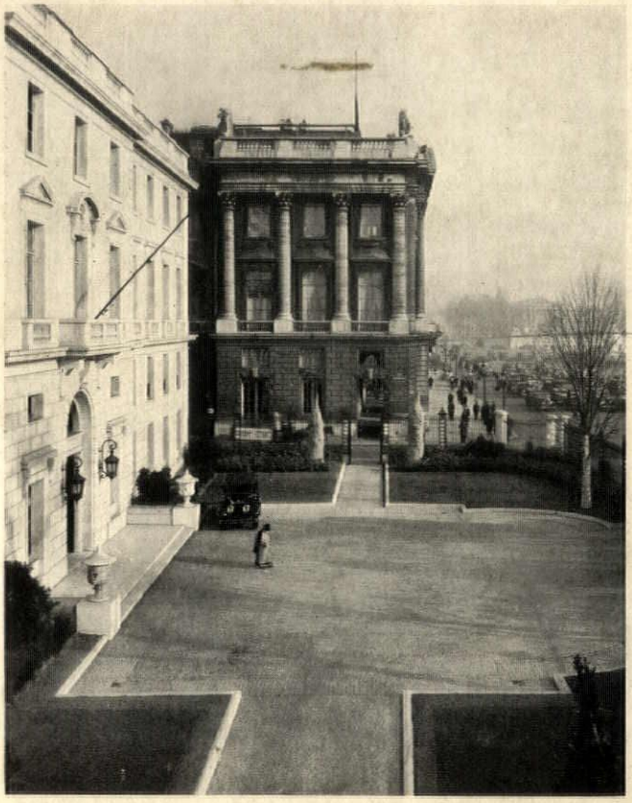
ARCHITECTURE

SEPTEMBER, 1934



The New U. S. Government Building in Paris

DELANO & ALDRICH, ARCHITECTS; VICTOR LALOUX, CONSULTING

FOUR LITHOGRAPHS OF NEW CASTLE, DEL., BY ALBERT KRUSE

A New Craftsmanship in Concrete

BY JOHN J. EARLEY

PENNSYLVANIA TERMINAL, PHILADELPHIA PAUL MANSHIP'S N. Y. ZOO GATES

Portfolio: NRA CODE Spires

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St. Clair Hotel, 160 E. Ohio St., Chicago, Ill. Oman & Lilienthal, Architects. Murals by Alexander Rindskopf. Circular bar 8' in diameter. Workboard of Stainless Steel, including drainboards, waste chutes, storage racks, etc. The beer is mechanically refrigerated, having an under-counter Brunswick Instantaneous Beer Cooler.
Upper Left: Note clever, compact, efficient arrangement of seats and table with the booth — allowing sufficient room for 2 guests.

ICTINUS FACED THIS PROBLEM, TOO

● Who built the Parthenon? Ictinus drew the plans. Pheidias' sculpture adorned it. But back of these artists were the expert craftsmen of Athens—men who could interpret and execute what these masters conceived.

● With architects it has always been the same. No matter what they design—whether it be a building of classic design or a modern taproom—their creative ability will be judged by the craftsmen chosen to interpret it.

● Before you decide upon any tavern service fixtures, call in Brunswick. The expert craftsmen of this highly trained specialty organization will not only faithfully reproduce your blue prints but they will catch and interpret the spirit of your designs as well.

● Brunswick's unlimited facilities give boundless outlet to your creative artistry. For smaller installations Brunswick's superb line of stock service fixtures offers wide variety plus efficiency with either mechanical or ice refrigeration under counter or remote storage facilities.

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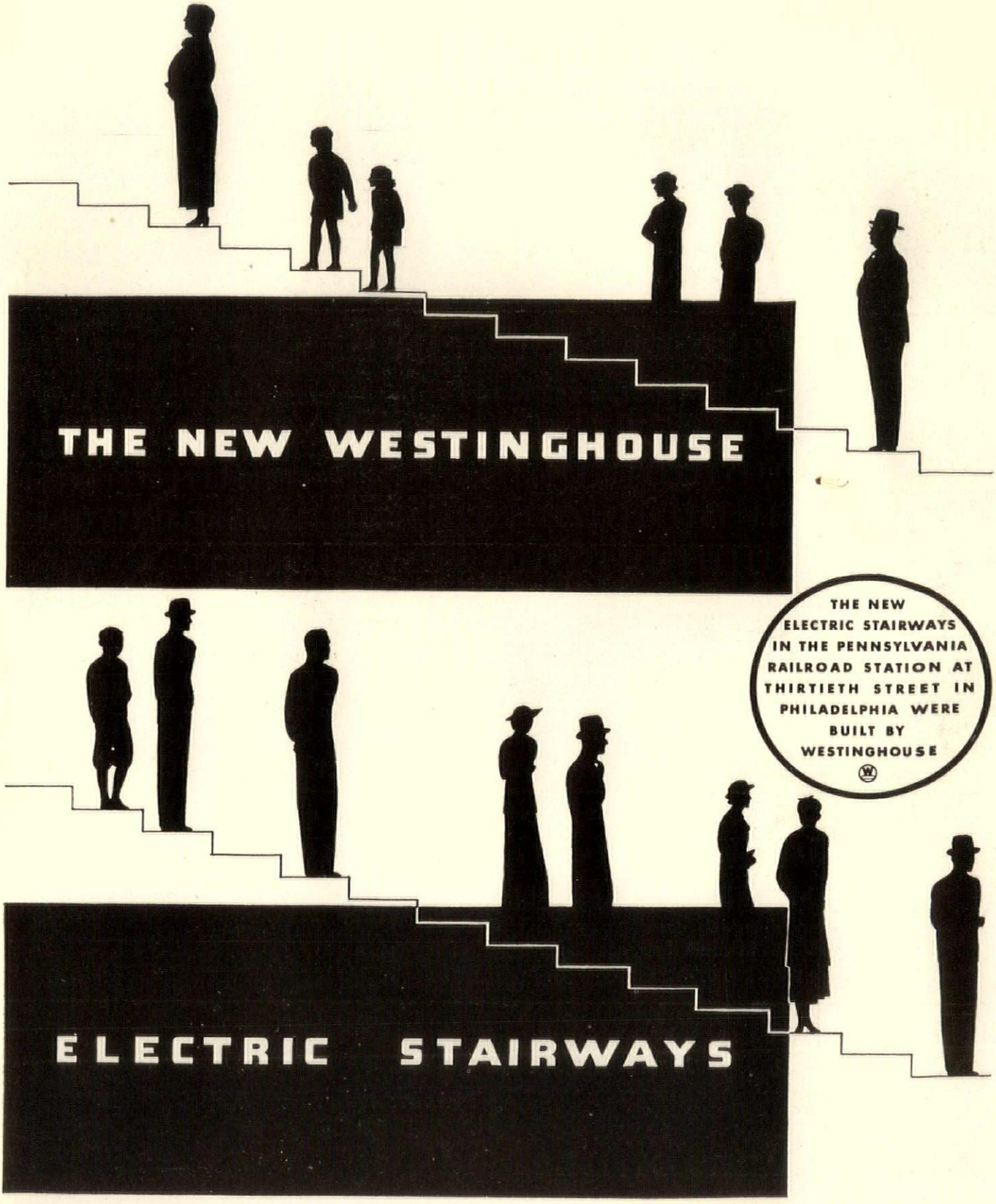
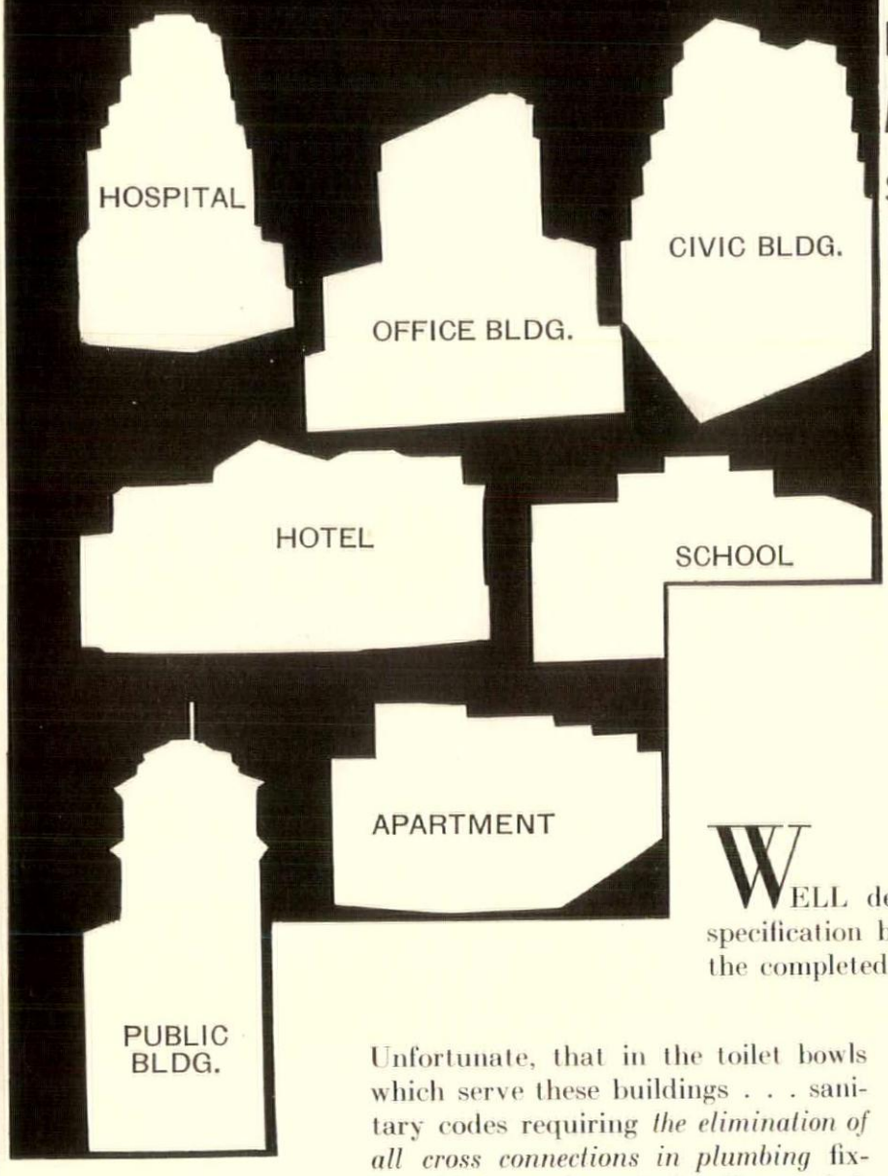


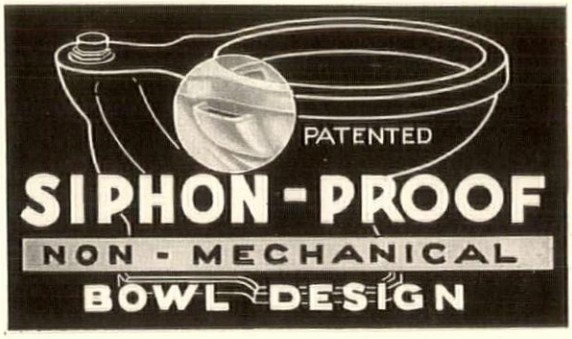
WESTINGHOUSE Ⓦ INTRODUCES A REFINED CONCEPTION OF MOBILE STAIRWAYS COMBINING BEAUTY WITH SILENT AND ECONOMICAL OPERATION. THIS MODERN VERSION OF MOVING STAIRWAYS ESTABLISHES ANOTHER STEP FORWARD IN THE PROGRESS OF ELECTRICAL DEVELOPMENT BY WESTINGHOUSE.

ARCHITECTURE, published by CHARLES SCRIBNER'S SONS, 597 Fifth Avenue, New York, N. Y. September, 1934. Volume LXX, No. 3. Published monthly on the 28th of the month preceding date of issue. Entered as second-class matter, March 30, 1900, at the Post-Office at New York, N. Y., under the Act of March 2, 1879. Yearly subscription rate to members of the architectural and allied professions, $3; to all others, $6; add $1 for Canadian postage and $2 for foreign postage. Single copies, $.50

ANTIQUATED



BEFORE THEY WERE *Built*—yet One specification would have made them *Modern*



WELL designed buildings, architecturally excellent in every specification but one . . . and that one vital enough to render the completed job an archaic structure.

Unfortunate, that in the toilet bowls which serve these buildings . . . sanitary codes requiring *the elimination of all cross connections in plumbing* fixtures should be unknowingly disregarded. Unfortunate, indeed, that because they exist, *water pollution becomes an ever present menace.*

There is but one safe answer to this problem . . . one specification that places the toilet bowl in strict compliance with sanitary codes which forbid cross connections. That specification is "SIPHON PROOF."

"SIPHON PROOF" means freedom from the danger of back siphonage, freedom from the questionable efficiency of mechanical devices, freedom from the doubtful assurance of human maintenance. "SIPHON PROOF" is an integral part of the bowl itself, a non-mechanical, natural, safe, sane method of eliminating cross connections, and the consequent dangers of water pollution.

Back siphonage and its dangers are well worth the study of architects who desire to keep abreast of modern plumbing practise. "Civilization's Greatest Menace" shows the way to safety and sanitation in your plumbing specifications.

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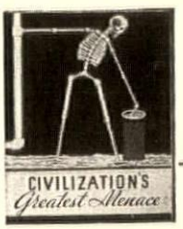

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THE BULLETIN-BOARD

BUILDING CODE ACTIVITIES

WITH official notification from Administrator Hugh S. Johnson of his approval of the financial budget of the Divisional Code Authority for General Contractors and the basis of contribution thereto by members of the industry, the Code Authority has undertaken an intensive nationwide checkup of all general contracts in excess of $2000, entered into on or after March 19—the effective date of the code—for the purpose of securing 100 per cent registration of this work.

While millions of dollars worth of work already has been voluntarily registered, and the 1/10th of 1 per cent assessment paid, failure to comply with these code provisions has not been treated as an NRA code violation prior to approval of the basis of contribution and the budget. From now on, however, the Divisional Code Authority has announced that a close check will be kept on all construction work to see that it is registered within fifteen days after being undertaken. Cases of wilful failure to comply with these code provisions will be turned over to the enforcement agencies of NRA, the Authority states.

Although assessments are paid directly to the Divisional Code Authority at Washington, the approved budget of this central body includes the financing of the subdivisional code authorities of the industry and approximately 250 State and local administrative agencies under the jurisdiction of the Divisional Code Authority. This includes at least one administrative agency in each of the 48 States and in each of the 196 cities in the country having a population of more than 50,000.

NATIONAL PUBLIC HOUSING CONFERENCE

A CONFERENCE on public housing education and legislation was held at Christodora House Settlement in New York City on June 28, under the auspices of the National Public Housing Conference. Representatives of twenty-five national organizations met to consider methods of arousing a wider interest in the housing problem, and to propagate sentiment favorable to the creation of municipal housing authorities. Delegates from technical, religious, labor and social work groups were invited to aid the conference in formulating a program of community organization, looking toward the necessary acceleration of the movement for public housing in the United States.

It was the consensus of opinion of those attending the conference that it is highly essential for all important national organizations to formulate plans for carrying forward a sound and permanent federal-local housing program in the next year, and that through their local branches, pressure should be brought to bear upon political representatives to insure the passage of legislation to enable cities to create local housing bodies.

Miss Helen Alfred, secretary of the National Public Housing Conference, in opening the discussion, said: "We feel that this will be an extremely important year in the history of housing. Housing legislation must be adopted in some three dozen States. Legislatures will be convening in all but four States in 1935, so that this can be done effectively if given sufficient organized pressure. We have three definite objectives: (1) to get this State enabling legislation through, (2) to secure the creation of municipal housing authorities, and (3) to induce the President and Congress to advance adequate funds for a vigorous and continuing federal-local slum clearance and rehousing program."

1934 POWER SHOW

THE Eleventh National Exposition of Power and Mechanical Engineering will be held in Grand Central Palace, New York City, December 3 to 8.

PRIZES FOR REMODELLING

GOOD HOUSEKEEPING MAGAZINE is offering two prizes of $500 each for the best remodelled exterior and the best remodelled interior, together with a gold medal in each class. In addition, there is a second prize of a bronze medal for the best work in exterior remodelling, and also one for the best interior, from each of the forty-eight States—that is two bronze medals awarded in each State. The cost of exterior alteration is not to exceed $5000, nor $700 for a room or interior. Work must be begun and completed between January 1, 1933, and June 30, 1935. Full details may be had by addressing Good Housekeeping Bulletin Service, 57th Street and Eighth Avenue, New York City.

CHICAGO ARCHITECTURAL SKETCH CLUB COMPETITION

THE Walter M. Buchroeder Prize Competition was judged July 19. First prize was awarded to Thomas J. Mulig; second prize to Roy W. Anderson; and mentions were awarded to Roy L. Plhak and Walter G. Anderson.

The subject of the competition was the remodelling of an old Loop building into a restaurant and tavern. Virginia Black Serpentine stone was required to be used in the façade in a modern design with plate glass, stainless metals, etc., as the other materials.

The Chicago Architectural Club is planning prize competitions for the future, employing various building materials incorporated into designs which are best adapted to bring out the inherent qualities of these materials.

The jury was composed of Harry K. Bieg, Theodorus Hofmeester, Jr., Jack Hamilton and Robert C. Ostergren, chairman.

CONTEMPORARY AMERICAN INDUSTRIAL ART

FOLLOWING the general pattern of its important exhibition of 1929, the Metropolitan Museum of Art will present during November and December of this year, a comprehensive display of contemporary American industrial art. As was the case in the 1929 exhibition, only especially designed material will be shown this year. A co-operating committee has been enlisted to prepare a gallery for this special exhibition. Paul P. Cret, Arthur Loomis Harmon, and Ely Jacques Kahn will supervise the design of the three major units.

Mr. Harmon's unit, the central section of the gallery, will consist of six complete interiors, each designed by an architect who will in turn marshal such other individuals and firms as may be necessary to realize his own part of the exhibition. The architects who have agreed to assist in this unit are Archibald M. Brown, William E. Lescaze, John W. Root, Eliel Saarinen, Eugene Schoen, and Ralph T. Walker.

Similarly Messrs. Cret and Kahn will be assisted by groups of designers. In their units the installation will consist of parts of rooms and grouping of objects of industrial art, such as textiles, furniture, glass, pottery, etc. Mr. Cret's collabora-

(Continued on page 6)

Delano and Aldrich, Architects — *Hegeman-Harris Co., Inc.*, Builders

Anaconda Brass Pipe in the American Embassy in Paris

IN the new American Embassy building in Paris . . . designed by Delano and Aldrich to fit into the historical setting of the Place de la Concorde... Anaconda Copper and Brass were installed.

Anaconda 85* Red-Brass Pipe . . . more than 30,000 lbs. of it . . . was used for water distribution lines; and Anaconda Sheet Copper for waterproofing the cellars and basement.

Throughout the civilized world, architects have made extensive use of Anaconda Copper, Brass and Bronze for many useful and ornamental purposes. These products meet every quality requirement and assure long-term economy . . . freedom from all annoyance and expense caused by rust.

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THE BULLETIN - BOARD *Continued*

(*Continued from page 4*)

tors to date include Gustav Jensen, Gilbert Rohde, Lee Simonson, Raymond Loewy, Walter D. Teague, and V. F. von Loesberg. Mr. Kahn will be assisted by Donald Deskey, Walter W. Kantack, Irvin L. Scott, and Walter von Nessen.

QUARRY TILE COMPETITION

UNDER the auspices of the Quarry Tile Industry, a competition was recently held calling for the design of a post-office lobby. It was felt that some benefit would result not only to the Quarry Tile Industry, but to the competing designers in bringing out the possibilities of tile for the embellishment of interiors.

The jury consisted of Edward W. Donn, Jr., L. M. Leisenring, Arthur B. Heaton, Fred V. Murphy, and F. W. Southworth. Controlling considerations for the jury were: a demonstration of the best use of the material; that tile should preferably be used on flat surfaces without incorporating special shapes; that the designs should be sound compositions of good architectural character exhibiting orderliness and quietness characteristic of all first-class architectural designing.

The first prize was awarded to Vernon F. Duckett and Henry S. See, Washington, D. C.; second prize, S. Thomas Stathes, Washington, D. C.; third prize, Harry F. Cunningham, Washington, D. C.

Honorable Mentions were awarded to H. L. Virnelson, E. S. Malczewski and Dan W. Twiddy, Vernon F. Duckett and Henry S. See, all of Washington. Mentions were also given to L. C. Page, Jr. of Austin, Texas, and to Oran Jenkins, Stinson Beach, Calif.

The fact that the greater number of winners were from Washington, D. C., is noteworthy, and is perhaps partly explained by the fact that some of these contestants at least were more familiar than the average with elements of post-office design.

NATIONAL CONFERENCE ON CITY PLANNING

THE Directors have accepted the invitation of St. Louis to hold the Conference of 1934 in that city, probably during the week of October 22. Sixteen years have elapsed since the Conference met in St. Louis in 1918. Further details and confirmation of the date will be announced later.

DIRECTORY OF ARCHITECTS FOR EDUCATIONAL BUILDINGS

THE *American School and University* is a year book for school and college executives. It has had for the past six years a section listing architects who, since January, 1928, have served as architect for two or more school or college buildings costing not less than $50,000 each. This listing included more than a thousand architects in the last edition. Architects specializing in the educational field are asked to fill out and forward an information card, which may be obtained from *The American School and University*, 470 Fourth Avenue, New York City. No "professional cards" or other advertisements of architects are published and no charges are made for the listings.

REPLANNING OUR CITIES

WERNER HEGEMANN, international authority on town planning, will give a series of fifteen illustrated lectures on the replanning of old cities, beginning Thursday, October 4, at 5.20 P.M., and continuing each Thursday for fifteen weeks. The course is given by the New School for Social Research.

Abraham Goldfeld, executive director of the Fred L. Lavanburg Foundation, and vice-president of the Housing Section of the Welfare Council of New York, will conduct a field course on the social aspects of housing on Saturday afternoons at 2 P.M., beginning October 6.

LOW-COST HOUSING EXHIBIT

A LOW-COST housing exhibit will be held at the New York Museum of Modern Art during the period between October 15 and November 15. This exhibit will be devoted to American and European housing developments which meet the requirements of low rentals. There will also be shown in graphic form such evidence as has been made available in recent years which may be used in developing a foundation for a low-rental housing programme in the United States. The exhibit is held under the auspices of the New York City Housing Authority, the Welfare Council of New York, the Lavenberg Foundation, and other agencies, including the Museum of Modern Art.

In connection with this exhibit will be printed a catalogue, the main aim of which is to list the material presented in connection with certain brief analyses of the achievements of European countries and the aims of the low-cost housing movement in the United States.

For information, address Carol Aronovici, chairman, 302 East 35th Street, New York, or Mrs. Alice F. Rothblatt, Welfare Council, 122 East 22d Street, New York City.

STEEL IN THE CHICAGO STOCK YARDS FIRE

ON May 19, 1934, a fire broke out in the Stock Yards at Chicago, doing a total damage estimated at eight million dollars before it was finally put under control. Engineers representing the American Institute of Steel Construction visited the site immediately after the fire and carefully examined the damage done to the buildings. Their report has been rendered in great detail, copies of which may be had from the A. I. S. C., 200 Madison Avenue, New York City.

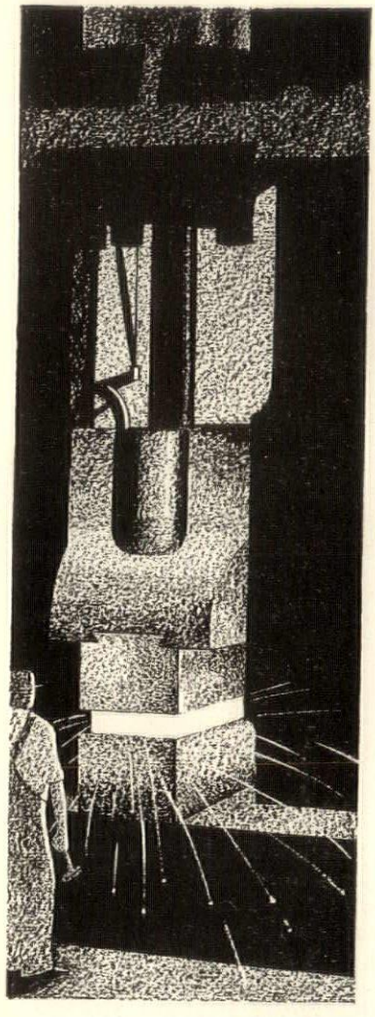
In general, according to this report, steel frames with combustible roofs and no fireproofing were seriously damaged or a total wreck. Reinforced concrete structures were severely damaged and can not be repaired to their former condition. Fireproof steel structures came through with no damage to the steel frame and, with the fireproofing repaired, will be as good as ever.

PERSONAL

Garry A. Boyle, architect, formerly with the late Fred J. James, president of the State Board of Architecture, Tampa, Fla., wishes samples and catalogues sent to him at his new address, 113 West Alfred Avenue, Tampa, Fla.

Architects' Exhibit, Inc., is desirous of establishing a complete catalogue file, and requests that manufacturers' catalogues be sent to them. The address is 333 North Pennsylvania Street, Indianapolis, Ind.

H. Mortimer Favrot and Alan C. Reed, architects, formerly members of the firm of Favrot & Livaudais, Ltd., now dissolved, will continue the practice of architecture under the firm name of Favrot & Reed, with offices at 402 Nola Building, New Orleans, La. Charles A. Favrot will remain with the firm as consulting associate.



OUR DUTY—AND YOURS

This month the schools will open and on opening day five schools will burn.* Five more will burn the next day; and five more the next; and so on until within the year eighteen hundred will have burned.

This month some two hundred boys and girls will enter school, never to complete the school year because of death by fire and panic.

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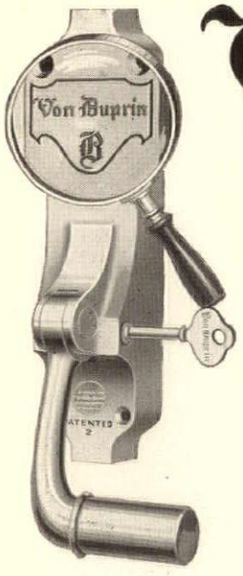

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See Sweet's
Pages C365-C367

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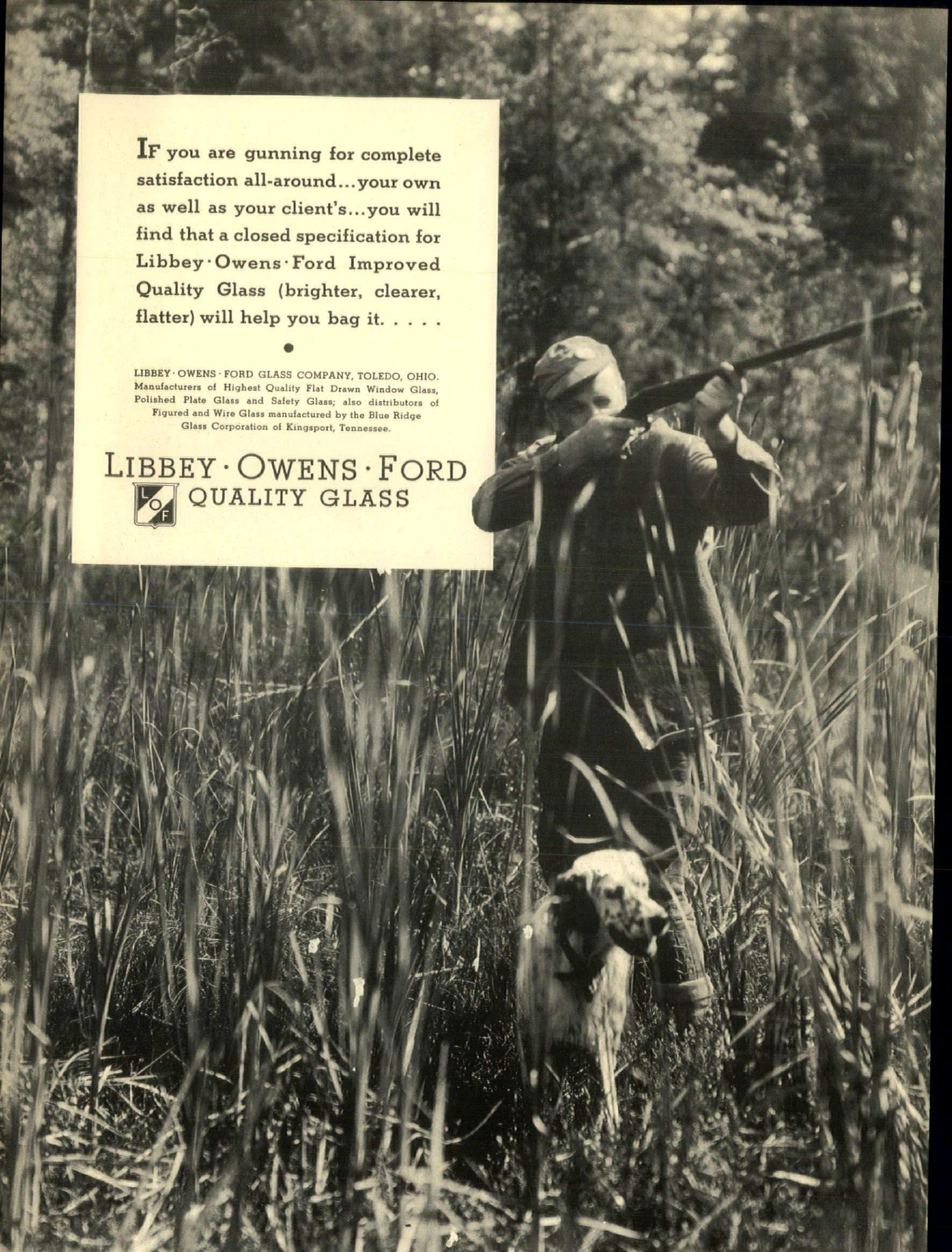

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ARCHITECTURE

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THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXX, NO 3 — SEPTEMBER, 1934

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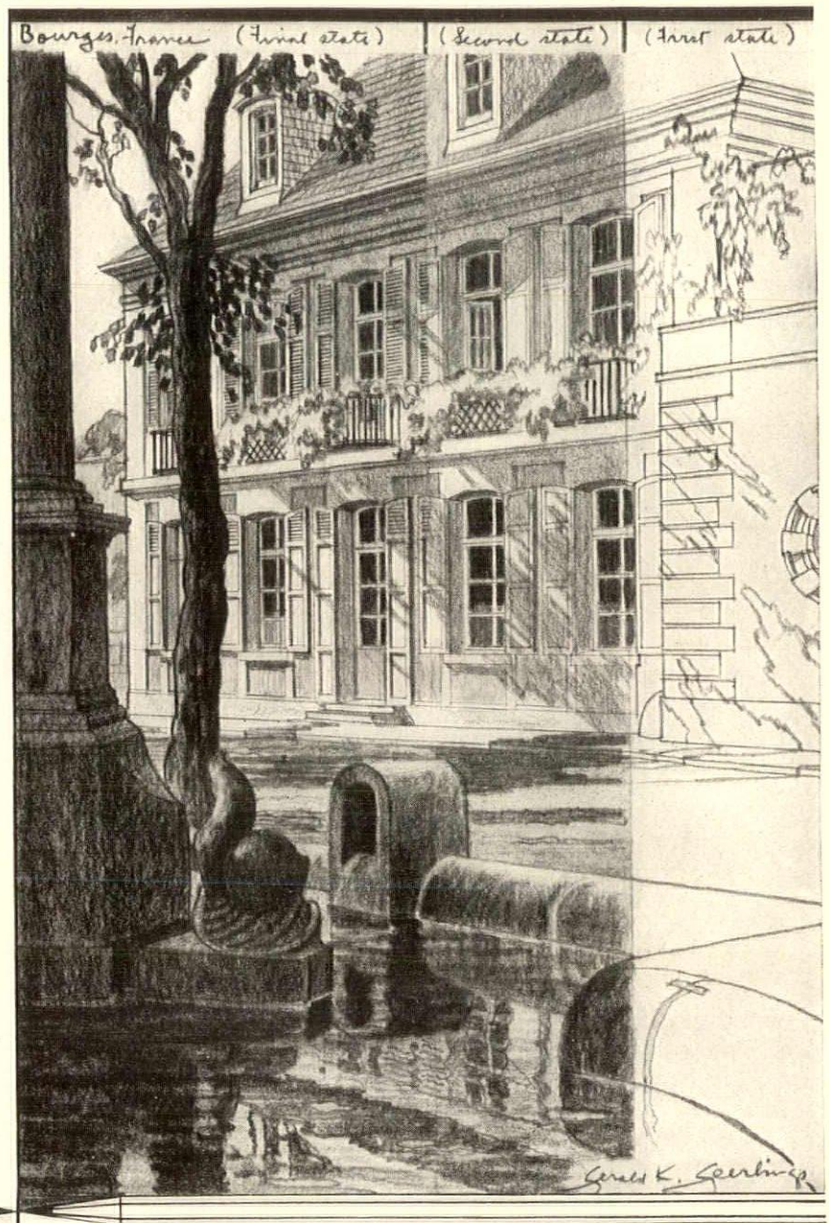
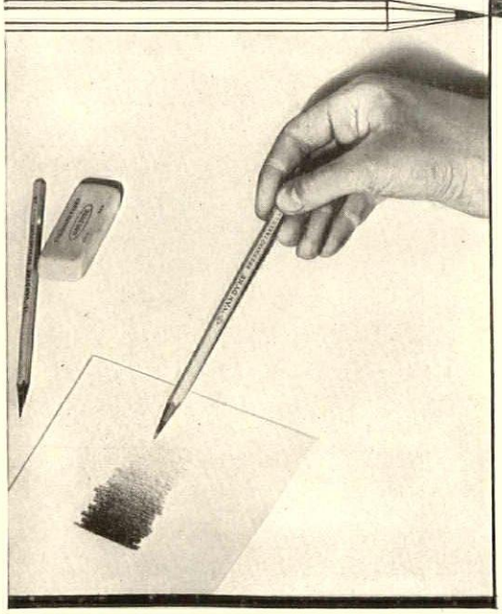
"To render in monochrome with pencil instead of wash is different in one important respect. For the latter a finished line drawing is completed before water color is added. But a pencil 'wash' drawing in its initial stage should have no more lines than are essential for defining the various tone areas—see 'first stage' to the right. The tones are laid in next, like the portion marked 'second stage.' The detail lines and final touches are added last because otherwise their crispness would be lost by the action of the lead as the tones are laid in."

