are too high. After he O.K.s preliminary sketches, you go to the trouble and expense of making up itemized estimate of cost for him, then he goes over it, item by item, and shows you where you are wrong. He tells how he went on a deer hunt last fall with a big saw mill owner who told him whenever he got ready to build that warehouse he would sell him all his mill timbers and everything at wholesale and, no

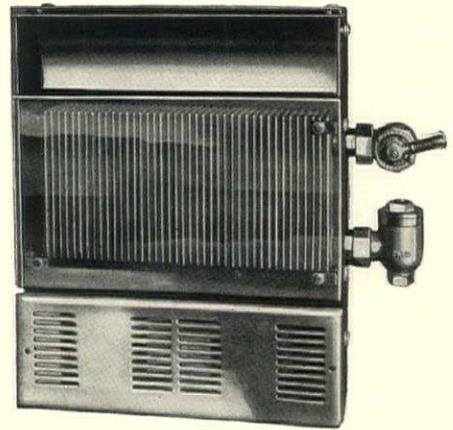
doubt, after the third drink, agreed to pay the freight so he just knows he can cut the lumber bill at least \$5,500. And the idea of common brick costing \$32 in the wall. Why, his father-in-law built a store in 1913 and the brick cost only \$14 laid. But anyway, he tells you to go ahead and get your figures in.

Better look out for this fellow. After the bids are opened, he will be called out of town for a day or two. Then the following Thursday, some son of a wild jackass—this is an old Mosaic expression—will come in with a set of plans and a bid. Mr. So-and-So has gone right over your head and hunted up some down-at-the-heel contractor, who has been through the bankrupt court so often that the referee calls him by his first name, and induced him to put in a bid so low that even an out-of-town contractor wouldn't take it at that price. The other bidders get sore and have a right to. Mr. So-and-So comes in the next morning and makes you

Better Appearance More Economy And Better Heat Distribution



An ideal installation for Aeriet is under windows.

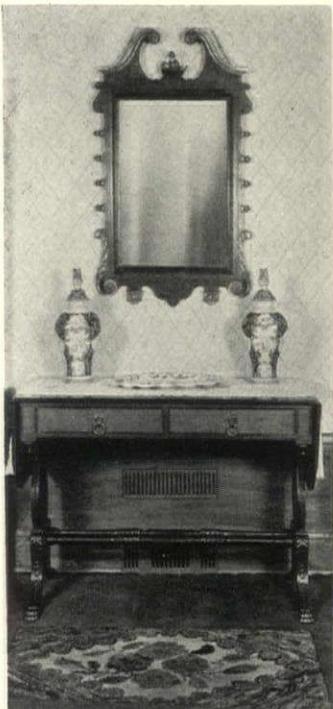


THE new Air-Way Aeriet realizes every desire of the architect and heating engineer. Here is a simple, trouble-proof, super-efficient unit that assures the constant maintenance of any desired temperature in every part of any room.

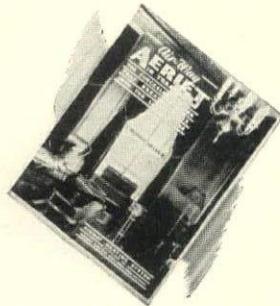
It is wholly enclosed within walls or partitions, presenting no unsightly radiators to interfere with interior arrangements. It projects *warmed* — not hot — air out into the room at the living level from which it rises, rather than directly up the walls to the ceiling as with every other domestic heating equipment. No smudge on walls reveals the location of the Aeriet.

Positive, automatic, thermostatic control in each room eliminates all manual regulation or attention. And yet simplicity of design avoids any necessity for service.

Aeriet is easily installed. Easily removed at any time. It is connected to the usual hot water or steam lines. It is inexpensive in operation. It is the modern domestic heating system.



Aeriet helps rather than hinders interior decoration and artistic furnishing arrangement.



Complete detailed information about Air-Way Aeriet is given in a comprehensive booklet which will be sent free to all who request it. Use the coupon on this page and have all the facts about this new heating equipment.



Please send me the Air-Way Aeriet book.

Name

Title

Firm

Address

AA

AIR-WAY ELECTRIC APPLIANCE CORPORATION

Toledo, Ohio

(Heating Systems Division)

this proposition: "The figures ran so much higher than I expected that I cannot go on with the work, but I am willing to pay your fee for the plans and specifications based, of course, on the last contractor's figures, which are about \$17,000 under your estimate and the lowest other bid. Then too, I will not need supervision, have to save that expense."

If you will look the client up, you will find he has already leased the building on the basis of a good return on your estimate, but in addition to that, he has set out to beat the material men. Funny how these material salesmen flock around a contractor who has a signed contract in his pocket, no matter what his record is. Sell him? Lord, yes. But listen to them beef when the contractor settles with them at the end of the job for 57 cents on the dollar. The owner is happy because he has put over a good one and is netting 9% on a proposition that he assured the tenant would push him to net 6; the architect is happy; that is, if he is fool enough to accept the reduced fee he wouldn't have sense enough to know the difference; and the salesmen are happy because it is volume they are after, just like the hat shop that buys hats for \$288 a gross and sells them for \$2 a piece—it's the volume that counts.

TRY this on some of your contractors. When a new one comes in to get on your list ask him if he can buy his material on open account. The one who has just come from Florida driving that cream colored car with green spokes will swell up like a poisoned pup and tell you he can buy anything he wants. Hasn't had time to establish his credit, but will pay cash and take his discounts on any job up to \$75,000; but you will notice he doesn't come back for the plans that will be out tomorrow. Next week, if you liked the looks of his car, you can find it at the automobile exchange over on Avenue G. Another one will tell you about three concerns where he has been buying for the past six years. Call up the credit manager and sometimes you get this: "Yes, sir, we sell him. Did you say he has a job out of your office? Sure go ahead and close up with him, he's all right." Next week you get a personal call from the credit manager or his assistant and this: "Has that contract been signed yet? Well, that's fine, that contractor certainly knows his business and is a hustler. By the way, he hasn't had much work lately, and has got a little behind with his account. Been owing us a little balance of \$900 for about ten months, but he's all right. Do you think the owner on that contract would guarantee the payment of our account?" "Nothing doing, big boy. If he was not entitled to credit, you should have told me. If you fellows would quit crediting everybody that came along, the bad actors would soon be shaken out of the contracting business and the whole works would be better off."

Have you ever noticed how easy it is for a contractor to make bond? The architects and committees on public work are especially helpless in their selection of contractors so long as every boll weevil that asks for it can get a bond. So many private clients, too, measure a contractor by his ability to make bond and it is as hard to get anything else through their heads as it is for New York City to go Republican.

Architects as a rule are a retiring modest little set of wall flowers, except the perpetrator of that little library episode in Louvain—and I think he was dead wrong.

The next time a prospect kicks on the amount of your fee, open up and tell him, fairly and honestly, that it is nearly fairly and nearly honestly just what the actual cost will be to you for doing the work. Tell him what you pay your men, about how long it will take, tell him what your gross expense was last year. At first he will think you are lying, but you show your sincerity in your eyes and he will get a different angle on it and free his mind of the idea that you are charging such and such a fee because everybody else is charging the same fee for that class of work. If you fail to land him with this method, just send me the bill.

In that paragraph back there where I mentioned the salesmen and said I wanted only as much work as I could handle with a small force, I forgot to mention the secretary—a very important adjunct. I have a combination, secretary in the front office, stenographer in here. She is better in the front office. She likes salesmen, too. One comes up here pretty regularly, a tobacco salesman. I specify a lot of tobacco. No, she will not go out to lunch with you, especially if you are married, but she will take candy and will be sure to see that I use your catalogue numbers when I come to writing that specification.

I hear that new prospect out in the front office now. He has spent an hour or more each day with me for the past two weeks. One of those detail fiends. Wants to know beforehand exactly the kind of each material, who makes it, what it will cost and how much will be used. Makes copious notes. Better look out for him and have him thoroughly understand that you are going to charge him \$340 for the preliminaries, whether or not he has plans and specifications. Just had another case like that. By the time he got through he had a set of sketches that were almost working drawings and his notes furnished him a brief specification, so he just decided to go ahead with a contractor and build the department store without having regular plans. Of course the contractor knew this wasn't right, but he needed a job and now pretends not to understand why I have cut him off the list. I made the owner pay for the preliminaries, but don't think I will let that fellow who is waiting out there catch me, though he is in to me pretty far now.

BUT the good clients more than make up for the bad ones. The kind that call you up and tell you to go down on Fourth Avenue, take a look at that lot, get in touch with the tenant, see what he wants and get the contract let as soon as you can, as the tenant has to get in by April 1. Or the doctor who comes in and tells you he has seen such-and-such a hospital that you have built and wants you to handle one for him, except he wants ninety beds instead of sixty. Or the school superintendent from Fair Play who calls you on long distance and tells you that the president of the school board has instructed him to have you come out to see about the new school building. They want one very much like the one you built at Tupelo, only they haven't got quite that much money or the equipment has to come out of the appropriation and they may have to buy a larger lot. But I had better stop right here, or I will be increasing my force and besides, it is clearing up and I may be able to get in nine holes. You know, my stomach does not stick out in front like it did before I started golf. Traps did it, no, not straps—traps. Sometimes I spend the whole afternoon in one.

INSULITE

the Wood-Fiber Insulating Board

Combines Both
STRENGTH *and* **EFFICIENCY**

2 Tests That Prove it is
14% STRONGER
as well as



WHEN YOU specify insulation, you want more than just protection against heat and cold — you want a material that efficiently insulates, and in addition builds strength and durability into the structure. Insulite, a strong, all wood-fiber insulation board, has both these advantages.

Insulite has strength—in a recent laboratory test the four best known insulating boards were tested for strength . . . and Insulite proved to be 14% stronger than any.

Insulite has efficiency—another laboratory test shows that not only is Insulite stronger, but—full 1/2 inch thick—it gives 12½% more efficient insulation than ordinary 7/16 inch insulating boards.

The large, broad panels of Insulite are easy to handle, quickly and economically applied—reducing labor costs and material waste. As sheathing, Insulite has several times the bracing strength of lumber horizontally applied. As a plaster base, Insulite grips plaster with twice the strength of wood lath. Insulite is made from the long strong fibers of spruce and other hardy northern woods. It is chemically treated to resist moisture and is not subject to deterioration or disintegration.

Insulite has many other advantages we should like to tell you about—its effectiveness in roof insulation and the prevention of condensation, its economy and practicability in acoustical correction, and its many and various uses in large industrial plants.

THE INSULITE COMPANY

(A Backus-Brooks Industry)

1200 BUILDERS EXCHANGE, DEPT. 23B MINNEAPOLIS, MINN.

INSULITE

the Wood-Fiber Insulating Board

FULL ½ INCH THICK MEANS
12½% MORE EFFICIENT INSULATION
 THAN ORDINARY 7/16 INSULATING BOARDS

Have Your
 Clients
 Make
 These
 Tests



Prove the greater strength of Insulite . . .

Drive a nail a half inch in from the edge and through a board of Insulite. Loop a strong cord around the nail and, with hand scales, see how much greater pull is required to tear the nail through Insulite than through any other insulating boards similarly tested.

Prove the greater insulating efficiency of Insulite . . . Place a cube of ice on a piece of Insulite over an automatic electric iron set at hot. See how long it takes the heat to penetrate the Insulite and melt the ice.

Our Engineering Department will gladly help with any insulating problems you may have. It is organized to be of service to you.

JUST MAIL THIS COUPON

THE INSULITE COMPANY

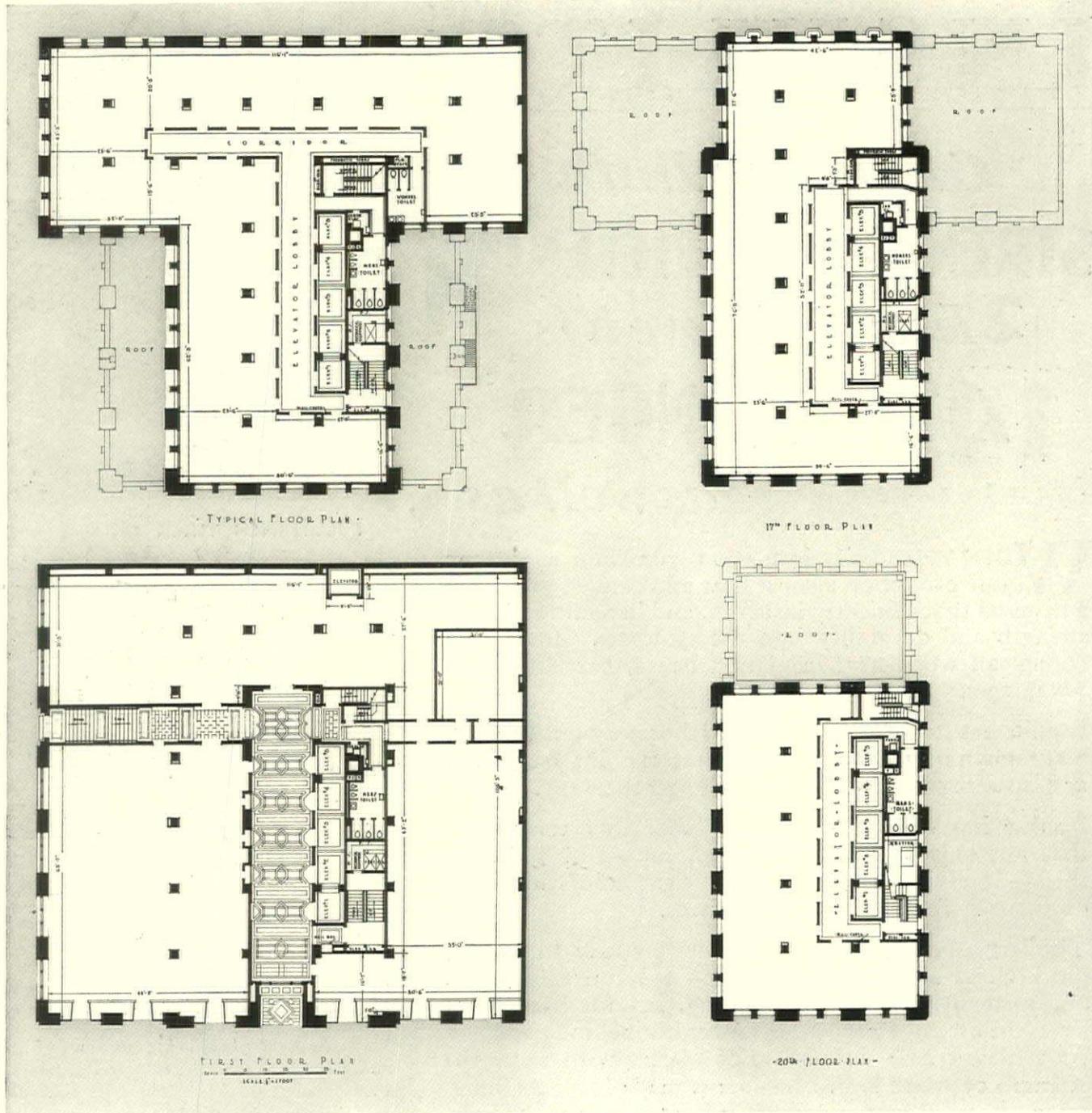
Builders Exchange, Dept. 23B
 Minneapolis, Minn.

