

# ARCHITECTURE

JUNE



1934



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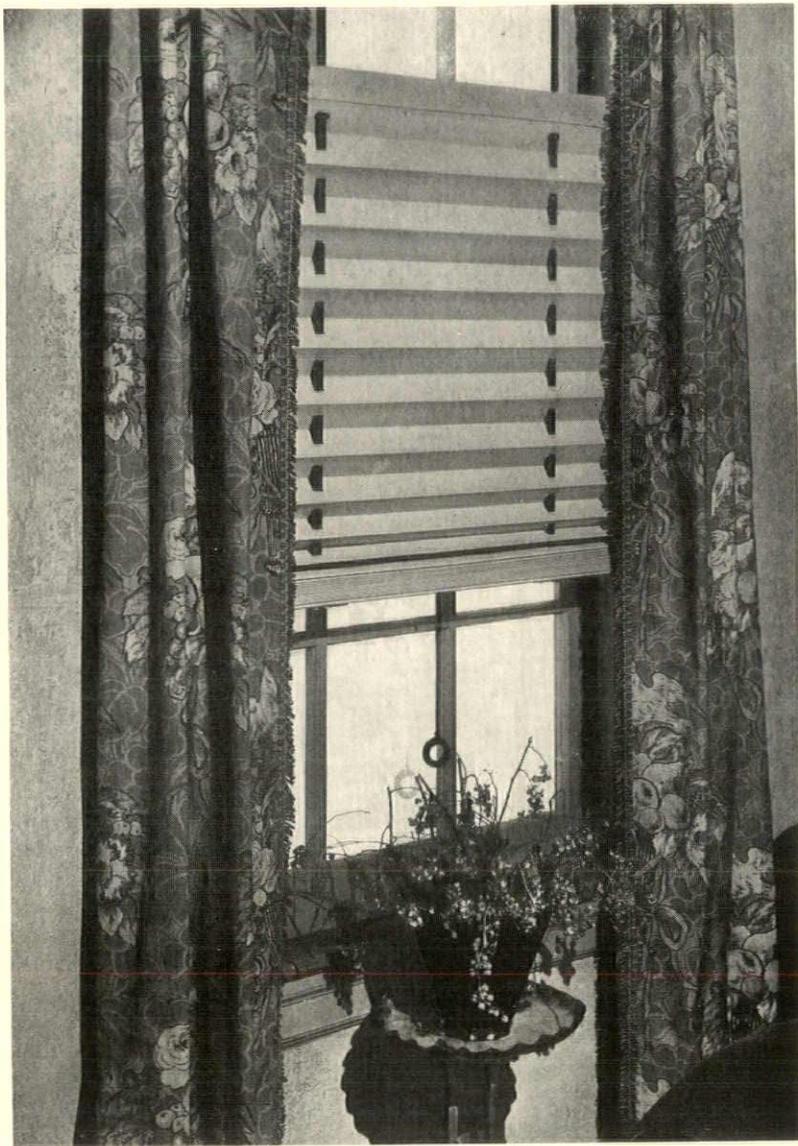
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# ARCHITECTURE

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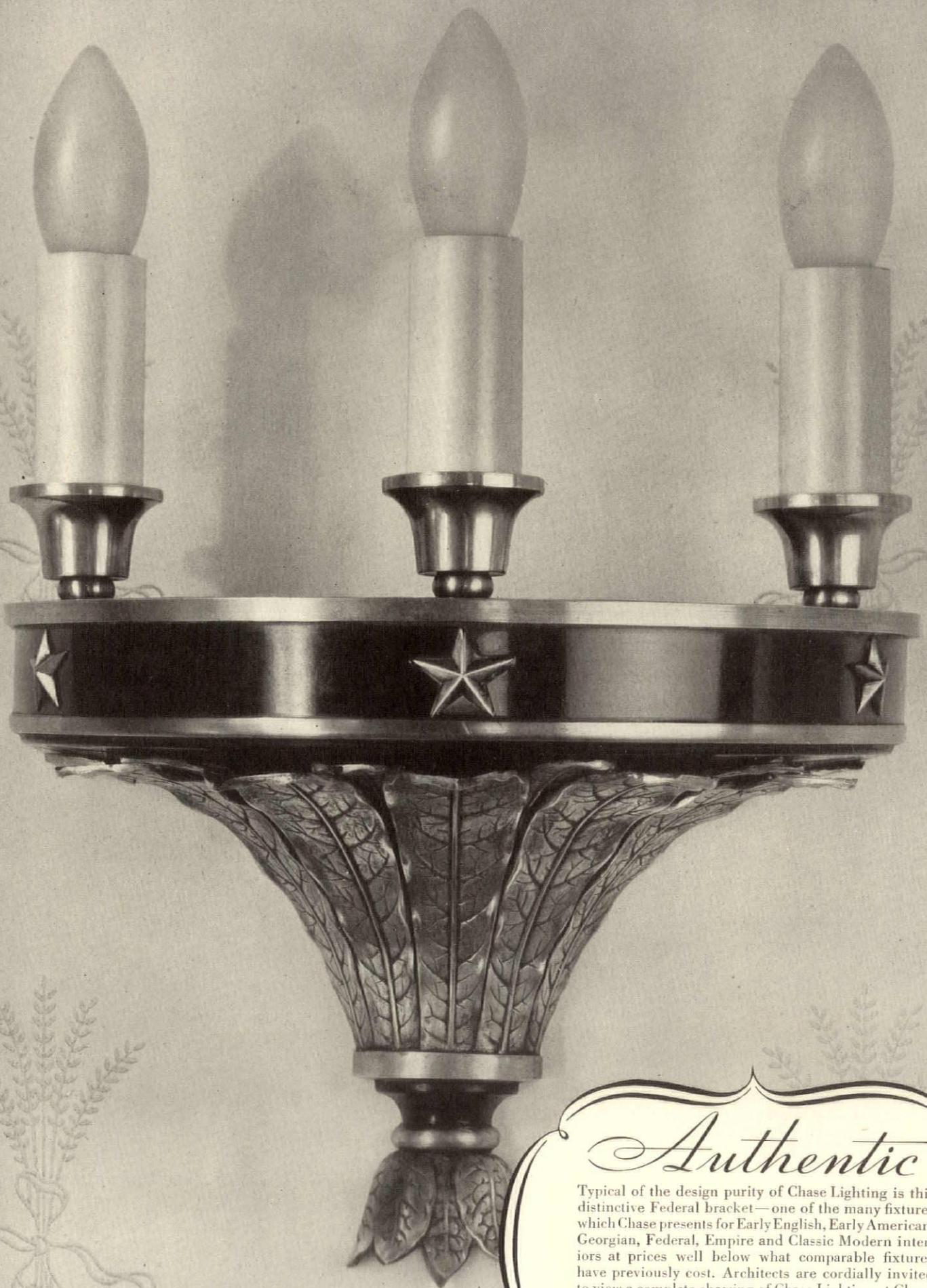
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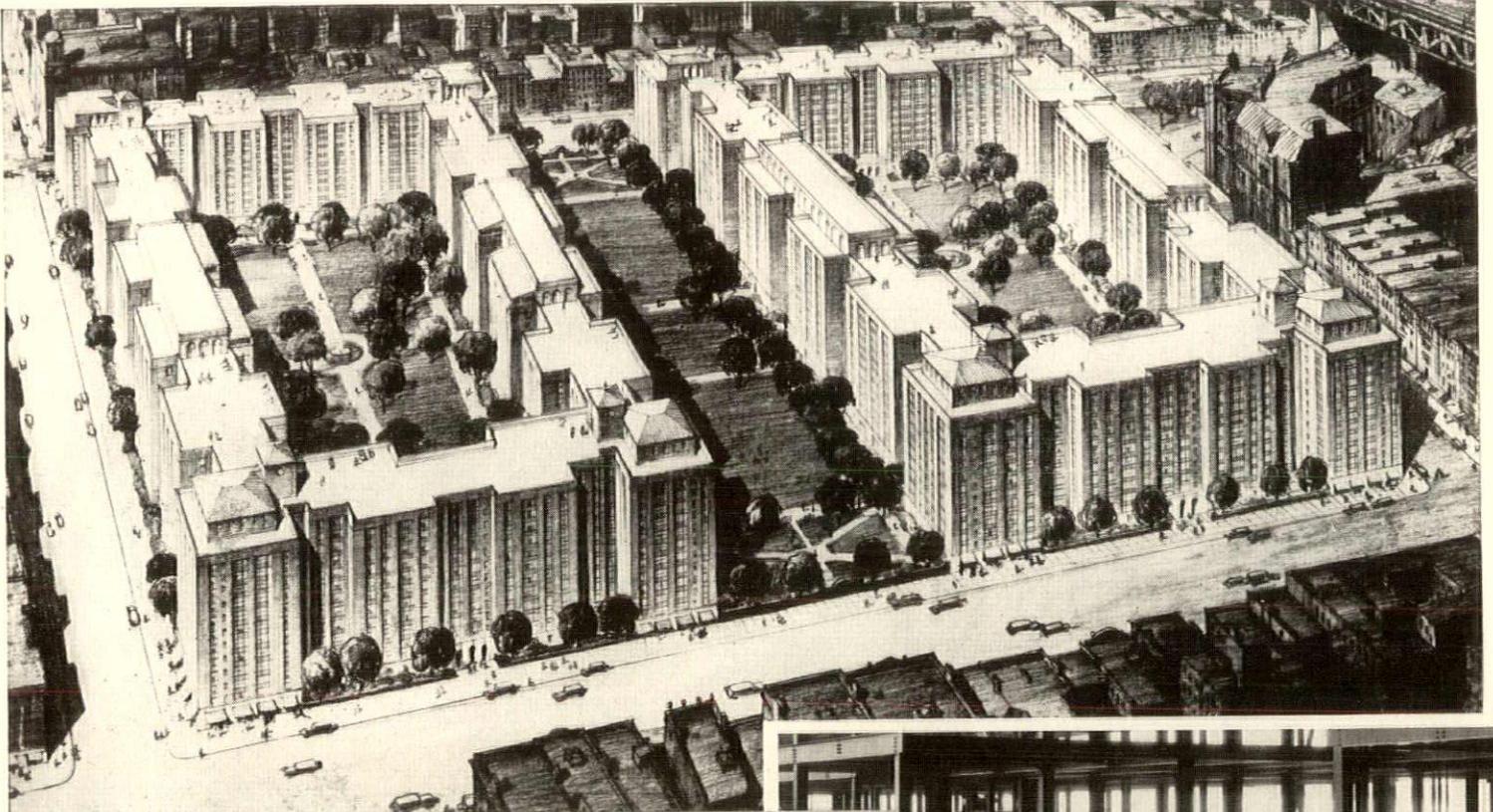


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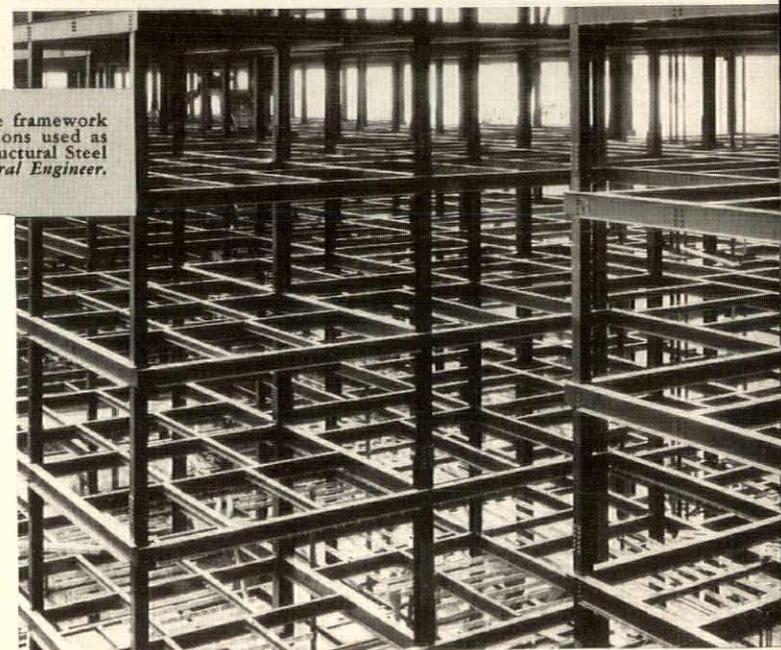
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# THESE



Architect's drawing of Knickerbocker Village, New York City. All steel in the framework of this project furnished by Bethlehem Steel Company. Bethlehem Light Sections used as intermediate floor members . . . Fred F. French Co., General Contractors; Harris Structural Steel Company, Fabricators; John S. Van Wart, Architect; Alexander D. Crosett, Structural Engineer. At right: Portion of steel framework, Knickerbocker Village.



### PROPERTIES OF BETHLEHEM LIGHT SECTIONS

Section No. and Nominal Size	W'g't per Foot Lb.	Axis X-X S In. <sup>3</sup>	Section No. and Nominal Size	W'g't per Foot Lb.	Axis X-X S In. <sup>3</sup>	Section No. and Nominal Size	W'g't per Foot Lb.	Axis X-X S In. <sup>3</sup>
*B 12L } 12 x 4 }	22	25.3	*B 6L } 6 x 4 }	16	10.1	*BS 4 } 4 x 4 }	13	5.45
	19	21.4		12	7.24		10	4.16
	16½	17.5					7½	3.13
*B 10L } 10 x 4 }	19	18.8	B 6 } 6 x 6 }	41	27.0	*BJ 12	14	14.8
	17	16.2		30	19.8		*BJ 10	11½
	15	13.8		27	17.6	*BJ 8		10
					23		15.1	*BJ 6
*B 8L } 8 x 4 }	15	11.8	20	13.1				
	13	9.88	*BS 6 } 6 x 6 }	18	11.7			
			15½	10.0				

\* These shapes have flange slope of 2 per cent, and flange thicknesses tabulated are average thicknesses.

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## PRIX DE ROME IN ARCHITECTURE

THE Prix de Rome in Architecture for 1934 has been awarded to Robert A. Weppner, Jr., of Lakewood, Ohio. Mr. Weppner graduated from the Catholic University of America, Washington, D. C., in 1929, and served as an instructor in architecture there for the next few years. The problem this year for the contestants was an imaginary memorial in Washington to the founders of the Republic. The jury: Chester H. Aldrich, chairman; Louis Ayres, William Mitchell Kendall, John Russell Pope, and James Kelum Smith.

## PRIX DE ROME IN PAINTING AND SCULPTURE

GILBERT BANEVER, of New Haven, has won the Prix de Rome for 1934 in painting. Mr. Banever is twenty-one years old, and is just completing his fourth year at the Yale School of Fine Arts. The subject with which he won is a Mexican pottery vendor against a bright blue sky. Members of the jury on painting were: Barry Faulkner, chairman; Francis Scott Bradford, Allyn Cox, Abram Poole, and Ezra Winter.

In sculpture the award was given to Reuben Robert Kramer, of Baltimore, who has been studying for seven years at the Rinehart School of Sculpture in Baltimore. Mr. Kramer won travelling scholarships in 1931 and 1933 given by his own Alma Mater.

Honorable Mention in sculpture was awarded to Gifford MacGregor Proctor, of Wilton, Conn., a student at the Yale School of Fine Arts; to Roy E. King, a student at the Beaux Arts Institute of Design; and to Theodore Cotillo-Barbarossa, of Boston, a student at Yale. The members of the sculpture jury were Herbert Adams, chairman; James E. Fraser, Charles Keck, Edward McCartan, and Adolph A. Weinman.

## NATIONAL ACADEMY OF DESIGN

AT the annual meeting of the National Academy of Design, now one hundred nine years old, Jonas Lie, landscape painter, was elected president, succeeding Harry W. Watrous. In addition to Mr. Lie, the officers elected are: First vice-president, Hobart Nichols; second vice-president, Edward MacCartan;

corresponding secretary, Charles C. Curran; assistant corresponding secretary, Albert P. Lucas; recording secretary, Charles S. Chapman; treasurer, Henry Prellwitz; assistant treasurer, F. Ballard Williams. New members of the council are: Eugene Savage, Clifford Beal, and John Taylor Arms. Associate members who were made full academicians this year are: Arthur S. Covey, Herman D. Murphy, Albert Sterner, Adolphe Borie, John Gregory, Ulric H. Ellerhusen, Egerton Swartwout, Kerr Eby, and Ellen Emmet Rand.

## ARCHITECTS' LEAGUE OF NORTHERN NEW JERSEY

THE Architects' League of Northern New Jersey has elected the following officers for the coming year: President, Robert Jahelka; first vice-president, George Harvey; second vice-president, Harold Anderson; corresponding secretary, J. Norman Hunter; recording secretary, Theodore S. Holmes; treasurer, Daniel Conte; executive committee: Harry Lucht, Clarence Tabor, B. F. McGuire, C. V. R. Bogert, H. T. Stephens, and G. Willaredt.

## NEW YORK SOCIETY OF ARCHITECTS

THE Professional Practice Committee of the New York Society of Architects has, during the past year been active in securing convictions for illegal practice of architecture. A total of one hundred sixty-five cases of alleged practice by non-registered architects, and of illegal and unethical procedure, were investigated during the year.

## FINE ARTS FEDERATION OF NEW YORK

OFFICERS of the Fine Arts Federation of New York elected at the thirty-ninth annual meeting are: President, Joseph H. Freedlander; vice-president, Herbert Adams; secretary, George Pearse Ennis; treasurer, Albert S. Bard; directors: Messrs. Freedlander, Clarence Fowler, Ernest Peixotto, I. N. Phelps-Stokes, and John V. Van Pelt.

## SMALL-HOUSE COMPETITION

THE seventh annual competition to bring to light small houses recently built in the United States,

and of outstanding merit in design, carries on the series conducted by *House Beautiful Magazine*. *House Beautiful* having been combined with *Home & Field*, the competition is conducted under the sponsorship of the new name. Copies of the announcement giving full particulars as to conditions and the submission of the material may be had upon application to the House Competition Editor, *House Beautiful-Home & Field Magazine*, 572 Madison Avenue, New York City. The competition closes July 1.

## GOING TO THE FAIR?

ARCHITECTS planning to visit the Century of Progress Exposition in Chicago this summer will be interested in an announcement made by The Architects Club of Chicago. The club welcomes architects and members of the building industry generally, offering these visitors an opportunity to make the club their headquarters while they are in Chicago. There are only a limited number of rooms available, so that reservations will necessarily be made in advance. Information regarding space, rates, etc., may be had through correspondence with the club, which is located close by the 18th Street entrance to the Fair—about three minutes' walk to this gate. The address is 1801 Prairie Avenue, Chicago.

## TALIESIN

TALIESIN is planning to issue a publication with text and pictures portraying the work and ideals of the Taliesin Fellowship, being conducted under the direction of Frank Lloyd Wright. Seventeen numbers will make the yearly volume, which will be mailed tri-weekly to subscribers, at five dollars per year. The first number issues May 15. A prospectus with subscription blank may be had by addressing Taliesin Fellowship, Taliesin, Wis.

## P. W. A. CONTRACT REQUIREMENTS

THE Federal Emergency Administration of Public Works has issued a bulletin governing non-federal projects. The full title is: "P. W. A. Requirements as to Bids, Contractors' Bonds, and Contract, Wage, and Labor Provisions, and General Instructions as to Applications and Loans and Grants." This

(Continued on page 14)

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*Illustrations show dumb-waiter car loaded with merchandise in the basement and the same car under counter on the first floor.*

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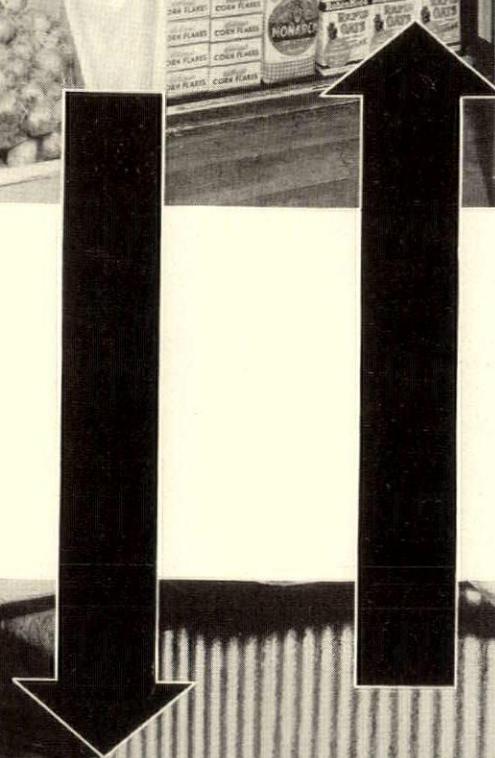
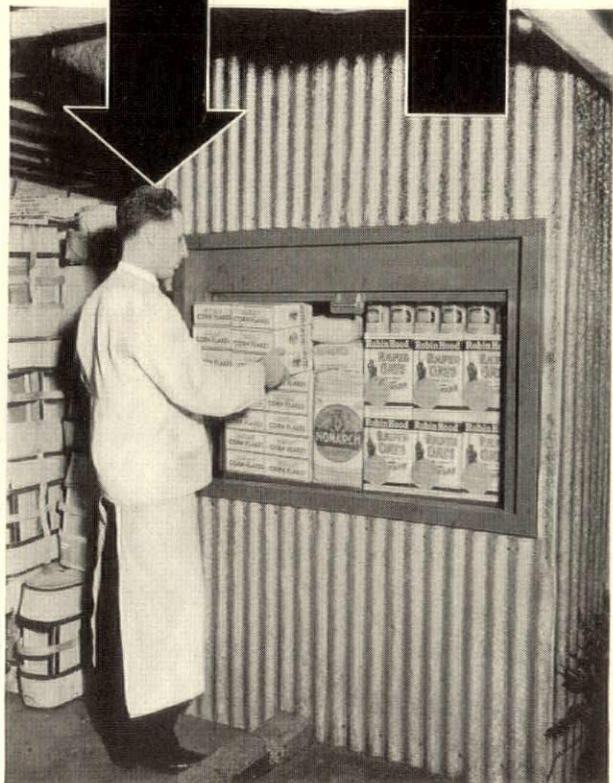
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H. P. motor. Ball and roller bearings throughout. Steel worm and worm shaft and bronze worm gear.

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# ARCHITECTURE

REG. U. S. PAT. OFFICE

THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXIX, NO. 6

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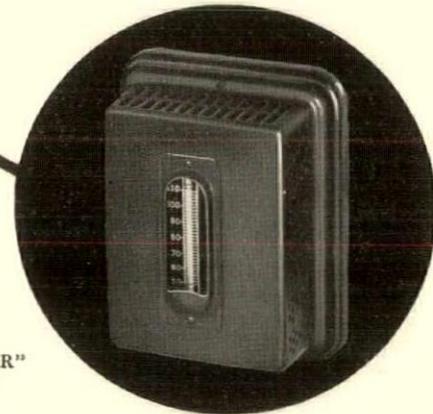
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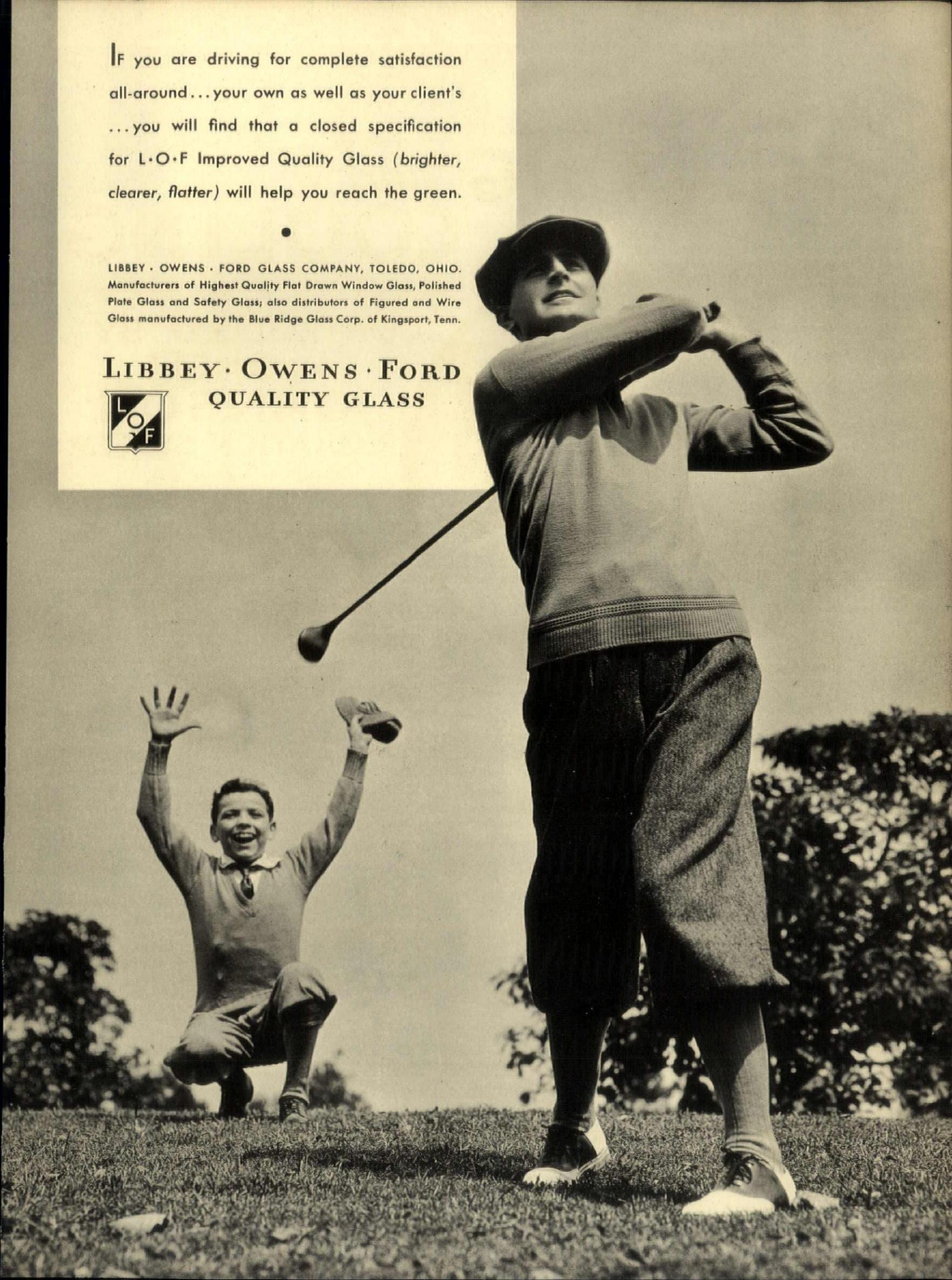


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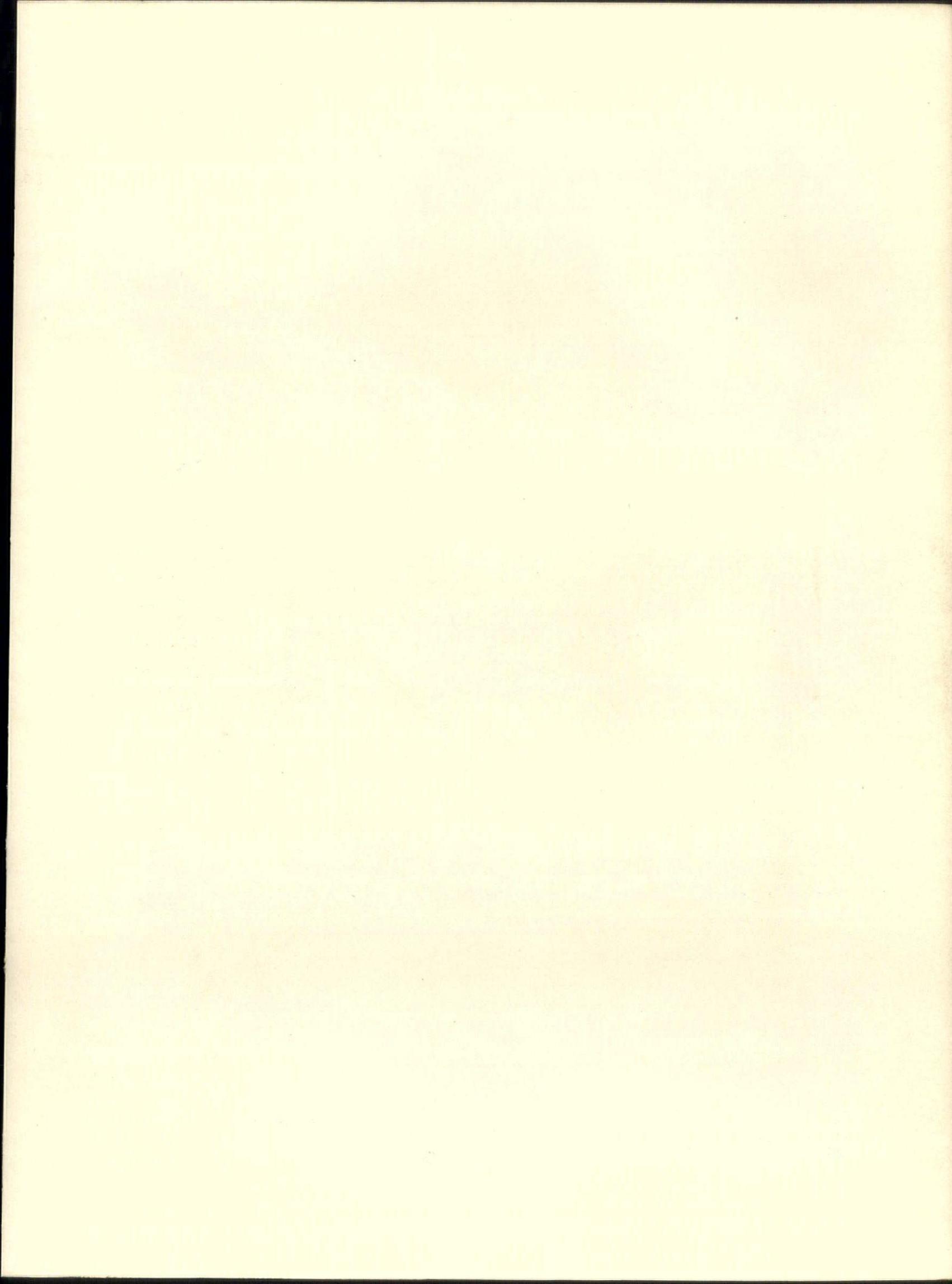


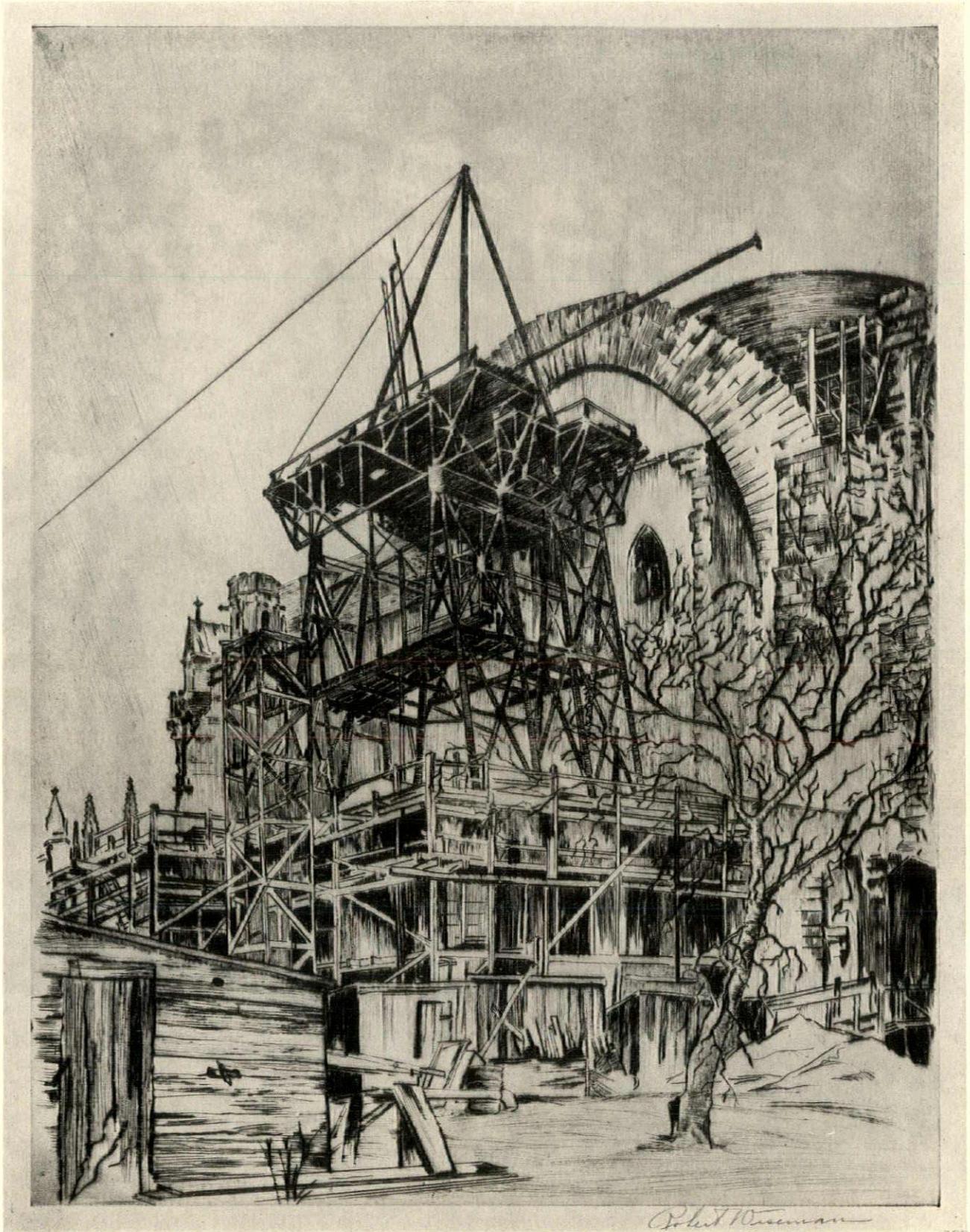


*Lobby, Oliver Cromwell Hotel, New York—Emery Roth, Architect*

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THE CATHEDRAL OF ST. JOHN THE DIVINE, NEW YORK CITY  
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(Original, 10 x 7½ inches)

« ARCHITECTURE »

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IN ARCHITECTURAL CHARACTER

*By Edwin Bateman Morris*

HERE was a time when modernistic architecture justified itself simply by being modernistic. That was natural. It was new. It aroused enthusiasm. It gave opportunity for new materials, new details, new formulæ. It gave interesting new experiences for the architectural palate. It had a certain alcoholic content producing a sense of exhilaration. To architects, bored with the dusty forms of the past, it spelled release, it indicated accomplishment, it *was* Progress.