FREE SAMPLES of any two degrees of the Microtomic Van Dyke Pencil are yours for the asking. Write to the Eberhard Faber Pencil Co., Dept. AR 9-34, 37 Greenpoint Ave., Brooklyn, N. Y.





LAY A WASH WHICH NEVER FAILS

"Long and constant practice is essential to success in running a graded water color wash. But laying a tone with a pencil is so easy that one trial is almost enough to become expert. You are sure to develop your own technique, but at the start try holding the pencil as shown. Build up dark tones with successive 'washes,' rather than try to get them directly, unless their area be small. In using a pencil like this nothing is worse than lead which is either gritty or easily broken. Try a Microtomic Van Dyke for a successful wash."—Gerald K. Geerlings

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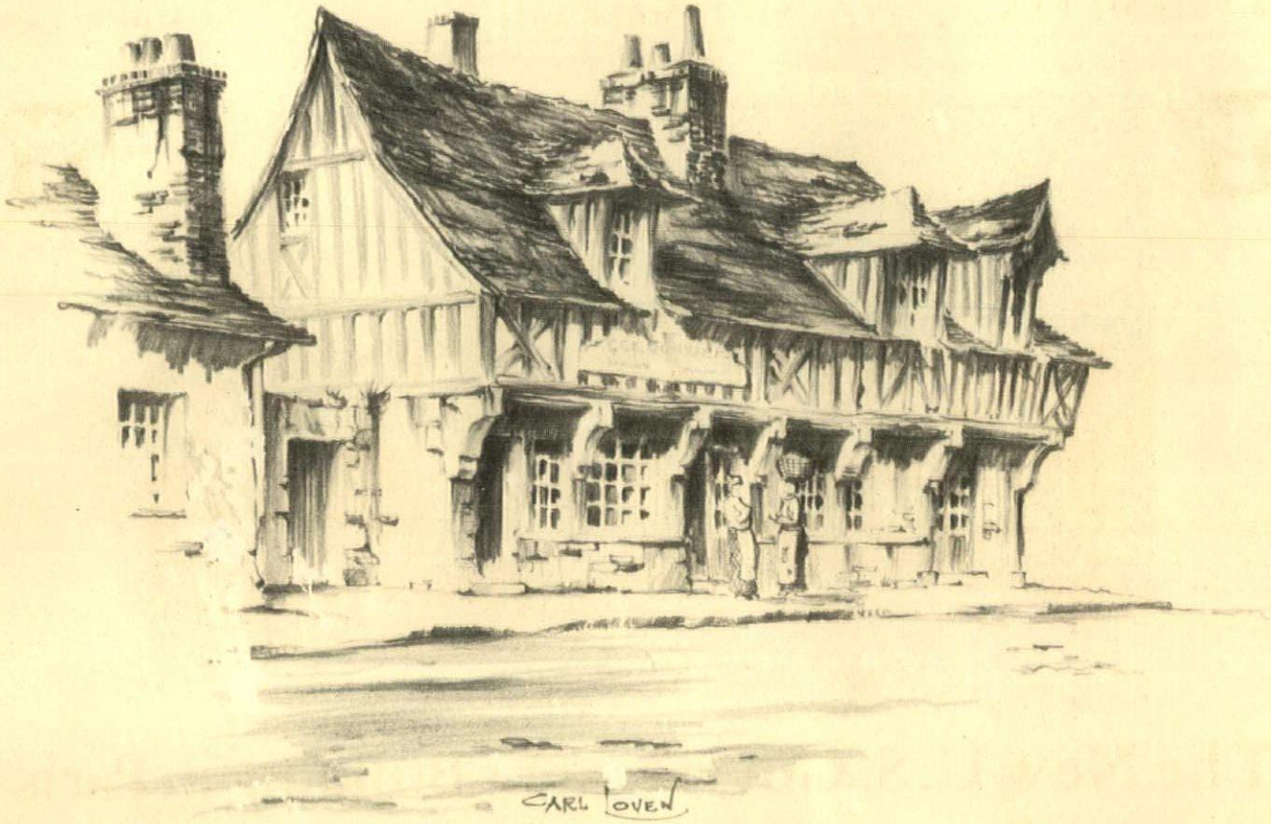


MONTREUIL-SUR-MER
FRANCE

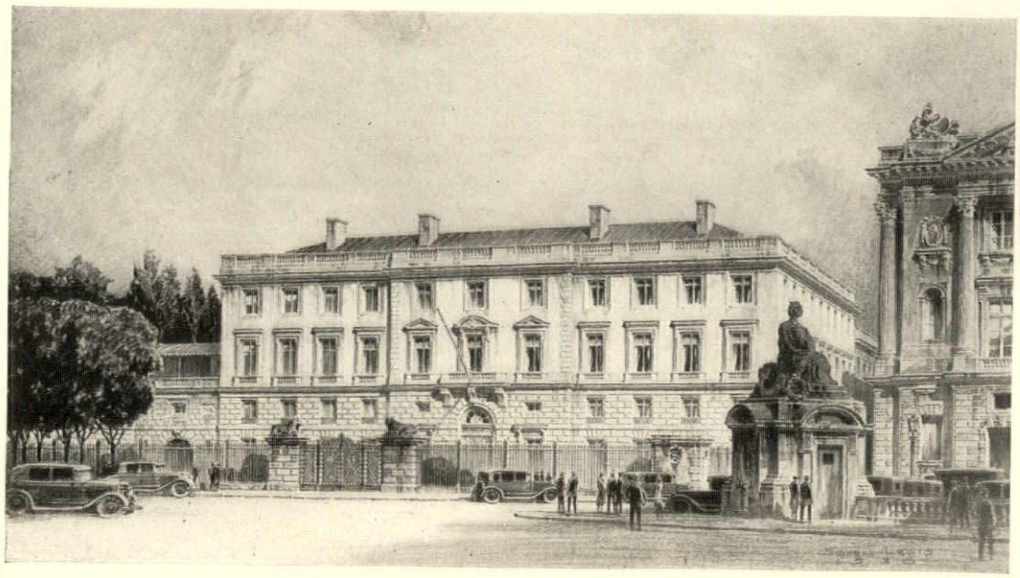
MONTREUIL-SUR-MER, FRANCE

Original, 7¼ x 8½ in.

From the pencil drawing by
Carl Loven

ARCHITECTURE

VOLUME LXX SEPTEMBER 1934 NUMBER 3



The architects' preliminary perspective

The New U. S. Government Building in Paris

DELANO & ALDRICH, ARCHITECTS

VICTOR LALOUX, CONSULTING ARCHITECT

IN 1925 Senator Edge of New Jersey, later ambassador to France, discussed with the late Ambassador Herrick the construction of a United States Government Building in Paris, to house all our government activities. In 1928 a commission composed of Ambassador Herrick, the Honorable Andrew W. Mellon, then Secretary of the Treasury, Mr. Stephen G. Porter, then chairman of the House Committee for Foreign Affairs, and Mr. Keith Merrill, of the Department of State, secretary of the commission, went to Paris and purchased the property at the corner of the Place de la Concorde and the rue Boissy d'Anglais. On this property stood the eighteenth-century house of Grimod de la Reynière, Fermier Général under Louis XV, which, after becoming successively the headquarters of the Duke of Wellington and the residence of the Turkish ambassador, was finally, and for many years, the home of the Cercle de l'Union Artistique, commonly called "L'Epatant." This club is now housed in a new building immediately adjacent to the American building on the west.

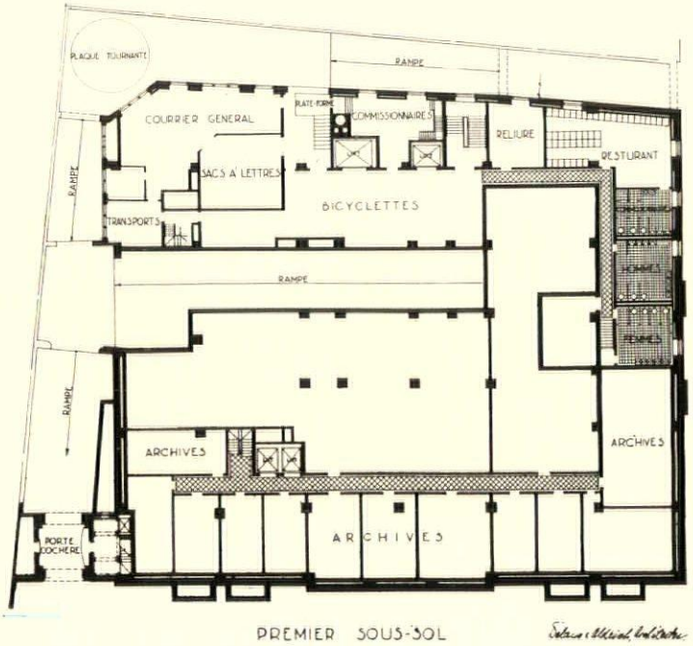
Delano & Aldrich were appointed the architects of the new building and they asked M. Victor Laloux, the distinguished French architect, under whom Mr. Delano had studied at the Beaux-Arts, to associate with them as consulting architect. They chose as their representative in Paris Mr. John W. Chandler, an American architect practising in France. The Department of State decided that the building should be built by an American contractor, and, after a country-wide competition, Hegeman-Harris Company, Inc., of New York, the lowest bidder, was chosen.

The architectural problem was to house the offices of the Embassy and the Consulate, together with other commissions then carrying on their business in separate rented quarters in Paris, in one building which should harmonize with its surroundings on the Place de la Concorde and carry out, as far as possible, the original plan of the architect of that place, the cele-

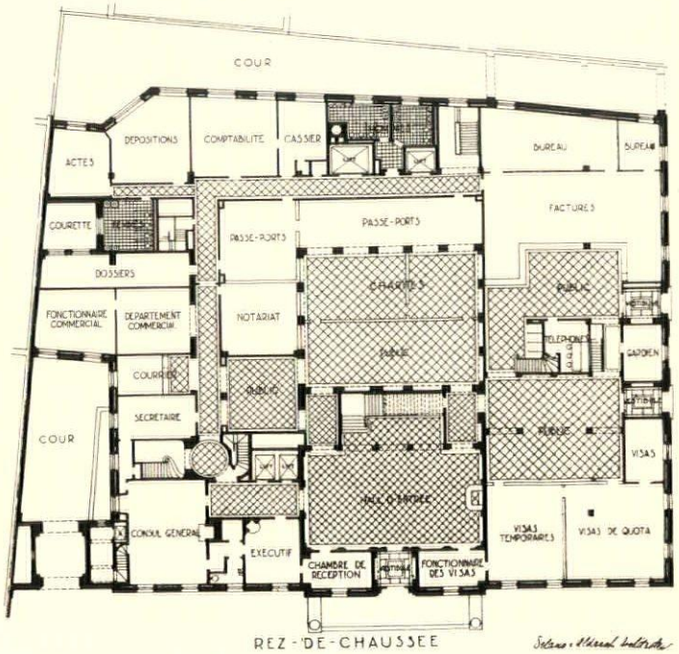
Main entrance. The eagles on the stone piers are by Paul Jennewein, sculptor

brated Jacques-Ange Gabriel. Although necessarily differing in its composition and fenestration, its general lines correspond with those of the Hotel Saint-Florentin, now the Hotel de Rothschild, and once the residence of Talleyrand, on the corresponding opposite corner of

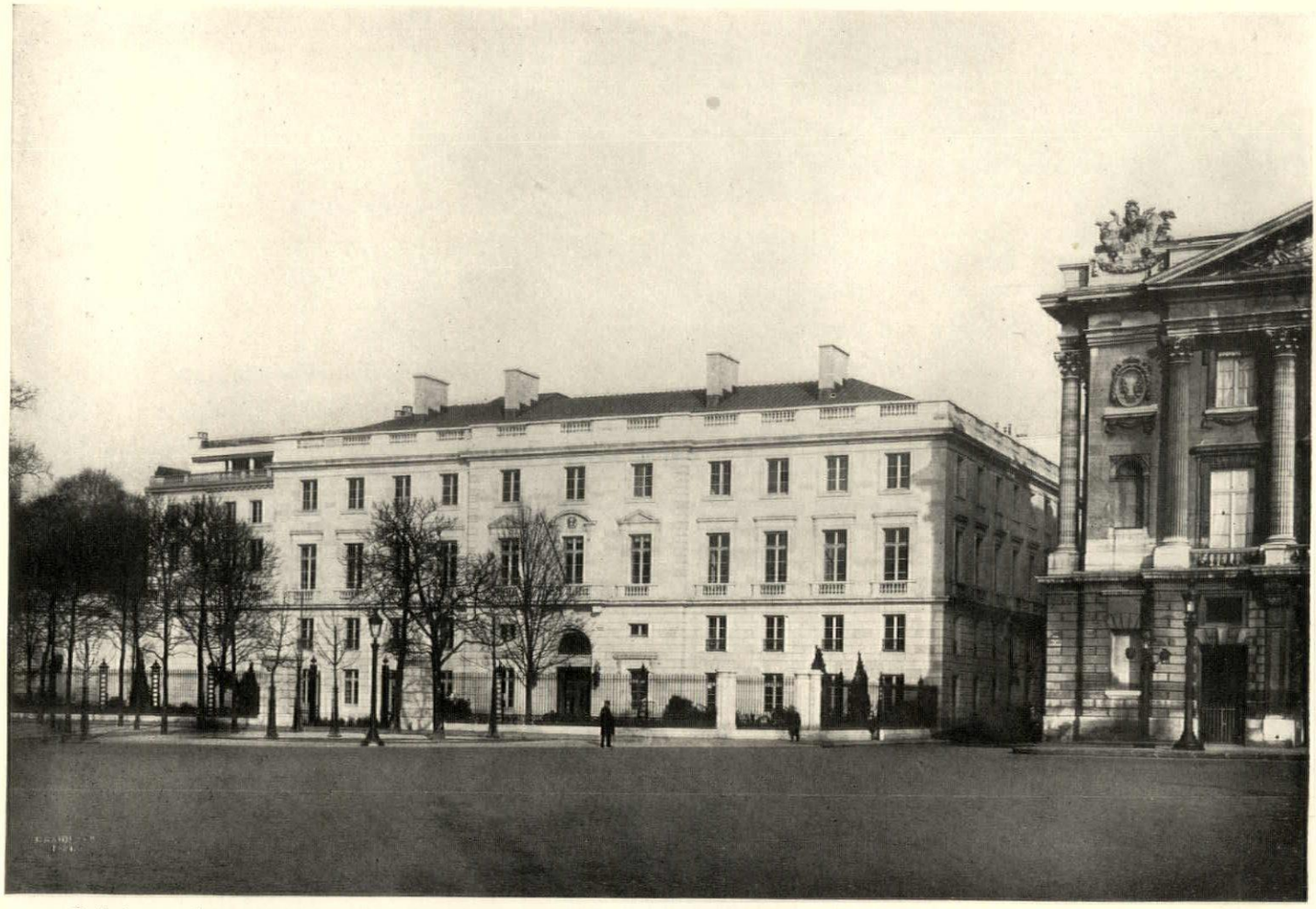
Below at left, the plan of the first basement. There is a second basement below this, used mainly as a garage and for electrical and heating equipment. Immediately below is the plan of the floor at ground level



PREMIER SOUS-SOL



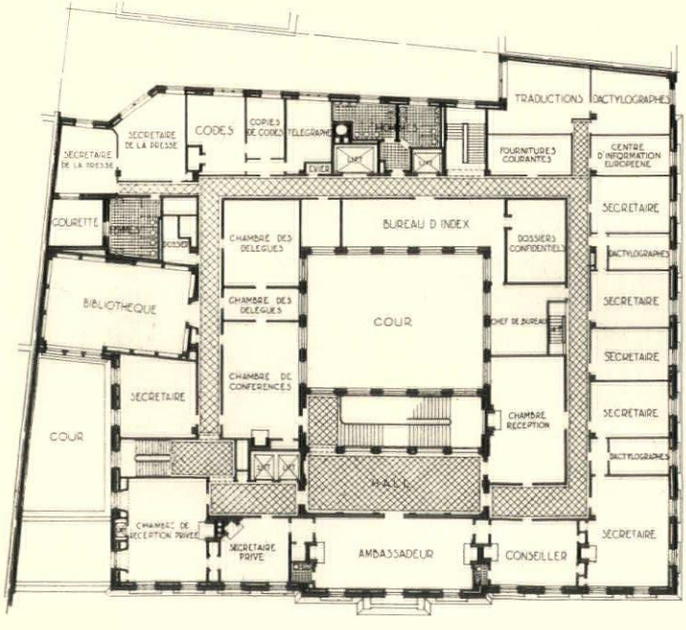
REZ-DE-CHAUSSEE



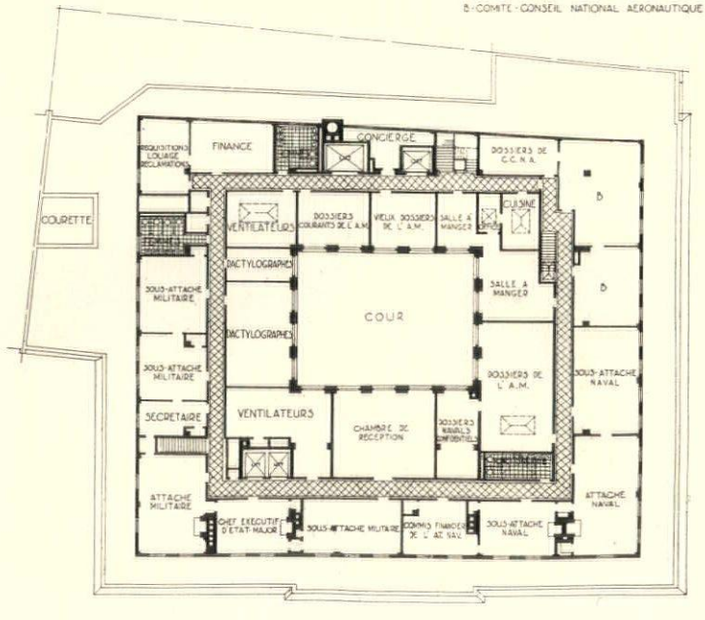
It is interesting to compare this photograph of the finished building with the preliminary study on page 121, to see how closely the original conception has been carried out

Below, plan of the first floor above the ground. Below at the right, plan of the third floor; between these two there is a mezzanine floor and the second floor, given over largely to offices of the Commercial Attaché and Treasury Department

the Place de la Concorde, at the end of the rue de Rivoli. This building, like the two flanking the rue Royale on the north side of the Place, was designed by Gabriel. His hope was to complete this ensemble by another, where the American building now stands, but he was destined to dis-



PREMIER ETAGE



TROISIEME ETAGE

Looking out through the entrance from the balcony of the main reception room

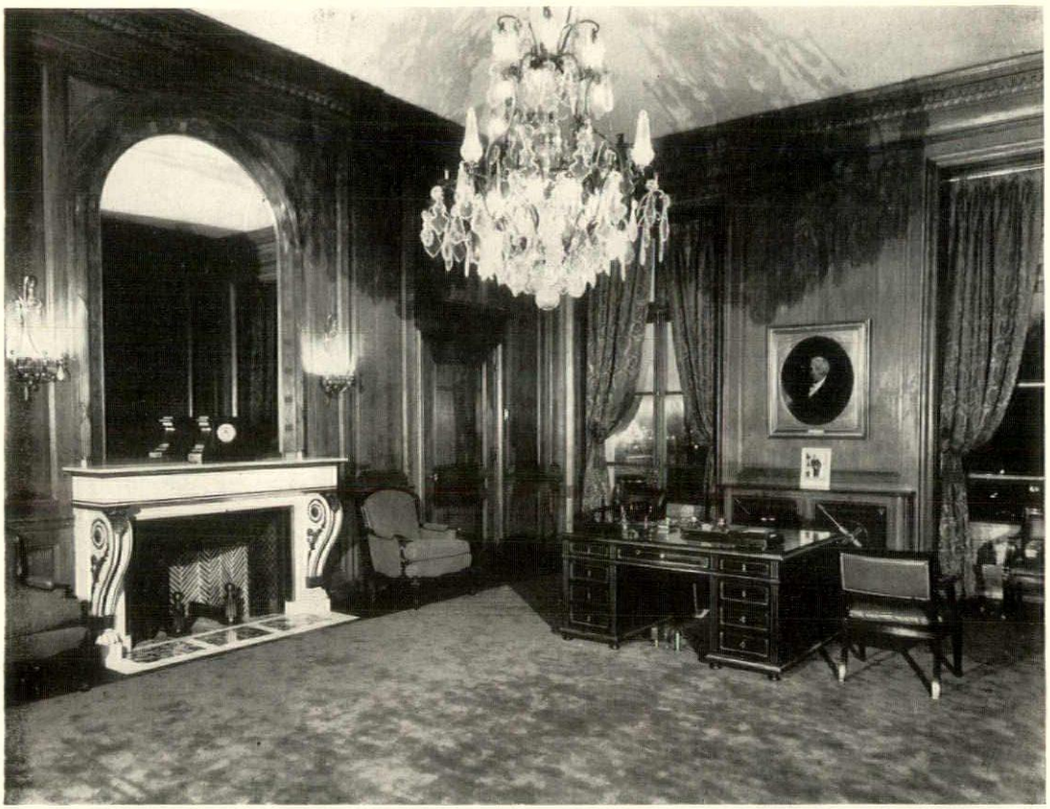
At the left is the new building of the Cercle de l'Union Artistique, adroitly brought into harmony with the embassy building

Looking down upon the Court of Honor from the roof of the Cercle de l'Union Artistique with the Gardes Meubles beyond

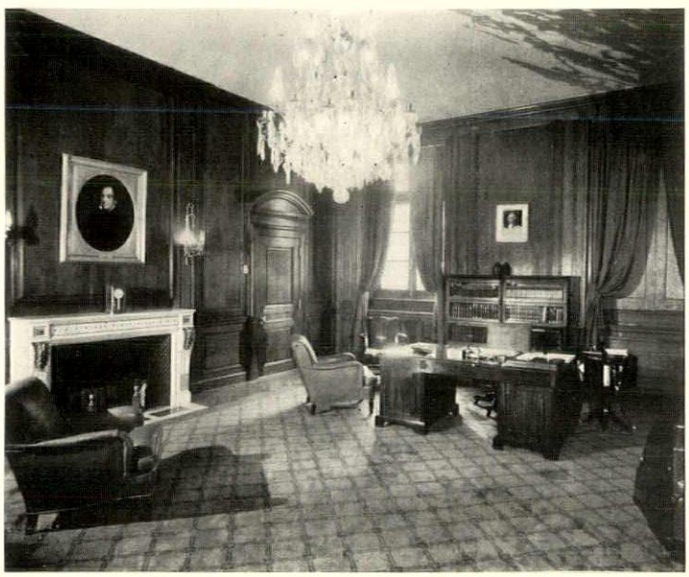
appointment, for the work was taken out of his hands and an inappropriate building erected by another architect. That Delano & Aldrich, in the new building, have succeeded so admirably in carrying out the spirit of Gabriel's conception is a great satisfaction to Parisians and those who love Paris.

The property purchased is approximately a rectangle, bounded on the south by the Place de la Concorde and the Avenue Gabriel, on the west by the new building of the Cercle de l'Union Artistique, on the north by an apartment house, and on the east by the rue Boissy d'Anglais. The building proper is set back from the property line and is approached through a Court of Honor enclosed by iron grilles, its main entrance flanked by piers surmounted by eagles—the latter the work of the American sculptor, Paul Jennewein. Delano & Aldrich asked M. Jacques Gréber, landscape architect of Paris, to collaborate with them in planting this court with appropriate trees and shrubs. The southerly portion of the club next door, which is but one story high where it faces the court of the American building, was left in the rough and this the architects of the American Government Building have clothed with a finished wall and a fountain on the prolongation of the axis of the arcades under the two monumental buildings known as the Gardes Meubles. From the Court of Honor a motor passageway encircles the rear of the building, coming out on the rue Boissy d'Anglais.

In general, the building is a hollow square, surrounding an open court. It consists of two basements below grade and five stories above. The lower basement is a garage, used for the parking of fifty employees' cars, and is reached from the passageway which surrounds the building, by a ramp. It also contains the heating



The Ambassador's private office is on the southwest corner of the building. This is shown on the plan of the Premier Etage as the "Chambre de Reception Privée." The room marked "Ambassadeur," originally intended as the Ambassador's private office, is used as the main reception room



Consul General's room, at the southwest corner of the ground floor

plant and "breakdown" electrical machinery, pumps, etc. The upper basement is devoted to archives, divided in proportion to the various activities which occupy the building. This upper basement also contains the Post-Office Department. Owing to floods which occasionally occur on the Seine, sometimes rising almost to the level of the Place de la Concorde, great care had to be taken in waterproofing these basements.

The main entrance from the Court of Honor leads into a spacious vestibule, which is the distributing point for all departments. From this vestibule an imposing staircase leads to the Chancellery, and two elevators and a secondary staircase give access to all other parts of the building. Except for this vestibule, the ground floor is entirely devoted to the Consulate. The space which above this story is an open court, on this floor is covered with glass and serves as the general office for all American citizens who have business with the Consulate. Around this covered court are offices connected with the Consulate. From the rue Boissy d'Anglas two minor entrances lead into rooms devoted to immigration and consular invoices.

In the mezzanine, between the ground floor and the principal story, are housed bookkeepers, stenographers, store and file rooms, etc., which are common to both the Consulate and the Chancellery.

The principal floor is occupied by the Chancellery. The ambassador's private office is in the centre of the building, with three large windows overlooking the Place de la Concorde, and is panelled in French oak. Flanking it are the offices of the Counsellor of Legation, the First Secretary, private secretary, and a private reception room for the ambassador. In addition

The Wallace Library, shown on the plan of the first floor as the "Chambre de Conferences." The books, dealing with Franco-American relations, were given to the embassy by the late Honorable Hugh C. Wallace

The main stairway as seen from the principal floor. It will be noticed that the arrangement of the stairs has been changed from that shown on the plan, to omit the landing

to these rooms, there are a public reception room, panelled and painted, a large room containing the working library of the building, to which all departments have access, and another large room which on occasions can be used for conference. This room houses the library given to the Embassy by a late ambassador, the Honorable Hugh C. Wallace. The books in this library deal with Franco-American relations and the collection is considered one of the best on that subject in existence. The rest of the floor is devoted to various secretaries, to a code and telegraph room, press bureau, etc., and is treated in the manner of an ordinary American office building with movable wood and glass partitions.

The second floor was given over entirely to the Commercial Attaché, whose activities, at the time the building was designed, required a great amount of space.

The top floor, which is in the roof, contains offices for the Military, Naval, and Aviation Attachés, Graves Registration Commission, Battle Monuments Commission, etc.

In general, the rooms throughout the building are treated simply, but in the more important ones there are handsome marble mantels which came out of the old club building formerly on the site, together with eight chandeliers and some fine hardware. Other electric-light fixtures throughout the building were designed by the architects.

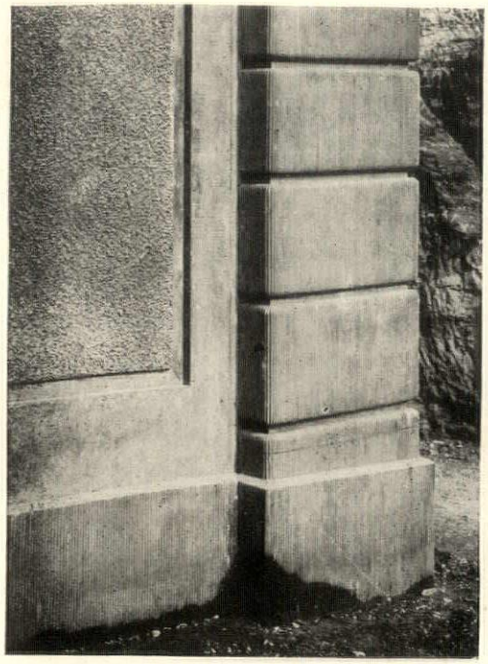
In France, the limestones are graded by number, from the softest, which is practically chalk, to the densest marble. It is customary in that country to use a fairly soft stone for the plain wall surfaces, a harder stone for any projecting members, such as lintels, cornices, etc., and a still harder stone for the base course of the building. Following this custom, the architects

The room in the middle of the south front, originally intended to be the Ambassador's room, but now used as the main reception room. It is panelled in French oak

chose for the plain wall surface a medium grade stone called Anstrude, which comes from the Department of the Yonne and which will ultimately match in color the other buildings on the Place. The cornice, balustrades, and projecting motives are all of Massangis stone from the same Department, and the base is of a hard Villebois stone. The frame of the main entrance door, the fountain, and certain other decorative features are of Hauteville marble.

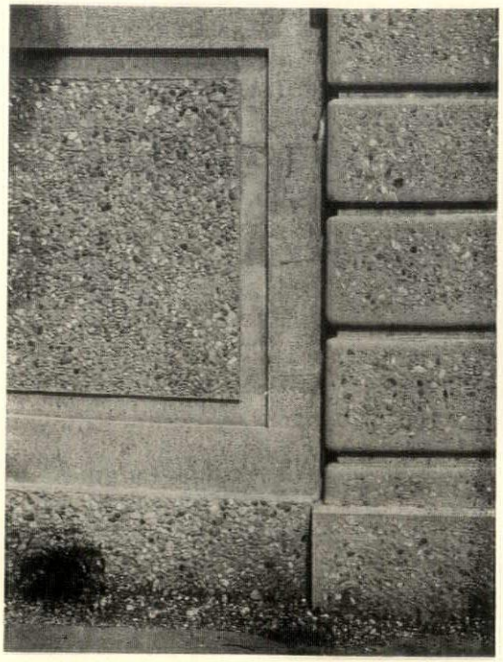
American flooring was used throughout the building except in the important rooms, where the floors were laid in pattern. The wood for the latter came out of beams taken from the Louvre during a recent alteration. The elevators and much of the mechanical equipment came from the United States, as did also the tile work, which was put in place by American workmen. Apart from these, all materials were of French origin and all the work done by French workmen. Due to the efforts of the general contractors, and under their guidance, the subcontractors, who in every case stood high in their particular trade, have done splendid work. The plans at metric scale and the specifications in French and English were unusually complete, which did much toward facilitating the task of the builders.

It may be of interest to mention that in July, 1931, a Portrait Committee, composed of the American ambassador as honorary chairman, and of certain other prominent Americans residing in Paris, was formed. The function of this committee, which is entirely unofficial in character, is to collect for hanging in the public hall, reception rooms, and libraries of the new building, a portrait in the original, where obtainable, and a copy where not, of every American envoy to France from Benjamin Franklin to, and including, the present ambassador's immediate predecessor, the Honorable Walter Evans Edge. This committee was assured of the co-operation and assistance of many of the descendants of former American envoys in the work of selecting and acquiring the portraits, and to date have acquired eighteen.



