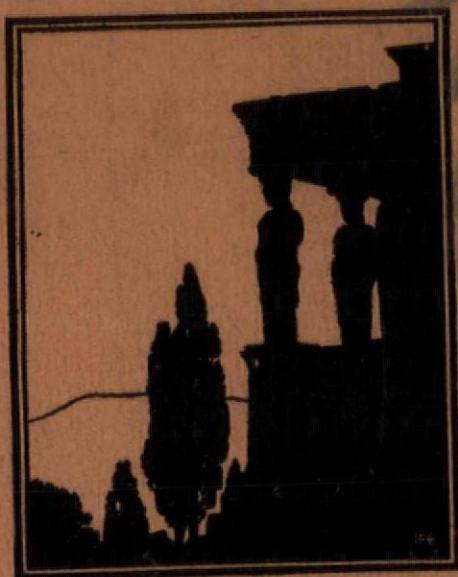


# ARCHITECTURE

*August 1931*



---

Ely Jacques Kahn—an analytical portrait

---

Modern Lighting Sources—Eugene Clute

---

Commensurability and Walls—Ernest Flagg

---

Additions to St. Bartholomew's, New York

---

Portfolio: Bank Entrances

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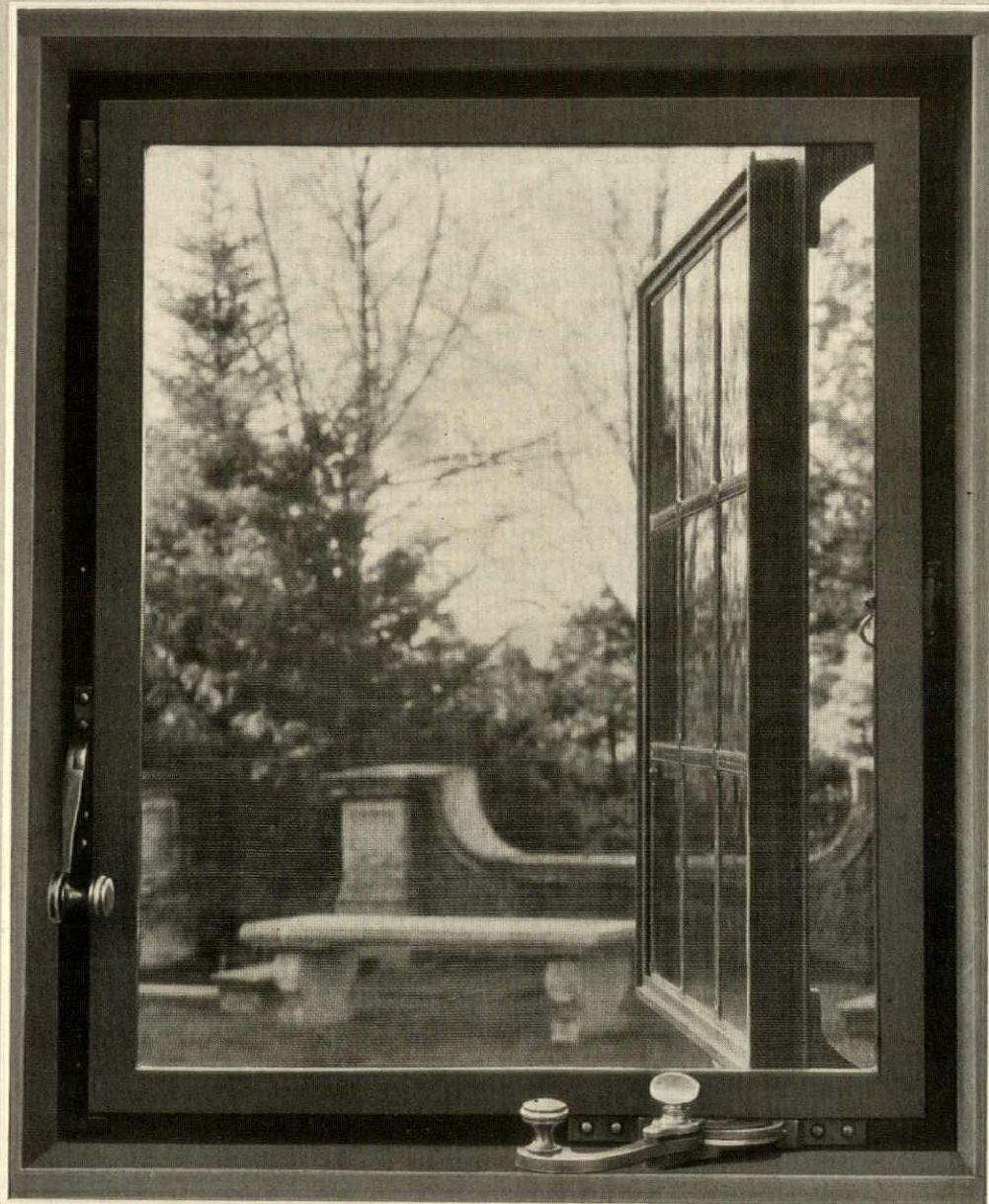
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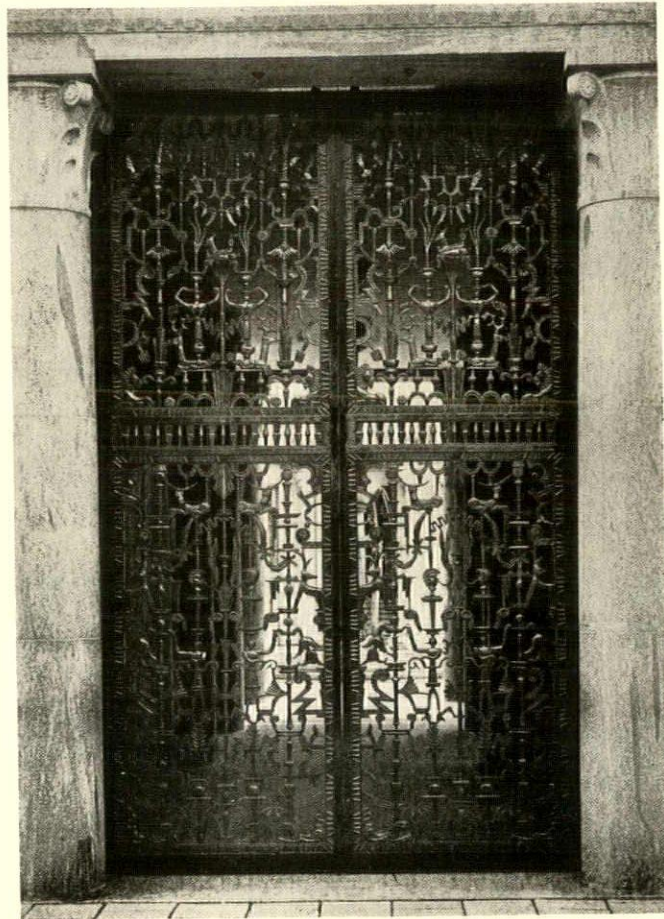
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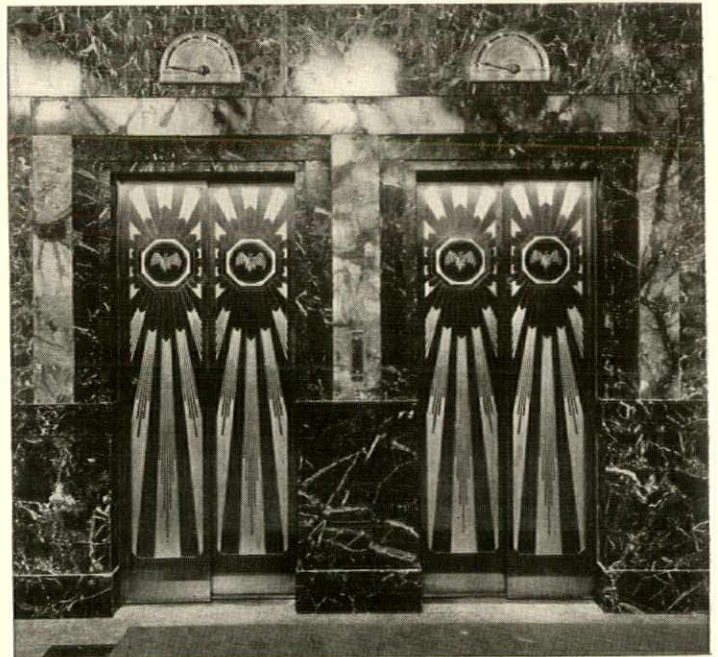
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**I**T IS well known that uniformity of design and finish greatly enhance the appearance of a building. This likewise is true of its furnishings. Carrying this truth to elevators, it is logical that the same concern should furnish the complete elevator installation. And that is why the architect will find the uniformity of design between Otis elevator entrances and cars and fixtures particularly helpful, either in planning a new building or in modernizing an old one. Harmony in Otis design is apparent in the two pictures at the right showing cars and entrance of a recent installation. Also, Otis foundries and shops are amply equipped to produce any special design or finish that the architect may wish. . . . The Otis plan of keeping elevator equipment in perfect running order, making regular examinations and all necessary repairs and replacements, for a flat yearly rate, is a service that is appreciated everywhere.



*The upper picture shows the cars and the lower picture a ground floor entrance manufactured and installed by Otis in the Bacardi Building, Havana. Note the harmony in design and effect between the finish of the cars and the entrance.*



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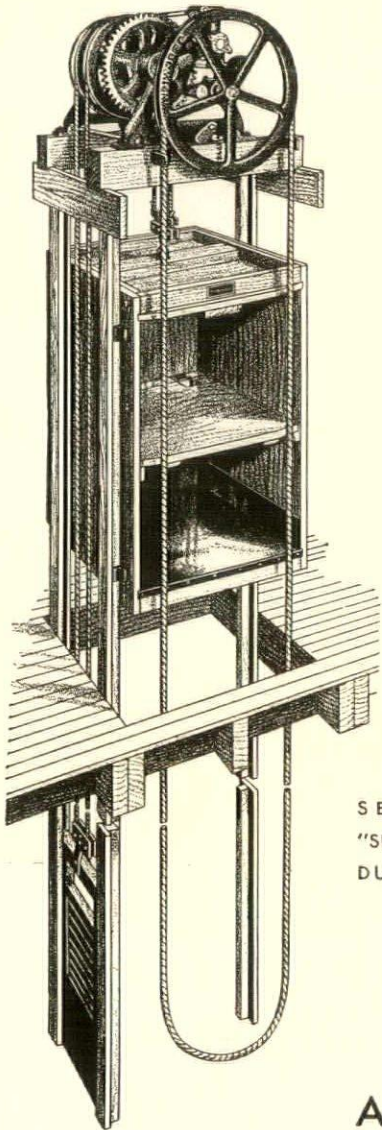
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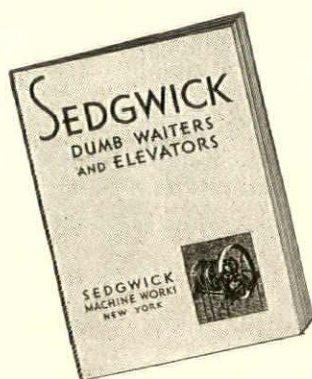
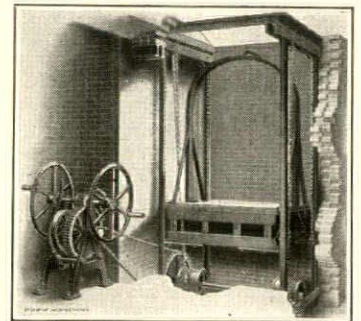
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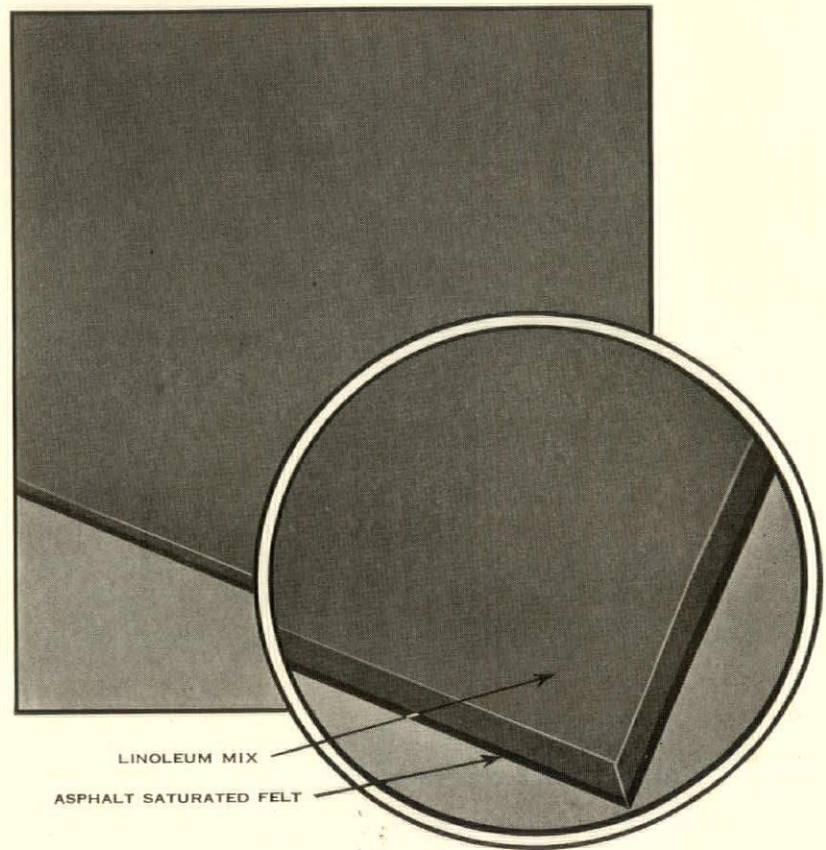
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IT is Armstrong's brand-new floor material consisting of a foundation of asphalt-saturated felt to which is keyed a durable wearing surface of "linoleum mix." It is brown in color and is  $\frac{3}{16}$ " thick. The exceptionally smooth surface is finished by the Accolac Process which protects it against dirt and makes it easy to clean.




## WHY SHOULD I USE IT?

First, because BattleShip Linoflor is highly moisture-resistant. Tests show that it can be used safely in many places where dampness prohibits the use of linoleum. Second, it is a highly *resilient* floor. Whenever you wish to quiet the noise of people walking, BattleShip Linoflor will solve your problem. Third, BattleShip Linoflor can be cemented direct to concrete slabs without the use of lining felt.

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Its durability makes it suitable for all sorts of interiors where traffic is heavy. Use Battle-

ship Linoflor in public buildings, churches, schools, hospitals, offices, stores. If patterned floors are desired, there are attractive designs in lighter gauge Inlaid Linoflor.

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*new low-cost floor material*

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# MODERN

**in  
design**

Reflecting the modern trend in architectural design, the Philadelphia Saving Fund Society Building at 12th and Market Streets will add new interest to the rapidly mounting sky-line of down-town Philadelphia. Howe & Lescaze are the architects and Purdy & Henderson, the engineers for this interesting contrast to the more conventional architecture of the Quaker City.

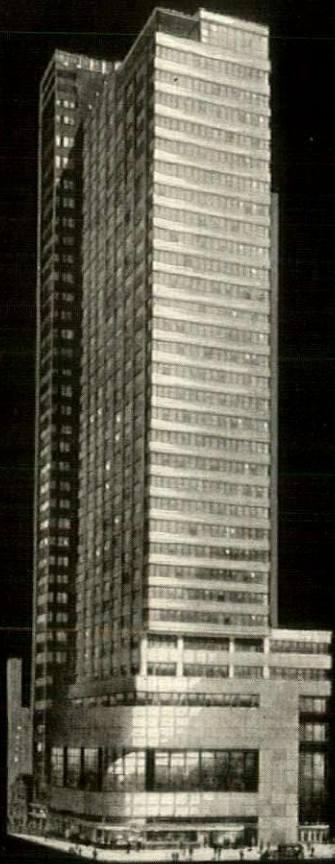
**in  
construction**

Equally modern is the structural framework, embodying CB Sections . . . the latest contribution to structural steel. American Bridge Company are the fabricators and George A. Fuller Company, general contractors. If you are interested in efficient and economical steel construction . . . investigate the merits of CB Sections. Carnegie Steel Company,

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149



# SECTIONS





General Electric Refrigerator Showroom of Judson C. Burns Co., Philadelphia. Architect: Solomon Kaplan. Sealex Floors installed by Wilf Bros.

## How far do you go when you go modern?

The architect of this General Electric Refrigerator showroom decided to be modern to the limit. For the floor, he chose a material that has had no "entangling alliances" with any period style—an entirely new and different effect just developed this year by the makers of Sealex Linoleum.

Veltone effects in Sealex Linoleum lend themselves to interesting and unique floor design. First, because this flooring is intrinsically beautiful—very unusual—very distinctive.

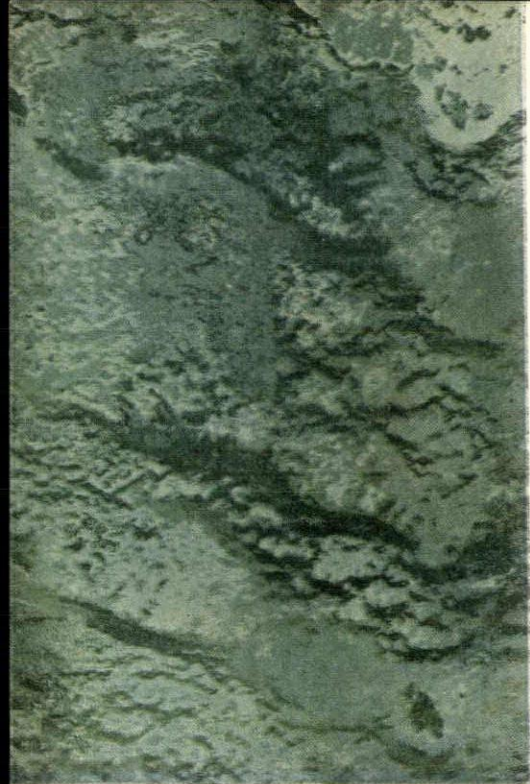
Second, because Sealex Linoleum is a very workable material—easily cut into any required shape. The bold geometric insets which give so much character to the floor reproduced above did not add greatly to its expense.

Veltone effects come in several different color combinations. When laid, they are apparently seamless, an unbroken flow of harmoniously blended colorings from wall to wall.

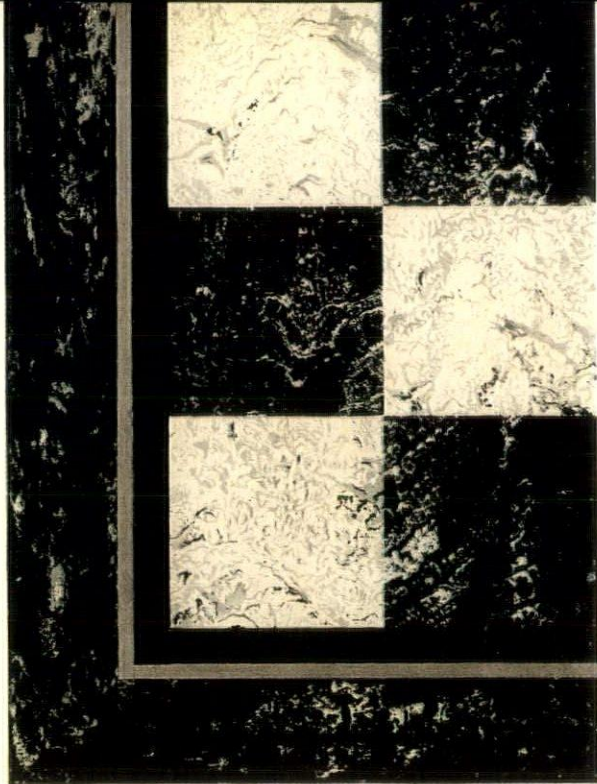
In designing a floor in Sealex Linoleum, it is not necessary to confine oneself to large-scale

(See next page)





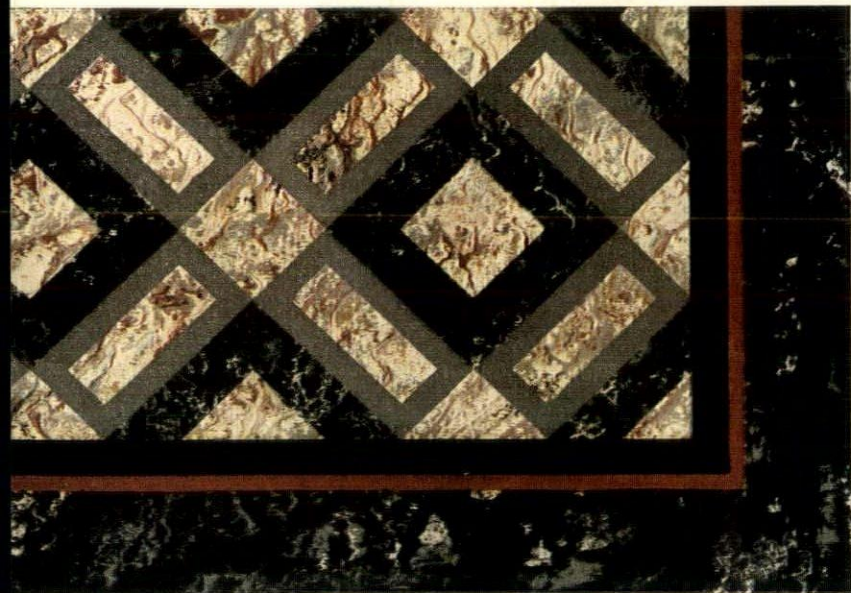
"DELPHI"—SEALEX LINOLEUM 2952



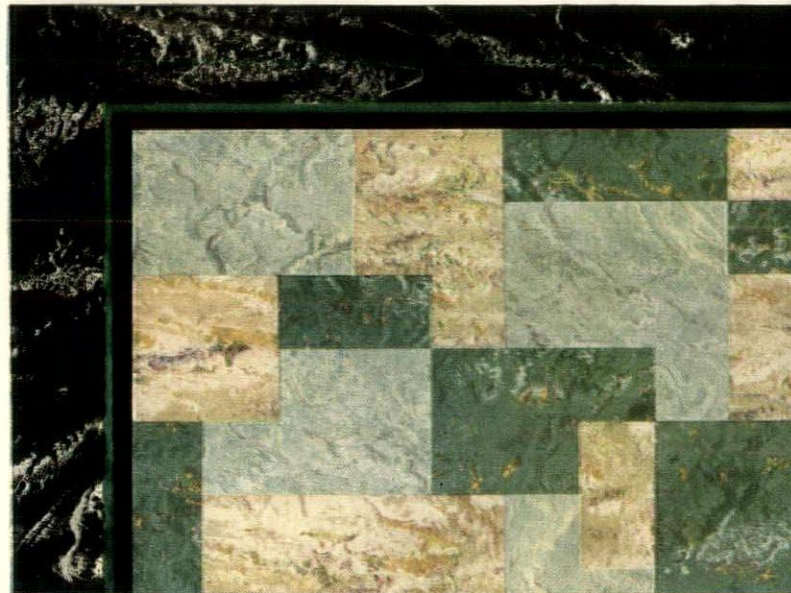
"DEAUVILLE"—SEALEX LINOLEUM 3041



"ARABY"—SEALEX LINOLEUM 2954



"CRUSADER"—SEALEX LINOLEUM 3092



"MIRAMAR"—SEALEX LINOLEUM 3323

figures. The cleverly executed G. E. monogram in the foreground is an example of what the skilled contractors who work in Sealex Linoleum can do for you on cut-to-order insets.

## FOR LARGE AREAS

Congoleum-Nairn offers a number of designs created specially for large area installations. Some of these are reproduced above. Pattern No. 3323, for example, has 54-inch repeats—the widest ever

offered in a standard linoleum design. This makes possible an unusually large-sized tile, measuring 18 by 24 inches. Such patterns are not out of scale even in spacious interiors.

When Sealex materials are installed by authorized contractors of Bonded Floors, they are backed with a Guaranty Bond, issued by U. S. Fidelity and Guaranty Company. Write our Architectural Service Department for any further information you may require regarding these resilient floors.

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Main Entrance to City Bank-Farmer's Trust Co. Building  
Cross & Cross, Architects. See Portfolio Section

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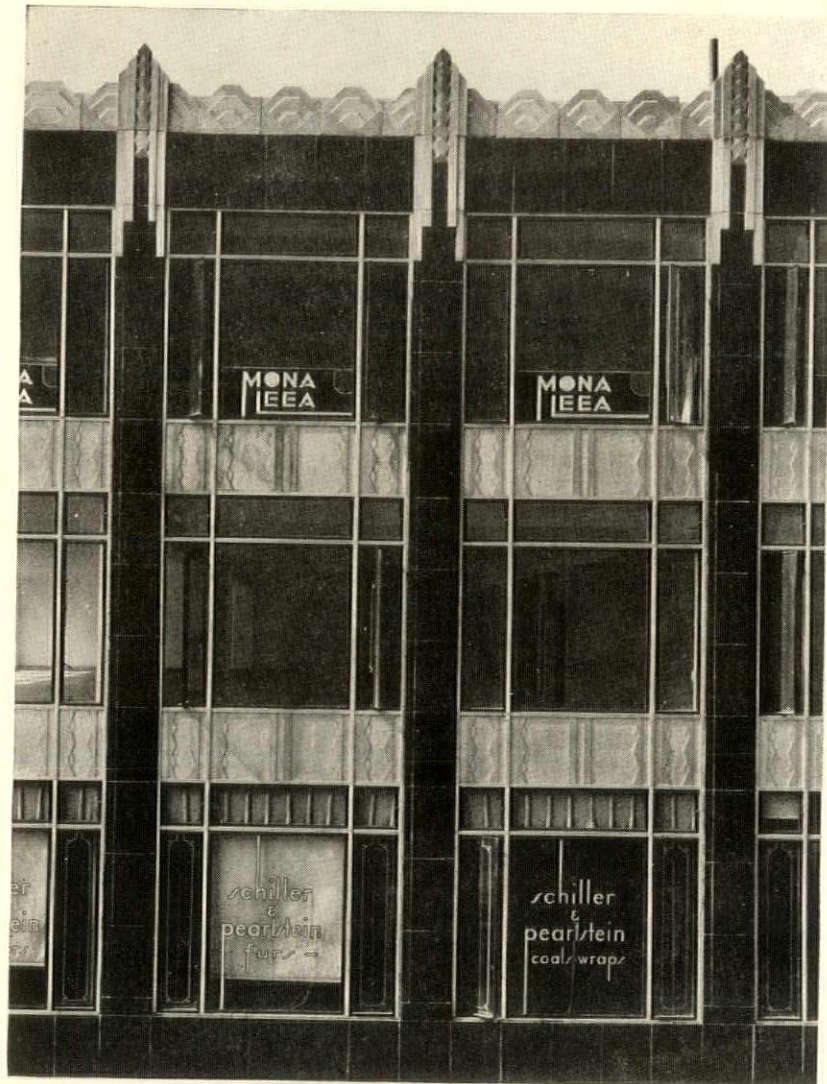
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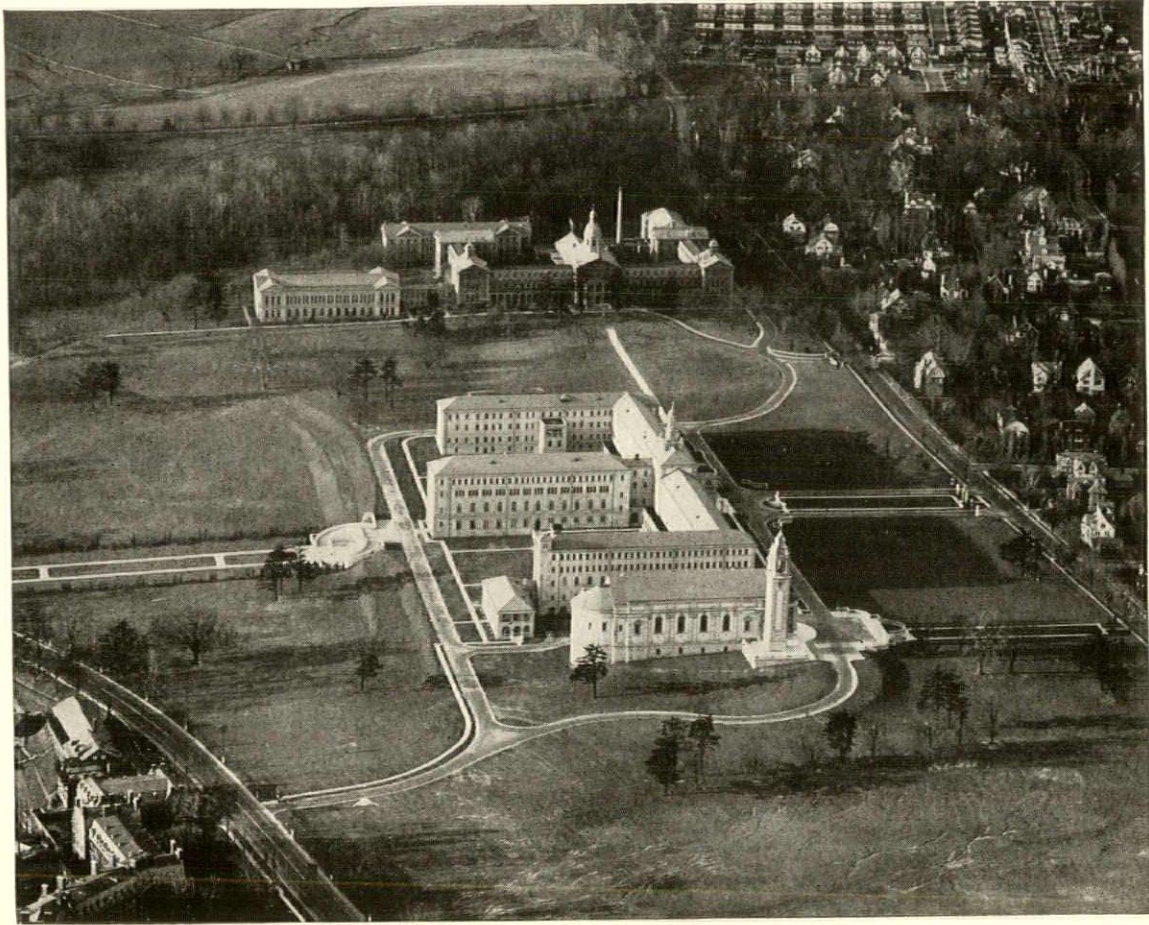
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The Seminary of St. Charles Borromeo, Overbrook, Pennsylvania

New Group in foreground:  
Paul Monaghan, Architect  
Chambersburg Construction Co., Heating Contractors

Alterations to old group in background:  
Hoffman - Henon Company, Architects  
S. Faith & Company, Heating Contractors

## The Seminary of St. Charles Borromeo

is one of many notable University Groups heated by Webster Systems

*Others include Princeton University, Massachusetts Institute of Technology, University of Notre Dame, University of Alabama, William and Mary College, Vassar College, etc.*

When the old group (shown in the background) was modernized three years ago the heating system was equipped with Webster MODERATOR Control—in which steam to the entire old group of buildings is actually Controlled-by-the-Weather through a unique Roof Thermostat. Results in terms of fuel economy, enhanced comfort, ease of operation and low maintenance cost deserve the most careful study by university adminis-

trators and their architects and warrant the prediction that true Control-by-the-Weather will play an important part in university group heating during the next decade.