However, certain questions were asked. Will it digest? Will there be a head for the morning after? Will it stand the test of time?

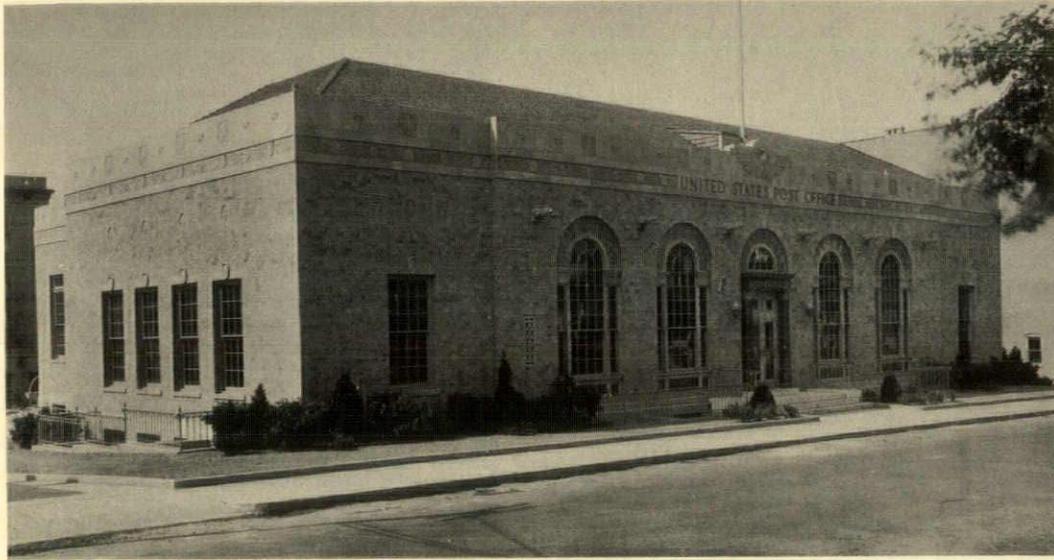
The answer then to these questions—and it was good enough for the time—was, “How can we guarantee digestion and no tomorrow’s head? How can we guarantee against the Test of Time? All we know is that what we are doing appears now to be predominantly right. The Test of Time works slowly. Come back and see us in ten or fifteen years.”

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The opportunity to sit back and look judi-



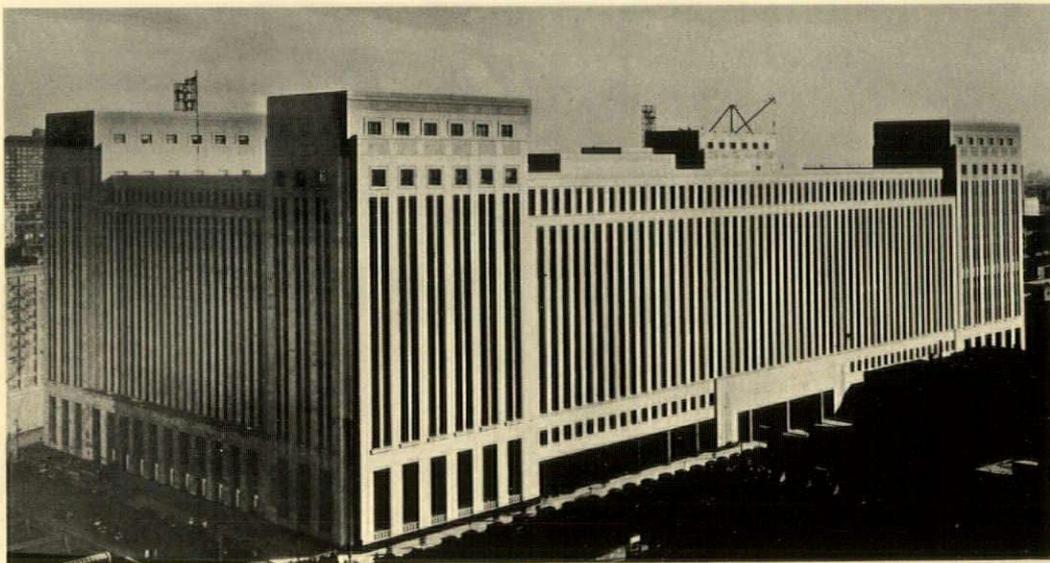
*Post Office, Court House, and Federal Building of the United States, Hartford, Conn.  
Malmfeldt, Adams & Prentice, architects*



*United States  
Post Office,  
Coatesville, Pa.  
Office of  
Supervising  
Architect,  
Treasury  
Department*

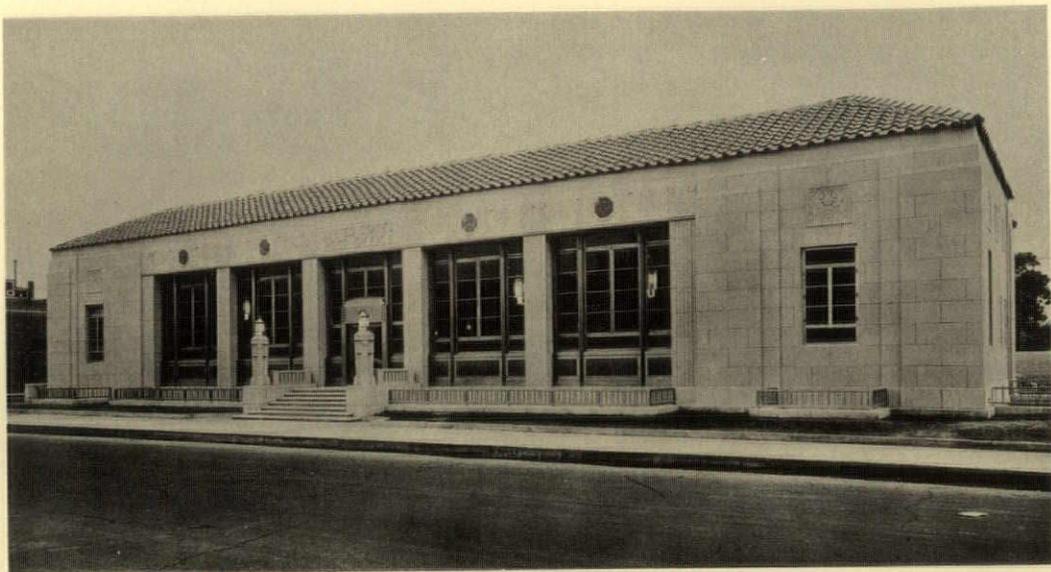


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Schmitt, architect*



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architects*

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Lake, architect*



*United States  
Post Office,  
Napa, Calif.  
Reed & Corlett,  
architects*



*United States  
Post Office and  
Court House,  
Jackson, Miss.  
Hull &  
Malvaney,  
architects; E. D.  
Drummond,  
associate*

cially is accepted not only by the architect but by the man on the street, for the reason that the modernistic style has now spread to public buildings which he feels he owns. The man on the street is singularly apathetic concerning commercial architecture. He is so used to mills, stores, movie palaces and undertaking parlors, designed in the emetic style, that he steels his senses against architecture in general, believing it is the privilege of private owners to inflict anything at all, since they pay for it, on the suffering public, and it is the suffering public's duty, since they do not pay for it, to suffer in silence.

Therefore, the said man on the curb passes by commercial examples of modernistic, whether meritorious or highly atrocious, in the belief that if owners having the money to build such structures desire them to look like that, it is their own affair. But when public buildings are built, the public instantly bristles with opinions.

This public—architectural and non-architectural—stands, therefore, before this New Method in Architecture, and says: "This was left to the next generation. We are the next generation—what do we think of it?"

This public will ask the question in the conviction that something has happened. They will be aware that the modern movement has life and

virility—it is fresh and lush and vibrating with the strength of youth.

They will doubtless sense—perhaps vaguely, perhaps very strongly—that it represents a force that has been heaving at the surface long before there was any modern architecture. The disgust civilized people began to feel at the mannerisms, the meaningless conventions, the gilt chairs and the hansom-cabs of the 'nineties, was real. The upheaval through that state of artificiality resulted in one-piece bathing suits, social conversation designed to shock and asphyxiate, roadside parking, and generally the grafting upon the manners of the old drawing-room the manners of the old bar-room.



That was a vicious upheaval—not wholly desirable, but yet too strong to be suppressed. The swing to modern architecture was backed by the same revolt against artificiality. It can not now—even if we desired such a thing—be suppressed. But the thoughtful, sensitive person, who appreciates inspiration in architecture and deplors affectation, will be unwilling to accept and swallow it all. He will approve of the crusade to eliminate the old affectations in favor of



*United States Post Office and Court House, Knoxville, Tenn. Baumann & Baumann, architects*

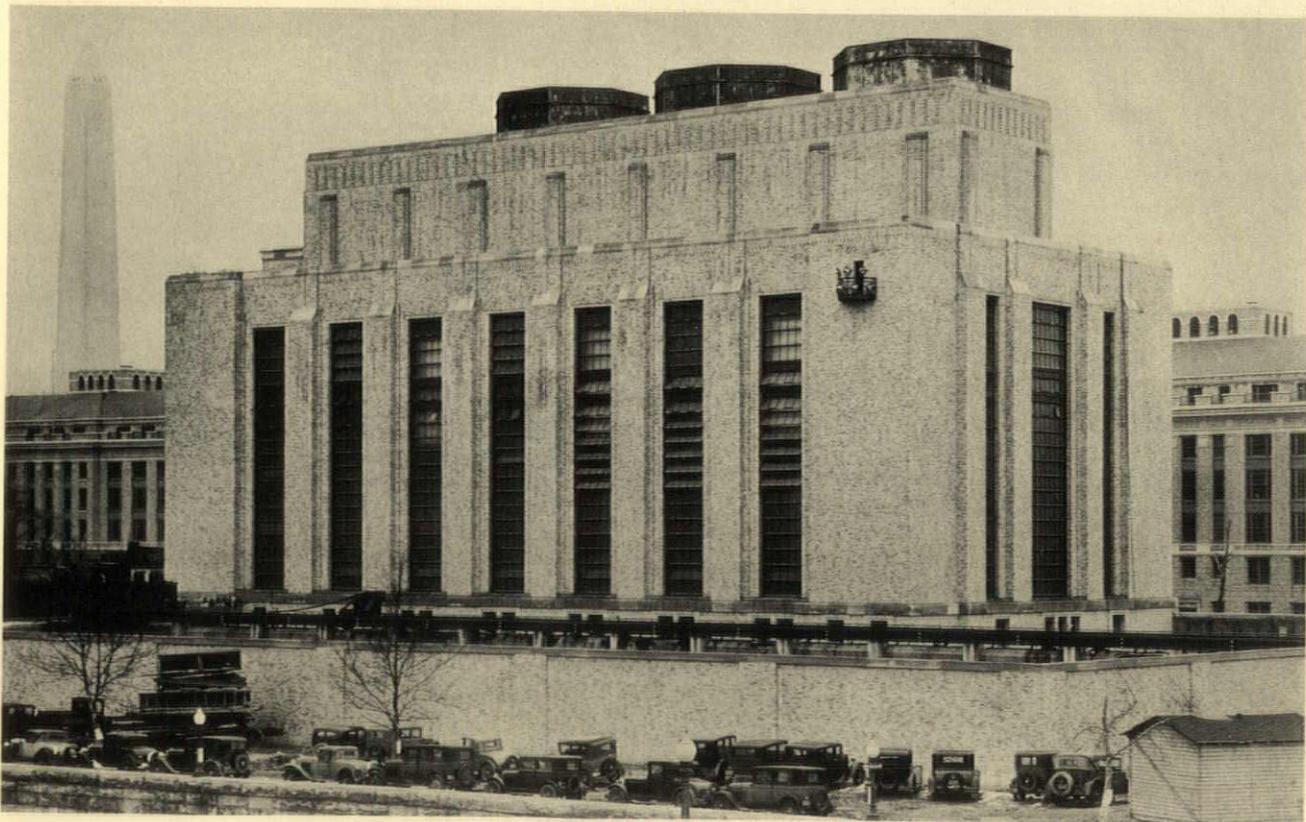
« ARCHITECTURE »

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*United States Post Office, Court House, and Custom House, Albany, N. Y. Gander, Gander & Gander, architects; Electus D. Litchfield, consulting architect; Norman R. Sturgis, associate architect*

*Central Heating Station, Washington, D. C. United Engineers and Constructors, designing engineers; Paul P. Cret, associate architect*



honest inspirational design, but he will not approve of the mere substitution of a new type of affectation for it.

Persons giving consideration to the new architectural trend would probably feel that the first type of structure to be viewed would be the high office buildings in the new style. These are really modern architecture *par excellence*. They are the reason for modern architecture.



Since the classic forms were based on an assumption of horizontality, and the skyscraper presented an absolutely vertical problem, the column-entablature idea lay crosswise of the scheme. It was only natural that columns and entablatures, and gradually everything with the classic taint, should be eliminated to evolve the skyscraper.

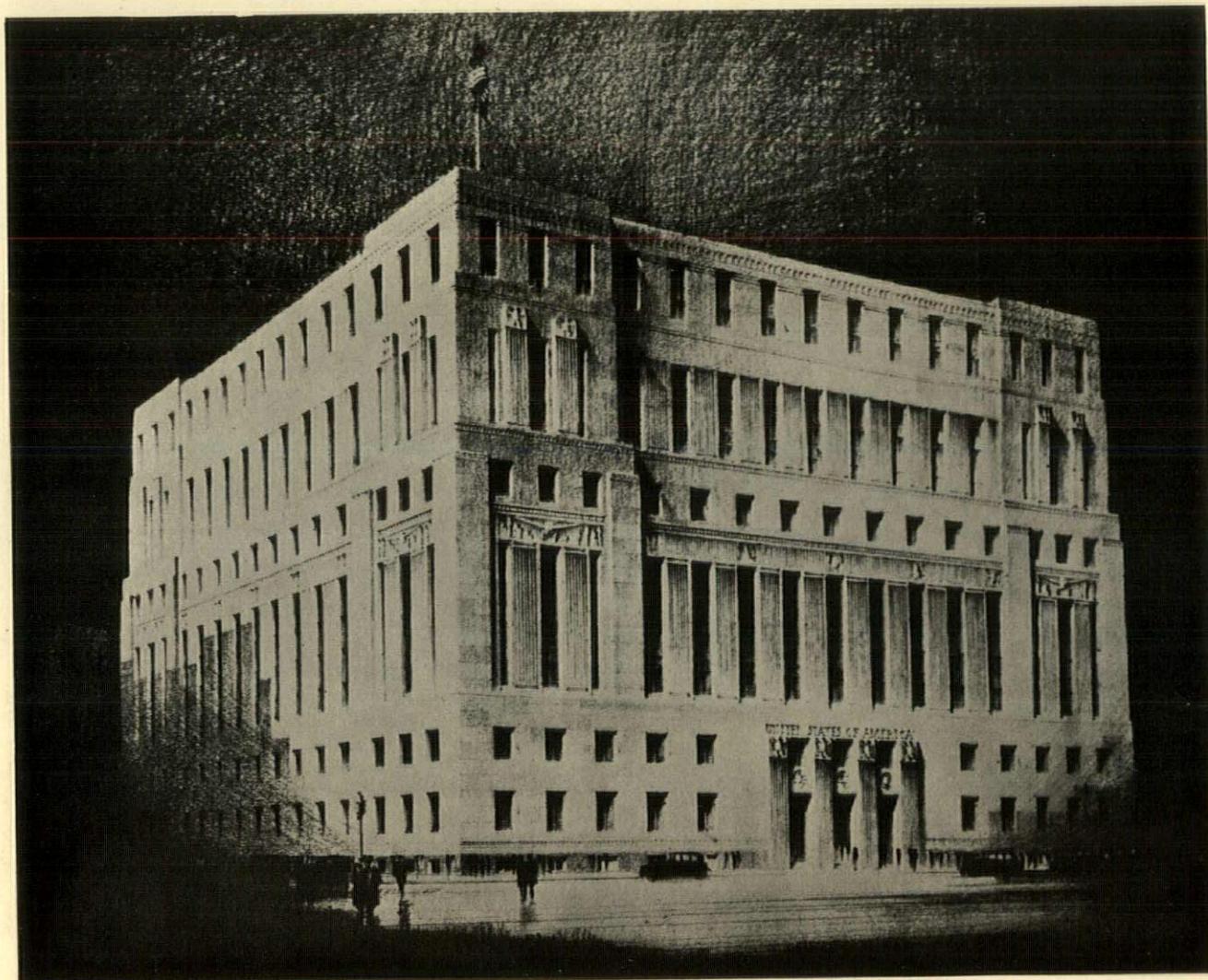
In fact it may be said that modernistic archi-

itecture was in its beginning not so much a style as a method of design for high office buildings. There is its home. The strong vertical lines and the ascetic sparsity of decoration, which are two salient features of the style, are perfectly suited to the skyscraper. They adapt themselves to horizontal structures less readily.

Representatives of our generation, therefore, standing before the high office building, will doubtless absolve it from criticism. It appears inescapable that they will establish it as the norm, the yardstick, admitting its method of design as fitting the slender girlish figure of the tall building. The problem is as to whether it can be satisfactory for the stylish stout.

In other words, can a style evolved to fit an abnormally high obelisk be grafted successfully upon flatter and more spreading architecture?

It would be advisable to leave out of consideration altogether the horizontal effect aimed at by the so-called Frigate-Constitution archi-



*Preliminary study for Federal Building, Detroit, Mich. Robert O. Derrick, Inc., architects*

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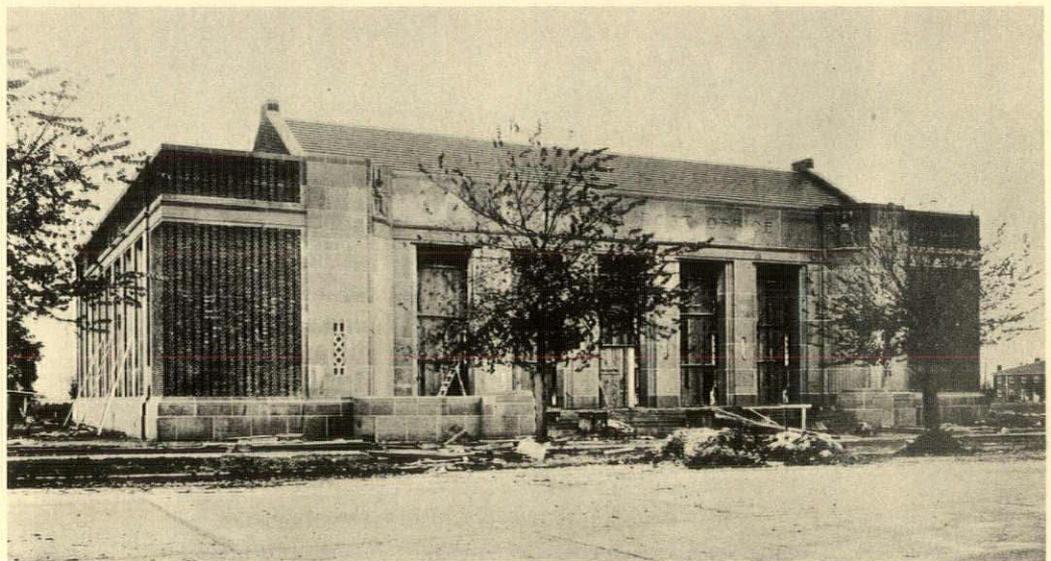


*United States Post Office and Court House, Boston, Mass. Office of Supervising Architect, Treasury Department; Ralph Cram Adams, architect for exterior*

◀ ARCHITECTURE ▶  
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*United States  
Post Office,  
Stockton, Calif.  
Bliss &  
Fairweather,  
architects*



*United States  
Post Office,  
Longview, Wash.  
Bebb & Gould,  
architects ;  
John Gould,  
associate architect*

ecture, as exemplified by the wings of the Administration Building at the Chicago Fair, and certain office buildings showing the European influence, where there is a row of openings recalling gun ports, with solid structure above and below. These layers of masonry supported on layers of glass are a type of functionalism that has not yet been carefully enough explained to be considered as part of the vocabulary of architecture. It is Esperanto—having a clever simplicity but not established as being better than ordinary talk.



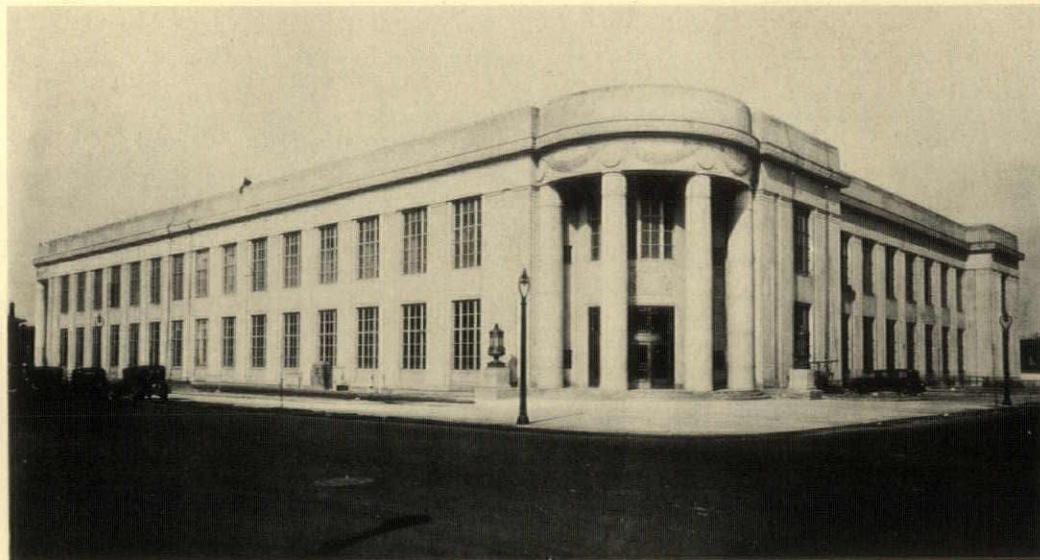
The vulnerable spot in the armor of modernistic, therefore, is the low building, where verticality has no dominant place and ornament is

in focus. Modernistic brings a strong pressure nevertheless even in such instances toward emphasis of the vertical and toward blocking in the ornament rather than defining it.

This is the result of a mental attitude which causes some architects to regard the use of modernistic as a religion rather than a method of artistic expression. Their distaste for tradition makes them discard not only the forms of the past but the principles of mass, proportion, and ornamentation of the past.

They confuse syntax with vocabulary. It is proper to change one's vocabulary so as to keep language alive, but one many not change grammar without losing the power to convey ideas. Similarly, it is clear you can change architectural forms, but you cannot change architectural principles without confusing the message.

*United States  
Post Office,  
Rochester, N. Y.  
Gordon & Kaelber,  
architects*



*United States  
Post Office,  
Dover, Ohio  
Office of  
Supervising  
Architect,  
Treasury  
Department*

There is an old axiom that a good design, following established principles, should be transferable from one style to another and still be a good design. A proper design in modern, therefore, should be capable of having its modern detail replaced by traditional detail and still look like the product of an architect's intelligence.

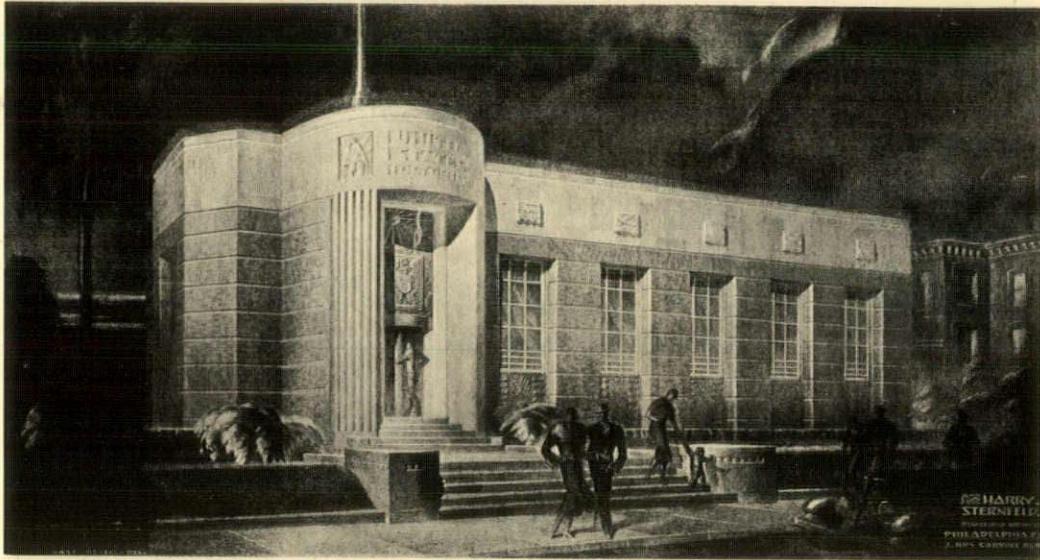
In other words, it might be well to design low buildings in the classic style and work them over into modernistic. The syntax would then be right. The architectural principles of mass and proportion which we have impressed upon the pliable public as the canons of good taste would thus be certain to be followed. It would not be necessary to admit to that public, as many architects have, that up to now we have been all wrong about the canons of good taste, and that, at this late date, we are starting in to

educate the said public to revised canons of a diametrically opposite character.

This thought is brought out in the Folger Library—an example of the use of a new architectural vocabulary expressed along established rules of syntax. Here, original and inspired forms are presented with due regard to the delicacies of proportion and mass established through centuries of architectural study.

You have in this building a horizontal theorem treated in a horizontal manner. It is not designed in a high office building mood to result in a structure which, by the addition of thirty or forty more stories, would become impressive and architectural.

The modernists have trouble with entrance motives. The feeling of many is that if the material of the entrance is black, it makes no dif-



*Preliminary study of the United States Post Office for Milton, Pa. Harry Sternfeld, architect*

*United States Post Office, Waterbury, Conn. Office of Supervising Architect, Treasury Department; George Oakley Totten, Jr., designer*



ference what the proportion and design may be. The preference is for a motive as nearly square as possible, introduced with firmness into the composition wherever there appears to be a weak spot, wedging aside a few pilasters to make its existence possible. If the lintel of such a motive can be made of one stone of carload size, the design is felt to require no more study and refinement. Such motives have the appearance of deliberate and smug nose-thumbings at good taste.

Concerning a certain recent large building, its architect stated, as if conscious of accomplishment, that he had achieved his result by study of mass, selection of materials and the restrained use of ornament—instead of employing the customary architectural motives. His design consisted mainly of two large pylons, conceived in

the spirit of the Washington Monument, giving the indication that for an ordinary office building an overabundance of cell-space had been provided. In other words, in setting his jaw firmly to break away from traditional forms which he considered inappropriate, he had swung to other forms much more inappropriate.

Architects, to a certain extent, educate the public to good taste. But the public, on the other hand, with its thumbs up or its thumbs down, holds the strongest card. If it tires of a type of design, as it did of the Mansard roof and the wave of Romanesque, both of which were fostered by eminent architectural minds, that type is on the way out.

The world is taking another turn now. It is tired of being new—it is reacting—becoming intrigued again by older things, older ideas. Our

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Post Office,  
Jacksonville, Tex.  
Office of  
Supervising  
Architect,  
Treasury  
Department*



*United States  
Post Office,  
Terre Haute, Ind.  
Miller & Yeager,  
architects*

women are rustling in long skirts and Gibson sleeves, our men have gone back to suspenders and the despised clawhammer coat. We have this mania for horseback riding, bicycling and program dances. We can't be held to things new and are finding sentiment and satisfaction in the things of the old generation.