On the left, a structural concrete wall in which there is no provision for color other than that of the natural cement

On the right, a wall in which the structural concrete has been brushed to expose the aggregate. In some places there were pebbles, in other places, not so many

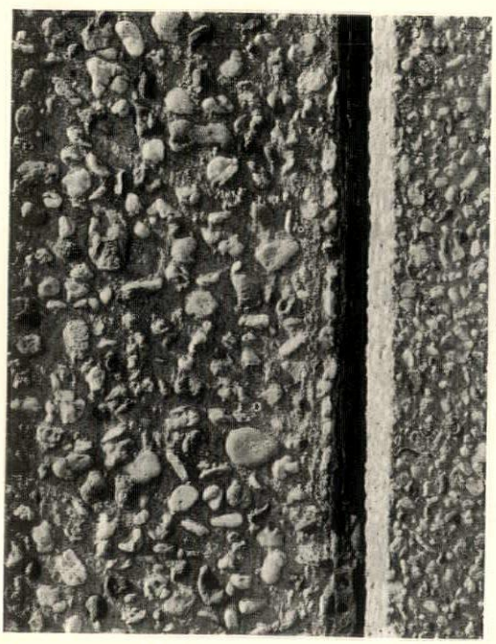


A New Craftsmanship in Concrete

By
John J. Earley

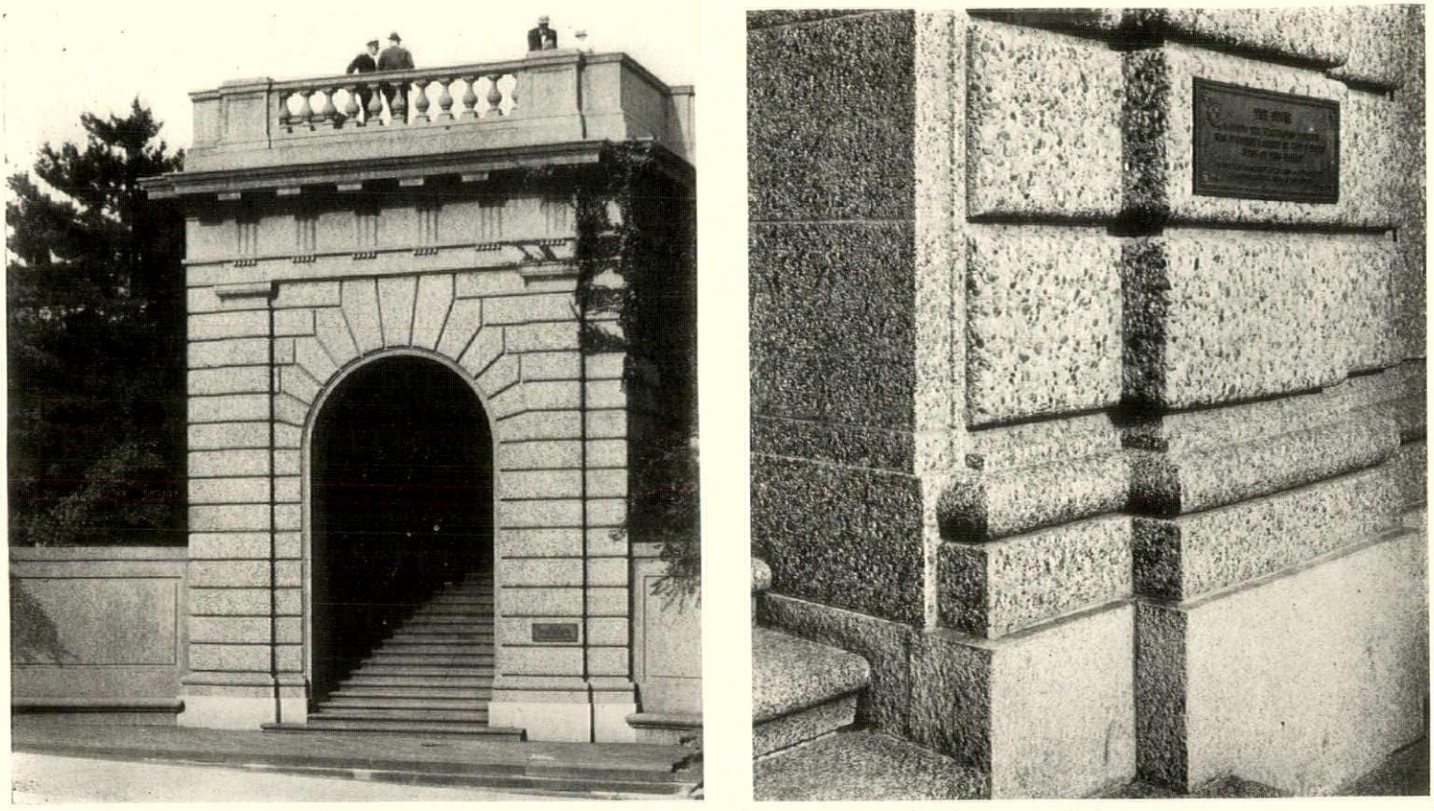
IT seems queer that one should devote himself for life to the development of an idea which came in the flash of a moment, but after all it may be a very sane thing to do. Such work is always a pleasure and often it is very useful. Stimulated by an idea, we in this studio have devoted not one but a group of lives to the development of concrete into an architectural medium. We have enjoyed some success and have received no small measure of recognition from those who are acquainted with our work. This approval has been a great help to us and nourished by it we have worked earnestly and diligently to perfect the technique by which concrete has been transformed into what might be called a modern mosaic.

Economy has been a ruthless overseer of construction and has scourged it to both degradation and to achievement. I like to think of the achievements which economy has forced on construction. I am fascinated by a steel-skeleton building multiplying the area of valuable land, and by the struggle of reinforced concrete to replace all other types of masonry. I like to recall the story of Luca della Robbia, because he had a studio and because his answer to economic scourging was achievement. He was commissioned to do an altar for the Cathedral at Florence but never completed it. The money necessary to reproduce in marble the work which he himself did in clay was not available. It was needed for war and for the maintenance of government. To escape this scourging he determined to fix his work permanently in the original medium, and he proceeded to



Structural concrete with brown and yellow pebbles held in cement

Architectural concrete with the same yellow pebbles occupying a predetermined position on the surface



The first structure built with architectural concrete made by the new technique—a technique in which the surface aggregate is predetermined and prearranged

develop in his studio the technique for making glazed terra-cotta—a technique which has never been materially changed. This opened to him a new and greater field, in which he found more if less wealthy patrons. He enjoyed great popularity and his work was widely distributed; indeed its distribution was wonderful, considering the transportation facilities of his time.

Immediately before the great war there began to be a change of design in building construction. Decoration had been overdone, and design generally was too complex and too expensive. Few projects were built without major revisions of the original design, for economy's sake, and unfortunately for us the first curtailment or omission was the ornamentation—our work. Of course we knew that this trend was not purely economic; it also heralded a change in style. We were clearly conscious of the increasing omissions of ornament in stone, wood, metal and plaster, and we felt the need of something new. As I write this I am conscious that our perception of the movement is much clearer now than it was then, and I cannot help wondering how many of our early experiments were fortuitous. However, I am convinced that we apprehended the change, although we probably did not see what pattern the change would make. The movement was interrupted by the war and has but recently resumed its course.

When the United States, through the Bureau of Public Buildings and Grounds, under the criticism of the Fine Arts Commission, began to build a formal garden on Meridian Hill at Washington, we had no interest in concrete; further, it was a displeasing material to us because its plasticity was poor and its color very bad. The first work on this project was a retaining wall on Sixteenth Street. It was designed to be a normal concrete wall without any provision for color other than the natural color of the cement, but with a beaded texture of conventional character, wholely unrelated to the material. A section of this wall was made and submitted to the inspection of the Fine Arts Commission. It was one of those things which meet the requirements of plans and specifications but are far from thrilling.

We had been employed to make some ornamental castings, and when it was suggested by a member of the Fine Arts Commission that an effort be made to treat the concrete so that its surface would in some measure recall the pebble mosaics seen in Italian Gardens, we were em-

ployed by the general contractor to help. This was not done, as I see it now, because we had great knowledge of concrete, but because we did have a good general knowledge of plastic media.

The method employed was to place concrete in wooden forms keeping as many pebbles as possible close to the surface. The forms were removed before the concrete was fully set and its surface was brushed with steel wire brushes to expose the pebbles. In some places there were pebbles, and in other places there were not so many, but the result was a great improvement in the appearance of the wall—and an idea for us.

This idea became the theme for all our future work with concrete, the foundation for the technique which changed concrete into an architectural medium. It is not easy to state such an idea in words, because it did not occur in words, but rather in a series of pictures in which particles of stone mixed with cement moved around among themselves, taking different places in different orders until the arrangement was satisfactory. But perhaps this is about it: if every piece of stone exposed on the surface of concrete could be considered as a spot of color in juxtaposition to other spots of color, and if a technique could be devised which would control these particles of color so that they would be made to occupy a predetermined position on the surface of the concrete, then the color of the concrete would be the color of the particles of stone with which it was made, and its texture would be determined by their size. Such concrete would be a mosaic, a form of artistic work made by uniting small pieces of stone or glass of various colors.

It would be immediately an architectural medium, participating in the traditions of an old and fully developed art, without need for a long period of experimentation to determine the properties of unknown materials.

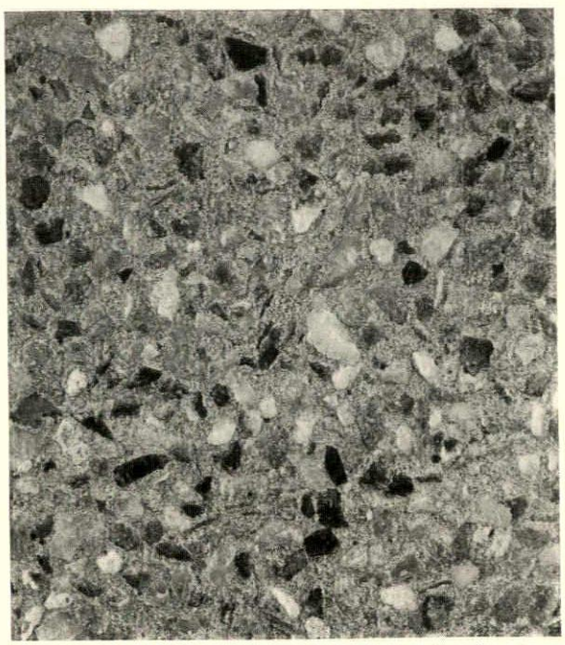
In time and with practice the technique was perfected. The surface of the concrete expressed the nature of the mass, the nature of the mass predetermined its appearance, and concrete became a modern mosaic. Moreover, there were available to this new art all the wonderful materials of its older sister: decorative marbles from the whole world, granites that were old in Egypt, stones so hard that

A later example of structural concrete in which the technique has been improved, particularly as to the utilization of more complex forms

they never yielded to a craftsman's chisel, jasperites, quartz both white and yellow; ceramics developed by the skill of generations, white and black, blue, red and green; and to complete the treasure store there were yet those glass enamels of almost infinite hue which came in the form of mosaics from the East into the West to be the glory of decorative architecture.

The technique which did this was simple but none the less dependent on supreme craftsmanship. Suitable materials were selected for color and structure, they were crushed and screened into particles of uniform size, they were recombined for the desired effect. They were mixed with Portland cement and placed in a mould without disturbing the character of the mix. When the cement had set, but before it had thoroughly hardened, the moulds were removed and the surface of the concrete was brushed with steel wire brushes until the particles of stone were evenly exposed over the whole surface. Subsequently the particles of stone were cleaned by washing them with muriatic acid.

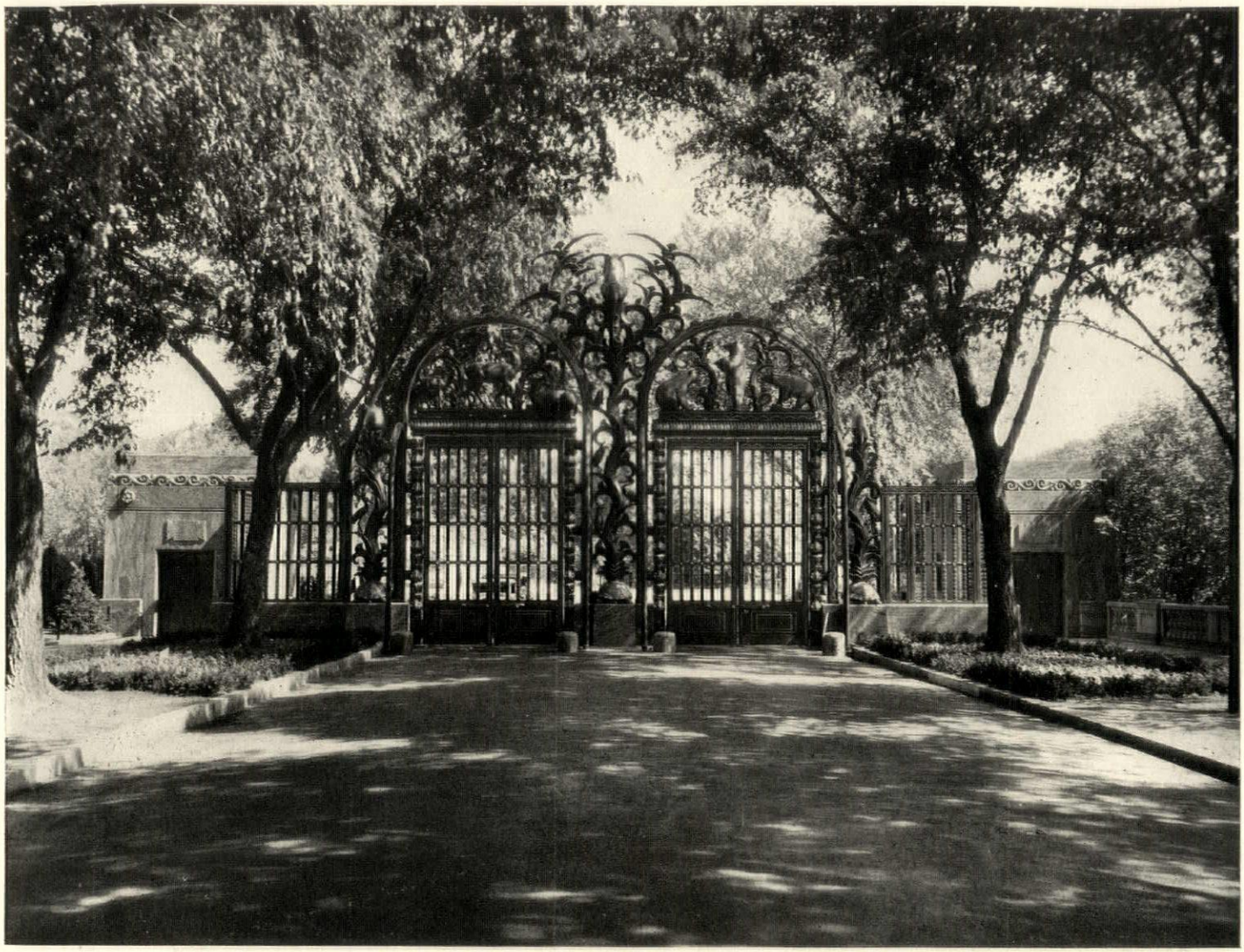
When one considers the work which has been done with architectural concrete, its economy and the service it has rendered to a few architects, it is hard to understand why it is not better known and why it has not been more extensively used. Perhaps the economic pressure which we now bear will soon be great enough to direct architectural attention to this wonderful medium. We of the studio have done our best. We have developed what we know to be the most complete medium in the history of architecture, and frankly we take to ourselves no small blame because it is not better known. We were held spellbound by the wonders found in the development of a new medium and in the execution of our work. No one knows how strong that spell can be unless he too has enjoyed the privilege of doing something new and useful. But the energy so spent must leave but a remainder for the presentation of the material. Perhaps it is good that we did not go much faster. The result might not have been as satisfying as it is. Step by step we have moved along, like patient craftsmen should, from Meridian Hill to the Sacred Heart Church, to the Department of Justice, to the Bahai Temple, all of which now stand as evidence that concrete is a modern architectural medium of great beauty, facility and economy.



Crushed yellow and white quartz and red stone

Now that such a material has been developed what will be done with it? I have no real knowledge, but I have a hope and a reasonable expectation. It may be that the scourge of economy will fall heavier than it has. It may completely upset the balance between the costs and the earnings of all buildings. This will mean the need of new materials, new methods, which in turn will mean new design and new appearance. Taste will change, following the movement which began before the war, was interrupted by it, and now has begun again. New buildings will be old because no one will want them. No young person thinks the Petit Trianon a fine place in which to live. These are signs of new thoughts, new desires, and new materials.

Architectural style has changed from time to time. The change always cast a long shadow before, and it has been the custom of the studio by study and travel to prepare for each change. And so we feel about our work with concrete. We see the signs of a great change in building. We wish to be prepared, and we have selected the material which we think is potentially best suited to the need. This plastic masonry gives promise of more than has yet been realized—no one knows this better than we, who work with it every day. It has the essential economy of a plastic material and the beauty of a mosaic. It will leave its mark on architecture before this generation has passed. It and steel, if present indications may be believed, will take possession of architecture, but, following the traditions of the studio, we are prepared to be its craftsmen.



These new gates at the main entrance to the Bronx Zoo were the gift of Mrs. Grace Rainey Rogers, sister of Mr. Rainey, an explorer and big-game hunter, who was a member of The New York Zoological Society and who added to its collection of animals.

The memorial consists of two massive gates of bronze flanked by two gate houses built of Cold Spring granite from Wisconsin. The gateway is about 36 feet high and 42 feet wide. Charles A. Platt collaborated with Paul Manship in the design of the gate houses. Incidentally, the roof of each is a single block of granite weighing twenty-six tons

Photographs by The New York Zoological Society

Paul J. Rainey Memorial Gates

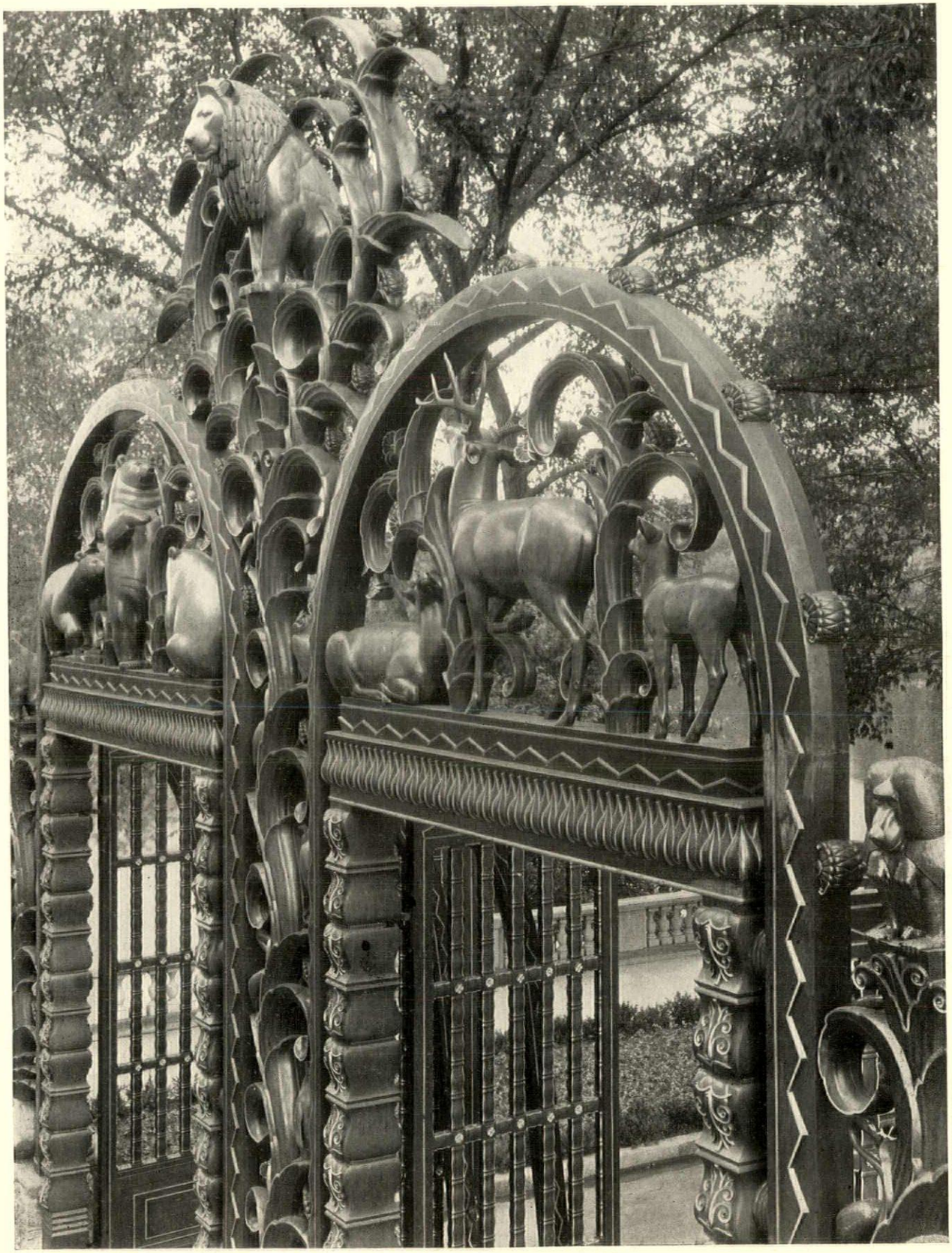
New York Zoological Park

New York City

PAUL MANSHIP, SCULPTOR

The gates and piers are of unusually large and heavy scale. The sculptor has taken advantage of the possibilities that lie in various finishes of the bronze

The gateway as it appears from inside the grounds, with the gates open. There are twenty-eight tons of bronze in the whole



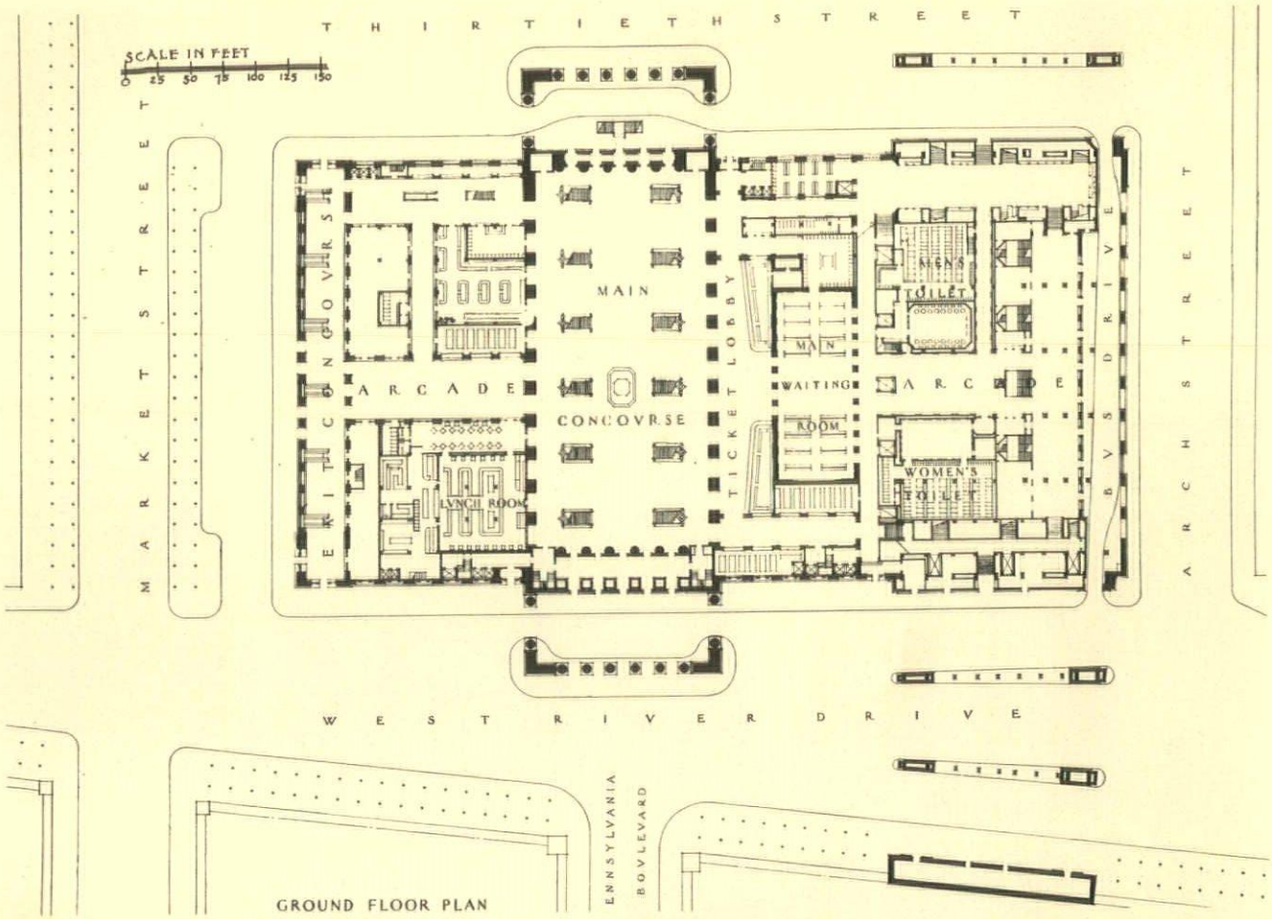
A detail at the top of the composition

Photographs by William M. Rittase

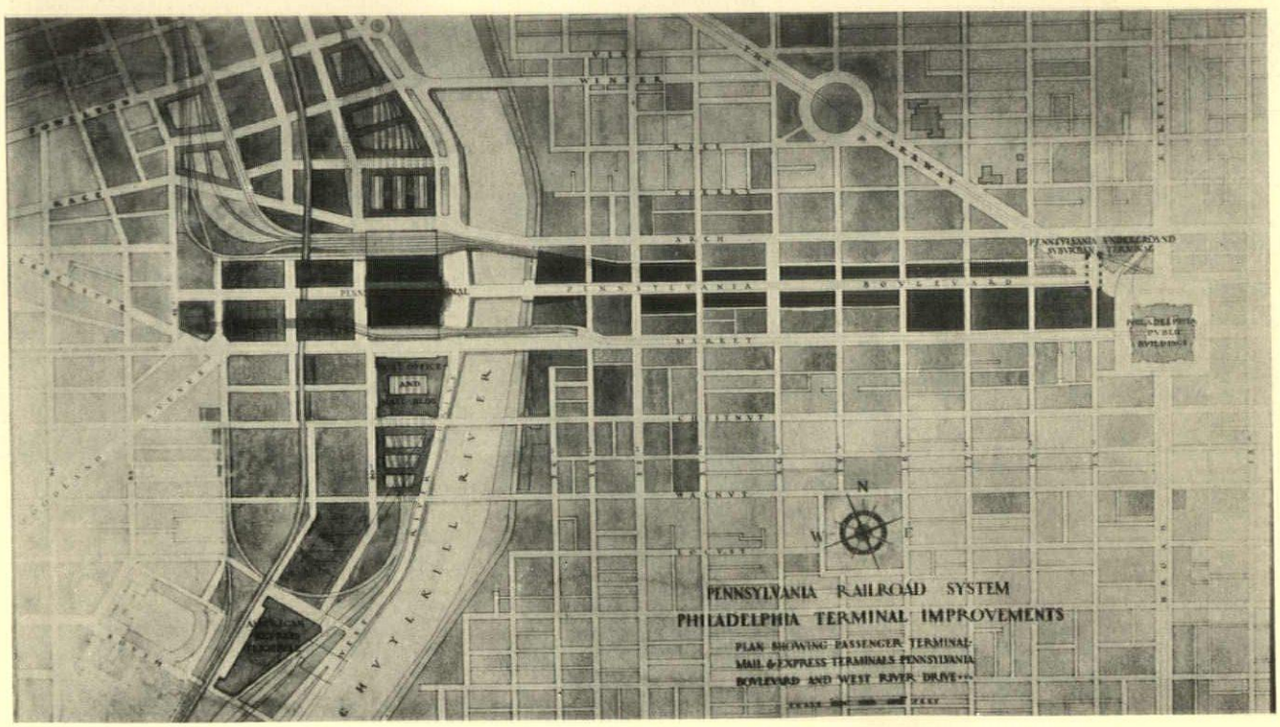
The West Portico, with a glimpse beyond of the viaduct carrying the upper-level tracks through the station

GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS

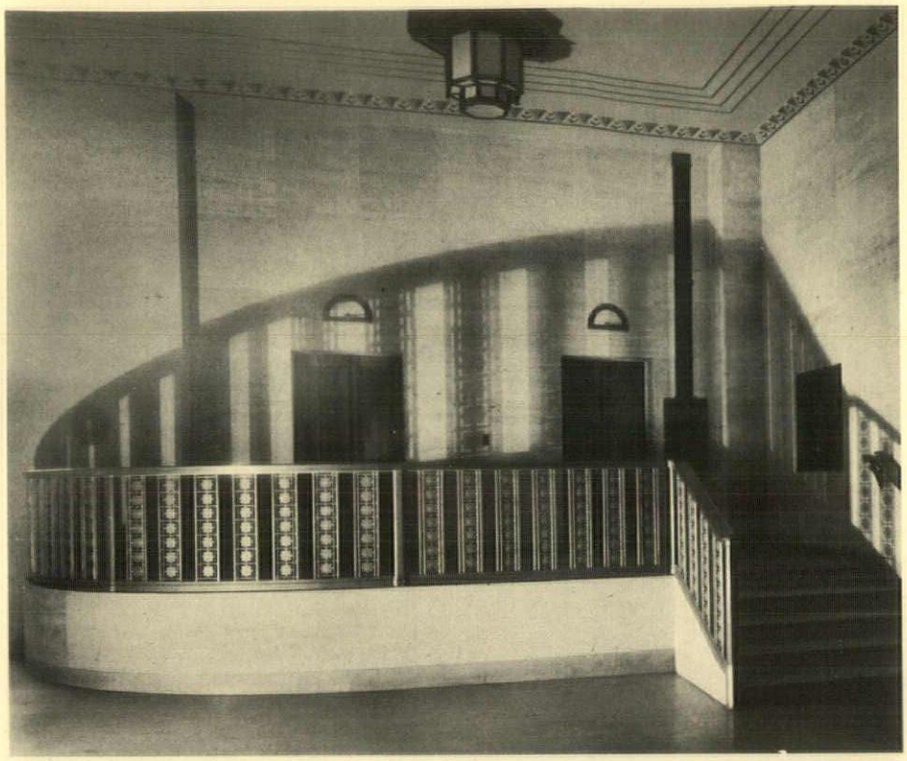
Pennsylvania Railroad Terminal, Philadelphia



Above, ground-floor plan of the terminal. Below, plan showing the relationship among the Terminal west of the Schuylkill River, the centre of Philadelphia, the Parkway, and the Pennsylvania Boulevard still to be built

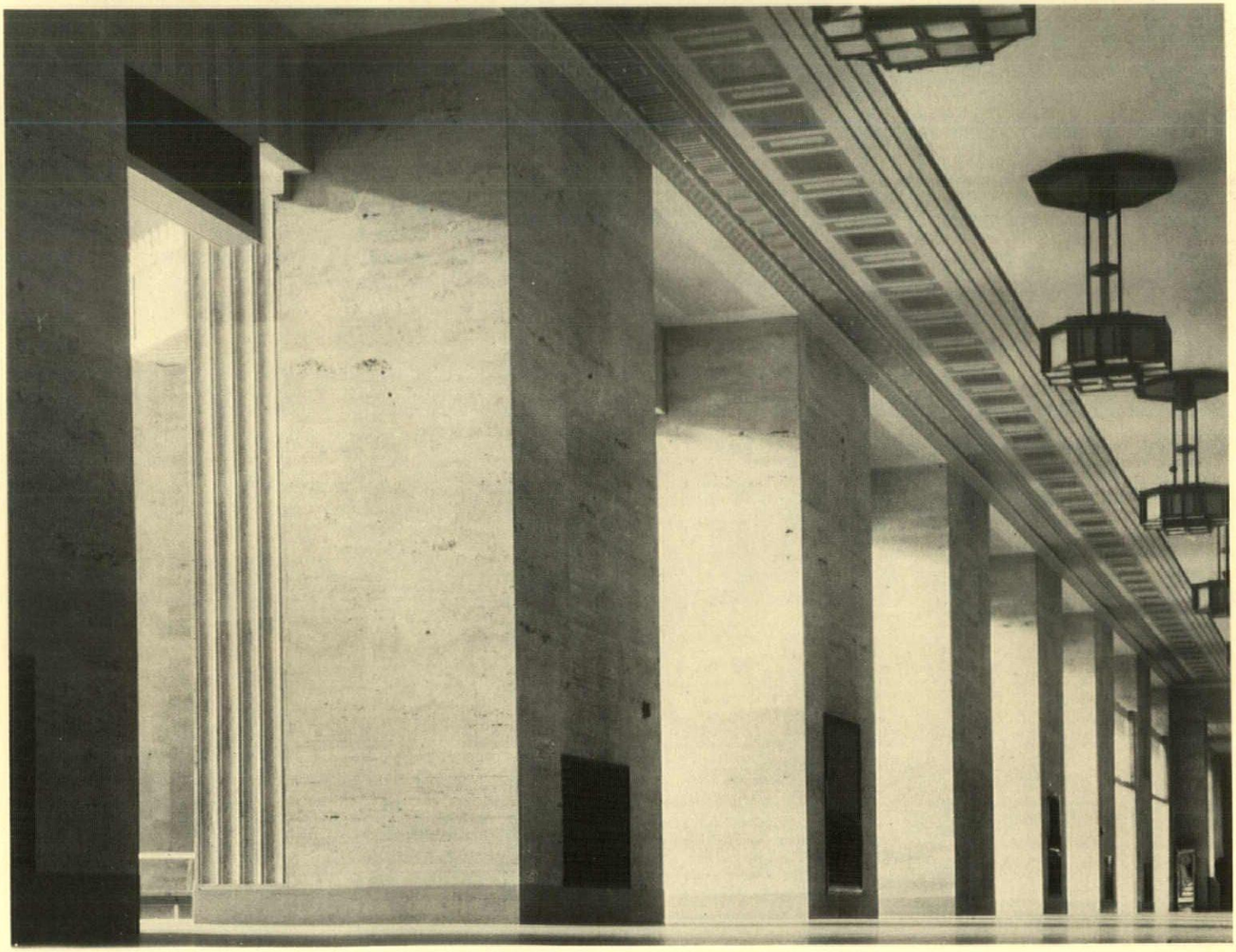


The Main Concourse, showing the combination escalators and stairs on the right, and the wide stairs on the left leading to the tracks below. The walls are Travertine up to the frieze; ceiling, Travertine color decorated in orange, vermillion, and gold



Typical utilitarian details of the bronze elevator doors, mail box, fire-hose cabinet, and railing

The Ticket Sales Lobby. Walls are of Travertine; floor and base, of gray Tennessee marble; all metal work, bronze. The ceiling is the color of Travertine with green and gold lines and panels



The Concourse windows on the long side, upon which opens the Ticket Lobby and beyond that the Main Waiting-Room

Main Waiting-Room. The sculptured panel at the end was moved from the old Broad Street Station, where it was placed in 1895. It is the work of Karl Bitter, and represents, prophetically, a child carrying the model of an airplane, leading the "Spirit of Transportation"

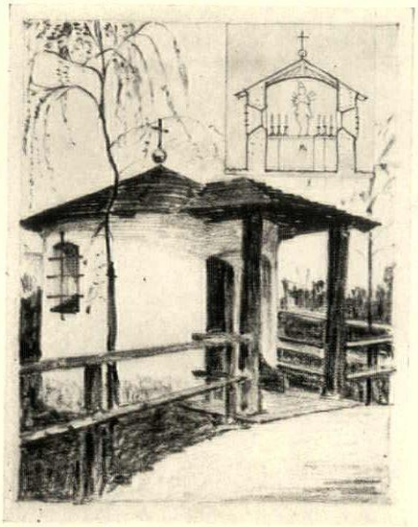
Rest Room, which serves as a private waiting-room for funeral parties. Piers are of Botticino marble; the painted panels, a continuous rhythm of tree trunks in front of a background of hills and water. The figure at the end is "Contemplation"

One of the minor exits. The doorway is cased in granite inside and out. Window frames are of cast iron; fixtures of bronze; walls, Travertine; floor and base, gray Tennessee marble

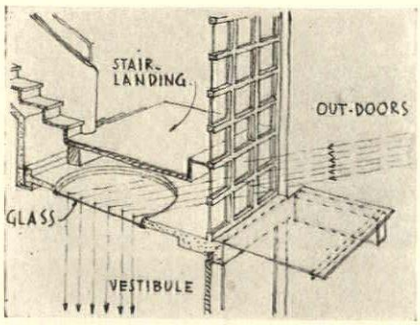
A detail in the Main Concourse. Each opening contains a triple indication of its function, so that the signs may be read from any position in the room

The Architectural Observer

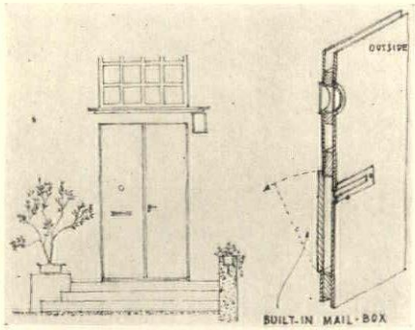
THE roadside shrine and chapel are almost unknown to us in America, by reason of which fact we lose both spiritually and esthetically. There is a delightful sense of scale—a real feeling for the basic needs of the human being—in this simple little roadside chapel at Murnau, Germany. Gustav Reutter is the architect.