GENTLEMEN: Please send me your A. I. A. File of Specifications and Details, also sample of Insulite. It is understood there is no obligation on my part.

Name

Address

City State



Floor plans of the Northern Life Tower, Seattle, Wash. A. H. Albertson, architect, and Jos. W. Wilson, Paul Richardson, Associates

Brickwork Inspired by Nature

(Continued from page 35)

in the color of the brick and mixture should take place.

In order to produce what might be called an entasis of the color the heights of the sections were accumulatively decreased upwards in geometrical ratio. This acceleration of mounting color produces a sense of motion and speed in the piers and, while imperceptible, it adds interest and vigor that would not otherwise be present with a flat or arithmetical grading of the brickwork. This hidden refinement, together with the restrained entasis of the corner piers, doubtless adds vitality and a little mystery to the design of the building.

As the bricks came from the kiln they were sorted roughly into four main color groups, A, B, C & D,—A being the darkest and D the lightest. The ten graded mixtures were then gotten by mixing these main groups in varying proportions. For instance, Section No. 1, the darkest color at the base was all from group A; Section No. 2 was 2/3 A and 1/3 B; Section No. 3 was 1/3 A and 2/3 B; Section No. 4 was all C; and so on up the building. When the brick delivery was started a competent man was charged with the control of the color mixture at the kiln and at the building. While the



INDEPENDENCE HALL
Philadelphia
ERECTED 1736

VISUAL EVIDENCE OF THE DURABILITY OF SOAPSTONE

THE use of Soapstone for exterior trim is not a new development. It is, rather, a revival of interest in this natural stone whose heritage in America goes back to the early 1700's.

Independence Hall, Philadelphia, erected in 1736, on which *soapstone was used for quoins, coping, water table and other exterior trim, is a monument not only to the age and weather-resisting qualities of soapstone, but also a charming example of the value of the stone for color enrichment.

For veneer spandrels, soapstone, of the superior grade quarried in Virginia (and trade-marked "Alberene Stone" for identification) has distinct advantages, among which are—unlimited design possibilities, color, texture, thinness, erection economy and entire freedom from maintenance expense.

Samples of Alberene Stone and full information will be supplied gladly on request.

*The soapstone used in 1736 is still there, unrestored.

ALBERENE STONE COMPANY, 153 WEST 23RD STREET, NEW YORK

Quarries and Mills at SCHUYLER, VIRGINIA

CHICAGO
BOSTON

PHILADELPHIA
WASHINGTON, D. C.

PITTSBURGH
RICHMOND

CLEVELAND
DALLAS

NEWARK, N. J.
ROCHESTER

ALBERENE STONE

THE SUPERIOR SOAPSTONE QUARRIED IN THE STATE OF VIRGINIA

finished brickwork shows natural and desirable variations, at no place is there a suggestion of a break or defect in the continuity of the gradation. Without the active interest and cooperation of the brick and terracotta manufacturers, Gladding, McBean & Company, it is very doubtful whether the result would have been so eminently satisfactory.

So much for things material, brick, mortar, terracotta. What of the immaterial—such stuff as dreams are made of. Some sleepless hours passed before conviction and

courage arrived in support of daring—what would the president of the company say to such a concept? It was a profound and startling change. Suppose it should fail and stand a monument to folly—27 stories of it! But he too knows our changing waters and the inspiration of our towering snow-white peaks, and after a period of deep concern, saw and hailed the vision. Such was the travail of an idea and now for better or worse the idea is embodied—the thing is done—the possession of everybody, to condemn, to pass by or to praise.

The Man in the Street

(Continued from page 20)

the architect. Is it any wonder the public knows little or nothing of the architect? Ask any architect who has to *sell* his services! He knows.

The man who sells typewriters wouldn't waste his time trying to explain the superior merits of any one make to a man who had never seen a typewriter, didn't know what it was used for, and couldn't see any use for one anyhow! How can you sell your services to a man entirely ignorant of what an architect does?

FOR the past year the building industry, hence the architect, has been suffering from a woeful lack of business. Contractors, large and small, national and local, find themselves with idle organization and equipment piling up the cost of overhead. They can't bid competitively in the architects' offices (their first source of business) because the architects, generally speaking, have little work. They cannot run on indefinitely paying for idle hands and equipment. The contractors must look for work, if not in the architects' offices, then somewhere else. And they do.

Where do they look and how do they find it? By running down every building report and rumor, by sending the otherwise idle office organization out to make a search for building prospects among those whose acquisition of new property has been learned of through transfer of deeds, by advertising, and even by canvassing owners of buildings, trying to prove to them the necessity for building additions to present structures. They make almost a house to house canvas. If there is any new building work to be found, they find it! They are on their toes.

After having made so great an effort to discover new business they will, of course, try by every means to keep it for themselves. They will not run the risk of turning the prospect over to an architect who might, they suspect, send the plans out for competitive bids. To protect themselves they first get the contract signed, *then* get out the plans. And how! Perhaps they already have a small drafting force. It is a simple matter to add to this by hiring a few crack draftsmen. Plenty of draftsmen have been laid off by architects. Or, perhaps, rather than carry the expense and overhead of their own drafting room, they employ an architect with whom they would like to bid in the future and they save themselves from the stigma of openly competing with the very architects in whose offices they may still wish to bid.

What happens? The architect is working for the contractor, who, since he has already set a price upon a

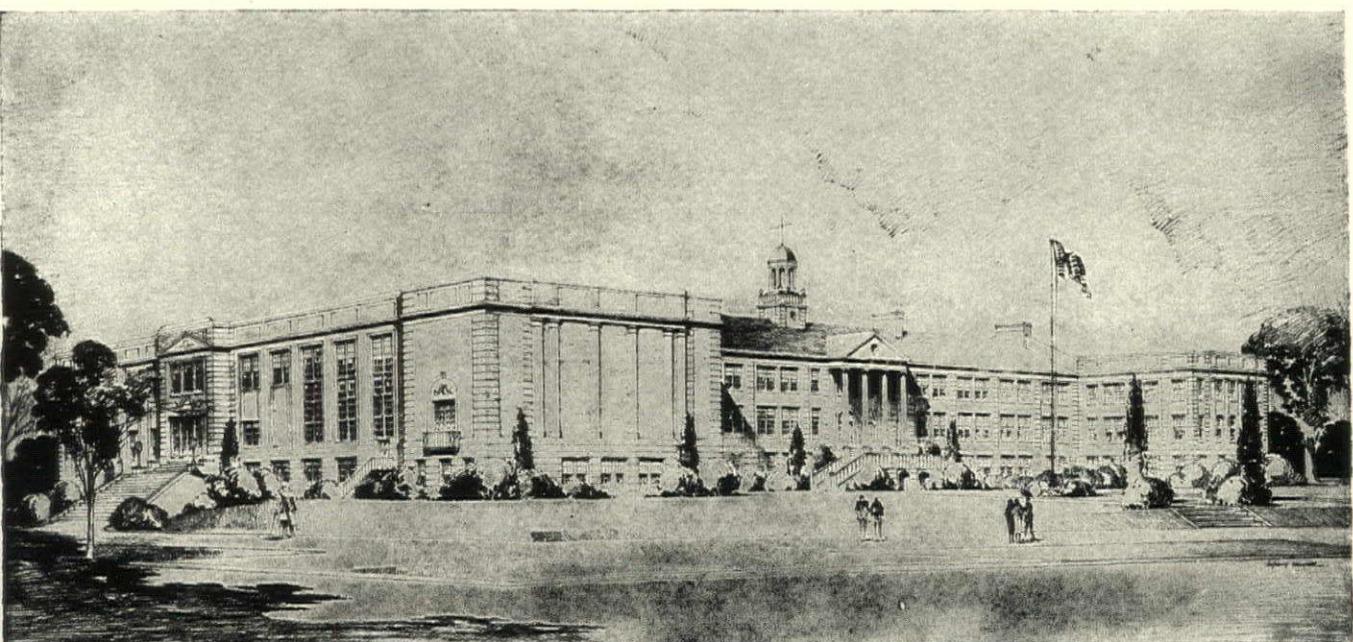
guessed-at project, must dictate everything from plan layout to materials. When the plans and specifications are completed, the architect is paid off, frequently on a fee based upon the contractor's own previously set evaluation of architectural services.

The building is begun; an accident or a long siege of unexpected bad weather causes the contractor to suffer a loss. To make this up, substitutions are sometimes made in materials or, perhaps, the heating system is cheapened! When the job is done and time reveals the defects, who is to blame? The architect, of course! Far fetched? Not a bit of it! It goes on every day. This year it is going on several times a day. Architects can't blame contractors for going out after business nor for making certain that the business they find shall remain in their possession, nor can they blame them for insuring themselves a profit. They are in business for that purpose. They cannot blame the public for giving business to contractors because the public, dear friends, knows *so much* about contractors and *so little* about architects. The contractors have been advertising!

What of residence work? What a multitude of agencies are at work convincing the prospective home-builder that "plans" are cheap! Lumber dealers with free plan-books! Sunday newspaper supplements with plans of prize houses for \$25.00! Ladies' magazines, too, and what is worse, the Institute's own Small House Bureau! Contractors and builders offering plans for nothing! With all these agencies insistently offering cheap or free plans to the prospective client what chance has the architect? More particularly, what chance has the chap just starting to practice?

THE architect who practices to make a living cannot help but appreciate the situation that exists. With every possible agency working openly against him, depreciating the value of his services on the one side and openly competing with him on the other, what can he do to safeguard his only means of livelihood? This question is the chief subject of discussion at many A.I.A. Chapter and Architectural Society meetings. The younger men show the greatest concern because they are hardest hit. Many of them have had to shut up shop. Many more will.

That the architect is beginning to realize his adverse position in the building world is evidenced by the spasmodic attempts of various local chapters of the American Institute of Architects to employ newspaper editorial space or to buy display advertising space for publicity purposes. The Institute has set aside a comparatively

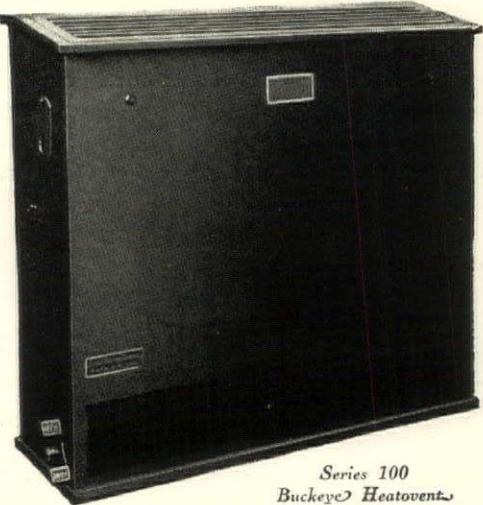


WEST SIDE HIGH SCHOOL — MADISON, WISCONSIN

Architects: Law, Law & Potter, Madison, Wisconsin

Heating Contractor: Paul E. Mueller, Milwaukee, Wisconsin

Madison, Wisconsin, Also Chooses Buckeye Heatovents

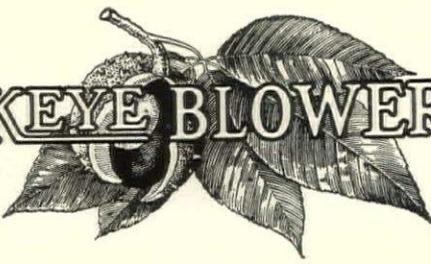


Series 100
Buckeye Heatovent

The Modern ventilation for this fine new School Building is supplied by 74 Series 100 Buckeye Heatovents and 11 Buckeye Thermovents.

From coast to coast and from Canada to Florida, Buckeye Ventilating Systems are supplying fresh outdoor air, filtered, warmed and diffused to hundreds of thousands of the nation's army of school children.