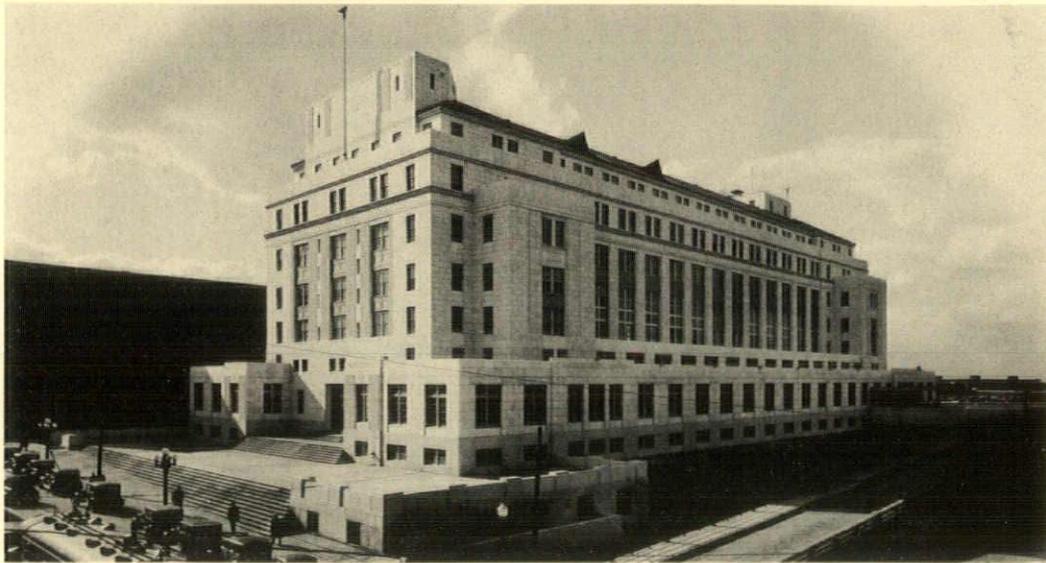
The public will continue to have a sentimental feeling about its buildings. The Capitol, the Lincoln Memorial, Columbia Library, Independence Hall, will continue to represent Architecture to it. It will be puzzled and confused by any architectural change which has the appearance of stating that all previous architecture has been in bad taste.

No one can say absolutely that the public will refuse to accept and take to its breast a modernistic scheme of design that opposes

hitherto accepted schemes of design. But it probably will refuse. It will accept, rather, something which has a distinct link back to the buildings for which it has a sentimental affection.

There are presented here a few recent public buildings showing the modern influence. These, for the most part, follow established rules for mass and proportion. They show a freedom of idea and treatment and yet have a restraint.

They are in the mood that might be termed Resultant. Every new movement in art is marked in the beginning by exaggeration. To obtain attention, the idea has to be keyed up—perhaps, almost, to the point of absurdity. It comes close to burlesque, and is enjoyed as such. The movement swings back to a compromise ground between the indefensible conservative and the indefensible radical. These public build-



*United States  
Post Office,  
Atlanta, Ga.  
A. Ten Eyck  
Brown, architect;  
A. Barili, Jr.,  
associate  
architect; J. W.  
Humphreys,  
associate architect*

ings are in or near that compromise ground, showing strong allegiance to tradition while borrowing freely from the modernistic vocabulary.

It may be said that their outstanding asset is that they have less of self-consciousness than had modernistic in the beginning. They seem to be trying to express their idea in simpler terms, in phrases that have sincerity rather than affectation.

There is still a certain lack. The sort of thing I think of is the restless skyline of many modern buildings—exemplified by downward cuts of roofs into parapets, by uncompleted buttresses, which reach inconclusively beyond the parapet,

grasping at something not there. Or by the brutal convincingness of vertical lines of some of the huge, masculine structures where the design is confined to a stark, hard alternation of voids and solids, rigid as the stripes on the flag. Such sternness could be modulated and given pace were the designers ready to believe their public would be in a receptive frame of mind toward their new type of architecture, so that they need not design in so didactic and forceful a manner.

There is, in such buildings, this sense of incompleteness, of a step in the design purposely not taken, lest it might possibly weaken the strength of the argument. There is too much



*United States Parcel  
Post Building,  
New York City  
Office of Supervising  
Architect, Treasury  
Department*

*United States  
Post Office,  
Wilkes-Barre,  
Pa. Office of  
Supervising  
Architect,  
Treasury  
Department*



*United States  
Post Office and  
Court House,  
Sioux City, Iowa  
Beuttler &  
Arnold, architects  
and engineers*

*United States  
Post Office,  
Trenton, N. J.  
Office of  
Supervising  
Architect,  
Treasury  
Department*



drive to put over the style and not enough calm, not enough of the enthusiastic following of inspiration.

Until recently, it had not seemed that the modern style would arrive. The Chicago exposition, that galaxy of magnificent containers, seemed to read the burial service over it. But instead of being requiem, it turned out to be the warning skull and crossbones, the sign marking the spot at which one should turn about and go back.

The retracing of steps strikes an average. The tree has been bent over beyond the desired point and springs back to assume the proper angle with the ground. It would seem that when the architectural world becomes familiar enough with its new medium to develop in it delicacy and shading and change of pace, a new style will be definitely and indelibly written into architectural history.



The recent buildings are in general studied, earnest and scholarly. They have lost the early ballyhoo which sought at all cost to direct attention to the new and original form of expression that was now being presented, gentlemen, for the first time in the history of art and architecture.

But there is still a subtle lack, as though the wine of this new architectural method had not yet fully mellowed in the bottle. It is hard to

put one's finger directly on the lack that exists but it seems to be, to sum it up in a word which may perhaps be too much of a generality, in its restlessness.

The immortal examples of architecture are serene. They are calm and restrained, as having been born of good architecture, which in turn has been born of good architecture which in turn has been born of good architecture. They have the repose and dignity of a cultured lady of lineage, whose hands lie quiet in her lap, whose tones are modulated, who is poised, undisturbed, secure.

A new style of architecture must naturally, in its earlier stages, be didactic and insistent. As it becomes secure and feels that its public is convinced, it will become more delicate. It will develop nuances, modulation, softness. It will become calm, serene, certain of its position.

It is to be hoped—and the indications are encouraging—that the architects will soon get the idea to stop bearing down, to stop preaching the style. We are tired of sermons. We want stuff with delicacy and poetry and charm. We are tired of being convinced, of being hit in the eye with carload lintels, of too much raw meat. We want the preachers to let up on the hell-fire and get human.

We want our buildings to look like the product of an architect's soul, rather than of his mind restrained by prim axioms. We want more of the buildings you walk around the block to look at again.



*United States Post Office, Lansing, Mich. Bowd-Munson Company, architects;  
Albert Kahn, Inc., consultants*

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Main floor of the Bowery Savings Bank in New York City, entirely of Cosmati mosaic. York & Sawyer, architects. Craftsmanship by the De Paoli Company, Inc. The marbles used here are Rouge Antique, Rouge Jaspé, Rouge Royal, Alps Green, Verde Antique, Tinos Green, Yellow Siena, Campan Melange, Traniville, Belgian Black, and Black-and-Gold

## Craftsmanship in Cosmati Mosaic

By Eugene Clute

ANY of the famous old churches of Italy and many of the finest of present-day buildings in our own country owe much of their beauty to Cosmati mosaic. This type of mosaic is distinguished from all other types by the fact that the pieces of marble of which it is composed are of various geometrical shapes: oblongs, squares, triangles, discs, segments of circles, or any such forms as may be required in working out the design. The other kinds of marble mosaic, known in current practice as "Roman" and "Pompeian," are composed of tesserae that are square of face and all of one size for any one piece of work, excepting where it is necessary to cut some of them to fit into parts of the design.

The pieces of marble in Cosmati mosaic are called *pezzi*, which means pieces, not *tesserae*, as in other mosaic. They are broken from slabs of marble with a hammer, the head of which is drawn to a chisel-like point. The craftsman skilfully shapes the pieces with sharp blows of this hammer, while he holds the marble against an edge of a block of iron on his workbench.

The slabs are usually about  $\frac{7}{8}$ " thick and consequently the pieces are of this depth. However, the depth may vary with the scale of the design. In face size the pieces usually range

from  $\frac{3}{4}$ " to 4" or 5" in current practice, though much larger pieces are occasionally used, for example, such units as the so-called "daisy petals" are sometimes 11" or 12" long in a large floor. In some of the old Italian Cosmati mosaic, on the other hand, the pieces are very small and the workmanship very fine, *pezzi* not more than  $\frac{1}{4}$ " across often being found. In general, the pieces of marble in Cosmatic mosaic are larger than the tesserae in other mosaic.

The method of working is very much like that employed generally in the making of mosaic. That is, the design is drawn at full size upon paper which is divided into sections of convenient size for handling, each section containing a portion of the design. Then the pieces of marble are arranged face downward upon the paper, following the design, and attached to it by means of an adhesive made from gum arabic. This is turned over upon a fresh coat of mortar into which the stones are pressed. Later the paper is removed by soaking with water and rubbing.

The cutting and the arrangement of the pieces of marble upon the paper, processes that are carried on in the shop, call for a high degree of ability on the part of the craftsman, who in-

deed should be a true artist. The selection of portions of the various marbles that have the right veining or shading of colors to interpret correctly the intention of the architect or designer requires an appreciation of character and refinements in coloring and the ability to judge correctly the effects that will be produced when the finished work is in place and seen as a whole.

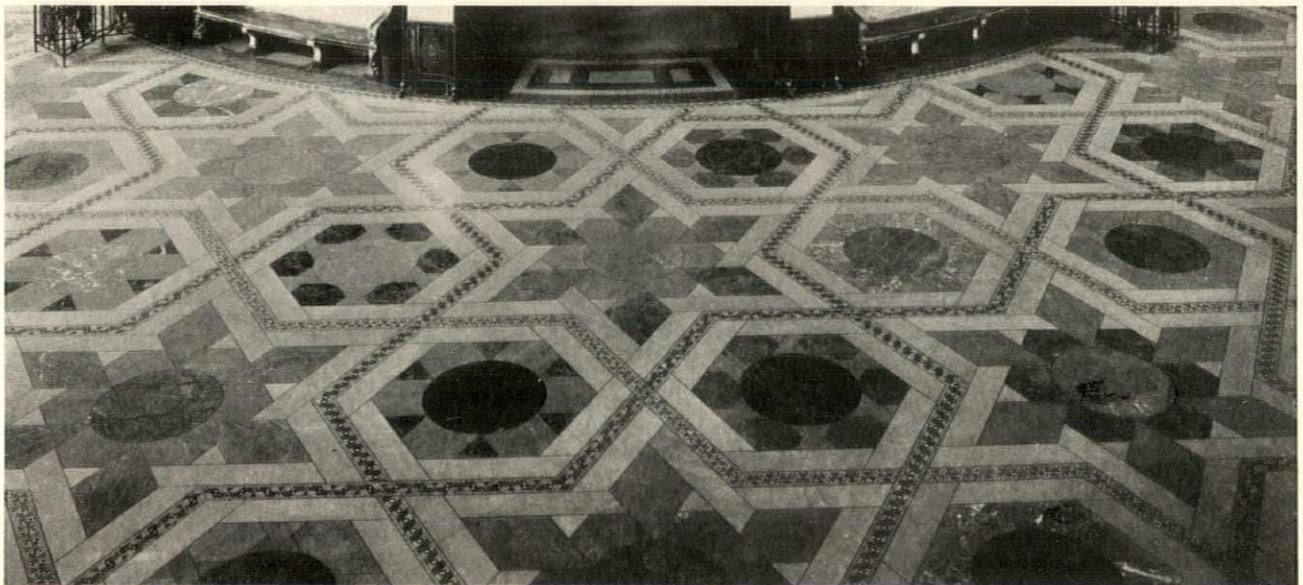
So great is the effect of the coloring upon the design that it is a good practice to have a full-size sample of a portion of the work several feet square executed in the mosaic for criticism, and then to restudy the design, remedying any defects or shortcomings that may be revealed. Sometimes this test makes it clear that a better effect can be had by reversing the coloring of parts of the design. Very often it is found that certain elements of the design need to be made either heavier or more slender. It may be that some motive needs to be omitted or replaced by a different motive.

After the sections of mosaic are turned over upon the mortar, they are tamped down with a block of wood that is moved about over the surface during the process, then the mosaic is rolled down with a heavy stone roller, if it is on a floor. Next the craftsman goes over the work carefully, adjusting any pieces of marble that may have been forced out of their proper relation to the others, prying with a knife blade to force them apart at some point or bring them closer together somewhere else, straightening a slanting piece and forcing down one that may project

here and there. Finally he must wash off all of the adhesive from the surfaces and joints, especially to permit the adhesion of the grout to the mortar.

The mortar in which the mosaic is embedded is known as *mastico*. This mixture is in the proportions of two bags of sand, one bag of cement, and one bag of lime, with the necessary amount of water. After the mosaic has been laid the joints are filled by grouting with lime and cement. When the cement has set, the whole surface is rubbed with an electrically operated grinding machine that uses revolving stones of carborundum or some other suitable abrasive material. For this operation an 80-grit stone is used. Next, the surface is grouted again with lime and cement, which is left on for two or three days or until the building is nearly ready for occupancy. Then, the grouting is removed by lightly going over the work with an 80-grit stone in a grinding machine, or, if a polished finish is desired, a 120-grit stone is used.

Since the pieces of marble in Cosmati mosaic are of simple geometrical forms and relatively large, they afford an opportunity to display to great advantage the veining, mottling, and other color variations of the more decidedly figured marbles which are usually chosen for this type of mosaic. The colors can be blended skilfully to produce a pleasant harmony, while effective contrast is secured, because of the mingled colors in the veined and mottled marbles. The range of colors in the marbles, which



Main banking-room floor, Dime Savings Bank, Brooklyn, N. Y. Halsey, McCormack & Helmer, Inc., architects. Craftsmanship by the De Paoli Company, Inc. The Cosmati mosaic here is composed of Pink Tennessee, Dark Cedar Tennessee, Belgian Black, Botticino, and St. Geneviève. The borders of Cosmati mosaic are edged with brass strips, and the slabs of marble all separated by similar strips in the joints outlining the design

are brought from all parts of the world, is practically unlimited.

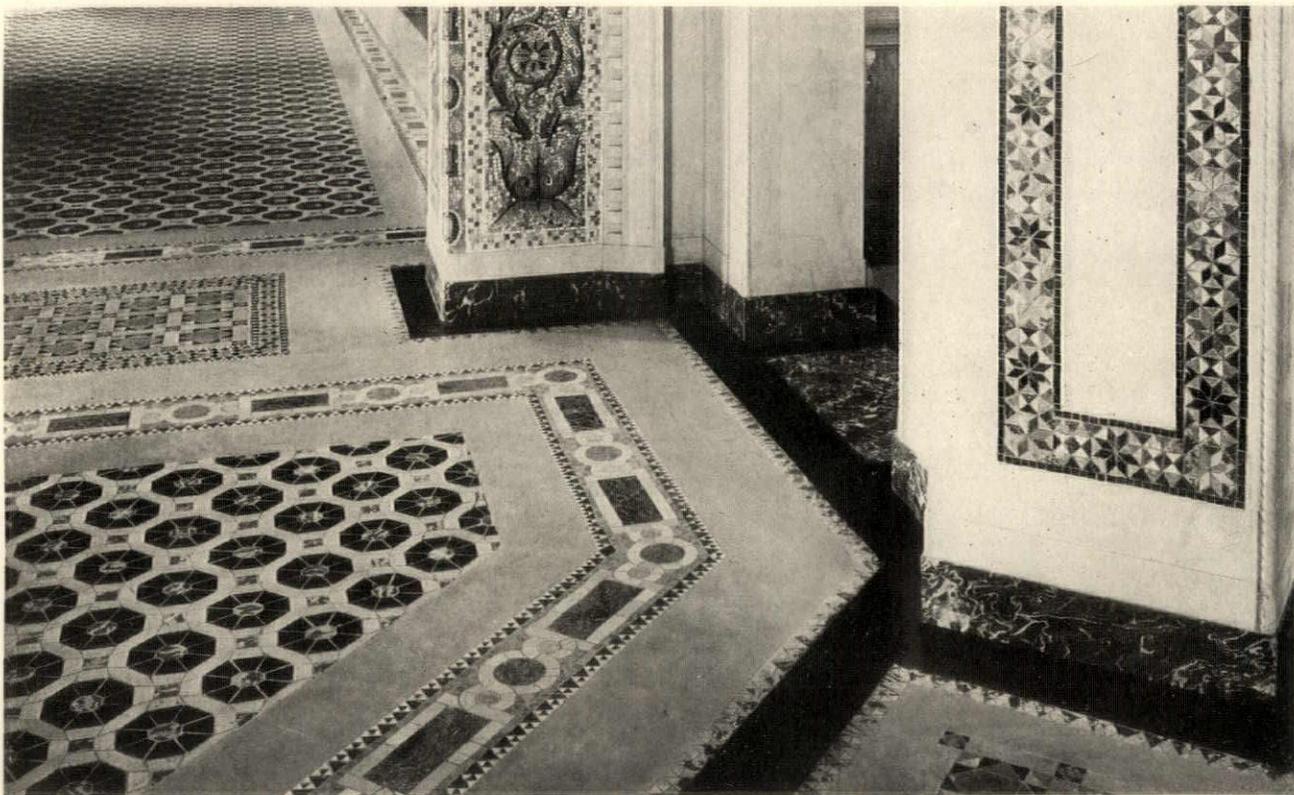
Cosmati mosaic lends itself to the rendering of essentially modern designs as well as to those of a traditional character, though it was developed mainly in the churches that were built in Italy in early Christian times and in the centuries immediately following. There is a wealth of marvelous examples of this technique in the historic architecture of Italy from which design inspiration may well be drawn.

The adaptability of these old traditions to our present-day requirements is well demonstrated in some of the outstanding architectural works of recent years in this country. Notable among these are the Bowery Savings Bank on 42d Street, New York City, York & Sawyer, architects; The Rochester Savings Bank, Rochester, N. Y., McKim, Mead & White, architects; the Nebraska State Capitol at Lincoln, Neb., Bertram Grosvenor Goodhue and the Goodhue Associates, architects; and the Dime Savings Bank, Brooklyn, New York City, Halsey, McCormack & Helmer, architects. The buildings mentioned afford examples of Cosmati

mosaic inspired by Italian work ranging from the fifth century to the thirteenth century, details of which are shown in the photographs herewith. The craftsmanship in all of these buildings carries on the best traditions of the art of mosaic.

In the floor of the main banking room of the Bowery Savings Bank is a masterly interpretation of the traditions of Cosmati mosaic as they are represented in the early Christian churches in Italy, especially in the following: The Church of Santa Maria Maggiore (c. 432 A. D.); the Church of San Clemente; the Church of San Giovanni Laterano; and the Church of San Lorenzo fuori le Mura (530 A. D.), all in Rome.

The style characteristics of the Cosmati mosaic floor of the Rochester Savings Bank date from some six centuries later than those of the Bowery, for their prototypes are found in such Sicilian buildings as the Church of San Giovanni, Ravello (thirteenth century), the Palazzo Cappella, Palermo (twelfth century), and the Cattedrale de Monreale. Cosmati mosaic is employed also on the walls of this banking room, as it was in some of these buildings.



*In the Rochester Savings Bank, Rochester, N. Y., McKim, Mead & White, architects. Craftsmanship by the De Paoli Company, Inc. The floor and some wall panels, as at right, are in Cosmati mosaic; other wall panels, as in the centre, are of Venetian (enamel or glass) mosaic. Marbles used are Rose des Alps, Grey Siena, Verde Antique, Rouge Jaspé, Yellow Siena, Tinos Green, Levanto, Rouge Royal, Spanish Red, Rouge Antique, Belgian Black, Botticino, Vert Frejus, and Carrara*

It is not only in Rome and in the cities and towns of Sicily that interesting old examples of Cosmati mosaic are found, for they are to be seen in all parts of Italy. Among the most beautiful are those in the Chiesa del Duomo, Isola di Torcello, Venice; the Basilica di San Marco, Venice (twelfth century), where Cosmati and Pompeian mosaic are combined; and the Battistero, Florence (twelfth century), where Cosmati is combined with the type of inlaid marble work known as *grafitto*; and the Basilica de San Miniato al Monte, Florence (thirteenth century), where Cosmati and *grafitto* are also found together. The treatment in the churches of this period is lighter in design character and less robust than in the churches built some five or six hundred years earlier.

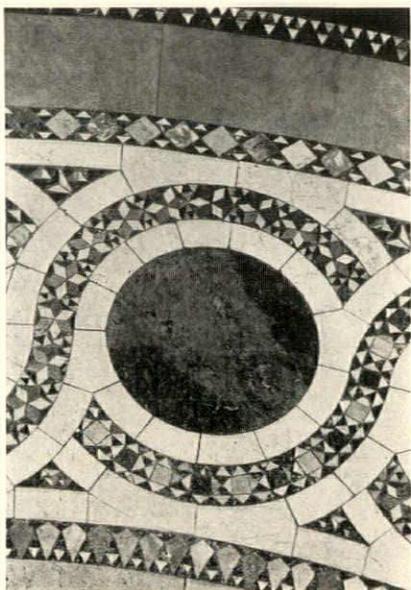
In the floor of the grand rotunda of the Nebraska State Capitol, Cosmati mosaic is employed to outline the great guilloche that embraces in its nodes four medallions with figure subjects and surrounds the large central medallion, all of which are of the Roman type of mosaic in Belgian Black and Blanc de Nimes marbles.

In the foyer and lobbies adjoining this grand rotunda, Cosmati is used entirely for some elaborate and beautiful designs as well as in borders around figure panels of Roman mosaic.

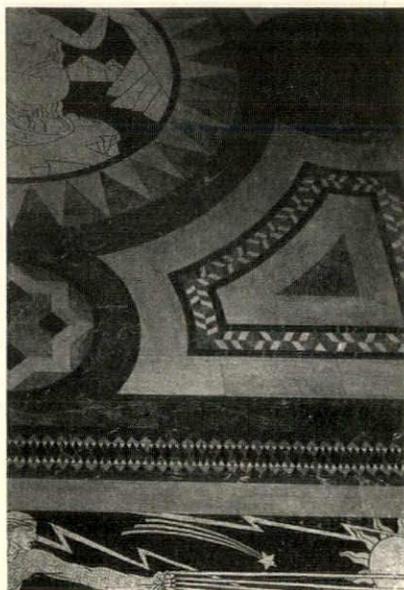
One of the most interesting as well as one of the most recent of the important works in which Cosmati mosaic plays a leading part is the floor

of the main banking room of the Dime Savings Bank, Brooklyn, New York City, which is one of the largest banking rooms in the world. The architecture is of classic inspiration and there is a circular colonnade in the centre of the room containing the desks of officers of the bank. The floor outside of this colonnade is patterned with interlaced bands of Cosmati mosaic forming six-pointed stars and hexagons, in a background of marble work, all in low, quiet tones of rich warm grays, some softly rose-tinted, others veined with yellow, while for accent there are cream and black marbles.

Since it lends itself especially well to bold geometrical designs, Cosmati mosaic is very useful in borders which form the main lines in the scheme of a large floor in conjunction with Roman mosaic medallions or panels, as in the Nebraska Capitol rotunda. There it effects a transition from the marble work of the relatively plain areas to the pictorial panels. But it is excellent also for areas within borders, providing a vibrant all-over pattern, as in the main banking-room floor of the Bowery Savings Bank. And it is rich and effective when used for large-scale designs such as those in the lobbies of the Nebraska Capitol. Cosmati mosaic, because of its great architectural effectiveness, is one of the best of the mediums of artistic expression that have come down to us from the past. It is not a closed chapter, but one capable of development to meet the changing needs of this age and of others to come.



*A detail in the Rochester Savings Bank floor where the Cosmati mosaic is in the manner of twelfth-century work in Sicily*



*A detail of the floor in the Nebraska State Capitol. Floor designed by Hildreth Meière, craftsmanship by the De Paoli Company, Inc.*



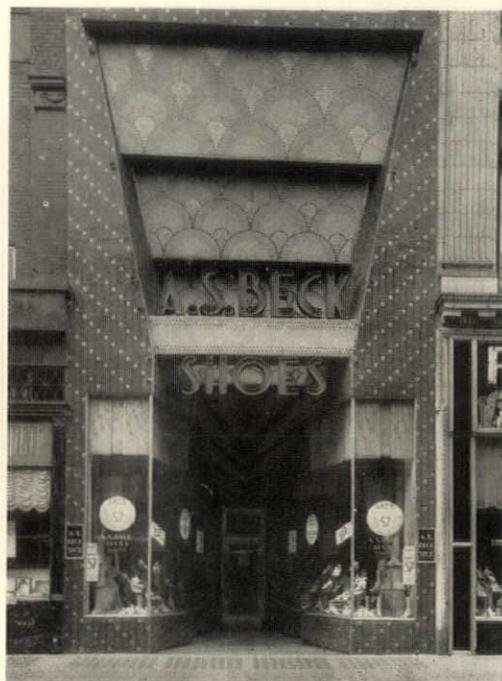
*A detail in the Nebraska State Capitol floor, showing the combination of Cosmati mosaic with marble mosaic in the medallions*

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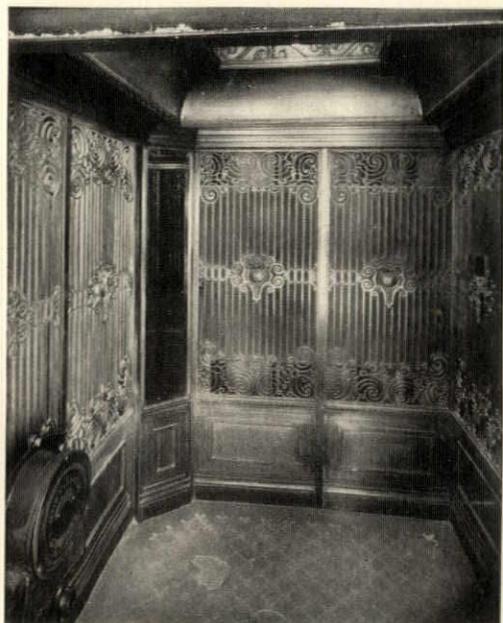


*An alteration by Vahan Hagopian, architect, in which the demand for additional light has been met by greatly increased height of the entrance motif and the use of color in tile*

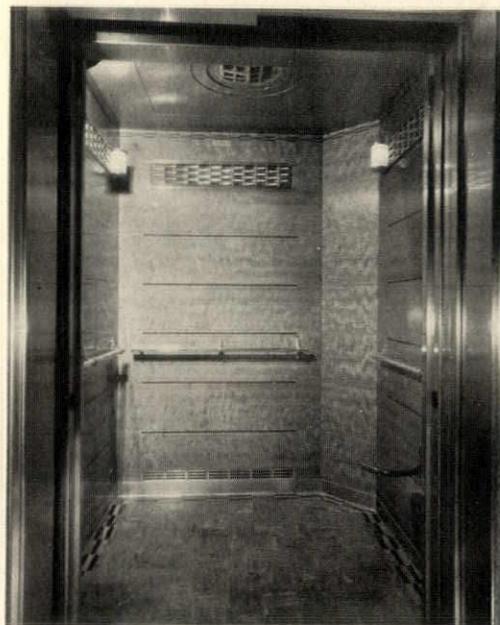


## Before and After

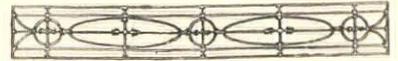
IF, AS SOME WOULD HAVE US BELIEVE, THERE ARE ALREADY TOO MANY BUILDINGS IN THIS COUNTRY, THE OBVIOUS PROCEDURE IS TO MAKE THE ONES WE HAVE BETTER, PARTICULARLY IN THE KEEN RIVALRY OF BUSINESS STRUCTURES. MANY AN OWNER IS FINDING THE SHIFT FROM RED FIGURES TO BLACK IN MORE ENTICING ARCHITECTURE



*One of the most frequent opportunities found for holding present tenants and gaining others in office buildings or apartments—the bringing up to date of the elevator system. Here are the old and new elevator cabs in the Yeon Building, Portland, Ore. De Young, Moscovitz & Rosenberg, architects*



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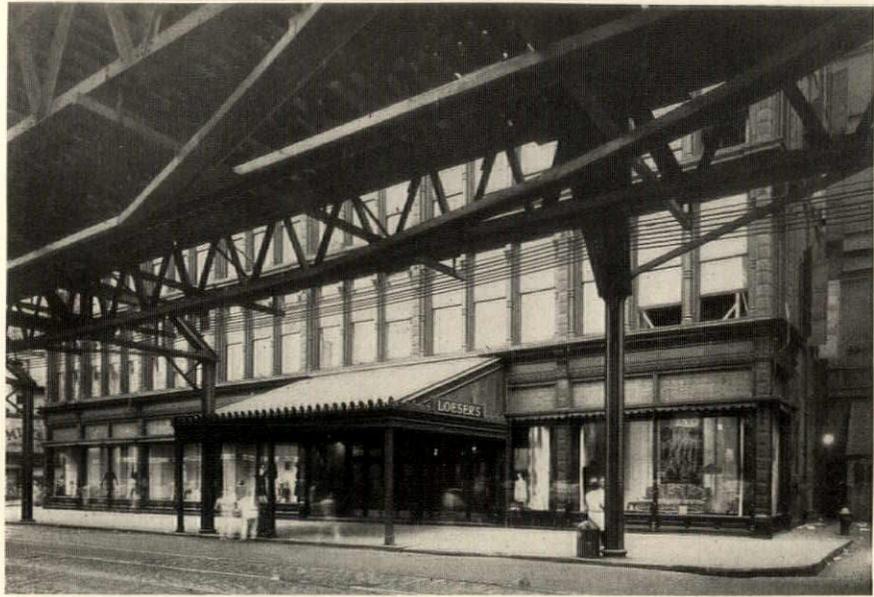


*At the left are two general views of the department store of Frederick Loeser & Company in Brooklyn. Figures are not available to indicate the increase in business in the new setting as provided by Starrett & Van Vleck, architects, but they might be assumed to be far more than enough to pay the interest on the additional investment*



*Alterations in improvement are not always revolutionary, as may be seen by comparing "before" and "after" stages of an entrance doorway of the Cities Service Company of New York. R. M. Karger, architect, has striven first of all to get more light into the corridor, together with the elimination of the old wooden doors*





*In addition to the work of the architects, Starrett & Van Vleck, in the simplification and brightening of the interior of Loeser's department store, the exterior required revision for the sake of better window display and a more inviting entrance than the old work provided*



*Inside the Cities Service Company's building, R. M. Karger, architect, has done away with the old radiator, has installed modern lighting, replaced the old floor with terrazzo, and redesigned the elevator entrances*



## BOOK REVIEWS

**THE FOUNTAINS OF FLORENTINE SCULPTORS AND THEIR FOLLOWERS FROM DONATELLO TO BERNINI.** By BERTHA HARRIS WILES. 163 pages, 8¼ by 11¼ inches. Illustrations from photographs and drawings. Cambridge, Mass.: 1933: Harvard University Press. \$7.50.

There has been plenty of material published upon Florentine sculpture in the religious and civic monuments, particularly the tombs, but, as Miss Wiles points out, there is a wealth of work in a lighter vein appearing in the gardens and villas. In the evolution of style through the fifteenth and early sixteenth centuries, the reader traces very clearly the budding and flowering of the Baroque. The book provides complete illustrations of the extant fountains and fountain figures.

**TESTS OF THEATRE-PROSCENIUM CURTAINS.** By NOLAND D. MITCHELL. Research Paper RP603. 23 pages, 6 by 9 inches. Illustrations from photograph and line diagrams. Pamphlet binding. Washington: 1933: U. S. Department of Commerce, Bureau of Standards. 5 cents.