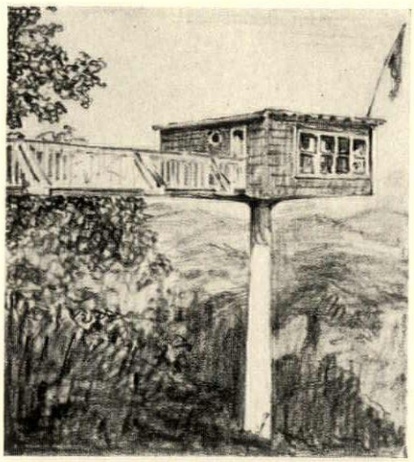
THERE are two ingenious details in apartment-house building in Budapest, as designed by L. Kozma, architect. One of these is the way in which he provides for light in the vestibule by bringing it in overhead through prism-glass windows under a stair landing. Electric lights in this space light the vestibule at night.

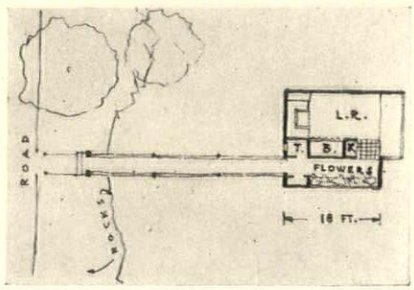


The other detail is the door with a built-in mail box. This in itself is not particularly novel, but centered above its slot is a peep hole. The construction of both of these accessories is shown in the section.

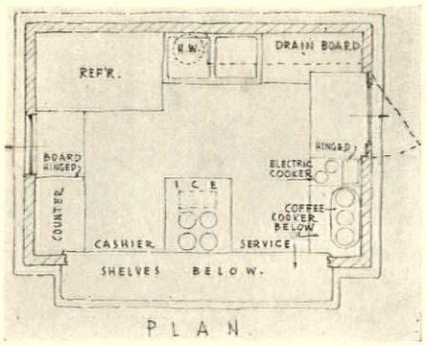


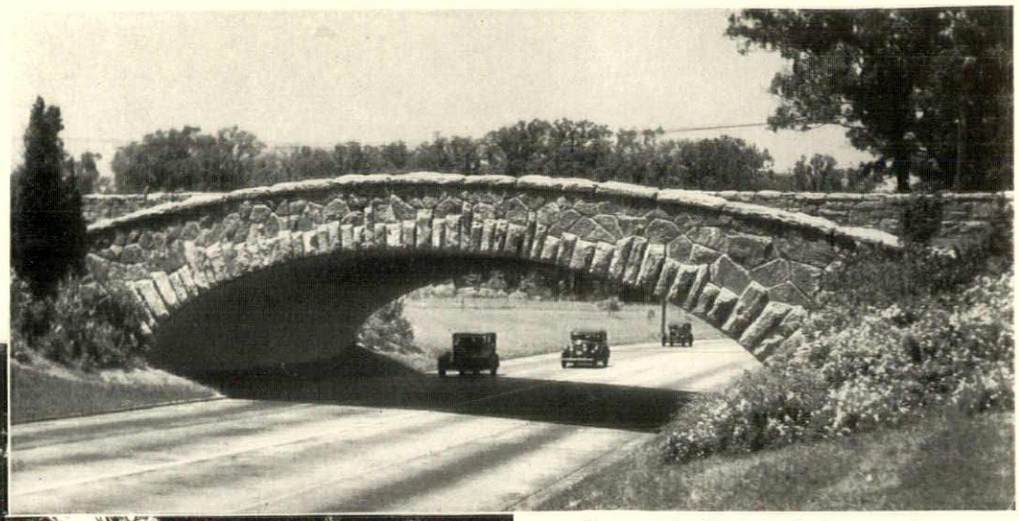
THERE are those who enjoy the feeling of being in high places, and there are those who do not. A tour de force for those who do is a week-end "bird house" recently built near Stuttgart. *Baumeister* illustrates it—the work of Eduard Krueger, architect. The house is supported upon a reinforced concrete column, some forty feet above a stone quarry. Just why a softer spot was not chosen is not made clear. Connection with a nearby highroad was intended to be established by a small suspension bridge, but the local building department insisted upon a straight span of wooden construction. The superstructure on the column is also entirely of wood, stained dark. Folding glass doors separate the living-room from the additional overhang of the balcony. "B" on the plan represents a pair of bunks, upper and lower. It seems to us that the architect should have provided a drawbridge.



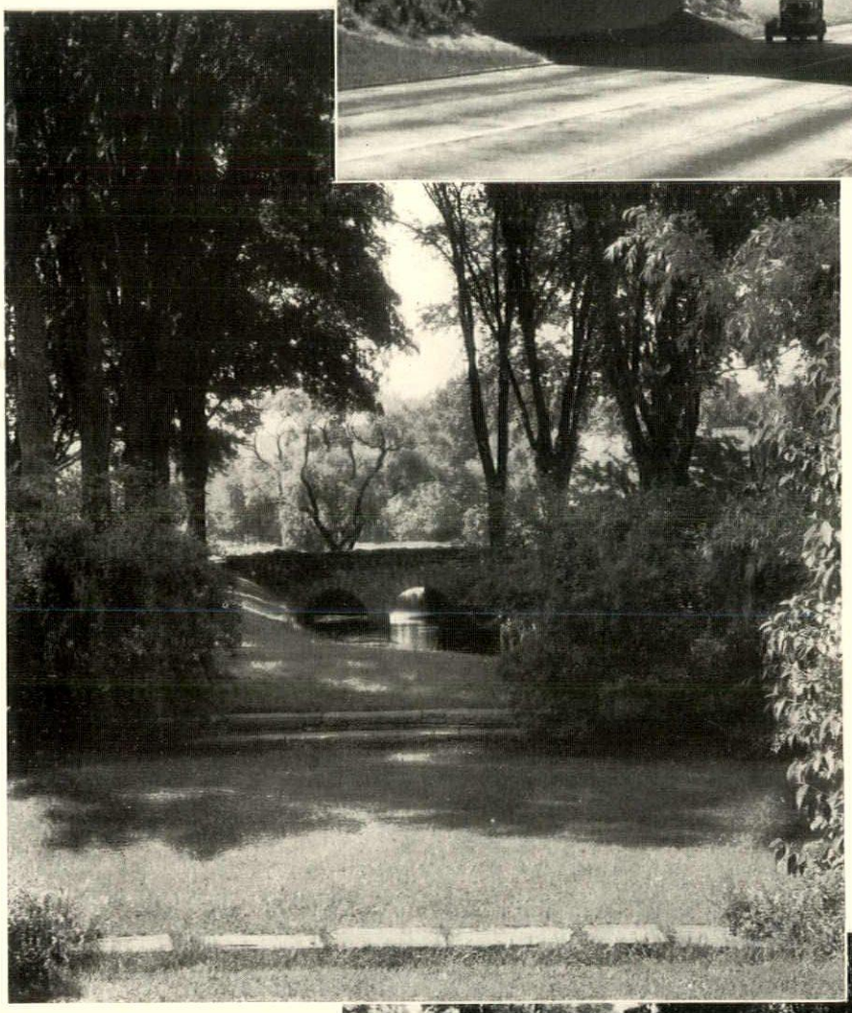


THE City of Vienna wanted a garden café in one of its parks. Limiting the kiosk itself to seven by ten feet put something of a strain upon economical planning. This is what was done—in perspective and plan. The kiosk supplies four hundred persons, seated at tables around about it. In the little structure itself, four persons, if necessary, can work. The building is made of wood sections, enamelled green. It can be taken apart readily, and put away in the winter. The outdoor furniture consists of chairs of red enamelled steel tubing with natural color cane seats. The table tops are white. A. and H. Paar were the architects.





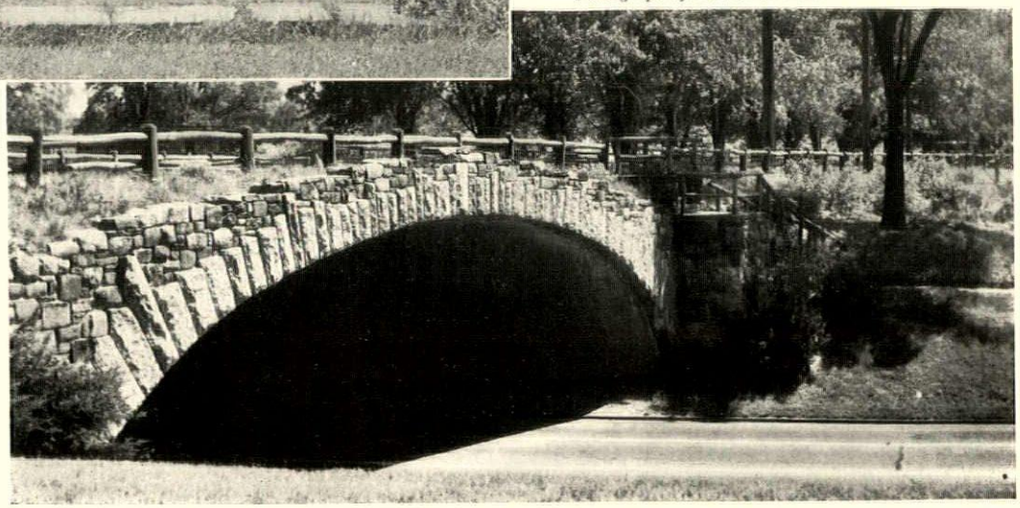
Photograph by Charles E. Knell



SMALL

With the rapid expansion of our motor highways through the countryside, together with the necessity for the abolition of grade crossings, the small bridge has become a new problem. Four examples are here shown (at the top and bottom of the pages) which are new bridges on the Southern State Parkway, Long Island, designed by the Long Island State Park Commission. All

Photograph by Charles E. Knell



Photograph by Charles E. Knell

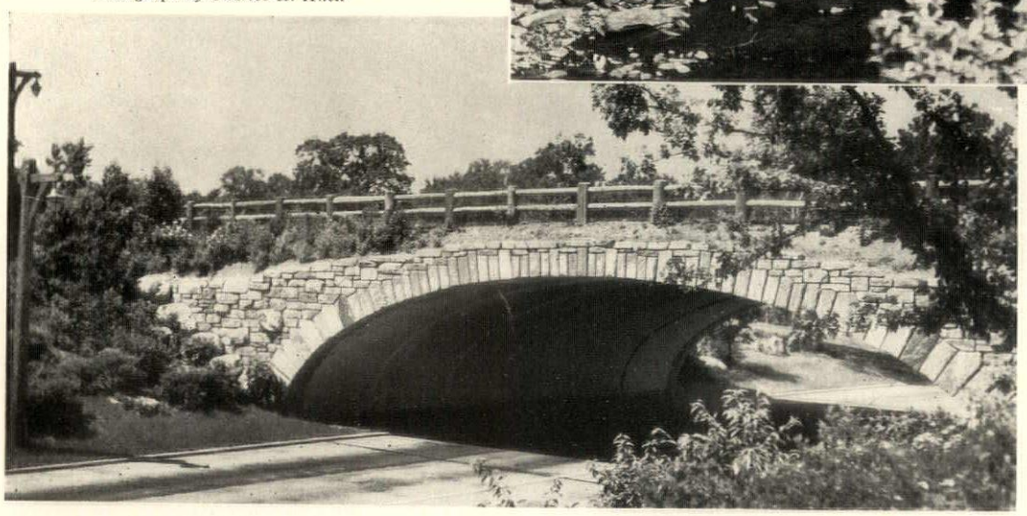
BRIDGES

of these are of reinforced concrete deeply faced with stone.

Still another example of the small bridge is that at the extreme left of the opposite page in the garden of the Misses Righter, Bedford Hills, N. Y., of which Helen Swift Jones was the landscape architect. At the right is a stone bridge in the Enfield Glen State Park; Herbert Blanche, landscape architect

Photograph by Henry R. Head

Photograph by Charles E. Knell



BOOK REVIEWS

SULGRAVE MANOR AND THE WASHINGTONS. A History and Guide to the Tudor Home of George Washington's Ancestors. By H. Clifford Smith. Foreword by Viscount Lee of Fareham. 260 pages, 7½ by 10 inches. Illustrations from photographs and drawings. Printed in Great Britain. New York: 1933: The Macmillan Co. $4.

The early English home of George Washington's ancestors was for long forgotten and weed-grown, until 1914 when a distinguished list of British subscribers purchased the place, and, with the financial aid of Americans—thanks mainly to the Colonial Dames—restored the house, gardens, and grounds, and into Sulgrave Manor put furnishings in harmony with its various periods. The author, who has also written the story of Buckingham Palace, has been at great pains to compile this detailed record of the shrine and of its appurtenances.

WEAR RESISTANCE OF NATURAL STONE FLOORING. By D. W. Kessler. 14 pages, 5¾ by 9¼ inches. Research Paper RP612. Pamphlet binding. Washington: 1934: U. S. Department of Commerce. 5 cents.

INSCRIPTIONS WRITTEN BY CHARLES WILLIAM ELIOT. Foreword by Grace Eliot Dudley. 62 pages, 6½ by 9½ inches. Cambridge, Mass.: 1934: Harvard University Press. $2.

The late president of Harvard was being constantly asked to write inscriptions for monuments, buildings, and the like, his first effort in that line—the inscription for the monument set up on Boston Common in 1877 for the Civil War heroes—having won wide acclaim. Possibly no one else in our generation, not even excepting Royal Cortissoz, has contributed more of these beautifully turned phrases to be perpetuated in stone or bronze.

TESTS ON A REINFORCED-CONCRETE ARCH OF THE ARLINGTON MEMORIAL BRIDGE. By Cyrus C. Fishburn and John L. Nagle. 32 pages, 5¾ by 9¼ inches. Illustrations from diagrams. Research Paper RP609. Pamphlet binding. Washington: 1934: U. S. Department of Commerce. 5 cents.

ART IN AMERICA FROM 1600 TO 1865. Foreword by F. A. Whiting. 48 pages and 7 color plates, 9½ by 12½ inches. Illustrations from paintings and photographs, some in color. Pamphlet binding. Chicago: 1934: The University of Chicago Press. $1.

Under the sponsorship of many organizations such as art museums, libraries, and other bodies of an educational nature, there has been arranged for radio broadcasting over a coast to coast network, a series of talks on art in America. The talks are given every Saturday night at 8 P.M., and include information about our early painters and their subjects, something about collecting, with some consideration of sculptors and architects. The present volume is an illustrative guide to supplement these radio talks.

INFLUENCE OF NEIGHBORING STRUCTURES ON THE WIND PRESSURE ON TALL BUILDINGS. By C. L. Harris. Research Paper RP637. 18 pages, 6 by 9 inches. Illustrations from diagrams and a photograph of a model. Pamphlet binding. Washington: 1934: U. S. Department of Commerce, Bureau of Standards. 5 cents.

DECORATIVE ART. The Studio Year Book. Edited by C. G. Holme. 156 pages, 8 by 11¼ inches. Illustrations from photographs and plans, some in color. Printed in Great Britain. New York: 1934: The Studio Publications, Inc. Cloth, $4.50; paper, $3.50.

Another—the latest—of the always stimulating yearbooks, this time giving a rather comprehensive picture of modern decoration. Whatever course the interior treatment of our rooms may take, there is no doubt of the *Studio's* visualization of the present stage as very definitely what we loosely call modernism: blank walls, unbroken surfaces, black glass, chromium plate, with here and there an unexpected—and usually unjustified—curve, introduced perhaps for the sake of contrast or to make more palatable the stringent mixture. John de La Valette, who writes the introductory text, believes that in 1933 we touched bottom in the matter of decorative art.

THE LEANING TOWER. By Fred Rothermell. 361 pages, 5¼ by 7½ inches. New York: 1934: The John Day Co. $2.50.

Here is one of the few novels in contemporary fiction that concerns itself with the life of the architectural profession. If there were more of these being written the public might be led to understand more clearly just what place the architect fills in this civilization. It is a good yarn, with a plentiful admixture of dramatic suspense.

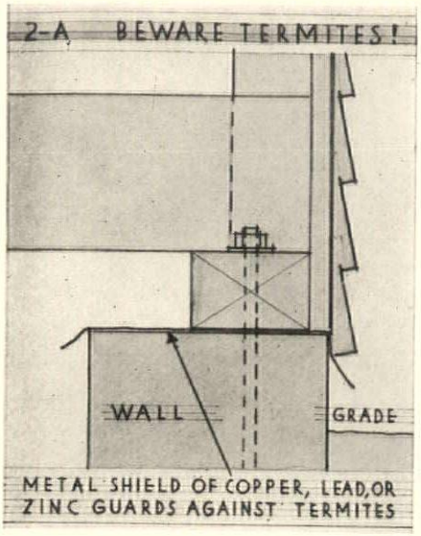
NATIONAL SOCIETY FOR THE STUDY OF EDUCATION. Thirty-third Yearbook, Part I—The Planning and Construction of School Buildings. Prepared by the Society's Committee on School Buildings. Edited by Guy Montrose Whipple. 337 pages, 6 by 9 inches. Pamphlet binding. Bloomington, Ill.: 1934: Public School Publishing Co. Cloth, $2.50; paper covers, $1.75.

The Yearbook of the Society has been published consecutively for thirty-two years. There are two volumes—Part I, as given above, and Part II, dealing with educational matters that will not deeply concern the architect. Any practitioner, even remotely interested in school buildings, will find this a valuable summary of contemporary practice.

Better Practice

By W. F. Bartels

CARPENTRY



The problem of preventing termites from attacking wood is a vital one at the present time. The use of refined hot creosote is said to protect wood against these modern pests. Certain salt treatments of lumber are effective. Nevertheless, as has been pointed out by Jefferson M. Hamilton in ARCHITECTURE for December, 1933, and January, 1934, the problem is not solved merely by wood treatment. The methods used should be fully outlined in the specifications, and manufacturers' directions followed on the job. The use of metals, such as copper, zinc or lead, between damp masonry and wood supports, is also an essential (Fig. 2A).

1—GRADING

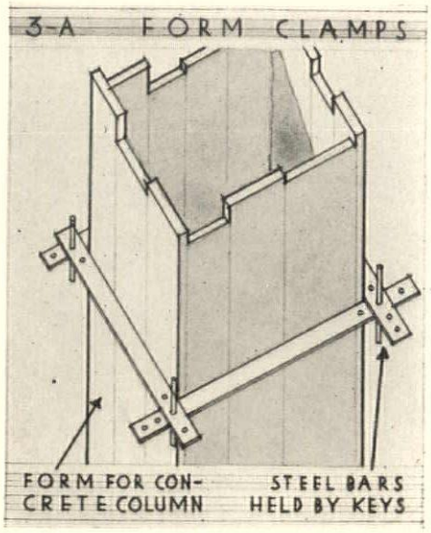
THE grading of wood cannot be said to be an exact science—any more than is the method of using it. Often one lumber yard may supply a lower grade than its competitor under the same grade name without any one being the wiser. In rough lumber, short-leaf yellow pine and fir may be substituted for long-leaf yellow pine; hemlock may be substituted for fir. Several grades of siding may look alike, yet one of them may contain resins detrimental to paints. Finishing lumber may contain defects which would bring it in a class lower than that for which it is sold, if it were properly classified. One of the architect's biggest problems in carpentry would seem to be to get legitimate bids on the identical grade of material, and then to be furnished that material on the job. One solution is to specify lumber that is graded and trade-marked by reputable concerns.

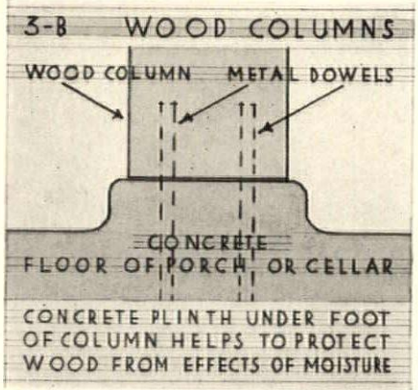
2—SCOPE OF WORK

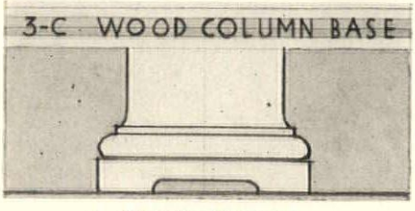
The carpenter will normally contract to furnish all rough and finished lumber, together with the labor necessary in working it into the building. Besides this such specific items as the amount of cutting, the furnishing of forms, centres or scaffolding, etc., for the various trades should be specified. Backpainting of trim and preventive measures to be taken against termites should also be covered in the carpentry contract. In the backpainting of trim care must be exercised to see that those units to be stained are not painted, but only oiled.

3—FORMS; COLUMNS

Some architects will allow the lumber used for concrete forms to be re-used as rough flooring. This would seem to be false economy. The forms should be kept solely for similar work and only new lumber used for underflooring. In pouring concrete columns the wood forms are often held together by wooden cleats. A neater, cheaper, and easier way is to use steel bars which are fastened by means of pegs. These cannot collapse, they are quickly attached, and they give adequate support without stretching (Fig. 3A).







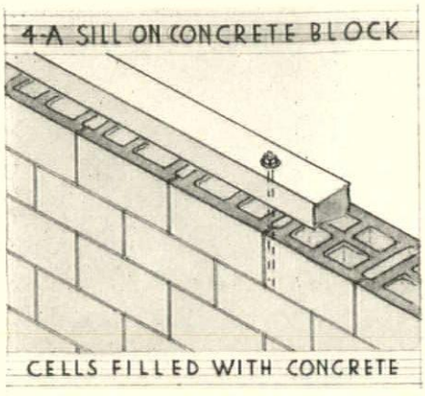
Columns or posts of wood, for either cellar or porch will be less apt to rot at the bottom if anchored with dowels to a raised concrete or masonry plinth (Fig. 3B). Columns with wood bases will benefit by a further means of ventilation (Fig. 3C). The only disadvantage of this method is that the cut-out portion generally remains filled with dirt, and in thus retaining moisture leads to further decay. Wooden stairs and porches which do not allow for ventilation underneath are sure to become rotted in spots and cause trouble.

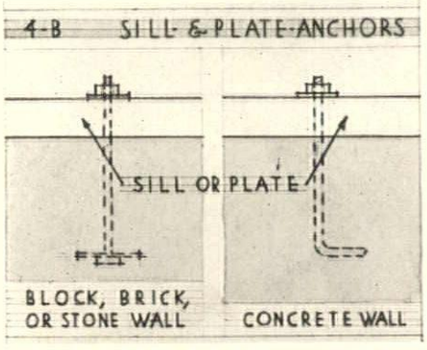
4—BEAMS; GIRDERS

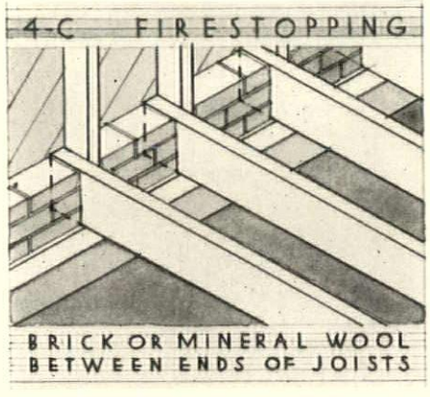
When sills are laid on concrete blocks the holes of these blocks should have been filled with concrete. In no case should they be allowed to remain open (Fig 4A). Sills should be fastened to masonry by means of a rod or bolt. In brick and block walls the bolt end should extend through a flat iron band or plate. In concrete work the lower end is best bent in a hook shape (Fig. 4B). The same precautions should be followed for roof plates.

Beams should be set with the crown edge upward, as every one but the merest tyro knows, shimmed up with slate only—*not wood*. Adequate fire stopping at the walls with brick or other incombustible material should be used (Fig. 4C). Headers over 4′ 0″ should be hung in stirrups. The latter are comparatively inexpensive and should be used always, rather than mere nailing.

For long spans it is well to have girders in the cellar and not to de-

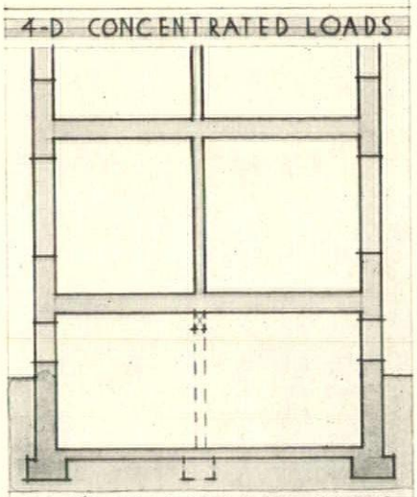


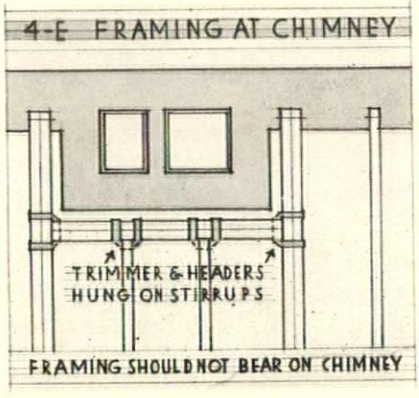


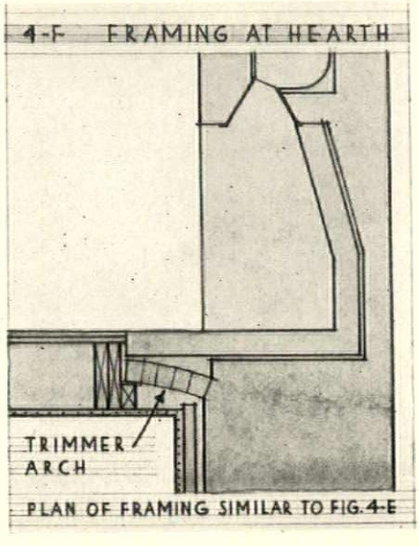


pend upon the joists to transmit heavy loads to the side walls. Too often partitions extend above one another through several stories of the house, only to be left without special support in the cellar. While double or triple joists may be adequate for the load, a steel I-beam would add to the strength and rigidity (Fig. 4D).

Bathrooms, with their tile work and fixtures, add greatly to the floor loads, but in many houses no effort is made to reinforce the floors under such rooms by decreasing distances between joists. Many times the plumber will needlessly cut the joists so that a line will go where he thinks it should. Such practice should not be permitted, even if it is necessary to increase







the thickness of a partition or to add a hung ceiling to conceal the pipes. Seldom do plumbers have proper respect for beams and joists —as witness one who ran an old lead waste line diagonally across a ceiling and through every beam, in order to reach his stack with the least possible pipe.

Beams should not be permitted to rest on chimneys, or any part of them. To do so is in violation of most codes, as well as contrary to insurance regulations. All framing should be *around* chimneys, independent of the latter (Fig. 4E). Also, openings for hearths must be framed out and masonry turned against it (Fig. 4F).

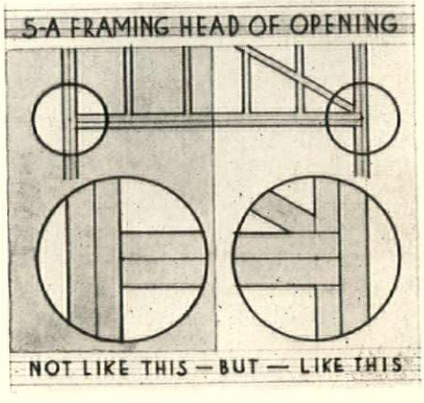
5—STUDS; FRAMING

One of the most common phrases seen in a carpentry specification is that "the studs must be doubled at door and window openings." How this admonition can be followed and yet result in a poor job is shown in (Fig. 5A). This is a sketch from an actual condition found when a house was being altered. The reason for cracks, as well as possible collapse, is apparent.

Sometimes a specification may call for all openings wider than a certain size to be trussed. This is good practice but it is often preferable to run a short length of doubled beam (acting as a lintel) across such an opening (Fig. 5B). To make sure that the plastering over it will adhere, metal lath should be used extending down over the wood lath to prevent cracking. Lintels, instead of trusses, may be necessary in some cases, such as where the heads of the openings are near the ceiling, or the space above is occupied by concealed radiation, thus giving the carpenter no room in which to make an adequate truss.

Studding partitions containing soil pipes, or other large plumbing lines, should allow at least 6″ inside the lath faces.

In the desire to save room many partitions have the studs turned the narrow way, which will give a partition 2″ thinner than would be the



case if they were placed as usual. Where they are used for supports the studs should by no means be turned the narrow way. This practice is acceptable for closets and cupboards, however. All stud partitions should be braced at least once in each story height—this should not be neglected.

6—FURRING

Furring in a brick building should be properly fastened to the masonry, so that it is firm and capable of supporting the load it is to carry. There are several modern methods besides wood furring which are acceptable and have very desirable features. In frame buildings, in addition to the usual furred spaces for pipes, etc., the one other space that needs furring is the chimney. To frame the timbers of a building all around the chimney, not only to avoid fire but because of the difference of movement and settlement, and then to expect that plaster joined from the brick chimney to the lath will not crack, is being far too optimistic. The chimney should be furred (Fig. 6A).