"The Unit with a radiator that freezing does not harm"

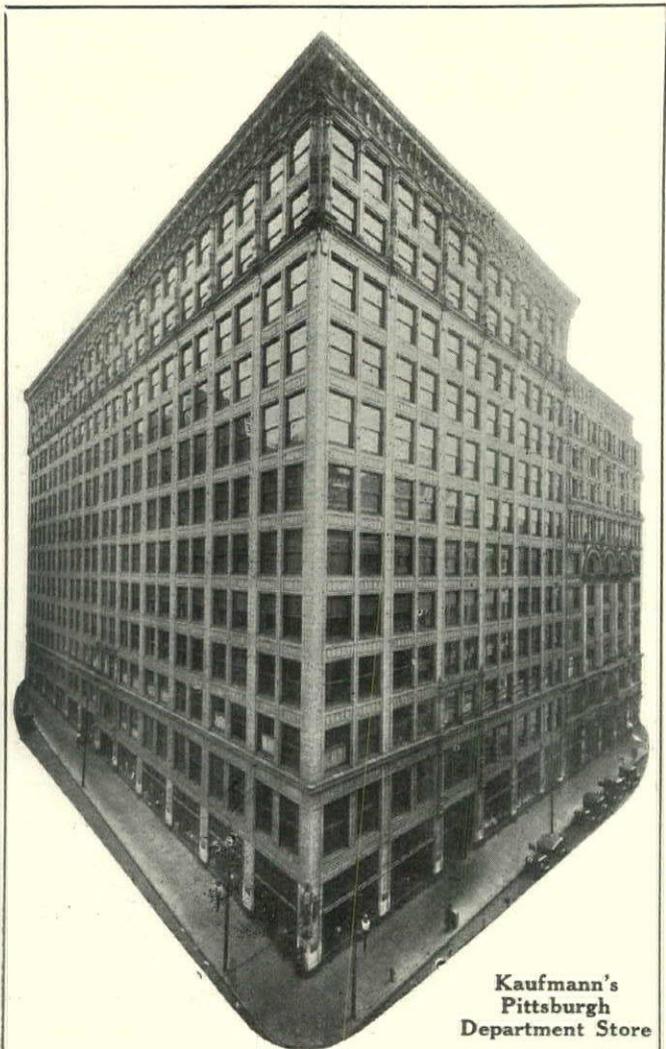


THE BUCKEYE BLOWER COMPANY

Main Office & Factory 400 Dublin Avenue
Columbus, Ohio

Sales and Service Offices

- | | | | | | | | |
|-----------|-----------|------------------|------------------|---------------|----------------|-----------|------------|
| ATLANTA | CHICAGO | DETROIT | INDIANAPOLIS | MINNEAPOLIS | PITTSBURGH | ST. LOUIS | YOUNGSTOWN |
| BALTIMORE | CLEVELAND | GRAND RAPIDS | KANSAS CITY, MO. | NEW YORK CITY | PORTLAND, ORE. | SEATTLE | CANADIAN |
| BOSTON | DALLAS | HEMPSTEAD, L. I. | LOS ANGELES | NEWARK | RICHMOND, VA. | SYRACUSE | OFFICE |
| BUFFALO | DENVER | HARRISBURG, PA. | MILWAUKEE | PHILADELPHIA | SALT LAKE CITY | TOLEDO | TORONTO |



Kaufmann's
Pittsburgh
Department Store

When

Kaufmanns installed additional Otis Escalators Garland Conduit was used to permanently protect the electrical system. Incidentally, the same make of conduits are installed throughout the store.

"GALVADUCT"- "LORICATED"

Garland Mfg. Co.
Pittsburgh Penna.

minor sum to pay for the preparation of "copy" for the use of local chapters which must pay for the space in publications in which it is to appear. A worthy effort has been made in New York City by inducing one of the Metropolitan papers to give over a Sunday page the text for which is prepared by an Institute Committee. A similar idea is followed in Chicago. All of these efforts have been and still are purely local. True enough, the publicity committee of the Institute circulates the dailies with "copy," much of which is reprinted, but it is general, and not to the point.

The American business-man will not be convinced that beauty and good proportion, at a higher cost, are worth buying until you prove to him that they have a monetary value. Fortunately they have, and the argument is tenable if we will but offer it in a way that the business-man can understand. Nor can you make him see that what seems to be an *added 6%* on his building cost is worth the extra dollars and cents, until you prove that it is a paying investment and an ultimate saving! You cannot even talk architecture to him! He doesn't understand it. Nor do prospective home-builders.

What's the answer? It is obvious. It has been obvious for the past ten years. We must tell the public the what, how and why of the architect. It is not enough to tell just the public of New York City, just the public of Dallas, Des Moines, Seattle, Pittsburgh or Detroit. The word must be spread nationwide.

THERE is decided opposition in the Institute, which is made up, largely, of architects with national reputations of long standing, to the use of national publicity. They are conscientious in their dislike of the word "publicity" or its harsher sounding synonym "advertising." They have a traditional horror of anything that smacks of advertising. They are of the well-established "old school." Many have independent means of livelihood. Others enjoy an established practice. Work comes to them unsought.

Neither of these classes have to *sell* their services. They do not contact the public, or else their own particular public is of the cultured class with a knowledge of the architect and his service. They have seldom, if ever, had occasion to meet the sales resistance of public ignorance. But they, to a great extent, control the destinies of the Institute. Yet they do not represent the majority of architects—they do not work or even think in the same way. They are not faced with the same problems of business and practice. Therefore they are *not* representative! The fact that they are so well-known relieves them of the very difficulties and worries that beset the rest. It is not surprising that they turn a deaf ear to the cry from the wilderness! Who are these who cry from the wilderness? Architects! Men of genius! Many, as yet unheard of. Many who never will be. Many who never can be. These did not choose architecture because it offers fabulous wealth. Most of them have art inbred. Pursuing the art they love, they find themselves facing an age of business. They must, perforce, put on business raiment. If architecture is to survive and increase its usefulness either as an art or as a business, it is our duty to ourselves, to our profession, and to the nation to take architecture out of the darkness of public ignorance.



THE QUIET SI-WEL-CLO IMPROVED



*An aid to clean
healthful living*

THE most modern of all water-closets—the Improved Quiet Si-wel-clo is ideally shaped to meet the needs of present-day sedentary man. For the Si-wel-clo encourages a natural sitting position and thus assists the digestive tract in performing its eliminative functions.

Another desirable feature about the Si-wel-clo is its quiet operation. The flushing is performed quietly yet thoroughly. Strong, positive action coupled with an over-size passageway assure a quick outlet to the sewer. The mechanical excellence of the fittings obviate trouble and the frequent visits of the plumber.

The Si-wel-clo is but one of the complete line of "Te-pe-co" All-clay plumbing fixtures—famous for years as most sanitary, beautiful, practical and permanent. Te-pe-co Products are the popular choice of architects for either the home or public building.

Be it bathroom, toilet, kitchen or laundry, "Te-pe-co" provides a plumbing fixture gleaming in whiteness, always clean, and from which the residue can be removed with a dampened cloth. Gritty soaps do not scratch the surface—medicine and common acid stains will not adhere. Always bright, rich looking, pride inspiring — yet not extravagantly priced.

Do you know how to properly plan a bathroom? Enclose 10c in stamps for a copy of "Bathrooms of Character"

THE TRENTON POTTERIES COMPANY

TRENTON, NEW JERSEY, U. S. A.

National Exhibit Rooms
101 Park Ave., New York City, Entrance on 41st Street

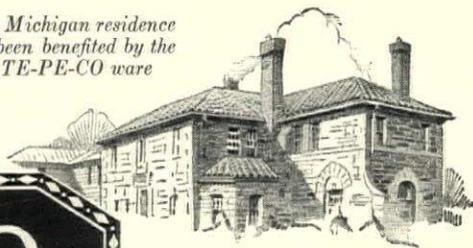
Sales Offices in
Philadelphia, Boston and San Francisco

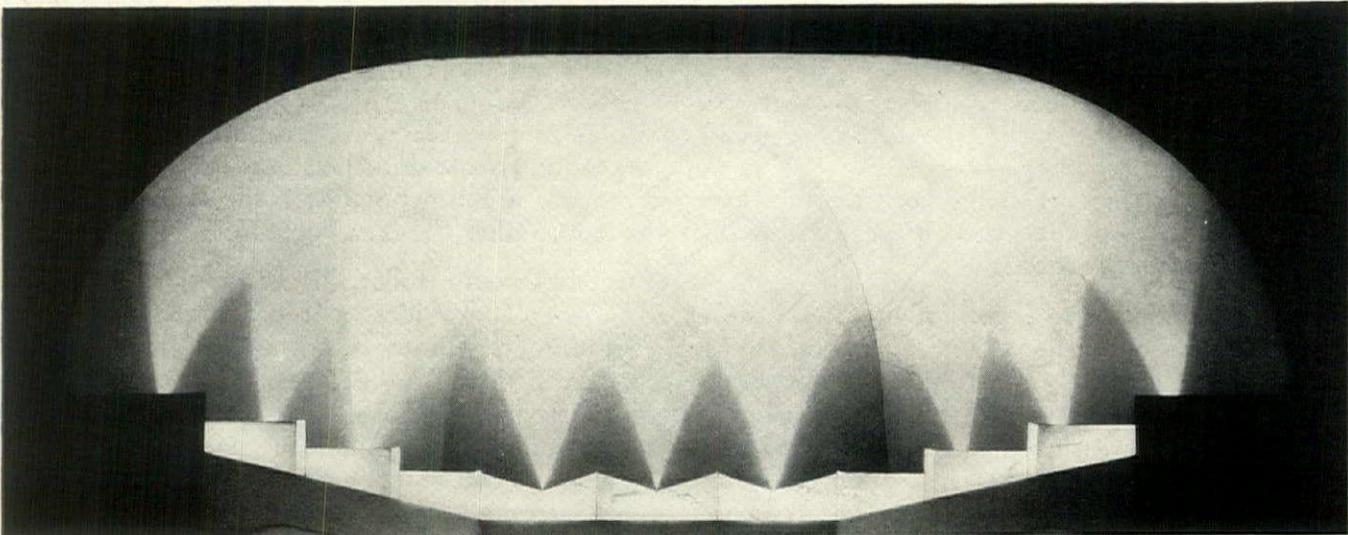
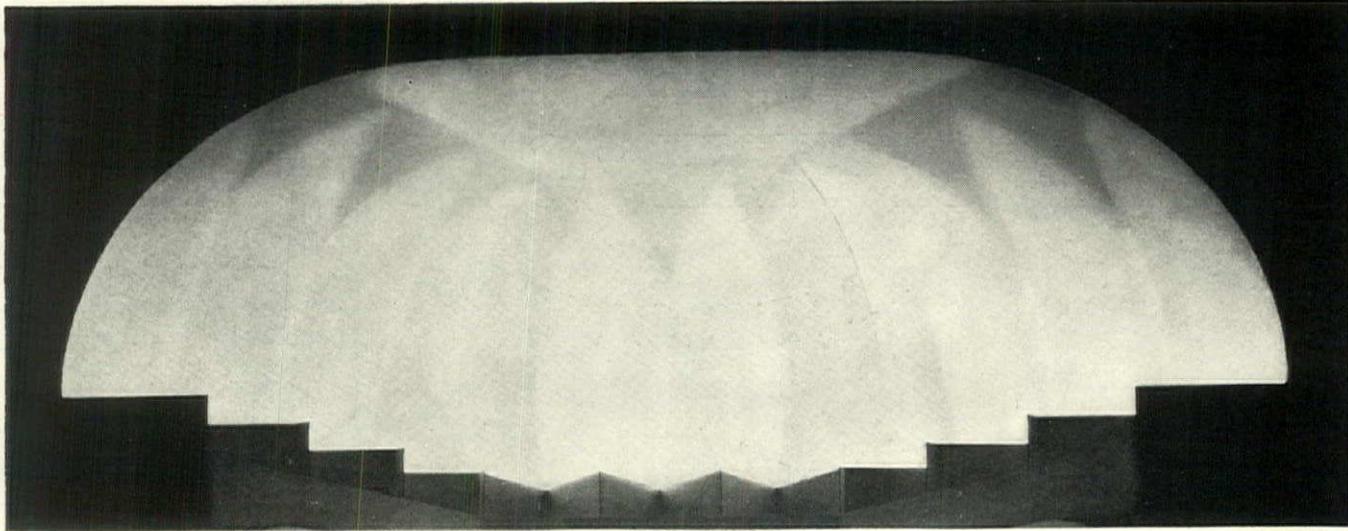
Export Office: 115 Broad St., New York City

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.