<sup>a 162</sup>

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# THE BULLETIN - BOARD

## PARIS PRIZE AWARDS

OF the six hundred and fifty-four entrants in this year's national competition, the four finalists were P. A. Bezy, of Columbia University; H. Elarth, of Nebraska; C. F. Guenther, of Cleveland School of Architecture; and C. F. Schillinger, of Princeton University. The award was made to C. E. Guenther by the jury consisting of Messrs. Joseph H. Freedlander, chairman, Harvey Wiley Corbett, C. C. Zantzing, Philip A. Cusachs, Chester Aldrich, John W. Cross, William Adams Delano, Otto Eggers, William F. Lamb, Egerton Swartwout, John V. Van Pelt, and Whitney Warren.

The competition consisted of three eliminative competitions of varying duration. The first required a completely rendered drawing in twelve consecutive hours for a fountain facing the entrance to a metropolitan park, and commemorating the completion of a new water supply for the metropolis. The second competition, of twenty-four hours' duration, called for a rendered plan for a museum and laboratories of anthropology. The final competition, of thirty-six hours' duration, required a sketch solution for a pantheon. Of the eight competitors in this third competition, four were selected to develop and execute the drawings at larger scale, the time being ten weeks.

The Paris Prize in Sculpture was awarded to Ottavio Mastrovito, a student in the Sculpture Department of the B. A. I. D., attending the evening classes, and, during the day time, working as assistant to Lee Lawrie and Albert Stewart. The subject of the final competition was the sculptural decoration of a setback.

In addition to the Paris Prize, the following Honors were awarded: Second Place, Silver Medal and \$100 to George J. Sklar; Third Place, Bronze Medal and \$50 to Michael F. Lantz; Fourth Place, First Mention Placed and \$25 to Anthony Dal Pino; Fifth Place, First Mention and \$10 to Gabriel Kohn; Sixth Place, First Mention and \$10 to Ray M. Wever.

In Architectural Ornament, the season was ended by an important competitive design, entitled: "Bird Fountain Panel in the Louis XVI Style," which was the occasion for the following Honors: First Prize, Silver Medal and \$100 awarded to John Rosalie; Second Prize, Bronze Medal and \$50 awarded to Thomas

Famiglietti; First Mention to P. Mutalipassi, F. Di Bugno, M. Monteleone; Mention to J. A. Campo and G. Rosalie.

Other Annual Awards at the end of the school year were as follows: Trustees' Prize, \$50 for the best ornament during the year, to Maurice Arata; Silver Medal and \$50 for best composition during the year, exclusive of the Paris Prize, to Anthony Dal Pino; Bronze Medal and \$25 for the second best composition during the year, exclusive of the Paris Prize, to Anthony Dal Pino.

The following constituted the jury: Ronald H. Pearce, Henry R. Sedgwick, John V. Van Pelt, Philip A. Cusachs, Robert G. Eberhard, John De Cesare, Charles G. Peters, Gaetano Cecere, George T. Brewster, Ernest W. Keyser, Ulric H. Ellerhusen, Adolph A. Weinman, Wheeler Williams, Albert Stewart, Lee Lawrie, and Edward McCartan.

## BOSTON ARCHITECTURAL CLUB

AT a recent meeting of the Boston Architectural Club Atelier, the following officers were elected for the coming year: Massier, Russell H. Brown; Sous-Massier, George S. Lewis; Treasurer, Joseph Di Stefano, Jr.; Scribe, Robert Minot.

## BROOKLYN CHAPTER, A. I. A.

AT the May meeting of the Brooklyn Chapter, A. I. A., the following prizes were awarded in the competition of the Chapter's student affiliates. This was the sixtieth annual competition, and called for a parkway bridge. First prize, \$75, to Robert Hillier; second prize, \$50, to Robert Edwards; third prize, \$25, to Hamilton Reese.

The Chapter's \$50 scholarship award went to Frederick Amundsen, of Pratt Institute, for his gas filling station. First honorable mention went to Hamilton Reese.

The officers re-elected are: President, Charles C. Wagner; Vice-President, William A. Sanders; Secretary, George F. Kiess; Treasurer, Herbert C. Bowman; Surveyor, Ralph M. Rice.

For the Board of Directors: Adolph Goldberg was elected for one year; Stephen W. Dodge, Lester B. Pope, and Robert F. Schirmer for two years.

The A. I. A. 1932 convention delegates are Charles C. Wagner, Wil-

liam P. Bannister, William A. Sanders, J. Monroe Hewlett, and John B. Slee, with the following as alternates: Alexander Mackintosh, Herbert C. Bowman, Daniel D. Streeter, John P. Veelker, and George Francis Kiess.

## GUGGENHEIM FELLOWSHIPS

IN order to improve the quality of education and the practice of the arts and professions in the United States, to foster research, and to provide for the cause of better international understanding, the John Simon Guggenheim Memorial Foundation, established by former United States Senator and Mrs. Simon Guggenheim as a memorial to a son who died April 26, 1922, offers a limited number of Fellowships, tenable abroad under the freest possible conditions, for research in any field of knowledge and for creative work in any of the fine arts, including music. Appointments to Fellowships will be made by a Committee of Selection, subject to ratification by the Board of Trustees.

The Foundation now offers a limited number of Latin-American Exchange Fellowships to citizens of Argentina, Chile, Cuba, and Mexico, for work in the United States of America; and to citizens of the United States for work in Latin America. In 1932 the Latin-American Exchange Fellowships will be extended to Porto Rico. Latin-American Exchange Fellows from the United States will be chosen on the same basis as all other Fellows from this country.

The Foundation plans to maintain annually approximately sixty Fellows. The Fellowships are intended for men and women of high intellectual and personal qualifications who have already demonstrated unusual capacity for productive scholarship or unusual creative ability in the fine arts.

Fellowships are open to men or women, and to married or unmarried candidates. Fellows are normally of ages between twenty-five and forty years; but for 1932-1933 the Committee of Selection has been empowered, in exceptional cases only, to make a limited number of grants to scholars older than forty. The Fellowships are open to citizens (or, in exceptional cases, to permanent residents who are not citizens) of the United States, irrespective of race, color, or creed.

(Continued on page 17)



# ATLANTIC TERRA COTTA

## SPANDRELS

USED FOR THE  
**500 FIFTH AVENUE**  
 BUILDING

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*Charles T. Wills, Inc., Builders*

*Walter J. Salmon, Owner*



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# THE BULLETIN - BOARD *Continued*

The stipend will in the normal case not exceed \$2,500 for a year of twelve months. The tenure of Fellowships will be adjusted to the purpose and scope of the studies of each individual. Appointments will be made ordinarily for one year; but plans which involve two or three years' work will be considered by the trustees.

Further details may be had upon application to Henry Allen Moe, Secretary, 551 Fifth Avenue, New York City. Applications for appointment should be received at the office of the Foundation before February 1, 1932, and final selection of Fellows for 1932-1933 will be made early in March, 1932.

## UNIVERSITY OF MICHIGAN

THE University of Michigan, in the death last April of Professor Albert J. Rousseau, lost its senior professor in architectural design. The university now announces the appointment of his successor, Jean Hebrard, who comes to Ann Arbor in the fall to fill the same chair. For the last five years Professor Hebrard has been a professor of architectural design at the University of Pennsylvania, and was at one time at Cornell University. He holds the diplôme of the École des Beaux-Arts.

## VENTILATION IN THE NEW YORK BUILDING CODE

THE ventilation problem—one of the most difficult with which the writers of the municipal building codes have had to deal—has been attacked in an entirely new manner in the new Building Code which the Merchants' Association of New York is now writing at the request of the City Administration.

In general, the proposed code, as drawn by the subcommittee, intends that many spaces in which the air is now dead shall be ventilated by artificial means. The proposed code provides that in all cases the ventilation shall be sufficient to render the air harmless for the occupancies that are permitted.

As a means of accomplishing its purpose of providing pure air for every one, the committee has recommended the establishment of a simple basic formula. Under this formula an index figure based on window space, floor area, cubical contents, and proposed occupancy is established for all types of buildings.

From the index figure, it is easy to calculate the ventilation requirements.

The present New York building code attempts to deal with the ventilation problem by permitting the presence of not more than one part of carbon dioxide to a thousand parts of air. For several reasons this test has been found impracticable. It is practically impossible to determine the amount of carbon dioxide that will be present under varying conditions.

## ARCHITECTURAL STUDENT AWARDED TWO SCHOLARSHIPS

RICHARD H. GRANELLI, twenty-four years old, of New York City, draftsman and student of architecture, for the past seven years in the employ of Schultze & Weaver, architects, was awarded the Walter Hopkins Scholarship which is given to the winner of the highest number of values in Class A studies of the Beaux Arts Institute of Design.

Granelli was recently informed that he had also been declared the winner of the Princeton Scholarship in Architecture for 1931-1932, which entitles him to a one-year course in the study of architecture at Princeton.

For the past five years Granelli has been a member of the Atelier Morgan, under the tutelage and patronage of Lloyd Morgan, junior member of the firm of Schultze & Weaver.

## "HOUSE BEAUTIFUL" COVER COMPETITION AWARDS

BETWEEN twelve and thirteen hundred entries were received in the Ninth Annual Cover Competition conducted by the *House Beautiful Magazine* which closed last May, artists and students from every portion of the United States competing.

The prizes and honorable mentions were awarded as follows: First Prize: Antonio Petruccelli, New York City; Second Prize: Betty Paul, New York School of Design; Honorable Mention: Christopher Murphy, Jr., Savannah, Ga.; Albert Richard Stockdale, Pasadena, Calif.; Lauren W. Cook, New York City; Katherine G. Fisher, Columbus, Ohio; Heath Anderson, San Francisco; Margaret Masson, Penacook, N. H.; Marion Moran Cook, New

York City; and Howard Weston Arnold, Yonkers, N. Y.

As a student design won the second prize, no special student prize was awarded this year.

The usual cover exhibit of one hundred designs selected from all those submitted will start its tour of the country next September.

## A TEST OF NEW YORK STATE'S REGISTRATION LAW

JUSTICES Kernochan, Flood, and Murphy in the Court of Special Sessions recently convicted J. Harold MacDowell of practicing as an architect without a license. Mr. MacDowell, who had a sign "Consulting Architect" on the door of his office in the Chrysler Building, was tried on the complaint of James O. Hoyle, an inspector of the State Department of Education, that, between April, 1929, and November, 1930, he had violated Section 1,476 of the State Education Law by posing as an authorized architect.

Mr. MacDowell, testifying in his defense, insisted that he was a graduate architect and declared that he had practised the profession for more than twenty years.

## PERSONAL

John M. Liptak and Albert L. Schaeffer, architects, have formed a partnership for the practice of architecture with offices in the Delaware Trust Building, Wilmington, Del., under the firm name of John M. Liptak & Albert L. Schaeffer.

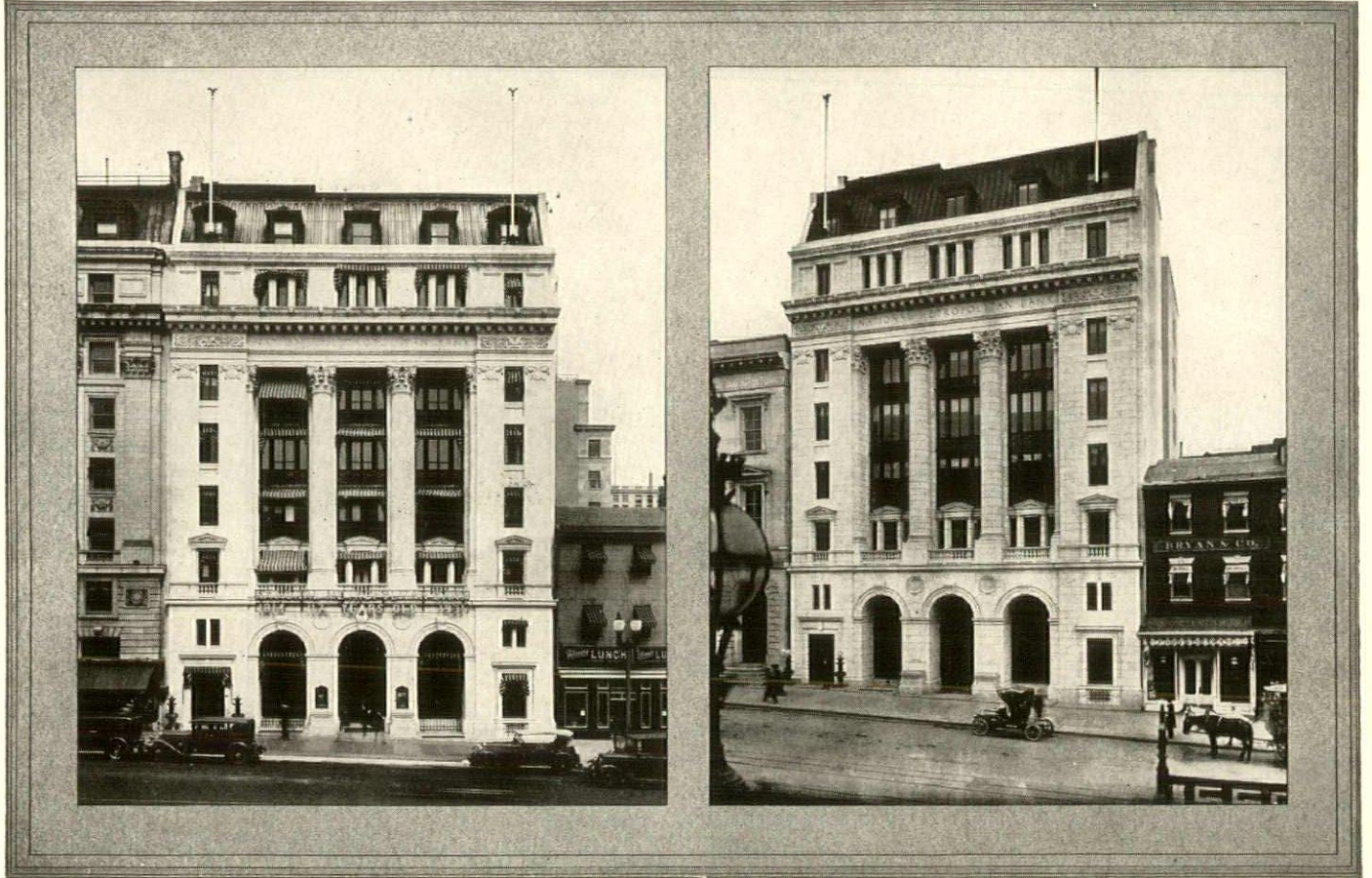
Henry & Murphy, architects, announce the removal of their offices to 247 East Exchange Street, Akron, Ohio.

E. C. Landberg, architect and engineer, announces the removal and consolidation of his Newport, Ky., office, with his Cincinnati, Ohio, office, which will be located at 114 Garfield Place, Cincinnati, Ohio. Manufacturers' catalogues are desired.

Morris H. Whitehouse & Associates announce the change in the firm name on July 1, 1931, to Whitehouse, Stanton & Church. Morris H. Whitehouse, A. Glenn Stanton, and Walter E. Church will continue the practice of architecture with the same personnel of firm and staff as heretofore at The Railway Exchange Building, Portland, Ore.



# Two photographs of a Georgia Marble building and one of them was taken 25 years ago / / / /



NATIONAL METROPOLITAN BANK, *Washington, D. C.*, Gordon, Tracy & Swartout, *Archts.*, and B. Stanley Simmons, *Asso. Archt.*, Thompson-Starrett Co., Inc., *Builders*... One photograph taken in 1931, the other in 1906.

THERE is no change in the *Georgia Marble*... only the *surroundings* have changed. The lunch room on the right has worn several new fronts during the past twenty-five years; a theatre has been built on the left; the runabout with its *buggy top* has given way to the sleeker motor cars of today; *Brownie* and *Pete* have been out of the harness for a score of years.

#### WHAT CHANGES WILL ANOTHER QUARTER CENTURY BRING?

A photograph taken in 1956 will no doubt show a new building on the right, new types of motor cars in the street, making today's models look angular and clumsy, and possibly a small helicopter hovering in the air waiting to drop into any parking space that might open up.

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# ARCHITECTURE

REG. U. S. PAT. OFFICE

THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXIV, NO. 2

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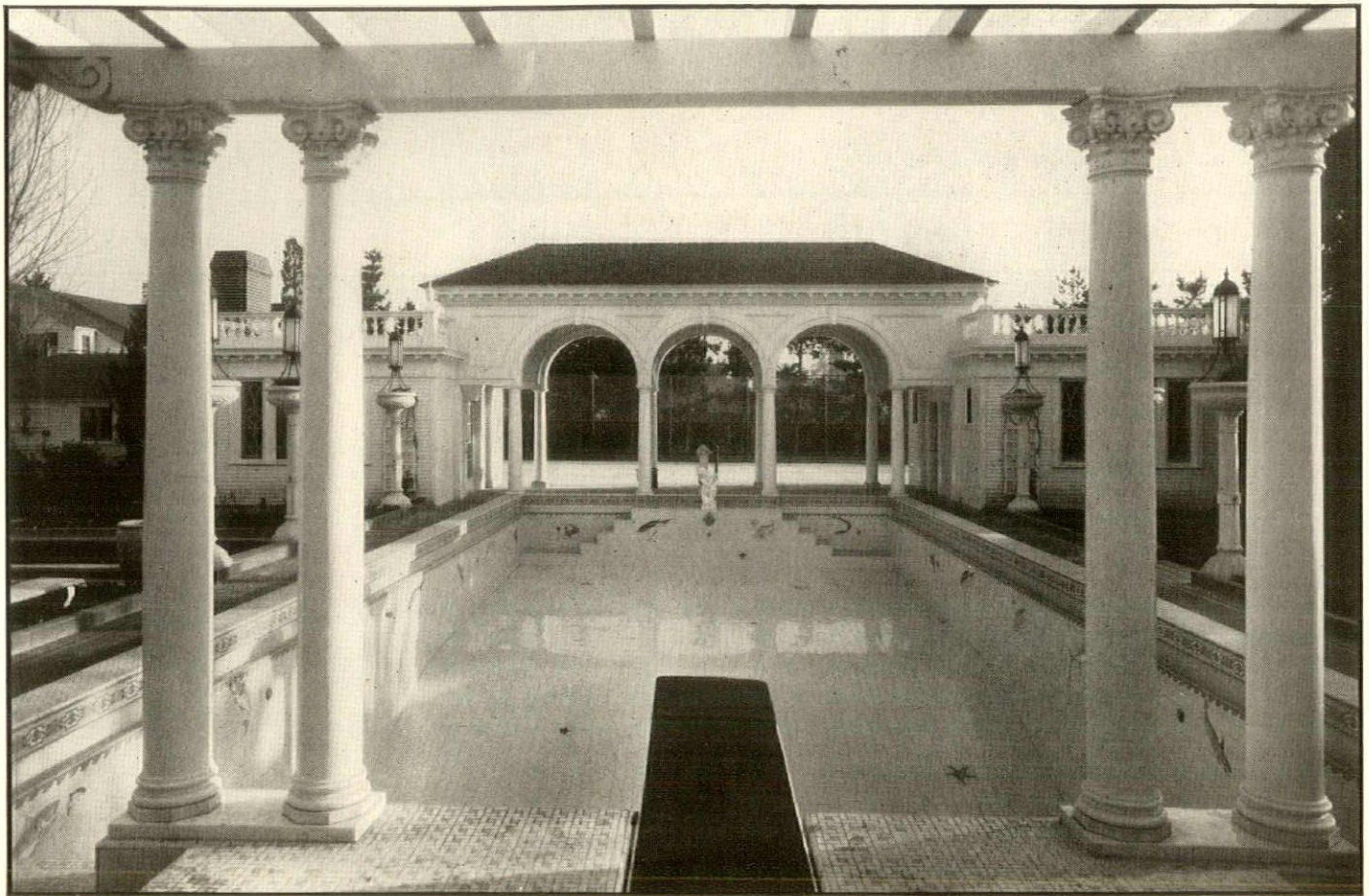
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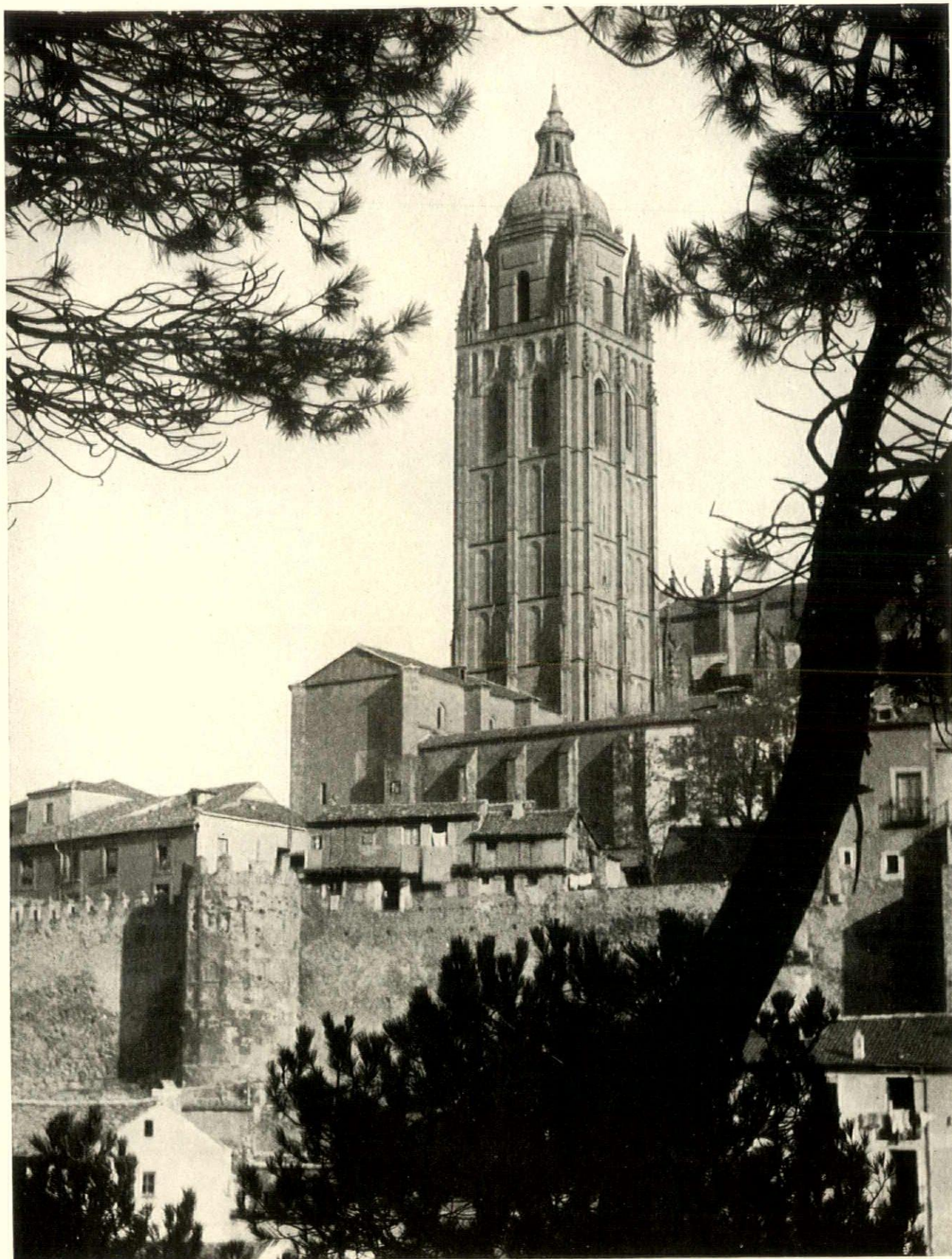
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THE CATHEDRAL AT SEGOVIA

*From a photograph by Joseph B. Wertz*

◀ ARCHITECTURE ▶



# ARCHITECTURE

❖ VOLUME LXIV

AUGUST 1931

NUMBER 2 ❖

## Ely Jacques Kahn

*By Henry H. Saylor*

**P**ERSONALITY is an amazingly complex thing. It is almost never comprehended unless the observer constantly change his viewpoint, viewing the object in the whole round. I should imagine that one who knew Ely Kahn only through his architectural achievements would feel rather confident that the man is an outstanding executive, interested mainly in the doing of big works—an architect of bulk. The number of huge office buildings that he has built within the last five years would lend weight to such a portrait.

Or, another observer, noting the absence of all traditional detail in Kahn's work, and in its place a daring use of abstract ornament, bold color, and the unexpected silhouette, would label the man as a radical modernist who could have neither admiration nor respect for beautiful forms of past epochs.

Both observers would be absurdly wrong, each with a distorted picture of Ely Kahn's personality resulting from assuming the whole on the basis of observation from a single point of view.

Unquestionably it would astonish either of these superficial observers to learn that one of the things nearest this man's heart is archæology. His library along these lines is probably the most extensive in New York, and it is being constantly and rapidly enlarged. And this love of archæology has carried Kahn into devious paths that lead far beyond architecture. The minor arts of Persia beckon him; his personal collection of majolica, early pottery, the more sophisticated porcelains, gives a new vista of the man's personality. Greek ideas, Greek arts, Greek



philosophers, have influenced him deeply.

Ely Kahn went from Columbia to the École in Paris and came back an etcher, a watercolorist. For a time he was known in architectural circles as a man who could render presentation drawings, a man to be called in for the special job. Then he taught design for a period at Cornell. It doesn't resemble the picture of the man to-day, does it? But most of us pass through some such period of finding oneself—experimenting, developing one's powers,

tending toward the things one wants most to do and therefore does best.

Apparently, the thing Ely Kahn really wanted most to do was an honest job of architecture. Quite evidently he did not want to go on making beautiful drawings of other men's ideas, for in his work to-day he is the designer—not merely as to general *parti*, not merely as to the plan and mass silhouette, but in every last minor detail of materials, textures, color, even to the fabric which will cover a minor piece of furniture, or a piece of hardware necessary to the full development of a particular scheme.