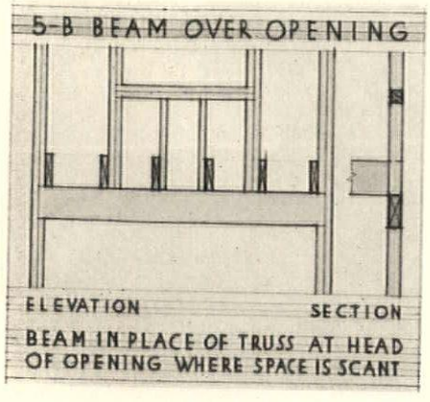
7—SHEATHING; INSULATING; ROUGH FLOORING

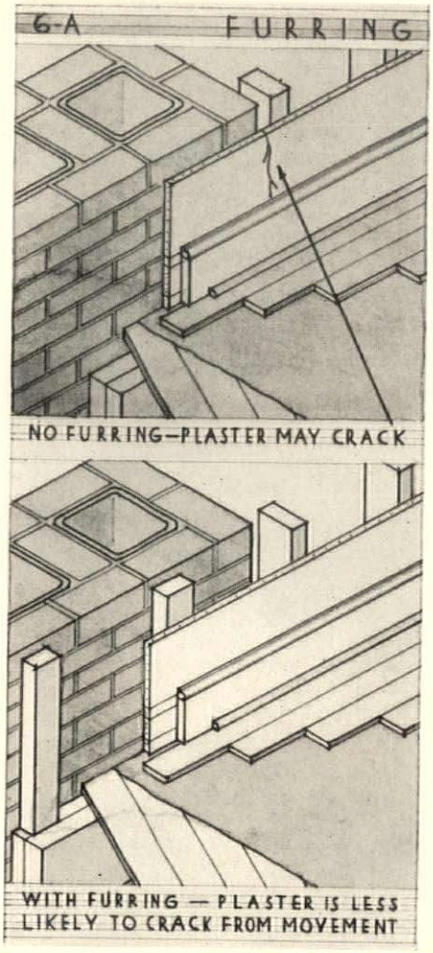
The sheathing of a building should be, in most cases, applied diagonally. Tests have shown that walls thus erected are much stronger and more rigid than those which have had the boards nailed horizontally. Sheathing should, of course, have its vertical joints occurring at studs and should be securely fastened with two nails in each board at the joint. Three nails offer little more in the way of stiffness because the board would tend to turn on the middle nail.

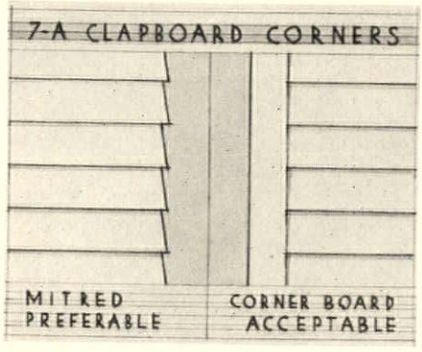
After the sheathing is on the house, the question of paper to cover it arises. Very few people can afford the use of a cheap paper. The cost of a good paper over and above that of a poor one is so slight on an average building that it is imperative that the architect procure a good grade for his client. The added cost will probably be made up in the first year by the superior insulation and the saving of fuel.

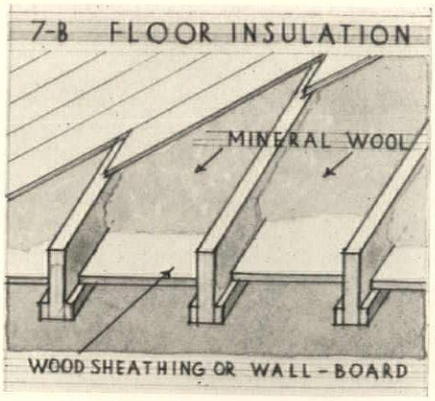
When clapboards are put on the building the corners should be mitred. This is a sign of craftsmanship and good building, but is seldom found in the speculative type of work (Fig. 7-A).

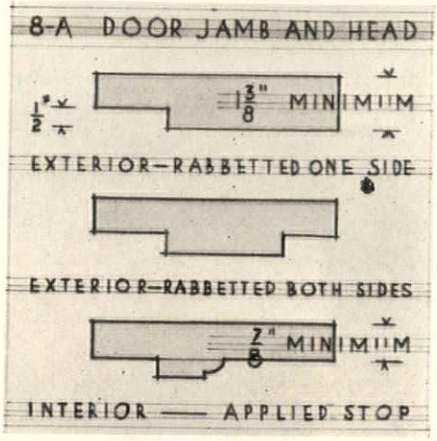
The rough flooring should be carried out to the brick walls or to the sheathing, allowing, however, a small space between the walls and the flooring for possible expansion. The flooring itself should be of sound stock. While it is possible while nailing flooring to see knots and avoid nailing into them, this is not the case when laying the finished floor, and if the nails do not hold the finished

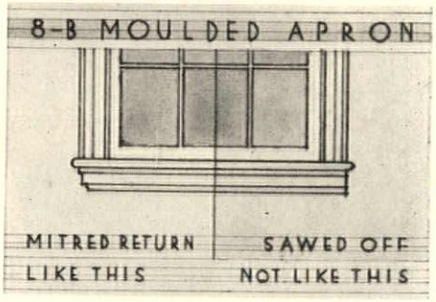


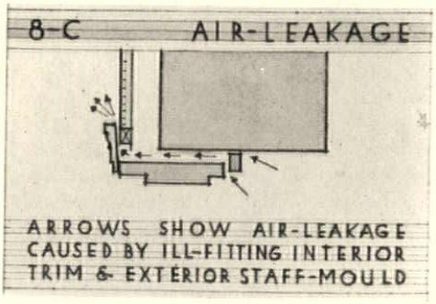












flooring (because of striking knots in the underflooring), squeaks may soon develop.

Floors over unexcavated portions of cold cellars should be insulated. This may be done by laying insulating board over the rough flooring before putting down the finished floor. This insulating board may be of asbestos or other similar material. The insulating material could also be put below the rough floor, to keep out the cold (Fig. 7B). In such unexcavated portions provision should be made for adequate ventilation, so that the floor will not rot. This can be done by having solid panels fitted around such spaces in the winter and substituting lattice or open panels in the summer months.

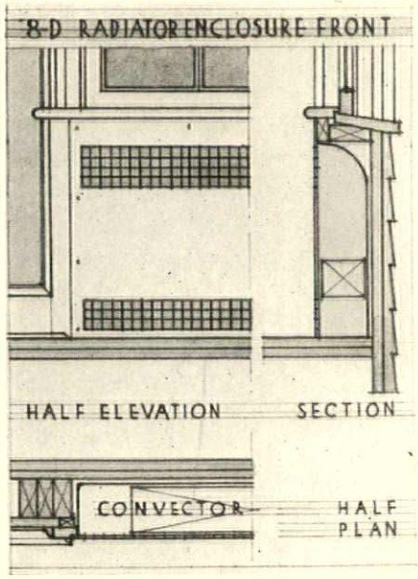
8—TRIM; DOOR AND WINDOW FRAMES

For the fastening of exterior trim, only non-rusting nails should be used. Sills should be of heavy stock with drips. They should have a prime coat of lead and oil before being set. It is poor practice to economize on frames for windows and doors. Poor materials will soon make themselves noticeable by the repairs they will require. Unless fully specified and carefully supervised, entrance door sills will turn out to be of scant stock, and door frames will be found not rabbetted; they may even have $\frac{3}{8}''$ stops instead of $\frac{1}{2}''$ ones. Of course if they are not rabbetted it signifies that thinner material is being substituted (Fig. 8A). Inferior species and grades of wood are all too often substituted for what is specified for frames. It pays to purchase or specify frames and sash from reputable companies which trademark all their goods with their name, to prevent inferior substitutes from being foisted on the client.

In masonry work the staff bead should not of course be permanently nailed until the joint it covers has been properly calked with oakum or mastic.

The pulleys put in the frames should be brass with steel axles. In no case should the cheap, stamped type be used except by those who can afford to replace them in a few years.

In furnishing most wood trim a great deal of grade-shifting is done, leaving the owner with a poorer grade than he has paid for. Whatever the wood, it must be so nailed as to be secure but not to leave



hammer marks and bruises on it. Grounds must be furnished by the carpenter and he must be told just where they are to go. Window trim is an item on which the mill will save money if it is not reputable and carefully watched.

The stops on the window frames will be screwed on, preferably with brass screws. The stool should be $1\frac{1}{8}''$ instead of the often used $\frac{3}{4}''$. The apron, if one with moldings is used, should have mitred ends instead of being cut off squarely. The latter is cheaper, of course, but in many cases will spoil the finesse of the entire window by its clumsy effect (Fig. 8B).

It is good practice to have the sash and frame made by the same mill. In some sections it is customary to make the frames in one mill and the sash in another, with the result that the one does not fit the other, yet neither mill will accept the responsibility. The carpenter often feels that the top member of the window trim is unimportant when it comes to fitting it against the plaster. But in a masonry job if this piece is not fitted tightly against the plaster a great deal of cold air will enter along this line. If the plaster is not true here, and cannot be remedied, it may be well to put a strip or molding over the crack to save the heat (Fig. 8C).

Interior door frames are often put up too hurriedly by the carpenter. He frequently puts one wedge behind them, trusting to the trim to keep them in place. There should be at least three wedges at each jamb and these should be well nailed. The trim may be mitred, or just a plain piece run across the head with a backband. If the trim is mitred the architect should make sure that it is properly fastened at the mitre. This is done in a number of ways, by dowelling and by means of corrugated fasteners embedded in the back faces. If a good job is made at the mitre joint this type of trim is highly desirable. Because the joint is apt to open up, the flat top or head member is more generally used by builders, running from outside to outside of side casings.

Whatever kind of trim is used it is well for the architect to consider the trim for closet interiors. It is very likely that part of the trim will be forgotten for these places, or else made up of odds and ends that are left lying around. Too often the trim at heads of closet openings is omitted entirely.

Years ago a chamfered baseboard, a shelf, and a hook strip were considered all that was necessary for a closet. Today this has changed and a closet is almost a piece of cabinet work, with hat boxes built in, shoe racks, sliding poles for hangers, small trays on the doors for powder boxes, etc. Many of these articles can be obtained ready to install and they have the advantage of being made under better working conditions than those which exist on most jobs.

When installing concealed radiators in 4″ stud walls it may be, and probably will be, necessary to line up the panel or face of the grille with the baseboard. In such a case a side piece will be necessary to which the panel may be screwed. Either the molding member of the baseboard or any small molding, may be run along this piece next to the wall to finish it off. The stool is best set out far enough, in this case, to project slightly beyond the baseboard (Fig. 8D). For sanitary reasons it is very essential that the bottoms of such recesses should be of finished smooth material, so that they may be cleaned readily.

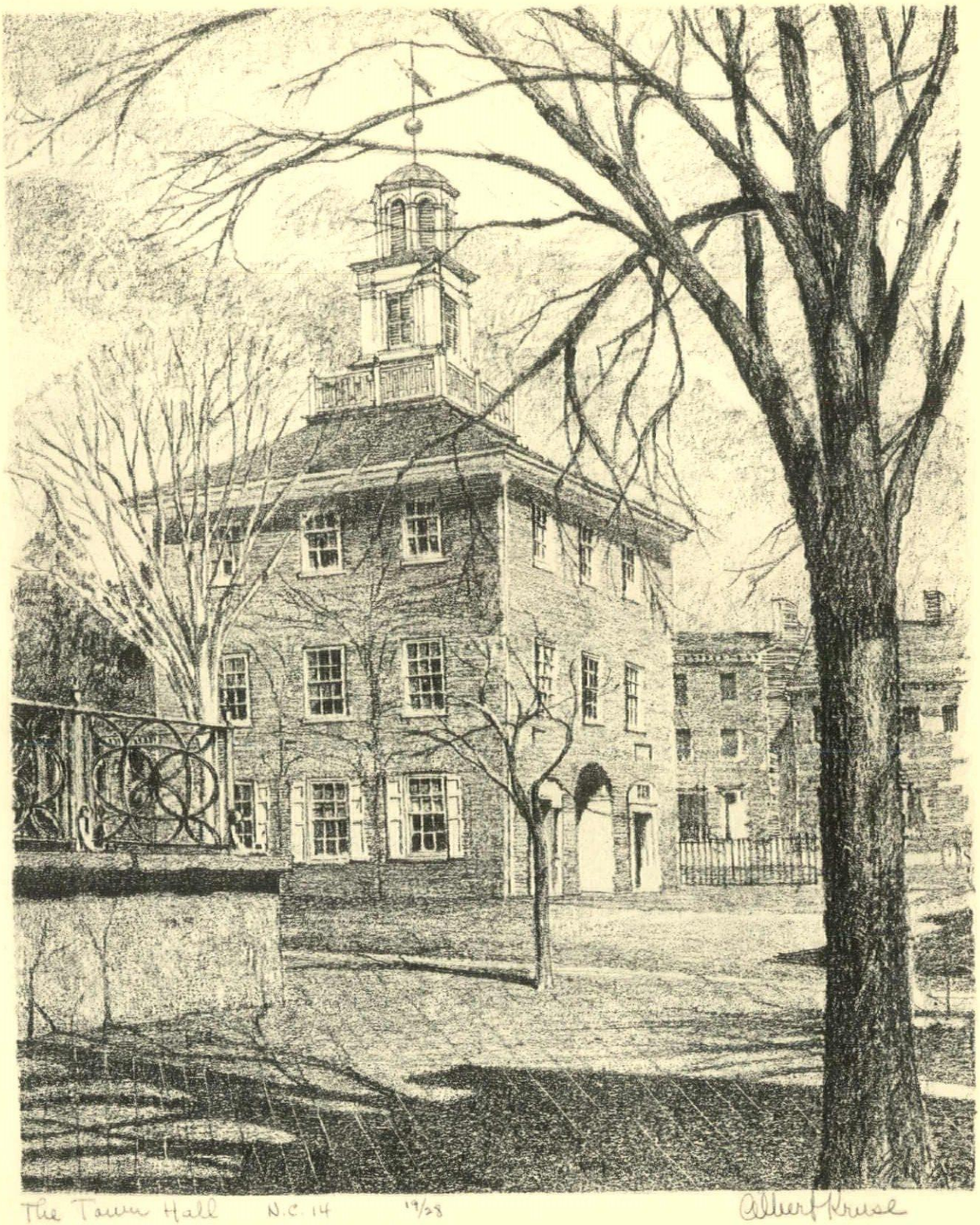
Stock kitchen cupboards are now made in such a variety of forms and sizes that it is possible to assemble almost any group of units to fit any requirements. As a rule those made in factories have the advantage of a superior finish, because more elaborate means of sanding are available and spraying will give a better finish than a cupboard painted on the job.

ALONG THE STRAND — Original, 8¼ x 7¾ in.

New Castle, Delaware, over whose roofs four different flags have flown, was at one time an important political and commercial centre. Expansion and so-called progress passed it by together with the railroad, and it stands to this day as an unspoiled town of the early days. The cobblestones of the Strand were laid in 1815, and still remain; the Town Hall was erected in 1823; the Court House was built in part in 1675; and the Old Dutch House (page 56) in about the same year

BY ALBERT KRUSE

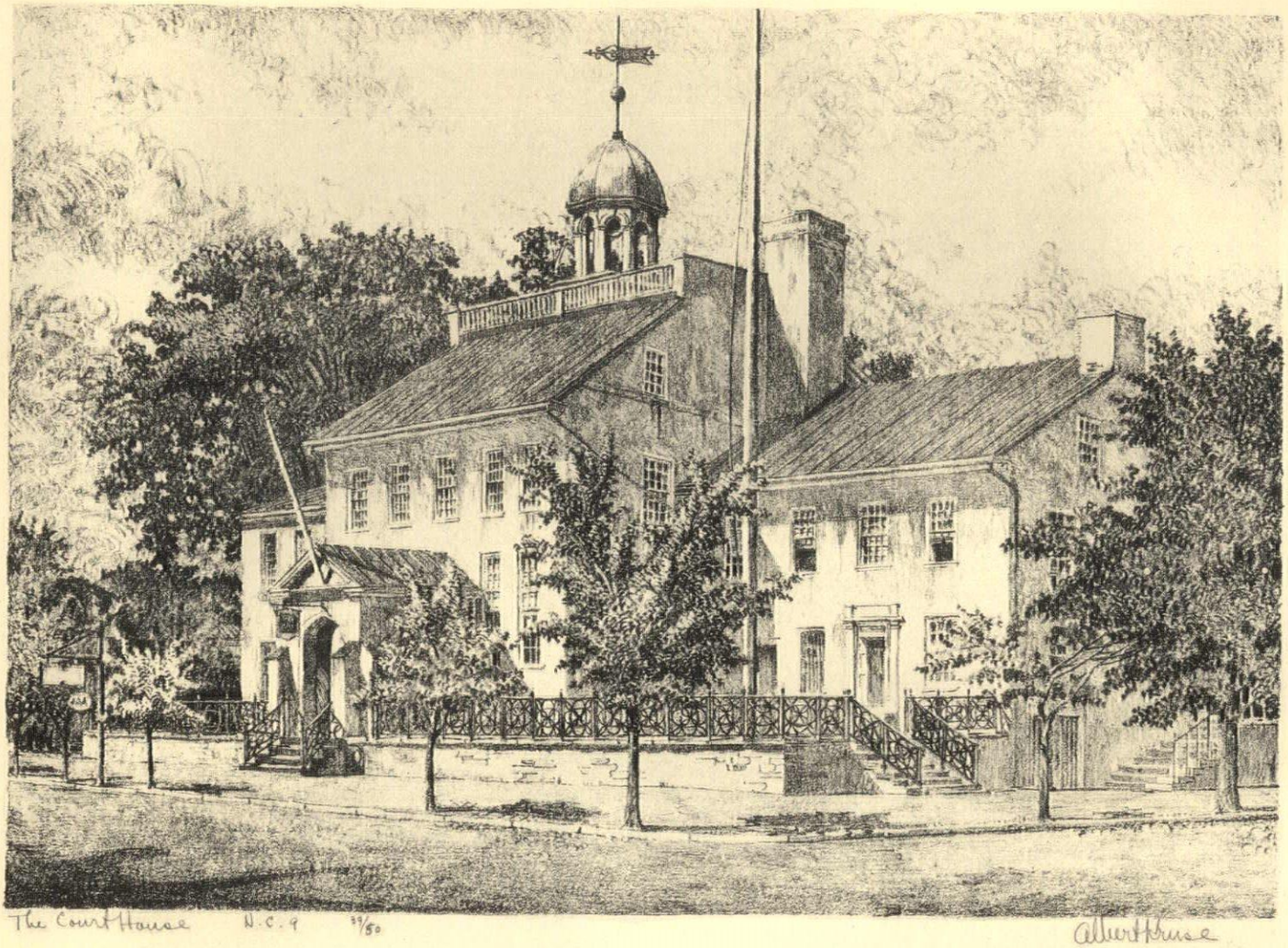
Four Lithographs of New Castle, Del.



THE TOWN HALL, NEW CASTLE, DEL.

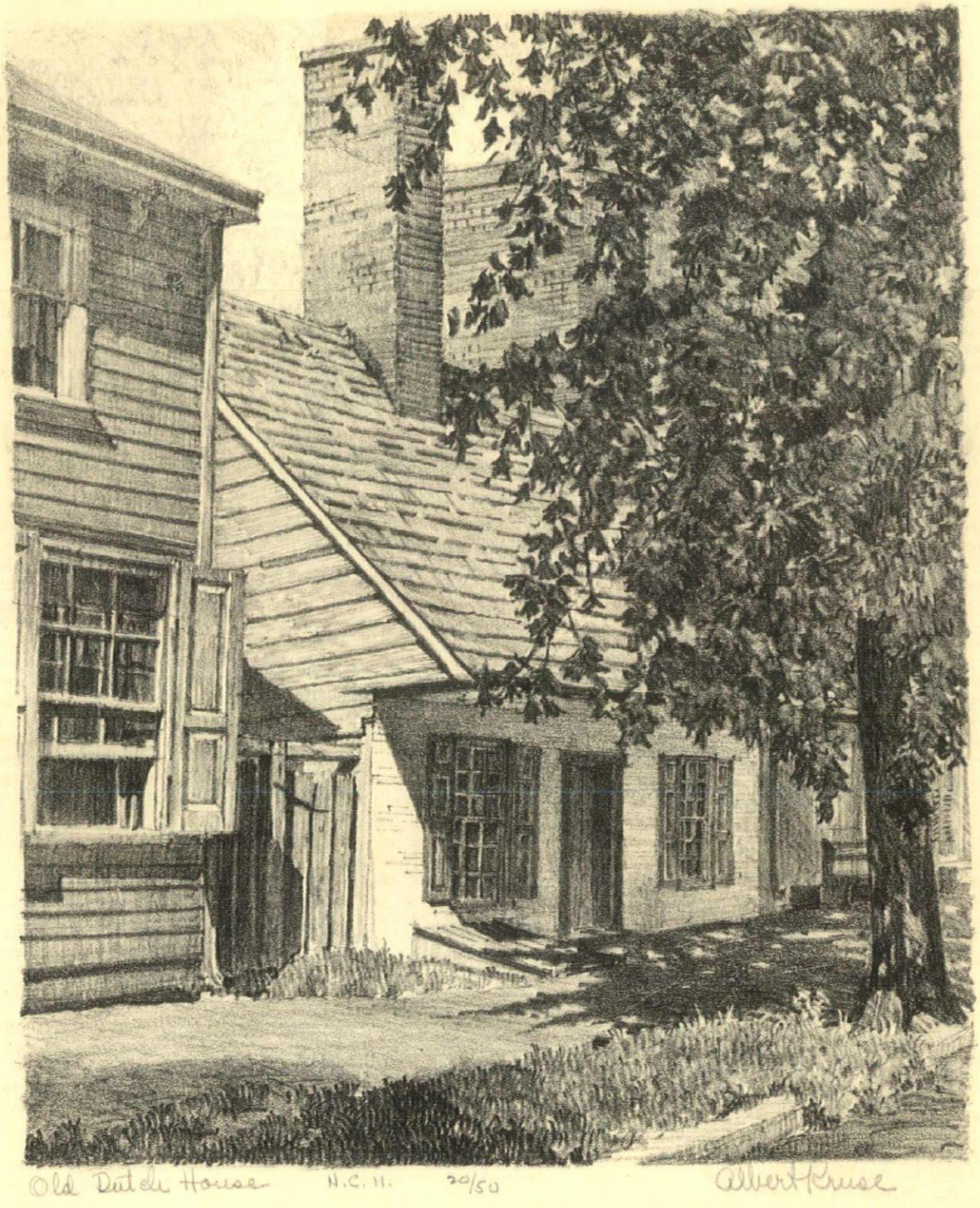
Original, 10½ x 8⅛ in.

A lithograph by Albert Kruse



THE COURT HOUSE, NEW CASTLE, DEL.
Original, 8⅞ x 12 in.

A lithograph by Albert Kruse



OLD DUTCH HOUSE, NEW CASTLE, DEL.

Original, 8¼ x 6⅝ in.

A lithograph by Albert Kruse

The Editor's Diary

Wednesday, June 27. — Frederick Heath, Jr., in from Syracuse, reporting something of the progress being made in the movement toward standardization of the sizes of building units. He tells me that the Bureau of Standards, which has been working toward the adoption of the standard size of common brick as a unit, has now shifted its aim to a module of 8½ inches for both vertical and horizontal dimensions. The idea, as is becoming better and better known, is to have a common denominator of sizes for stock sash, steel sash, brick, concrete blocks, wall tile, furring blocks, and all other items built into masonry. It is encouraging to find that the Bureau has abandoned its effort to make this common dimension a module of fractional dimensions, involving complex dimensioning. Their present idea of 8½ inches is better, but surely not so good as an 8-inch dimension in both horizontal and vertical planes, which would do away with fractions entirely.

Friday, June 29.—Rhodes Robertson called just before sailing to take up his summer residence in France. He had been good enough to allow me to read a manuscript setting forth his ideas as to the whys and wherefore of esthetics, a manuscript which I found deeply absorbing. The eternal puzzle of what is art, what is beautiful, and why objects give us esthetic pleasure has, it seems to me, never been so simply and understandingly ratiocinated.

Monday, July 2.—Evidence is piling up to the effect that any job to be well done should be undertaken only by those skilled in its particular type of work. The building of this country should be in the hands of builders, not of an aggregation of nondescript workers on relief. The Maine Monument at Columbus Circle, New York City, was recently cleaned by a group of CWA workers in charge of a stone mason. The steel brushes used had the effect of taking off many of the fine crisp lines of the carving in the marble. Some one discovered that the damage was being done, telephoned H. Van Buren Magonigle, the architect, who appealed to the Mayor and Park Commissioner Moses. The work was stopped, but not before considerable damage had been done.

Tuesday, July 3.—As Millar's Housing Letter points out, with the appointment of James A. Moffett as Housing Administrator, there are a number of pertinent facts staring us in the face which indicate the possible activity in building: Over 5,000,000 homes throughout the country are without baths. A greater number lack electrical equipment of the simplest kind. The demand for new housing is spotty, but there is a shortage of 1,000,000 to 1,750,000 homes.

Wednesday, July 4.—Miss Nancy McClelland, interior decorator, says that there are two serious problems facing the interior decorators: the problem of the untrained, and the problem of the unemployed, of which the former is the more distressing.

"Dozens, yes, hundreds and even thousands of people without the slightest benefit of preparation, have stepped blithely into the career of interior decoration and announced to the world that they are capable of installing and furnishing whatever you have, in any fashion you wish. Interior decoration seems to them to be the line of least resistance. There is even a saying among us that 'with every divorce, a new interior decorator is born.'"

Saturday, July 7.—John C. Hegeman of Hegeman-Harris, builders, in speaking to a group of college-trained young people on choosing a career, makes a good point regarding the reason why prefabrication of whole houses progresses so slowly:

"From time immemorial house building has expressed the individual tastes of the owner, and I believe that this fact has become ingrained in our natures. The motor car is a thing of an hour ago, relatively speaking, and from the very beginning of the motor industry the idea of mass production of a standard car unit was the basic consideration of the industry; and so, because of the fact that we were educated in this way, we expect nothing different. The building industry, on the other hand, grew from many ancient handicrafts and it has never outgrown these limitations."

Monday, July 9.—Lunched today with Harrie T. Lindeberg, recently back from Russia where he had gone to study the site provided for his United States Embassy in Moscow. The site is a particularly fine one of fifteen acres, giving a view of the Kremlin just across the river. His scheme provides for a quadrangle, with the Chancery at one end, the ambassador's residence at the other, the bachelor staff quarters on one side, and the married staff on the other, the whole being connected by an interior arcade strongly reminiscent of the University of Virginia. Lindeberg is having his difficulties in getting the Russians to make a good brick for the group. Apparently they made a beautiful brick some four or five hundred years ago, when the Kremlin was built, but have lost the art. Partly as a precaution against the dangers from inaccurate workmen, and partly because of his conviction of its intrinsic merit, Lindeberg is using a modular system for the buildings. Most measures are made with a two-foot stick.

Wednesday, July 11.—The architects of New York City have been active in seeking a part of the work involved in the low-cost housing projects developing under the New York City Housing Authority. There were 1775 architects who handed in a preliminary qualification form in answer to a questionnaire; 656 signified their intention of entering the simple form of competition devised to pick those who should do the work. Apparently the problem staggered a large number of these architects, for only 278 submitted the two drawings required in the competition.

Thursday, July 12.—Arthur C. Holden calls attention to some of the difficulties in the way of putting into successful operation the modernization and rehabilitation provided for in the National Housing Act.

"Obviously if credit is extended to get work done, that credit has got to be balanced by the use that can be made of the things produced, at some time in the future. Therefore, the measure of the usefulness of modernization is that the improvements made will be such as to give better and more economic results than can be achieved by building new.

"It pays for example to fix up a tumble-down farmhouse, because the soil about it is fertile and the shade trees planted are good, and all the other advantages of years of accumulated toil outweigh the consideration of starting new in another location. The same applies to the old town house on the shaded village street, provided, however, that the advantages of quick transportation brought by the automobile do not make outlying land more desirable and even more available.

"It does not pay to modernize a single house on the village street if the other neighbors insist upon permitting their properties to continue to depreciate at such a rate that no one who could afford to would want to live in the rehabilitated house. It does not pay to pour money for rehabilitation into the city slum where congestion has been so great that the buildings are improperly planned for light and air, where surroundings are tawdry, and public morals bad, unless sufficient work can be done to change these conditions.

"It does not pay to put money for rehabilitation into properties which have been held for such high prices that it has not been thought necessary to liquidate past credits loaned on the properties or where it has not been possible to do so. High interest charges are the result of unliquidated credits. They usually mean high rents, skimping on maintenance, and frequently also delinquent taxes and inadequate city control of the neighborhood."

Friday, July 13.—Lunched today with Waldron Faulkner who is going to move to Washington this fall in the belief that there is likely to be much more building of residential work in that locality within the next four or five years, at least, than here—and perhaps he is right.

Monday, July 16.—Joseph Miller, Jr., secretary of the New York City Board of Education, has dug up the fact that in one of the Eastern states—one of the original thirteen colonies—the annual expenditure for cigarettes per head of family is almost double the average annual expenditure per child for education. Georgia spends $31.89 per child each year in educating its children. That is the lowest cost of all the States. The highest is that of New York with $137.55, though Nevada runs a close second with $136.18.

Tuesday, July 17.—Motored up into the beautiful country of Milbrook, N. Y., and Sharon, Conn., with Roswell F. Barratt to see some experiments he has been conducting with the idea of finding a substitute for the plaster wall in residential work. In order to avoid the inconvenience and delay involved in the introduction of so much water into a house, he has used a composition wallboard. To overcome the greatest drawback of this material—the butt joint—he abandons it by advancing or receding the plane of his wall at the joints. Of course, it is necessary to design every side of every room and every ceiling, which naturally involves a lot of work for the architect. Nevertheless, the effect after this diligent study and employment of ingenuity is very effective—not wholly unlike the panel work of the Louis XVI period. Walls can, of course, be papered at once if desired without any fear of lime-burning or of cracks. For a house used during the winter months for week-end visits, the wall board saves considerable time in heating—having far less absorbent effect upon heat than has the cold plaster.

Thursday, July 19.—Lunched with Ralph Walker, who told me that he had just heard the results of the competition, limited by invitation, for extensions to the Chicago Art Institute. Those invited to compete were: Bennett, Parsons & Frost; Paul P. Cret; Delano & Aldrich; Ernest A. Grunsfeld, Jr.; Holabird & Root; Office of John Russell Pope; Voorhees, Gmelin & Walker. Holabird & Root won it.

Saturday, July 21.—Professor H. Vandevoort Walsh, assistant professor of architecture at Columbia, is one of those who believe that the Fordized home will never be brought to a practicable basis. Prefabrication is very much with us, and has been with us for some time, in the construction industry. Most of the elements that enter into residential construction have been standardized. What we need, Professor Walsh thinks, is to learn how to assemble these standardized details more intelligently.

Monday, July 23.—Went into the Beaux-Arts Institute of Design to see the Paris Prize drawings—"An International Athletic Center," with a great stadium and smaller centres for boxing, swimming, training quarters, etc., along a water front. An interesting problem, well worked out in a broad superficial way, but I am wondering of how much real value in training this has been to men who have about one chance in two hundred fifty thousand of ever handling such a commission.

Tuesday, July 24.—Many were called but few were chosen in the New York Housing Authority's competition for the selection of architects with a knowledge of low-cost large-scale housing. Of the 278 competitors, 22 displayed in their drawings the evidences of an adequate imagination and knowledge of the subject.

Wednesday, July 25.—The Home Owners' Loan Corporation is apparently meeting a tremendous need. Up to the present nearly a million and a quarter mortgagees have agreed to accept bonds of the corporation in exchange for their overdue mortgages. More than 99 per cent of the loans have been effected by exchange of the corporation's bonds for existing mortgages. The average loan is $3,017.

Friday, July 27.—The successful contestants in the Housing Authority's competition for the selection of qualified architects gathered at luncheon today in The League to hear Langdon Post, Frederick Ackerman, and Charney Vladeck, with Dwight L. Hoopingarner, who is representing the Federal Government in the local housing projects. The Mayor was to have been there, but was forced to postpone his visit. All the successful drawings were hung on the walls—a very interesting assortment in three groups: one providing 100 inhabitants to the acre; one, 150; and the third, 250. There were many new faces among the successful competitors—men who have been little heard of in the more spectacular side of a city's architecture. Two groups who won through were made up of CWA men, who gained most of their knowledge of the problem through the organization's research beforehand.

Monday, July 30.—Roger Bullard and Clifford Wendehack have designed what *Better Homes in America* calls an "ideal" home. This afternoon Mayor LaGuardia broke ground for the erection of this house at Park Avenue and 39th Street. It is planned for the average family of five living without a maid, and will be equipped, doubtless, with most of the gadgets. It is said that the house will be possible of duplication in any small city or suburb for from six to eight thousand dollars.

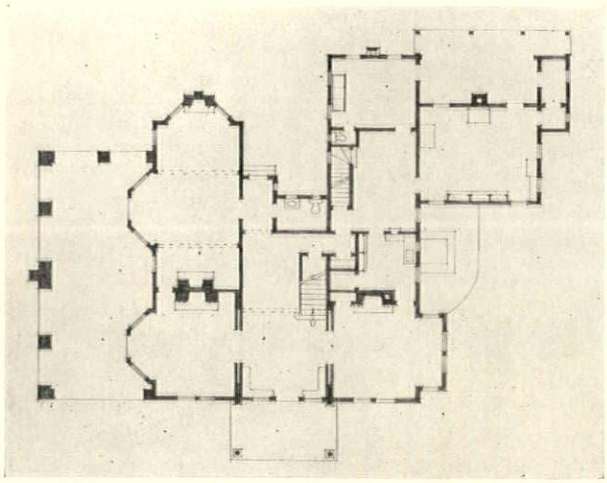
Tuesday, July 31.—I went to see "Men in White" on the screen the other night, having seen it previously on the stage. Aside from the fact that it is good drama, it is the most inspiring picture of the medical profession ever given the public. It occurred to me at the time that if some one could only produce an equally effective exposition of the place the architectural profession should occupy in our civilization, it would put us a long way ahead. Curiously enough, I notice that Herbert G. Wenzell of the Detroit Chapter, writing on publicity for the profession in the Weekly Bulletin of the Michigan Society of Architects, had precisely the same thought on seeing "Men in White"; but he goes further in suggesting Louis LeBaume, Kenneth Murchison and Lancelot Sukert as the men to write the scenario.