Hotel Fort Shelby,
Detroit's newest,
is equipped with
Te-pe-co products

*Here is a Michigan residence
that has been benefited by
the use of TE-PE-CO ware*





Model used in developing the lighting of the St. George Hotel ballroom, showing color gradations and light patterns, which are changeable at the will of the control operator. Above, effect of lights used in back of flutes only. Below, effect of lights used in front of flutes only. Thousands of combinations of pattern and color effects are possible

Decorating with Light

(Continued from page 27)

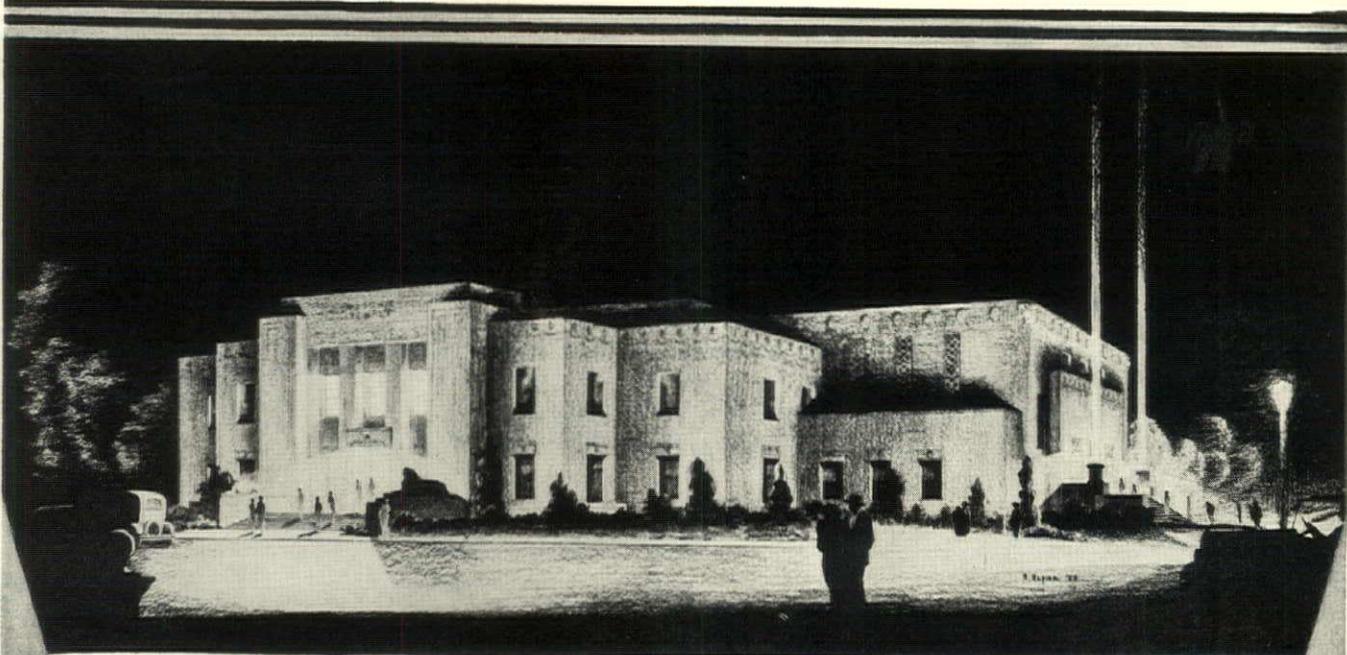
feet long and contains over 200 dimmer plates. If the system were operated by manual control eight men would be required at the switchboard at all times. As designed, one man is able to operate the entire lighting system of the ballroom through the use of the remote-control board. Over 82 miles of wire are used in the installation. It is stated that over 3,000 square feet of steam heating radiation was omitted from the ballroom owing to the heat generated by the lights. The installation in the hotel ballroom cost approximately \$150,000. This cost is of course offset by the saving in cost of decorating the walls and ceiling in the usual manner.

The following schedule of lamps used in the top wall cove near the ceiling will give some conception of the lighting arrangement in the troughs. This cove contains 172 flutes. Each front flute contains two 100 watt blue, two 60 watt red, two 50 watt green and one 100 watt clear lamps. Back flutes are equipped with one 200 watt blue, one 100 watt red, one 75 watt green and one

100 watt clear lamps. The total lamps and wattages used in this particular cove is as follows:

FRONT			
Wattage	blue	34,400	Lamps 344—100 watt
"	red	20,640	" 344—60 watt
"	green	17,200	" 344—50 watt
"	clear	17,200	" 172—100 watt
Total front wattage		89,440	Lamps . . 1,204
BACK			
Wattage	blue	34,400	Lamps 172—200 watt
"	red	17,200	" 172—100 watt
"	green	12,900	" 172—75 watt
"	clear	17,200	" 172—100 watt
Total back wattage		81,700	Lamps . . 688

Total for this section: wattage, 171,140, and lamps, 1,892. Total total in ballroom are as follows: blue, 181,775; red, 114,140; green, 97,055; clear, 139,500.



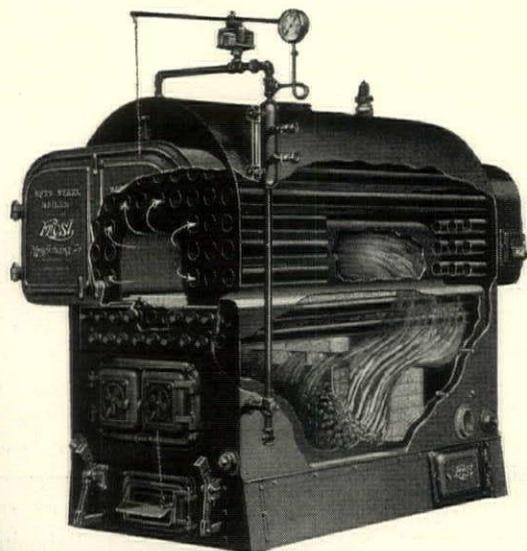
Masonic Temple, Fort Smith, Arkansas, two 10,000 foot Ross Boilers installed.
George R. Mann, Wagner and King, Architects; Haralson and Nelson, Associate
Architects Eldorado Plumbing and Heating Co., Heating Contractors.

ROSS

STEEL HEATING BOILERS

Details and specifications on request.

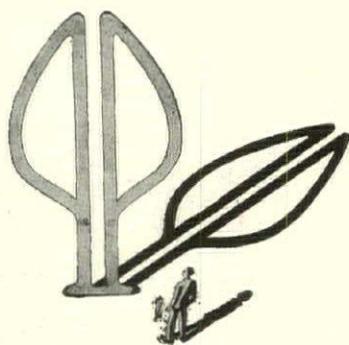
THE FROST MANUFACTURING COMPANY
GALESBURG, ILLINOIS



ECONOMICAL - EFFICIENT - DURABLE



In the end,
the responsibility
for
good lumber is yours!



Your client knows little about lumber. The builder may not care what wood he gets, so long as it looks good and carries a rock-bottom price. But *you* know and *you care!* Lumber is one of the most important materials that goes into the house. And you know, too, your responsibility for that lumber still holds long after the home is completed.

Specify Pondosa Pine for any softwood purposes, except framing. A well-seasoned, carefully graded and milled lumber, Pondosa stays flat, clings to nails and paint, and finishes with a beautiful, satiny surface. And to make sure you get Pondosa Pine when you ask for it, this good wood carries the pine tree trade-mark right on the end grain. Specify Pondosa Pine. There is an abundance of Pondosa Pine at reliable lumber yards throughout the nation. Address Dept. 60, Western Pine Manufacturers Association, Portland, Oregon.

Pondosa Pine 
The Pick o' the Pines



Part of switch board and dimmer bank, which can be operated by one man from a single control board

The ballroom contains 11,000 square feet clear floor area and is provided with 48.4 watts per square foot.

From the house distributing board twelve 500,000 circular mill conduits are carried in two feeders to the ballroom dimmer bank room, where they terminate in two 800 ampere circuit breakers. The control board is provided with ammeters so that the operator can keep the load on the ballroom within the 800 ampere capacity of the two feeders. From the circuit breakers sub-feeders are carried to the contactor boards, splitting the four colors—that is, white, blue, green and red—from the contactor board.

FLAME proof wires are carried back to a control board located in the control booth in the ballroom directly behind the contactor board. There is a connection strip box with approximately 600 two-wire circuits from which the circuits branch. The circuits consist of No. 8, No. 10 and No. 12 wires grouped to allow a uniform voltage throughout the ballroom. The wires are colored, to correspond with the colors of the lamps. Wires from the control board terminate in junction boxes located in the catwalk in the ceiling of the ballroom. Branch circuits are carried from the junction boxes to the various troughs.

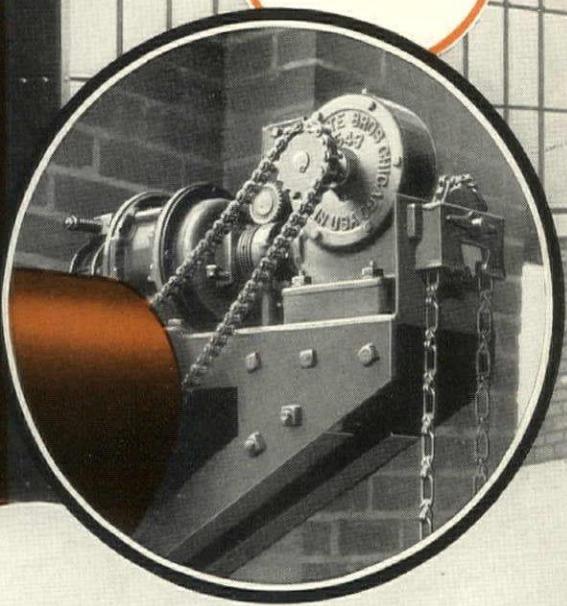
In general the wiring is arranged so that the fourth light of each color is on a separate circuit. These circuits vary from 1,000 to 1,200 watts and are carried to the contactor board, where they are grouped so as to connect with the dimmer bank. The dimmer banks are motor driven by a series of seventeen motors arranged in groups mounted directly on the dimmer bank frames.

The installation is provided with a complete control system, which includes grand master and sub-master control of all switches of each and all colors and all dimmer motors of each color. Each dimmer motor control is equipped with a speed rheostat permitting speed variation up and down from one-half minute to three minutes per *up* cycle. A special flasher mechanism to obtain a "chaser effect" in certain sections is also provided. The latter permits light in various colors to be "chased" in waves around the room.

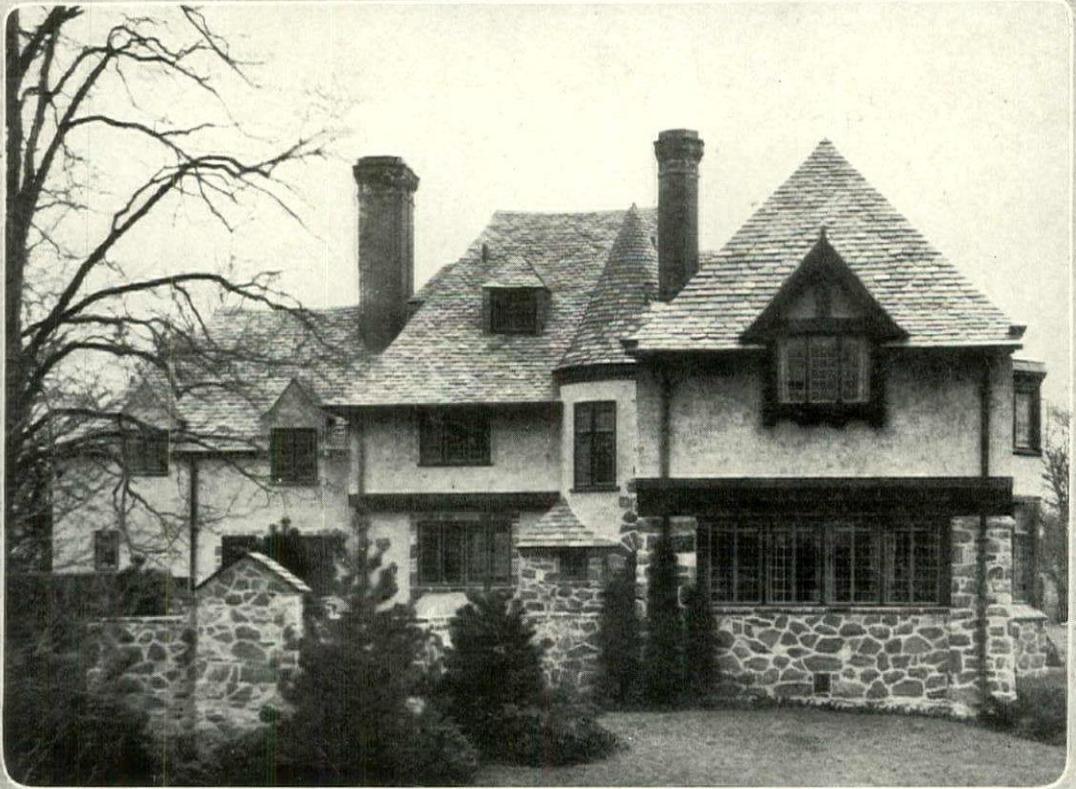
MAHON

ROLLING STEEL DOORS

THE Mahon Rolling Steel Door represents the finest that modern manufacturing methods can produce. Nowhere at any price will you find a door of equal quality, and yet, Mahon's vast manufacturing facilities permit production of these doors at no greater cost. Mahon Rolling Steel Doors are furnished in any size, for any purpose, with either hand crank, endless chain or electric operating mechanism. Write today for complete information—and remember, when you buy a Mahon Rolling Steel Door you buy a superior product approved by the Underwriters' Laboratories, Inc.



THE R.C. MAHON COMPANY
DETROIT, MICHIGAN



Residence:
Sound Beach, Conn.

Julius Gregory,
Architect

This roof presents those striking irregularities which are so pleasing to the eye — provided the roofing material does not over-emphasize them. Here the subdued color tones of Tudor Stone have a softening effect, and harmonize perfectly with the architectural design.