**SKYSCRAPER.** By ELSA H. NAUMBURG, CLARA LAMBERT, and LUCY SPRAGUE MITCHELL. 80 pages, 8½ by 10¼ inches. Illustrations from photographs. New York: 1933: The John Day Company. \$2.

Here is another effort to convey to the child the thrill of twentieth-century building, combined with a knowledge of the nature and order of the building process. The message is conveyed through dramatic photographs, verses by Clara Lambert, and the text exposition by Lucy Sprague Mitchell.

**TOWN AND COUNTRY PLANNING.** By PATRICK ABERCROMBIE. 256 pages, 4¼ by 6½ inches. Illustrations from line drawings. Printed in Great Britain. New York: 1933: Henry Holt & Company. \$1.25.

This is a volume of the Home University Library covering history, literature, art, philosophy, religion, and the sciences. Without going too deeply into technicalities, the author, who is professor of civic design in the University of Liverpool, makes very clear to the layman the differences between satellite expansion, vertical expansion, and the ribbon spread of cities, together with the many ramifications and combinations into which these types of growth lead us. A well balanced and informative book.

**AGRIPPA'S BUILDING ACTIVITIES IN ROME.** By FREDERICK W. SHIPLEY. 97 pages, 6½ by 9½ inches. Illustrations from maps and plans. Pamphlet binding. St. Louis, Mo.: 1933: Washington University Studies. \$1.25.

The author, who is professor of Latin in Washington University, believes that with the single

exception of Augustus himself, Agrippa did more to change the Rome of the Republic into the Imperial City than any other man of the period. This paper follows another by the same author in the *Memoirs of the American Academy in Rome*, Vol. IX, 1931, which presented a chronological summary for the period based upon the inscriptions and ancient authors. In the present paper the evidence of ancient literature is supplemented by the archaeological evidences available.

**PATTERN DESIGN.** A book for students, treating in a practical way of the anatomy, planning and evolution of repeated ornament. By LEWIS F. DAY. Second Edition, revised and enlarged by AMOR FENN. 306 pages, 5½ by 8½ inches. Illustrations from drawings in line, wash, and color. New York: 1934: Charles Scribner's Sons. \$4.

There have been few more widely accepted masters of lettering and abstract design than Lewis F. Day. It is difficult to see how any one with an interest in design could turn away from the fascinating allure of these pages dealing so graphically and clearly with pattern.

**A STUDY OF THE REMOVAL OF SULPHUR DIOXIDE FROM LIBRARY AIR.** By ARTHUR E. KIMBERLY and ADELAIDE L. EMLEY. 9 pages, 6 by 9 inches. Illustrations from diagrams. Pamphlet binding. Washington: 1933: U. S. Department of Commerce, Bureau of Standards. 5 cents.

**STATE LAWS FOR PUBLIC HOUSING.** A Memorandum on the Drafting of Enabling Acts for Public Housing Agencies. 18 pages, 6¾ by 10 inches. Pamphlet binding. Chicago: 1934: National Association of Housing Officials, 850 East 58th Street. Free to officials, 25 cents to others.

A timely and explicit aid in the drafting of legislation with due concern for the experience of others in the fields of housing, legislative drafting or administrative procedure. The Association has consulted with the legal staff of the Federal Emergency Administration of Public Works.

**EASILY INTERPOLATED TRIGONOMETRIC TABLES WITH NON-INTERPOLATING LOGS, COLOGS AND ANTILOGS.** By FREDERICK W. JOHNSON. 44 pages and the tables with thumb guides, 7 by 9½ inches. San Francisco: 1934: The Simplified Series Publishing Co., 1381 Third Avenue. Semi-loose leaf on two-ring binder, paper covers, \$1.85; bound, flexible cover, \$3.50.

Logarithmic tables have been with us for a long time, and it seems curious that up to the present so little has been done to make them more easily utilized. The present volume is a distinct step in advance along these lines.

◀ ARCHITECTURE ▶

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# Better Practice

By *W. F. Bartels*



## 1—INTRODUCTORY

TO the average owner the excavation is merely the hole in the ground into which his building is to be set. Without the architect's care and knowledge it may easily prove to be a hole in his bankroll as well.

For the sake of accurate bids the architect must specify accurately the area to be excavated. An excavation plan is always desirable, and usually essential. The distances, levels and contours must be checked and then compared with the surrounding territory. It would be embarrassing if, upon completion, the plot were so laid out that the neighborhood drained into the excavation. Definite levels should be given, always in reference to a bench mark or known spot. The general contractor must be responsible for the correct location of the building and the excavation, but it will not be amiss for the architect constantly to check as the work progresses. This is particularly essential where the building is located on the lot line.

One builder, erecting a building without benefit of architect or engineer, found upon completion that he was over on the adjoining property at least two inches. He was notified of this by his none-too-friendly neighbor and told that the wall would have to be removed. Being either a very crafty person, or perhaps being only desirous of being very sure the second time, he rebuilt the wall two inches back of his own line. Within a few months the neighbor started to build and put his building tight up against this one of his neighbor. When he in turn was informed of the facts, he realized that he did not have a vacant lot next to him to facilitate the rebuilding of his wall. In order to avoid tearing down his wall it is likely he paid a considerable part of the cost of rebuilding the first wall.

The architect would do well to recommend that his client have a test pit dug before the excavating contract is let. This is well worth while on even a small job, and the small amount that it will cost is

## EXCAVATION



likely to be saved many times. On large operations it is absolutely essential that the subsoil conditions should be known. Not only will such information influence the price of excavating, but the design of the footings themselves will be predicated upon such information, especially where unusual conditions prevail such as underground streams in New York City. The utmost care must be taken in gathering such knowledge, for often pennies spent for this work will save dollars later. On a large plot in New York several years ago borings were taken where it was thought necessary. The boring results were correct in themselves but were not complete enough, with the result that much additional money had to be spent for footings. Another site was known to contain nothing but the hardest rock in the city, and no borings were made. But no one ever dreamed that a streak of soft blue mud ran through the plot about five feet below the rock surface. However the contractor's bank account showed the results of it before he got through. Then, too, a test pit may disclose the presence of sand or gravel which can be used to advantage in the construction.



## 2—INSURANCE AND PERMITS

It is the architect's duty to see that his client is covered by all the necessary insurance before any contractor is allowed to start work, or bring his material on the job. This means that the contractor's verbal assurance should not suffice, but copies of his policy should be delivered to the owner or his representative. This will include compensation insurance, as well as accident and liability insurance. Ex-

cavation work is always a temptation to children, and even the hardest-hearted watchman will often allow the children to play for "just a few minutes." But the owner should not have to be responsible for broken legs or other injuries that may result.

If there is to be blasting on the job a man with not only experience but also a license should handle the work. One large job in a big city had unlicensed dynamite handlers. Luckily there were no serious accidents, but all jobs might not be so fortunate. The architect should not put his client in the position of having to defend himself in legal matters when it can be prevented. A clause should be in all contracts putting the responsibility for all damages accidents and lawsuits directly up to the contractor.

Many cities and towns require the contractor to obtain carting permits, as well as permits allowing the excavator to cross the curb and sidewalk.

## 3—FIELD WORK

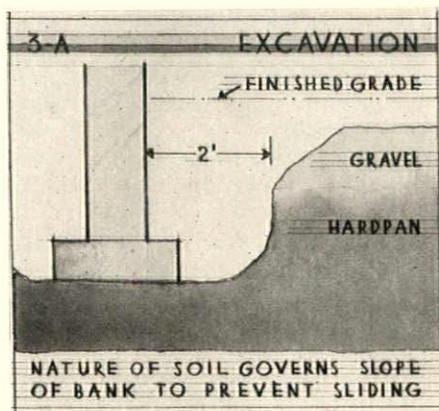
One item which the architect often forgets, but the client cannot spare, is neighborly good will. When the hole is being dug for the future building much dirt is bound to accumulate on the sidewalk, and to be subsequently tracked to the neighboring sidewalks. If the work is done by a thoughtful contractor he will have a man clean up not only in front of his job, but any dirt that may have been tracked upon the neighboring sidewalk. This will be an initial step in establishing cordial relations with the owners of the surrounding property.

The contractor should make provision for any bridging that may be necessary, and see to it that portions of the sidewalk, over which he will take his heavy trucks, are properly protected against damage by the heavy loads. Trees and shrubs which may be subject to damage during the work should be properly protected.

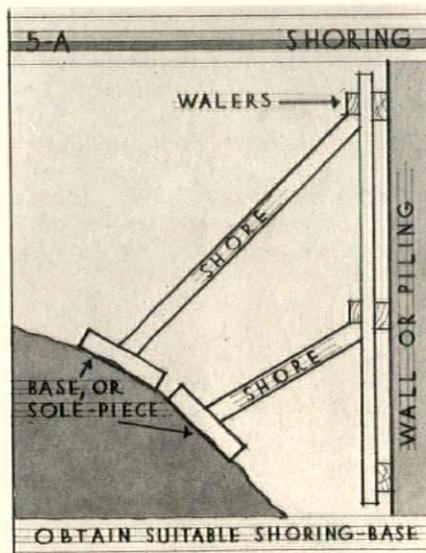
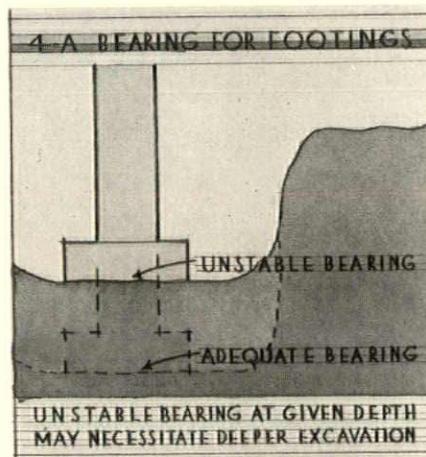
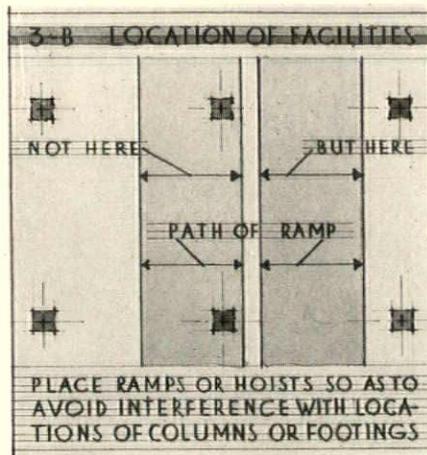
The owner will not care which method is used to excavate his plot

—it may be by hand or steam shovel, or by horses and scoops. The latter is often the most economical for the small plot. The amount of material to be taken out must be considered and also where it is to be carted. Possibly some of it, such as sand or gravel, can be used in the building on the property and thus a saving may be effected in carting. Or, there may be a not-too-distant market for good filling dirt. It should be agreed that the material excavated belongs to the owner if he desires to use it, such as top soil, but it will be necessary for the architect to specify how much material the contractor will have to cart away, so as to keep his bid down to the lowest figure. All the work to be done should be clearly listed, and nothing left to chance or possible misunderstanding. If the top soil is to be placed in a certain spot for future use it should be so stated.

The excavation should extend beyond the walls of the house by about two feet all around. This will leave room for the men to work comfortably while erecting the forms, if it is to be a poured concrete job, and in any case will provide a reasonable working space for any waterproofing which may be done to the outside of the walls before the backfilling is done. The banks should be so "trimmed" that if there is a heavy rain the soil will not wash down. (Fig. 3A). The contractor will have to assume all responsibilities for such occurrences. All trenching, whether for foundation walls, footings or plumbing lines, should be clearly specified. Small items of this nature when combined will make up a big total of extras unless taken care of originally. If the plumber is to do his own trenching, this should be inserted in the plumbing specifica-

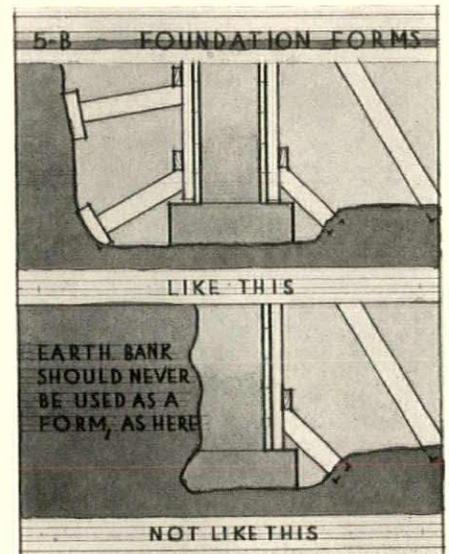


tions. All work for the garage footings and driveways should be included. The contractor's attention should be called to the requirement that all footings must be on undisturbed soil only so that if he digs too deeply in some parts of a footing excavation, he will not be permitted to level off by filling in with



loose dirt. He will be financially responsible for any extra concrete or foundation work that may result from any footings that may be disturbed. Any tree stumps anywhere on the premises must be removed. Top soil should be heaped and located so as to be handled conveniently when the time comes for the finished grading.

Sometimes on very large work it is worth while to erect a ramp so that trucks may climb out of the hole under their own power. Or, the erection of elevators to lift the trucks out may be worth while. If either of these two methods is

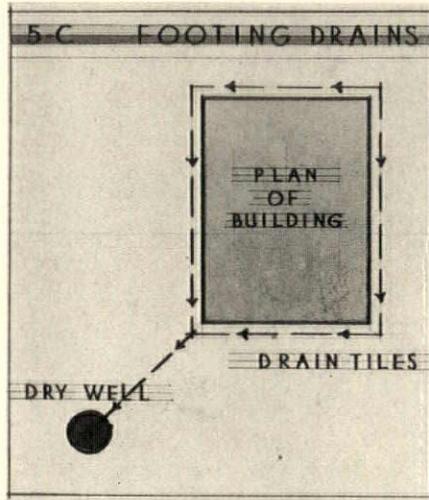


used they should be so arranged that they will not interfere with the erection of the building, and so that footings can be placed and columns can be erected before the excavating facilities are demolished. On one job a large temporary elevator was put immediately over the position of two important columns. These columns were among the first that should have been erected. Hence before the excavation was completed the elevator had to be removed. Obviously the elevator should have been erected where it would not have interfered with the excavation work—something which would have been possible if careful planning had been done. (Fig. 3B).

#### 4—PRICES

The architect should take into consideration the fact that good

soil for the footings as designed may not always be found at the depths indicated on his drawings (Fig. 4A). Provision should be made for the payment for any extra work necessary to be done in order that a proper bottom may be obtained. Then too, estimates should be obtained giving unit prices to be credited to the owner in case it is desired to omit certain work. A further provision should be made giving a unit price for rock excavation if rock is encountered. This will relieve the contractor from in-



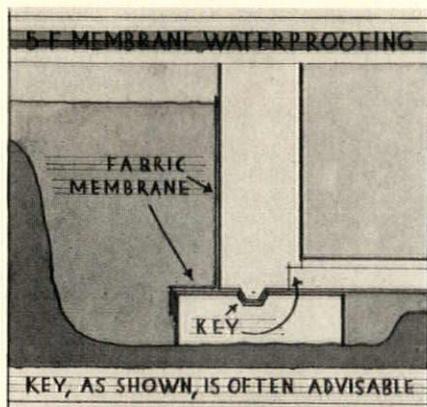
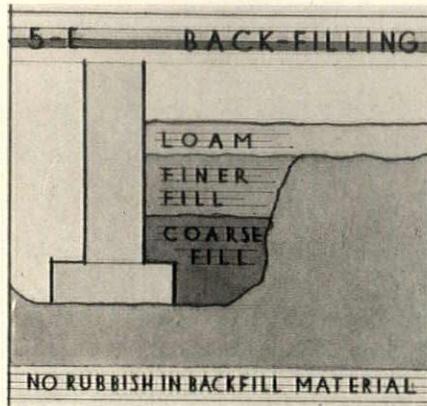
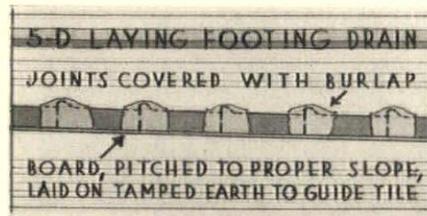
cluding a considerable sum in his bid to meet the emergency of excavating unexpected rock. Rocks or boulders beyond a certain size will be regarded as rock excavation. A satisfactory means of measuring the rock removed must be agreed upon.

One excavator in a small town was much disturbed by the fact that he encountered several boulders which he was unable to get in his trucks with the equipment he had. One of his men promised to have the rocks on the trucks the next day. That night he started a fire around the rocks and utilized the watchman's services to keep them roaring all night. The next morning he turned a stream of cold water on them—and immediately they were ready to be loaded on the trucks.

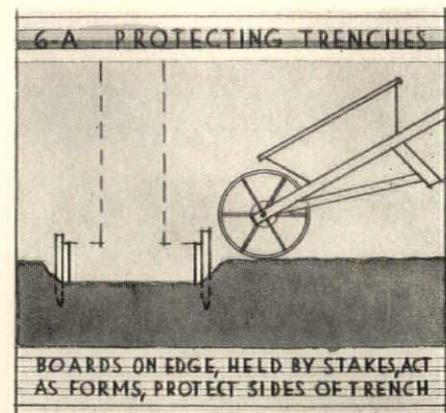


#### 5—SHORING; SAFETY MEASURES

The responsibility for shoring work is a big one. Wherever there is the least danger of collapsing, all



banks, walls or buildings should be properly shored. Dirt or sand banks should be supported so that there will be no danger of sliding. Foundations of adjoining buildings and the buildings themselves must be taken care of, particularly if the buildings are old. One of the most important details is to have the base or footing of the shoring solid. Too often the latter is put in so badly that it easily slips—much to the detriment of the job (Fig. 5A). One man should be put in charge on all shoring work and made responsible for the safety of the job. A small amount wisely spent for shoring will well repay itself by the safety it affords and the potential delays that it eliminates. On some work the banks and trenches will have to be shored or boarded in a simple manner in order that dirt may not fall into the forms. In no case should a bank of dirt be al-



lowed to serve as a part of a form, but all walls should be smooth and made with the proper materials (Fig. 5B).

In order to carry the water away from a free-standing building it is advisable to run drain tiles around the footings and bring them together at one point some distance away where they may empty into a dry-well (Fig. 5C). This well will be separate from the one which takes care of the leaders; otherwise a heavy rain might overflow the leader well and force the water back up the drain lines. The dry-well to which the tile are drained should be at the sandiest spot available. It is better to make this well of stone, laid up dry, and covered with a concrete lid or top. Some contractors fill in the dry-well with stone but this only prevents the full utilization of the space. If the well is properly laid up there should be no danger of its caving in, or of the adjacent earth sinking. The drain tiles are best laid by putting them on an old board which has been levelled to the proper pitch and tamped down to make sure that it is on solid ground. Pieces of burlap should be put over the joints so that no dirt will get in to clog the drains (Fig. 5D). Then the space alongside of the building is ready to be filled up. First, coarse stone should be filled in, followed by finer material, until finally the loam is filled in at the top (Fig. 5E). Rubbish must not be used for backfill, because it will result in an altogether unsatisfactory job. In the first place it can not be filled in solidly, and second, it will frustrate planting which may be desired next to the building.

Waterproofing walls, either by troweling on a mastic or by applying a fabric, is a desirable way to make certain that water will not

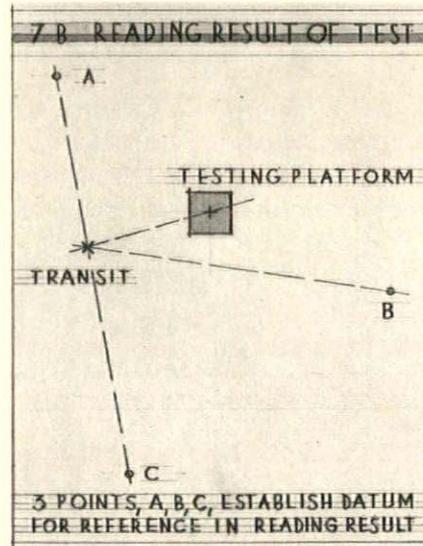
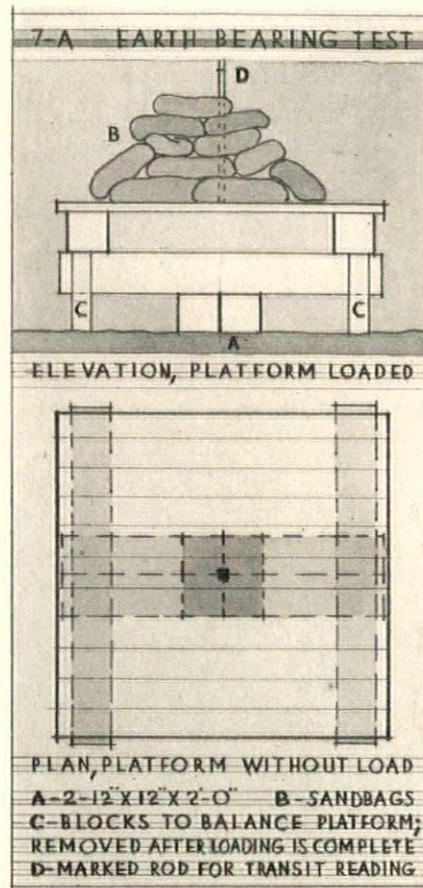
seep through. If fabric is used it would be well to have it run under the floor as well, to make sure that no water comes through at the junction of wall and floor. Care must be exercised to see that the bond is properly made outside the wall. The wall and the footing must be keyed in some manner, preferably that shown in Fig. 5F.



## 6—FOOTINGS

The approval of footings is something the architect must keep constantly in mind, not only in writing his specifications but afterwards also in the field. He should obtain all possible data on the soil conditions, a great deal of which he may get from the test pit. Cracked walls and falling plaster are not the only detrimental results. Often more serious damage results, such as buildings that collapse and have to be taken down. Nothing should be taken for granted. One young inspector did that on one job with the result that the buildings had to be demolished shortly after their erection. They were built on filled ground over an old stream. And today we find buildings all but tumbling over that were built when people were too busy to make sure that a good foundation was obtained.

Footings should be of adequate size and not skimped. Many cracked walls, cracked plaster, and other building ailments can be traced directly to faultily designed footings, or ones that have been located on soil that was not sufficiently solid for the load imposed on them. Footings should be true to form and correspond to dimensions given for them. It is well in even the simplest footings to have some reinforcing. This can easily be done by the use of rods, which are easily obtained. Such reinforcing gives an added measure of strength to the foundations and is well worth while. On larger work the reinforcing will of course be especially designed for the job. On residential work very often a trench will be dug for the footings and during the pouring the men will run the wheelbarrows close to the edge thus breaking down the dirt walls and causing the dirt to fall in the trench to the detriment of the footings



*Better Practice appeared first in the issue for October, 1933, dealing with Plumbing. The November issue continued Plumbing and covered Water Supply; December, Plumbing, including hot water and insulation; January, 1934, Plumbing Fixtures; February, Brickwork; March, Plastering; and April, Tiling*

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(Fig. 6A). To avoid this, and also to make sure that the proper depth is obtained, it is well to call for boards to be run alongside of the trenches to form the sides for the footings in order to avoid ragged edges. These boards can be held down by means of stakes driven in the ground.



## 7—LOAD TESTS

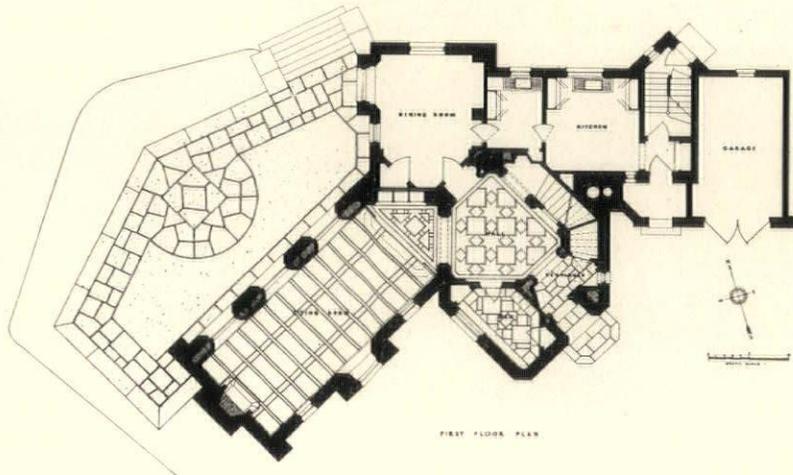
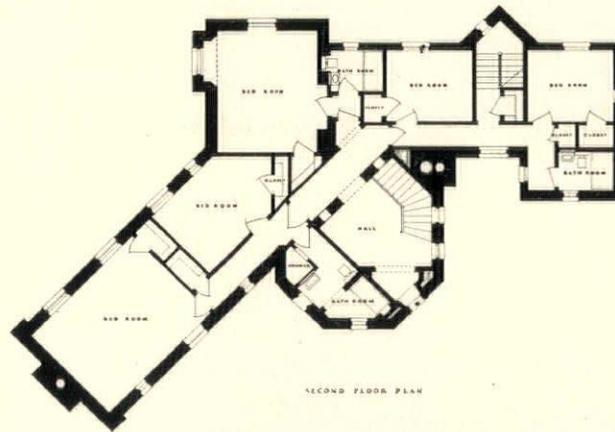
Unless there is dependable information obtainable, the architect should order a load test made of the soil. This is a fairly simple matter but it takes time. It is wise to consult with the local authorities and ascertain their exact requirements for such a test. An accepted procedure is to level off a spot to be tested and place on it two 12" x 12" timbers, each 2' long (Fig. 7A). By fastening these together they will give an area of four square feet which will be sufficient for the test. Upon these a platform is built of heavy timbers of sufficient strength to hold the load that is to be imposed. A standard is then set up on the platform and bench marks are established at nearby convenient locations (Fig. 7B). It is well to have enough marks to establish a plane, otherwise it will be difficult to be assured of accurate levels, and an inaccurate report will result. The weight of the platform is estimated, and a reading taken with a transit that has been set up. The platform is wedged up so that it will not tip over while being loaded, and weights are added to total a half ton or a ton. From then on increments of a ton are added by making use of sand bags, iron bars or other weights. After each loading a reading is taken to establish the sinking of the platform. Care must be taken to load the platform evenly so that it will be perfectly balanced after each loading. When 50 per cent more weight than that which is to be approved has been placed on the platform, a final reading for the day is taken. This is again checked at the end of twenty-four and forty-eight hours, and finally at the end of seven days. The total sinkage should not be much over a quarter of an inch, and this will generally occur on the initial loading which presses down the loose dirt beneath the blocks in contact with the earth.



Photographs by The Copeland Studio

# House of Celeste H. Troth, Whitemarsh, Pa.

HARRY STERNFELD, ARCHITECT; BORIS RIABOFF, ASSOCIATE



*In all the wealth of stone dwellings that brighten the countryside of eastern Pennsylvania, there has developed a traditional treatment of the long flat ledge stone of the locality. The architects have here chosen to depart from that tradition, using the*

*Chestnut Hill stone as a cut ashlar with a generous amount of the wall surface finished with stucco. The site overlooking the Whitemarsh Valley afforded a fine panorama from the living-room terrace and the dining-room, calling for an unusual plan*



*A general view of the living-room from the upper level of the entrance. The ceiling is an open-timbered one, the rafters being of Douglas fir above which are laid cypress boards and panelling. This ceiling was decorated by Carlo Ciampaglia, a Fellow of the American Academy in Rome. The fireplace is of carved stone brought from a house in Florence*



*The deeply embrasured window on the southeast side of the living-room, with a balcony above. Copings and sills throughout the house, as well as the paving, are of flagstone. The roof is of black slate*

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*The upper end of the living-room, looking into the reception-room beyond. The walls throughout are sand-float plaster, left natural for the most part, but painted in several rooms to meet color schemes. The floors are of oak plank secured with wooden dowels*



*The terrace side, which commands the extensive view over the Whitemarsh Valley. The angularity of the plan resulted not only from the purpose of securing the best views for the principal rooms, but also because of the sharply sloping site*



*The reception-room, looking into the living-room at left, the dining-room at right. This room also has a wooden ceiling of cypress boards and panelling, decorated again by Carlo Ciampaglia. Sash and trim of the windows are all of wood painted to suit color schemes in the various rooms*



*The dining-room. Throughout the house, in radiator grilles and for other decorative accessories, the architects have used wrought iron executed by The Iron-Craftsmen*



*The reception-room as seen from the entrance to the living-room, with the main stairway leading up from the opposite side*



*A corner of the studio on the second floor of the tower (it is indicated on the second-floor plan merely as hall). The top of the main stairway is at the left*

*Monday, April 12.*—The difficulties we encounter in the various rearrangements of our social and economic framework are sometimes amusing, sometimes tragic, and always perplexing. In a certain school building in one of the suburbs of New York, a mural painter working under the C. W. A. is engaged in painting a pictorial representation of local historical background for the instruction and edification of the students. The mural painter, until recently, received thirty dollars a week; now he gets twenty-four for this work. In another room in the same building there is a painter putting a fresh coat on the walls and woodwork. This man, too, is under the C. W. A., but, due to the provisions of the C. W. A., is entitled to receive the same wage as his particular craft receives in that neighborhood, which is eleven dollars a day. It is true that he is allowed to work only three days a week, which, however, brings him about a third more for his week's work than the mural painter receives.

*Wednesday, April 4.*—It does no harm, and may do some good, to remind ourselves occasionally, as Dean Rexford Newcomb did at the Conference on Home Building in Illinois, that 95 per cent of the farm homes and some 80 per cent of the village homes of America lack a sanitary closet within the building, and almost as many lack running water. This in what we fondly believe to be one of the enlightened nations of the earth. It would seem the birthright of every American boy and girl, no matter what the economic status of the parents, to have the decent, cleanly, sanitary, and orderly environment necessary to the beginning of civilized human life. Furthermore, it appears that adequate housing for this nation depends upon one or the other of two procedures: *a.* A change in the economic balance that will insure to the low-income groups a larger participation in the national wealth; *b.* Governmental participation in housing to the extent that low-income groups may be insured decent habitation at a rental commensurate with their incomes.

*Friday, April 6.*—With Gerald Geerlings to look over the Industrial Arts Exposition, an elaborate showing of the results of modern design in industry. It was a disheartening experience. With all our talk of the absurdities into which designers led us in past eras, and with all the talk of achieving simplicity of form that follows function, the results seem, in large part, just as foolish, just as far away from functionalism as some of our absurdities of the Victorian era. Just as one horrible example, what should the modern designer feel that he is accomplishing in abandoning the traditional round clock face for a long rectangle—in the name of modern art? Or what should he think he gains by de-



## The Editor's Diary

signing a table knife so as to resemble in miniature a butcher's cleaver? Modern design that attempts wholly to follow function and at the same time achieve beauty is much to be desired, but modern design that merely contorts traditional or functional forms for the sake of being different, will fade like last winter's snows.

*Saturday, April 7.*—I see that the Massachusetts Institute of Technology, oldest of the architectural schools in this country, has established a degree of bachelor of architecture in city planning. The course includes the study of slum clearance, industrial housing, traffic systems, and other phases of engineering such as sociology, economics, and law.