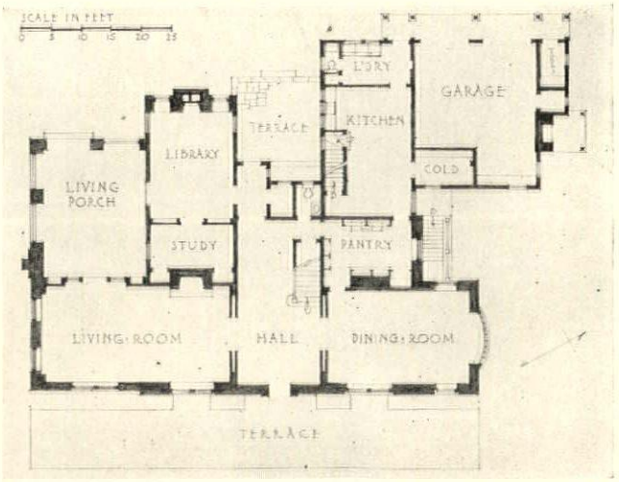
Photograph by Eugene V. Barthmaier

Alterations in the House of James T. Haviland, Wayne, Pa.

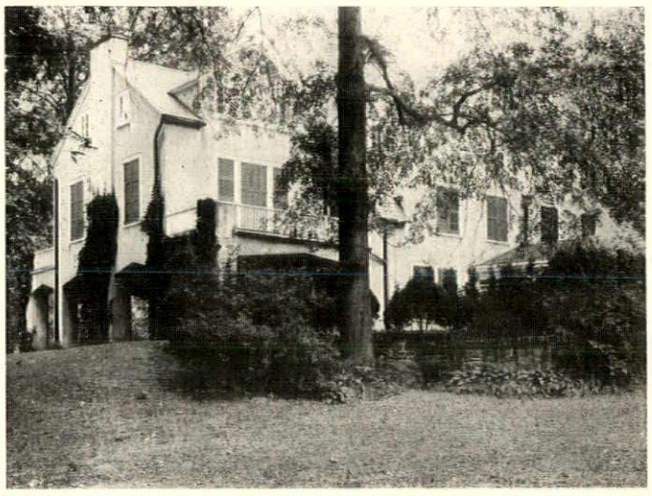
EUGENE V. BARTHMAIER, ARCHITECT

Below, the first-floor plan of the old house as surveyed before alterations were started, and the architect's plan of the first floor as remodelled





At left, the east front as it now appears, with, below at left, a photograph of the corresponding view before alterations

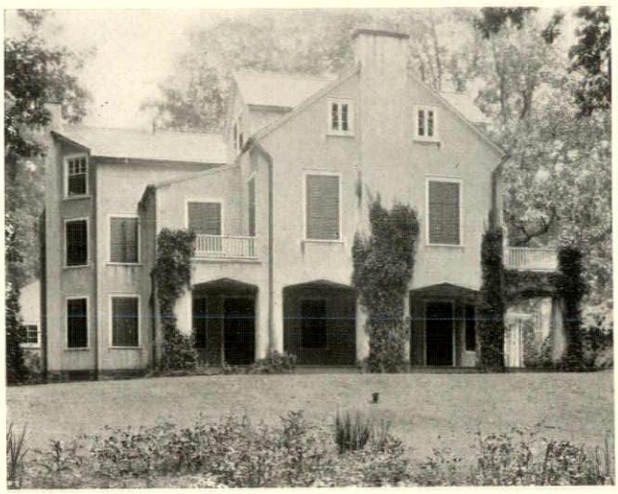


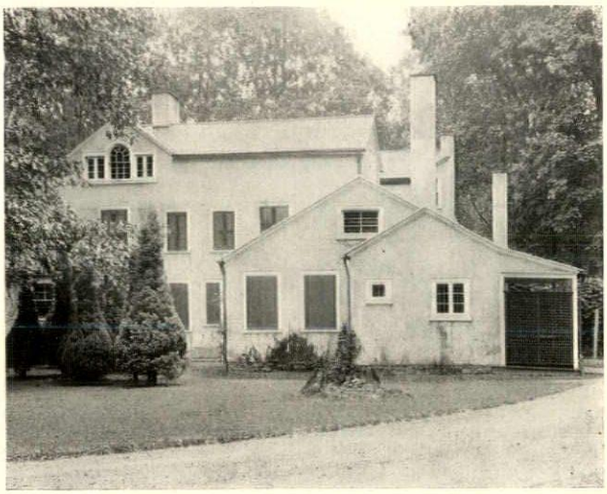
The house from the southwest as it appears after the alterations, with, above at the right, the corresponding view before the changes were made. The total cost of the alterations was $16,582

At right, the new front, with, below at the right, the front as it was. An important factor in the alterations was the facing of the old frame walls with local stone

At right, the west front corresponding to the old photograph immediately above at the left. On the second floor there are six bedrooms, five baths, and a linen room. On the third floor there are two rooms and a bath

The south end as it now appears, with, below to the left, the corresponding aspect of the old building





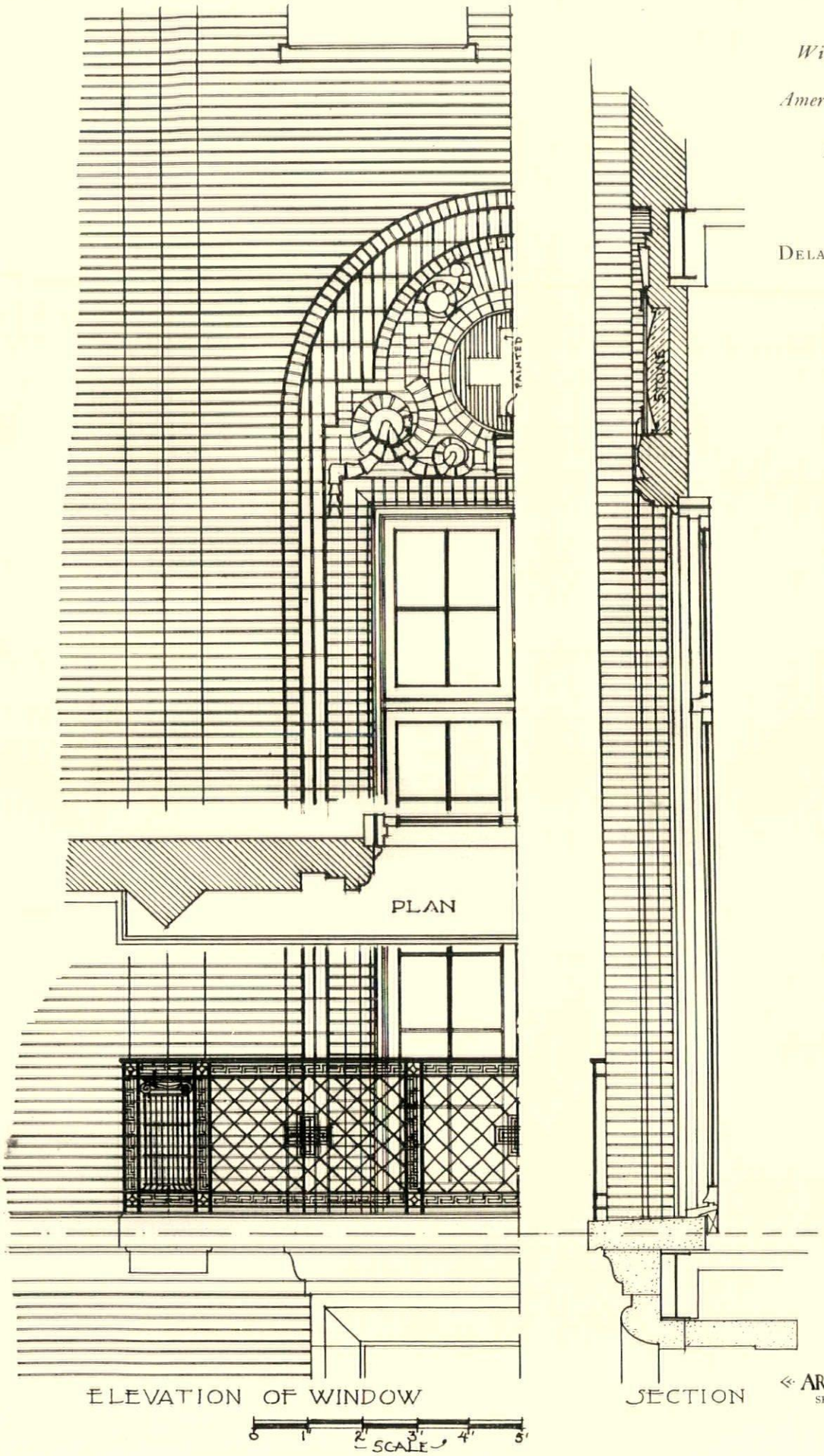
The north end as it now appears, and above at the right, as it was

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*)

Window details in molded brick
American Red Cross Building, New York City
DELANO & ALDRICH
ARCHITECTS



Window details in molded brick, American Red Cross Building, New York City

DELANO & ALDRICH
ARCHITECTS

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

ARCHITECTURE'S PORTFOLIO OF

SPIRES

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
PATIOS
TREILLAGE
FLAGPOLE HOLDERS

Below are the subjects of forthcoming Portfolios

Business Building Lobbies
OCTOBER

Roof Trusses
NOVEMBER

Modern Lighting Fixtures
DECEMBER

Circular Gothic Windows
JANUARY

Tile Roofs
FEBRUARY

Molded Brick
MARCH

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

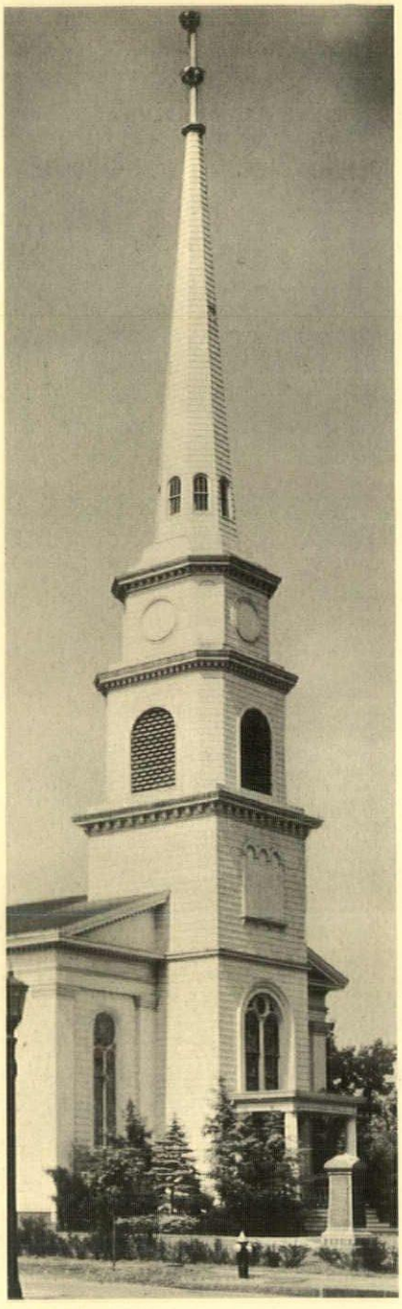
1930
CASEMENT WINDOWS
FENCES OF WOOD
GOTHIC DOORWAYS

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 STONEWORK
OVER-MANTEL TREATMENTS

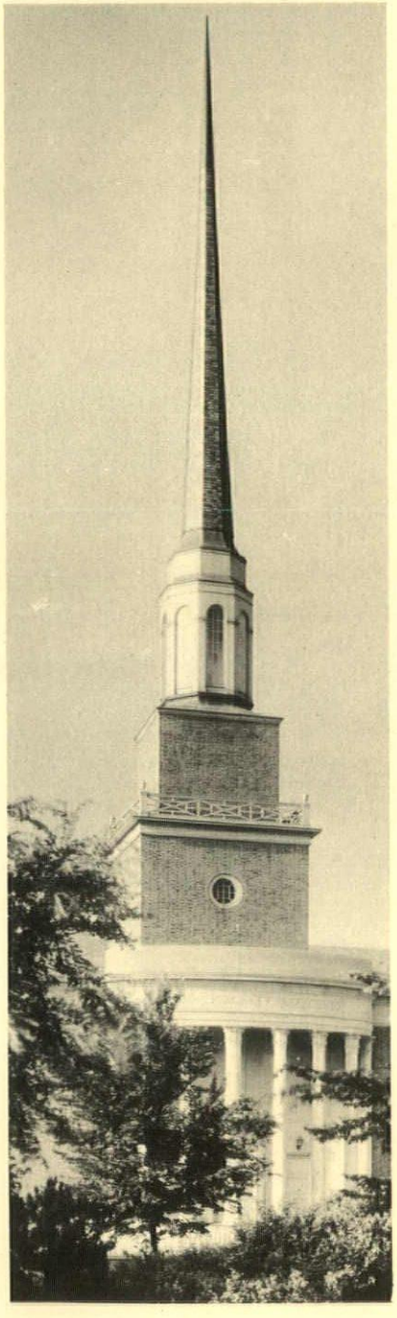
1933
BANK SCREENS
INTERIOR DOORS
METAL STAIR RAILINGS
VERANDAS
THE EAGLE IN SCULPTURE
EAVES RETURNS ON MASONRY GABLES
EXTERIOR LETTERING
ENTRANCE DRIVEWAYS
CORBELS
PEW ENDS
GOTHIC NICHES
CURTAIN TREATMENT AT WINDOWS

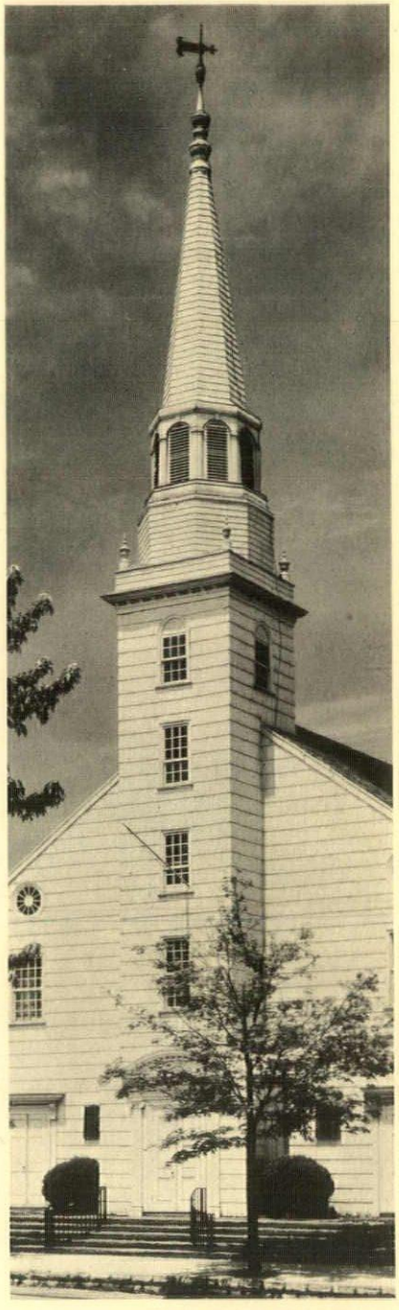
1934
EXTERIOR PLASTERWORK
CHURCH DOORS
FOUNTAINS
MODERN ORNAMENT
RUSTICATION
ORGAN CASES
GARDEN FURNITURE
WINDOW HEADS, EXTERIOR



First M. E. Church,
Hempstead, Long Island

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

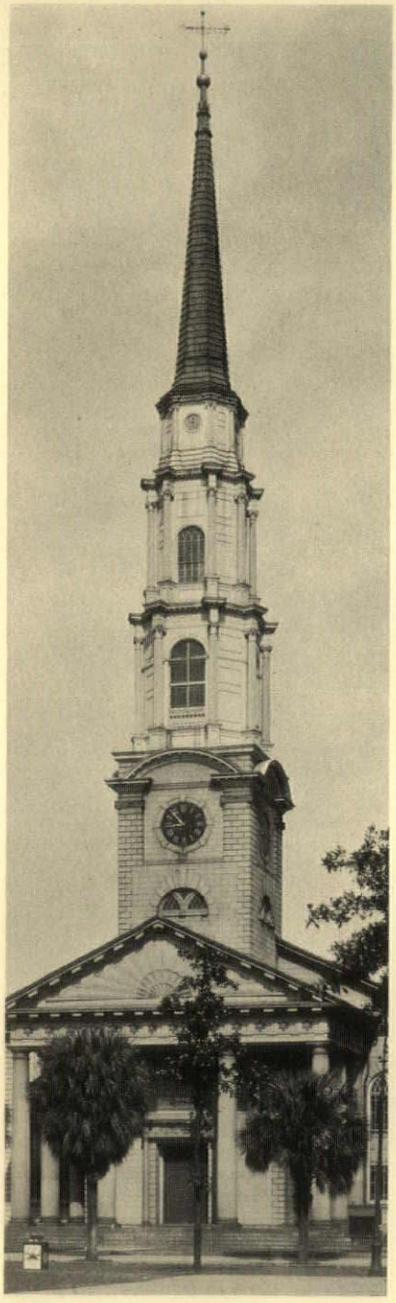




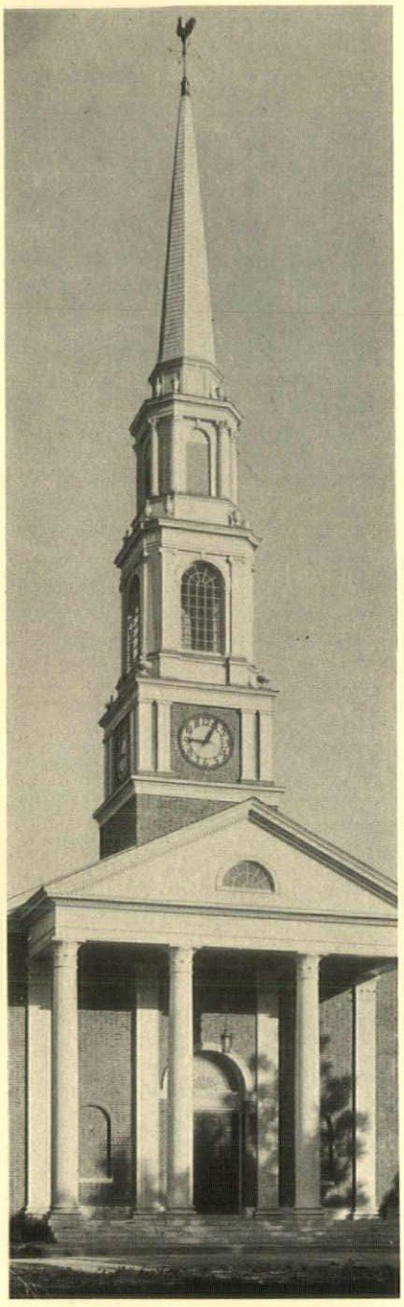
Old First Church,
Huntington, Long Island
Built 1784

First Presbyterian Church,
Roslyn, Long Island
William B. Tubby

Independent Presbyterian Church,
Savannah, Ga.
Built 1800 (rebuilt later in marble and wood). Jay (?)

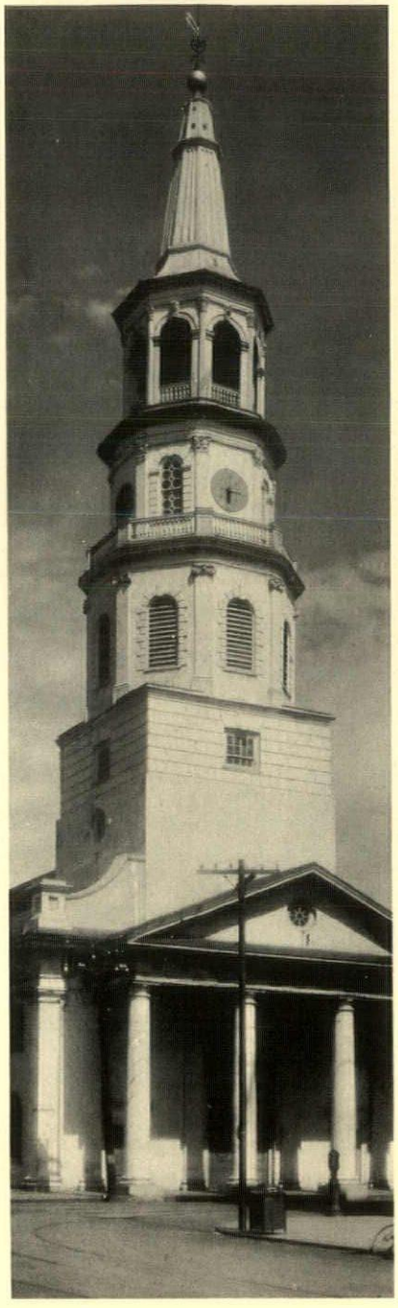


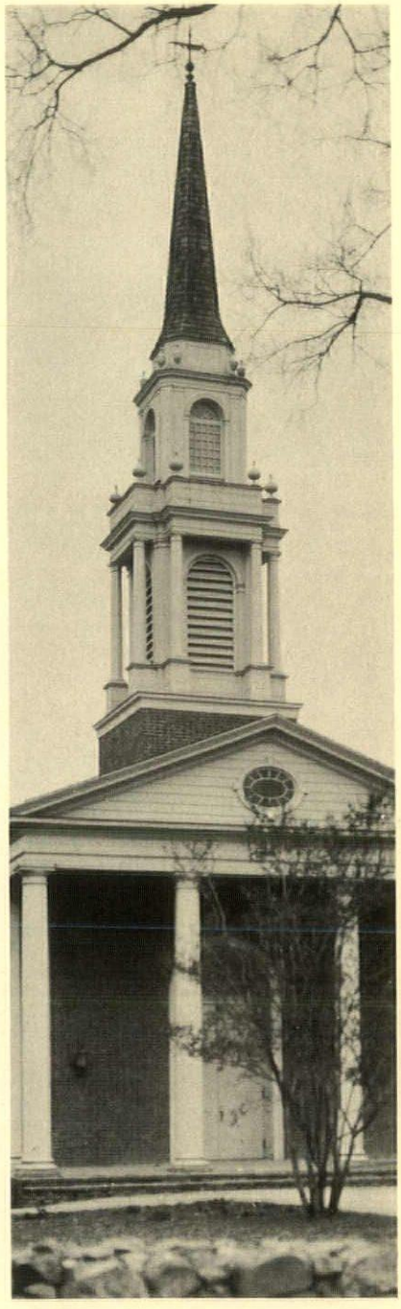
Reformed Protestant Dutch Church,
Flatbush, Long Island
Built 1796



Village Chapel, Pinehurst, N. C.
Hobart Upjohn

St. Michael's Church,
Charleston, S. C.
Built 1752. James Gibbs (?)

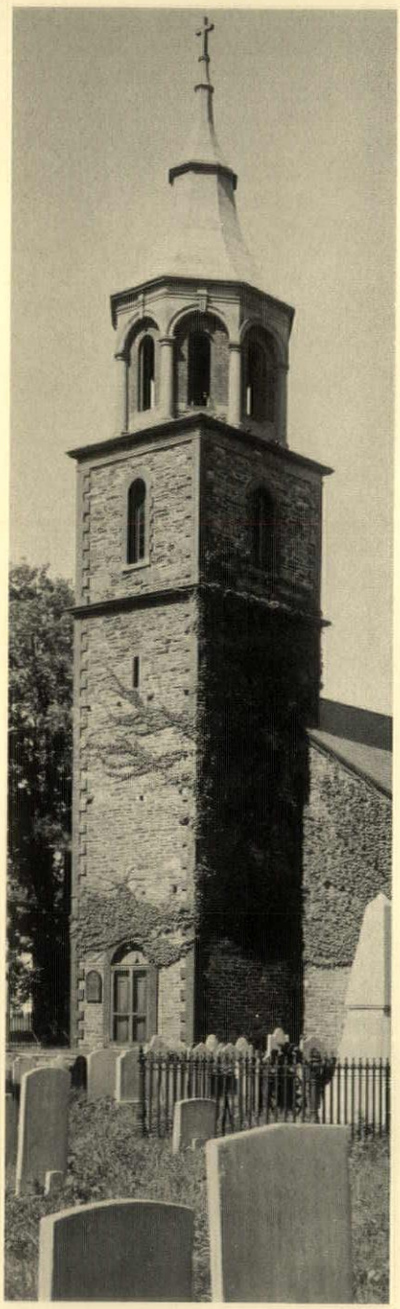




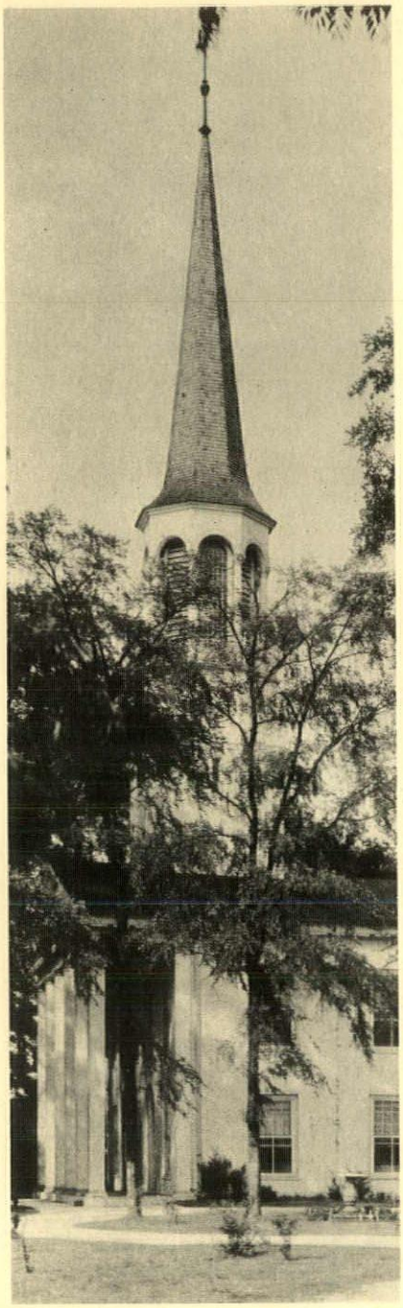
Sprunt Memorial Presbyterian
Church, Chapel Hill, N. C.
Hobart Upjohn

Central Presbyterian Church, Montclair, N. J. Carrère & Hastings

St. Paul's Episcopal Church, Eastchester, N. Y. Built 1764

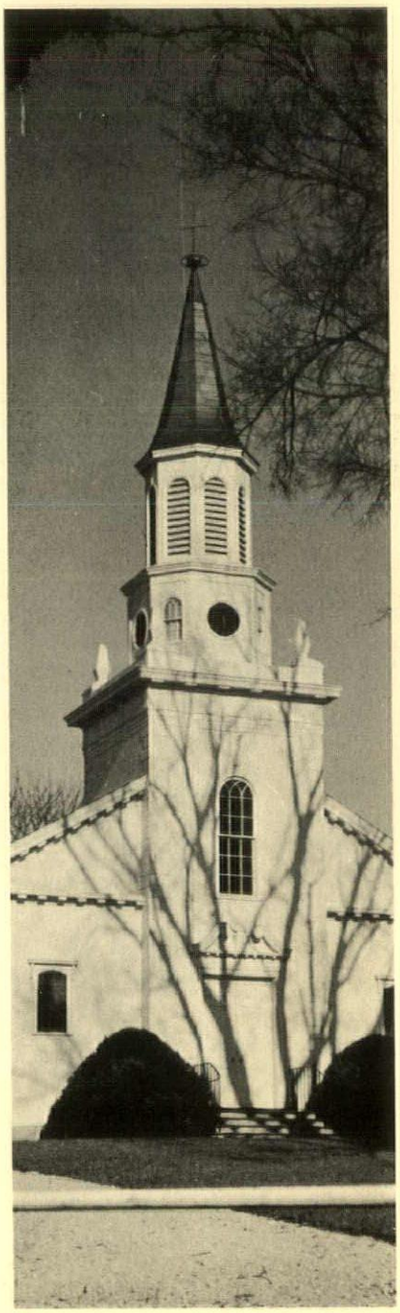


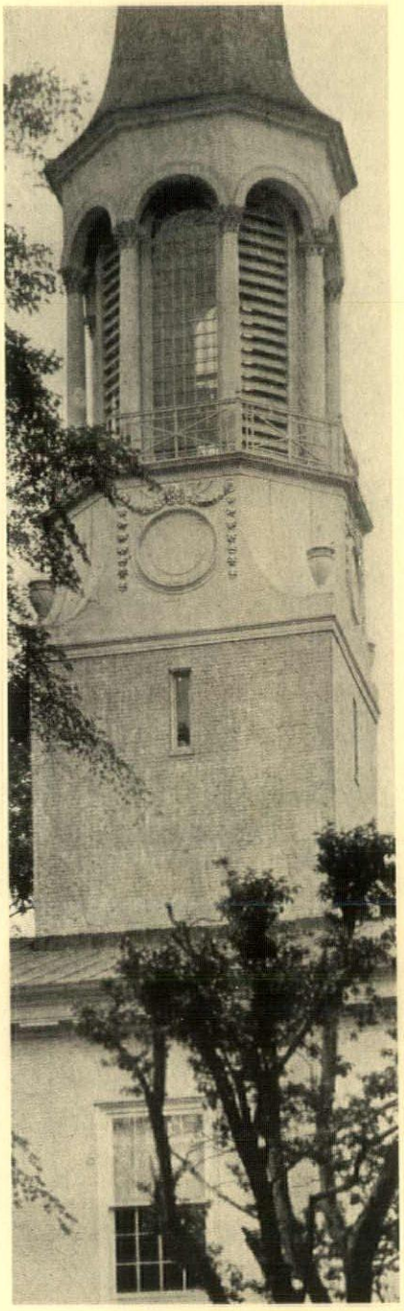
Chapel, New Jersey College for Women, New Brunswick, N. J. Ludlow & Peabody



Presbyterian Church, Fayetteville, N. C.
Hobart Upjohn

Dutch Reformed Church, Brookville, Long Island
Delano & Aldrich

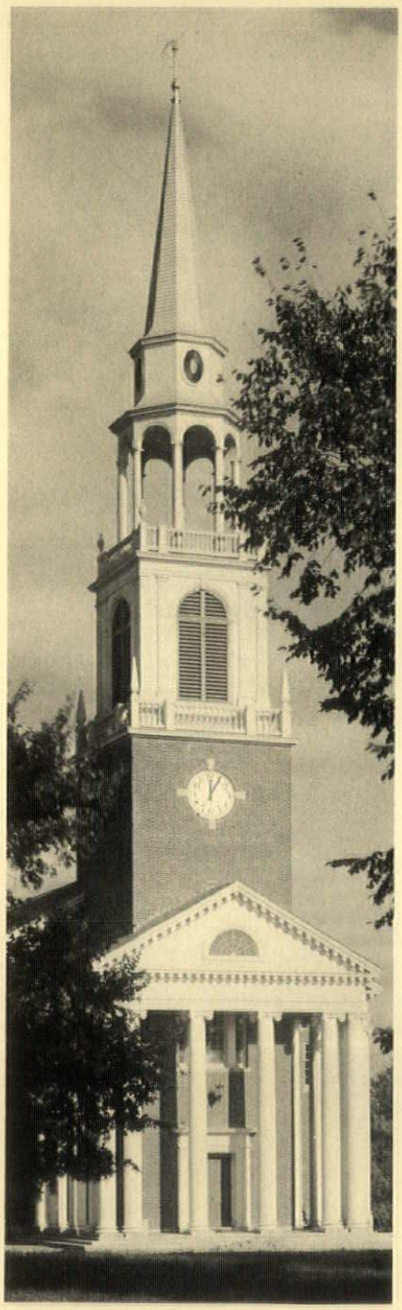


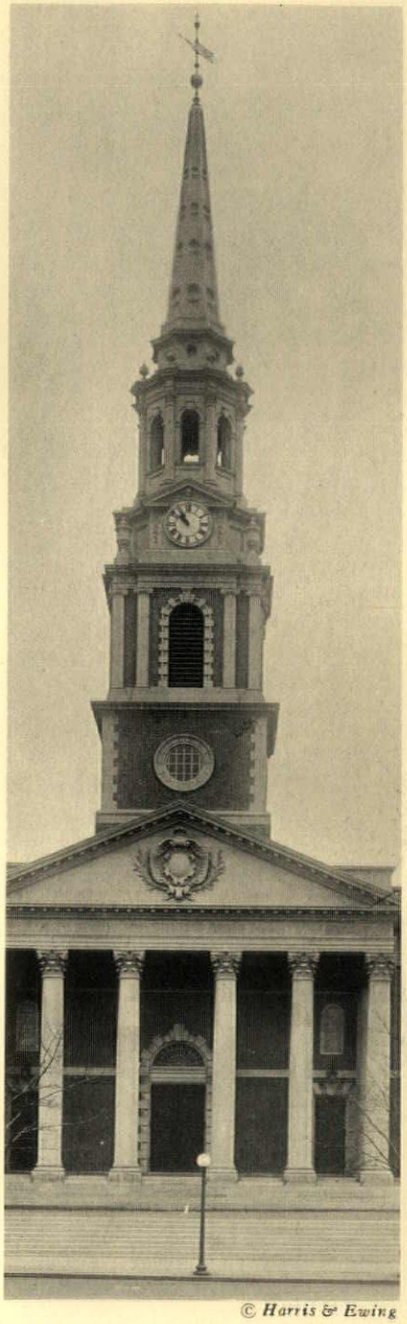


Tower Detail, Presbyterian Church, Fayetteville, N. C.
Hobart Upjohn

St. Paul's Chapel, New York City
Built 1756. Macbean

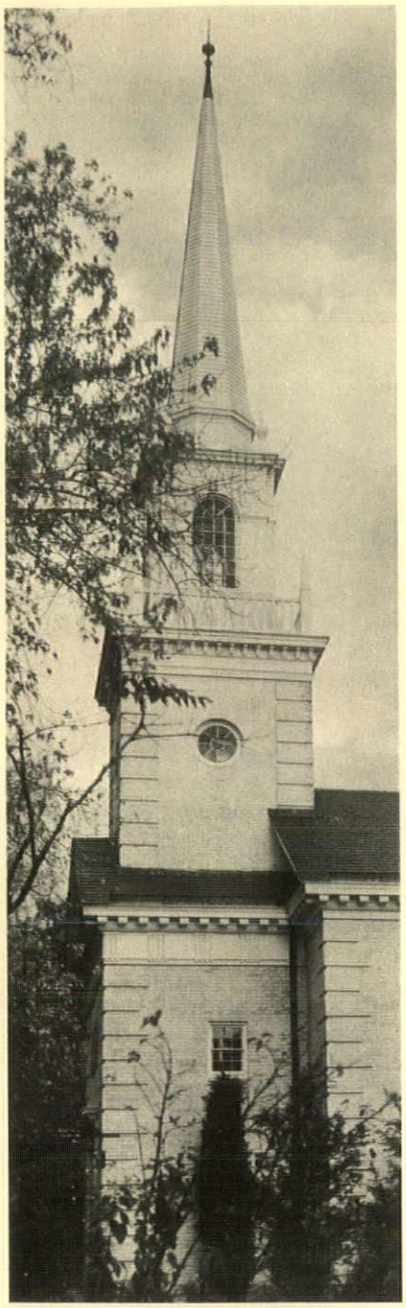
Chapel, Wheaton College,
Norton, Mass.
Cram & Ferguson