Rising and Nelson-Slate Company

WEST PAWLET, VERMONT

Architects' Service Department: 101 Park Avenue, New York City

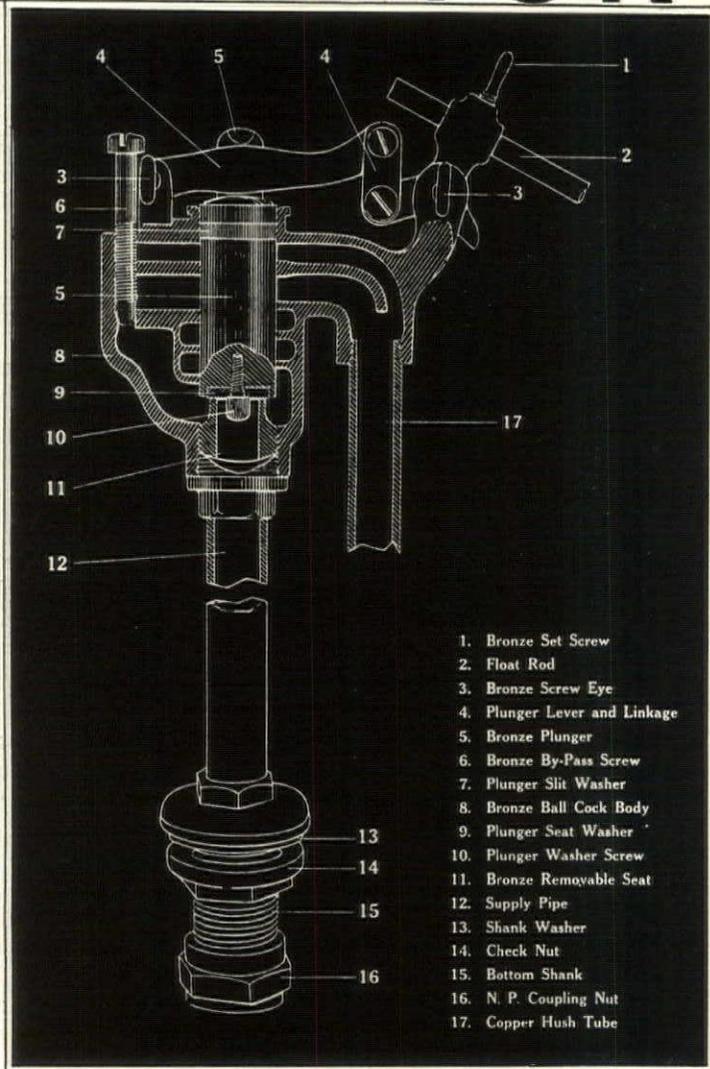
CHICAGO

DETROIT

PHILADELPHIA

BOSTON

BUILT FOR LIFETIME SERVICE



1. Bronze Set Screw
2. Float Rod
3. Bronze Screw Eye
4. Plunger Lever and Linkage
5. Bronze Plunger
6. Bronze By-Pass Screw
7. Plunger Slit Washer
8. Bronze Ball Cock Body
9. Plunger Seat Washer
10. Plunger Washer Screw
11. Bronze Removable Seat
12. Supply Pipe
13. Shank Washer
14. Check Nut
15. Bottom Shank
16. N. P. Coupling Nut
17. Copper Hush Tube

This is no idle statement---no manufacturer's boast to gain new customers ---no enthusiastic copy-writer's dream. It is a fact. Curtin tank fittings ---those quiet operating valves and ballcocks---are built with care and precision, from the finest material obtainable. Not "how much production" but "how well produced" is the Curtin motto.

See Sweets for full specifications

A. F. CURTIN VALVE COMPANY

Medford

Massachusetts

CURTIN

TANK NOISELESS FITTINGS

Kimball

STRAIGHT LINE DRIVE ELEVATOR MACHINE

Sturdy, compact and vibrationless this powerful straight-line drive machine is the most modern elevator machine made.

With motor and machine aligned and bolted together as one complete unit there is no chance of misalignment. The electric brake magnets are submerged in oil, eliminating the noise of contact so objectionable in other machines. All vital points are housed and run in oil.

The mobile parts of Kimball Straight Line Drive machine are reduced to a minimum with very little to get out of order. A machine of long life that will give continuous and snappy service.

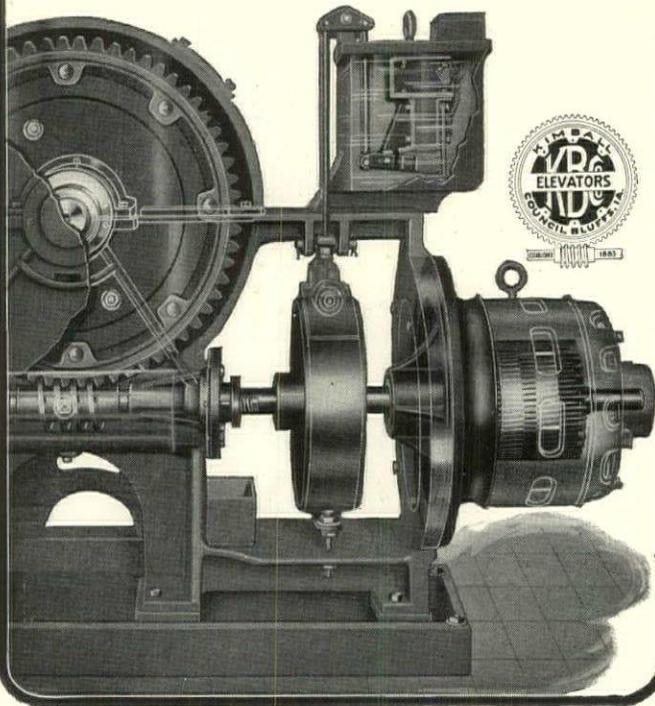
*Write for literature on the
Kimball Straight Line Drive Machine.*

KIMBALL BROS. CO.

Builders of Elevators for 46 Years

1119-27 Ninth St. Council Bluffs, Ia.

7-29



Simplified Practice in Masonry

(Continued from page 68)

casement or double hung, we introduce a variable. If we adopt a standard or stock size frame we automatically standardize masonry openings for these stock frames, but when we attempt to build these standard masonry openings it is only by chance that the standard or stock face brick or the backing tile are of dimensions which permit the building in of these standard openings without cutting and frequently materially weakening the construction.

We therefore start with an attempt to use the present stock size of glass. Before we get through we find that we have run into a problem relating to stock size of a face brick. In other words, since what we are building is a wall with openings and architectural treatment, we must approach the subject from the standpoint of the wall and the architectural treatment, and stock units used in the construction of the wall, the openings and the architectural treatment, must be dimensioned so that they will coordinate with each other.

If it can be done it would mean that by the adoption of a simple module, such as the height of a brick and a joint vertically and the length of a brick and a joint horizontally, the face brick and backing would work together, face brick and cut stone would work together, all openings figured in multiples of these modules could be constructed without cutting, floor joists figured from bottom to bottom in terms of the module would automatically come at the joint, etc.

In other words, the architect would do just as he does today, that is, decide on what is going to be the size of the brick and of the mortar joint and very largely use these dimensions as his horizontal and vertical modules.

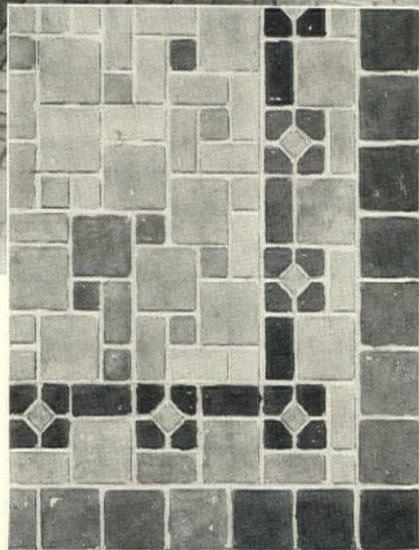
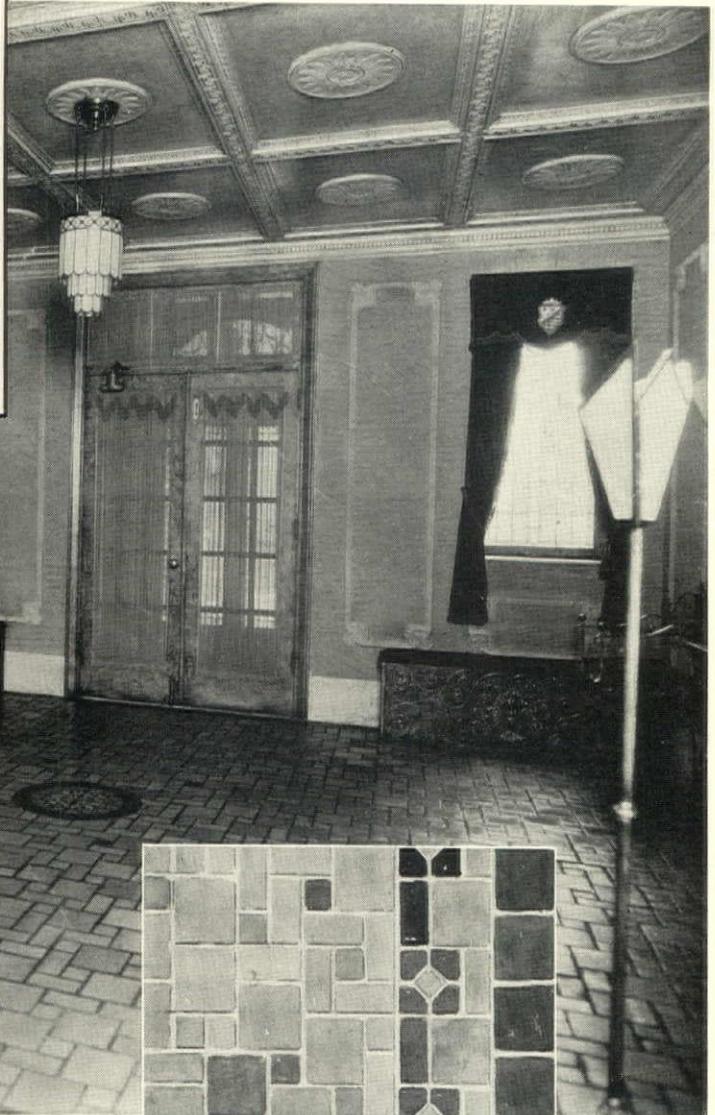
THE project indicates how standardization in one line can be carried so far that it blocks standardization in other lines. For example, if we have only one size of brick we standardize practically nothing else about a wall unless we also standardize the brick joint. The standardization of the width of a brick joint would, of course, be undesirable. Smooth face or enamel brick usually require a small joint, and a rough texture brick a wide joint. If, therefore, we assume a vertical module of three inches to include a brick and a joint and had three widths of brick, we could obtain three joint widths and still maintain our module and the face brick work would coordinate with the backing regardless of the architectural effect produced. Material for ordinary stock stone sills could be gotten out and would coordinate with the other materials regardless of joint widths, etc., because other materials would also be gotten out to coordinate with the three inch module. You understand, of course, that I am not advocating a three inch module but am simply using three inches to illustrate the immediate principle.

So far as I can see there is nothing daring or radical in the proposal. It is simply looking at the problem from the standpoint of the completed wall and not from the standpoint of the individual materials that are used in the building of the wall. Some investigation has been started in order to collect data on the savings that might be effected. These savings will probably be hard to

MOSAIC FAIENCE TILES

*for Floors of
artistic beauty*

*Lobby in an apartment house, Yonkers, N. Y., with floor of
Mosaic Faience Tiles. Architect, William P. Katz.*



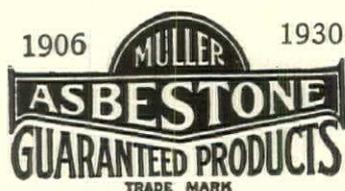
FLOORS of distinctive attractiveness, floors that give the room itself an effect of unity without uniformity, are created with Mosaic Faience Tiles. Your artistry of achievement with Mosaic Faience is heightened by the hand-made character of these tiles. Their wide scope of colors, sizes and shapes makes your designs as original as you please. The 80-page book, "Mosaic Faience Tiles", contains scores of helpful suggestions. Send for it. And feel free to consult our design department.

THE MOSAIC TILE COMPANY
502 Coopermill Road Zanesville, Ohio
NEW YORK CHICAGO
LOS ANGELES ST. LOUIS SAN FRANCISCO

Random Design No. F-503 (See Mosaic Faience Catalog). Choice of large group of beautiful colors and innumerable designs.

MOSAIC

The name "Mosaic" is stamped on all products of The Mosaic Tile Company, which include ceramic mosaics, vitreous, semi-vitreous, wall and faience tiles, as well as "All-Tile" bathroom accessories. The word "Mosaic" should be used in writing tile specifications.



ASBESTONE

Magnesia Flooring

It is not the cost *per foot* for flooring, but the cost *per year* that counts. ASBESTONE lasts so much longer that it costs less over a given period of time.

For the price of the most ordinary flooring materials you can use ASBESTONE. The first cost is moderate and because of its amazing wearing qualities, there is practically no upkeep expense.

Durable

Non-dusting, fireproof, waterproof. Preserves its fresh appearance under years of terrific wear.

Sanitary

Smooth, jointless, easily cleaned; may be waxed and polished.

Comfortable

Easy to the tread, non-slippery, noiseless.

Easily Applied

Over any new or old sub-floors, at any angle, over and around any irregularities.

Distinctive Appearance

A large variety of rich colors.

Service

Our own chemical laboratory and technical department test and verify every shipment for uniform, high quality. A large staff of skilled mechanics insure completion of the largest contracts on schedule.

Guarantee

A uniformly high standard product, backed by the integrity of the Muller name and more than 20 years of manufacturing experience.

May we send you samples and descriptive literature?



FRANKLYN R. MULLER, Inc.