*Monday, April 9.*—The prospect of having twenty-five million dollars in Federal funds to clean up some of New York's slums and build some new housing has been the cause of much discussion among the architects of New York, particularly as to how the architects for this work would be chosen. At a Chapter meeting this afternoon the report of a committee found unanimous acceptance, and will be communicated to the other architectural organizations in the community with the idea of reaching a general agreement on the procedure. Probably, therefore, the housing will be designed in some such way as this: The Housing Authority will be asked to appoint an architectural board consisting of men of outstanding experience and specialized knowledge in housing. A questionnaire will be sent to the local members of the profession generally, following possibly some such form as that used by the Treasury Department recently in seeking knowledge of the qualifications of those who would like to be considered for public work. This architectural advisory board will then hold a competition for the selection of architects, using as a problem some typical site for which housing will be designed by the competitors, without involving unnecessary expense in the elaboration of presentation drawings. As a result of

this competition those architects who seem best qualified for the work will be chosen and possibly divided into groups, each headed by a member of the advisory architectural board. Each of these groups will be commissioned to design the housing for a given site, subdividing the work as may seem advisable for the best results. The scheme, it will be seen, accomplishes two things which have seemed difficult to correlate: one, the utilization of the knowledge of the few outstanding specialists in housing; the other, utilizing talents and ability that might otherwise be lost, and at the same time giving every opportunity to those who feel that they have a real contribution to make.

*Wednesday, April 11.*—There is some real comfort in the fact that the Lumber Code is also a conservation code. Under its provisions it appears that for the first time in the history of this country we are taking note of the fact that our supply of forests is not endless, that we have been using them up with alarming rapidity, and that at last we are bound to a procedure which will insure the replacement of the wood we use and destroy.

*Thursday, April 12.*—Stepped over to the R. C. A. Building to see the award of medals in the Better Homes in America Small House Architectural Competition. It was interesting to see this affair broadcast with some, at least, of the principals—Roger Bullard, Gold Medalist, and Kenneth Stowell—making their premieres over the radio.

We had a grand argument at the Housing Guild rooms tonight, with Lewis Mumford deftly catching and returning a shower of critical darts on *The New Republic* housing articles mentioned a few days ago. The criticism came from Joseph Platzker whose sympathies, however, were rather too evidently with the poor downtrodden real-estate holders; from Professor Shapiro of Columbia who called the scheme Utopian, impossible of achievement, and full of dangers in unforeseen complications; from Frederick L. Ackerman who brought up the question of a housing shortage, not, as I understand it, in any claim that there was no such thing, but rather objecting to casual deductions from insufficient data.

*Friday, April 13.*—There are some rather astounding results in the first returns from the nation-wide real property inventory. Casper, Wyo., is the first of the sixty cities to come through. Here are some of the outstanding facts, from which so many conclusions might be drawn that we shall leave that task to others. Of 4270 structures, 2783 were in need of repairs, and 262 unfit for human habitation.

Of the habitable residential units, the vacancy ratio was 7 per cent.

Frame construction prevailed in over

82 per cent of the residential buildings, and almost half of these were without basements.

One third of the dwelling units were owned by their occupants, 60 per cent free and clear.

Twelve per cent of the residential units were without running water.

The monthly rental ran from under ten dollars to fifty dollars with a negligible number over that price.

Of the 1864 owned single-family houses, only 47 were worth over \$7,500, while 42 per cent were valued from \$2000 to \$5000.



*Saturday, April 14.*—There are all kinds of schemes afloat for making mortgage money more easily available, and thereby stimulating building. One plan conceived in this office, by Carroll B. Merritt, might be outlined as follows:

Any bank or trust company in the United States may at any time discount its bond holdings at the Federal Reserve Bank, provided it is a member of the Federal Reserve System. No bank or trust company may discount its own first mortgage at the Federal Reserve Bank. Therefore, billions of dollars remain frozen that might be made liquid with proper safeguards for the borrowing institution, as well as for the Federal Reserve Bank. If members of the Federal Reserve System were permitted to discount their existing first mortgage holdings at the Federal Reserve Bank in an amount not to exceed 45 per cent of the face of the mortgage, with the understanding that the proceeds would be used only for *new* construction—there would be available funds for those who desire to build. The credit obtained from the discount of mortgages at the Federal Reserve, in addition to being used for new construction, could be loaned to mortgagees only with the distinct proviso that the principal must be returned in not less than eighty installments in twenty years. With the gradual increase in deposits in financial institutions, these new and additional deposits could be used by the borrowing banks and trust companies to retire their mortgage loans with the Federal Reserve at the rate of not less than 12½ per cent a year.

Whatever scheme is finally adopted to expand credit for building, should, we insist, provide for some reasonable form of amortization. We cannot for ever pyramid our debt structure.

*Monday, April 16.*—Nancy McClelland, speaking over the radio for the American Institute of Decorators, spoke of the difficulty the householder finds in choosing pictures. Miss McClelland said that she felt like reminding the householder of the sign that was put on a bad road in Indiana: "Choose your

rut carefully. You will be in it for thirty-five miles."

*Tuesday, April 17.*—There are plenty of subjects for debate these days. In one corner we have James W. Gerard heading a Committee for American Self-Contained, arguing that we should live entirely to ourselves. In another corner is Doctor Nicholas Murray Butler arguing with great force in his new book, "Between Two Worlds": "National-building as an end in itself is over. . . . What is the nation for? Is it simply to make the people of Portugal, of Siam, of Salvador, of Bulgaria, prosperous and happy? Or is it to play some part in the rebuilding of a broken world, to carry satisfaction to the minds and hearts of men everywhere, to uphold ideals and ideas which are precious? Or is it only to sink back into selfish and self-centred contemplation as the first step toward national suicide?"

*Wednesday, April 18.*—The research engineers of the Westinghouse Company were showing representatives of the press today the results of some of their recent findings in lighting. It is quite evident that we are at the end of one period of electric lighting, and at the beginning of another. Up to the present time the problem has been a quantitative one—how to get enough light. That problem is solved. The next problem is a qualitative one—what kind of light is going to make our environment more satisfying. It is along these lines that the research engineers are now working with some remarkable progress.

*Friday, April 20.*—There's a promising outlook in the purpose of Columbia's summer session this year in that the students will visit large and small country homes, and trace the history and principles of domestic architecture, and finally will design and build a model of a private dwelling and its surroundings. Professor Walsh is also going to lay stress on the possibilities of stone, brick, glass, and other natural building materials, as well as of the new synthetic products. It looks as if architectural students were getting down to brass tacks.



*Saturday, April 21.*—It does begin to look as if America were becoming plan conscious. State planning programs are under way in three States. Moreover, State boards with technical consultants assigned by the government have now been organized in thirty-seven States. Connecticut was the first of the three States to start actual operations. It has four State-wide projects under way: the making of a composite reference map which will bring together all the data now existing in the highway, forest, water, wild life, and other

similar departments; a survey of the water resources; of the scenic and historical values; and they are also making an aerial map.

*Monday, April 23.*—Lunched with Alfred Githens, discussing a book on which he has been working, covering the subject of public library design. One has only to glance over such an analysis as Githens is making of plans, to realize how fast library design is changing and how far we have progressed beyond the typical Carnegie library that was so freely scattered over the countryside a generation ago.



*Tuesday, April 24.*—Stuart Chase was asking some of us at luncheon today to consider one of those hypothetical questions. There is much talk, largely on the part of industry getting once more to its feet, about what it calls the meddling of the government in business. Stuart Chase's point was that this so-called interference of the government in business was not a matter of choice but of necessity, and suggested that we consider for a moment the possibility of the government's immediate withdrawal from all such "interference." The government, let us say, would drop N. R. A., A. A. A., call the C. C. C. men out of the woods, abandon the T. V. A., cut off relief, cease all public works, and recall its loans to the banks. It seems hardly necessary to carry the hypothetical question of what would happen any further.

*Thursday, April 26.*—In the effort to provide the best procedure for the New York City Housing Authority to follow in the selection of architects, the various architectural organizations submitted a plan which has already been described in these columns. There is one provision of this plan which seems, on careful thought, ill advised. That is the recommendation to the Housing Authority that no architect at present having a government job be considered for new housing work. The purpose, of course, is to distribute the work as equitably as possible in these difficult times. Nevertheless, this provision, if carried out, would act to prevent a free choice of the best ability available, and moreover, would not really serve the main purpose of distributing professional income. It is well known that many of the government jobs now under way—small post offices and the like—are bringing the architect little, if any, profit. In fact, the talk about town is that many of them show a real loss. The architect, therefore, who has taken a government job, and is carrying it through at a loss, should not, it would seem, be penalized by being kept out of further work at the moment.

# FAVORITE FEATURES

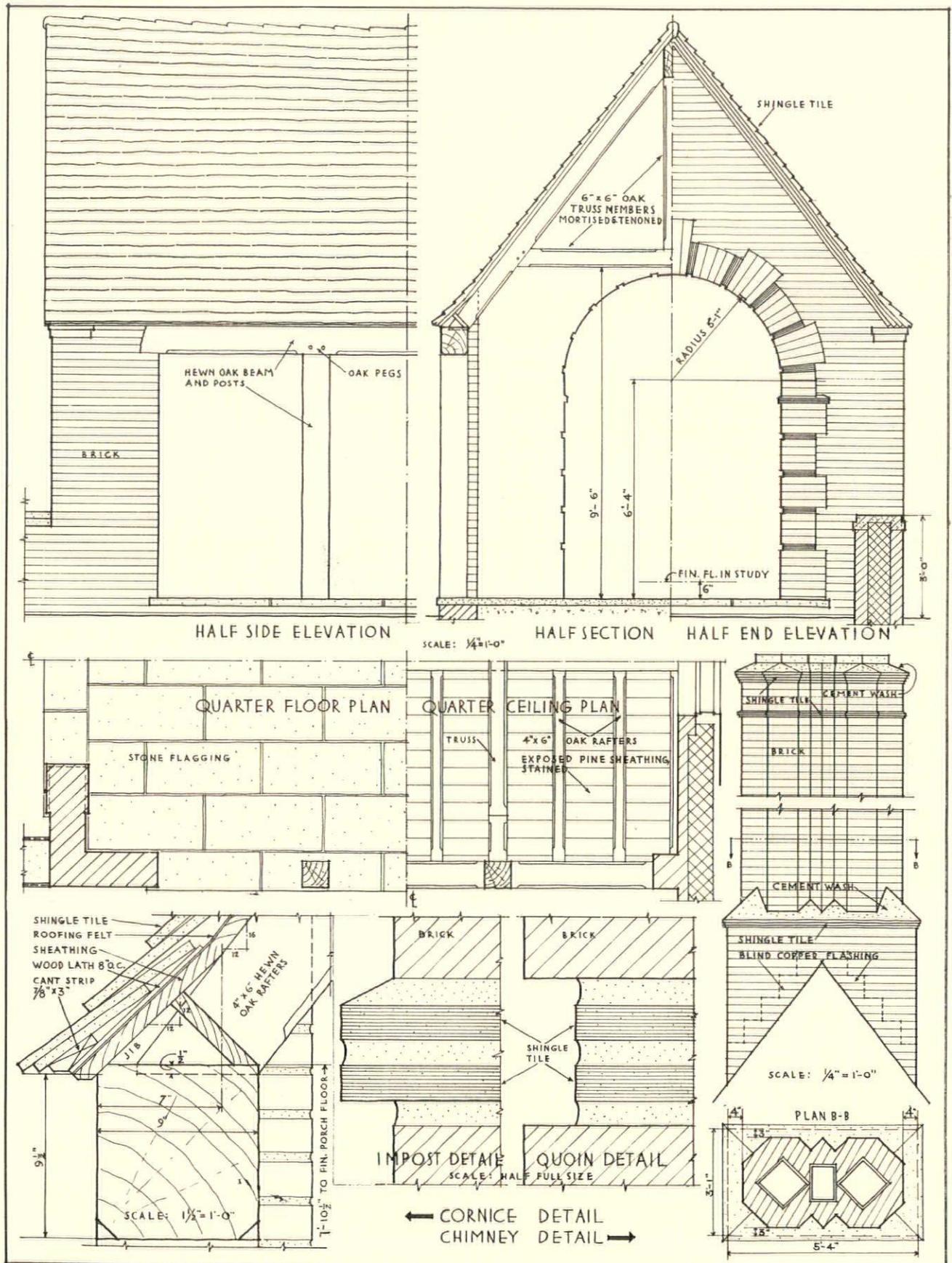


Many of the architect's creations fail to measure up to his expectations. Here is one of a series, however, that satisfy, in a measure, the designers themselves  
*(Scale details overleaf)*

Porch on the House of Gilbert Browning  
Greenwich, Conn.

FRANK J. FORSTER & R. A. GALLIMORE  
ARCHITECTS

« ARCHITECTURE »  
JUNE, 1934



Porch on the House of Gilbert Browning, Greenwich, Conn. Frank J. Forster & R. A. Gallimore, architects

# These Houses We Live In

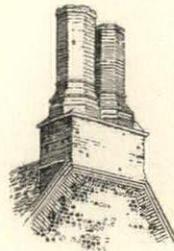
CONTINUING THE DISCUSSION STARTED BY AN ANONYMOUS ARCHITECT'S LAMENT IN THE OCTOBER, 1933, ISSUE AND CARRIED ON BY WYATT BRUMMITT IN JANUARY. THE LAMENTER HEREIN REPLIES

YOUR spirited response, Mr. Brummitt, fills my exact and pressing need—an excuse for addenda to my Lament of last October; and since your answer bears the acid sting of truth, I shall be only too glad to turn from monologue to controversy. I had not hoped to enlist the attention of so intelligent a layman, for the essay has fallen upon evil days—being seldom written and never read. It is, of course, inevitable that I reply. An architect is expected to criticize his fellows; it is no less his duty to defend them against outsiders.



I am truly dismayed at the gulf that yawns between you, the layman, and your technician, the architect; at the many points which must be cleared up before you understand his plight. First of all, it seems to me, there ought to be a clearer understanding of what his functions are. His job is not one of abstract invention, he cannot out of thin air anticipate your demands. He exists only to give you what you know you want but are not equipped to get. This presupposes that you know what you want. But do you, Mr. Brummitt? I think not. I think that no one today has a very clear idea of what he wants. And until a desire is coherent its gratification is impossible; until the layman knows how to demand good architecture, he has small chance of getting it.

Here at the beginning you will understand that I do not speak in defense of that great majority of architects whose work is mediocre if not actually unworthy. Rather, I want to make clear to you the position of that relatively small group of men who have proved themselves sincere and as sane as the times allow, who by their work show themselves worthy of defense. Where to begin this defense is a problem. You mention your dissatisfaction with the buildings at the Century of Progress and they afford an almost perfect illustration



of what is wrong with architecture today.

You realize that the Fair presents astonishing proof of the triumph of mind over matter. It wears a glitter, a fantastic quicksilver sort of wealth that cannot fail to stir the senses. But even beyond its carnival aspects it presents in staggering array the manifold evidence of our conquest of nature; here are more forms of riches, more titillations for the senses, than you even dreamed possible. You are lost in a forest of miracles. Here grows every seeming clew to happiness, yet in the end you emerge fatigued and distracted. Nowhere have you glimpsed certainty, stability, peace. So much emphasis upon progress makes it seem only more dubious.

The men who designed this fair were confronted only with the most hypothetical set of conditions. They faced few or none of the technical limitations of former fair-builders. They had a new technique (and to prove it turned a building inside out and hung the roof from cables) and so many new materials to hand that their powers of selection were paralyzed. But they set about housing the exhibition in buildings suitable to the times. This it seems to me they did with tragic finality—whatever you may think of it, it is a perfect expression of its era. For when they started it all values were in flux; as they built, the whole economic structure collapsed, leaving their building schedule high and dry; and before they could open the gates, a revolution had been staged and the age they sought to glorify was passed.

Do you think the architect can flourish in such an atmosphere, Mr.

Brummitt? Can you not see that while indecision and lack of perspective remain abstract evils in fiction or finance they assume a brutal reality in a house? Can you not see the satanic irony of his task—to house the most fluid and mobile people the world has ever known in buildings of stone and clay? If he were saner, smarter, more far-sighted—but he is, alas, only human, as easily seduced by glittering gadgets as any other. Building, on its very premises, cannot express movement; and though the buildings at the Fair achieved a far greater degree of mobility than ever before, they still wore the limitations of matter; and where they escaped, no rules existed to govern their behavior. Moreover, the Fair showed how much more advanced we are technically than aesthetically, knowing more of the stresses and strains of steel construction than of the operation of its laws of design.



One thing, I think, is obvious—the Fair is our first large-scale application of a new and dangerous concept of design—that of endlessness, infinity. The machine—whose reign the Fair sought to extoll—is at the bottom of it all. It increased our everyday contacts enormously, extending our range of movement, sight and hearing to fantastic limits. It played hell with the neat cyclic theories, disclosing a universe which refused to conform to any pattern at all. It brought transportation so rapid that space lost its significance; showed us stars almost beyond reckoning in space; reduced most building problems to mere questions of economic feasibility.

Where do you think this leaves the architect, sir? Where in this shifting world can he find a material, a medium, of suitable liquidity? And obsessed with this new concept of endlessness—as cloth from electric looms is endless—how can he express it? All this conflict may seem a little absurd to you, Mr. Brummitt, unless you are familiar with the background of the average

architect. He is steeped in tradition, in a school of design which regards all matter as finite. Though nature has not lacked unbroken surfaces—in the rind of the melon, the body of the snake, the vault of the sky—they always wore the clear definitions of either their end or their apparent end. Nowhere (save perhaps in religion) was there any bald suggestion of infinity—the limitations of the individual were too sharply drawn for that. This much weight could one man lift alone, this far could he walk in a day. Inevitably his architecture reflected these facts; consequently each door had its paneling, each frieze its cap, each ending.



But suddenly the architect is projected into a different world. From exploiting the end of each member he comes suddenly to hiding it. He dreams of slick, seamless surfaces, pre-assembled buildings, machines for living. He begrudges even the concrete wall its expansion joint, the roof its pitch. He no longer conceives of pattern as stopping at the border or even (heresy!) of there being a border. He no longer thinks of walls as existing to panel; and his columns suddenly lose their caps. Symmetry dies a slow death and windows run in ribbons up and down and around the corners. Yet having escaped the limitations that structure once imposed upon them, who can govern the behavior of these things? The past offers no help, to whom can he turn?

So, Mr. Brummitt, when you say to the architect, "Give us honesty in our houses," what is he to answer? What, in times like these, is the truth? Who has it? Can he prove it? Most of us believe what we want to believe. Hence the prestige of familiar things—the gabled roof, the open fire. Some, weary of all that, believe in the steel-tube chair and the flat roof; and the truth, as usual, lies somewhere between.

It seems to me the fault is as much yours as his. Until you know better your own desires he has no means of granting them. Until you decide in your own heart how much machine is good for you, where

animal well-being will give way to spiritual well-being—until, in short, you learn the true properties of change—his houses for you will remain at best makeshift affairs.

You laymen expect the impossible of a house. You demand a shifting city-structure built of permanent, non-shifting units. You want the pleasures of a nomadic life while yet enjoying the security of a home. You will learn that the old saw still applies—you cannot eat your cake and have it too. The day of reckoning cannot be long delayed and I think your choice is made. In a world in which nothing seems secure any longer you will seize what has always epitomized stability—the home, the ordered growth of a garden in its walls. With the machine you have contrived a world in which all disaster is man-made and economic, existing in the midst of physical abundance. If this is so one thing remains—muzzle the machine; it does not offer you the ultimate felicity. And either you will master it or it will master you.

But the choice is already made and when the din dies down some things will become apparent. Honest men will at last have a coherent goal and dishonest ones be disclosed in their true capacities. And you laymen will have a clearer vision. You will no longer tolerate the promises of the past decade—the shoddy subdivisions, the "period" bungalows with their "Old English effects." Being less distracted by progress you will see them for what they truly are—ill-bred, ugly, impermanent and expensive. What you will increasingly demand is a more intelligent conception not only of the home but of the entire community.



But a sacrifice is involved, Mr. Brummitt—that of your American and immemorial right to do exactly what you damn please, regardless of society as a whole. Your individual enterprises—garages, groceries, movies, homes—will be a part of a planned whole. You will submit to a supervision of your city-building instincts. You will erect an authority to pass upon the structural and aesthetic value of proposed building—a thing which would have provoked your ancestors to bloodshed. You will respect

zoning ordinances far more real than the present—ordinances which may well require that you buy heat from a central plant, that you take no boarders, even that you relinquish your privileges as landowner if you abuse them.

All this, and now one last and perhaps misplaced word on decoration. You mention a certain variety of modernism as appealing to you—and I know well the sort of thing you mean. An idiom that relies upon bold clear color and simple shapes (more than a little reminiscent of the Classic) for its charm. After an overstuffed period of design this is a most welcome relief, a step in the right direction. Yet be not too hasty in labeling it modernism (if by the word you mean something suitable to machine fabrication, simple in design and moderate in price). An anecdote to prove my point: I know of a new armchair all done up in white fur, simple almost to sternness in line, low on the floor and with no single curve. A masterpiece of modernism, you would think. Yet the upholsterer told me it was one of the most difficult pieces he had ever done; and the complexity and wastefulness of its frame astonished me. It was neither simple, suitable to machine fabrication nor—consequently—moderately priced. It really had no claim to modernism.



And this is what I want to warn you against in architecture. Aluminum casements and modern brick detail do not constitute the honesty for which you seek. The thing you desire is not to be achieved merely by shearing all ornament, eaves and chimney-pots off the traditional house. It will be achieved only by a fresh and honest approach to the problem of building so that the great majority of Americans may really enjoy that much-boasted high standard of living. It does not exist today—no country has worse housing—and it will not come about without travail. But this process of clarification in natural national affairs will inevitably be reflected in the work of the architect. Be patient yet a little while—say five years—and I really believe he will stage for your delectation such a comeback as will make you forget his past sins in the name of housing.

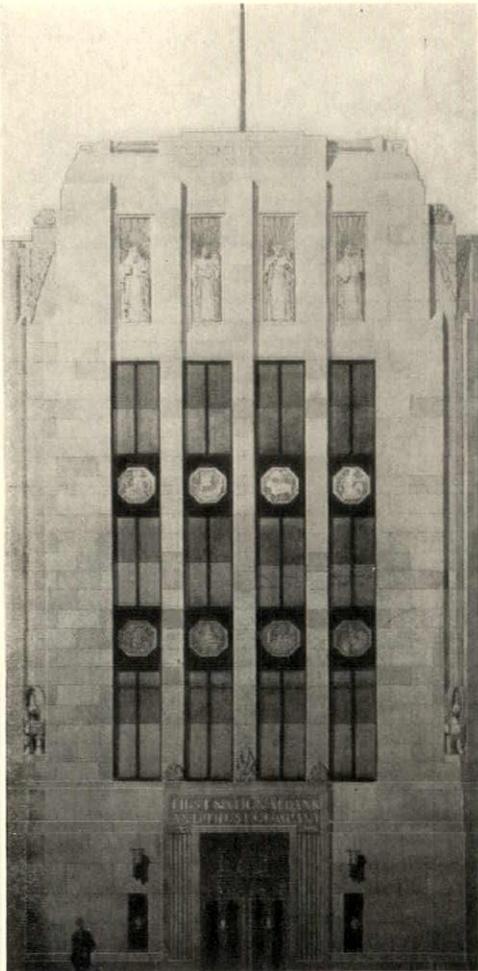


*The triangular corner plot for bank use is not uncommon, but when combined with a steeply shifting grade as shown here, it presents some difficulties to the architect. The building is of fire-proof construction, the exterior walls above grade being faced with cast stone resembling granite. Doors and grilles are of bronze, the windows of steel*

# First National Bank and Trust Company, Ossining, N. Y.

LESTER KINTZING, ARCHITECT  
DECORATED AND FURNISHED BY HOGGSON BROTHERS





*One of the architect's preliminary studies for the south façade*



*The architect's preliminary perspective study of the building as seen from the south. In the cast stone resembling granite a pinkish tint relieves it, and the base is darker than the walls above*

*Preliminary study of the main banking-room. The counter screen, it will be noticed, is kept low so as not to detract from the spaciousness gained by centring the circular public space within the hexagonal plan of the exterior walls*





*As finally developed, the hexagonal form of the banking-room is cut by the entrance segment, without, however, detracting unduly from the original scheme. The ceiling here is twenty-three feet high, lighted and ventilated on all six wall surfaces by windows in the upper portion leading directly to the outside air and light. The general color scheme of the room is that of Caen stone with decorations in old ivory*

« ARCHITECTURE »

JUNE, 1934

# Organ Music and Organ Architecture

By *Walter Holtkamp*

**I**N any consideration of organ cases it is impossible to separate the architectural treatment from the musical functioning of the organ itself. The two elements are inseparable, for regardless of how fine a case one may achieve, the instrument does not fulfill its purpose unless it is also musically workable. It should be an interesting problem to combine music and architecture, and today there is an excellent field for the serious designer of organ cases. Only in rare instances thus far have modern organ cases been logically designed to assist and glorify the true character of the instrument.

The designer of an organ case must first consider the nature of musical tone in general and keep constantly in mind that *all* musical tone is governed by the same natural laws. There exists a misconception that organ tone is different from other musical tone and that it may be generated in remote locations where organ cases are unnecessary, or in chambers with so-called tone openings masked by grilles or applied woodwork. This misconception must be corrected if future investments in organs are to be justified on scientific, artistic, or economic grounds.\* In the short space of this article it will be impossible to present all the scientific data, artistic requirements, or economic considerations involved, but since organ tone production and organ case design are dependent upon location, it seems important to deal with this matter first, and in a general way. For the purpose, we will use the church as our example, although the fundamental principles involved apply to all pipe organs, whether for church, concert hall, or residence.

The most important consideration for the production of good organ tone is free and direct speech for the pipes. In general, it may be said that the organ should be given the same

\* "The sin referred to is that of piercing the walls of churches to erect those abominations known as organ chambers, the proper term for which in a large number of instances would be organ sepulchres. No artist, be he organ builder or architect, could feel inspired to produce his best work, knowing that it is to be incarcerated in a hole in the wall, such as many of these chambers are!"—*The Organ*, July, 1921.—E. E. Adcock.

"From an artistic point of view much has been lost by the organ chamber, which is nearly always an ugly adjunct to a church. Directly organs are relegated to a chamber they no longer come under the attention of the architect, and that singularly beautiful article of church furniture, the organ case, is abandoned."—From a paper read before an English architectural association in 1883 and appearing in *The Organ* for July, 1921.

freedom of speech as the voice from the pulpit or choir. The musical value of an organ, or any instrument or group of instruments, including the human voice, is in direct proportion to its free-standing position. There are many examples of improperly placed organs costing \$50,000, to adopt an arbitrary figure, the musical value of which is not over \$20,000. Although the mammoth thing contains more pipes, its immense size makes its favorable location impossible, and thus the laws of acoustics render the pipes incapable of musical expression. Packed away remotely in vast chambers, the tone must be forced in order that it may be heard in sufficient volume by the congregation seated in the nave. Under these conditions it gives the effect of an explosion or concussion when heard close by. It is the very nature of organ tone to build its volume by utilizing the resonance of the church itself, and this it does only if the sound waves are able to reach the walls, ceiling, and floor directly.

Organ music is largely polyphonic in structure and for its proper realization the various parts must be clearly discernible. Although there are many reasons why clarity of the parts is extremely difficult from crowded or chambered organs, it is neither essential nor possible to treat of them here. What is more important to know is the fact that by far the greatest amount of available organ music was composed before the days of chambered organs, and that the instruments of those early days, owing to their favorable locations, encouraged clarity of tone. This great literature is practically lost to our modern ears, and if we are ever to revive it, we must place the organ within the same walls as the ears of its hearers, so that the environment is common to both.

A golden rule to follow is not to pierce the walls to accommodate the organ. This may not always be possible, but the nearer we approach this ideal, the more capable the instrument will be of rendering artistic and economical service. If chambers are unavoidable, they should be shallow, wide, and high.

From the foregoing, I hope my readers have gained the impression that the free-standing organ may be smaller and yet achieve musical adequacy. May I repeat that the musical value of an organ is in direct proportion to its free-

standing position? I should also like to add that the more remote or crowded the organ becomes, the larger it must be to achieve a given result. The circle is a vicious one.

When the architect has decided upon the location of the organ there are two courses open for him to follow in determining the appearance of the instrument. First, there is the traditional method of providing a more or less elaborate case or screen to cover the organ mechanism and support the offset visible pipes. Second, there is a contemporary treatment which places the pipes of the entire organ before the eyes of its auditors. This we shall deal with more fully a little later on. In the former instance, due to the now common use of electro-pneumatic control which enables one to offset the pipes according to taste, the architect is given the utmost freedom to place and arrange the pipes to suit any case design. It is recommended that he take full advantage of this freedom and place as many pipes in the case work as the design will permit, for it may be truthfully said that one visible pipe is worth two invisible ones. He should also employ the larger pipes whenever possible; placing them in the outer case work gives an offset of majesty which is characteristic of the instrument. Incidentally, this also frees the interior of the organ to the advantage of the smaller pipes. Where the pipes in the case are all too small, the effect of the great sonority of tone coming from small pipes is quite incongruous. As to the woodwork, it should be kept to the minimum consistent with good design. Solid or thick panels should be avoided and the entire case should be as open and free as possible. Not only is this advisable for the freedom of the tone, but it is imperative for ventilation, and is especially essential at the floor and ceiling levels. In general, the hand of the craftsman should be evident in any well-executed organ case. A feeling of ruggedness suits the instrument better than a too lacy or delicate effect. In short, the whole conception of the organ case must be considered as an integral part of the instrument rather than as a mask or cabinet. In this connection, grilles are particularly indefinite, weak, and purposeless in appearance. Grilles, if dense enough to conceal, are by the same token generally dense enough to hold back the tone of the organ.

From the preceding first principles of good organ case design, it is but a short step to the modern viewpoint of which we spoke before,

where the architect may dispense with the case altogether and form the actual parts of the organ so that they may be attractive and expressive as well as functional. Here he will find that the problems of architectural composition offer unlimited play for the imagination. Ranks of pipes are really beautiful to look upon. Let us remember that the original organ had no case. It was a simple and direct presentation of pipes, air chamber, bellows, and keys. Unfortunately, however, because of the mechanism involved in making the pipes speak, it was necessary for the early builders to arrange the wind chests somewhat compactly and close to the player, without opportunity for variety of arrangement. Today the electro-pneumatic action enables the builder to lay out the chests as he wishes; thus in making his design, he can arrange the ranks of pipes into any form which pleases him. Many expressive compositions can be obtained in this way, and particularly if the pipes themselves are made up in a variety of metals and woods. While zinc is the most common medium, other metals may also be employed, such as copper, tin, brass, and the modern alloys. Wood pipes, while not attractive in their natural state, may be made so by a carver or decorator. In the woods as in the metals, monotony may be avoided and interest added by varying the kind. Pine, oak, maple, cherry, and mahogany are but a few woods which may be employed.

The world of music would be everlastingly indebted to the architect who would bring the organ out into the open and insist that it be treated so as to provide the organist an opportunity to comprehend the nature of his medium. The artist-musician, whether he plays a kettle-drum or a violin, is sensitive to his instrument and merges himself physically with it. With present conditions of organ placement, the organist is in the unfortunate position of the man who must woo his lady by correspondence.

One word more, and that is economy. As the remote and indirectly placed organ increases its size automatically in order to attain a suitable result, so the intimately placed and direct speaking organ decreases its size in the same ratio and to the great enhancement of the music. The saving by reduction in size and simplification in mechanism is obvious.

As a builder of organs allow me to present the foregoing to the building architect as a plea to release the organ from its bondage: the organ chamber and the organ cabinet.