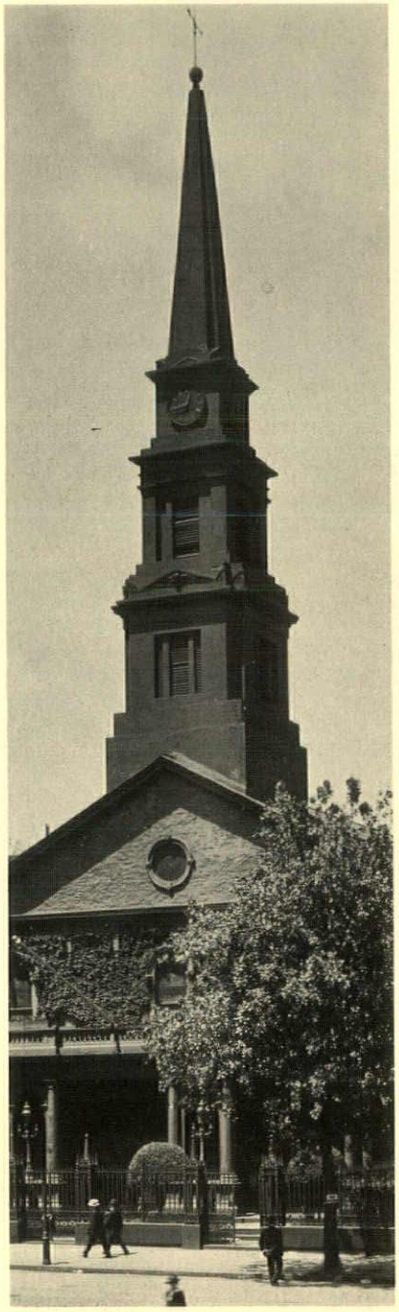
© Harris & Ewing

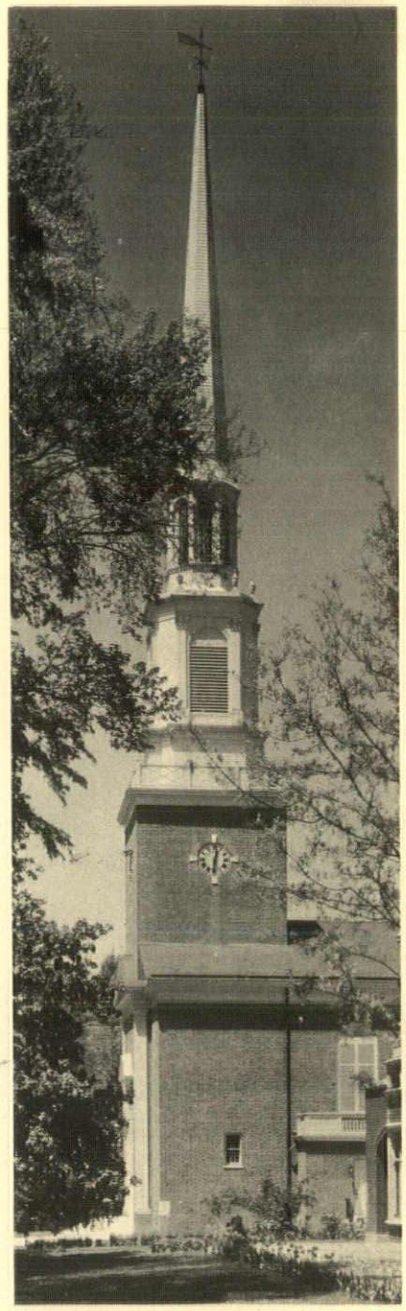
All Souls' Unitarian Church,
Washington, D. C.
Coolidge, Shepley,
Bulfinch & Abbott



The Wyoming Church,
Wyoming, N. J.
Hobart Upjohn

St. Mark's-in-the-Bouwerie,
New York City. Spire built 1827
Ithiel Town

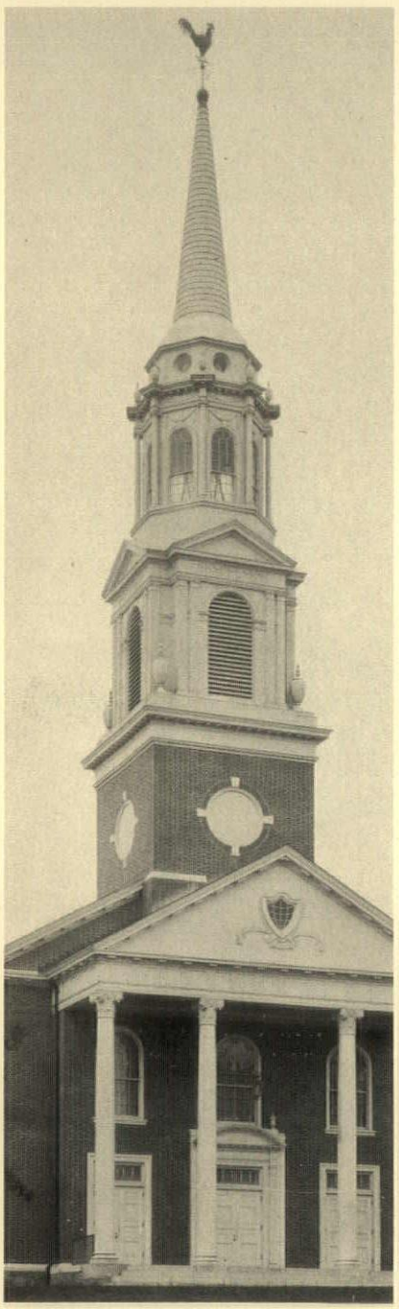


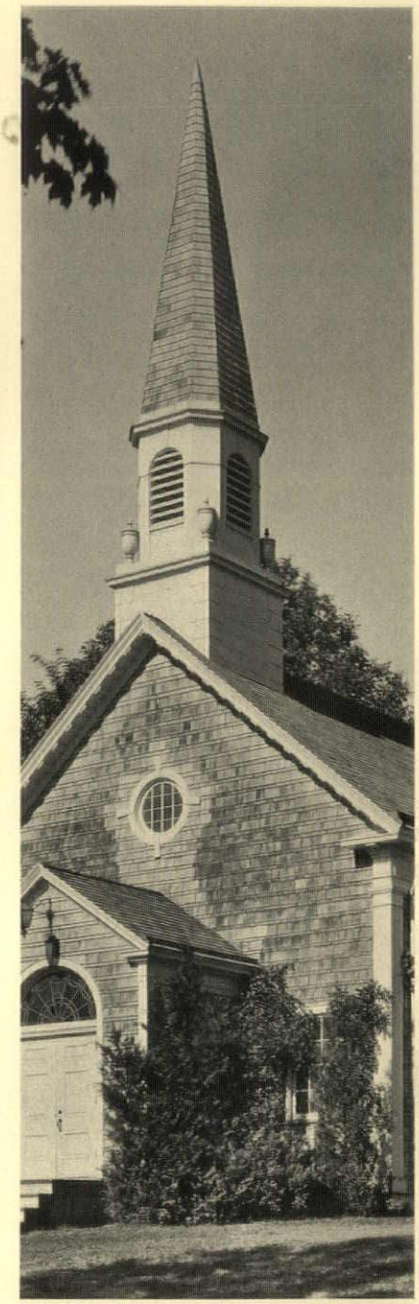


First Presbyterian Church,
Concord, N. C.
Hobart Upjohn

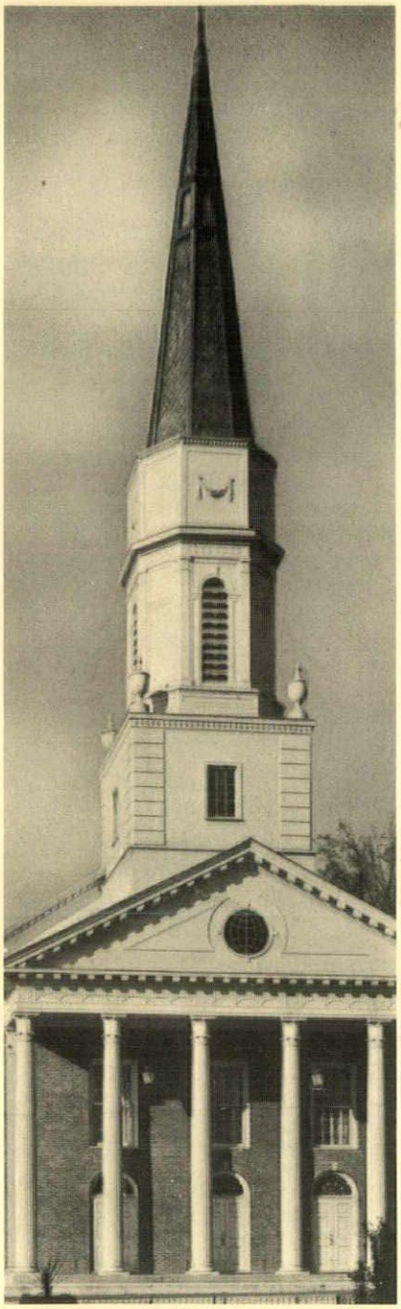
St. John's Evangelical Lutheran Church, Easton, Pa.

Storrs Church and Community House, Storrs, Conn.
Delbert A. Perry & Earle K. Bishop



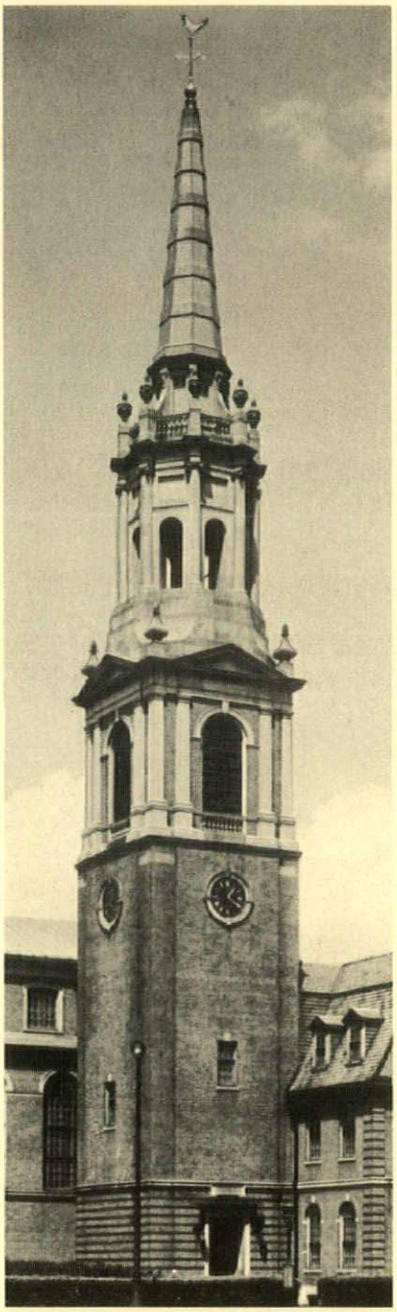


Christian Science Church, Pleasantville, N. Y.
Oscar Vatet



Springfield (Vt.) Congregational Church. Aymar Embury II

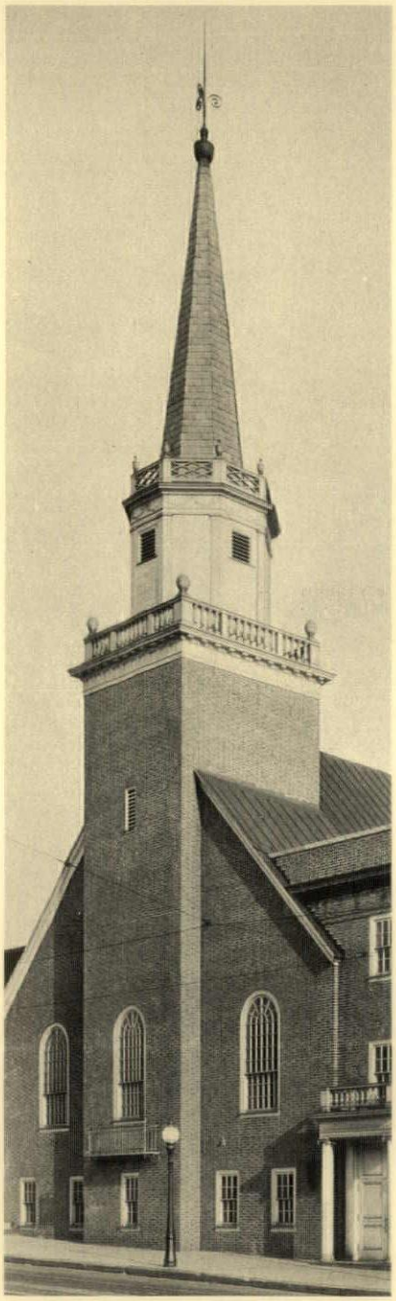
The Second Church, Boston, Mass. Cram & Ferguson



Central Union Church, Honolulu, H. I. Cram & Ferguson

All Souls' Unitarian Church,
New York City
Hobart Upjohn

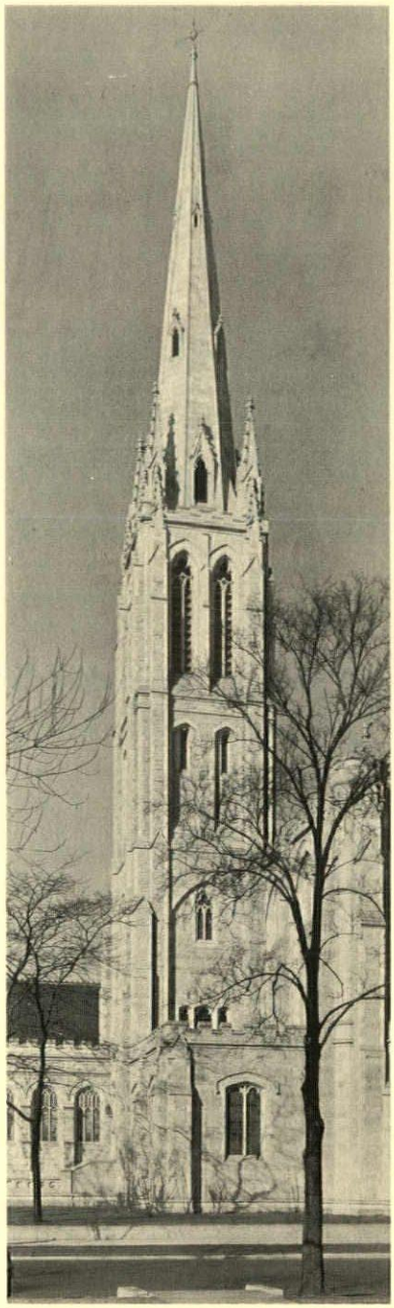
Fort Avenue M. E. Church,
Baltimore, Md.
Henry Powell Hopkins

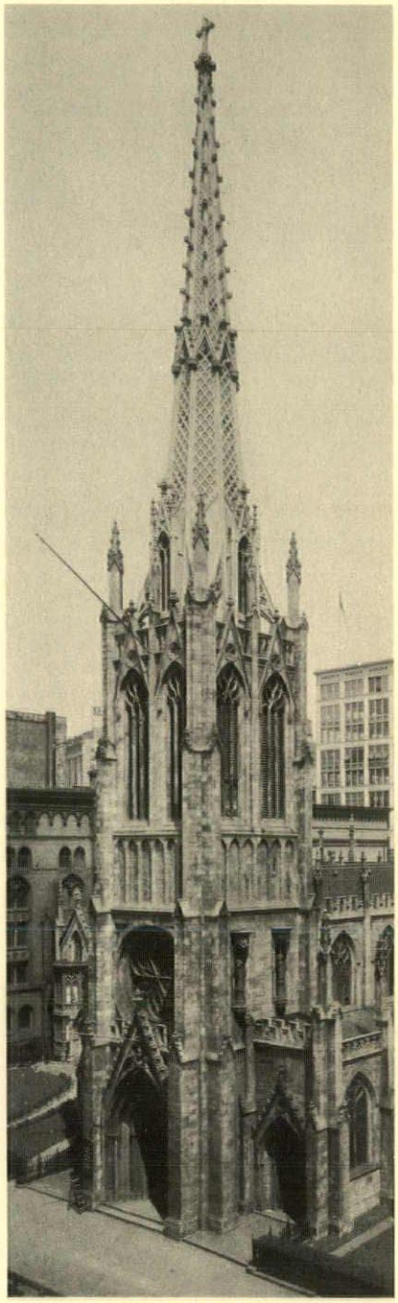


Choate School Chapel,
Wallingford, Conn.
Cram & Ferguson

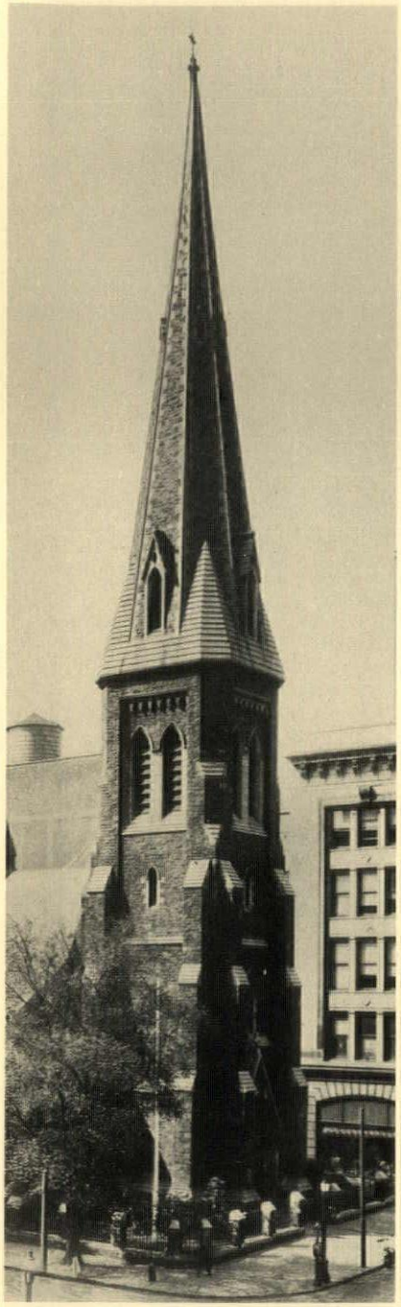
Trinity Church, New York City
Richard Upjohn

First Unitarian Church,
Chicago, Ill.
Denison B. Hull



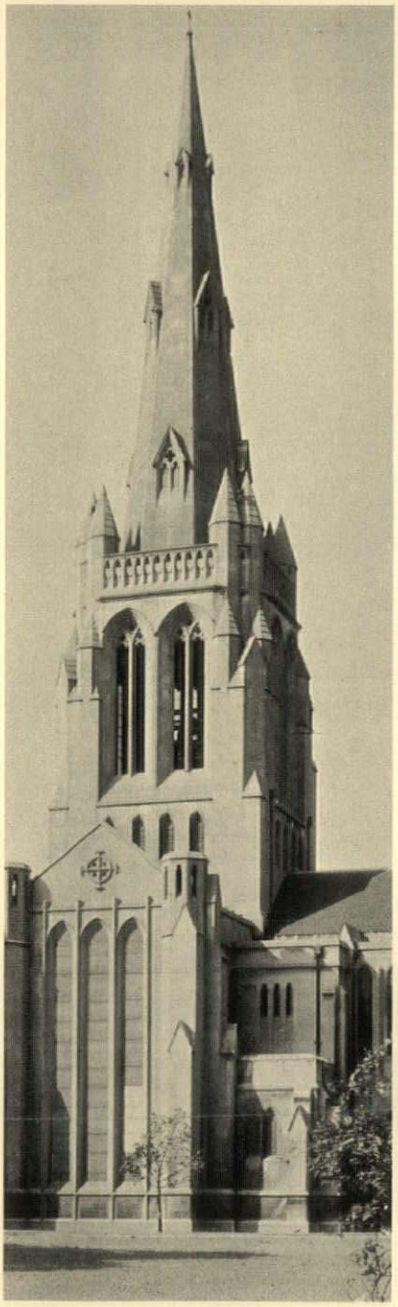


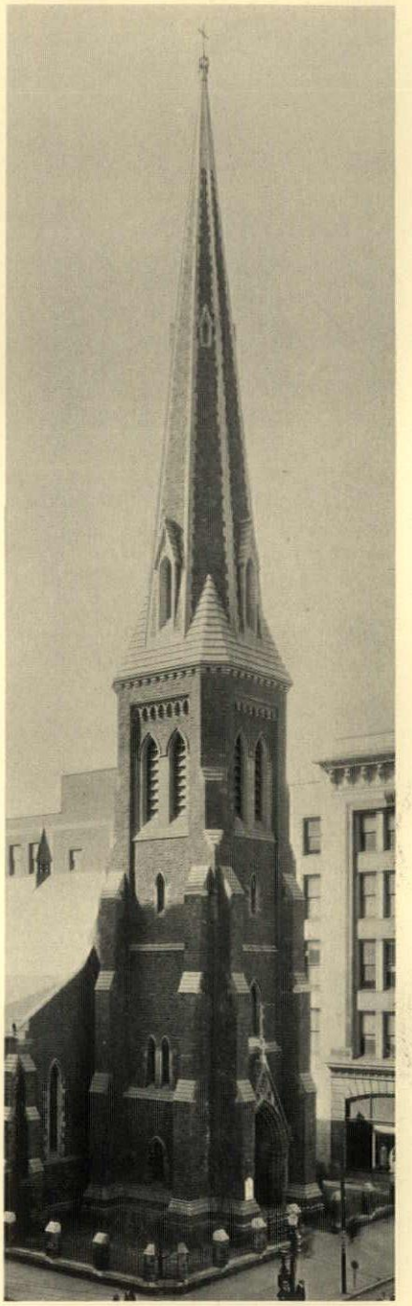
Grace Church, New York City
W. W. Renwick



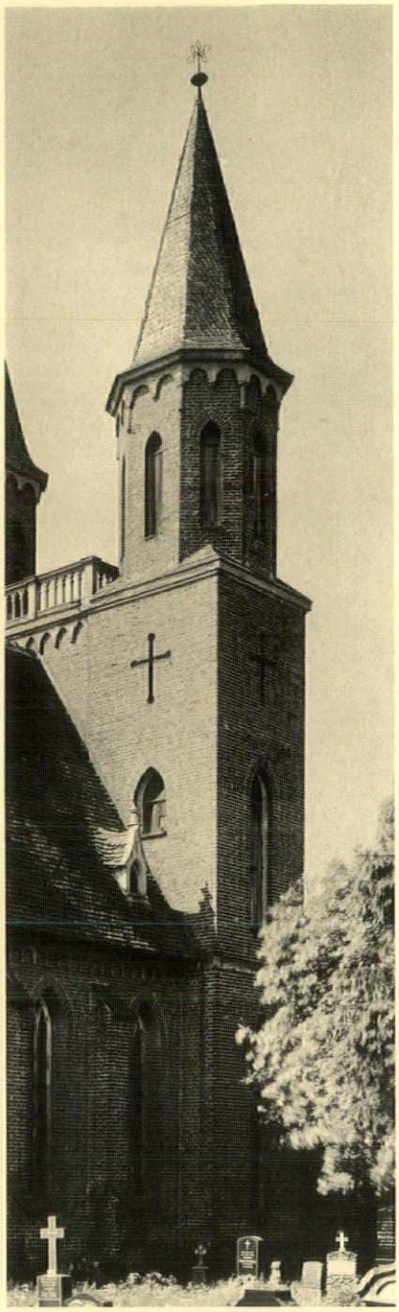
Grace Church, Utica, N. Y., before alterations

Calvary Church, Pittsburgh, Pa. Cram & Ferguson



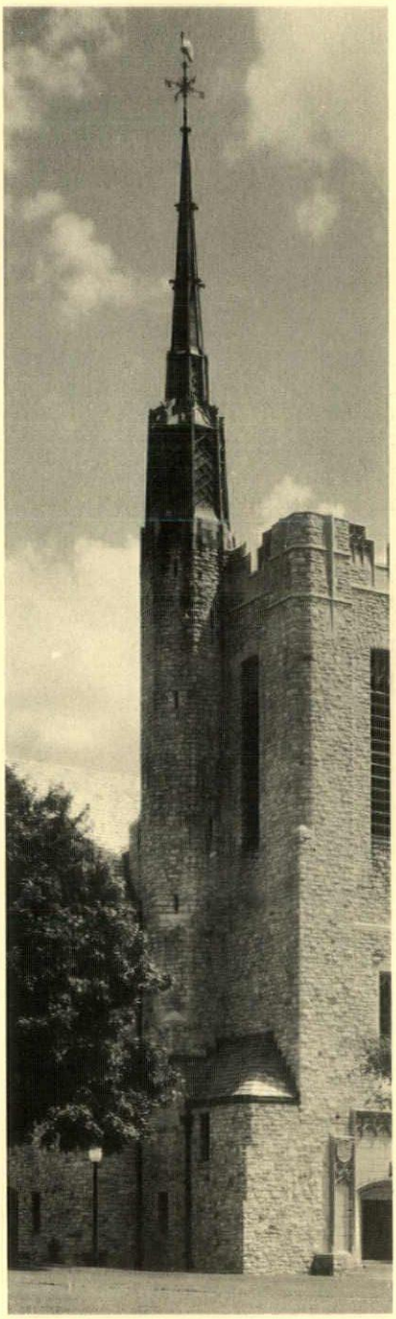


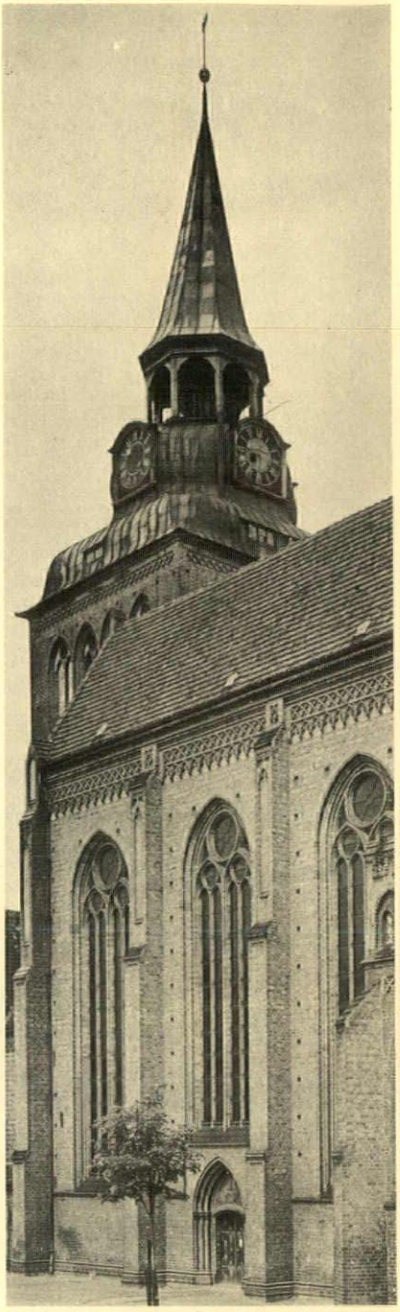
Grace Church, Utica, N. Y., the spire rebuilt. Hobart Upjohn



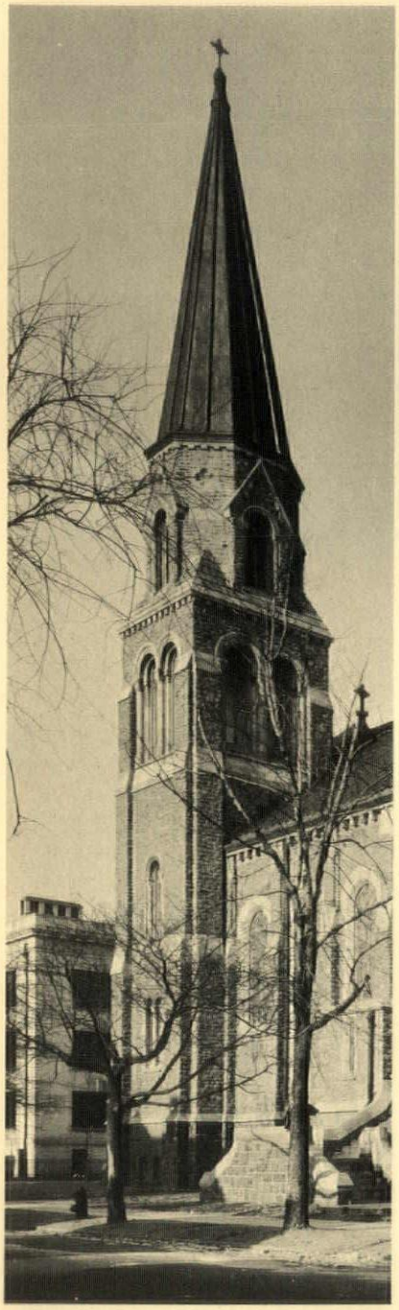
Church at Vorkerode, Germany

Gunnison Memorial Chapel,
St. Lawrence University,
Canton, N. Y.
B. G. Goodhue Associates