Manufacturers of Asbestone and Sana-bestos Tiles
103 Madison St. Waukegan, Illinois
Established 1906

estimate, but I believe if we consider the reduced amount of cutting and fitting at present required the saving would be considerable and the architectural design in no way affected.

OF COURSE THERE IS A REMEDY - - WHY NOT USE IT?

From Albert J. Eldon, Batchelder-Wilson Co., Inc.,
New York

Editor, The American Architect: . . . Referring to the heading, "Impractical Bathroom Fixtures," on page 39 of your December, 1929, issue, we would further refer you to page 96 under "New Catalogs" of this same issue of your magazine, in which you will find the remedy for the ill of which you complain editorially. The new catalog which you mention of Batchelder Patina Glaze tiles shows that this matter has been taken care of for some time although apparently the fact may not be generally known.

On page 508, designs 2102 and 2113, show fixtures which we have been making for several years.

On pages 504 and 505 you will see later designs of fixtures, both with and without drips.

We thought, inasmuch as you raised the question so definitely, that you might be glad to know the answer and to be able to say to others if you wished, that you have found it.

CREDIT ON WEATHERVANE

From Charles Wellington Walker, A.I.A.

Editor, The American Architect: . . . Illustrations in THE AMERICAN ARCHITECT of the Allan MacDowell House at Kent, Connecticut, have just come to my attention (page 58. December issue). Will you please correct the published statement that the weather-vane on this house was designed by me? This weather-vane was designed by Mr. Frederick J. Waugh and was copied by Mr. Allan MacDowell.

HASTINGS AND NEW YORK PUBLIC LIBRARY

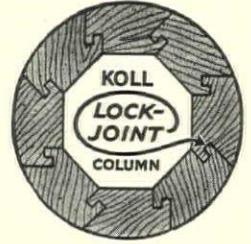
From Theodore Irving Coe, Carrere and Hastings,
New York

Editors' Note: Following the death of Thomas Hastings in New York City, the daily newspapers contained accounts to the effect that Mr. Hastings had provided in his will for funds to be used for altering the Fifth Avenue Facade of the New York Public Library. These accounts excited much comment and interest. To determine the facts in the matter, the office of Carrere and Hastings was addressed on this subject. Their reply follows:

"The provision referred to in Mr. Hastings' Will which contemplated a revision in the facade of the New York Public Library was predicated upon the death of Mrs. Hastings prior to that of Mr. Hastings.

"The newspaper rumors which were published immediately following Mr. Hastings' death were not supported by the provisions of the Will itself so far as immediate action in connection with this matter was concerned."

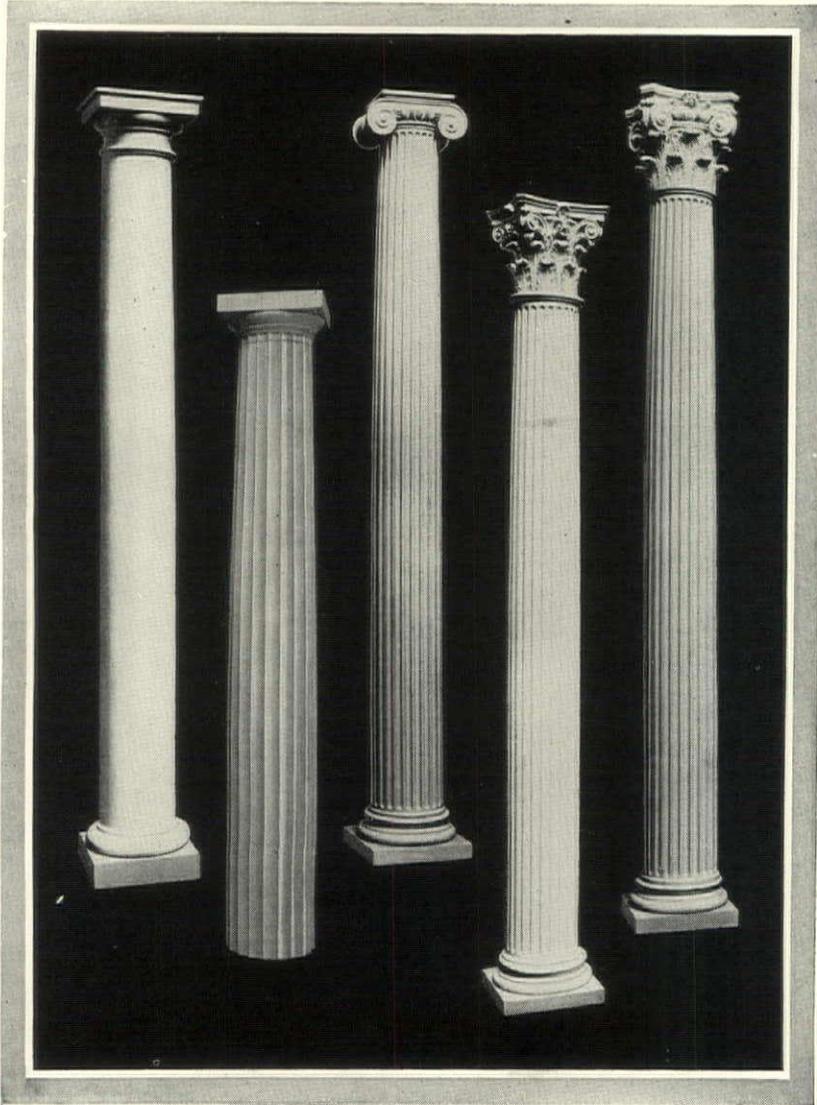
COLVMNS OF ELEGANT BEAVTY WHICH NEVER FADES



CORRECT — VNIFORM — WEATHERPROOF — NO KNOTS

Positive inherent superiority in both beauty and construction explains why so many leading architects insist on Koll Lock-Joint Columns by Hartmann-Sanders.

The confidence of the maker that they will deliver all the excellence built into them is poignantly shown by their wide usage throughout the country today.



Hartmann-Sanders are proud of the fact that they are privileged to execute *particular* architectural specifications as well as those standard in nature.

The famous Koll Lock-Joint feature, exclusively a Hartmann-Sanders possession, insures the maximum of strength. The cost, of course, is no more for this *plus* value.

1. Koll lock-joint columns *cannot* come apart
2. Not a knot in ten thousand Koll columns
3. Correctly proportioned, according to the five orders of architecture
4. Also made to architect's detail
5. Asphaltum paint waterproofing inside all large columns
6. Ventilated plinths, wood or cast iron, the latter recommended
7. Staves same thickness full length of shaft, for maximum carrying strength
8. Workmanship and lasting qualities fully guaranteed

Write for new catalog No. 48 which is packed with interesting information and photographs of the columns and beautiful Colonial Entrances from all over the country.



For the catalog, send to Hartmann-Sanders Co., Factory and Showroom: 2154 Elston Avenue, Chicago. Eastern Office and Showroom: Dept. W, 6 East 39th Street, New York City.

HARTMANN-SANDERS

PERGOLAS

COLONIAL ENTRANCES

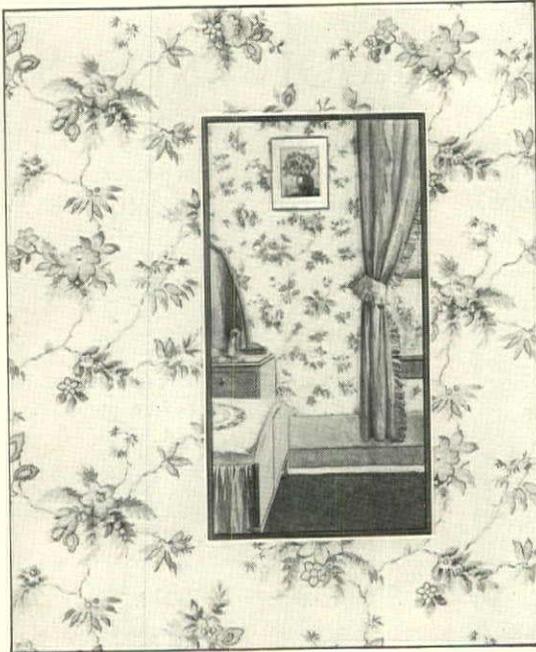
KOLL COLUMNS

ROSE ARBORS

GARDEN EQUIPMENT



These facts protect your interests



EVERY TYPE of room, no matter the period or size, may be effectively decorated with Wall-Tex. This splendid array of facts will please your clients and protect your interests:

1. The Wall-Tex line is complete.
2. It is priced right . . . assures you of prompt turnover and profit.
3. Tough, strong and elastic.
4. Easy to hang.
5. Beautiful and decorative patterns added *every year*.
6. Easily cleaned.
7. Strengthens plaster. Covers cracks and prevents new ones from occurring or showing through the surface.
8. Used as a foundation, may be redecorated with plaster, paint or lacquer treatments.
9. Colored to blend with every interior scheme.
10. Protected by 30 years' experience in the making of coated fabrics.

Be sure to investigate. Architects, builders and decorators: Write your name and address on margin of this page and send for sample, folder and name of nearest Wall-Tex distributor.

THE COLUMBUS-UNION OIL CLOTH COMPANY
Dept. C-2-30 COLUMBUS, OHIO



BOOKS

(Continued from page 74)

Basic Principles of Concrete Making

By Franklin R. McMillan. Published by the McGraw-Hill Book Co., New York. Illustrated; 99 pages; size 6x9¼; price \$2.

IT is the purpose of this book to present the underlying principles of concrete mixtures in such a way that those in charge of construction will not only recognize their responsibility for the quality of concrete, but will at the same time find a simple and direct method of meeting the responsibility." Such is the purpose of "Basic Principles of Concrete Making," as outlined by the author in the preface. He is



How excess water causes disintegration. From "Basic Principles of Concrete Making"

director of research of the Portland Cement Association.

The book analyzes various mixes, showing the effect of varying amounts of water, cement and aggregate, the effect of grading and type of aggregate, of curing, age and other factors; watertightness and other properties; permeability tests; design of concrete mixtures; selection of curing period and water-cement ratio; proper construction methods, and other valuable data.

Features consist mainly of tables and graphs which illustrate the points made in the text.

California Architecture in Santa Barbara

Collected and edited by H. Philip Staats with a preface by Charles H. Cheney, A. I. A. Published by the Architectural Book Publishing Company, Inc., New York. Illustrated; 125 pages; size 8¼x11¼; price \$7.50.

WHEN one city wins the first prize in the National Better Homes competition four times in succession, there must be an unusually fine type of architecture in that section. Such is the record of Santa Barbara, where flowers some of the best of that style of architecture called "Californian." There is, in this town, probably less of the usual jumble of styles and tastes in architecture than in other similar American communities, possibly because the climate is particularly

For Every Refrigerator Need

McCRAY REFRIGERATORS FOR ALL PURPOSES

For

Grocery Stores ·
Meat Markets ·
Hotels · Restaurants ·
Hospitals ·
Institutions ·
Florist Shops ·
Homes

WHATEVER need for refrigeration you encounter in your practice, remember there are McCray units to meet that need exactly.

Efficient, economical, thorough refrigeration keeps perishable foods pure, fresh and wholesome at low cost of operation.

And you can specify McCray with the utmost confidence that your judgment is justified. In every hidden detail McCrays are built as you would build them if you were a refrigerator specialist.

There are sizes, styles and designs to meet all needs, available direct from stock. In addition, McCray builds to order to meet unusual requirements.

Whatever the size or style, however, McCray quality is the same.

This is true whether machine refrigeration or ice is used. Mechanical refrigeration OF ANY TYPE can be used in any McCray. No changes are necessary; the cooling unit can be installed immediately. And remember, the character of service DEPENDS FINALLY UPON THE REFRIGERATOR ITSELF.

Our new portfolio (A. I. A. File No. 32c) is full of classified data on refrigerators of all types. Send now for your copy and latest McCray catalogs. No obligation, of course.

McCRAY REFRIGERATOR SALES CORPORATION

961 Lake St., Kendallville, Indiana

Salesrooms In All Principal Cities (See Telephone Directory)

WORLD'S LARGEST MANUFACTURER OF REFRIGERATORS FOR ALL PURPOSES

McCRAY REFRIGERATORS



**“That pump
MUST NOT clog—
so I’ve specified Economy”**

WE can't depend upon strainers to stop the drainage of this job. The pumps will have to handle what comes to them."

A frequent problem—and a vital one.

For not only heat, light and water supply may depend on the proper functioning of the building's sewage disposal plant—but health as well.

Specifying an Economy Non-Clogging Pump, the architect relieves his mind on this score. Economy Pumps embody the latest advances in this new field. Comparisons in actual practice have proved their superior and surprising ability to handle liquids containing a large percentage of solids—whether pulp, sticks, rags, stringy materials or coarse refuse of any kind.

ECONOMY PUMPING MACHINERY COMPANY
3431 West 48th Place Chicago

21 years of success as specialists in Centrifugal Pumps

Representatives in Principal Cities—
Telephone and Address Under Company Name

Economy Pumps

All Standard types, also specially designed pumps to meet any condition.

MAIL COUPON FOR FREE BULLETINS

Economy Pumping Machinery Co.,
3431 W. 48th Place, Chicago.

Please send me the new Economy bulletins on
Non-Clogging Pumps and Pumping Stations.

Also special bulletins I have marked below:

- No. 405—Condensation Pumps and Receivers
- No. 407—Sump Pumps
- No. 408—Double Suction Single Stage Pumps
- No. 409—Return Line Vacuum Pumps
- No. 414—Multi-stage Horizontal Split Case
- No. 415—Single Suction Single Stage
- No. 416—Small Multi-stage Vertically Split Centrifugal Pumps
- No. 417—Caisson Pumps

Name.....