THE NINETY-SECOND IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS  
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

# ARCHITECTURE'S PORTFOLIO OF ORGAN CASES

*Subjects of previous portfolios are listed below  
at left and right of page*



❖ 1926  
DORMER WINDOWS  
SHUTTERS AND BLINDS

❖ 1927  
ENGLISH PANELLING  
GEORGIAN STAIRWAYS  
STONE MASONRY TEXTURES  
ENGLISH CHIMNEYS  
FANLIGHTS AND OVERDOORS  
TEXTURES OF BRICKWORK  
IRON RAILINGS  
DOOR HARDWARE  
PALLADIAN MOTIVES  
GABLE ENDS  
COLONIAL TOP-RAILINGS  
CIRCULAR AND OVAL WINDOWS

❖ 1928  
BUILT-IN BOOKCASES  
CHIMNEY TOPS  
DOOR HOODS  
BAY WINDOWS  
CUPOLAS  
GARDEN GATES  
STAIR ENDS  
BALCONIES  
GARDEN WALLS  
ARCADES  
PLASTER CEILINGS  
CORNICES OF WOOD

❖ 1929  
DOORWAY LIGHTING  
ENGLISH FIREPLACES  
GATE-POST TOPS  
GARDEN STEPS  
RAIN LEADER HEADS  
GARDEN POOLS  
QUOINS  
INTERIOR PAVING  
BELT COURSES  
KEYSTONES  
AIDS TO FENESTRATION  
BALUSTRADES

❖ 1930  
SPANDRELS  
CHANCEL FURNITURE  
BUSINESS BUILDING ENTRANCES  
GARDEN SHELTERS  
ELEVATOR DOORS  
ENTRANCE PORCHES

*Below are the subjects of  
forthcoming Portfolios*

## Garden Furniture

JULY

## Window Heads, Exterior

AUGUST

## Spires

SEPTEMBER

## Business Building Lobbies

OCTOBER

## Roof Trusses

NOVEMBER

## Modern Lighting Fixtures

DECEMBER

*Photographs showing interesting  
examples under any of these head-  
ings will be welcomed by the Edi-  
tor, though it should be noted that  
these respective issues are made up  
about six weeks in advance of  
publication date.*

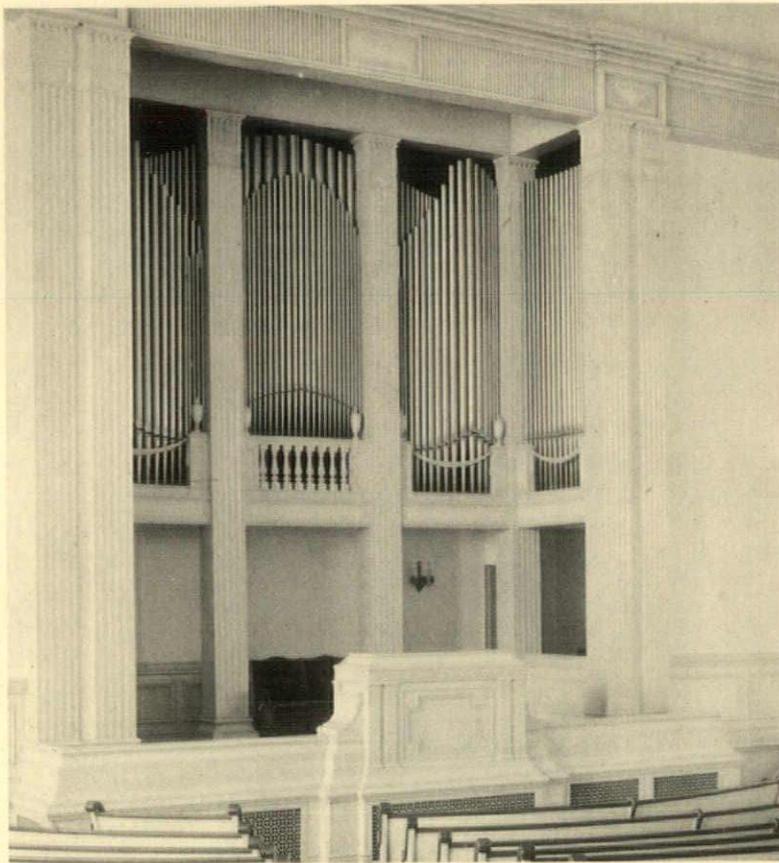
❖ 1930  
PATIOS  
TREILLAGE  
FLAGPOLE HOLDERS  
CASEMENT WINDOWS  
FENCES OF WOOD  
GOTHIC DOORWAYS

❖ 1931  
BANKING-ROOM CHECK DESKS  
SECOND-STORY PORCHES  
TOWER CLOCKS  
ALTARS  
GARAGE DOORS  
MAIL-CHUTE BOXES  
WEATHER-VANES  
BANK ENTRANCES  
URNS  
WINDOW GRILLES  
CHINA CUPBOARDS  
PARAPETS

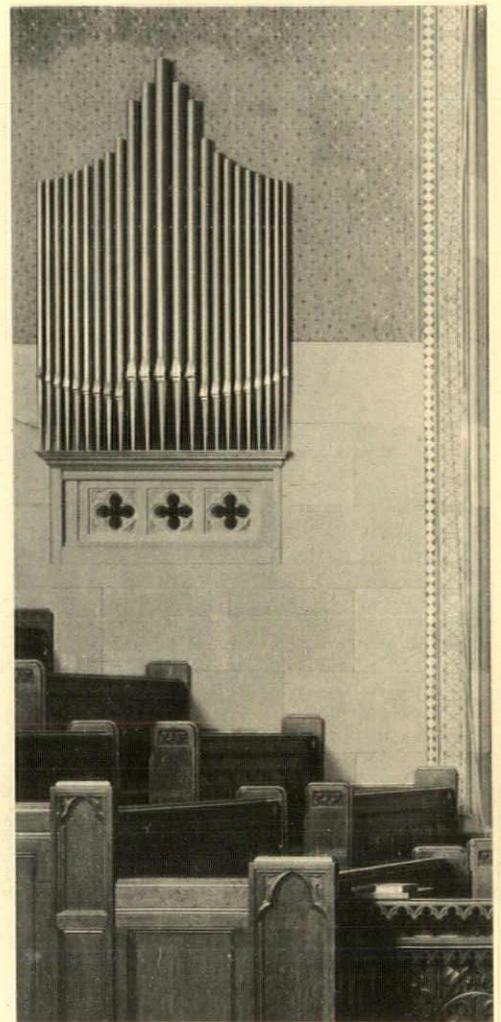
❖ 1932  
RADIATOR ENCLOSURES  
INTERIOR CLOCKS  
OUTSIDE STAIRWAYS  
LEADED GLASS MEDALLIONS  
EXTERIOR DOORS OF WOOD  
METAL FENCES  
HANGING SIGNS  
WOOD CEILINGS  
MARQUISES  
WALL SHEATHING  
FRENCH STONEMWORK  
OVER-MANTEL TREATMENTS

❖ 1933  
BANK SCREENS  
INTERIOR DOORS  
METAL STAIR RAILINGS  
VERANDAS  
THE EAGLE IN SCULPTURE  
EAVES RETURNS ON MASONRY  
GABLES  
EXTERIOR LETTERING  
ENTRANCE DRIVEWAYS  
CORBELS  
PEW ENDS  
GOTHIC NICHES  
CURTAIN TREATMENT AT  
WINDOWS

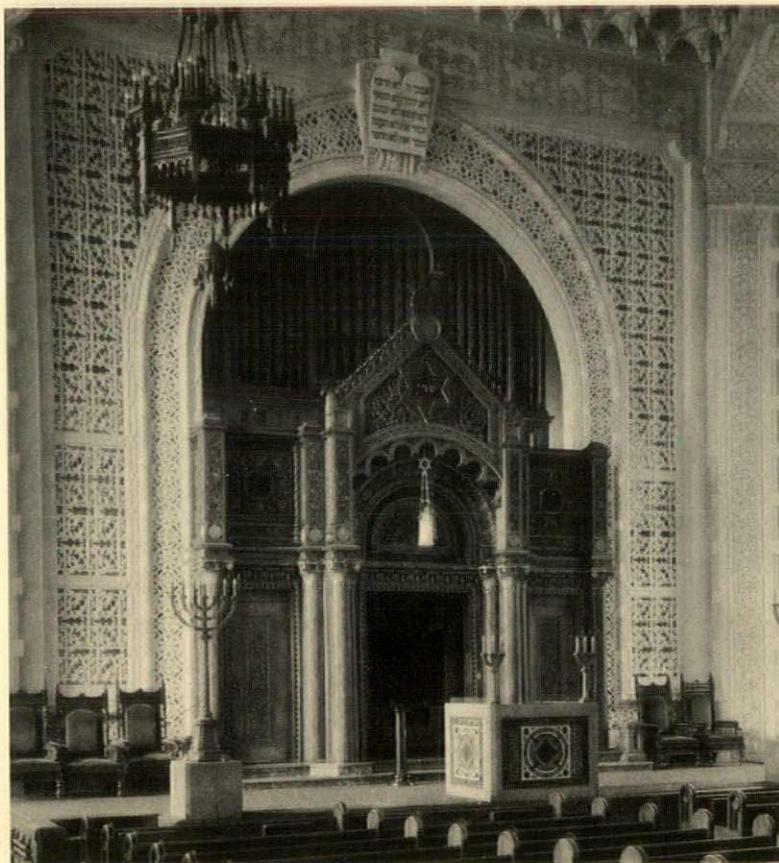
❖ 1934  
EXTERIOR PLASTERWORK  
CHURCH DOORS  
FOUNTAINS  
MODERN ORNAMENT  
RUSTICATION



*Fourth Church of Christ Scientist,  
Milwaukee, Wis.  
Charles Faulkner*

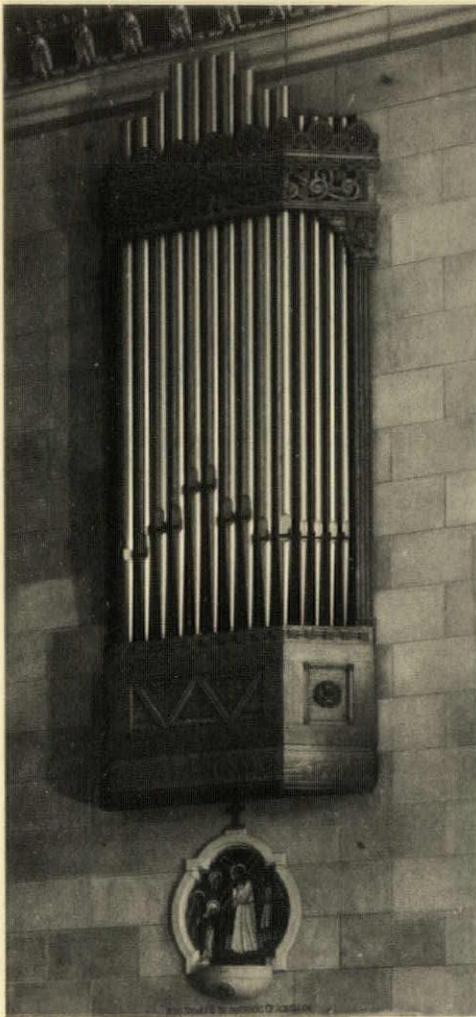
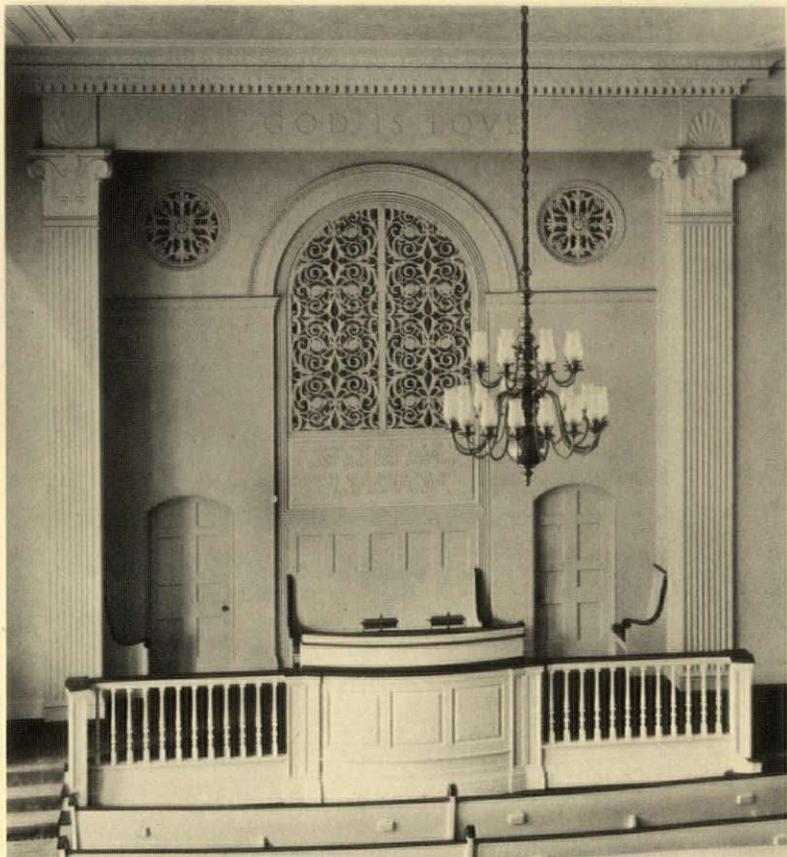


*St. George's, New York City  
C. Grant LaFarge*



*Temple B'Nai Yeshurun, New York City  
Walter S. Schneider; Henry B. Herts,  
associated*

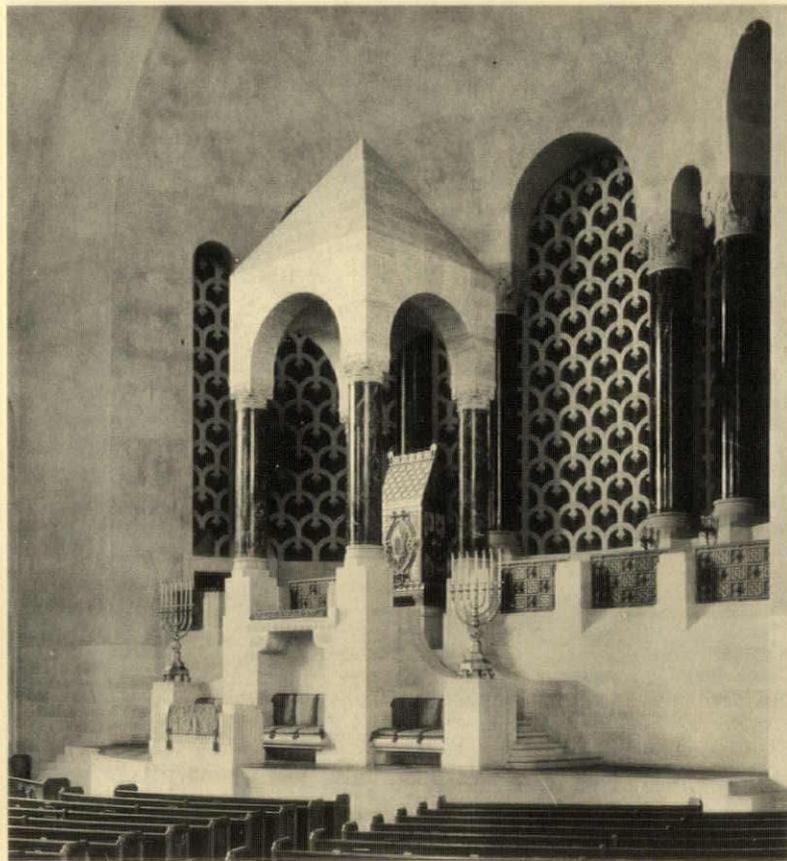
*First Church of Christ Scientist,  
Ardmore, Pa.  
Davis, Dunlap & Barney*



*Church of the Transfiguration of Our Lord,  
Philadelphia, Pa.  
Henry D. Dagit & Sons*

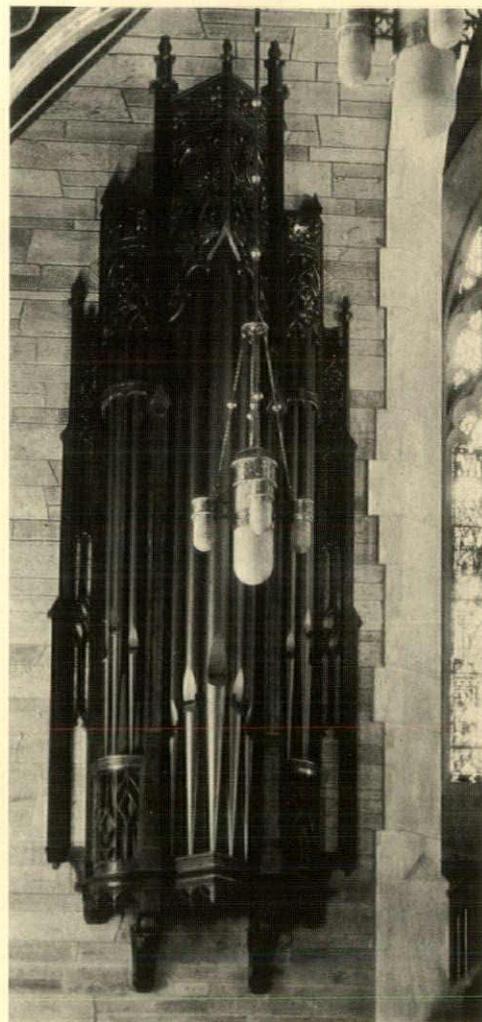


*Temple Emanu-El, San Francisco, Calif.  
Bakewell & Brown;  
Sylvain Schnaittacher*





*First Baptist Church, Pasadena, Calif.  
Carleton M. Winslow;  
Frederick Kennedy, Jr., associated*



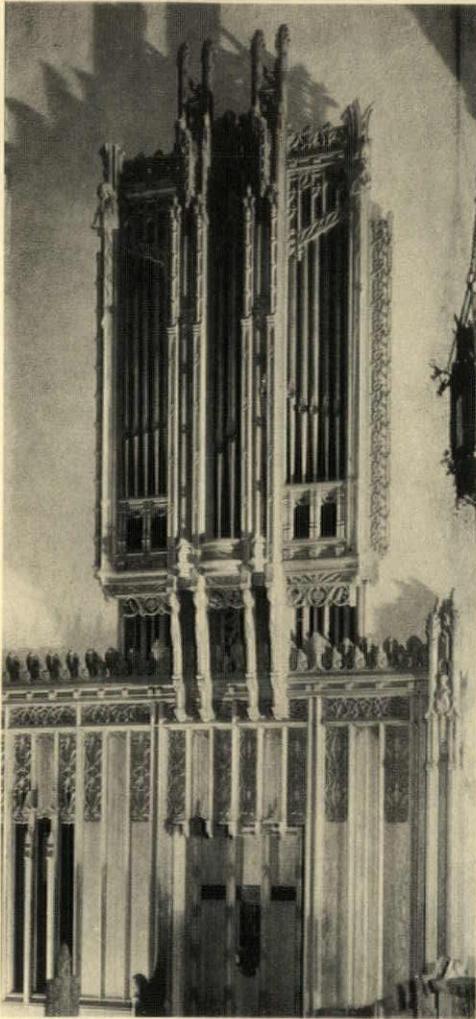
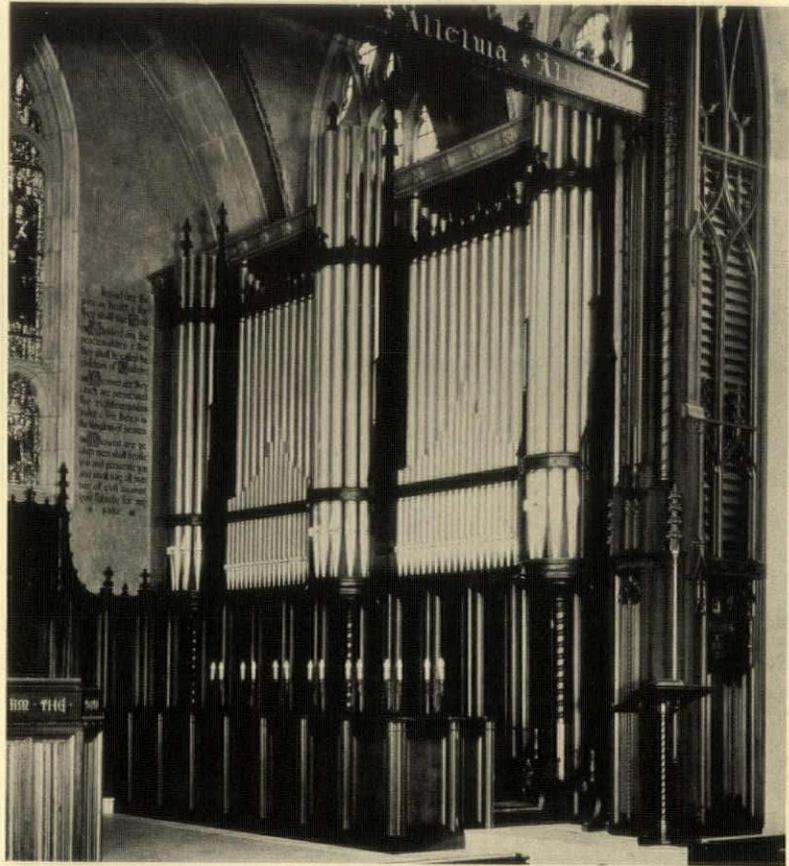
*Holy Cross Church, Germantown, Pa.  
Henry D. Dagit & Sons*



*Metropolitan M. E. Church, Detroit, Mich.  
W. E. N. Hunter Company*



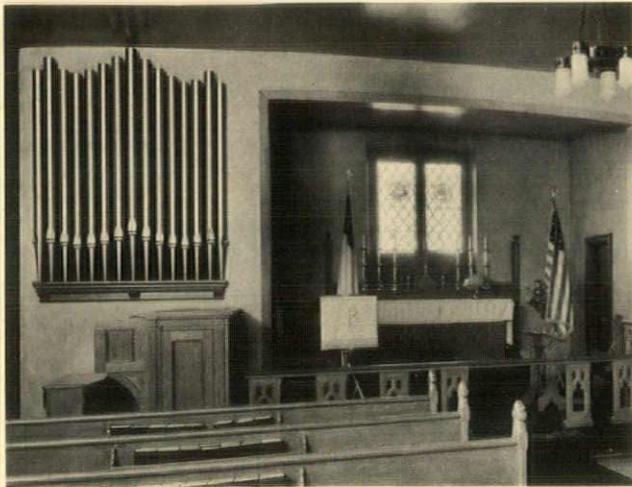
*First Congregational Church,  
Kalamazoo, Mich.  
Aymar Embury II*



*Chapel, First M. E. Church,  
Germantown, Pa.  
Sundt & Wenner*



*St. James's, New York City  
Cram & Ferguson*



*Chapel, Home for Incurables  
Crow, Lewis & Wick*



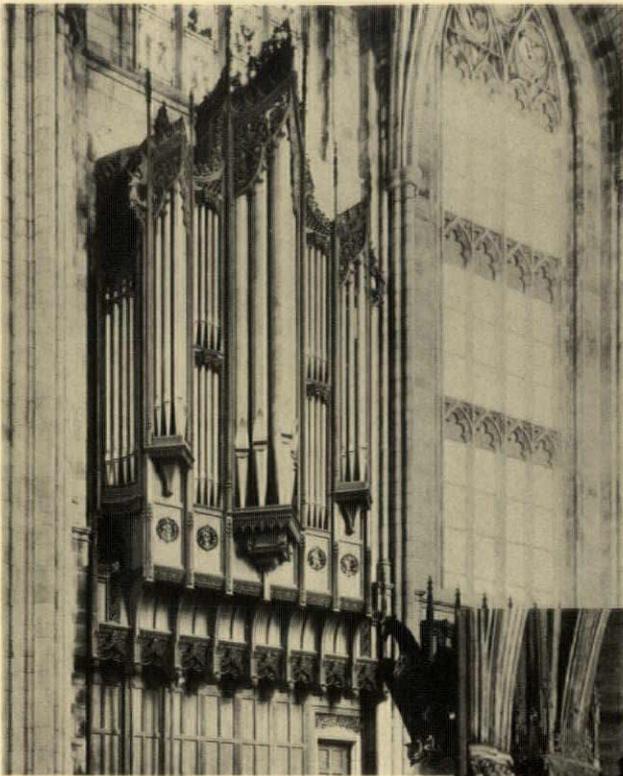
*Chapel, Duke University,  
Durham, N. C.  
Horace Trumbauer*



*Chapel of the Intercession,  
New York City  
Bertram G. Goodhue;  
Cram, Goodhue & Ferguson*

*Chapel, Metropolitan M. E.  
Church, Detroit, Mich.  
W. E. N. Hunter Company*

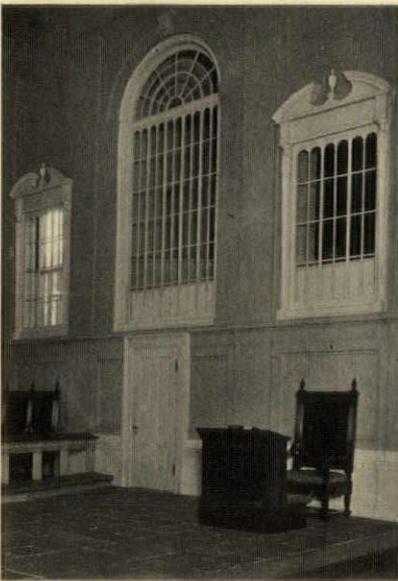




*Chapel, Princeton University,  
Princeton, N. J.  
Cram & Ferguson*

*Main organ, St. Patrick's  
Cathedral, New York City  
Robert J. Reiley;  
Maginnis & Walsh, associated*

*The Village Chapel,  
Pinehurst, N. C.  
Hobart B. Upjohn*

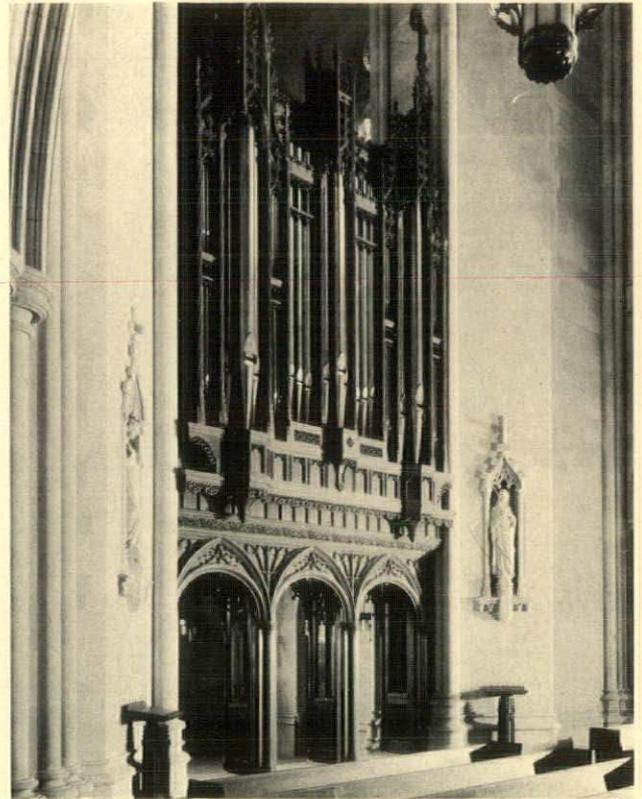


*St. Paul's M. E. Church, Northport, N. Y.  
Sundt & Wenner*





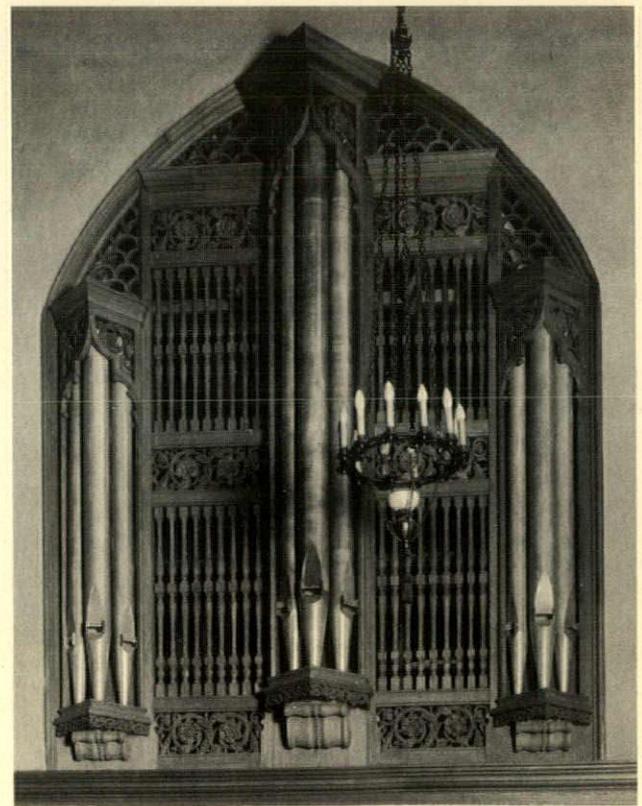
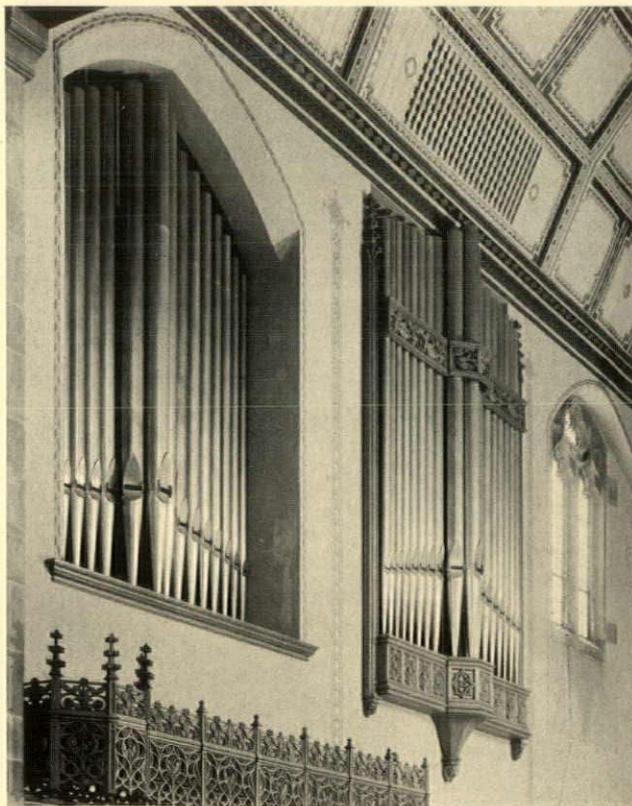
*Chapel of the Cross, Chapel Hill, N. C.  
Hobart B. Upjohn*