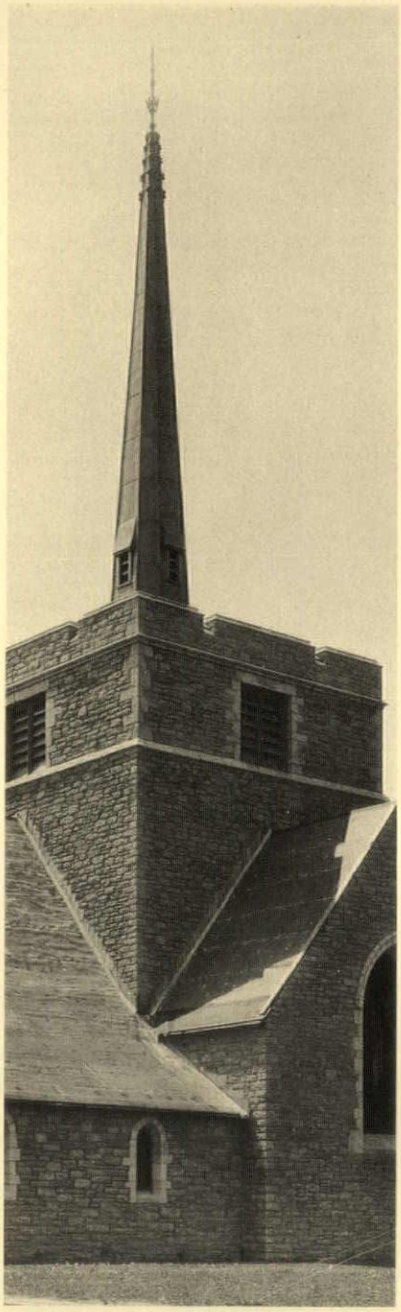


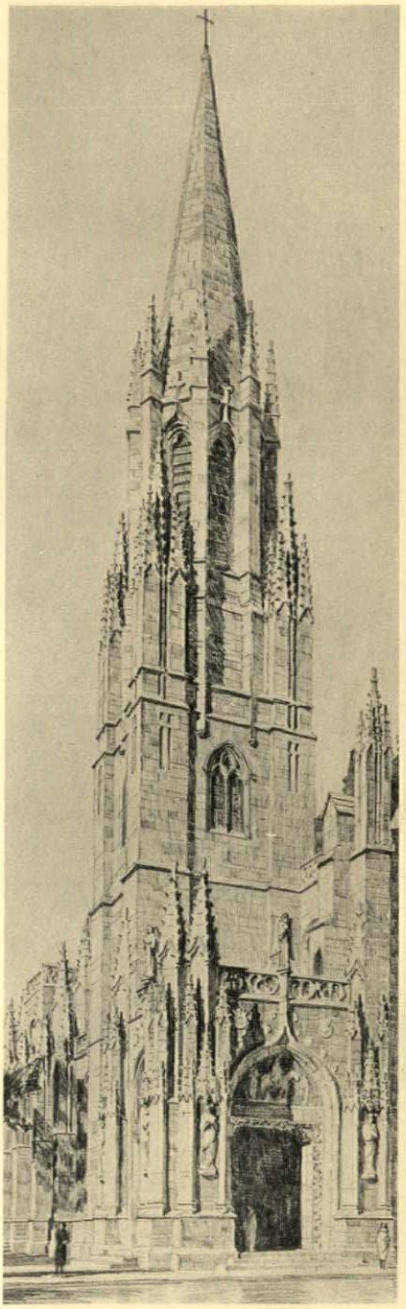
Pfarrkirche Güstrow, Germany



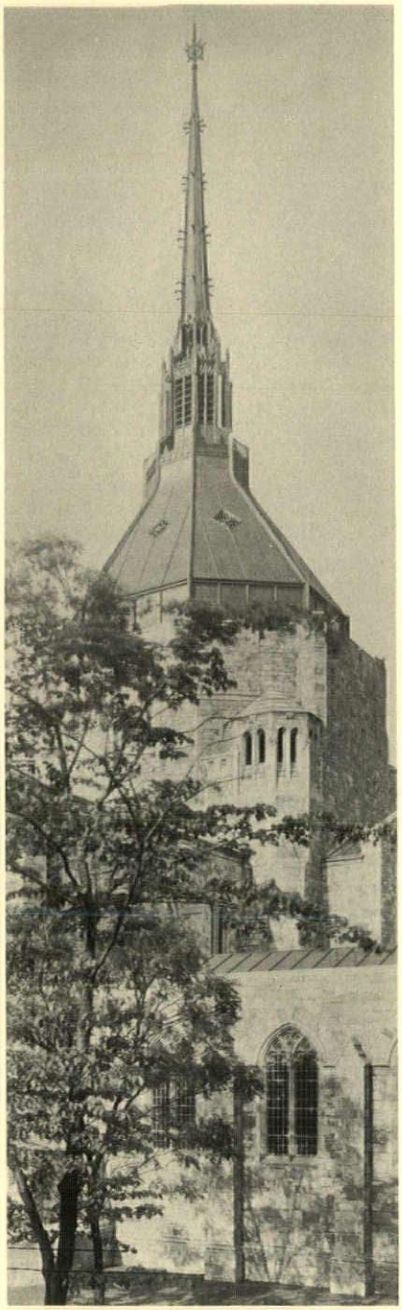
Church of St. Catherine of Alexandria, Brooklyn, N. Y.
Emile G. Perrot

Community Church, Mariemont, Ohio
Louis E. Jallade



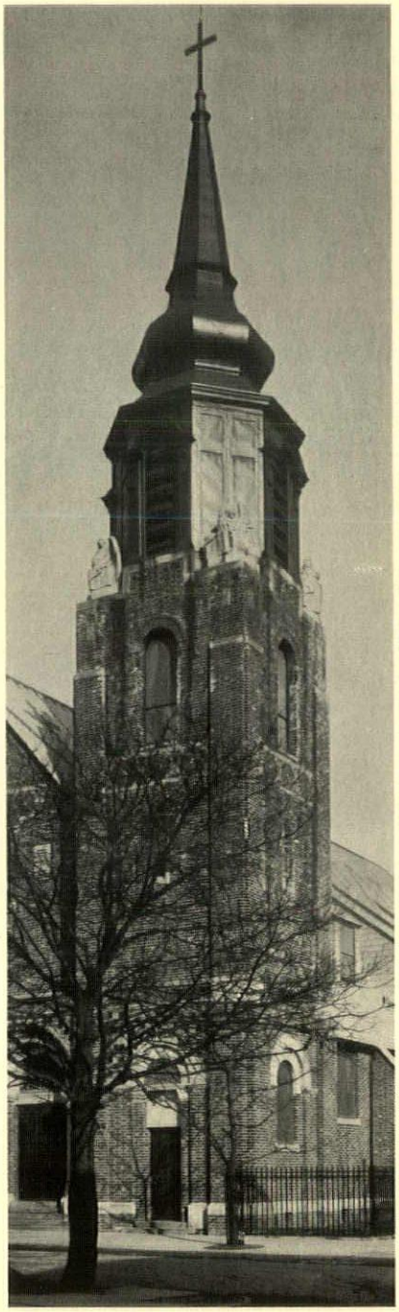


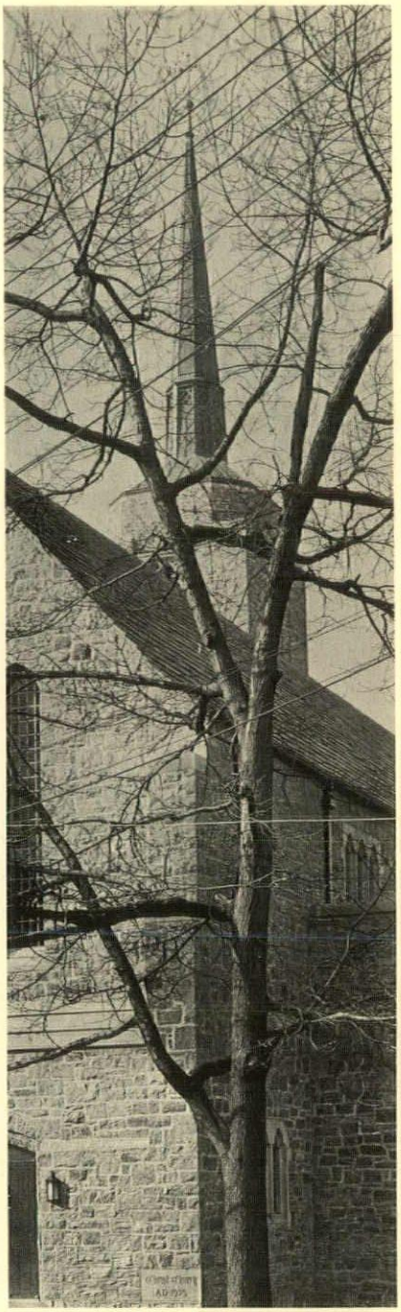
Holy Rosary Church, Pittsburgh, Pa.
Cram & Ferguson



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

St. Thomas's Church,
Woodhaven, Long Island
Gustave E. Steinback





Christ Church, Bronxville, N. Y.
Mayers, Murray & Phillip

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.

CAST STONE

F. 298. Details, Specifications, and Technical Data on Cast Stone are included in a most usable and effectively compiled folder sent us by the Cast Stone Institute, 33 West Grand Avenue, Chicago. The Institute states that a fortunate number of architects may share in the limited quantity reserved for specific request. That means get your request in for early action.

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AIR CONDITIONING PLANNED AND PROVED

F. 299. Clyde R. Place, well-known Consulting Engineer, has written and published an exceptionally interesting book devoted largely to an impartial explanation of the air-conditioning industry from the standpoint of technical requirements and factors in successful operation. The office of Mr. Place, Graybar Building, New York City, has a few copies for those who come up early with their request.

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FOR YOUR ROOF

F. 300. A finely illustrated new book entitled "For Your Roof" features Genasco Standard Trinidad Built-Up Roofing, Genasco Smooth Surface Roofing, and various types of Genasco Asphalt Shingles and Sidings. The Barber Asphalt Company, of Philadelphia, offers a Genasco Roof for every type of building and the illustrations in this new book offer proof of their long-life characteristics.

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FOR SOLVING INDUSTRIAL FLOORING PROBLEMS

F. 301. How, where, and why to use Genasco Trinidad Lake Asphalt Mastic is very well told in a booklet which may be had for the asking from the Barber Asphalt Co., Philadelphia. An impressive list of buildings of various types is included, which gives rather conclusive evidence of the practical and economical use of this product, specifications for the preparation of the mastic, for equipment for applying and for method of application are all given. Where traffic is heavy or constant Genasco Mastic seems to offer the answer, whether it be for Acid-Proof Floors, Breweries, Packing Houses, Terminals, Laundries, Schools, Hospitals, Dairies, Publishing Plants, Public Buildings, or Factories.

❖ ❖ ❖

THE WEATHERSTAT

F. 302. Is the aptly suggestive name of a new improved temperature control which is said to respond to the four weather factors: temperature, wind direction, wind velocity, and solar radiation. The Weatherstat, made by the Minneapolis-Honeywell Regulator Co., of Minneapolis, is announced as applicable to almost any type of building having one of the following types of heating system: 1. Steam or vapor furnished at a relatively constant pressure; 2. Steam or vapor furnished intermittently by a gas or oil burner; 3. Hot water under forced circulation. Being subject to the same weather influences and the same relative rate of heating and cooling, the temperature throughout the zone or building and the temperature within the control housing will maintain a fixed relationship.

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MATCHING LAMPS AND FIXTURES

F. 303. The New York Lamp Show included in its exhibit four rooms which were the scene of the debut of the Chase Brass & Copper Co., Waterbury, Conn., into the lamp field. Following a theory similar to that of their lighting fixtures, they make available to the public, at moderate price, a complete line of lamps in each of the main decorative periods: Early English, Early American, Empire, Georgian, Federal, Classic Modern, and American Adaptations. Thus it is possible for any room to have lighting equipment to match its general decorative scheme—and for lamps and fixtures to match or at least harmonize in spirit. The Chase Co. will be glad to co-operate with you on your lighting problems, and send you literature on their activities.

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FLOORS WITHOUT FLAWS

F. 304. An alliterative title, eh what? And to a useful booklet on Modern Maintenance Methods for the preservation of all sorts of floors. It is published by the A. C. Horn Co., Long Island City, N. Y. There is discussed an individual treatment for each kind of floor, a practical guide for bringing an old floor into condition approximating a new untreated floor and thereafter properly maintaining it.

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I-BEAM-LOK

F. 305. A substantial new 24-page book entitled I-Beam-Lok Armored Bridge Roadway Slabs and Heavy Duty Floors tells of the research to develop a lighter, more rugged, less costly, and highly efficient combination steel and concrete bridge roadway slab or heavy duty floor. The Carnegie Steel Co., Pittsburgh, does this, taking advantage of the well-known principle of the strength of the I-beam. This construction is illustrated, engineering features and design formulas are given as well as load tables and other details. It is a book of reference value.

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DELCO-HEAT CONDITIONAIR

F. 306. Announcement is made of the addition of the Delco-Heat Conditionair to an extensive line of heating equipment, which includes the Delco-Heat boiler and Delco-Heat conversion oil burner. The Delco Appliance Corporation, Rochester, N. Y., subsidiary of General Motors, offers Model DH, unit construction, stream-line heat transfer unit of "tear-drop" design. Made to purify air, humidify, automatically heat, circulate air and change it completely every ten to fifteen minutes. Furniture steel cabinet in jade and Killarney green with chromium trim and no exposed mechanisms.

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THE THERMOPANE PROCESS

F. 307. A revolutionary type of double-glazed window, known as Thermopane, which substantially reduces heat loss through windows and prevents frosting in cold weather, has been acquired by the Libby-Owens-Ford Glass Co., of Toledo. The Thermopane Co. will be the name of the subsidiary. The product consists of two panes of glass so fitted to each window sash as to provide a dehydrated air space, reducing the flow of heat and cold. It is expected to have a widespread effect in the construction of windows in new houses and buildings. Test data, details, etc., will be sent on application.

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PUMPS AND COMPRESSORS

F. 308. Three bulletins from the Pennsylvania Pump and Compressor Co., Easton, Pa., present the essential facts concerning the practicability, economy, and adaptability of their various pumps, pumping units, air compressors, and air-cushion valves. Such definite items as repair costs and service charges for a ten-year period on typical installations are given, showing precisely the economy of operation of their equipment. The sectional views, capacity charts, dimension tables are useful and readily understandable. These bulletins will come in handy.

❖ ❖ ❖

MULTI-USE BLACKBOARD FIXTURE

F. 309. Latest in the Austral Sales Corporation, 101 Park Avenue, New York City,

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line is the new Multi-Use Blackboard Fixture, usable as a blackboard, as a display board, as an art easel, or as a corridor exhibition board. The classroom can be made adaptable for Art, Music, Nature Study, Craft, Exhibition—a two-minute transformation. It obviates the need of many individual rooms. In any school or place where lectures or exhibits are held this new fixture will be of inestimable value. You will want complete data.

❖ ❖ ❖

G. E. ITEMS

F. 310. *Furnace for Gas*—a furnace line consisting of two general types—the residential and the commercial. Booklet complete with dimensional drawings, capacity tables, and specification directions.

F. 311. *"It's in the Air"*—booklet on G. E. Air Conditioning equipment developed by G. E. research and resources.

F. 312. *A Home that Will Stay Modern*—how to achieve that is discussed in interesting booklet.

❖ ❖ ❖

NEW TYPE VENTILATOR

F. 313. News has been released of a device known as the Dexter "Heat Valve," designed for lowering interior building temperature without aid of mechanical apparatus. This new ventilator, just placed on the market by the Swartwout Co., of Cleveland, is suggested particularly for residences, schools, and semi-commercial buildings. The Heat Valve is installed along the ridge of the roof and is designed to be unnoticeable.

❖ ❖ ❖

NEW BOILER

F. 314. A new Spencer Magazine Feed Boiler to be known as the C. N. Spencer has just been announced as an addition to the complete line of Spencer Magazine Feed Boilers. The new boiler will burn chestnut size anthracite or coke—and is designed to meet the demand among people of limited income for heating equipment offering the advantages of magazine-feed boilers.

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AIRTEMP CONDITIONER

F. 315. You no doubt have seen the publicity released on the new Chrysler air conditioning equipment. We have received for review an interesting leaflet on the Airtemp Conditioner. It promises real air conditioning at a price that makes it practical. Certainly a development of the Chrysler engineers is at least worth looking into. Copies of the literature descriptive of this latest addition to the air-conditioning market may be had from the Temperature Corporation, 405 Lexington Avenue, New York City.

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IDEAL HEATING FOR COTTAGE OR SKYSCRAPER

F. 316. A very complete catalog advocating Radiator Heat as the ideal heat for cottage or skyscraper mentions chiefly special characteristics of special Ideal Boilers. The book, published by American Radiator Co., 40 West 40th Street, New York City, is a comprehensive treatment of the American Radiator Line.

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GAS REFRIGERATOR

F. 317. Interesting little booklet from the Pyrofax Division of Union Carbide and Carbon Corporation, 30 East 42d Street, New York City, tells how the same gas that does your cooking will make the cold to refrigerate your foods. A model is shown of the new Electrolux Gas Refrigerator which operates from the Pyrofax system. Interesting note states that there are no cost extras—pay only for gas consumed.

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GLASS BLOCK SERVICE STATIONS

F. 318. A description of the recently completed Glass Block Service Station in Birmingham, Mich., for the Gibson Auto Service, Inc., shows not only its unique attractive quality valuable for catching the favorable glance of the motorist, but also its economies of construction and maintenance. The glass blocks, about twice the size of an ordinary brick, used in the walls and tower were made by the Owens-Illinois Glass Co., Toledo, Ohio. The bricks were laid by ordinary masons without any special training or equipment. The office portion and tower are of yellow and blue applied-color glass block which offers a striking appearance by day and glows with translucence from interior lighting at night. The Owens-Illinois Glass Co. will be glad to send you further information on the use of glass blocks in structural work.

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LAMP CORD WITH "ZIP"

F. 319. "Zipcord" is the trade name of a new product—a lamp cord with a novel "zip" construction that permits easy and safe opening of the sheath and separation of the conductors. Developed by the Wire Division of the U. S. Rubber Co., 1790 Broadway, New York City. Zipcord has been approved by the Underwriters Laboratories, Inc.

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GATE VALVE IMPROVEMENT

F. 320. Announcement is made of a new line of Kennedy Heavy Standard Bronze Gate Valves, designed for 150 pounds working steam pressure and 250 pounds working water, oil, or gas pressure. This valve, known as Fig. 23, made by the Kennedy Valve Mfg. Co., Elmira, N. Y., is said to have all the special features of design recently incorporated in the Kennedy Fig. 27 Valve, but is heavier throughout to withstand the higher working pressure for which it is intended. Additional information will be gladly furnished on request.

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EXIDE NEWS

F. 321. The feature article of the June "Exide News," published by the Electric Storage Battery Co., of Philadelphia, is a brief description of air conditioning as applied to Railway Passenger Cars. There are interesting discussions and chart illustrations of the three basic cooling systems: 1. Water Ice; 2. Mechanical Compressor; 3. Steam Jet.

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September, 1934

MODERN DUTCH BUILDINGS

BY F. R. YERBURY

A typical illustration reduced in size: Office premises of the Netherlands Trading Company, Amsterdam. The late K. P. C. de Bazel, architect.

The Modern Movement started in Holland by Berlage at the beginning of the century and developed with such success by the late de Klerk, has produced a school of architects who, working on consistent lines, have created a really national Modern Architecture. This volume will give full evidence of this. Although much of this work, which has been carried out in Holland, has been in connection with the great housing blocks, themselves deeply fascinating, there has been great activity in all kinds of buildings for schools —particularly interesting are those at Hilversum by Dudok—churches, libraries, office buildings, institutions, shops, etc.

Here and there are fine examples of commercial and industrial buildings in concrete, but in the main brick is the medium—brick used in such a way as to be the admiration of the whole architectural world.

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In September, 1932—the very depth of the depression—ARCHITECTURE published the first New Products Number* ever issued by any publisher. It was so interesting and genuinely helpful that a second New Products Number* was published in February, 1934.

In response to this display of the latest and newest products of 1934, over 17,000 leads have been passed on to producers all over the country by ARCHITECTURE. This proves the definite, positive, business-getting power of ARCHITECTURE. Advertisers today demand publications that will *produce,* and production is based on Plus Readership.

The Plus Readership of ARCHITECTURE is attested in the office of Albert Kahn, Inc., of Detroit, whose more important work includes the Fisher Building, Detroit; General Motors Building, Detroit; the Ford, Packard, Hudson, Chrysler and General Motors Industrial Buildings in Detroit; the H. J. Heinz Co., Pittsburgh; the newspaper plants of *The Detroit News, Detroit Free Press* and *Providence Journal;* the University of Michigan Hospital, Ann Arbor, and the General Hospital, Youngstown; the Ann J. Kellogg School, and the Kellogg Auditorium and Junior High School of Battle Creek, Mich.

Name	Do You Read Architecture?	Do You Read the Advertising Pages?
Albert Kahn, Member of Firm	Yes	Yes
Louis Kahn, " "	"	"
Moritz Kahn, " "	"	"
W. C. Bunce, Chief Arch. Draftsman	"	"
F. A. Fairbrother	"	"
Henry Altmiks	"	"
G. K. Scrymgeour	"	"
Norman K. Robinson	"	"

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R. W. Hubel, Chief Designer	"	"
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* New Products Number, Original, Sept., 1932. New Products Number, Repeated, Feb., 1934.

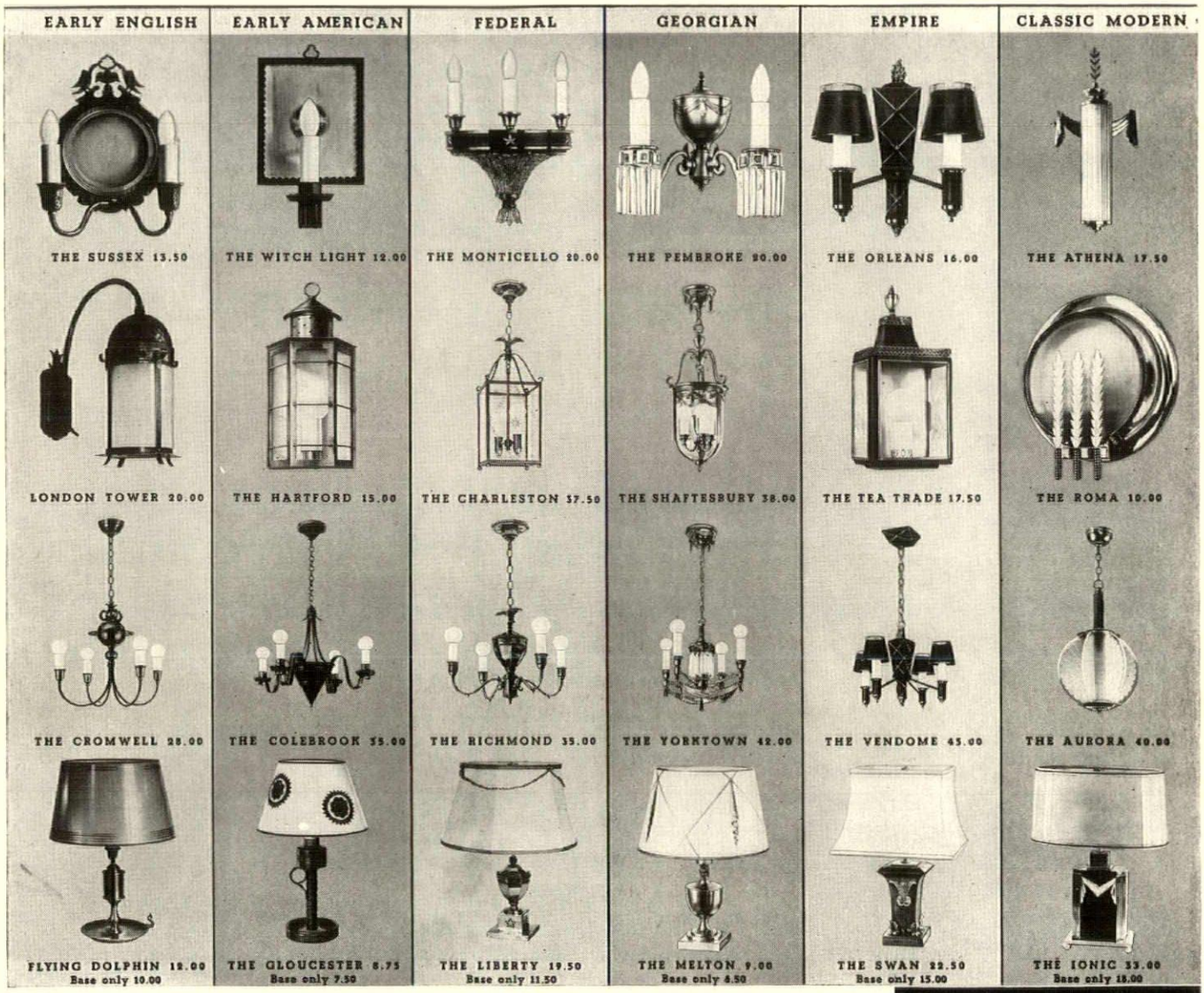
ARCHITECTURE

TO KNOW ARCHITECTURE IS TO USE IT . . . IT *IS* DIFFERENT

CHARLES SCRIBNER'S SONS, *Publishers*

NEW YORK CHICAGO CLEVELAND BOSTON PITTSBURGH LOS ANGELES SAN FRANCISCO

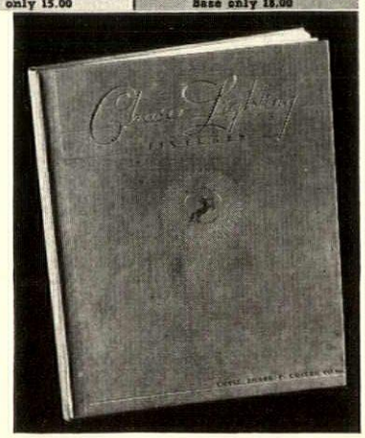
For Remodeling — Chase Lighting Fixtures meet all requirements...in Beauty...in Price...in Pure Period Designs



Creating a new interest in home lighting through the beauty of their period designs and their reasonable prices, Chase fixtures have won the whole-hearted approval of home-owners. This interest is reflected by the thousands of letters which pour in, asking for full information on Chase Fixtures and Lamps.

With every Chase national advertisement talking "refixturing" each passing month sees these new fixtures better known and in greater demand by all types of home-owners. Because of this national advertising, your recommendation of Chase Lighting — for either remodeling or new building—will be welcome.

CHASE LIGHTING



If you have not written for the new Chase Fixture Catalog, a complimentary copy has been reserved for your office. Write Chase Brass & Copper Co., Incorporated, Lighting Fixture and Lamp Division, Chase Tower, 10 E. 40th St., New York.

GREATER FLEXIBILITY IN DESIGN WITH BETHLEHEM LIGHT SECTIONS

A substantial tonnage of Bethlehem Light Sections was used in the Public Works Office Building, Boston, Mass.; E. T. P. Graham, Architect; E. A. Tucker, Engineer; George B. H. Macomber Company, General Contractors; Lehigh Structural Steel Company, Fabricators

BETHLEHEM LIGHT SECTIONS, including beams, columns, joists and stanchions, supplement Bethlehem's line of heavier structural shapes and provide engineers with a greatly increased range of sections with which to work out economical designs.

The principal field of application for these light sections lies in buildings with relatively light live floor loads, such as apartment houses, school buildings, hospitals, hotels and similar structures. In buildings of this type Bethlehem Light Sections greatly facilitate the development of floor designs with a well-balanced combination of load-carrying capacity, rigidity, and thickness of floor slab, providing the utmost economy in use of steel.

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Although floor construction is the major field of usefulness for Bethlehem Light Sections, they have similar advantages when used as purlins in roof construction, as columns in upper stories where loads are lighter, as struts between columns. In fact, Bethlehem Light Sections may be used to advantage wherever it is desirable to combine rigidity with relatively close spacing of the structural members, the loads not justifying the use of heavier shapes.

Perhaps your next job will offer opportunities to take full advantage of the economies made possible by Bethlehem Light Sections.

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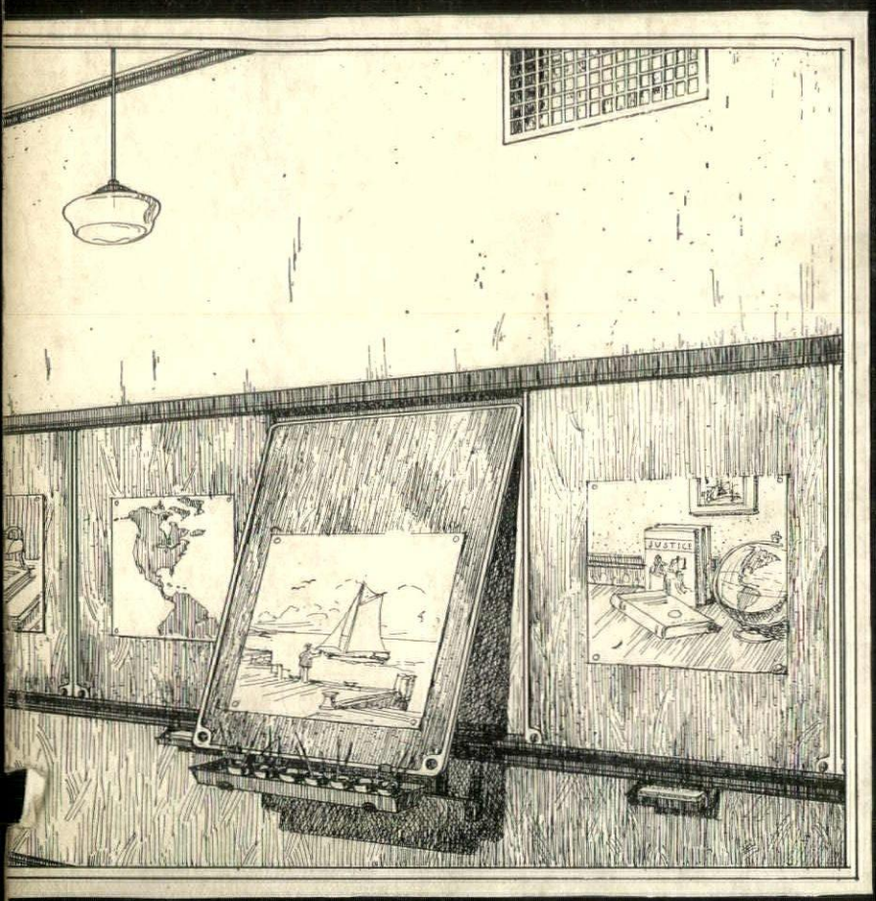
District Offices: Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Indianapolis, Milwaukee, New York, Philadelphia, Pittsburgh, St. Louis, St. Paul, Washington, Wilkes-Barre, York. *Pacific Coast Distributor:* Pacific Coast Steel Corporation, San Francisco, Seattle, Los Angeles, Portland, Honolulu. *Export Distributor:* Bethlehem Steel Export Corporation, New York.

BETHLEHEM STEEL

The NEW AUSTRAL *MULTI-USE* BLACKBOARD FIXTURE



AUSTRAL has developed another STANDARD for schools, perfected by the Austral Engineers who produced the AUSTRAL Window, Wardrobe and Folding Partition. The New AUSTRAL Multi-Use Blackboard Fixture is ultra-modern and is the first attempt to make blackboard space more flexible. It is the result of research and study in order to make the classroom more practical and convenient and to facilitate, improve and inspire instruction.

The same fine qualities and service, which are found in all AUSTRAL products, are equally a part of this new Blackboard Fixture. A complete description is contained in a new folder which will gladly be sent on request.

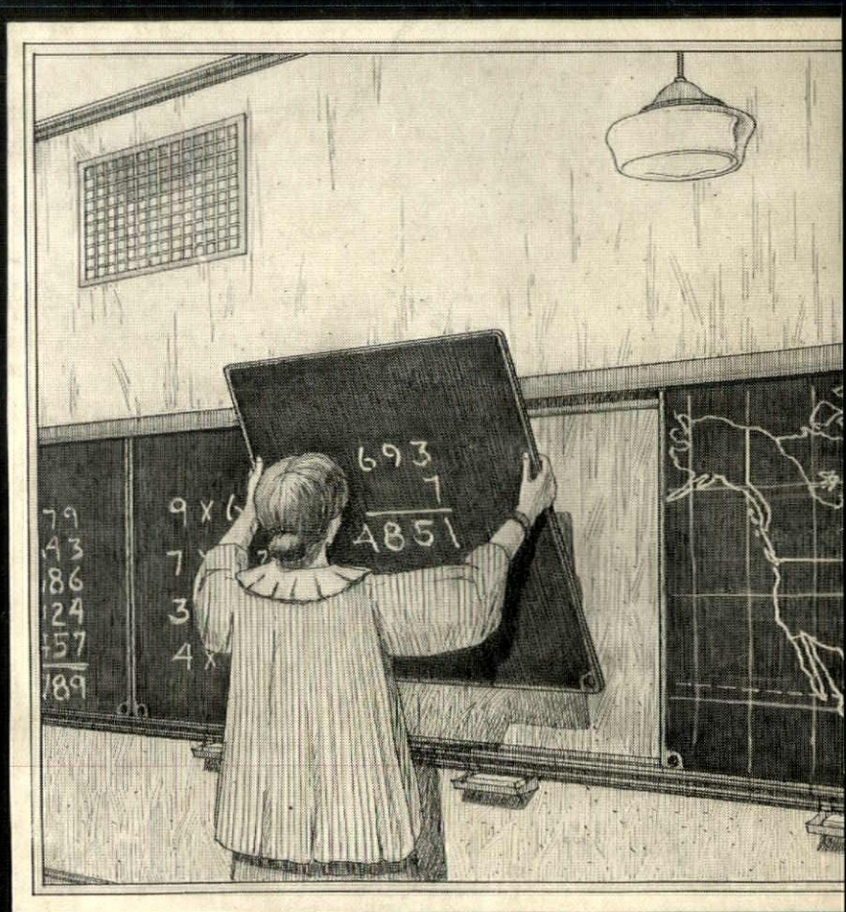
1. The New AUSTRAL Multi-Use Blackboard Fixture transforms a single room within a minute's time into a place adapted for Art, Music, Nature Study, Craft, Exhibition, and many other purposes, thus saving the additional cost of individual rooms for these purposes, and the use for class purposes of such rooms in existing buildings.

2. It unifies interest in one room and aids the teacher in imparting knowledge.

3. Either Blackboard area (as shown opposite) or, when reversed, Corkboard area (as shown above) are available. Two metal brackets attached to the chalk rail strip permit the leaf to be brought forward into easel position as shown above. With leaf in vertical position, a board may be placed on the brackets and used as a base for displaying work. Or the leaf may be removed entirely and serve as a display board in corridors or other locations as desired.

4. Even a young student can arrange the AUSTRAL Blackboard Fixture for its various uses. *It is always at the proper visual* height.

5. It is durable, compact, easily installed, works smoothly, and forms an attractive unit in the room.



AUSTRAL SALES CORP.

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