Company.....

Address.....

City.....

suitable to the Latin inspiration which found its way into the buildings of the early Spanish settlers.

As a consequence, "California Architecture in Santa Barbara" had plenty of material to draw upon. Every illustration presented is of the Spanish type. Houses, commercial buildings, and interiors of all sorts are illustrated together with many plans of the buildings shown. Those who incline towards this type of architecture will find the book an interesting collection of buildings from a town that in itself is truly interesting.



*Biltmore Hotel, Reginald Johnson, architect.
From "California Architecture in Santa Barbara"*

What Architects Are Talking About

(Continued from page 53)

feet apart. There should be no buildings nearer than one hundred feet to the wall, and all openings for utilities should be properly guarded.

"No sewer pipe of a greater diameter than eight inches should be used, and the foundations should extend to rock or twelve feet below finished grade. The height of the enclosing wall should not be less than thirty feet at any point.

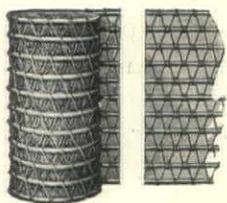
"This new type of surrounding wall, constantly patrolled and with properly guarded entrances, has brought about a renaissance in the design and administration of penal institutions. For the first time in history, the warden, with the responsibility of safe keeping, and the theorist, interested in the improvement of administration, can work together in harmony, designing the institution within the wall in as many complete units as necessary to accommodate properly the various types of prisoners."

FIVE mural paintings attacked by mold in the Administration Building at Balboa have been saved by American chemists under the supervision of W. B. Van Ingen, instructor in the Art School of Cooper Union, New York, who had done the murals. These murals are said to be the only official pictorial records of the construction period of the Panama Canal, and show features of construction now under fifty feet of water. The paintings were first washed with saponin to remove

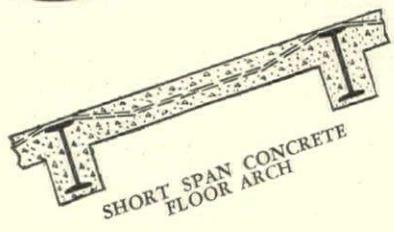
AMERICAN STEEL & WIRE COMPANY

WIRE FABRIC

FULFILLING
THE NEEDS OF
YESTERDAY,
TODAY AND
TOMORROW

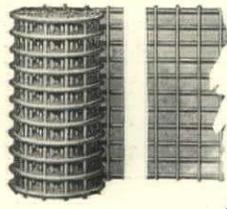


TRIANGLE MESH
Wire Fabric Reinforce-
ment
Furnished in Rolls
or Sheets



SHORT SPAN CONCRETE
FLOOR ARCH

ELECTRIC WELD
Wire Mesh Reinforce-
ment
Furnished in Rolls
or Sheets



WIRE FABRIC

THE STEEL BACKBONE FOR CONCRETE

Epoch making achievements in the Building Art meet the requirements of this age.

Sincerity of purpose is expressed in new simplicity that attains greater permanence and safety. Today's buildings, towering to new heights above the street must have protection against fire, load and vibration. The short span concrete floor arch, Wire Fabric Reinforced, is positive protection against these three elements.

American Steel & Wire Company Wire Fabric gives, as it has for over a quarter century, an even and effective distribution of the steel. On request we will gladly send you information on Wire Fabric for Concrete Reinforcement.

AMERICAN STEEL & WIRE COMPANY

— SUBSIDIARY — UNITED STATES STEEL — CORPORATION —

208 S. La Salle Street, Chicago

30 Church Street, New York

Other Sales Offices: Atlanta Baltimore Birmingham Boston Buffalo Cincinnati Cleveland Dallas Denver Detroit Kansas City
Memphis Milwaukee Minneapolis-St. Paul Oklahoma City Philadelphia Pittsburgh Salt Lake City St. Louis Wilkes-Barre Worcester
U. S. Steel Products Co.: San Francisco, Los Angeles, Portland, Seattle, Honolulu. Export Distributors: United States Steel Products Co., 30 Church St., New York

For Continued Economy and Saving



House at Upland, California. Witmer & Watson, Architects. Walls finished with Cabot's DOUBLE-WHITE Collopakes, sash and shutters with DOUBLE-WHITE and Green Gloss Collopakes.

Cabot's Collopakes, made by the patented Collo-paking Process, are a new product for use everywhere that paint was used in the past. They lower painting costs.

The enthusiasm of leading painters for the beauty, durability, covering power, and non-fading qualities of Green Gloss Collopakes is expressed in our Green Book.

Mail the coupon below today for this book, written entirely by painters from all parts of America.

Cabot's Green Gloss Collopakes

Sole manufacturer and distributors of Cabot's Collopakes and stains in Canada.

Brandram-Henderson, Ltd.

COUPON

Samuel Cabot
Inc.

141 Milk Street
Boston

Please send me your Green Book

Name

Address



all superficial dirt, the varnish was removed by alternate washings with alcohol and turpentine, a five per cent solution of thymol was applied and, as a safeguard in the future, a final coating of paraffin containing two per cent of thymol was spread over the surface of the pictures. Peculiarly enough, this treatment brought out the paint fresh and clear even where the canvas had clearly shown through in photographs taken to show the damage.

HARRY ALLEN JACOBS, a New York architect who is a member of Mayor Walker's Committee on Plan and Survey, urges that the city should condemn whole blocks for parks, and also condemn the property facing the parks so that more modern structures may be erected facing them. He believes that the parks would so enhance the value of property that the city could sell or lease the frontages across from the parks at sufficient profit to pay for the recreation centers, and says:

"The city's right to condemn property for the benefit of the community at large has never been taken advantage of to the extent that it should be. The possibilities of this right of condemnation and of the many civic improvements that could result with little or no cost to the city are beyond imagination.

"If Mayor Walker will appoint his city planning commission, selecting such men as Kenneth M. Murcheson, Raymond M. Hood, Harvey Wiley Corbett, James Gamble Rogers, William Adams Delano and Benjamin Wister Morris as members of the board, they will in a short time do wonders in exercising the city's prerogative of condemning and reselling as excess condemnation the properties adjoining public improvements.

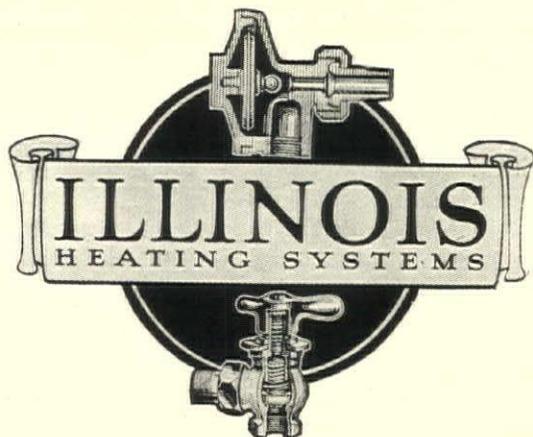
"Neighborhoods within a radius of ten or more blocks would be benefited by these parks, and the city could benefit still further by assessing in a small way all the properties in the vicinity of the improvements."

THE influence of skyscrapers on traffic congestion was recently discussed by George E. J. Pistor, a director of the American Institute of Steel Construction, who said: "This problem is not new and was present in our various cities long before we had any buildings over three or four stories high. As far back as the time of Julius Caesar, ancient Rome had this problem to contend with and many of the traffic regulations which we think modern were resorted to at that time. Thus history tells us that Rome had traffic policemen, taxi stands, one way streets, also regulations specifying, due to the narrowness of the streets, that merchants had to make their deliveries at night.

"In our own country this problem existed with bus and horse car lines and ferryboats fifty years ago. In London, where buildings are limited to 100 feet in height above the sidewalk, every means of transportation and traffic is crowded. Where in our cities can you find more aggravated traffic congestion than is found at Aldergate or Ludgate Hill in London? Similarly in Paris and Buenos Aires, where there are no tall buildings, we find the traffic congestion a very serious problem now growing steadily worse. In our own United States the experience of those cities where there are few if any tall buildings seems to indicate that low buildings do not

Speaking of Remodeling is This ECONOMY?

Spending \$1,528.00
Saving \$6,155.38



THE NIXON BUILDING is one of downtown Chicago's well known office buildings, owned by the Loop Building Corporation.

It was decided to overhaul the existing heating system and change over to an ILLINOIS System. The Illinois Engineering Company made no extravagant selling claims as to what savings could be effected, but knew that the specialties used would produce the maximum saving possible.

The following figures furnished by Mr. E. L. Ladenburger, Superintendent of Building, are accurate, as all steam is supplied by the Illinois Maintenance Co. and is accurately metered. These figures prove conclusively that no owner can afford to overlook the economies and satisfaction obtained with ILLINOIS specialties.

Prior to the installation of our system from October, 1927 to June, 1928	
Pounds of Steam used	15,978,000
Cost	\$15,724.50
New ILLINOIS System from October, 1928 to June, 1929	
Pounds of Steam used	10,080,000
Cost	\$9,569.12
Total Saving—	
Steam	5,898,000
Money	\$6,155.38

The cost of the ILLINOIS Specialties, \$1528.00 was saved during the first two months of operation. Installation or change-over was made during spare time without additional expense.

The mean average temperatures for 1927-28 and 1928-29 were practically the same—the difference being 0.3°



Nixon Building, Chicago

Write for Bulletins Nos. 22, 14 and 60

REPRESENTATIVES IN 40 CITIES OF U.S.A.
ILLINOIS ENGINEERING COMPANY
 ROBT. L. GIFFORD President INCORPORATED 1900
CHICAGO

save the community from congestion. Take for instance, Boston. Boston has a very wide spread business area, it has subways and a greater percentage of street area than most other cities, and yet where can you find a more serious traffic condition even in our tall building cities? Los Angeles is another city of low buildings and wide streets and still it has serious congestion.

"In New York City we find more serious congestion on Fifth Avenue and in the Times Square section than we do in the foot of Manhattan where most of the skyscrapers are. For the greater part of the day the department store sections are by far the more congested and in the evening you find the congestion in the theatre district where there are few if any tall buildings."

PRIZE winners of the third annual small house competition held by The House Beautiful have been announced. First prize for an eight to twelve room house was won by S. Arthur Love, Jr., Philadelphia; first prize for the best five to seven room house was won by Raymond J. Percival, Hartford, Conn. These two designs together with a number of others have been selected to form an exhibit which will be shown in the principal cities of the country.

THE New York Real Estate Securities Exchange opened its doors at 12 East 41st Street on December 16, 1929. Cyrus C. Miller is president of the Exchange and Peter Grimm chairman of the board of governors. The object of the Exchange is to provide for the ready sale of investigated real estate securities.

JOSEPH H. ROBERTS, secretary and treasurer of the Architectural Club of Long Beach, Cal., has established temporary offices at 616 Pacific-Southwest Building until his new quarters are ready.

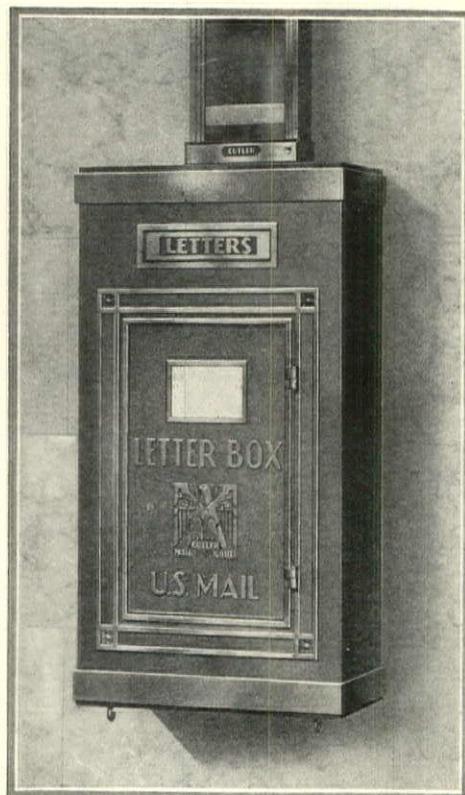
"DATA on Ultra-Violet Solar Radiation and the Solarization of Window Materials" is the title of research paper No. 113, reprinted from the Bureau of Standards Journal of Research. It is by W. W. Coblenz and R. Stair and sells for fifteen cents.

THE tenth revised edition of the Southern Pine Manual of Standard Wood constructions has been issued by the Southern Pine Association, New Orleans, La. It sells for \$1.50 a copy and contains valuable information on the subject indicated by its title.

MODERNIZATION of cities is a neglected field offering vast opportunities for the building industry," states D. Knickerbocker Boyd, chairman of the Committee on Public Information of the Philadelphia Chapter of the A. I. A. and president of the Philadelphia Building Congress. "This field can be opened up in two ways:

"First, by participation in the home modernization movement, so well established in certain communities. The vast majority of buildings have been allowed to deteriorate or become 'out of date' to an alarming extent, and they should be rejuvenated without delay.

"Second, by the elimination of slums and the modernizing of the older sections of our growing cities. For-



No. 4038

THE CUTLER MAIL CHUTE

Designed in its perfected form as the result of long experience to meet the requirements of public use under Post Office Regulation. Simple and substantial in form and construction. Harmonizes with the new motif in modernistic architectural composition.

A most interesting selection of stock Mail Boxes in conformity with the Art Moderne and executed in benedict nickel or other current media are now offered as constituent features of any equipment.

A pleasure to furnish information promptly upon request.

THE CUTLER MAIL CHUTE CO.