The question immediately arises: How is such a practice possible in these days when work costing thirty or forty millions of dollars is to be turned out in a twelvemonth? The answer one most frequently hears is, organization and the wide delegation of authority. But the answer is only half applicable in this case. Kahn does not and will not delegate design to others. I fancy one of his greatest dreads is that a flood of work may force it upon him, but he surely will never willingly take that way out. Rather, he uses another powerful weapon. It is almost wholly a



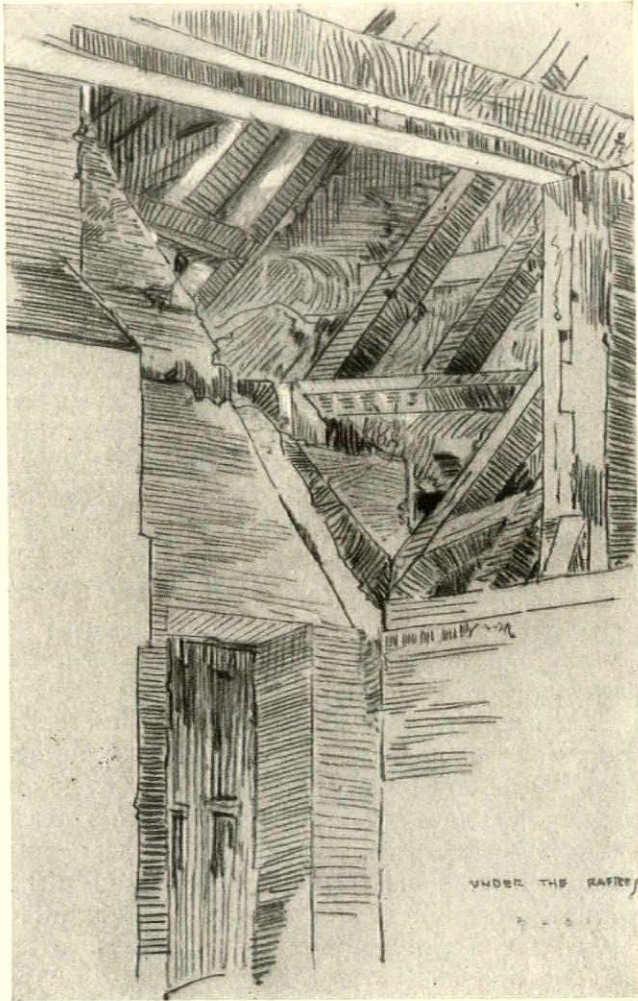
matter of time, after all. If time is dissipated on other matters there is little or none left for personal design. Kahn conserves his time in two ways: through organization and through a developed habit of making quick decisions. The organization is one of long standing. Three of his men have been with the firm for forty-five years; four or five, for twenty-eight years—

generously apportioned. It is a custom of the office to have weekly conferences at which every uncertain point concerning a particular job is threshed out, a decision reached and put on the records. Through this conference system, therefore, every side of the organization knows at once what decisions have been reached, and why, and carry on accordingly. The system also prevents the stealing of valuable time either in small quantities or large from Mr. Kahn, or any of the department heads, by the constant rain of questions which, without some such weekly round-up, would be inevitable.

S

Again, it is this matter of time—how can the little that is available be conserved and made to count most effectively? Mr. Kahn would probably be the last man to claim that all of his decisions are proper ones, but, right or wrong, they are reached almost instantaneously and pass into the realm of things checked off, and without further power to cause regret.

The architectural practice of the firm has, as in most important offices, attained a certain measure of specialization. Kahn has given his attention to matters as far away from his main line of activities as the design of a private apartment with all of the accessories that go with it, but the bulk of his practice is the design of commercial buildings. It is an essential adjunct of such a practice to know intimately the intricacies of New York real estate—the values of certain key locations, the maximum volume of building that can be put thereon under the present zoning laws, and finally, how such a building would work out in its financial set-up. Having worked out a number of such preliminary problems Kahn immediately recognized the futility of research and study over again for a later client who would be following similar lines of investigation. Thereupon, he established a sort of bureau of research in his own office by which this accumulated data, once having been reached through study and investigation, was filed and made readily available. As a result, to-day a client comes to Kahn, and tells him that he is considering the possibility of putting a loft building on such a location. Kahn touches a button, asks for the dossier of this location, and shows the client at once what the possibilities of the site are, down to the last detail of income



*A page from one of Ely Kahn's sketchbooks of student days—under the rafters at Blois*

much longer than Kahn himself. Before the present year the Firm of Ely Jacques Kahn was Buchman & Kahn; before Kahn's coming it was Buchman & Fox, among whose completed works were one or two of the Centennial Exposition buildings in Philadelphia of 1876.

With the passing of the years this organization has naturally become welded together as an effective machine. There are heads of departments to whom authority and responsibility are





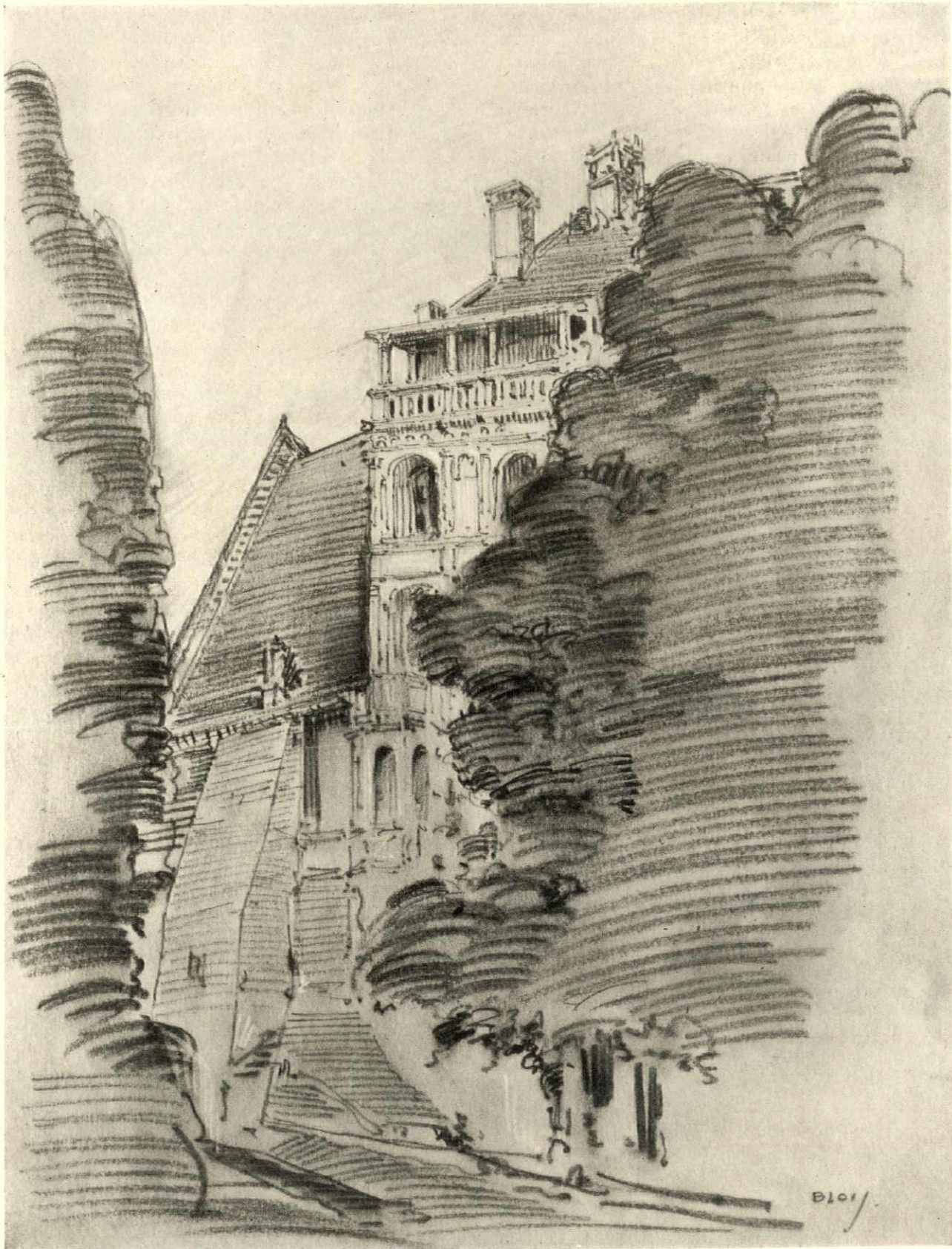
*Blois, from one of Ely Kahn's sketchbooks—done in pencil on a gray paper, with water-color washes*





*Kahn's facility in indication is well represented by this pencil drawing of Anboise—particularly the children*

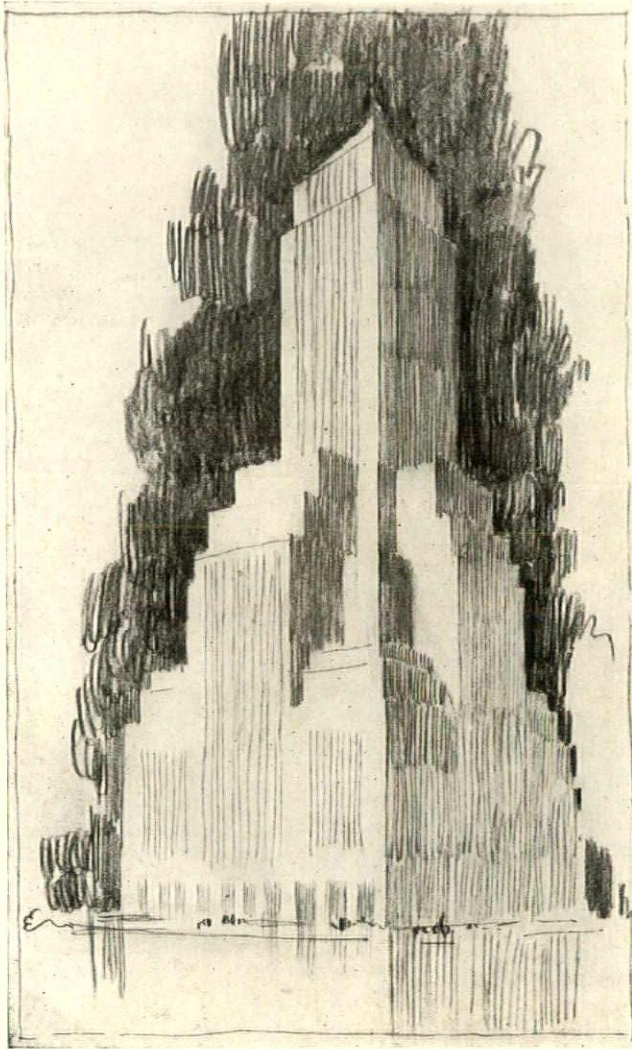




*Blois, in sar guine, with a rub of the finger-tips to gain tone*



production. The research department, when not otherwise engaged, is developing similar data for other likely and available sites, so that this accumulation is becoming more and more nearly complete month by month. Of course, a similar service, though usually without the architectural development, is becoming more commonly available through the large real-estate brokers, but it



One of Kahn's recent studies of mass and silhouette in a large office building

is naturally an impressive evidence of thoroughgoing efficiency to the prospective client when he finds that most of his tentative problems have already been worked out for him, thus permitting him to make a quick and rational choice.

Ely Jacques Kahn is perhaps generally classed as a militant modernist—one of the group comprising Mendelsohn, Ralph Walker,

Raymond Hood, Dudok, a group which is the pattern of many and the despair of others. The latter group probably regards these men as seekers after novelty, impatient of doing things as they have been done before, reckless adventurers into untrodden paths, without guide or compass—heretics rampant. Yet Ely Kahn and, I feel quite sure, any of the others named have no purpose in their architectural practice that conforms to any such picture. Kahn, at least, since it is he that we are here trying to learn to know, has no patience with either of the two common conceptions of modernism: either a static style of recent creation, or a negation of all that has been learned.

On the contrary, what he is trying to do is just what architects of any epoch, architects who have not been lured into some contemporary blind alley, have probably been trying to do, namely, to devise a structure that fits the needs of those who are to use it and make it beautiful according to the designer's lights. In his efforts to do just this he recognizes, first, the essential necessity of being *en rapport* with all the other arts, drawing upon their store of that which has æsthetic appeal—form, color, all rhythms in which mankind has found and will continue to find pleasure.



He recognizes the fact that in our time the achievement of such a structure has become a far more complex thing than ever before. It is not possible for an architect—or for any single artist—to create a monument of his own powers alone. He must bring into collaboration the work of others, the sculptors, the painters, the landscape men, but first of all the humble craftsmen who must give form and substance to the designer's visualizations. Architecture to-day, as in the days of Le Brun or of Michaelangelo, or of Bulfinch, consists in getting buildings built in accordance with mankind's best knowledge and ability, and appreciation of what is beautiful. The Greeks certainly aimed at nothing higher, nor did the cathedral builders, nor the designer of the Taj Mahal. The results these men produced were utterly different, just as the best we shall do to-day must necessarily be utterly different.



# Modern Decorative Light Sources

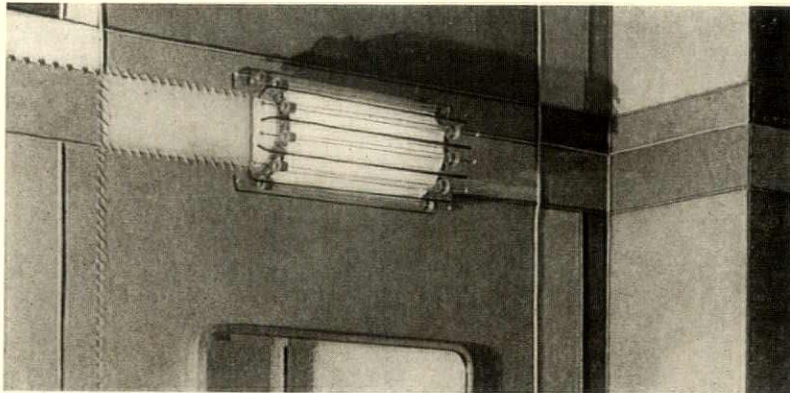
*By Eugene Clute*

**W**HAT was until recently one of the least progressive of the arts allied to architecture has suddenly become one of the most advanced—the making of decorative equipment for the lighting of interiors by electricity. “Lighting fixtures” is an inadequate and rather inept term, since it is so closely associated with the kind of chandeliers and wall brackets that did their worst to disfigure the homes and public buildings of the past three

decades; also, since the light sources of to-day are very often recessed in the walls or ceilings or otherwise incorporated in the architectural treatment of the room. Modern light sources bear little, if any, resemblance to the lighting fixtures of even a few years ago, because they are designed for electric light, rather than being mere adaptations of designs originally intended for lighting by candles or gas.

Some of the most interesting developments

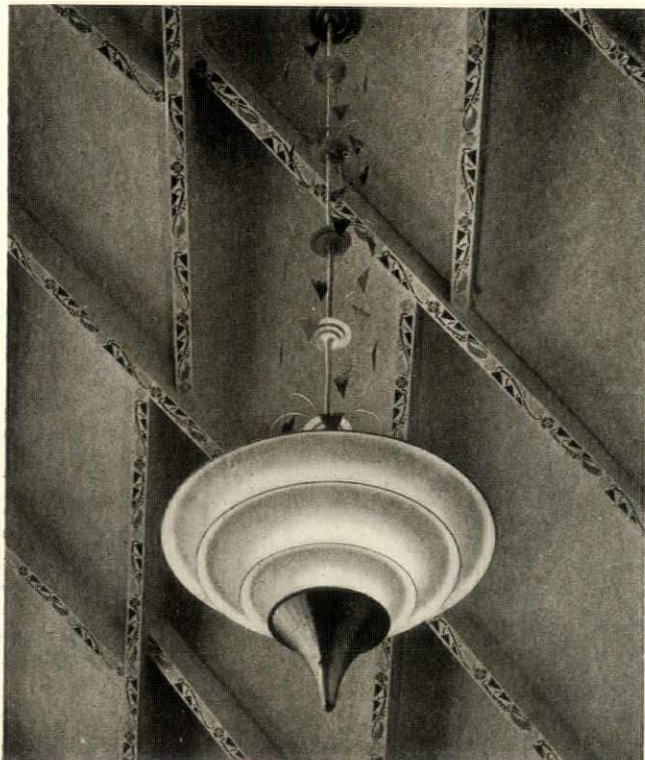
*One of the sources in the showrooms of Hollander & Co., New York City, in*



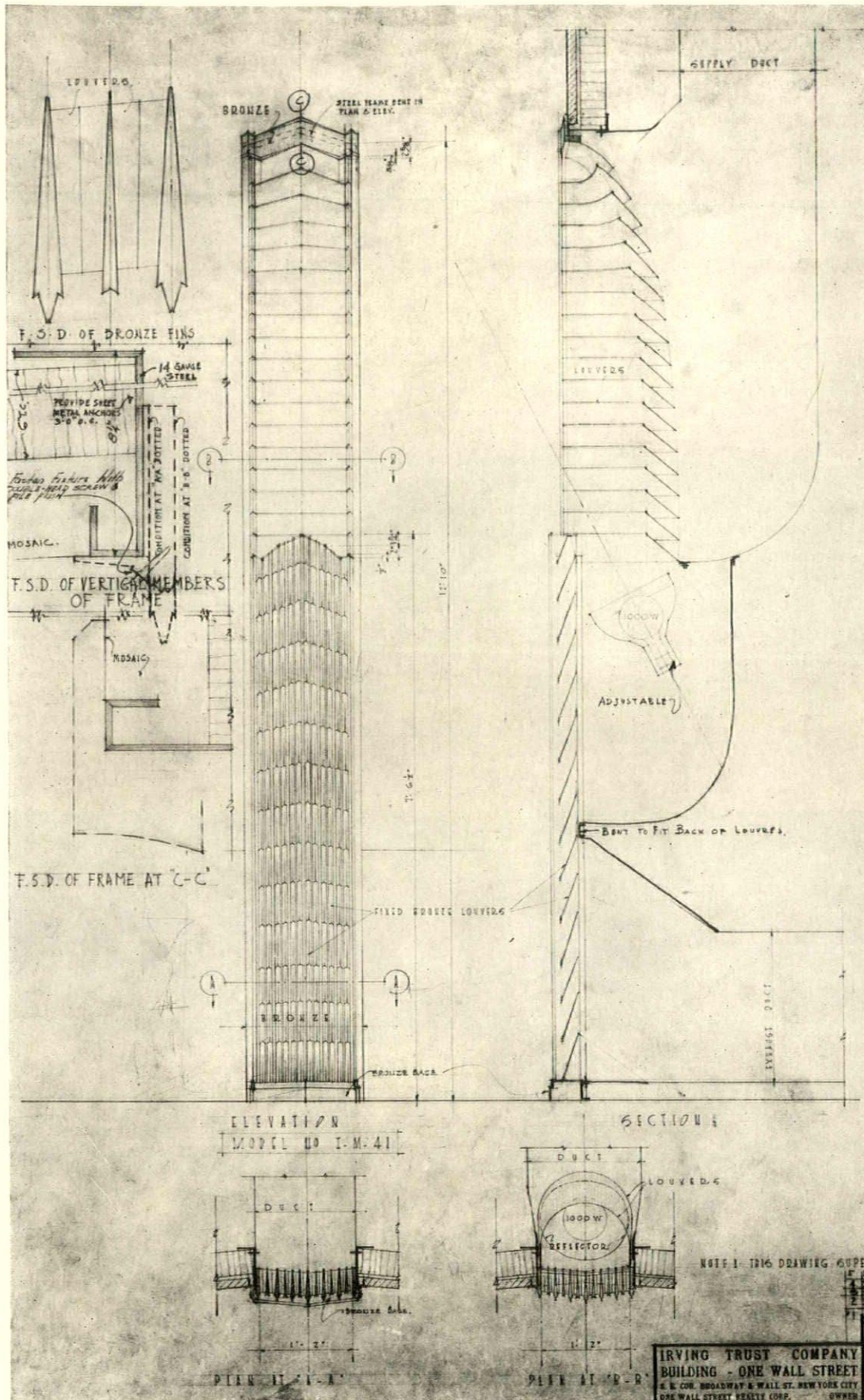
*which Maurice Heaton has used glass tubes, glass sheets, and a minimum of metal*

*In the Casino Restaurant, Central Park, New York City; of lacquered metal with chromium-plated tip. Joseph Urban, architect; craftsmanship by Cox, Nostrand & Gunnison*

*In the studio of Lucien Tyng, at Southampton, Long Island. Peabody, Wilson & Brown, architects; craftsmanship by Cox, Nostrand & Gunnison*







Working drawings of a lighting source with which are combined the warm air inlet and the vitiated air exhaust; see illustration on opposite page

In the reception-room of the Irving Trust Company, One Wall Street, New York City. Voorhees, Gmelin & Walker, architects; illuminating engineering by the Frink Corporation

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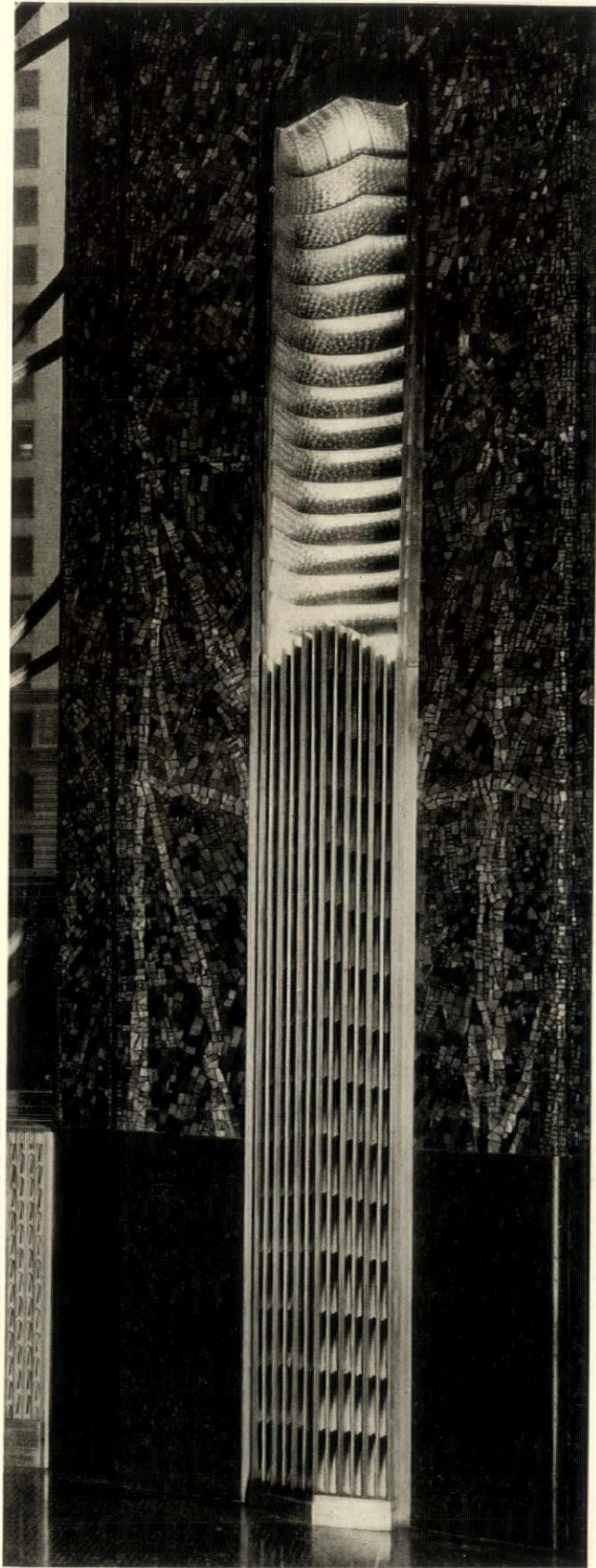
are seen in the light sources just installed in the Irving Trust Company Building, 1 Wall Street, New York City.

The reception-room of the bank, on the ground floor at the corner of Wall Street and Broadway, is a remarkably beautiful room of thoroughly modern design, about 90 feet long, 45 feet wide, and having a ceiling height of 32 feet. The walls and ceilings are covered with glass mosaic in a web-like pattern of gold lines upon a rich red background that grades up to a lively orange-red upon the ceiling. At intervals along the walls are tall, narrow bronze grilles (1 foot 6 inches by 12 feet 10 inches), back of which are combined the heating, ventilating, and lighting equipment, avoiding the disturbing multiplicity of grilles that so often mars the effect of fine interiors. Through the upper part of these grilles warm, fresh air is introduced; through the lower part the vitiated air is drawn out, and about half way up are concealed the flood lights that supply the illumination. These are directed upon the ceiling and are so arranged as to provide a wide and even distribution of light. The design and construction of these units are shown here by working drawings.

In the main entrance lobby of this building the problem was to supply an evenly distributed illumination and to light a decorated ceiling properly. By reference to the working drawings it will be seen that each light source consists of a reflector unit concealed in the wall back of glass louvers that are set in a bronze frame flush with the marble facing of the wall. The frame carrying the louvers is hinged at the top, for convenience in re-lamping. These light sources are 9 inches high by 1 foot 6 inches wide, spaced evenly on the two long walls, 2 feet 9 inches below the level at which the ceiling joins the walls. The light is projected upward and outward upon the ceiling and is well distributed.

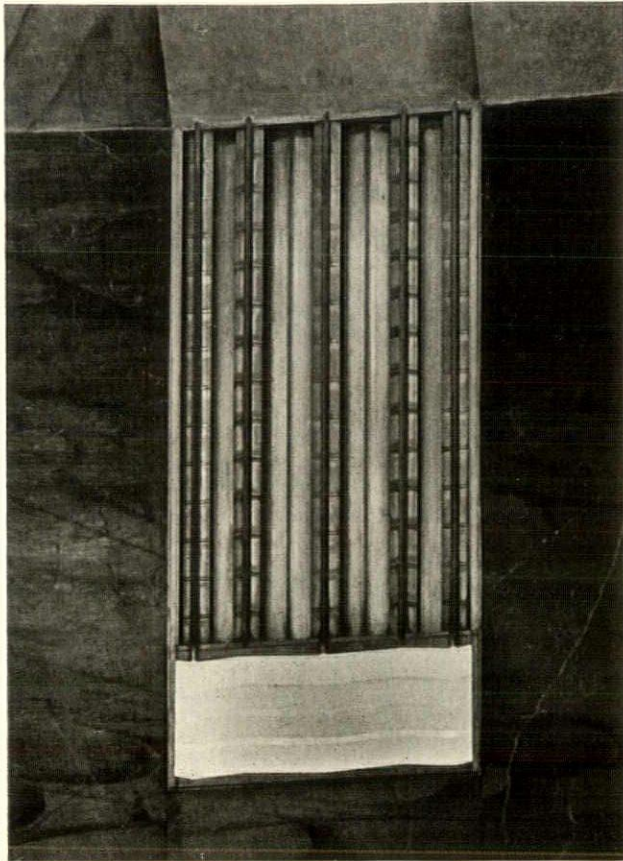
Above alternate light sources and connected with them are the grilled openings of exhaust ducts, for the ventilation and the lighting have been combined here also. The grilles consist of vertical members of extruded bronze of interesting design so arranged in staggered lines that one cannot see into the exhaust ducts back of them (see illustrations on page 74).

Though many photographs and descriptions of the lighting of the grand foyer of the Chrysler Building have been published, the working drawings from which the installation was made have never before appeared. The basis of the scheme is indicated in the diagram on page 75.



*Lighting, heating, and ventilating unit of bronze and glass in the Irving Trust Company's reception-room. See details on facing page*

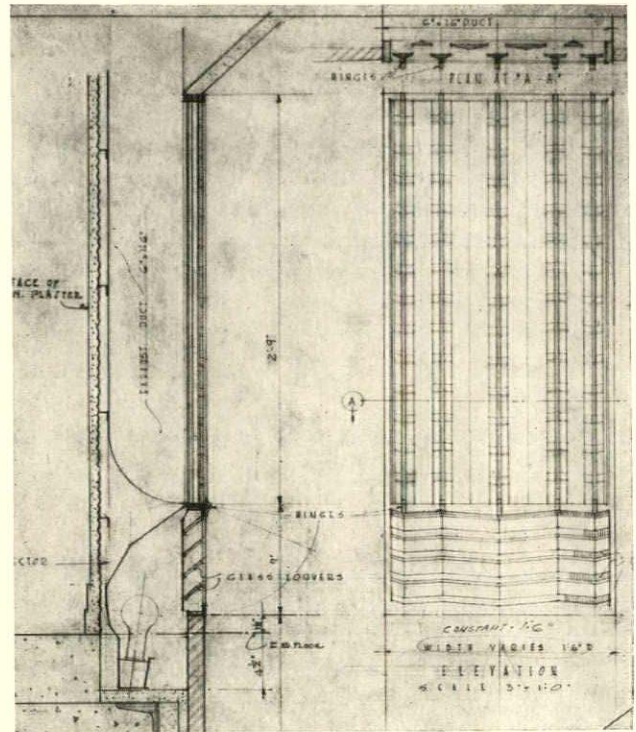




The lighting units are strip reflectors supported in a vertical position a little in advance of reflecting surfaces of honed Mexican onyx that are set in the walls and piers. These surfaces, having a matte finish, do not reflect an image of the lamp filaments, as a polished surface would. They not only reflect but also diffuse the light and they impart to it a slight amber tint to which is added a suggestion of red by reflection from the *rouge flammé* marble of the walls. This color is very pleasant and it is flattering to complexions, a point that should not be disregarded in the lighting of interiors.

Turning to light sources that may be classed as lighting fixtures more properly, though very different from the older types, we find a wide variety of designs, including combinations of glass tubes in various arrangements; combinations of superimposed louvers that take the place of the usual kind of indirect lighting fixture; luminous glass troughs upon the ceiling; and many other advanced types.

Among the most interesting of these are the lighting fixtures in the new showrooms of L. P. Hollander & Company, for the display of women's gowns and other apparel, on East 57th Street, near Fifth Avenue, New York.



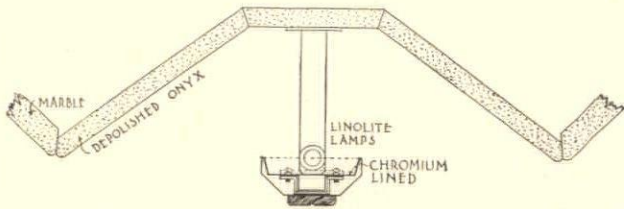
A combination exhaust opening and light source near the ceiling of the entrance lobby of Irving Trust Company Building. Voorhees, Gmelin & Walker, architects. The light is directed upward to strike a decorated ceiling and, indirectly, the lobby below

A simple unit of design is the basis of many of these fixtures—a tube of clear glass through the centre of which is a slender rod, little more than a wire, that holds in place simple metal caps upon the ends of the tube. By combining these tubes in different ways a wide variety of designs is produced.