*Echo organ, Chapel, Duke University, Durham, N. C.  
Horace Trumbauer*

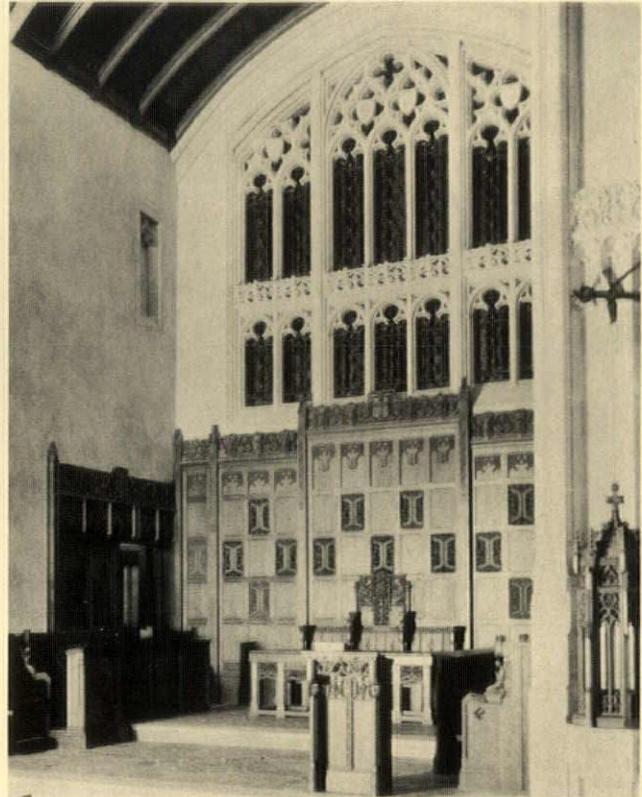
*St. James's Episcopal Church, Long Branch, N. J.  
Frazier & Robb*

*Trinity M. E. Church, Durham, N. C.  
Cram & Ferguson*





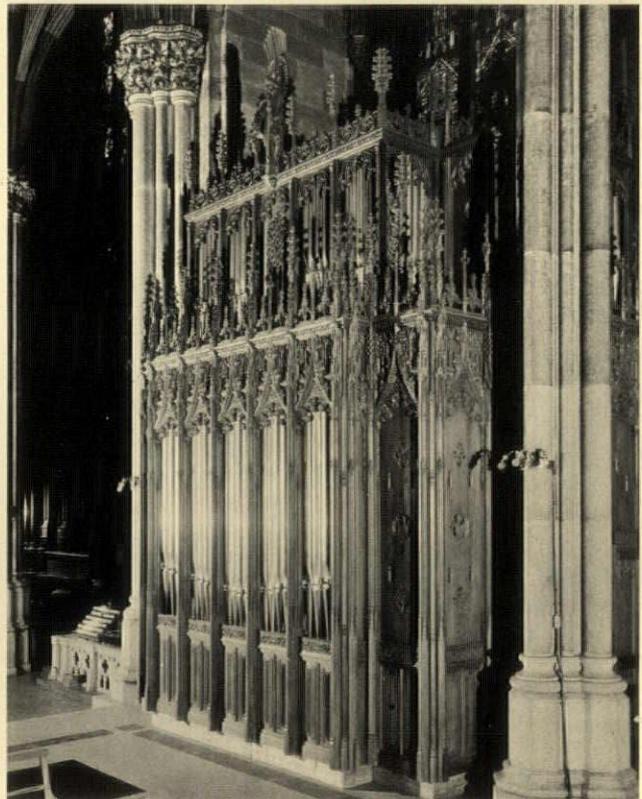
*Epworth Euclid Church, Cleveland, Ohio  
Bertram G. Goodhue; Bertram G. Goodhue Associates;  
Walker & Weeks, associated*

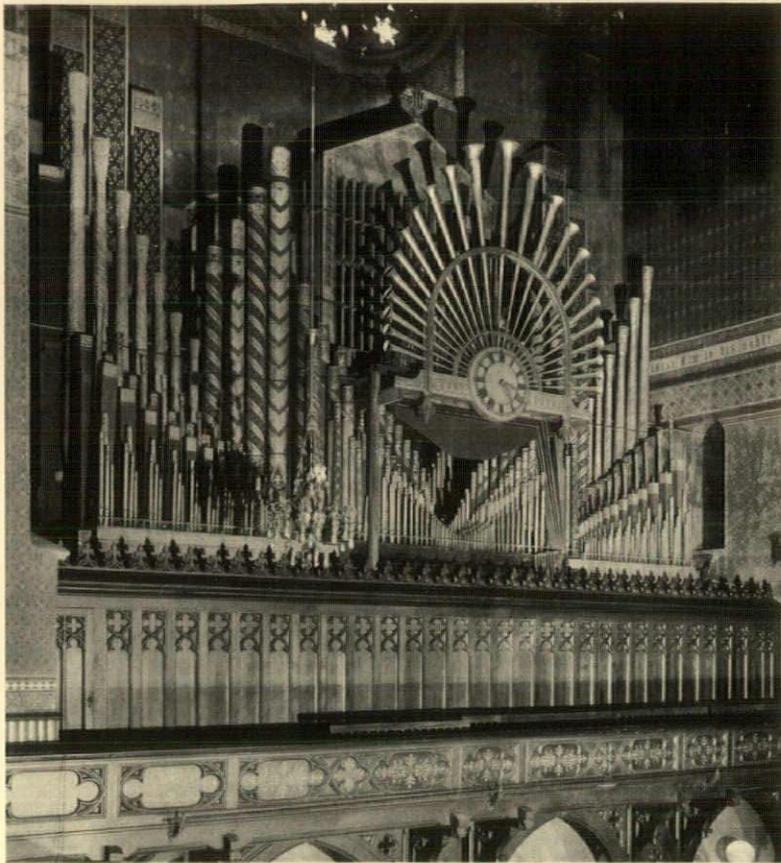


*Grosse Pointe Memorial Church, Detroit, Mich.  
W. E. N. Hunter Company*

*House of William S. Barstow,  
Great Neck, Long Island. Greville Rickard*

*Chancel organ, St. Patrick's Cathedral, New York City  
Robert J. Reiley; Maginnis & Walsh, associated*

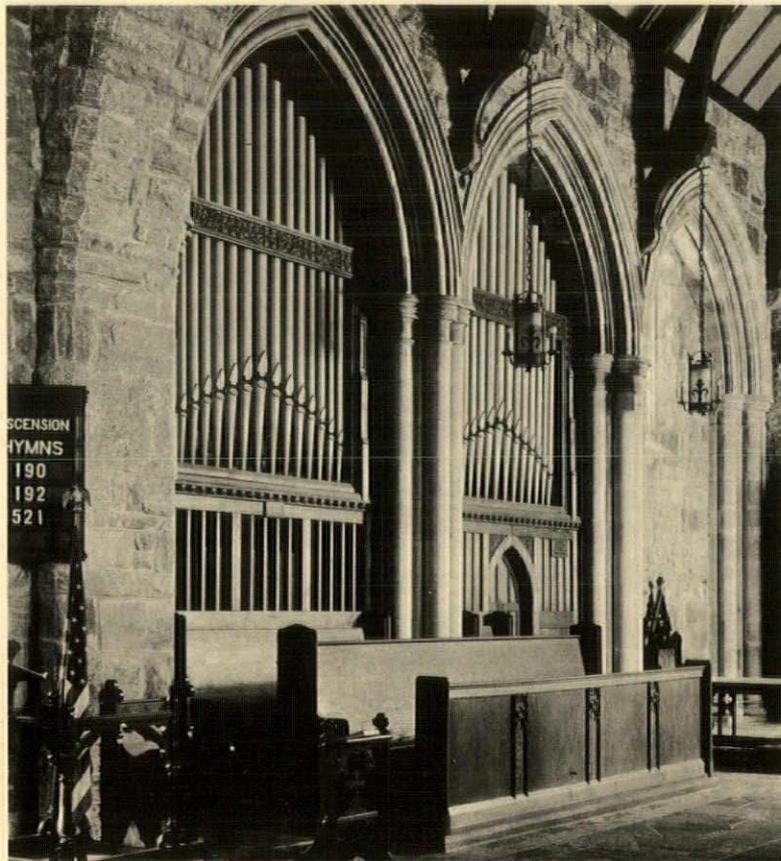




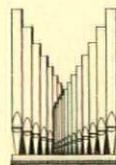
*St. George's, New York City  
C. Grant LaFarge*



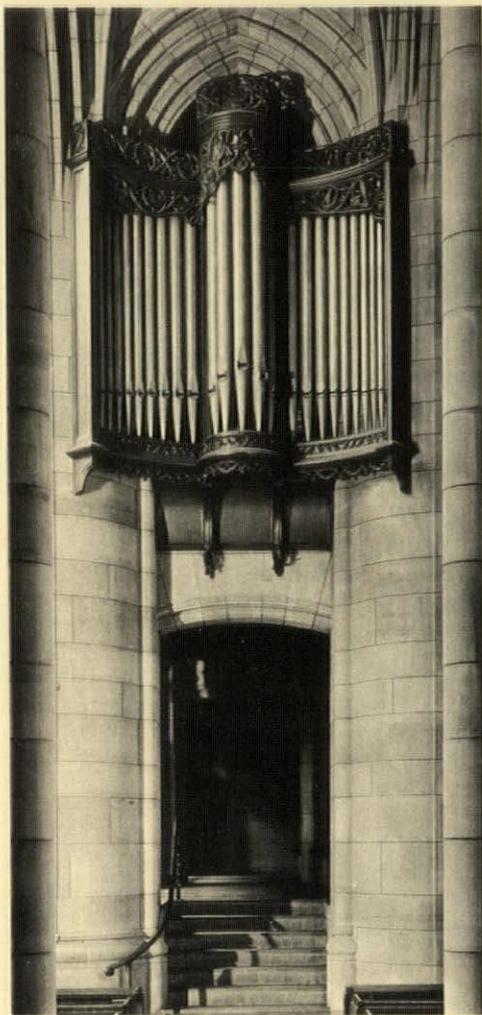
*Holy Cross Church, Germantown, Pa.  
Henry D. Dagit & Sons*



*St. James the Less, Scarsdale, N. Y.  
Hobart B. Upjohn*



*Chapel, Chicago University, Chicago, Ill.  
Bertram G. Goodhue;  
Bertram G. Goodhue Associates*

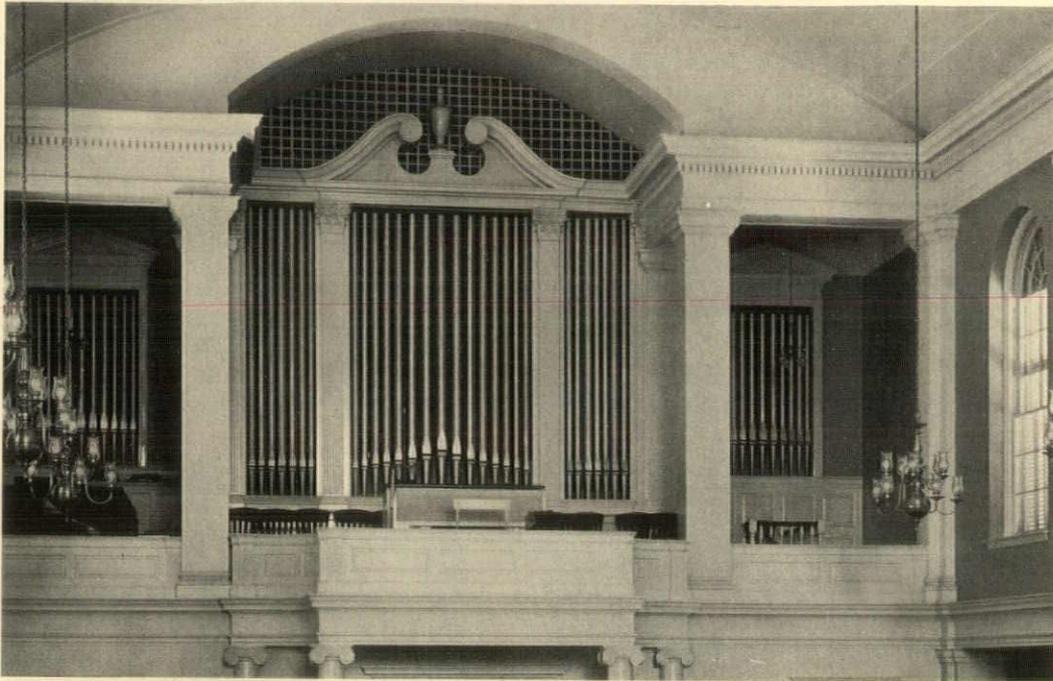


*St. Thomas's, New York City  
Cram, Goodhue & Ferguson*



*Holy Trinity, New York City  
Robertson & Potter*

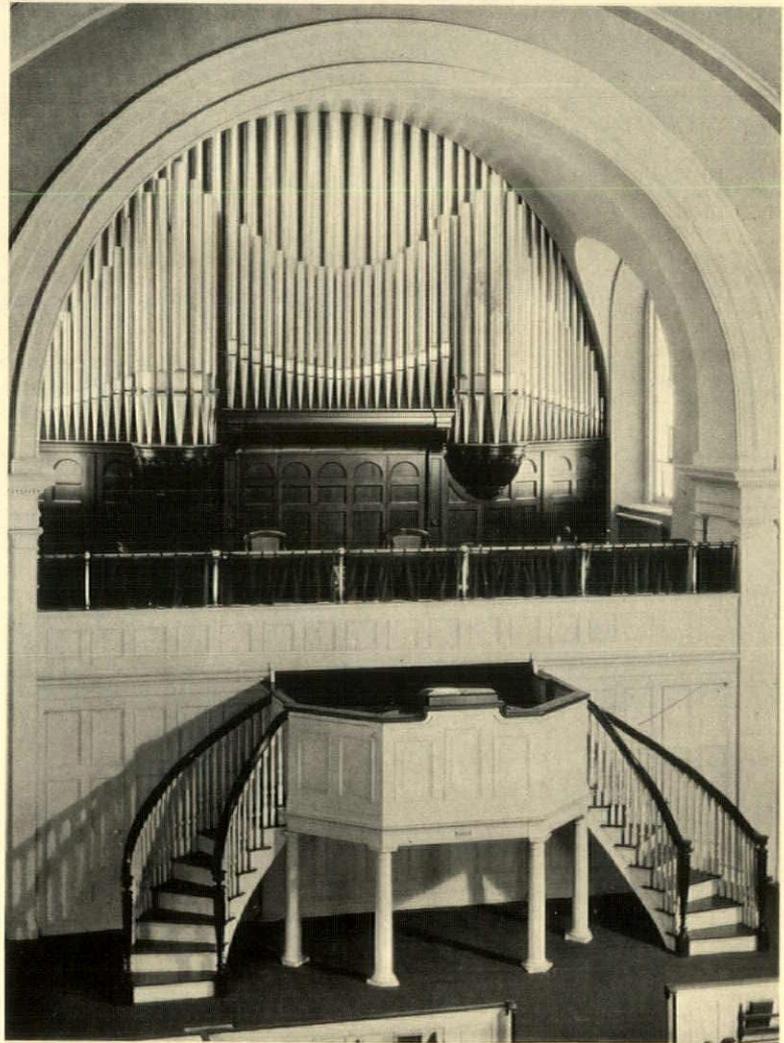




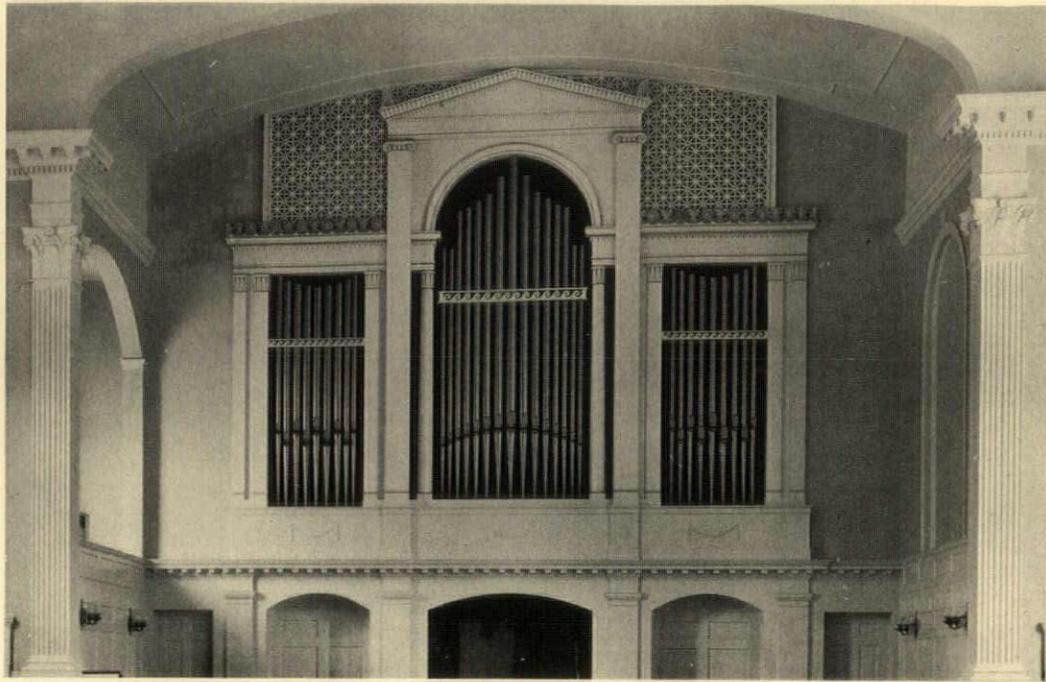
*First Presbyterian  
Church,  
Concord, N. C.  
Hobart B. Upjohn*

*Flatbush Reformed  
Dutch Church,  
Flatbush, N. Y.  
Meyer & Mathieu  
(alterations)*

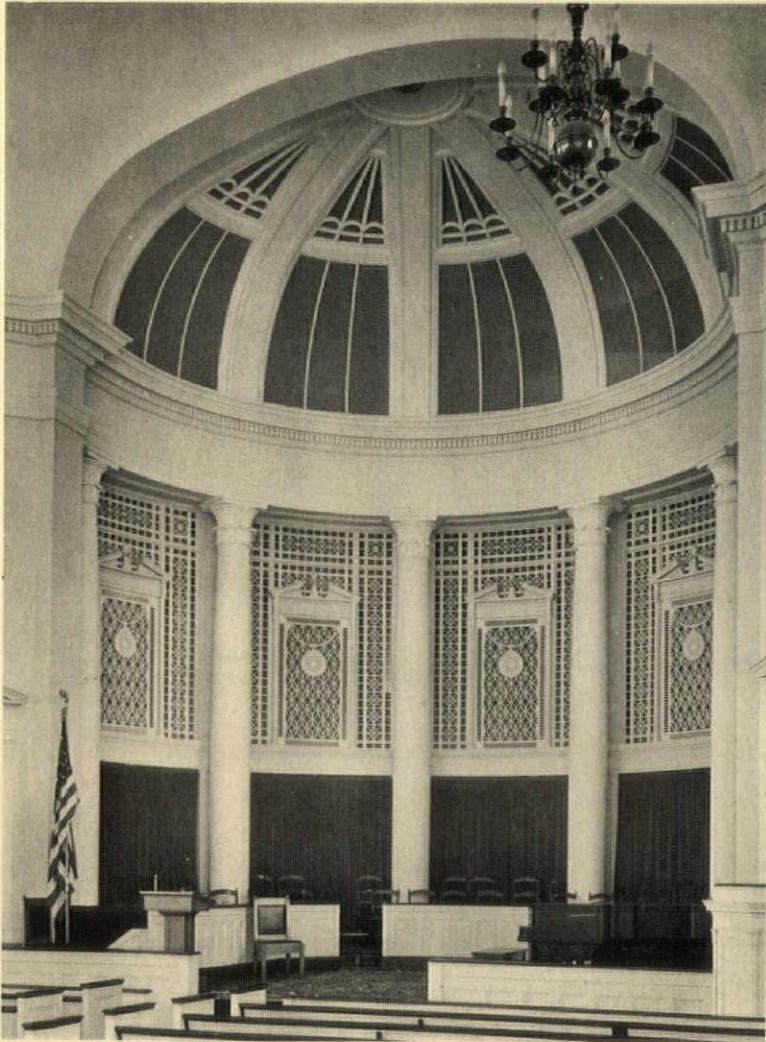
*First Congregational Church,  
Springfield, Vt.  
Aymar Embury II*



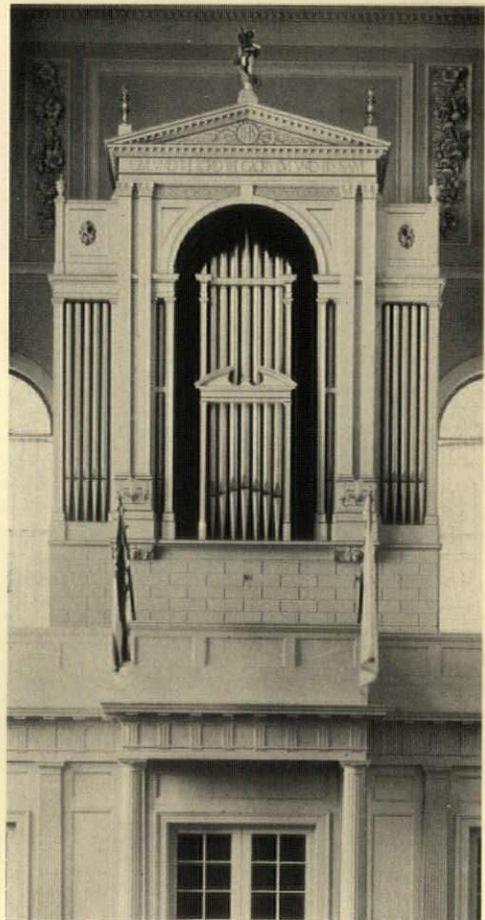
*First Park  
Baptist Church,  
Plainfield, N. J.  
Hobart B. Upjohn*

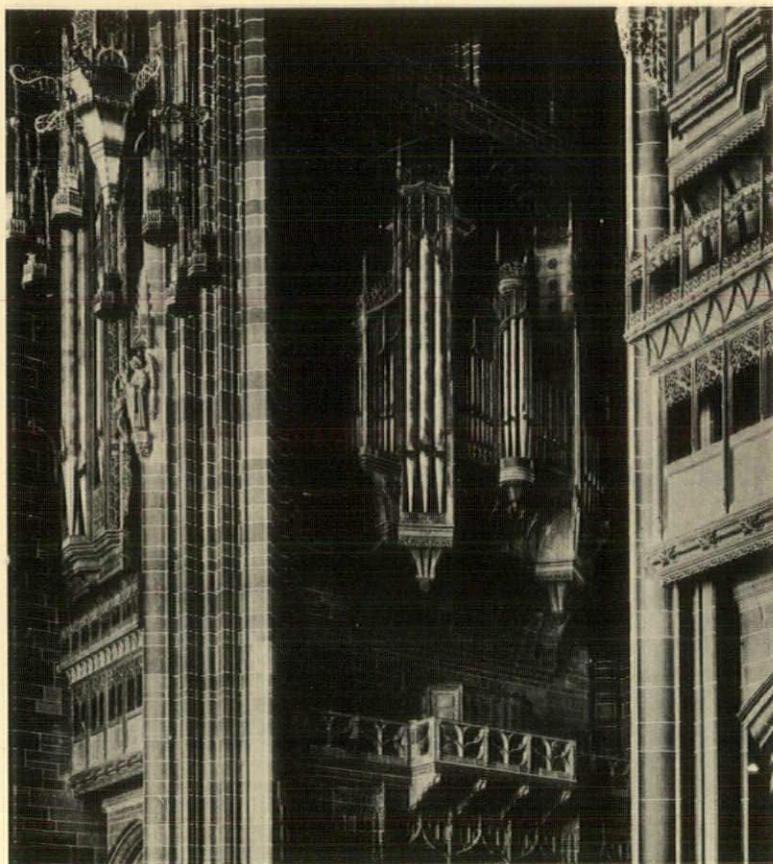


*Chapel, New Jersey  
College for Women,  
New Brunswick,  
N. J.  
Ludlow & Peabody*

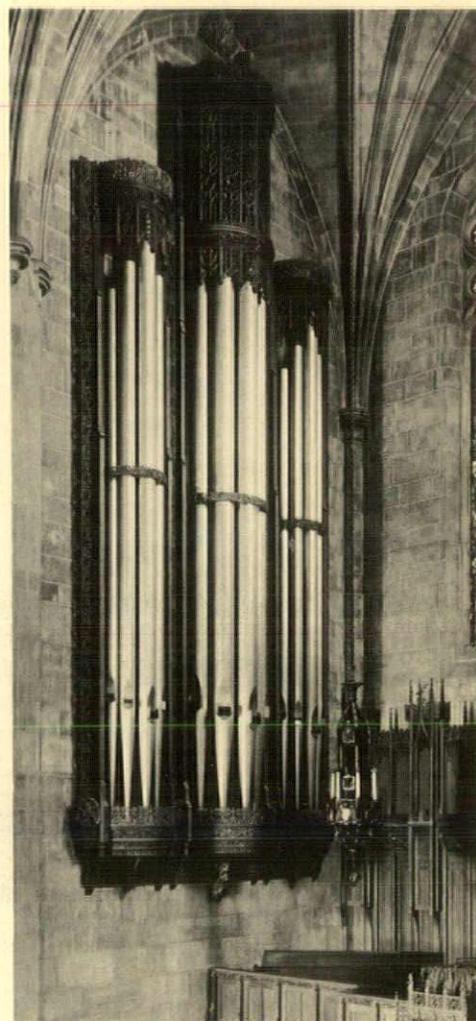


*Second Church, Boston, Mass.  
Cram & Ferguson*





*Liverpool Cathedral*  
*Sir Gilbert Giles Scott*



*Fourth Presbyterian Church, Chicago, Ill.*  
*Cram, Goodhue & Ferguson; Howard Shaw*



*First Presbyterian Church, Passaic, N. J.*  
*Harry Leslie Walker*



*First Congregational Church,  
Montclair, N. J.  
Bertram G. Goodhue*

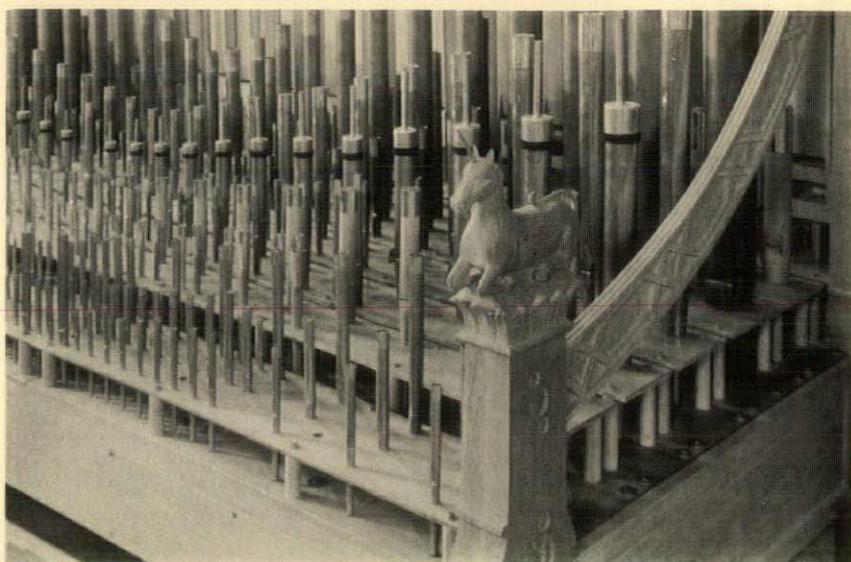


*Trinity Church, New York City  
Thomas Nash (alterations)*



*Jefferson Avenue Presbyterian Church,  
Detroit, Mich.  
Smith, Hinchman & Grylls*

Below, the Ruckpositiv in the Garden Court of The Cleveland Museum of Art. A detail is shown at the right. The organ is a memorial given to the Museum by the family of P. G. McMyler. The Garden Court, not originally built with music in mind, with its brick walls and glass roof, developed remarkable acoustical properties. In the build-



ing of the Ruckpositiv Frederic Allen Whiting, director of the Museum, Douglas Moore and Arthur W. Quimby, successive curators of musical arts, and Walter Holtkamp, were guided by a desire to subordinate everything to the organ as a musical instrument. It seems likely that we shall see more of this use of free-standing speaking pipes in organ design



# FOR YOUR REFERENCE FILE

— NOTE —

For your convenience ARCHITECTURE will see that at your request any data or literature pertaining to any advertised product presented in this issue is sent you. Use request card below.

Members of the architectural profession may secure without cost any or all of the literature reviewed on this and the following page. Fill in the file numbers of items desired on the prepaid mailing card below and mail. ARCHITECTURE will see to it that you have full information.

## A NEW SADDLE

F. 226. Illustration and description of a new saddle of advanced design for weather-proofing, out-swinging French windows and doors comes from the Accurate Metal Weather Strip Company, 216 East 26th Street, New York City. Saddles Nos. 38 and 38a are for screen door, allowing ½-inch rug clearance. Saddle No. 38b is adaptable for weather-proofing doors—opening outward—where no screens are required.

## "ZINCLAD" NAILS

F. 227. An aid to the lasting quality of shingles is announced by the W. H. Maze Co., Peru, Ill., in "Zinclud" nails. It is claimed that these special non-rusting nails have the lasting properties of solid zinc and will therefore outlast the ordinary galvanized nail by many years. A bulletin entitled "Why Zinclud Nails Prevent Wood Rot" will be gladly mailed you on request. You certainly will want to know more about these nails before making your next roofing specification.

## WHAT VALVES A VALVE

F. 228. An illustrated folder from the Kennedy Valve Mfg. Co., Elmira, N. Y., describes the new line of Kennedy Heavy Standard Bronze Globe and Angle Valves. A cross-section of the whole, and illustrated description of each part in turn make the superiority claims of these new valves clearly understood.

## WATER-HEATER DATA

F. 229. The Kewanee Boiler Corporation, Kewanee, Ill., has published a new catalogue, No. 95a, on Water Heaters, Garbage Burners, and Tanks, including new material on welded tanks, supplementing the riveted tanks data.

## ROLL FORM RUBBER FLOORING

F. 230. The Goodyear Tire and Rubber Co., Inc., Akron, Ohio, announces a new rubber flooring manufactured in roll form, thus simplifying the problem of floor covering for homes at reasonable cost.

## MODERN AMERICAN HARDWARE

F. 231. By Sargent. This brochure from Sargent & Co., New Haven, Conn., is a fitting medium for the display of design of their modern hardware. Alternating with the clear-cut examples of metal work are shadow drawings of the type of buildings in which they would be fittingly used. The brochure will be sent to all interested. For those architects who have under way home projects requiring hardware of only the choicest sort, The Sargent Co. has a new portfolio of the Lord Leicester design. It contains illustrations of actual size. The craftsmanship indicated is without doubt of unusual excellence. It harks back to the days when individuality meant something and every one wasn't in a rush. This portfolio may be obtained by direct request to the company, explaining the project in hand.

## ROOFING FOR KEEPS AT LOW COST

F. 232. A new folder from the John-Manville Co., 22 East 40th Street, New York City, invites the home owner to reroof for the last time with permanent, fireproof Johns-

Manville Asbestos Shingles. The last page is devoted to their million-dollar home improvement campaign.

## COMMERCIAL CLEANING

F. 233. Many buildings are evidence of the fact that little thought was given in their planning to the vital necessity of keeping them clean. A recent catalogue from the B. F. Sturtevant Co., Hyde Park, Boston, Mass., will be helpful in this respect. It gives a concise and practical account of the application of the Sturtevant System of Central Vacuum Cleaning to commercial buildings.