GENERAL OFFICES AND FACTORY
ROCHESTER, NEW YORK

The Invisible Superintendent at the Mortar Box Protects

BRIXMENT mortar, like any other mortar containing water, is not freeze-proof. Nevertheless it is used regularly for mid-winter masonry even in the severest northern climates. In fact during the winter months more BRIXMENT is sold in proportion to the volume of building construction than at any other time.

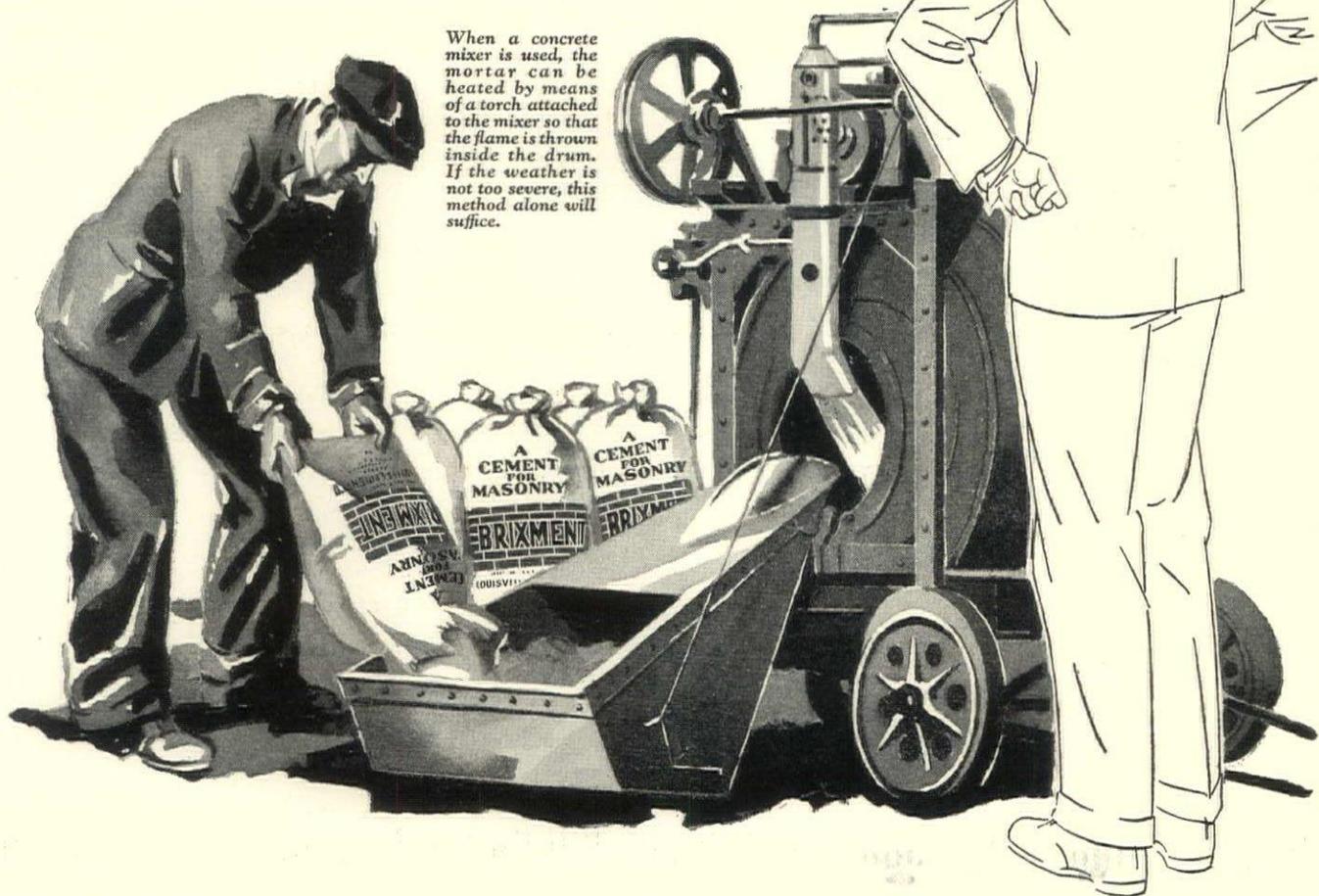
BRIXMENT mortar sets up faster than portland-cement-and-lime mortar in which a large quantity of lime is used and this set can be made to take place at any temperature before freezing occurs by heating the sand and water. Once BRIXMENT mortar has set, it remains sound and unimpaired no matter how long and severe the freezing period may be.

The oily content of BRIXMENT which reduces the freezing point of the mortar gives further protection in freezing weather. Send for architect's handbook. Louisville Cement Company, Incorporated, Louisville, Ky.

District Sales Offices: 1610 Builders Bldg., Chicago; 301 Rose Bldg., Cleveland; 602 Murphy Bldg., Detroit; 101 Park Ave., New York

BRIXMENT *for Mortar and Stucco*

When a concrete mixer is used, the mortar can be heated by means of a torch attached to the mixer so that the flame is thrown inside the drum. If the weather is not too severe, this method alone will suffice.



Winter Masonry

tunately, attention is now being called by the Better Homes in America Committees and women's organizations to the necessity of improving slum districts.

"This movement can be carried on only through collaboration with city planning and zoning commissions. Such bodies should direct the individual and association enthusiasm now being created through the work of the Chapters of the American Institute of Architects, construction organizations, and civic associations. These efforts should be coordinated wherever possible by Building Congresses or similar bodies."

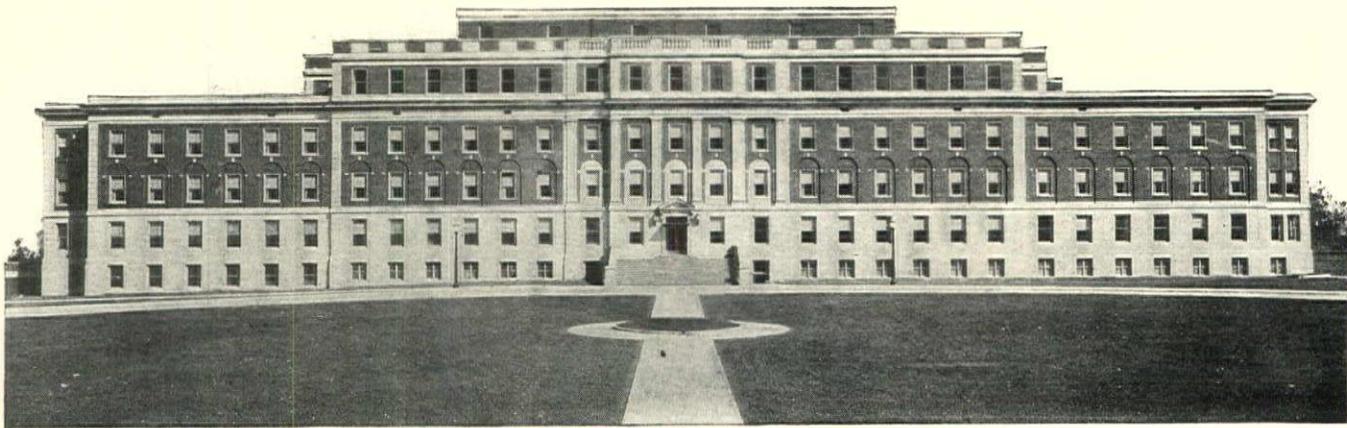
A CORRESPONDENCE course on the Analysis of Better Plastering and Lathing is being offered by the Associated Metal Lath Manufacturers, Chicago. The course is entirely educational and is based on many years of field and laboratory investigation. It is intended to take plastering out of the class of price competition by presenting plastering facts which will enable the contractor to sell a quality job. Those desiring to enroll should do so before February 1.

A STUDY of the Oil Burner as Applied to Domestic Heating" is the title of Technical Bulletin 109-T, issued by the United States Department of Agriculture. It gives the results of a series of tests made with several types of burners supplemented by a study of many domestic installations and indicates the performance that

may be expected from these burners, the adaptability of existing heating plants to oil burners, and the cost of operating such plants. The bulletin also gives some information regarding fuel oil specifications and the relative merits of different grades of fuel oils together with some data on the relative costs of heating both with oil and with gas.

ELY JACQUES KAHN, of Buchman & Kahn, New York, announces that he has formed a copartnership with John M. Montfort under the name of Ely Jacques Kahn and will continue the practice of the former firm with the same associates and organization. Albert Buchman, his former partner, is retiring from active practice.

NATIONAL banks reported seven million dollars more in loans on real estate in 1929 than in 1926, according to Herbert U. Nelson, executive secretary of the National Association of Real Estate Boards. He says that this is significant because it not only means that the resources of national banks are being made available for home building and other real estate developments, but that the real estate mortgage has found additional favor with the members of the Federal Reserve system. Of course this increase is partially due to the McFadden act of February, 1925, which permitted national banks to lend on real estate for five instead of one year periods.



FINISHED WITH STEEL INTERIOR TRIM FOR PERMANENCE

The Youngstown Hospital is a fine example of the modern trend in hospital construction. All elevator enclosures, dumbwaiters, swing doors, borrowed lights and more than 900 interior frames are of United Hollow Metal Construction.

Architect Albert Kahn knows from long experience the quality and scope of United engineering service. Joseph



Buchheit & Sons Company enjoyed the type of cooperation which has made United a favored name with contractors the country over.

Fitted by experience to handle any hollow metal requirement—equipped to produce accurately and on time regardless of the size of the job, United has rightfully earned its standing in the hollow metal industry.

THE UNITED METAL PRODUCTS CO.
CANTON, OHIO

GEORGIA MARBLE



MAIN DOORWAY—HOLMESBURG TRUST CO., HOLMESBURG, PA.
DAVIS, DUNLAP & BARNEY, ARCHITECTS

GLISTENING WHITE TRIM

The white crystalline texture of Georgia Marble has no superior as an architectural trim with brick . . . Just a touch, as used in this ably designed structure adds dignity and character at a minimum of expense.

THE GEORGIA MARBLE COMPANY · TATE · GEORGIA

1328 Broadway
NEW YORK

814 Bona Allen Bldg.
ATLANTA

648 Builders' Bldg.
CHICAGO

622 Construction Industries Bldg.
DALLAS

1200 Keith Bldg.
CLEVELAND

Conventions and Expositions

February	<i>Convention American Concrete Institute, New Orleans.</i>	March 31—April 5	<i>Twelfth Annual Home Show, Grand Central Palace, New York.</i>
March—April	<i>International Exhibition of Housing and Modern Industrial Applied Arts, Nice, France.</i>	April 7—12	<i>Seventh Annual Convention and Oil Burner Show of the American Oil Burner As., Hotel Stevens, Chicago.</i>
March 3—7	<i>National Industrial Equipment Exposition of the Midwestern Engineering Exposition, Inc., Hotel Stevens, Chicago.</i>	May 20—October 1	<i>Exhibition of Modern Industrial and Decorative Arts, Stockholm, Sweden.</i>
March 15—22	<i>National Better Home and Apartment Exposition, Madison Square Garden, New York; April 14—21, New Haven, Conn.; April 22—29, Waterbury, Conn.; April 30—May 7, Hartford, Conn.</i>	May 21—23	<i>American Institute of Architects, sixty-third convention, Mayflower Hotel, Washington, D. C.</i>
March 24—28	<i>Building Officials' Conference of America, Annual Meeting, Cleveland.</i>	May 26—30	<i>International Congress of Building and Public Works, London.</i>
		June 19—30	<i>Pan-American Congress of Architects, Rio de Janeiro, Brazil.</i>
		September	<i>International Architects' Congress, Budapest, Hungary.</i>

Are We Architects or Merely Pencils?

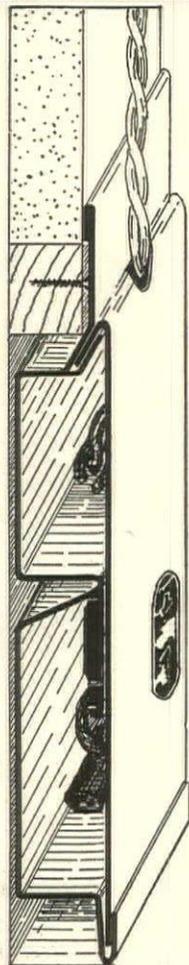
(Continued from page 59)

lawyer, banker, engineer and realtor and not lie supinely on the board, a pencil for everyone to scribble with and throw aside. We have sunk professionally so low that no magazine, not even a professional one, dare print honest criticism for fear of libel suits. So low that architects get \$2,000 for a set of plans for a million dollar building. So low that a large builder will say, "All

I need is a draftsman. I know more about apartment planning than any architect will ever know."

So low that many builders say, "All I want an architect for is to file plans and stick some decoration on the outside of the building." The other professions have designations for their members who have lost their self-respect and that of their profession. But architects, good and bad, are all architects. To the public, we are all tarred with the same stick.

"Pay an architect? What for? I can hire a pencil that's just as good?"



CONDUO - BASE

A Combination METAL BASE-BOARD and ELECTRIC WIREWAYS FOR HIGH & LOW TENSION BRANCH DISTRIBUTION

Enables you and your clients to have any number of Telephones, Desk Lights, Buzzers and any other outlet connections at any point along the Base IN 5 MINUTES TIME AND COST AND WITHOUT THE USUAL TEARING UP AND PATCHING OF FINISHED WORK.

Licensed Manufacturers

Dahlstrom Metallic Door Co. **The United Metal Products Co.**
Jamestown, New York Canton, Ohio

Knapp Bros. Mfg. Co.
Chicago, Ill.