The great circular fixture in the centre of the ceiling of the main showroom on the ground floor is made in this way. The tubes are arranged to form deep fringes and are hung so that they are free to swing, in order that they may always be plumb. They are illuminated by lamps concealed in a large ring suspended below them, and they blaze with light after the manner of crystal chandeliers.

Elsewhere such tubes are arranged close together in vertical lines upon the wall to form a rectangular mass; again, the tubes are similarly grouped upon the ceiling of an alcove, the ends of the vertical and horizontal groups of tubes coming together upon the angle. Only the thickness of the tubes projects beyond the surface of the wall or ceiling. Through these grilles of glass diffused light pours from lamps concealed in boxes recessed back of them. There are also panels of translucent glass set flush in

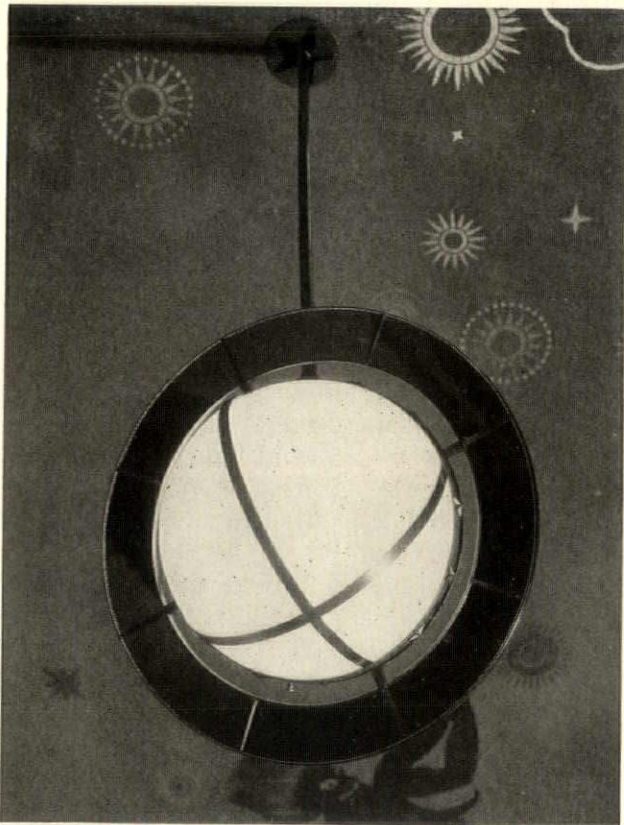




the walls in front of recessed boxes containing lamps. In some instances two or three rooms receive light from panels in different sides of the same box. In addition there are fixtures in many different designs in the various show-rooms, notably one in which heavy rings of clear plate glass are used as flanges on a cylinder of translucent glass that is lighted from within.

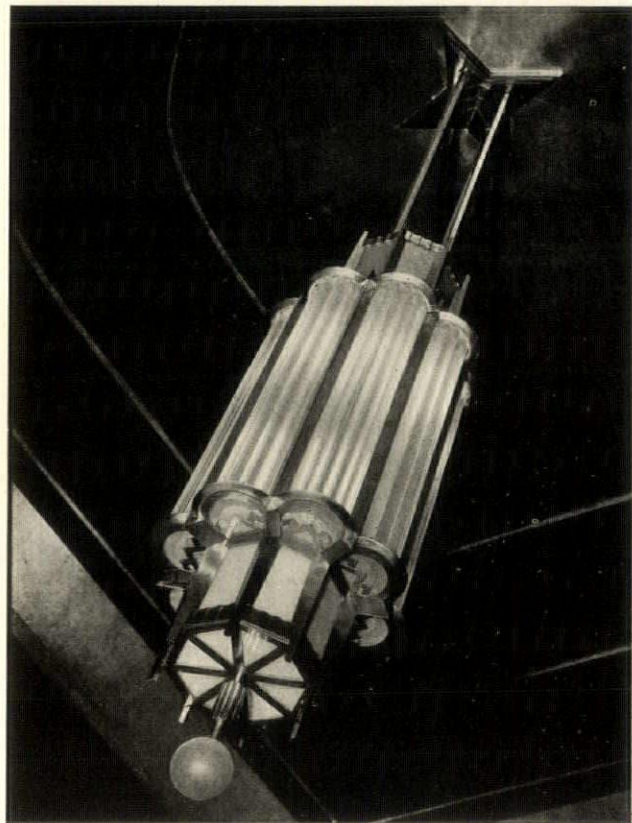
Indirect lighting fixtures composed of louvers arranged one above another are used in the remodelled and redecorated interior of the Casino Restaurant in Central Park, New York, and in the new section of the Brooklyn department-store of Abraham & Strauss, Inc. In the former the louvers are circular in plan and in the latter they are square. A development of this type is seen in fixtures for the New York Telephone

*Below, a light source in the Chrysler Building observation gallery. The globe is of translucent glass, the frame of monel metal, the ring of mirror glass. William Van Alen, architect; French & Company, decorators; craftsmanship by Cox, Nostrand & Gunnison*

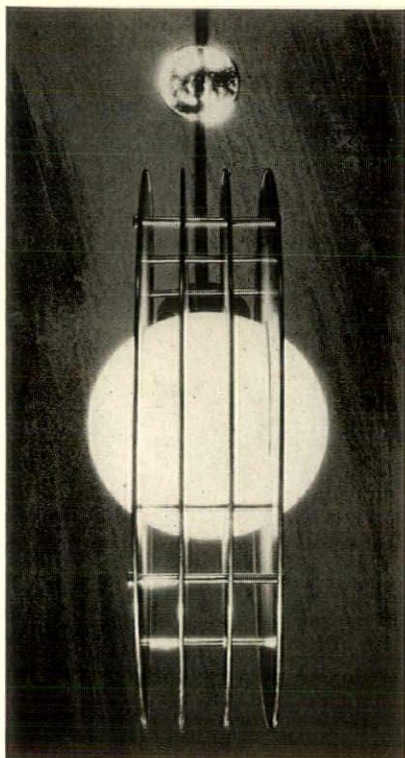


*In the Chrysler Building lobby where the light is reflected from large areas (see detail section above at left). William Van Alen, architect; illuminating engineering by the Frink Corporation*

*Staircase lantern in the Chrysler Building by the same designers and craftsmen; made of nickel silver and moulded glass against Bleu Belge marble. The moulded glass takes a form somewhat like a group of glass rods*

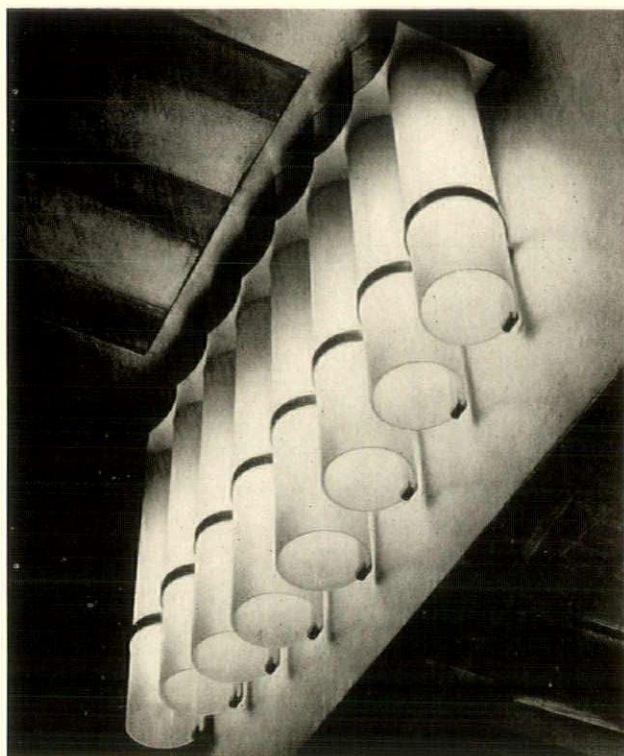






*At left, in the Daily News Building, New York City. A translucent ball cut by red lacquered discs with bright edges. John Mead Howells and Raymond Hood, associated architects; craftsmanship by Cox, Nostrand & Gunnison*

*Another source in the Daily News Building, by the same designers. Of translucent glass cylinders and bronze, over a doorway in the elevator corridor*



Company Building, in which the lowest portion is so constructed that it is lighted by reflections from the inside of radiating ribs arranged around it. An elaboration of this idea is seen in the large fixture in the studio for Lucien Tyng, Esq., at Southampton, Long Island, which is highly decorative (page 71).

A very pleasing treatment of the cylindrical lantern type of fixture is seen in the grand staircases of the Chrysler Building. The metal work is of Benedict nickel and the glass is in heavy moulded sections that have the form of groups of round glass bars.

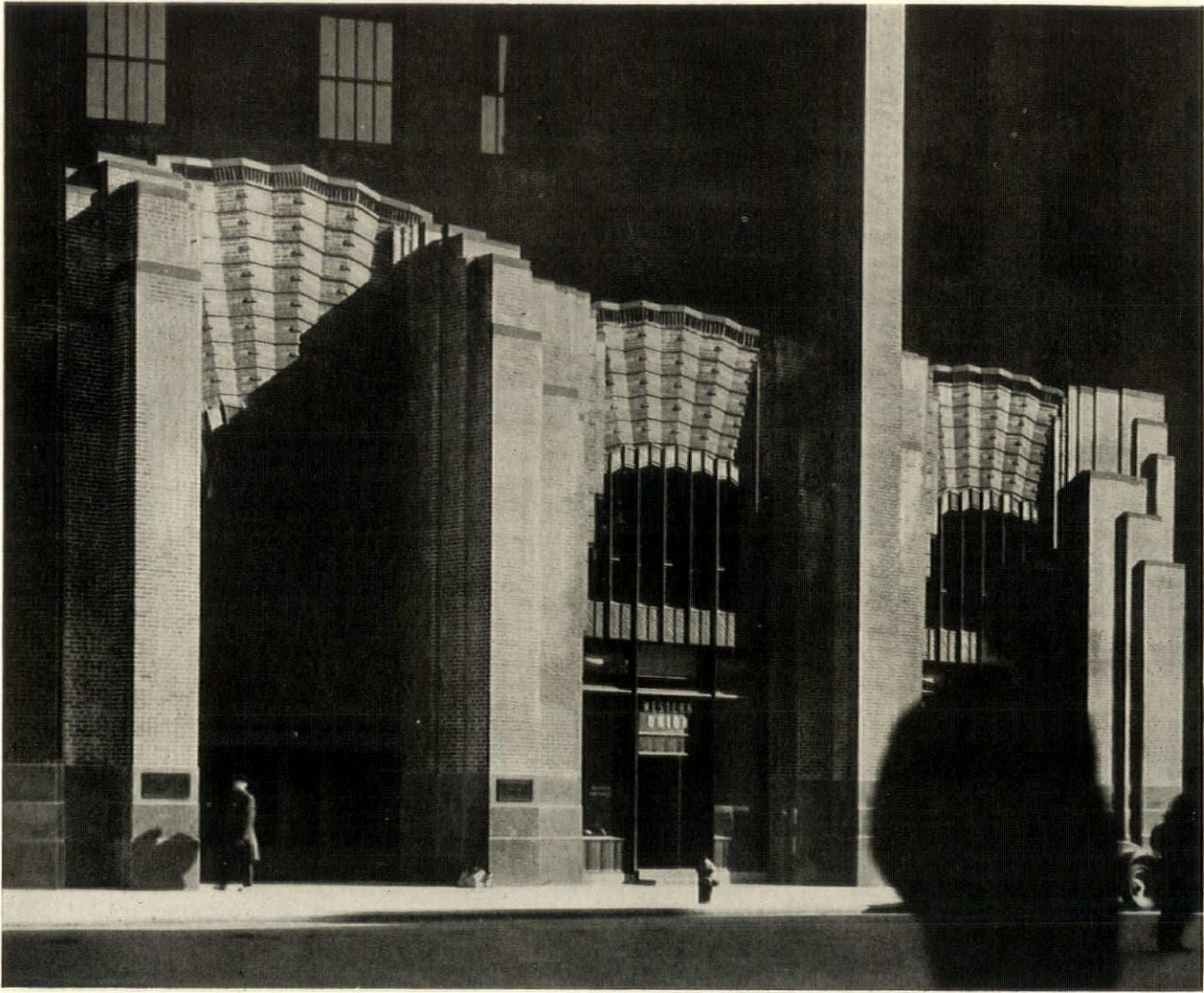
In the observation gallery of the Chrysler Building, on the seventy-first floor, are spherical fixtures composed of curved sections of translucent glass set in Benedict nickel. Each of these spheres is surrounded by a ring of mirror glass that recalls the Rings of Saturn quite appropriately, for these fixtures are seen against a painted ceiling decorated with constellations and signs of the Zodiac in gold on a blue ground.

The Daily News Building on East 42d Street, New York, affords a number of notable examples. The illumination of the grand foyer, or rotunda, is upward from the circular pit in the centre of the floor in which is set the great rotating terrestrial globe that is the chief feature of the room. This light comes from lamps con-

cealed under the steps of heavy translucent glass that encircle the lower part of the globe in the pit. The charts all around the walls have direct lighting from curved reflector strips supported from the wall on horizontal metal arms. In the entrance lobby, to the south of the grand foyer, the illumination is from trough-like boxes of glass, set in bronze and lighted from within, which extend along the centre of the ceiling, and from banks of vertical glass cylinders placed over the doors at the ends of the room. In the elevator lobby the lighting is also from a glass trough set against the ceiling. Smartest of all are the fixtures in the readers' service department. Each consists of a ball of translucent glass (14 inches in diameter) that is intersected by four vertical discs of metal (3 feet 6 inches in diameter) lacquered red and having chromium-plated edges (see illustration above).

Quite as modern as any described above and especially well suited to form part of the setting for formal social life are the lighting fixtures for those two new smart Parisian hostelries, the Hotel Georges V and the Hotel Principe de Gales. These luminaires are composed of crystal, forged bright iron, and nacrolaque, a composition made from mother-of-pearl in sheets, showing beautiful softly iridescent colors by transmitted light.





*Photographs by Palmer Shannon*

*Detail of the Hudson Street entrance*

*On account of its great size and its location among other tall buildings, it is impossible apparently to get a satisfactory photograph of the Western Union Building as a whole. It is built of brick, shading through twenty-one color variations from a deep red at the bottom to a light orange at the top. The coping material here shown and throughout the building is of cast stone, the display windows and their spandrels being of bronze*

WESTERN UNION BUILDING, NEW YORK CITY

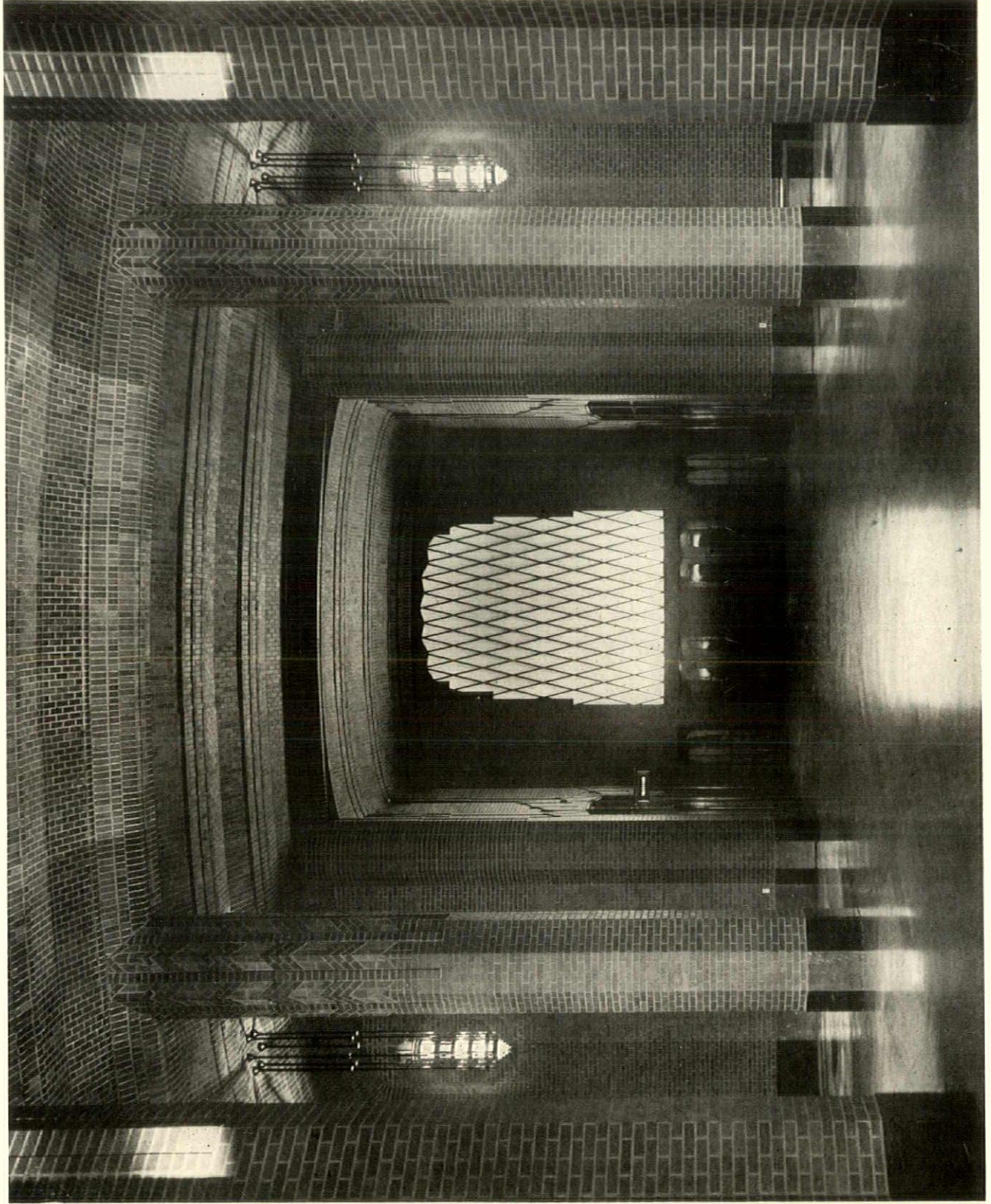
VOORHEES, GMELIN & WALKER, ARCHITECTS



ARCHITECTURE

AUGUST, 1931

*The main corridor, looking toward the Hudson Street entrance. Throughout this corridor the same brick as that used for the exterior, in three or four tones, has been employed*



WESTERN  
UNION  
BUILDING,  
NEW YORK  
CITY

VOORHEES,  
GMELIN &  
WALKER,  
ARCHITECTS



ARCHITECTURE

AUGUST, 1931

*One of the elevator corridors leading off the main lobby on the first floor. The floors are of three or four colors of terrazzo; the elevator doors and grilles of bronze*

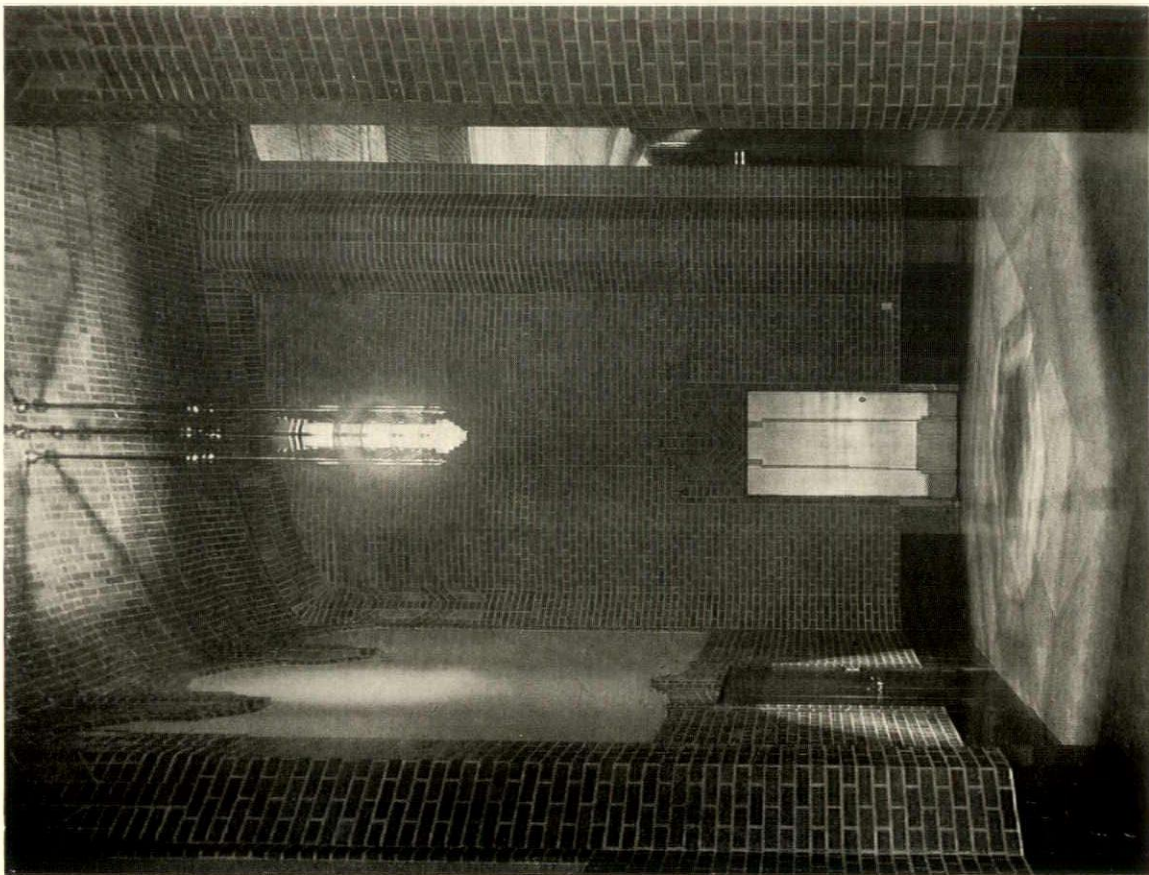
79



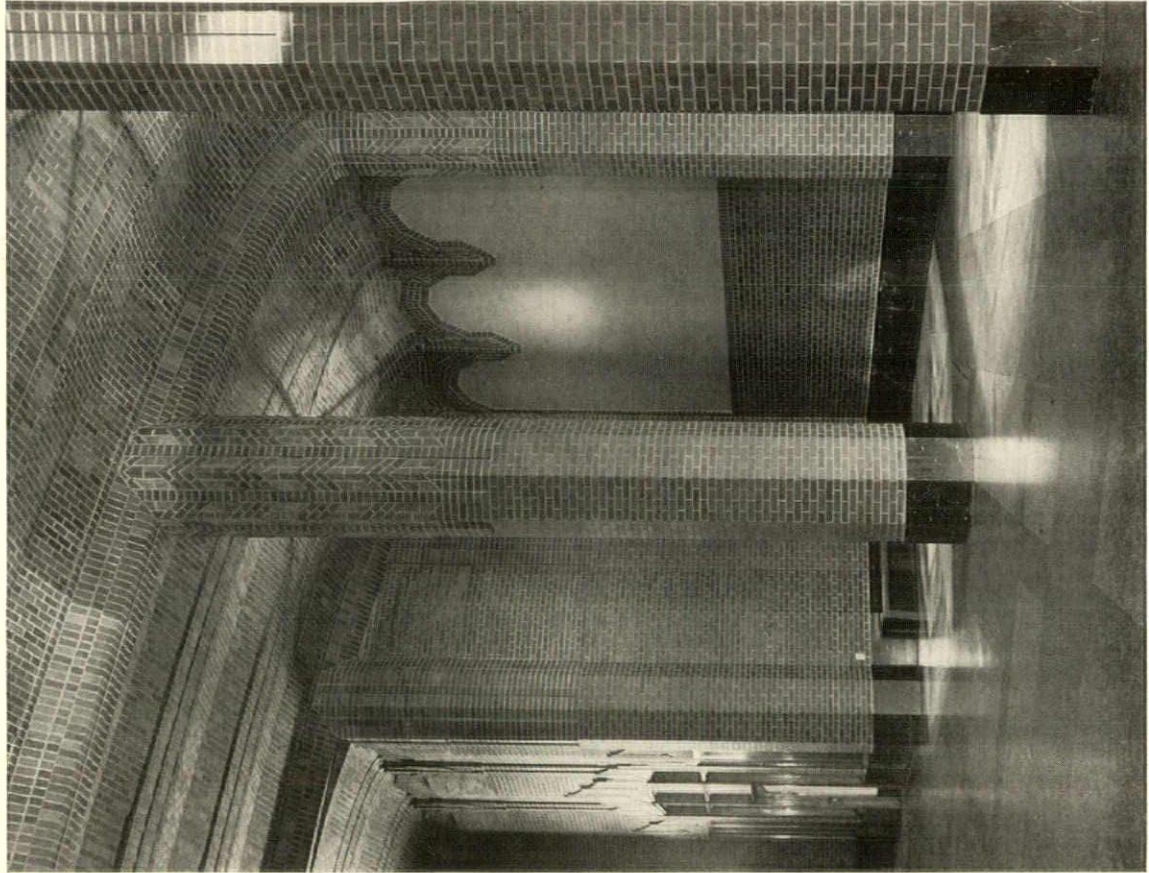
WESTERN  
UNION  
BUILDING,  
NEW YORK  
CITY

VOORHEES,  
GMELIN &  
WALKER,  
ARCHITECTS





*A bay of the main corridor leading at left to the gallery of the lecture hall*



*A bay of the main corridor. The plaster wall is later to bear a mural painting*

WESTERN UNION BUILDING, NEW YORK CITY

◀ ARCHITECTURE ▶

VOORHEES, GMELIN & WALKER, ARCHITECTS

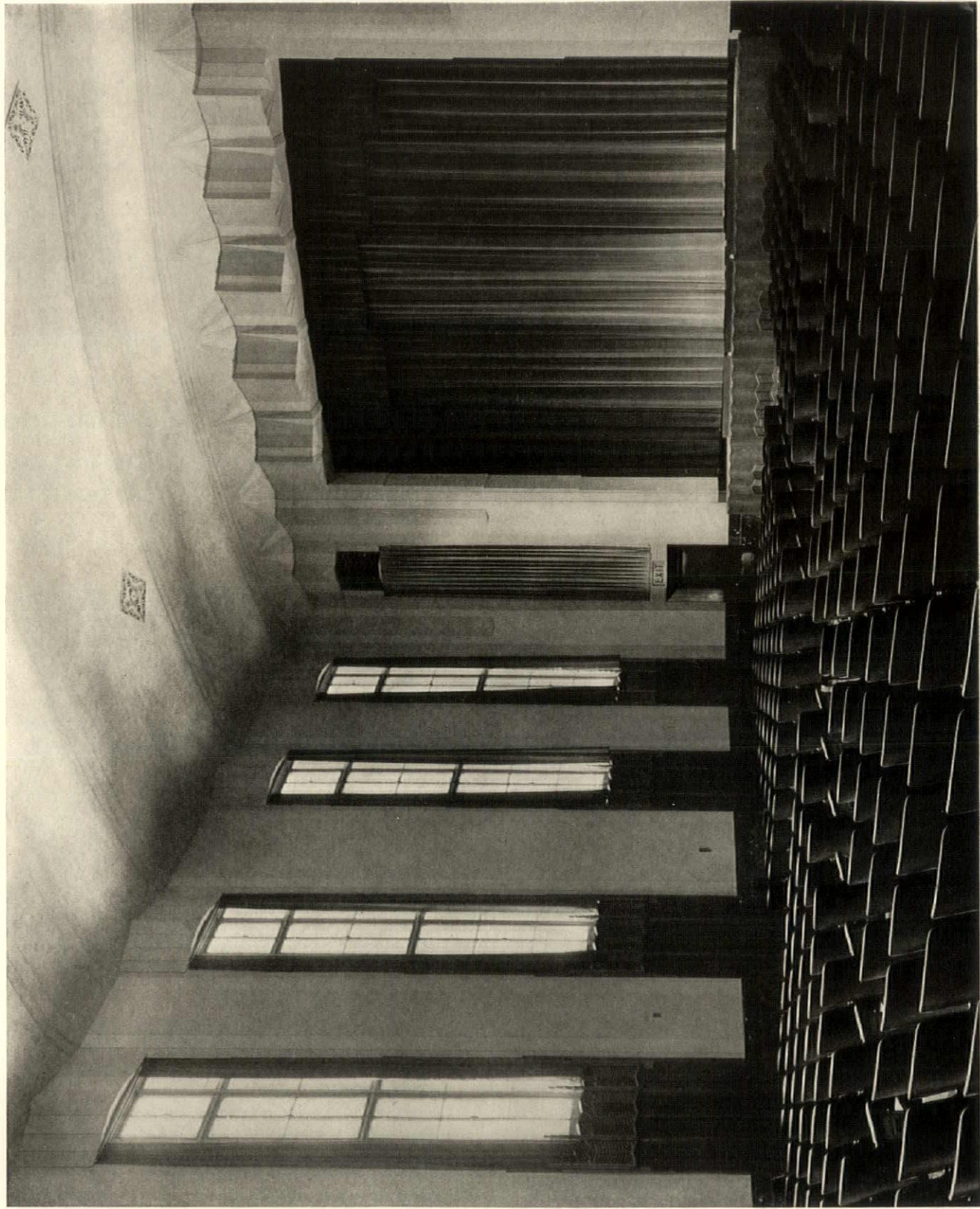


ARCHITECTURE

AUGUST, 1931

*The lecture hall for the use of employees. Acoustical plaster is used on the ceiling, and hard plaster, run in varying planes, on the side walls, all painted a warm gray. There is a loud-speaker opening back of the draperies at the sides of the stage*