## "DUREZ"

F. 234. The General Plastics Co., Inc., of North Tonawanda, N. Y., has just published a practical folder on the advantages and limitations of Durez Molding Compounds—particularly prepared for designers and engineers.

## STAINLESS-STEEL CORROSION DATA

F. 235. A new booklet on "Enduro 18-8" has just been released by the Republic Steel Corporation, Central Alloy Division, Massillon, Ohio. This bulletin has sixteen pages of up-to-the-minute data on Enduro Stainless Steel. Authentic metallurgical and fabrication data are given, together with a table of laboratory corrosion data, giving Enduro resistances to more than three hundred chemical reagents, solutions, and products under varying conditions. If you write direct ask for Bulletin 125.

## A STANDARDIZED HEARTH

F. 236. The Donley Brothers Co., of Cleveland, have a remedy for the uncertainty and bad construction so often encountered in the fireplace hearth. They offer centring and reinforcement as well as design details for a standardized hearth on the cantilever principle. The Donley Cantilever Hearth Assembly is intended to do away with dual support from which come settlement strain and consequent cracking. In passing the material on to the reviewer, our editor's remark was: "Clever—what?"

## EMERGENCY LIGHTING

F. 237. The Electric Storage Battery Co., Philadelphia, has published for your reference a booklet dealing with the need and advantage of Emergency and Power Systems in buildings where traffic is heavy or large gatherings are held. The competency of Exide Batteries to meet emergency requirements is subsequently illustrated.

## ELECTRIC STOVES FOR CHEF OR WIFE

F. 238. The new catalogue of the Standard Electric Stove Co., Toledo, Ohio, is ready for distribution. The thirty-two pages adequately illustrate the twenty-seven domestic models and eleven models for institutional use.

## LEAD FOR SOUND-PROOFING

F. 239. Latest issue of "Lead," published by the Lead Industries Association, Graybar Building, New York City, contains an interesting article on the use of lead in the sound-proofed doors of the new N. B. C. Studios. There is seldom an issue without some item

of interest to architects. Are you on their mailing list? What do you know of the efficiency of lead as a sound-proofing material?

## SUMP PUMP AND CELLAR DRAINER

F. 240. The thunderstorm season and wet cellars welcome news of a new Automatic Electric Sump Pump and Cellar Drainer, recently introduced by the M. L. Oberdorfer Brass Co., of Syracuse, N. Y. Constructed of bronze and having a special ¼ h.p., 1725 R. P. M. (110-60 cycle) Induction Type Motor, the new unit is said to be rugged and the manufacturer states it to be rust-proof, quiet-running, and trouble-proof. Note is added that its performance will not give radio reception interference. In other words, you can have a dry cellar and listen to your favorite programmes.

## GLASS BLOCK BARS

F. 241. With the demand for attractive bars for hotels, clubs, restaurants, and private homes at a minimum expense has come the development of the Glass Block Bar by the Owens-Illinois Glass Co., Toledo, Ohio. The new glass blocks are available in a wide range of applied colors. Unusual lighting effects are of course obtainable. The Owens-Illinois Glass Co. will be glad to furnish details as to structural requirements and cost.

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## INNOVATION IN RUBBER FLOORING

F. 242. An innovation is announced by the Stedman Rubber Flooring Co., South Braintree, Mass., in its introduction of Reinforced Rubber Tile Floors of 1/8-inch thickness. To present-day budgets this new gauge material of exactly the same formula with exactly the same characteristics as the heavier grades, offers a sanitary, long-wearing floor at decided saving in cost.

## LUNKEN WINDOW

F. 243. The Corry-Jamestown Mfg. Co., Corry, Pa., sole manufacturers of the patented Lunken Window, offer a very useful and complete detailed drawing of the window. It is particularly useful in school work.

## "ZIP-IN" SCREENS

F. 244. The "Zip-In" Frameless Fly Screen, manufactured by the Cincinnati Fly Screen Co., Cincinnati, Ohio, is fully described in a leaflet just received from the company. Fourteen "Zip-In" advantages are enumerated. They are of all bronze, at the price of wood frame screen. Easily installed. Require minimum of winter storage space. Stock sizes.

## WEBSTER RADIATION

F. 245. Warren Webster & Co., of Camden, N. J., have recently announced a new product known as "Webster System Radiation." It is described as "a light-weight, concealed convection type unit, embodying in a single unitary structure a heating element consisting of aluminum fins on copper tubing, with an orificed radiator supply valve and union connection built integrally into one leader and a thermostatic return trap and union connected integrally in the other header." A catalogue containing complete

description, dimensions, ratings, etc., will be furnished on request.

## DOE OIL HEAT

F. 246. With completely enclosed mechanism and furnished in soft, forest-green enamel, the Doe Quality Burner makes an appeal to architectural treatment as well as offering in utility "clean, even healthful heat in 'cradled silence.'" A compact and well-planned illustrated brochure from the Bethlehem Foundry and Machine Co., Bethlehem, Pa., will give you full details.

## NU-WOOD FOR INTERIORS

F. 247. The Wood Conversion Co., St. Paul, Minnesota, has published a 56-page booklet on New Wall and Ceiling Treatments with Nu-Wood, for insulation, interior decoration, and acoustical correction. Numerous illustrations show the adaptability of Nu-Wood in a wide variety of installations.

## MICARTA FOR STYLE

F. 248. The Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., issues an illustrated leaflet, in color describing the Micarta bar and table tops in the Manhattan Room of the Hotel New Yorker. The designs are distinctive and smart in both color and form. Description is included of the characteristics and adaptability of this material for new bars and old.

## COLOR IN SAFETY TREAD

F. 249. News release from the Norton Company, Worcester, Mass., announces that the new Alumudum Rubber Bonded Safety Tread is now available in three colors—red, green, and buff—in addition to the black originally offered. The same features are characterized and they are intended for both outdoor and indoor use. Details on request.

## THE NEW BATH

F. 250. You have seen already the single advertisements of the "Standard" New-Angle Bath. Now you may have an elaborate new booklet describing all the revolutionary advantages of this new equipment which modifies the shape of the bathtub for the first time since the installation of the original stationary tub in 1841. The Standard Sanitary Mfg. Co., Division of the American Radiator & Standard Sanitary Co., has placed on the market a four-foot square tub with a diagonal bathing recess, an integral shower seat, and a second seat for use in entering and leaving the tub. Automobiles, trains, and airplanes can no longer have a monopoly on startling new designs. The bath steps to the front. You will want this booklet with its arresting cover.

## "AIR CONDITIONING

F. 251. Brings Health and Comfort to the House" is the title of a twelve-page publication of interest to those contemplating the installation of air-conditioning equipment. It is issued by the Westinghouse Electric & Mfg. Co., East Pittsburgh. The publication describes the advantages of air conditioning and of the Westinghouse system; gives information on the system's operation; and provides data on models and equipment available, together with information for installation and maintenance.

## SPANDREL DESIGN

F. 252. One of the most useful publications crossing our desk is the new Portfolio of Contemporary Spandrel Design, published for your use and reference by the Aluminum Co., of America, Pittsburgh, Pa. This is one piece of promotion you will not want to miss. Besides the wealth of examples it contains some technical hints and design considerations.

## CARVER VENTILATING SHADES

F. 253. A leaflet from Morse and Driscoll, Inc., Taunton, Mass., describes the smart, practical, and economical features of their Carver Ventilating Shades. They are made of "Tontine" Cloth—are washable and fade-proof by claim. Being easily adjusted to shade any part of the window, they allow ventilation when shade and privacy are being obtained. You will find them advertised elsewhere in this issue and can see the interesting pleating effect. You will want further details as to color combinations, etc.

## PENCIL MASTERPIECES

F. 254. Those of you who did not see the recent Koh-I-Noor advertisement revealing the secret of the recent "Pencil Points" covers, will be interested in sending for a reprint of this Guptill revelation. The leaflet also includes additional data on the quick and modernistic effects obtainable through the use of Koh-I-Noor Sticks. Koh-I-Noor Pencil Co., Inc., 373 Fourth Avenue, New York City.

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June, 1934

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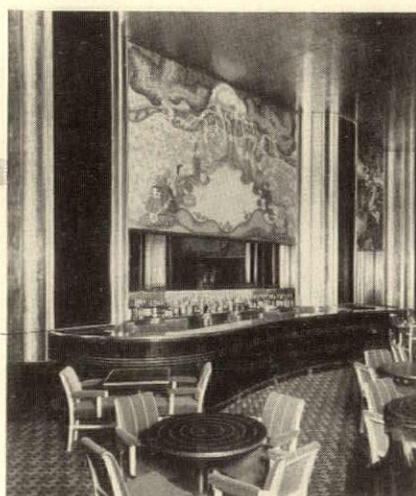
Our carpeting service to architects includes estimating and budgeting, styling, weaving and supervising installation. Our design staff will interpret *your* ideas or create designs and color schemes to harmonize with your building. We can give you expert advice on the best grades for different kinds of service—all made to Bigelow's traditional standards of quality.

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Lounge in the Mayflower Hotel, Washington, D. C. Decorators: Walter M. Ballard Co. Carpet Counsel: The Bigelow Weavers.



Persian Room and Bar, Plaza Hotel, New York. Architects: Joseph Urban Associates. Carpet Counsel: The Bigelow Weavers.



# THE BULLETIN - BOARD *Continued*

(Continued from page 4)

bulletin, a copy of which may be had upon application to the P. W. A., supersedes instructions previously issued which may conflict with these. The present bulletin is revised under date of March 3, 1934.

## *SURVEY OF OLD PEOPLE'S HOMES*

IN the many surveys which have been in progress during recent months one is that made by the American Trade Council, Washington, D. C., with the idea of bringing together information regarding old people's homes that are independent and non-charitable in their operation. The council will be glad to advise with those interested in finding a place where "those who have run their course" may spend their declining years in comfort. The council's Washington office is at 744 Jackson Place.

## *PRODUCERS' COUNCIL*

THE Producers' Council has been very active in their support of Senate Bill 3348, allocating the sum

of one and a half billion dollars for the construction of building, loans, and grants to finance building construction, and the five hundred million dollars allocated to the Home Owners Loan Corporation. The Producers' Council Committee on Public Buildings—B. M. Pettit, chairman; J. C. Knapp, C. W. Peelle, F. P. Byington, and F. W. Morse—strongly urges the passage of this bill as a possible stimulus which would put into motion the lagging building industry.

## *P. W. A. PROJECTS RESCINDED*

SECRETARY ICKES, as administrator, has announced the rescinding of certain allotments for low-cost housing and slum clearing projects, the funds having been transferred to the Public Works Emergency Housing Corporation. In every case excepting the project for the Suburban Housing Association, Hutchinson, Kan., where the applicant failed to execute the contract, the allotments were recalled because the local interests failed to

meet the P. W. A. requirements as to equity. The rescinded allotments are: \$2,025,000 to The Spence Estate, Brooklyn; \$40,000 to the Suburban Housing Association, Hutchinson, Kan.; \$12,000,000 to Cleveland Homes, Inc., Cleveland, Ohio; \$4,460,000 to the Indianapolis Community Plan Committee, Indianapolis; \$2,600,000 to Techwood, Inc., Atlanta, Ga.; \$1,212,500 to University Housing Corporation, Atlanta, Ga.; \$1,333,000 to Harms Park Housing Corporation, Chicago.

This action does not mean that all of these projects have been abandoned. Some of them may be constructed either by the Housing Corporation or by the administrator.

## *A. I. S. C. STUDENT BRIDGE COMPETITION*

K. R. DARRAH, a student in Rensselaer Polytechnic Institute, Troy, received first award in the annual bridge design competition, sponsored by the American Institute of Steel Construction. Second prize was awarded to George

(Continued on page 18)

## **KIMBALL . . . has the *Experience* to help you solve any Organ problem !**

**One Firm name . . . the same Family  
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Architects have learned that our unusual experience and sympathetic understanding of their problems are invariably of help and value.

In working with us you can be sure that the finished organ will be perfectly harmonized to the requirements of your design and space limitations and that the complete installation will fulfil your highest hopes. Kimball Organs always have been distinguished by exceptional craftsmanship and tonal beauty.

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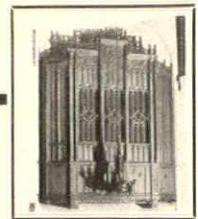
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Console of Kimball organ recently installed in the Worcester Memorial Auditorium at Worcester, Mass.

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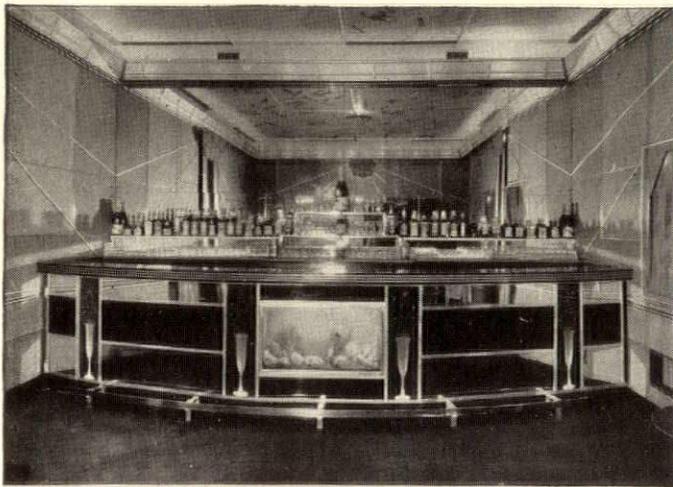
**W. W. KIMBALL COMPANY**

**KIMBALL HALL, CHICAGO, ILL.**

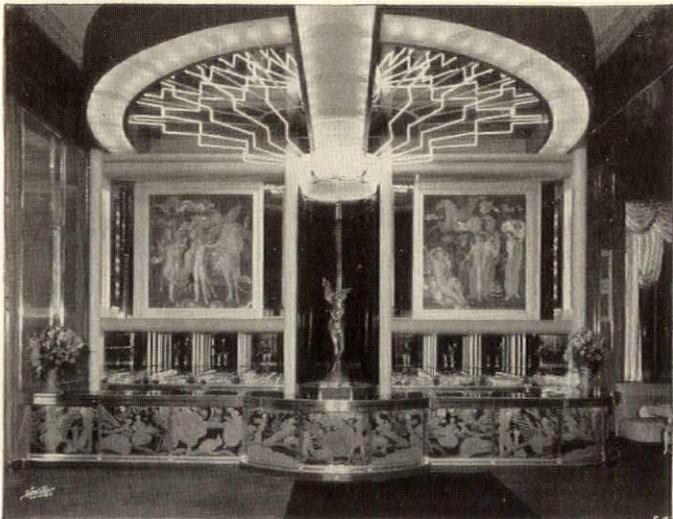
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CONGRESS HOTEL, MICHIGAN BLVD. AND CONGRESS ST., CHICAGO. N. Eastman of Eastman Studios, designer. This Brunswick installation with its red formica top scintillates with rare beauty and originality.

No matter what type of service fixtures you need to carry out your taproom designs—Brunswick can produce them for you. Our matchless manufacturing facilities enable us to build fixtures to fit every requirement. If desired, we can build the interior complete—from bare walls to paneled richness.

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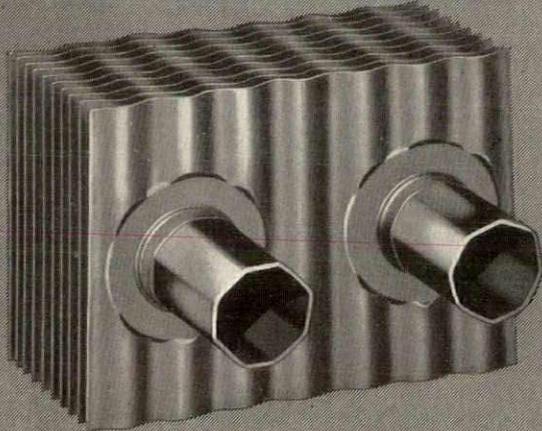
In addition, Brunswick offers you the free advice and counsel of its skilled staff of fixture experts! These experienced specialists will check your detail plans. Any suggestions they can offer for improving operating efficiency will be given without obligating you in any way, providing, of course, you want them.

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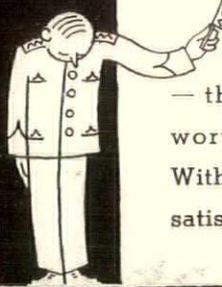
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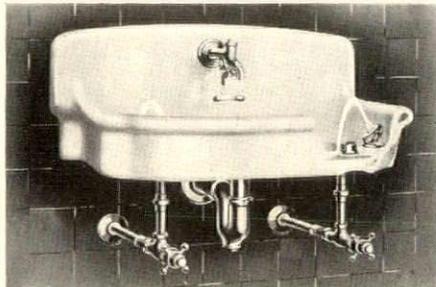


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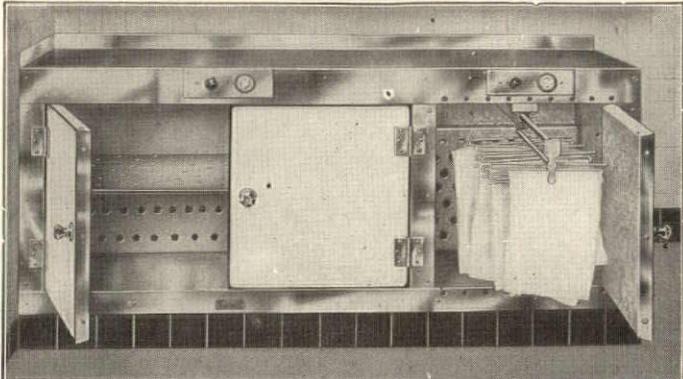
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# THE BULLETIN-BOARD *Continued*

(Continued from page 14)

Pistey, also of Rensselaer. First Honorable Mention was given to David Hiatt, of New York University; second mention to J. F. Nowak of Rensselaer, and third mention to Albert R. Nozaki, of the University of Illinois.

## CONSTRUCTION COSTS

THE Dow Service Daily Building Reports announces evidence of a rise in construction costs to the 1930 level. These figures show that a house, the material and labor costs of which in 1926 were \$5000, varied in successive years about as follows:

1926.....	\$5,000	1932.....	\$3,700
1927.....	4,975	April, 1933.....	2,560
1928.....	4,970	July, 1933.....	2,750
1929.....	5,015	October, 1933.....	3,340
1930.....	4,965	January, 1934.....	4,060
1931.....	4,200	March, 1934.....	4,675

JOHN C. WESTERVELT,  
1873-1934

JOHN CORLEY WESTERVELT, architect, died April 8, at his home in New York City from a heart attack. Mr. Westervelt was born in

Ithaca, N. Y., received his Bachelor of Science degree from Cornell University in 1894, and since his graduation had been practicing architecture in New York together with a sustained devotion to many alumni activities. He was a trustee of Cornell from 1912 to 1922. For more than thirty years Mr. Westervelt had been architect for Childs Restaurant Company. He was a member of the American Institute of Architects and The Architectural League of New York.

ROLLIN S. SALTUS,  
1870-1934

ROLLIN SANFORD SALTUS, landscape architect, retired, died April 24, of a heart attack at his home at Mount Kisco, N. Y. Mr. Saltus was born in Brooklyn, was educated at St. Paul's School, Trinity College, Harvard University, and in Paris. He also attended the Biltmore School of Forestry. For many years Mr. Saltus practised in New York City. He was a member of the American Society of Landscape Architects.

## PERSONAL

W. Keith Cook, architect, announces the opening of his offices in Featherston Chambers, 143 Featherston Street, Wellington, N. Z.

Samuel Zouri Moskowitz, architect, requests that manufacturers' catalogues and literature be sent to his new office in the Meyer Building, Public Square, Wilkes-Barre, Pa.

Michael Sheehan, architect, announces the opening of his office for the practice of architecture, at 432 North Calvert Street, Baltimore, Md., and requests that manufacturers' catalogues be sent to him.

Yasuo Matsui, F. H. Dewey & Company, architects and engineers, announce the removal of their offices to 10 East 40th Street, New York City.

Morris M. Pulver, architect, announces the opening of an office for the general practice of architecture, at 21 Dundas Square, Toronto, Ontario, Canada, and requests that manufacturers' catalogues and samples be sent to him.



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Arthur Brown, Jr., Consulting Architect

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For further details see Sweet's Catalogue or write direct to us.

## Pecora Paint Company

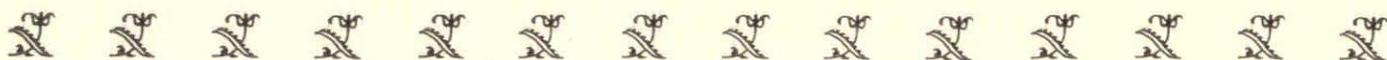
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The information throughout is clear and such that from it even a beginner can make a beautiful garden. On the other hand, the more experienced will find assistance and new avenues to explore. Size and expense are not governing factors of success: a small site and little money can also produce a complete picture. 151 pages, 6¾ by 9¼ inches. Illustrations from drawings and photographs. \$3.50.

By B. H. B. SYMONS-JEUNE



Water-plants, and particularly water lilies, are becoming more and more popular as gardeners realize that they are among the hardiest of plants; that of all hardy plants many of them produce the largest flowers and the most beautiful colors; and that they can be grown easily and cheaply in the simplest of ponds in the smallest of gardens. No modern book has hitherto existed, in English, dealing solely with this fascinating type of gardening. On the Continent, where water lilies have been grown in increasing numbers for many years, the author of this book, who is leader of research into water-plants for the Guild of German Horticulturists, is recognized as a first authority. 136 pages, 7½ by 10 inches. Illustrations from drawings and photographs. \$3.00.

By ALEXANDER NIKLITSCHK

## Water Lilies & Water- Plants



## The Arrange- ment of Flowers

The way to arrange flowers so that a genuinely artistic effect results is little known in the Western world.

Mrs. Hine, an outstanding authority on flower arrangement, for which she has won many prizes, has written this book primarily for those who want flowers in the house.

She shows how, by the use of certain simple rules, fewer flowers can achieve more varied and lovelier effects; how standards of excellence, deriving from centuries of experience in the Orient, have been affected by fashion and expediency; how balance and proportion in flower arrangement are the touchstones of successful decoration.

Her book is profusely illustrated with photographs of flower arrangements that won prizes, and thus pictorially presents the best efforts of specialists in different kinds of flowers. 147 pages, 7 by 10 inches. Illustrations from photographs. \$2.50.

By MRS. WALTER R. HINE

*and—*

# The New Illustrated Gardening Encyclopædia

By RICHARD SUDELL, F. I. L. A., A. R. H. S.



It is quite impossible, without seeing this book, to appreciate its comprehensive quality. Every phase of gardening is fully and authoritatively covered, and the book should be of the utmost value to every gardener, whether amateur or professional.



Gardening, like most arts, is constantly changing. In order to get a proper register of all that is best and newest in the way of method and information, various specialists have contributed the sections devoted to their particular subject. And to assist those amateurs who specialize, some of the more popular flowers have been dealt with rather fully in the text, and the material in such cases has been supplied by gardeners who have themselves specialized in the particular flower for many years. In short, the cream of many years' experience is included in these pages, and as far as possible all that is best in modern garden information has been expressed in simple form, so that the novice will find it a useful book of reference.

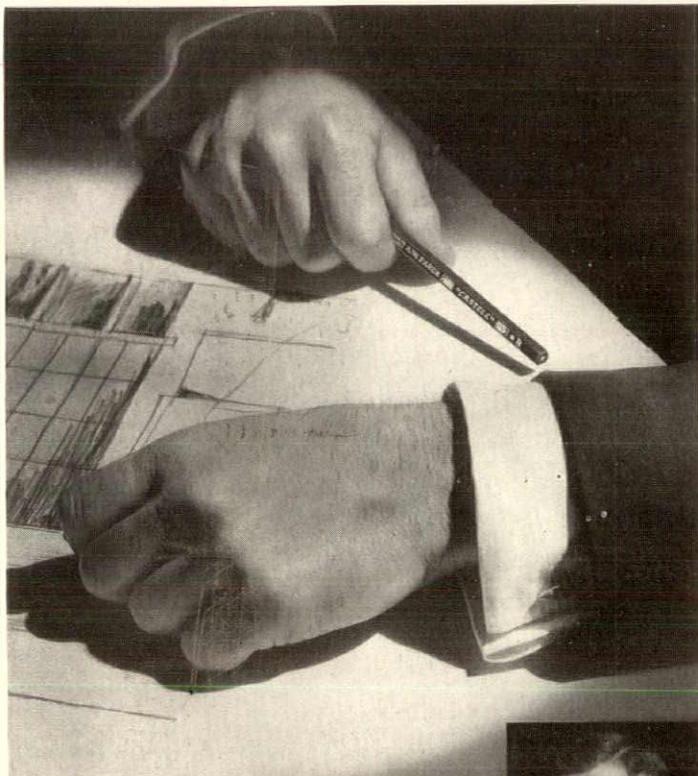
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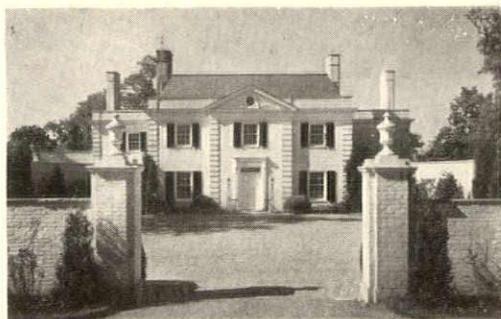
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Above The hands of Leigh French, Jr. Below The Patterson House in Dayton, Ohio. Mr. French's plan for this residence is one of his many notable country home designs.



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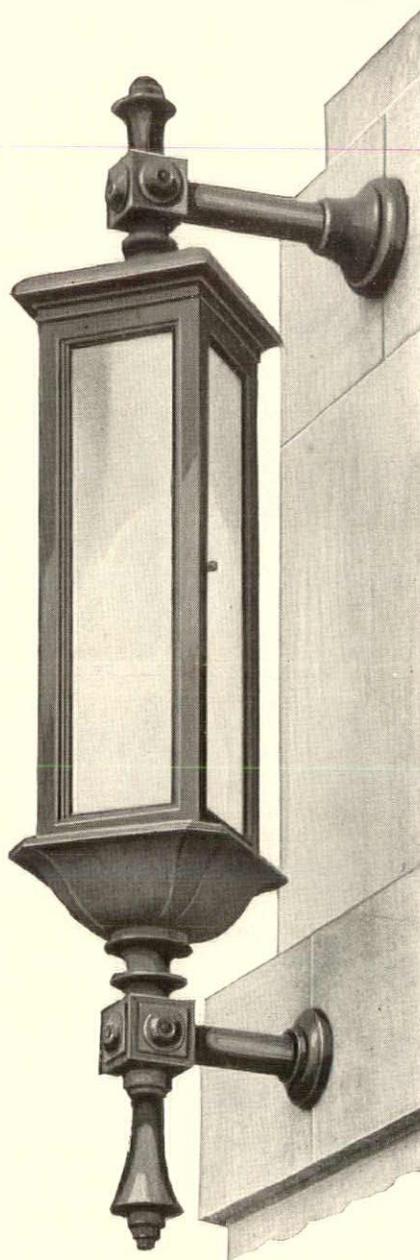
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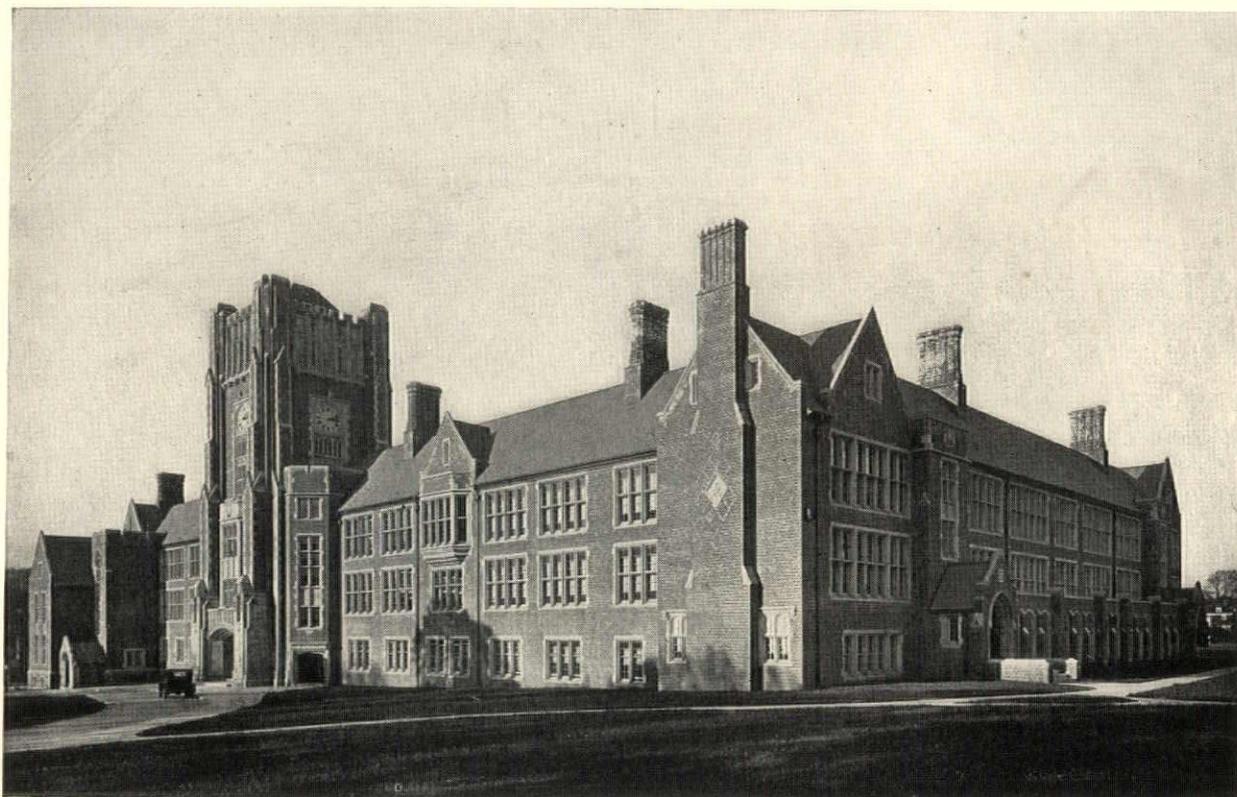
Consult Sweet's, Volume D, pages 668 to 669; or if estimates or more complete information are required, write Smyser-Royer Company.

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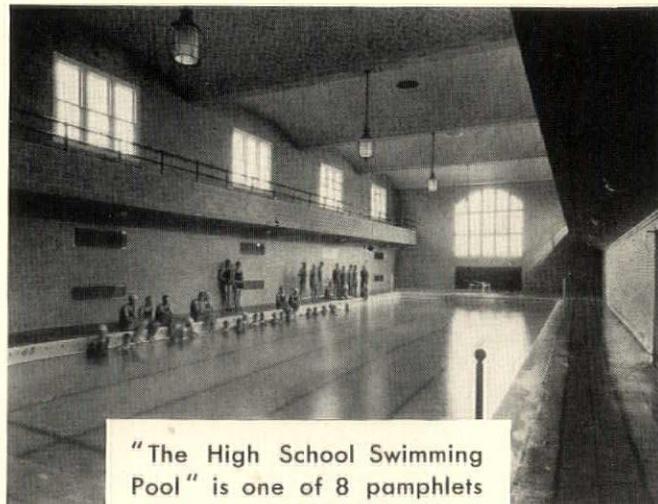
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