82



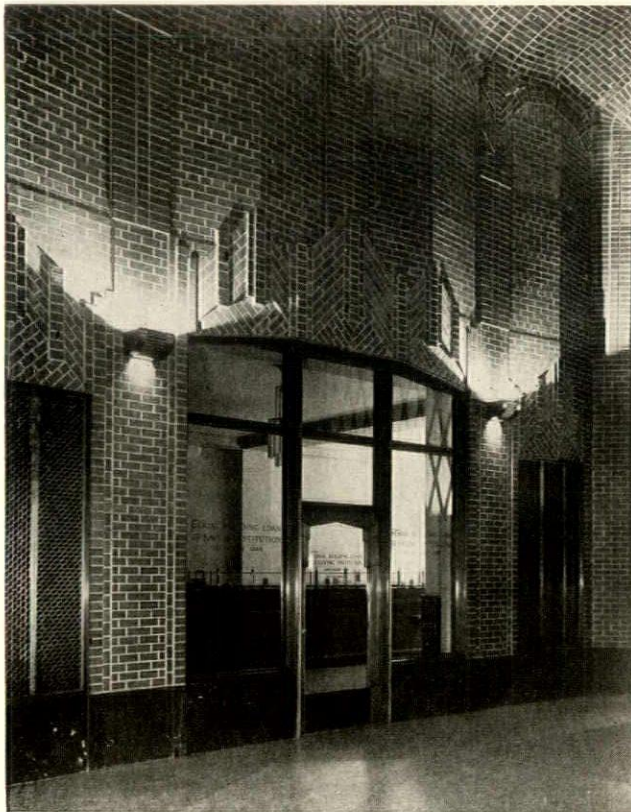
WESTERN  
UNION  
BUILDING,  
NEW YORK  
CITY  
VOORHEES,  
GMELIN &  
WALKER,  
ARCHITECTS





*The cafeteria, with its tile wainscot and acoustical plaster above and on the ceiling*

*Entrance to a bank from the main corridor*



WESTERN UNION BUILDING, NEW YORK CITY

*The serving counter room opening from the cafeteria*



VOORHEES, GMELIN & WALKER, ARCHITECTS



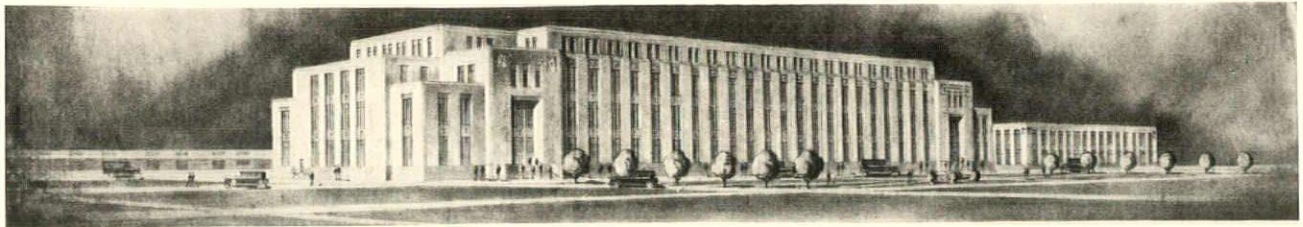


VERONA

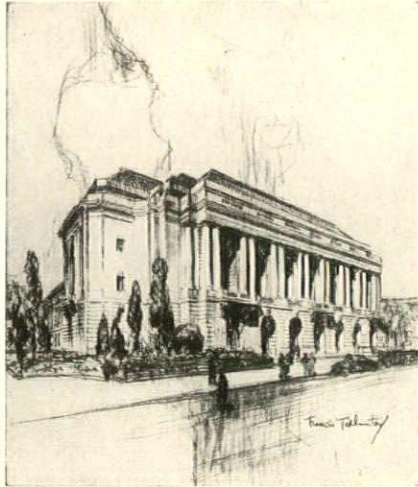
◀ ARCHITECTURE ▶

*From the pencil drawing by Vernon Howe Bailey*



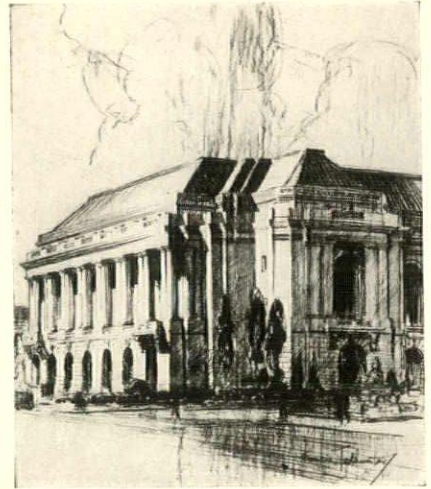


The new Post-Office, with Power and Garage Building at right, for Minneapolis, which buildings, to cost \$3,250,000, are approaching the working-drawing stage. Magney & Tusler, Inc., architects and engineers



## Architectural News in Photographs

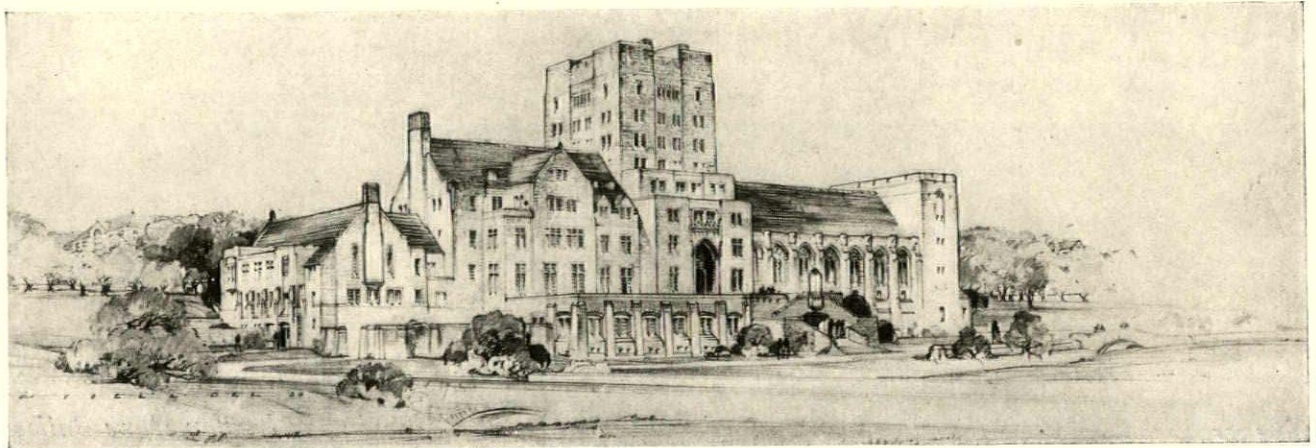
At left and right, preliminary perspectives of the War Memorial and Opera House to face the City Hall of San Francisco. Arthur Brown, Jr., architect; G. Albert Lansburgh, associate architect



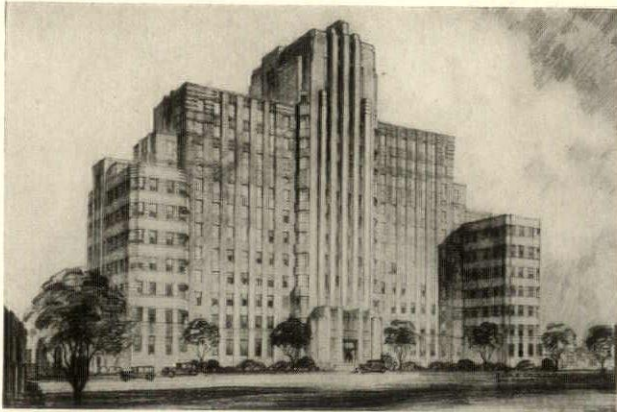
The City Commission of Newark has approved the drawings for the new Pennsylvania Railroad Station to replace the present Market Street Station. McKim, Mead & White, architects



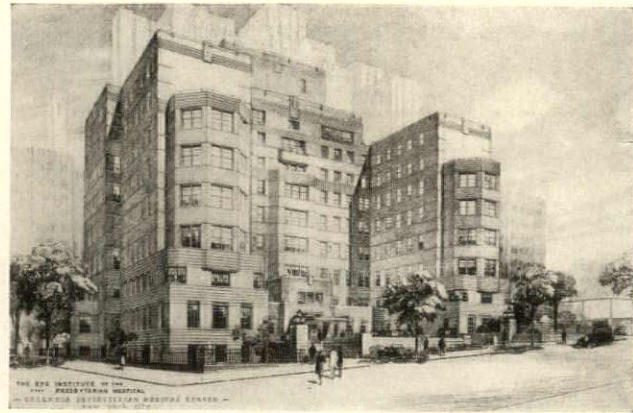
Indiana University's Union Building, now under construction at Bloomington, Ind., will contain an auditorium, cafeteria, bookshop, faculty club, and many offices. Granger & Bollenbacher, architects





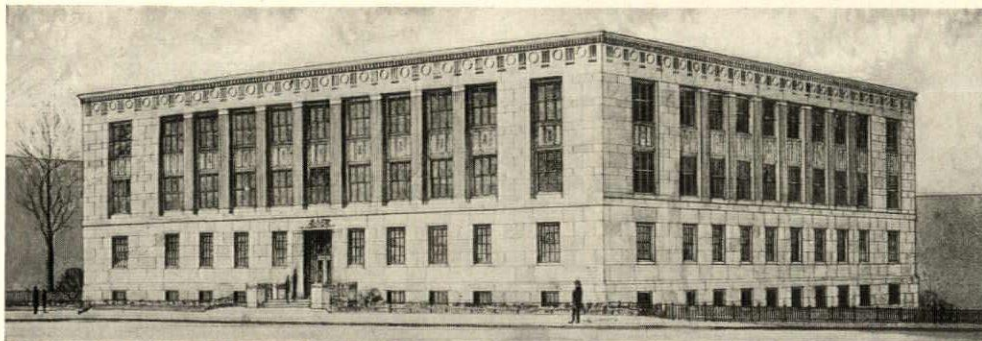
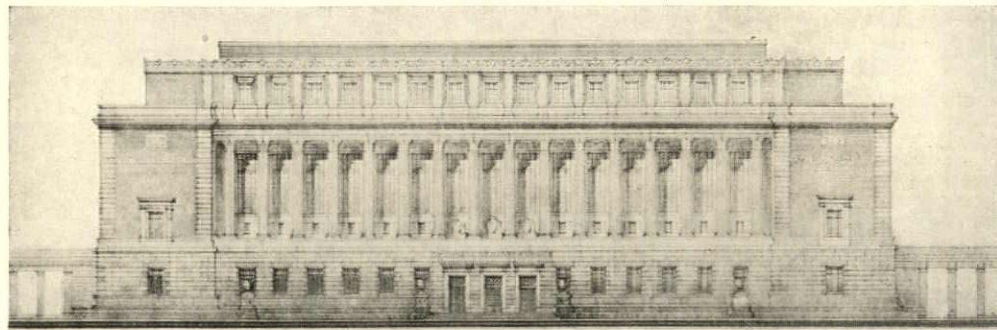


*A perspective of the approved design for the United States Marine Hospital in Seattle. Bebb & Gould and John Graham, associate architects*



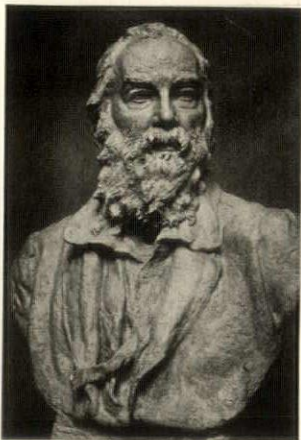
*A new unit in the Columbia Presbyterian Medical Centre, New York City, is the Eye Institute of the Presbyterian Hospital. James Gamble Rogers, architect*

*Edward S. Harkness has given Columbia University the funds with which to build a library facing the present Low Memorial Library. James Gamble Rogers, architect*



*The proposed new office building for the Hartford Steam Boiler Inspection and Insurance Company, Hartford, Conn. Carl F. Mahmfeldt, architect*

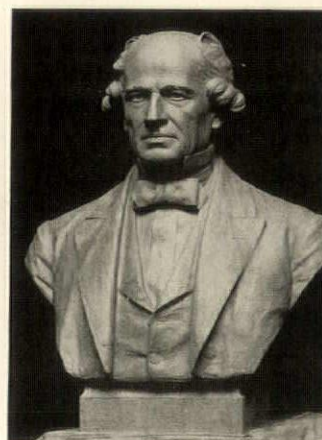
*Below, four busts recently unveiled in The Hall of Fame, New York University, New York City*



*Walt Whitman  
Chester Beach,  
sculptor*



*James Monroe  
Hermon A. MacNeil,  
sculptor*

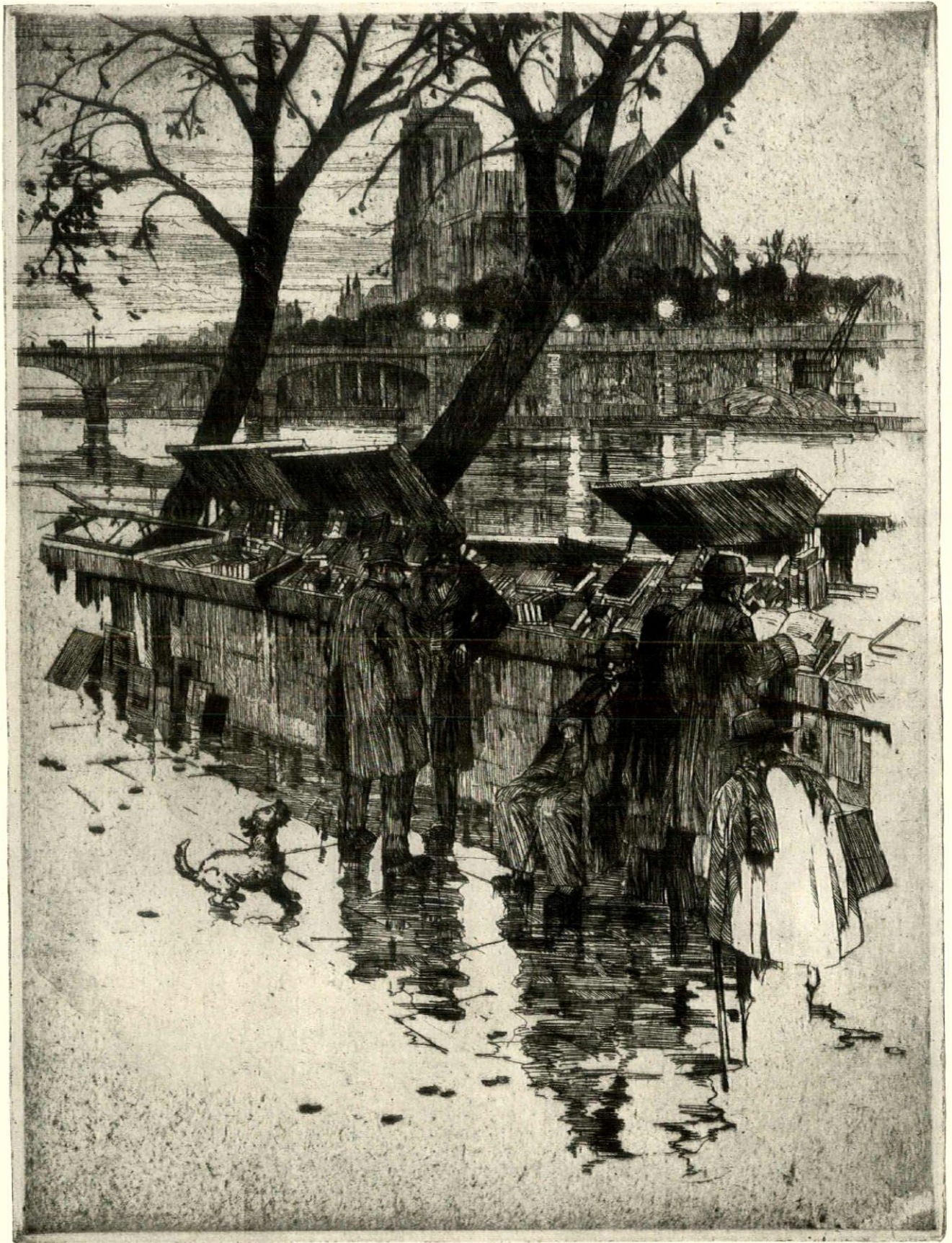


*Matthew Fontaine Maury  
F. William Sievers,  
sculptor*



*James A. McNeill Whistler  
Frederick MacMonnies,  
sculptor*





« ARCHITECTURE »

NOTRE DAME FROM ACROSS THE SEINE  
*From the etching by Donald M. Kirkpatrick*





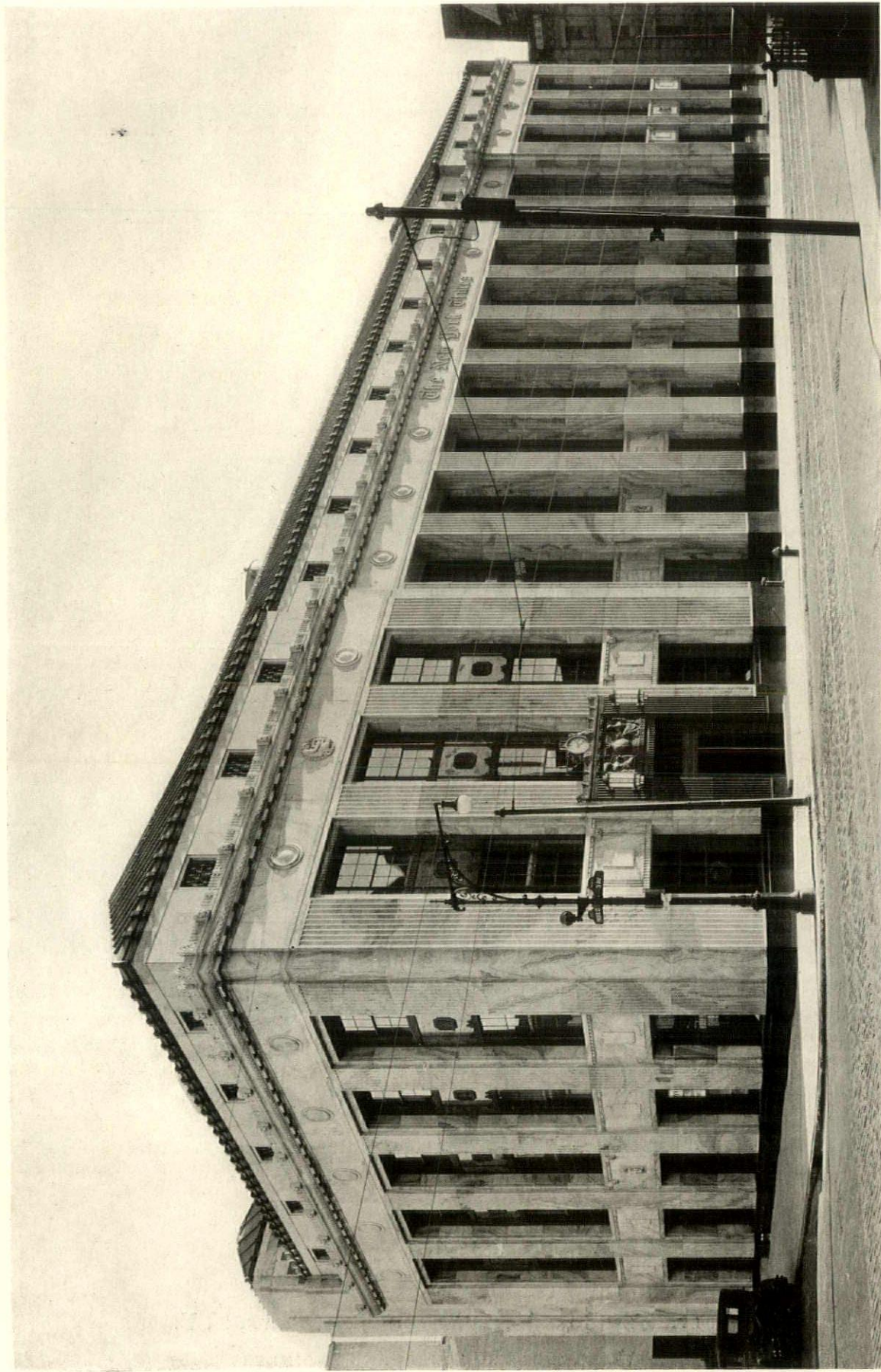
*Photograph by Wurts Brothers*

*Detail of end bay*

**BROOKLYN NEW YORK TIMES BUILDING, BROOKLYN, N. Y.**

**ALBERT KAHN, INC., ARCHITECTS AND ENGINEERS**





*Photograph by Wurtis Brothers*

◀ ARCHITECTURE ▶

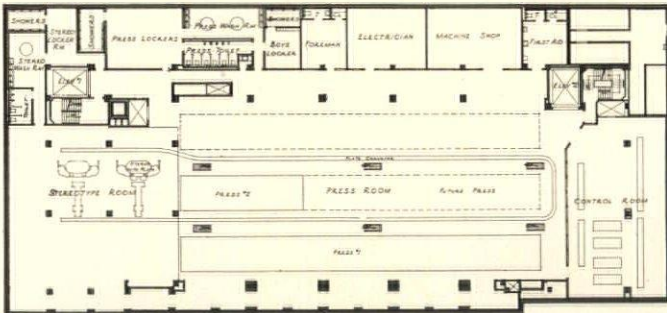
BROOKLYN NEW YORK TIMES BUILDING, BROOKLYN, N. Y. ALBERT KAHN, INC., ARCHITECTS AND ENGINEERS



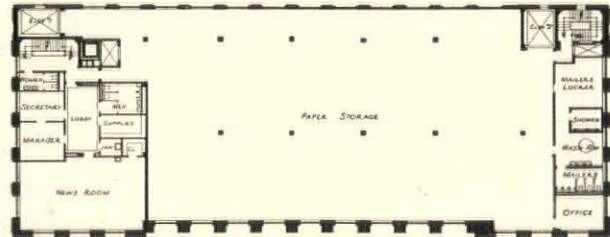


Photograph by Richard Averill Smith

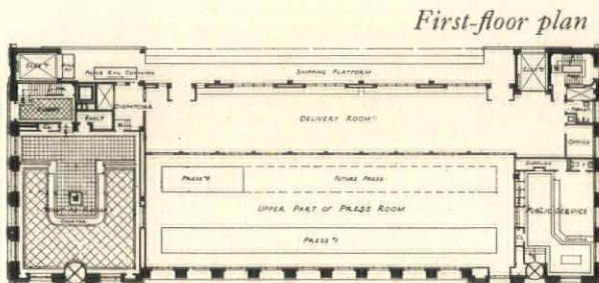
Classified advertisements room



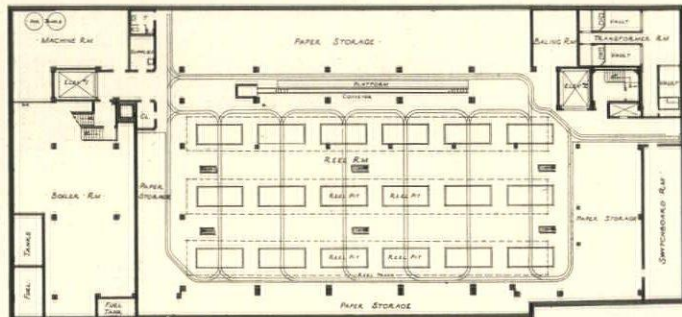
Basement-floor plan



Second-floor plan



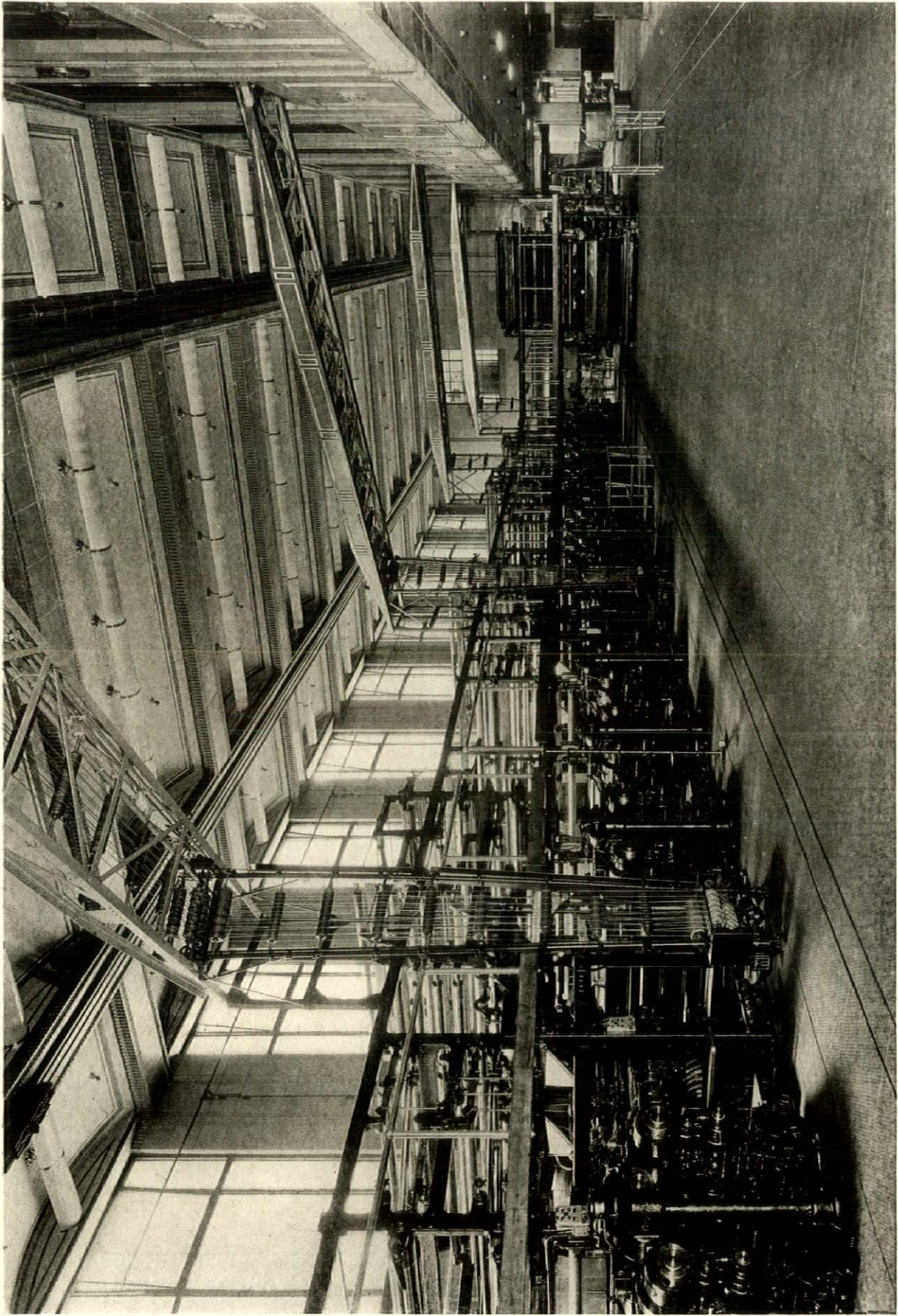
First-floor plan



Sub-basement plan

BROOKLYN NEW YORK TIMES BUILDING, BROOKLYN, N. Y.  
 ALBERT KAHN, INC., ARCHITECTS AND ENGINEERS



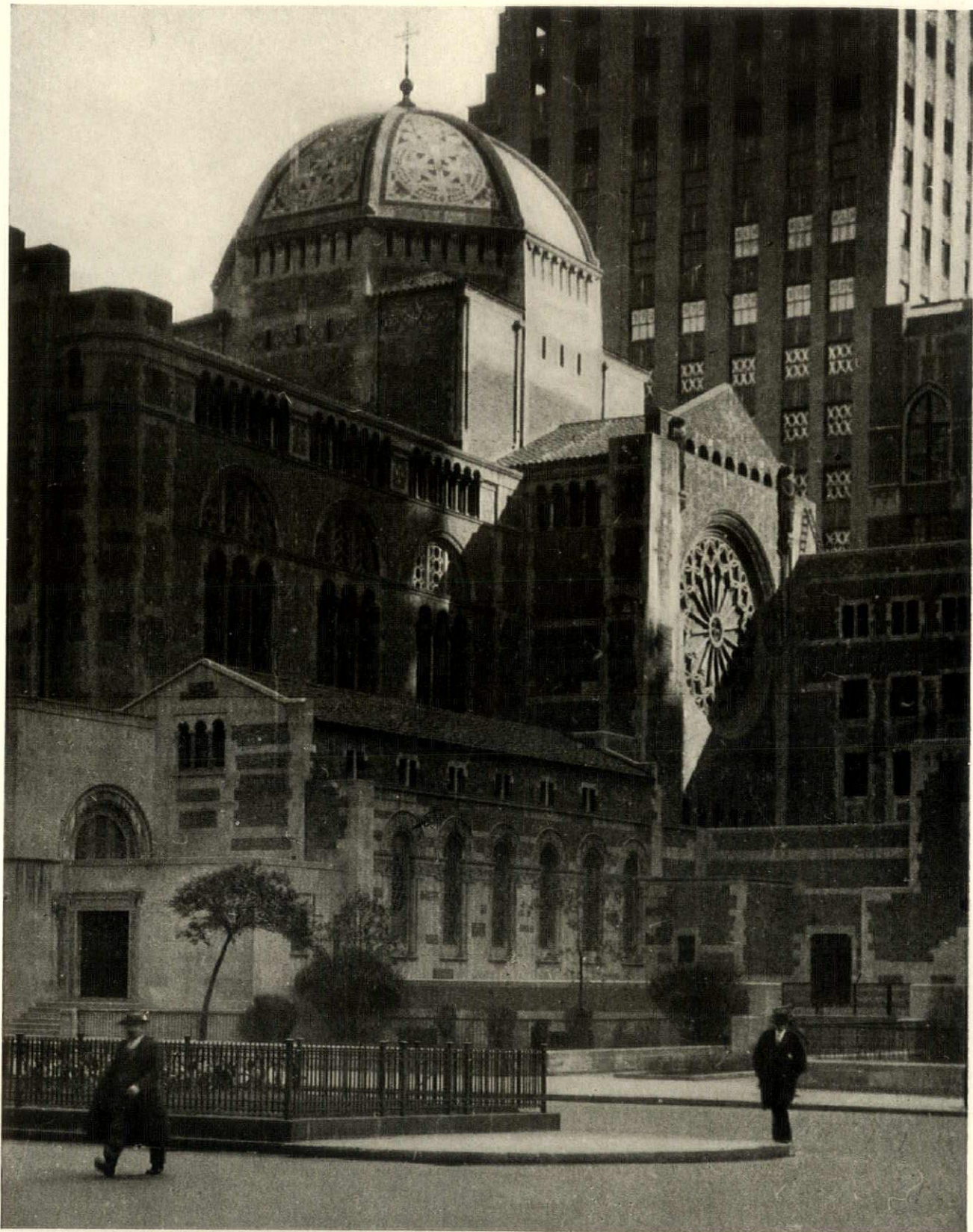


*Photograph from Bartlett Orr Press*

*The press room*

BROOKLYN NEW YORK TIMES BUILDING, BROOKLYN, N. Y. ALBERT KAHN, INC., ARCHITECTS AND ENGINEERS



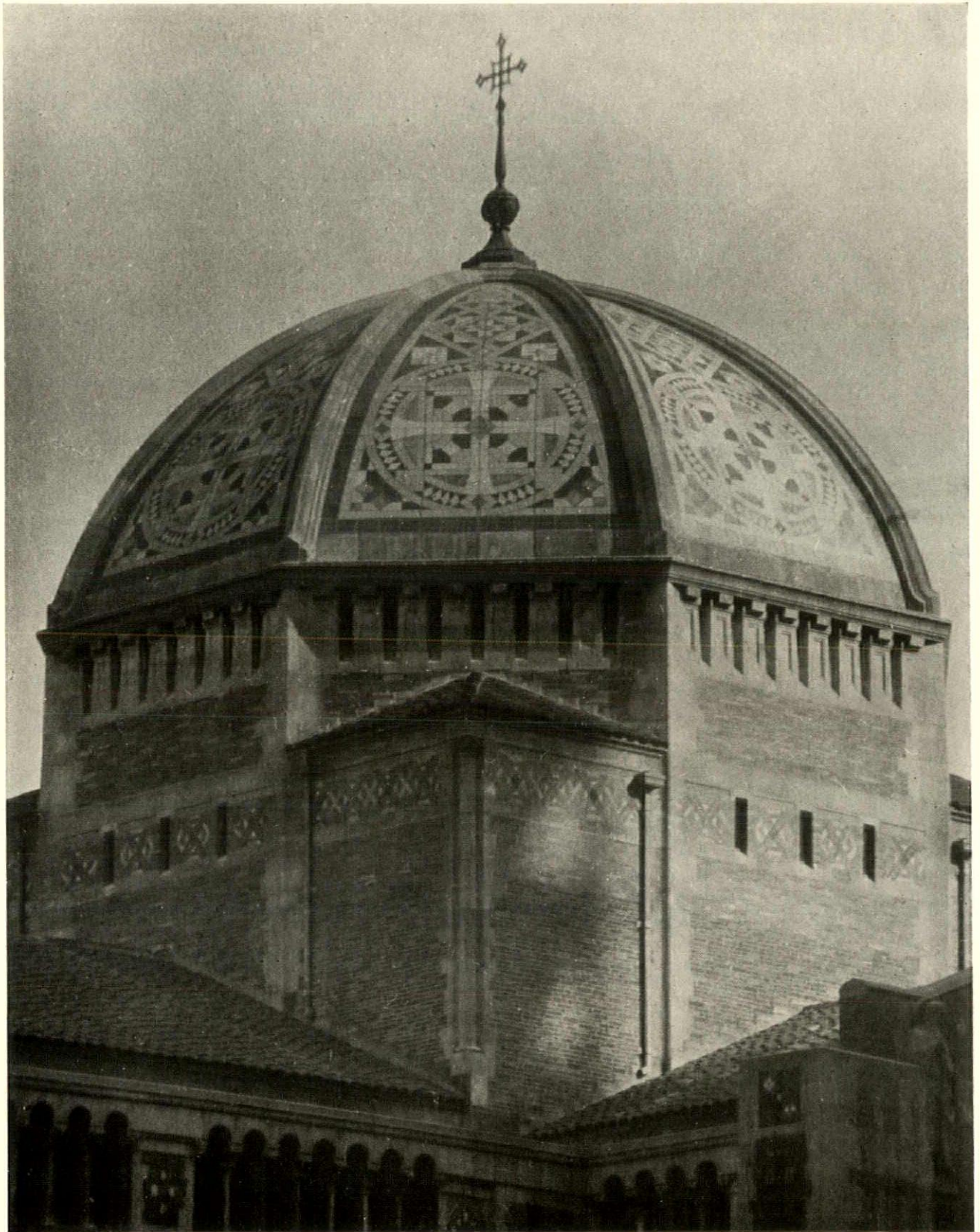


Photograph by Ben Judah Lubschez

*The architects have carried up through the ribs the limestone used in Goodhue's general exterior, filling the spaces between with tile and marble in varied colors which are, however, toned down to that of the general exterior*

DOME, ST. BARTHOLOMEW'S CHURCH, NEW YORK CITY    MAYERS, MURRAY & PHILLIP, ARCHITECTS





*Photograph by Ben Judah Lubschez*

*A detail of the dome itself which, in order not to compete with surrounding high buildings, is kept low*  
DOME, ST. BARTHOLOMEW'S CHURCH, NEW YORK CITY    MAYERS, MURRAY & PHILLIP, ARCHITECTS



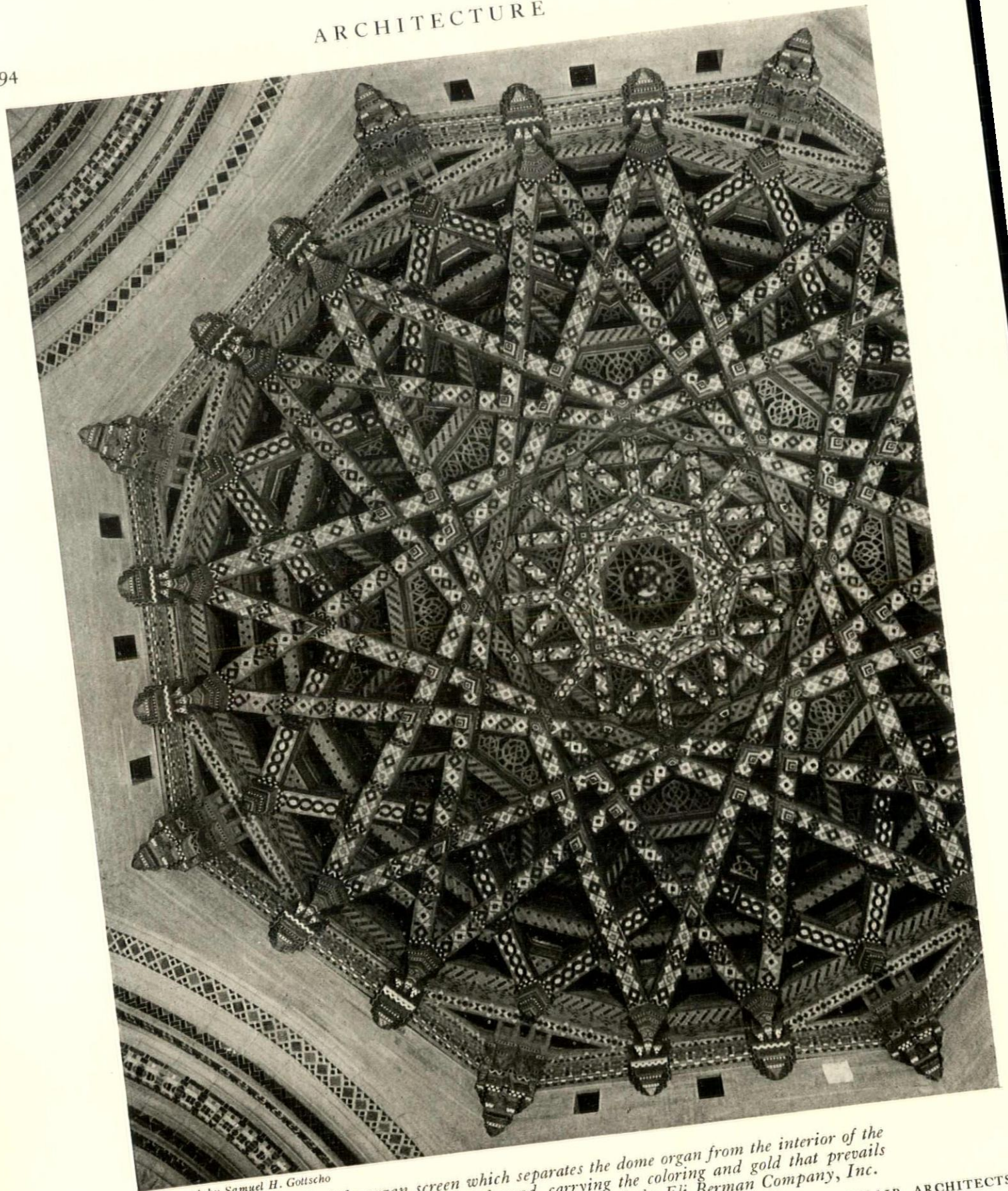


Photograph by Samuel H. Gottscho

*With the completion of the apse and the dome over the crossing, in which there is an organ, the interior of the church may probably be considered finished*

DOME, ST. BARTHOLOMEW'S CHURCH, NEW YORK CITY    MAYERS, MURRAY & PHILLIP, ARCHITECTS





Photograph by Samuel H. Gottscho

*Detail of the organ screen which separates the dome organ from the interior of the church. It is of fire-proofed wood, carrying the coloring and gold that prevails throughout the interior. The craftsmanship is by Eli Berman Company, Inc.*

DOME, ST. BARTHOLOMEW'S CHURCH, NEW YORK CITY MAYERS, MURRAY & PHILLIP, ARCHITECTS





Photograph by Samuel H. Gottschöj

*Another detail of the organ screen in the dome, showing more fully the corbelling.  
Color is secured in these corbels through the use of tile and marble mosaics*

DOME, ST. BARTHOLOMEW'S CHURCH, NEW YORK CITY    MAYERS, MURRAY & PHILLIP, ARCHITECTS





Photograph by De Witt Ward

The new bronze doors for the baptistry portal of the Park Avenue front. Albert Stewart, sculptor  
 ST. BARTHOLOMEW'S CHURCH, NEW YORK CITY

MAYERS, MURRAY & PHILLIP, ARCHITECTS



# A Century's Decadence in Lettering

*It is interesting to trace the gradually declining taste and knowledge of lettering through this series of memorial tablets, all to be found in Trinity Church, New York City. Assuming that the lettering of the respective tablets was executed at*

Obadiah Hunt, from  
Birmingham in Warwick  
With his Wife Susanna  
Credly in Hearisford sh  
in Oldingland. With su  
Children & Grandchildre  
who departed this Life  
1760. aged 84 Years. and  
at y founding of this Chu

*about the dates given thereon, the examples lead from the delicacy and grace of the 1760 tombstone to the final example of 1895, on the next page, which indicates the depth to which the design of lettering may descend*

To the Honour of Almighty God  
And the Advancement of the Christian Religion  
The first Stone of this Building was laid  
(On the site of the old Church Destroyed by fire in 1776)  
On the 2. Day of August A.D. 1788.  
In the 13<sup>th</sup> Year of y Independence of y United States of Americ

Memoriae Sacrum  
LANNIS CHARLTON M.D.  
12 April 1736 Obiit 12 Jun. 1806.  
Hujus Ecclesiae  
multos annos  
omnino diligens, Amicus semper fidelis.  
Vir bonus, integer, pius.  
CHRISTIANUS  
in mundo tenebroso edidit suam.  
Abi Lector:  
Esto talis in vita,  
Similis ei in morte evades,  
Et gloria sempiterna erit

**BENJAMIN MOORE**  
Born Oct. 16 1748, (old style)  
Consecrated  
BISHOP OF THIS DIOCESE  
Sept. 11. 1801.  
Died Feb. 27. 1816.  
  
His remains, together with those  
OF CHARITY HIS WIFE,  
are deposited in a vault  
on the Southern side  
of this churchyard.



**Thomas Swords,**  
 who was for Fifty Years an eminent  
*Publisher & Bookseller* in this City,  
 and for Twenty Five Years a *Vestryman*  
 of this Church,  
 BORN IN  
 Fort George, Saratoga County N.Y.  
 Jan. 5<sup>th</sup> 1764;  
 Died in this City  
 June 27<sup>th</sup> 1843.

IN LOVING MEMORY  
 OF  
**J KEARNY WARREN**  
 SON OF  
**JOHN & RACHEL H WARREN**  
 BORN APRIL 8 1821  
 DIED JANUARY 12 1895  
 HE HATH SHEWED THEE O MAN WHAT IS GOOD  
 TO DO JUSTLY AND TO LOVE MERCY  
 AND TO WALK HUMBLY WITH THY GOD

**IN REMEMBRANCE**  
 OF MANY ACTS OF KINDNESS AND AFFECTION  
 DURING HIS LIFE,  
 TO EXPRESS THE SINCERE REGRETS  
 WHICH ATTENDED HIS DEATH,  
 AND TO PERPETUATE A JUST ESTIMATE  
 OF HIS INTEGRITY AND WORTH,  
 THIS MARBLE  
 IS CONSECRATED TO THE MEMORY OF  
**THOMAS KNOX,**  
 WHO DIED 16TH JANUARY,  
 1835.

IN MEMORY OF THE REVEREND  
**FREDERICK OGILBY, D.D.**  
 WHO WAS BORN IN DUBLIN, IRELAND  
 ON THE 27<sup>TH</sup> DAY OF DECEMBER, A.D.  
 1818, AND WAS FOR TWENTY-THREE  
 YEARS AN ASSISTANT MINISTER  
 OF RINITY CHURCH. HE DIED ON  
 THE 26<sup>TH</sup> DAY OF MARCH, A.D. 1876.



# Some Pitfalls in Supervision

By *W. F. Bartels*

## XIII. PLUMBING (CONTINUED)

**P**IPES for water supply are of steel, wrought iron, or brass. Lately there has come on the market a steel-alloy pipe which is said to be almost the equal of wrought iron in rust-resisting qualities. Brass seems to be superior in general as far as non-rusting is concerned, and while talk may be heard of its high cost, its final cost is only a small percentage more than wrought iron, due to the labor costs being the same. Whichever one is called for, the superintendent should see that no other is allowed on the job. If wrought-iron pipe is to be used it should have the trademark of one of the standard brands rolled in it. Where wrought-iron pipe is called for, it is ludicrous to see a bundle of steel pipe come on the job with a label on which has been laboriously written: "Genuine wrought iron." More often, however, the plumber forgets to bring the wrought-iron fittings to go with the pipe. Incidentally, the substitute fittings are more difficult to detect and more easily overlooked than the pipe. The wrought-iron pipe, being more porous than steel pipe, takes the galvanizing better. Also, when wrought iron is split the rupture will show a fibrous structure as compared to the crystalline makeup of steel.

It is well to check the walls of brass pipe for thickness, to see that it corresponds to that called for in the specifications. Often there will be an attempt to substitute a light-weight pipe for the regular weight. This should not be countenanced, as it will be difficult to handle and will probably break off at its connections should any strain be placed on it. The reason for the breakage here is that there is not enough material left beneath the threading to allow for much strain. Similarly, the fittings should be checked to see that they are in order.

Having satisfied himself as to the weight and size of the pipe and the fittings, the superintendent should see that reasonable care is exercised in installing the brass pipe. The careless use of the Stillson wrench chews the pipe unnecessarily. The wrench should not be used too far from the point where the pipe is held by the vise. In large-size pipe care must be taken not to

crush the pipe, such as by the use of chain tongs. Ordinary brass pipe should not be bent unless it has been fully annealed. To make the joints tight the only thing that should be allowed is boiled oil and a little cotton wicking, which is put on the male thread. No red lead, litharge, or cements should be used, because oftentimes they will give a decided taste to the water. One case is on record where a plumber was sued for a case of sickness because he had used red lead.



The riser lines should be gone over to see that they are of the size called for on the plans. Then the branches, or "Crotons," as the mechanics in New York call them, should be checked to see that each fixture gets its proper size supply line. All this should be done of course before the lines are enclosed by partitions. Then the valves should be looked at to see that they are in and are located in their correct positions. If possible they should be in closets or other inconspicuous places and in no case should they be allowed to project out into a room. The valves are generally furnished to cut off the water supply of one set of fixtures, although in the more expensive type of work a valve may be furnished for each fixture.

No bushings should be allowed in the work to take the places of reducers. No unions should be installed, their places being taken by right-and-left couplings. The latter are difficult for the average plumber to put on and therefore are avoided whenever possible. Where the water supplies run to a basin or lavatory they should be provided with an air chamber, preferably twelve inches long. This will eliminate the knock so often heard when the water is shut off suddenly.

Hot and cold water pipes should be kept at least six inches apart, and the hot-water lines should be covered with an insulating material. When brass water pipes are run in cinder floor fill they should be painted or in some manner protected against the acids which may be in the



cinder fill. In the non-fireproof type of construction the hot-water riser will often have its individual hot-water return. Care should be taken to see that this return is carried down from the highest point served. Often it is cut into the riser at the second floor, thus depriving the floors above of its benefit. When this is done and the building plastered the detection of this fraud is difficult.



When water pipe is cut and threaded there is a burr left on the end by the cutting. This should be removed with a reamer to make a workmanlike job. Particularly is this so in steel or iron pipe, for where left on the burr offers an excellent starting point for rust. If it is a small pipe the whole opening is soon closed up with rust.

In long lengths of hot-water pipe it is necessary to provide expansion joints. It is a good plan to have access doors so that these joints may be reached in case of necessity. However, if a hung ceiling is provided, a swing or loop may take the place of the expansion joint, and then no access door is necessary. This "loop" is nothing more than an offset in the pipe to allow for expansion and contraction without damage. Where a long length vertically makes it necessary to install a loop it can be made in the middle and the pipe held by hangers top and bottom; or a "loop" may be furnished at top and bottom with the hanger in the centre.

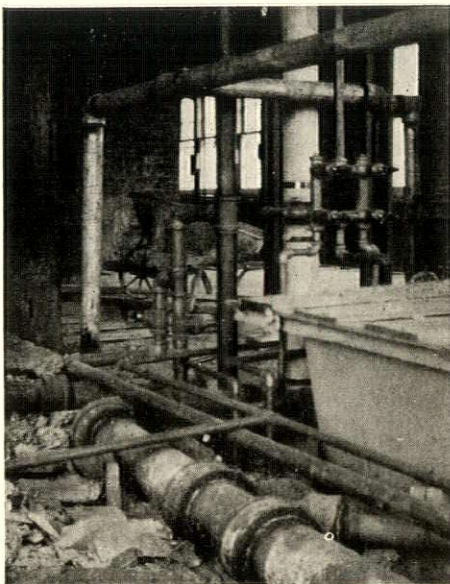
Similarly a "loop" should be used on a long horizontal run.

When the water supply system is completed it should be tested with air or water. The latter is really preferable as it will indicate the leaks more quickly. The test pressure should be fifty per cent greater than the working pressure. Care should be taken to see that the cut-out valves are open so that the entire system is being tested. Often if a line is not quite finished a turn of a valve will take it "out of the test" without the knowledge of the inspectors. A gauge will of course be supplied and the indicator should hold steady at the required mark.

If air is used in making the test and the lines are long, it is well to watch the hand of the gauge for several minutes. The pump used will be at the gauge, but there is nothing to prevent another pump's being used on another part of the line to keep the pressure up. The throbbing of the second pump, however, will cause a pulsation of the gauge indicator, thus revealing the deception.

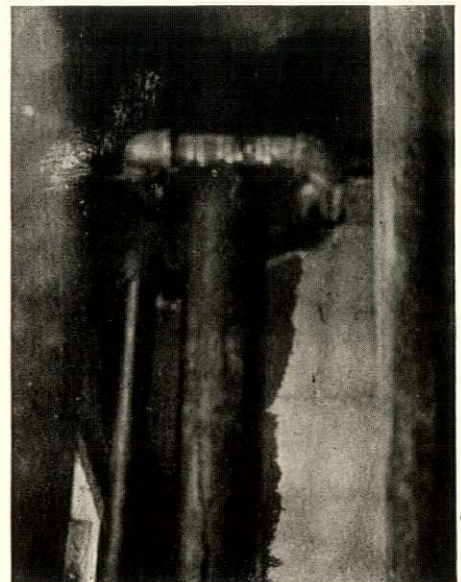
#### GAS LINES

The gas lines will be tested by the gas company, who use air pressure with a mercury-column gauge. In this test, as in the air test of water lines, a leak is difficult to find. The plumber generally makes a soapsuds lather and applies it with a brush to the suspected leak, which at once reveals itself if covered. Often the specification will call for gas pipes to be painted in some manner, in which case the superintendent should see that this is done.



*The maze of piping required for a single bathroom, before it has been hidden by floor and partitions*

*A six-elbow expansion loop on a hot-water line, the loop encircling the adjoining soil line*





# Commensurability and Walls

By Ernest Flagg

MUCH has already been said in these articles in a general way of the advantages to be derived from the standardization of parts in building and the dependence of standardization on commensurability in design.

The object in this installment, as it was in the last, is to present a specific illustration of the application of this truth. It is now proposed to consider walls, but before beginning it may be well to state again certain facts which seem so self-evident as to be axiomatic and upon the truth of which our argument rests.

1st: The most effective way to reduce cost is by standardization, or mass production, as it is called.

2d: Standardization of design in house construction is, generally speaking, undesirable as tending toward monotony.

3d: A better way is to standardize parts.

4th: Standardization of parts is dependent on commensurability in design, for otherwise they will not always fit.

5th: Commensurability can best be had by the use of building units or modules.

Now as to walls: Many different

*Mr. Flagg's series of articles started in the issue of September, 1930, with "The Basis of Greek Design." Supplementary articles have appeared every other month since that time.*



types have been evolved during the ages, suited to different needs, different materials, and different tastes. What is now wanted is a type suited to standardization of parts under modern conditions, or to unit construction, as it may be called.

Some years ago I invented a type of rubble wall which has certain advantages over ordinary rubble. It is made by the use of demountable forms, easy to operate and requiring little lumber to make. By the use of a unit in planning, the forms always fit, no matter how the design may be varied. This wall and the method of making it are fully described in my book "Small Houses." The forms consist of uprights, firmly held in place at top by light frames, and planks to hold the masonry. The

forms are so contrived that the planks can readily be slipped out as the work proceeds and used at a higher level, therefore comparatively few are needed. The face of the wall is formed by placing the flattest side of the stones against the planks, then filling behind with concrete. Pointing is done after the planks have been removed. Figure 1 shows a wall of this kind in process of erection, and Figure 2 is an inside view of the forms. As the work after pointing has a mosaic-like appearance, I called it mosaic rubble. Remarkably beautiful results are obtained with little skilled labor.

Although these forms, in their economy of construction and simplicity of operation, have advantages over any others that I know of, they, like all other forms, have their drawbacks. Comparatively inexpensive, their cost is nevertheless too great for a single operation and their setting requires care and a certain amount of skill. They are intended for, and adapted to, multiple building. When used for several buildings and operated by men accustomed to them they are of considerable value, but for a single house there is little economy in their use. It was to overcome this difficulty

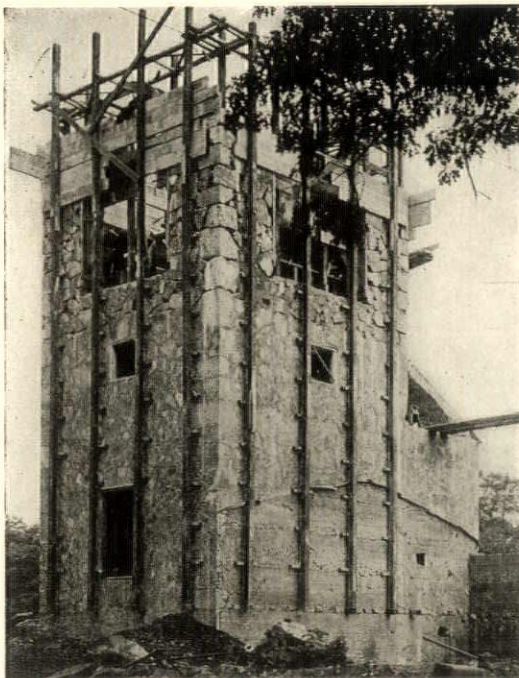


FIG. 1. Mosaic rubble wall in process of erection. The lower part, to just above the small square windows, has been pointed

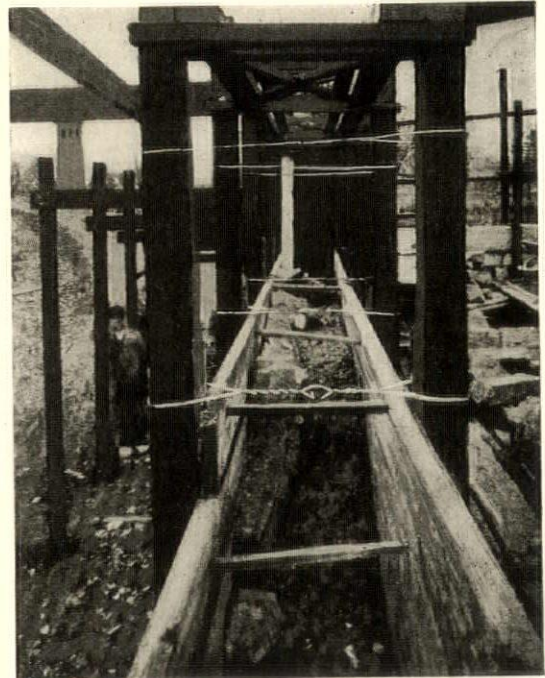


FIG. 2. Mosaic rubble; inside view of forms, showing the flattest side of each stone placed against the planks forming the outer face of the wall, backed up with concrete



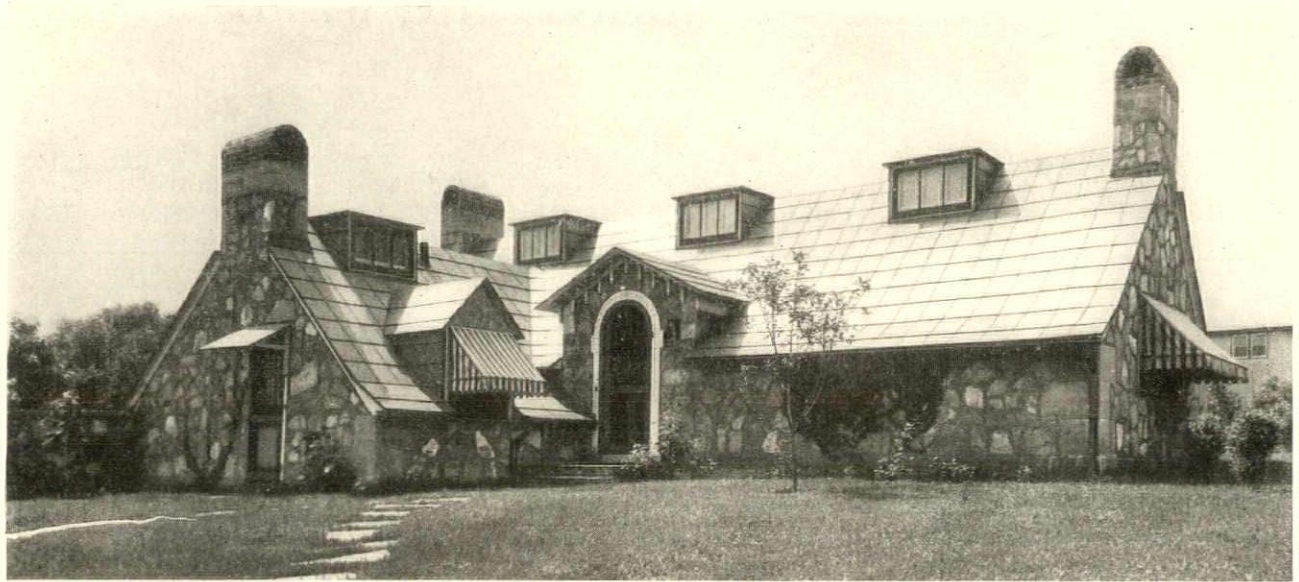


FIG. 3. *A house of mosaic rubble walls with armored quoins. The roof is of slate laid in a manner to be described in a later article*

that I devised the type of wall about to be described.

It came about in this way. In building mosaic-rubble walls I found, as usual in rubble work, the greatest difficulty at corners. Stones had to be cut to obtain a presentable angle, and there were other difficulties, so that one corner cost about as much as ten feet of plain wall. To remedy this I used cast-stone corner blocks, or quoins, as shown in Figure 3, and the better to hold them firmly in place and form a rigid guide for the forms, a large hole was cast in each so that when piled there was a continuous channel from top to bottom in which iron reinforcement was placed, then the hole filled with con-

crete, as shown in Figure 4. This device proved so successful as to suggest an extension of its use to all parts of the wall. Thus an entirely new system of wall construction made its appearance, with results astonishingly economical. The blocks used in combination with brick are shown in Figure 5. Before describing the process of erection it

will be in order first to describe the method of making the blocks.

As the unit in design gives perfect commensurability, stones of few shapes are needed and all can be made in a single box by the use of filler pieces. Inside dimensions of the form or box are 15 inches by 15 inches by 30 inches. It is made of cast iron, machined to exact dimensions, without top or bottom, and has demountable sides. It is shown in Figure 6 with certain of the filler pieces in place. Its cost, exclusive of filler pieces, was seventy-five dollars, and its life is indefinite. I have used mine for several years, and by keeping it oiled it has suffered no appreciable deterioration. Its inner sur-

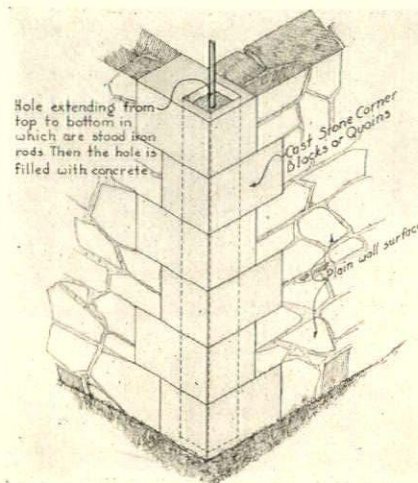


FIG. 4. *Mosaic rubble with construction detail of the armored quoins*

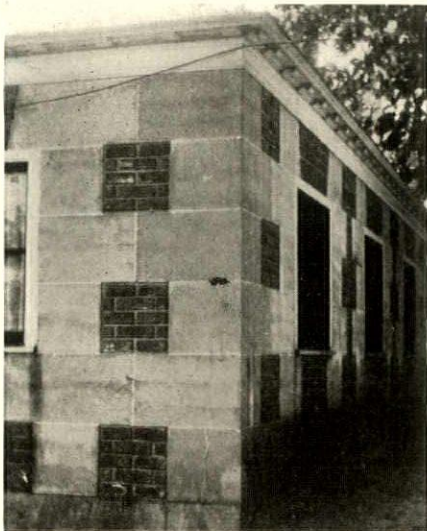


FIG. 5. *Cast stone block quoins and jambs with thin brick wall filling flush with the outside face*

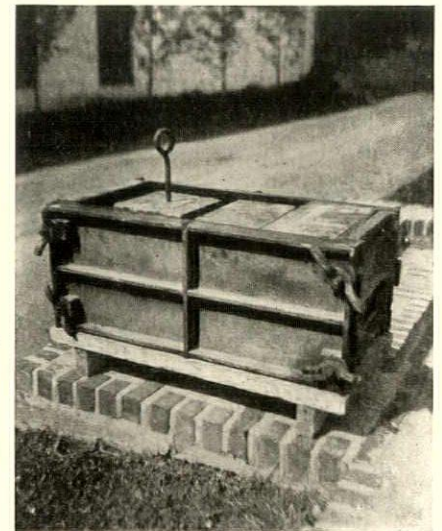


FIG. 6. *The iron box or form used for making cast stone blocks for armored construction*



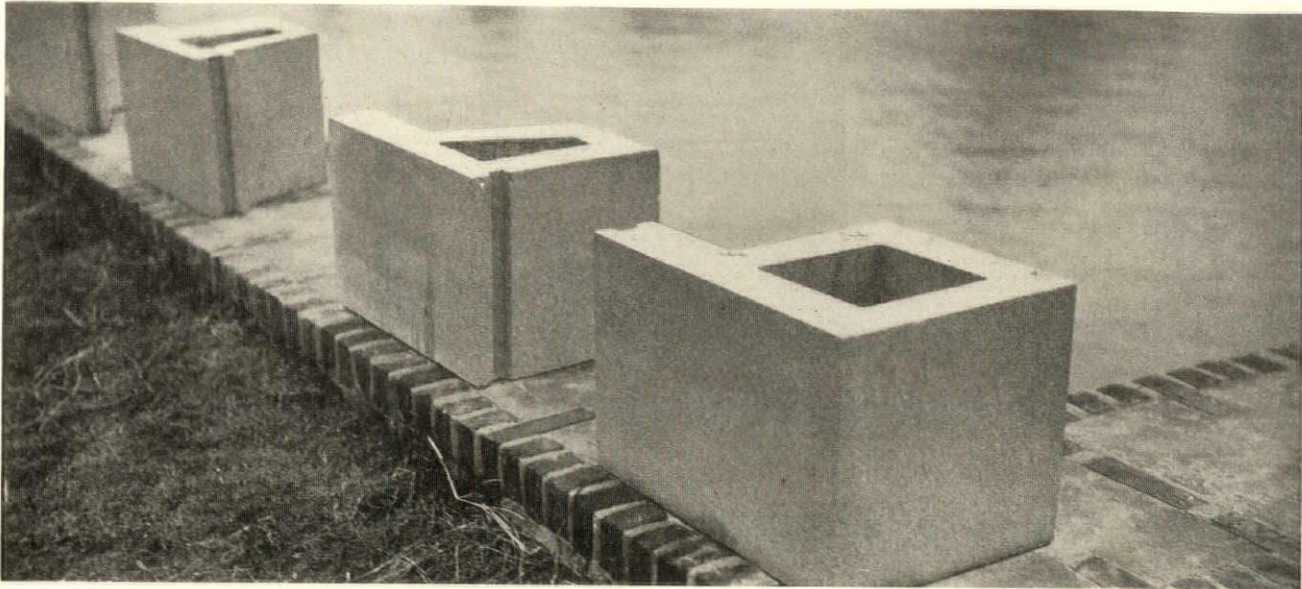


FIG. 7. Cast stones for armored block construction, made of three parts clean sharp sand to one part of white Portland cement, thoroughly mixed, with only enough water to dampen it

faces are perfectly smooth, as are also the surfaces of the blocks made in it. Heretofore the fillers used have been of wood, but they have not been entirely satisfactory because, even though kept well coated with shellac, there is more or less swelling and shrinking. In the future metal filler pieces will be used.

The mixture is three parts clean, sharp sand to one of white Portland cement, thoroughly mixed, with only enough water to dampen it. It is put in the forms in layers, each one carefully tamped by hand. Better and quicker results could doubtless be had by automatic tamping, but even by the hand process two men are able to make from twelve to fifteen blocks a day, or about twenty cubic feet. The blocks are quite as handsome, to my mind, as some varieties of limestone and probably quite as durable. Their cost compared to stone is low and by more efficient methods of manufacture it might easily be reduced by half. The white Portland cement in connection with the yellow sand produces a beautiful warm ivory color which few natural stones can equal. As soon as the material is tamped the sides of the form are removed and the blocks stood aside, each on its separate plate, and allowed to cure for thirty days, during which time they are kept damp. Figure 7 shows blocks of different shapes. The one in the foreground is a corner stone, the filler pieces for which are shown in place in

Figure 6. The one beyond is for a splayed window-jamb.

In an ordinary house from eight to ten different shapes are required, all made as stated in the one form.

Now as to construction: The houses are without cellars, and the first operation after laying out the work is to build the foundation. Where there are no foolish building laws to interfere and the wall is low, a trench is dug, on the line of the wall, about one foot wider than the wall and filled for eighteen inches with cinders well tamped. Then, centred on this cinder bed and using planks for a form, the foundation course, of the exact thickness of the wall, is made of concrete. In this connection too much stress cannot be laid on accuracy, for any time or trouble spent here will be most amply repaid by subsequent speed and satisfaction. Great care is taken to make the top of the planks which act as the form for the concrete base perfectly level and true. This foundation course is one foot high—six inches above grade and six inches below it.

If the finished floor is to be of linoleum cemented to the concrete floor slab, then the top of the foundation is at floor level, but if a wooden floor is to be used, then it is two inches above the floor slab to allow for the thickness of the floor and the one-inch sleepers to which it is nailed. When this foundation course has been finished and trowelled per-

fectly true, smooth, and level, it is covered with a damp-resisting compound on which, as an additional precaution, is laid a strip of rubberoid of the width of the wall. Then all is ready to proceed with the superstructure.

Work commences by piling corner blocks to the full height of the story, great care being taken that corners are exactly the right distance apart and perfectly plumb. These corner piles serve as guides for the intermediate ones and by sighting between them the slightest deviation from the true can be detected.

It will be seen by reference to Figure 5 that the wall consists of piles of blocks, one at each corner and one at each side of every door and window. If there are any long unbroken stretches of wall, intermediate piles are placed at suitable intervals. If all has been properly prepared in the manner described, two laborers under a competent foreman can easily set up the blocks for one story of an ordinary house in a day, or in far less time than would be required for the erection of the simplest kind of forms. The reason for this speed is that the stones are all of exactly the right size and that no mortar in the ordinary sense is used in the joints. The blocks are simply placed on top of each other, work which can be done by common day laborers under the guidance of a competent foreman quite as well as by the most skilled stone mason. I



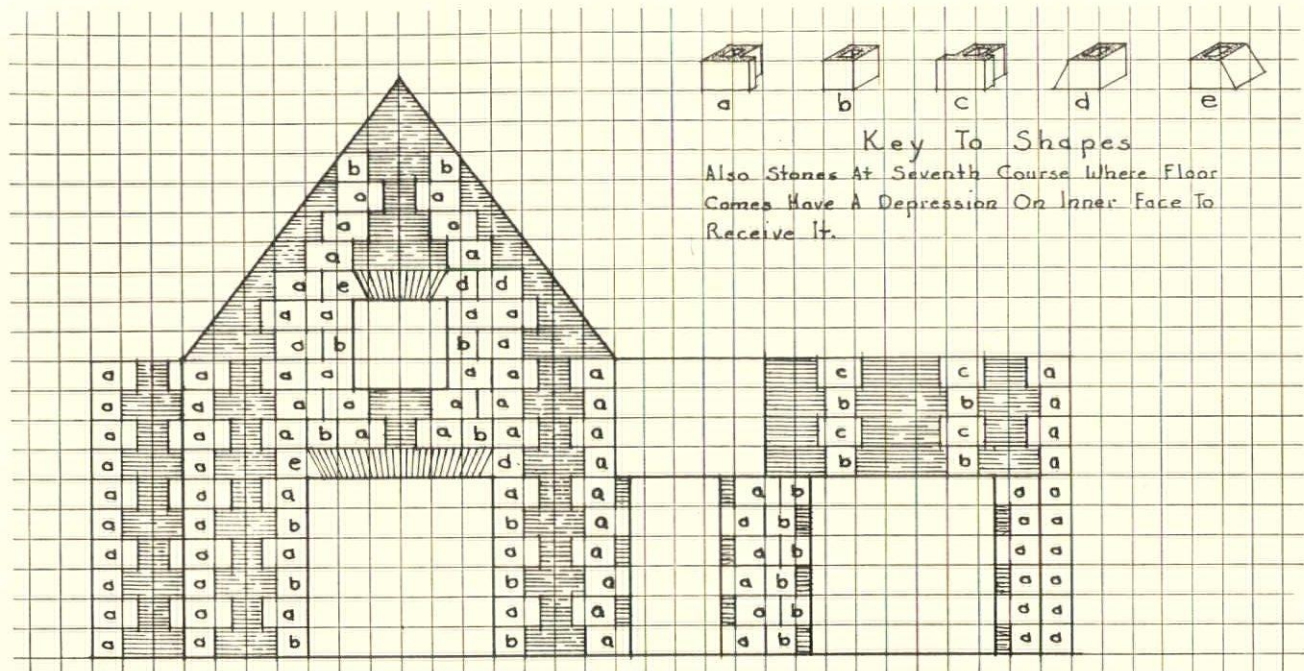


FIG. 8. A setting diagram for armored block construction of a façade, as indicated very quickly on the special tracing-paper printed with red lines, the squares representing fifteen inches on a side, the unit of wall thickness

say no mortar is used, in the ordinary sense; that is to say, no mortar which affects the thickness of the joint, but before one stone is placed on another the top of the under one is covered with a mixture of Portland cement and lime of about the consistency of thick cream. This has the effect of filling any irregularity, no matter how fine, in the stone beds and making them water-proof. Vertical joints are keyed or sealed by grouting the channels cast on the blocks where they meet, as shown in Figure 7.

It will be seen from this same figure that corner blocks have a tail piece on one side only, about three inches thick, with a groove in the end for the key just mentioned. In the next course this stone would be reversed so that from the outside the stones are alternately long and short as shown in Figure 5, but inside they appear as straight piers. The brickwork filling between these piers consists of only four inches of brick, damp-proofed on the inside and coated with a half-inch of cement. The blocks are so beautiful as to make it practical to leave them exposed on the inside as a part of the interior decoration. Recesses between piers can be filled in, furred off to form pipe chases, left for use as bookcases, cupboards, or simply as

FIG. 9. Below, armored blocks in the fifteen-inch cubes are useful for other purposes, such as fence posts, supporting piers, and the like



recesses, adding just so much to the available size of the room. By this means about one-third of the masonry otherwise required is eliminated, while a stronger wall is obtained. This type of construction is particularly suited to places subject to earthquakes, as California for instance, because, fastened together as they are by the iron rods and concrete core, no amount of shaking can dislodge the blocks. The construction may be likened to that of a bird cage which no shaking will affect, whereas if built in the ordinary way it would be like a house of blocks which at a slight movement collapses.

In using this method it is of course necessary that the placing of the various shaped stones be carefully worked out and clearly indicated on the elevations, but after a little practice this can be done very rapidly. The different shaped stones, of which there are few as stated, are each given a number or a letter which is marked on the elevation. Figure 8 represents one elevation of the house under consideration with the blocks numbered; each number representing a particular shape.

These blocks are useful for other purposes, as fence posts, supporting piers, and the like. Figure 9 shows them as angle posts of a grape-arbor.



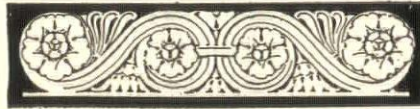
*Friday, May 22.*—Almost from the moment we left the pier yesterday at four P.M. we have moved slowly through a thick fog, probably engendered through the meeting of Traditionalists and Modernists who dwell in this world at widely differing temperatures. Not that there is any discussion of either subject; far from it, for, between the foghorn blasts, coming every minute, on the minute, the talk is of almost everything but architecture—of Paris and how to make the most of our fifteen days there, of those who should have been with us and are not, of committees and what is expected of them (which seems to be a great deal).

*Saturday, May 23.*—It was a fond thought of mine before embarking on this trip that the eight days at sea, both going and returning, would at least be free of all responsibilities in connection with periodical publishing. Here at last should have been a rest—well earned, I insist. But no. Instead of a monthly I am now editing a daily, nor are the news-gathering and writing the whole of it, for I must even type-cut the stencil from which it is mimeographed. It is permitted that Guest Editors be drafted into service, so the following are going to be largely responsible for the next few issues: Edgar Hay, Hubert Ripley, Kenneth Murchison, and Louis La Beaume.

*Monday, May 25.*—Tournaments are in progress on all sides—bridge, shuffle-board, deck tennis, deck golf, and "Camelot." C. C. Zantzing (pronounced "Zahn-zahn-zhay" on this trip) and Ethan Allen Dennison are revealed as dazzling comets at deck tennis, N. C. Wyeth is disclosed as a past master of shuffle-board, while Hubert Ripley broods over the bridge table like an all-wise Buddha. Ely Kahn is in a class by himself at "Camelot," having brought the game with him, and being the only one on board who knows the rules. When he does not know the rule he makes one.

*Tuesday, May 26.*—Apparently this holiday idea was wholly misleading. The "Muriel" painters, as Ken Murchison calls them, have undertaken the decoration of the Lounge and Bar, rooms which had conveniently been lined with ivory wall-board panelling. Arthur Covey, C. Putnam Brinley, George Wharton Edwards, Philip H. Chadbourn, James Monroe Hewlett, Ralph Gray, George S. Idell, C. Howard Walker, and Arthur Ware are busily engaged upon their respective panels of the Lounge, while Tony Sarg transformed the Bar by painting ten superb panels in a single morning.

*Wednesday, May 27.*—Unable to wait until the usual evening for the concert, the talent insisted upon giving it last evening under the chairmanship of Wil-



## The Editor's Diary

liam H. Gompert. "Songs of the Sea" were sung, with pantomime, by Harry R. Burt and Arthur Ware; Mott B. Schmidt sang "My Wild Irish Rose," assisted by a group of fairies; Tony Sarg wielded his marionettes; Arthur Ware, in the garb of Lord Dundreary, recited "Two O'clock in the Tenderloin"; Harry Burt entertained with legerdemain; and there followed a melodrama in one act, "The Triangle," written apparently while it was being performed, by Murchison, Foster Gunnison, A. J. Raspetti, Philip Chadbourn and George Harvey. The "Star-Spangled Banner" was followed by several earnest efforts to sing "La Marseillaise" in French—not wholly successful.

*Friday, May 29.*—Between the final rounds of various tournaments I managed to steal time for an hour or so with Ely Jacques Kahn, drawing from him the essentials of his philosophy of architecture and how he tries to achieve it, most of which will be found in another part of this issue.

Soon after lunch we ran into heavy weather on nearing the channel, and before dinner were slowing down under a full gale from the port beam. With all of the driving rain and heavy seas the finalists in the shuffle-board tournament succeeded in completing their match on the upper deck with a score of 98 to 102, the victors coming down in clothes that were almost as completely soaked as the decks.

*Saturday, May 30.*—Soon after nine A.M. we steamed into Cherbourg, went ashore in a lighter and, after a few moments with complaisant customs officers, disposed ourselves and our luggage in a new train. It had been designed for the State Railways by M. Pacon, an architect, who had come down from Paris with several other *anciens* of the Ecole to bid us welcome to France.

Soon after six o'clock we rolled into the Gare St. Lazaire to hear the welcome of some three hundred students in the eternal words of *Les Pompiers*, accompanied by their own band. The station rang with the vociferous welcome, the explosions of flashlights, and the almost

equally noisy reunions of the Voyageurs with Raymond Hood, Ernest Peixotto, William F. Lamb, Simeon Ford and others who had come to see that our entrance into Paris should be made unmistakably hospitable. On the students' tallyhos, in buses, and on foot, the procession and its band made their leisurely way through Parisian traffic to the Café des Deux Magots on the Boulevard St. Germain. Here the regular patrons graciously gave way before a demonstration of affection for the *anciens* that surely had never before been equalled in the Quartier.

After rounding up the luggage and disposing it properly at our two hotels, The Madison and The Palace, both on the Boulevard St. Germain, hard by old St. Germain des Pres, the party resolved itself into units of varying size and disposition to seek what might be found in our first night in Paris. Far into the night one encountered groups of two to five making their way between Le Rotonde and La Dom, and other lesser lights of the Montparnasse firmament.

*Sunday, May 31.*—This afternoon with Putnam Brinley, Arthur Covey, Monroe Hewlett, Ely Kahn, Louis LaBeaume and W. H. Parsons to have a preliminary glimpse of the *Exposition Coloniale*, out near Vincennes. Some of the thatched-roof buildings, representing Togo and Cameroun, seemed of particular interest—the work of an Ecole man, L. H. Boileau, who, whether or not he captured the spirit of the native architecture, displayed a convincing knowledge of design and a pleasing use of unusual materials.

*Monday, June 1.*—Parisians tell us that they have had rain for several months—to-day a fair sample of it, like a showery day in April, interspersed with sunshine. It was not enough to keep me from tramping miles of circulatory inspection over on the right bank, finding most of the familiar landmarks unchanged, but with a profuse representation of modernized shop fronts in the shopping district. Three years ago the contemporary manner had made only an occasional appearance in a rebuilt front; now it is far more in evidence—rarely as a whole new façade, but usually a new flowering of the street level alone, with plenty of applied metal, bizarre block lettering, and more daring color.

*Tuesday, June 2.*—Practically the whole party, numbering fifty or sixty, piled into char-à-bancs and motored out to Fontainebleau, where Welles Bosworth, supervising the various Rockefeller restorations in France, and the architect in charge of the work on Fontainebleau itself, showed us what is being done. Most of us found of particular interest the very tiny theatre, seating possibly one hundred fifty per-



sons, where the musicians' pit and the orchestra had been much subordinated to the main gallery, with its anteroom and rich embellishment. Here sat the Court, with retainers below and above in much simpler and less luxurious surroundings.

Before returning, Bosworth took us to Courance, a smaller and more intimate Fontainebleau, owned and used by the Marquis and Marquise de Gannay. The grand stairway in the entrance court, quite similar to that at Fontainebleau, seemed even finer and more restrained. And though flowers are grown here only with difficulty, through some climatic quirk of the location, the gardens themselves, depending largely upon water motives, are superb.

On the way back to Paris we again stopped for a sip of champagne, tea or what-will-you at the villa of Amos A. Lawrence, an American-born architect *diplomé* who has retired from practice, and who finds vent for his inclinations in design in his own villa. Here are gardens with no lack of flowering color, great trees and lovely vistas over the brown-pink village roofs, with interiors containing a rare collection of Louis XV and Louis XVI furniture, tapestries, and minor bits, all assembled with surpassing skill and discretion.

*Wednesday, June 3.*—At the Grand Palais there is a good showing of the artiste decorateurs—a better showing than in the now historic Exposition of 1925, in the opinion of several who have seen both. Great ingenuity in form, materials, and texture marks the minor arts of decorative glass, silver, textiles, book-binding, and the like, but to my thinking the furniture shows too obvious a striving for form for form's sake. Sideboards might be mistaken for catafalques; chairs are either ponderously heavy or structurally frail. The function seems to have been almost ignored in the effort to use beautiful woods and polished metals to compel attention.

After a few of us had lunched on the lovely terrace of the *Cercle Interallié* (formerly the Rothschild residence), shielded from the Champs Elysées and Avenue Gabriel by its great trees and border planting, the party arrayed itself *en fête* and was received at tea by Ambassador and Mrs. Edge in the Embassy which the late Ambassador Herrick and finally our Government had purchased as a fitting home for our representatives in Paris.

*Thursday, June 4.*—The chief purpose of our pilgrimage to Paris was achieved this morning when the whole delegation, again arrayed as the lilies of the field, marched in a body to the Ecole des Beaux-Arts and formally presented the flagpole which Frederick Hiron had designed as a tribute from *les anciens Américains* to their French Alma Mater.

A preliminary event of becoming fitness was our march through the Cour du Murier where, passing before the memorial to those of the Ecole who died for France, each of us laid a simple bunch of wild flowers upon its base. Thence to the inner garden where the flagpole, but for its new polished granite of warm gray and the brightness of its bronze, might have been standing for years. After an address of welcome by M. Albert Besnard, former head of the Academy of Rome, Clarence C. Zantzing made the presentation address in the polished French for which he is so well known, and M. Petsche, Under-Secretary of State, representing the Ministry of Fine Arts, formally accepted it. In a solid mass, filling the adjoining court, the student body, with cheers and the recurring song of *Les Pompiers*, voiced its own special approval. We had brought only the Tricolor of France to fly from the pole, but the Ecole officials insisted that the Stars and Stripes must rise beside it, so the two flags were raised simultaneously, the Tricolor by Julian Levi, the Stars and Stripes by M. Bommier, Acting Director of the Ecole, to intertwine their folds in a close embrace of international amity.

On the steps of the Musée des Antiques, immediately after the flagpole ceremonies, the Ecole presented to the Society of Beaux-Arts Architects a silken American flag to carry back with us. Kenneth Murchison delivered himself of a most sonorous speech of acceptance in French, which, somewhat later, had to be translated at sight back into English for the microphones of the recording newsreel, for American edification. Finally Julian Levi suavely announced the opening of our exhibition of students' drawings in the hall above, and we thronged upstairs to see how our American Beaux-Arts problems compared with the current work of the ateliers—and the comparison certainly showed nothing of which we need be ashamed.

Visits of inspection to the new National City Bank, a new theatre, and to the museum of old French hardware in the offices of Fontaine et Cie, rounded out a busy day.



*Friday, June 5.*—The scheduled event for to-day was a trip to Rheims by char-à-bancs, in which the main party attempted the difficult task of drinking its way back from the heart of the champagne country. Fred Hiron, Monroe Hewlett, Arthur Covey, Philip Ruxton, and I turned instead toward Beauvais and Amiens in a fast motor car, and were fortunate enough to find the latter cathedral nearly filled in the celebration of a

Confirmation Mass. The white-robed children, chanting their slow processional before the bishop and his priests, with a background of black-clad relatives, made a picture that none of us will ever forget.

*Saturday, June 6.*—A somewhat diminished party followed the regular schedule of a trip to Versailles to-day, many of us, who felt that one or two visits to Versailles in a lifetime were sufficient, staying behind in Paris to follow ways of our own devising. There are times when one wants to be alone in Paris, wandering about as he wills, revisiting old haunts, seeking out new treasures. Such a day was this one for me, looking once more into Notre Dame, St. Sulpice, the Sorbonne, St. Etienne du Mont, the bookstalls of the Odeon, the gardens of the Luxembourg, with a lazy hour under the trees, lulled by the patter of the Medicis Fountain. Met Gelett and Mrs. Burgess dining at Michaud's. They have been abroad for six years, but will return home this fall.

This evening the whole party was reunited at the Follies Bergère, followed by a supper and dance at Noel Peter's in the Passage des Princes—and so far into the night.

*Sunday, June 7.*—Rain, lack of formal engagements, and an unquestioned need, combined to make this a day of rest.

*Monday, June 8.*—With Walter Thomas, Louis Jallade, George Lovatt, and Keith Schwinley, by motor to Chantilly, where, the chateau being closed, we had to be content with a view from outside; thence to Senlis and its cathedral; then on to Compiègne and to Pierrefonds, with its imposing fortified castle, destroyed by Richelieu, but restored by Viollet-le-duc under Napoleon III. Close inspection of the interior is rather disappointing, the restoration being cold and precise, and with a surprisingly crude use of color.

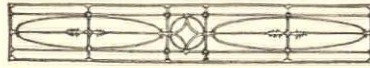
We were unfortunate in having picked a car with a new motor, and neither threat nor cajolery was efficacious in getting our chauffeur to exceed his limit of forty-five kilometers an hour. Hence we were disgracefully late for the magnificent dinner given the whole party in the permanent exhibition hall at the *Exposition Coloniale* by the *diplomé* architects of Paris. After the dinner we were entertained by a short Chinese play, by a troupe of children dancers from French Guiana, and by a dance of Annamites from the Sudan. Following our hosts, we entered the reproduction of Angkor Vat, the Exposition's most dramatic feature, and, under the guidance of the architect who reproduced it here, as well as formerly at Marseilles and at Barcelona, marvelled at the miles of intricate ornament so faithfully copied in stucco from the stone original.



NUMBER XV  
IN A SERIES  
OF  
WORKING DRAWINGS

*By Jack G. Stewart*

*This series, in which one drawing will appear each month, is designed to cover the smaller practical problems that confront the architect in his day's work. The subjects chosen are those which, while not uncommon, call for some experience and knowledge of approved solutions. Next month the subject is a Bank Counter and Screen*

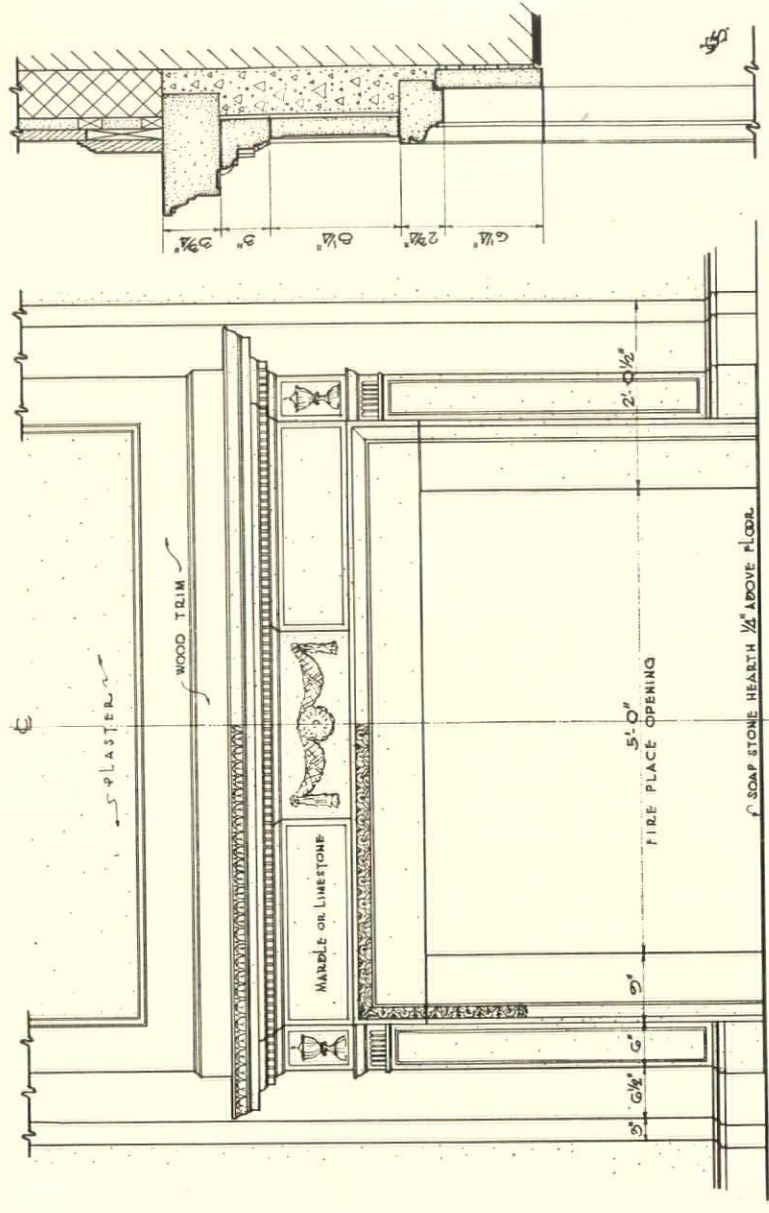


ARCHITECTURE  
CHARLES SCRIBNER'S SONS

PREVIOUS SUBJECTS IN THIS SERIES

- I. FLAGPOLE HOLDER ON AN EXTERIOR WALL
- II. RADIATOR ENCLOSURES
- III. CIGAR SALES COUNTER
- IV. WOODWORK IN A LIBRARY
- V. BUILT-IN KITCHEN CUPBOARD
- VI. VARIOUS TRIMS AND MOULDINGS
- VII. TELEPHONE BOOTH
- VIII. MEN'S TOILET
- IX. WINDOW SPANDRELS
- X. CIRCULAR STAIR FOR A RESIDENCE
- XI. DETAIL OF METAL STAIR CONSTRUCTION
- XII. DETAIL OF ELEVATOR CONSTRUCTION
- XIII. DETAIL OF FOLDING PARTITION
- XIV. DETAIL OF COUNTER-WEIGHT SLIDE DOOR FOR DUMB-WAITER

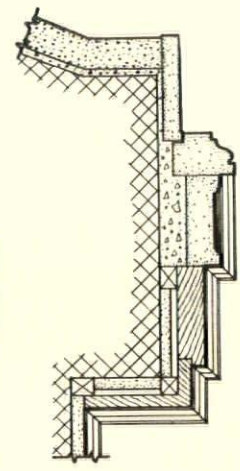




·DETAIL·

·ELEVATION·

·SECTION·



·PLAN·

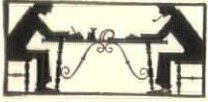
·SCALE: 0' 5" 10" 0' 5"

·SCALE·DETAIL·OF·MANTEL·

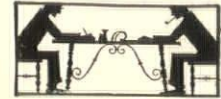
·DETAIL·



# CONTACTS



DEVOTED TO A BETTER UNDERSTANDING OF THE BUSINESS SIDE  
OF ARCHITECTURE AND ITS RELATION TO THE INDUSTRIES



## The Producers' Council Broadens Its Scope

A HIGH spot of the first day's proceedings, April 13, at the San Antonio Convention was the working relationship brought into view with the Associated General Contractors of America, the president of which, Mr. A. P. Greensfelder, and the heads of its various divisions and committees concerned with building construction, were all present at the joint afternoon session, and, with the president and other officials of the A. I. A., discussed with us the basis upon which our respective groups could cooperate.

Points discussed included the problems presented in the "or equal" clause of customary specifications; the presentation of an absent member's view in a written statement ably summarizing the manufacturer's position; the submission, by contractors, of subcontractors' names and proposed use of products, with their general bids; difficulties of this from the contractors' standpoint; the evils of unsoundly financed projects, and the assumption by architect, contractor, and producer of proper responsibility in their respective spheres.

The outcome has been a decision of the Institute to appoint a committee to work with the general contractor, and steps to be taken by the A. G. C. to form a corresponding section of that body to maintain contact with the Council and Institute, as the proposed "third leg" of the stool. Further steps will be the subject of a conference with A. G. C. officials in Washington at an early date.

This session developed some real meat for joint effort and Council service to members during the ensuing year. The "three-legged stool" upon which alone the solution of specific detail questions must rest has been brought into being, at any rate as a psychological fact. The

mental conviction upon the part of all three groups that this is a serious necessity is established. This large achievement is now recognized as the prerequisite to the particular solutions of detail questions which some may have hoped would be arrived at at this meeting.



*An old house in Chartres, with a particularly lovely texture of brick nogging in the half-timber. Because of the narrow street the photograph had to be taken in two sections*

The problem revealed proved larger than these in the laying first of the necessary foundation. That has been achieved. As one prominent industrial leader present remarked: "History is being made here. If our great business executives in industries not yet represented in this Council knew what it means, nothing could keep them out of it." There was similar evidence of serious appreciation in the comments of architects and the whole spirit of the A. I. A. Convention.

Tuesday, April 14, was given over to attending the A. I. A. sessions, at which the scope of the architect and government building programme were discussed. Listening in to the problems of the architect revealed much that is of moment to manufacturers' interests in both connections.

Wednesday, a high spot was the address delivered to the joint luncheon of the Institute and Council by Mr. Bennett Chapple (see July issue). Its result on public opinion with relation to support of the architectural and engineering professions and responsible industry should be very gratifying.

Wednesday's Council sessions were devoted chiefly to the discussion of recommendations made in the executive secretary's report relating to the co-ordination of research, action looking to the improvement of standard contract forms and the encouragement of Producers' Council clubs. This latter centred on what can be done to support and extend these, and provide for their representation by delegates at our annual meetings hereafter. Mr. G. R. Kingsland, president of the Producers' Council Club of Northern California, contributed greatly to clarifying the procedure which would make these clubs of inestimable value to Council membership.



# Cast Stone in Building Codes

SUGGESTED SECTION FOR INCLUSION IN MUNICIPAL SPECIFICATIONS: IT CONCERNS STRENGTH, ABSORPTION, SAMPLING, AND TESTING

*By Wal-Ward Harding, A.I.A.*

ARCHITECTS, engineers, and specification writers of my acquaintance from time to time are called on, either in official capacities or as consultants, to co-operate in the modernization of municipal building codes. In recent months some of these men have asked my advice concerning strength, absorption, sampling, and testing of cast stone—that is, with reference to these matters in connection with building-code revisions.

So numerous were these requests for information on cast stone, which is a building stone moulded from especially prepared concrete in which the aggregate is selected for durability and appearance, that a suggested section for inclusion in building codes has been drafted. This, I believe, will interest other architects, engineers, and specification writers who may at some time or another have occasion to use it in connection with municipal and other work.

"The term *cast stone* as used in this code shall be understood to mean a building stone manufactured from portland cement concrete, precast and

used as trim or facing on or in buildings and other structures.

"Cast stone shall have an average minimum compressive strength at the age of twenty-eight (28) days, or when delivered on the job, of not less than five thousand (5,000) pounds per square inch and an average absorption of not more than seven (7) per cent of its dry weight.

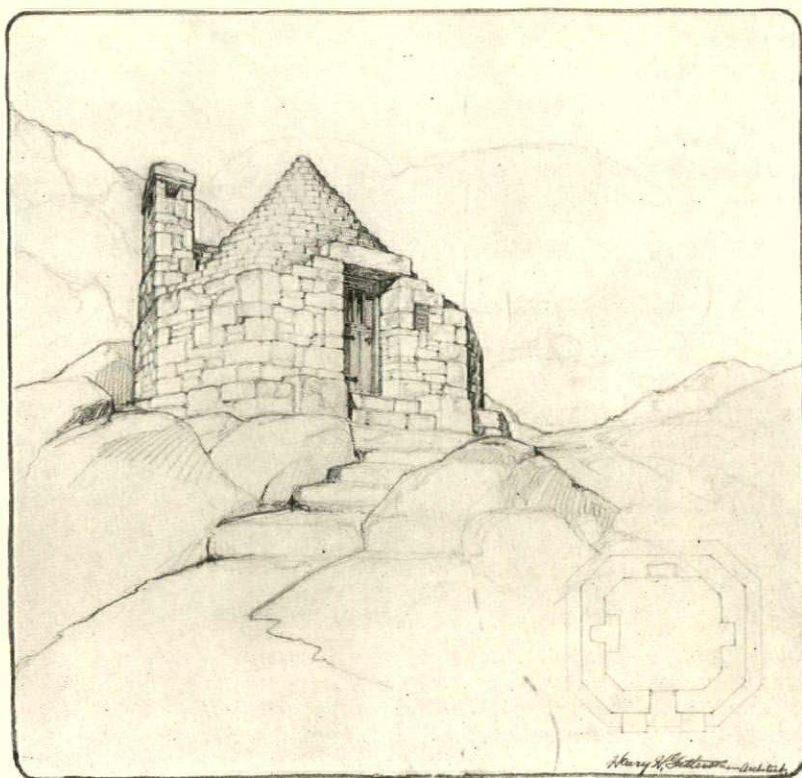
"Samples from which test specimens will be cut shall be selected by the Commissioner of Buildings or his representative. In the event specimens fail to meet requirements in the first test the test may be repeated on a second set of specimens. At the direction of the Building Commissioner tests may be required for each additional ten thousand (10,000) cubic feet of stone delivered on the job. Tests shall be paid for by the manufacturer.

"Tests for compression and absorption for cast stone shall be made on three (3) two by two (2 by 2)

inch cylinders or two (2) inch cubes cut from the stone as delivered on the job or from the regular stock in the yard. If not homogeneous throughout, specimens of cast stone to be tested for absorption and compression shall be taken in such a manner that they are composed of approximately one-half ( $\frac{1}{2}$ ) of facing and one-half ( $\frac{1}{2}$ ) of backing material and so that they can be tested in the position in which the cast stone will be laid in the masonry. Compressive strength and absorption tests on cast-stone specimens shall be made in accordance with the American Concrete Institute tentative specification for cast stone (P-3-A-29T).

"No individual specimen used in the above prescribed tests shall vary more than ten (10) per cent below in compression nor more than ten (10) per cent above in absorption from the average requirements specified above. All cast stone shall be branded with a permanent identification mark of the manufacturer, which shall be registered with the Commissioner of Buildings."

*Way up on top of Muir Pass in the Sierras, at an elevation of something over twelve thousand feet above sea level, the Sierra Club has built the Muir Shelter Hut, which was designed by Henry H. Gutterson,*



*architect, of San Francisco, and built out of the granite on which it stands. Sand had to be carried nine miles on pack animals; water, two and a half miles; cement, a four-day trip*





# ARCHITECTURE'S PORTFOLIO OF



## BANK ENTRANCES

THE FIFTY-EIGHTH IN A SERIES OF COLLECTIONS  
OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR  
ARCHITECTURAL DETAILS

*Forthcoming Portfolios will be devoted to the following subjects: Urns (September), Window Grilles (October), China Cupboards (November), Parapets (December), Concealed Radiators (January), and Interior Clocks (February). 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 a month in advance of publication dates.*

### ❖ ❖ ❖ *Subjects of Previous Portfolios* ❖ ❖ ❖

#### 1926-27

DORMER WINDOWS  
SHUTTERS AND BLINDS  
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

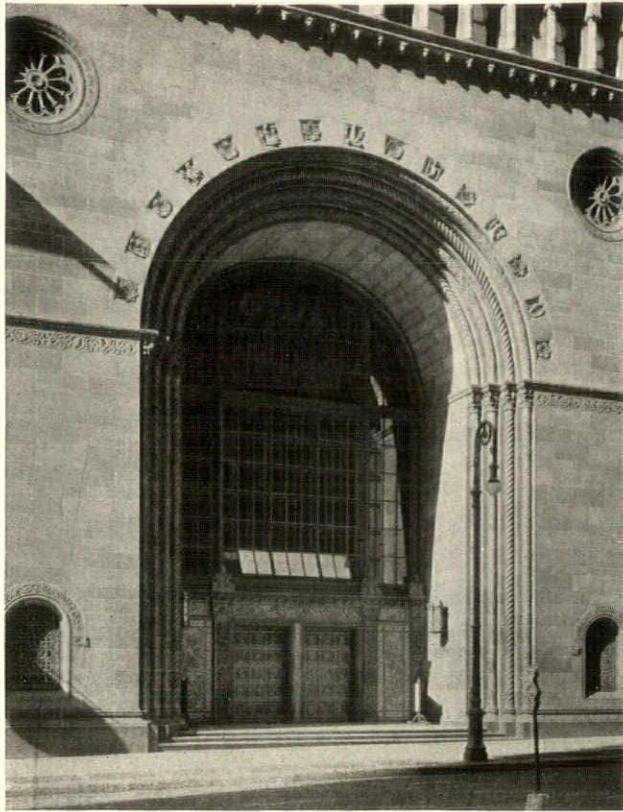
#### 1930

SPANDRELS  
CHANCEL FURNITURE  
BUSINESS BUILDING ENTRANCES  
GARDEN SHELTERS  
ELEVATOR DOORS  
ENTRANCE PORCHES  
PATIOS  
TREILLAGE  
FLAGPOLE HOLDERS  
CASEMENT WINDOWS  
FENCES OF WOOD  
GOTHIC DOORWAYS

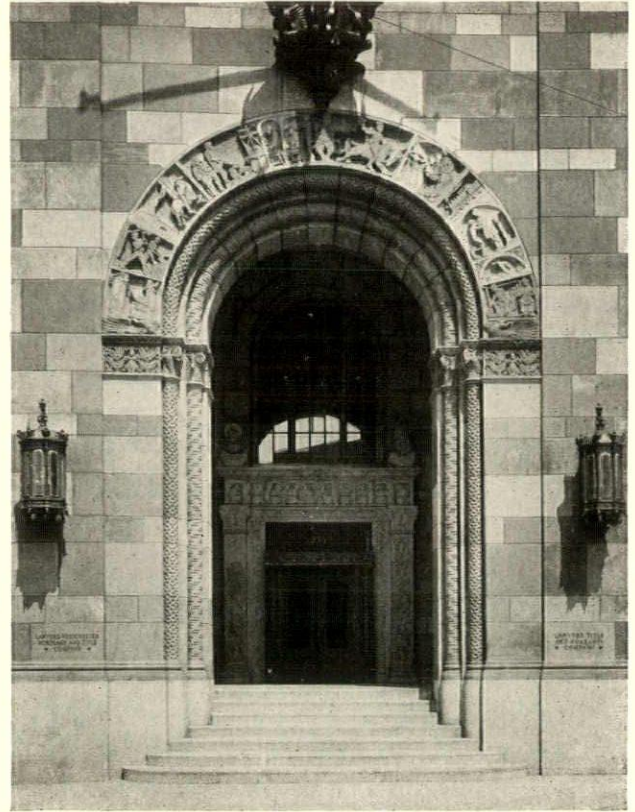
#### 1931

BANKING-ROOM CHECK DESKS  
SECOND-STORY PORCHES  
TOWER CLOCKS  
ALTARS  
GARAGE DOORS  
MAIL-CHUTE BOXES  
WEATHER-VANES





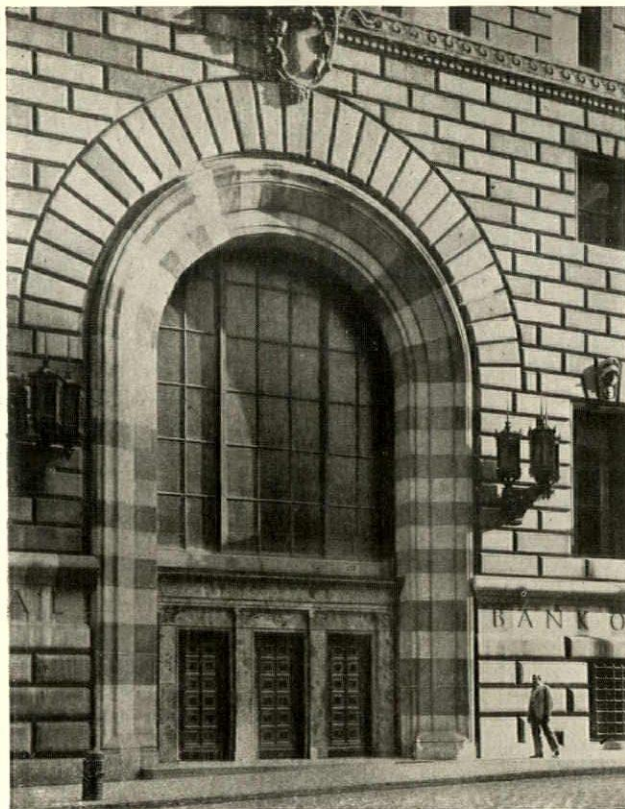
*Bowery Savings Bank, New York City  
York & Sawyer*



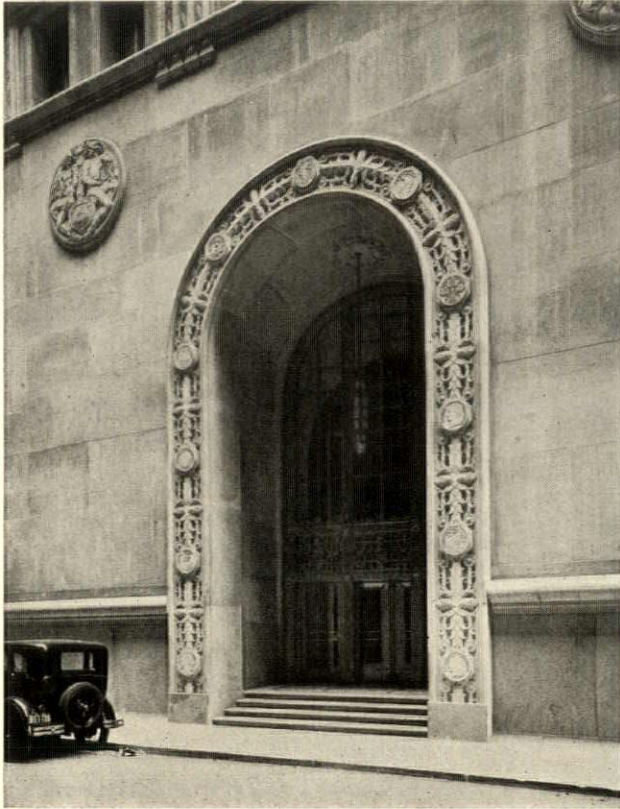
*Lawyers Title and Guaranty Company,  
White Plains, N. Y. Andrew J. Thomas*

*First National Bank of Boston, Boston, Mass.  
York & Sawyer*

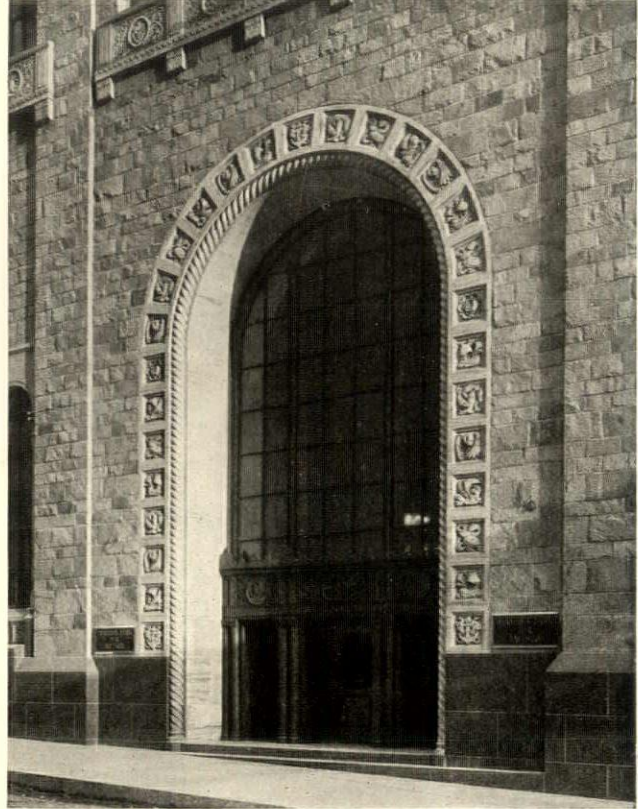
*National Bank of Commerce, Philadelphia  
Davis, Dunlap & Barney*







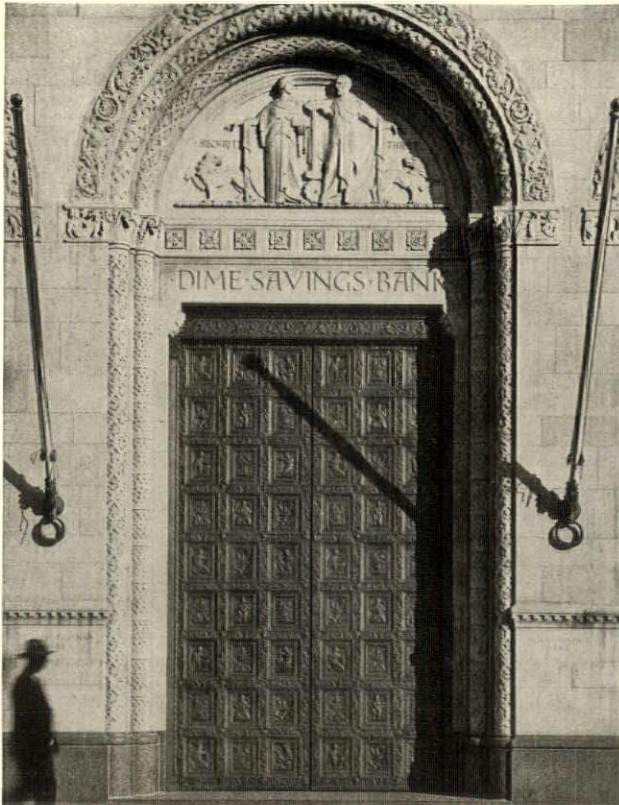
*City Bank Farmers Trust Company, New York City  
Cross & Cross*



*Seamen's Bank for Savings, New York City  
Benjamin W. Morris*

*Dime Savings Bank, Waterbury, Conn.  
York & Sawyer*

*Federal Reserve Bank, New York City  
York & Sawyer*

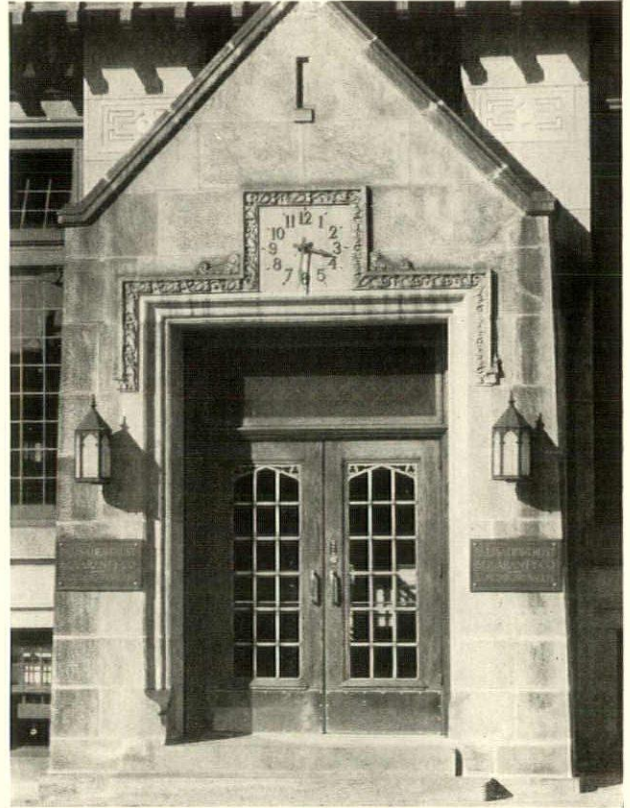






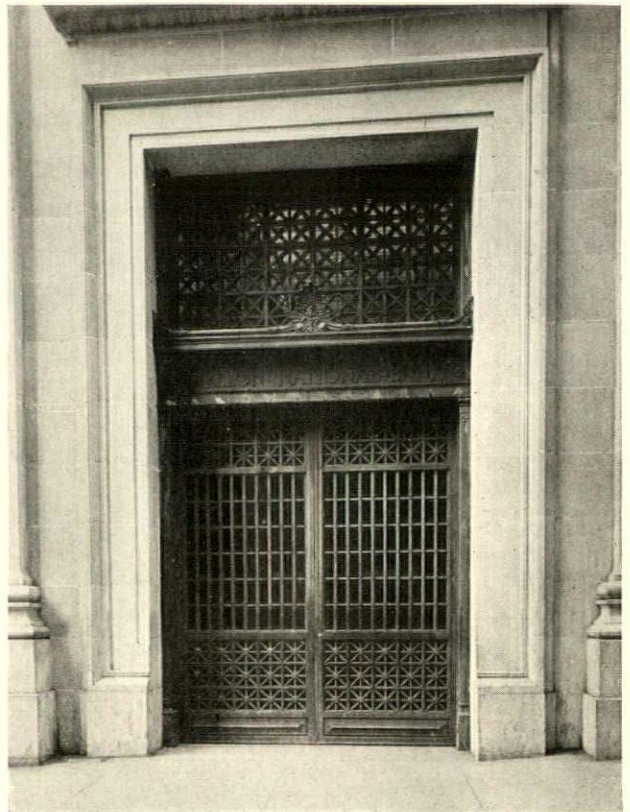
*Brooklyn Trust Company, Flatbush Branch  
York & Sawyer*

*The Fairhill Trust Company, Fairhill, Pa.  
Davis, Dunlap & Barney*



*Palisades Trust & Guaranty Company,  
Englewood, N. J. Aymar Embury II*

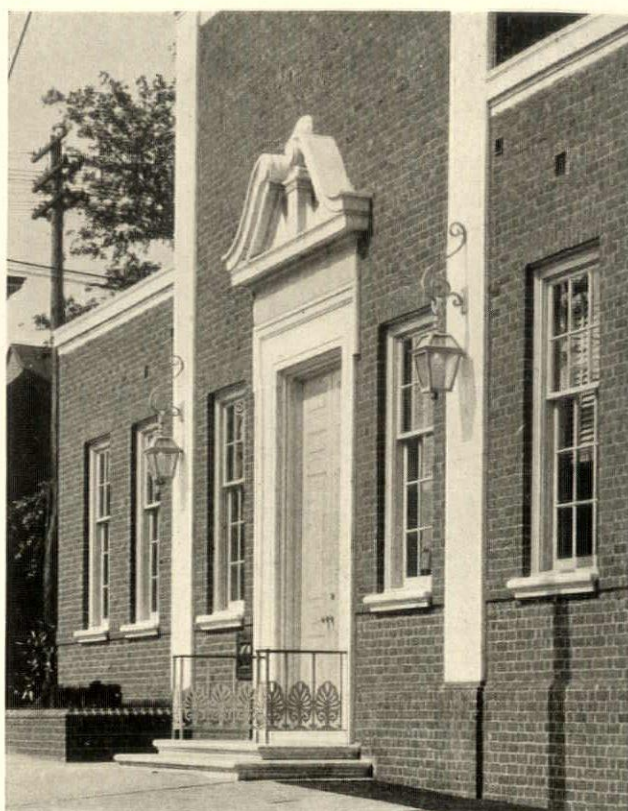
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Trowbridge & Livingston and E. P. Mellon*







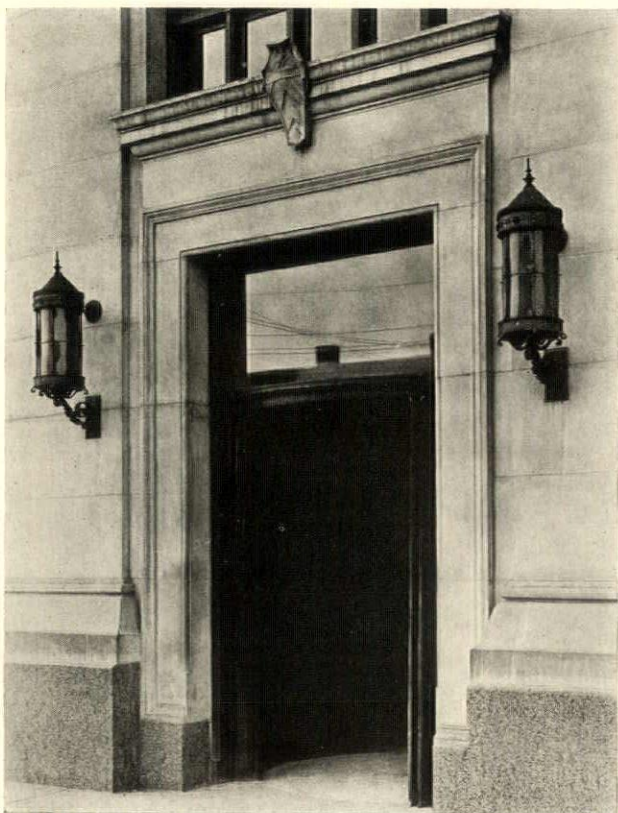
*Holmesburg Trust Company, Holmesburg, Pa.  
Davis, Dunlap & Barney*



*Holmesburg Trust Company, Holmesburg, Pa.  
Davis, Dunlap & Barney*

*The Ashland National Bank, Ashland, Ky.  
Schenck & Williams*

*New York Trust Company, New York City  
Cross & Cross*

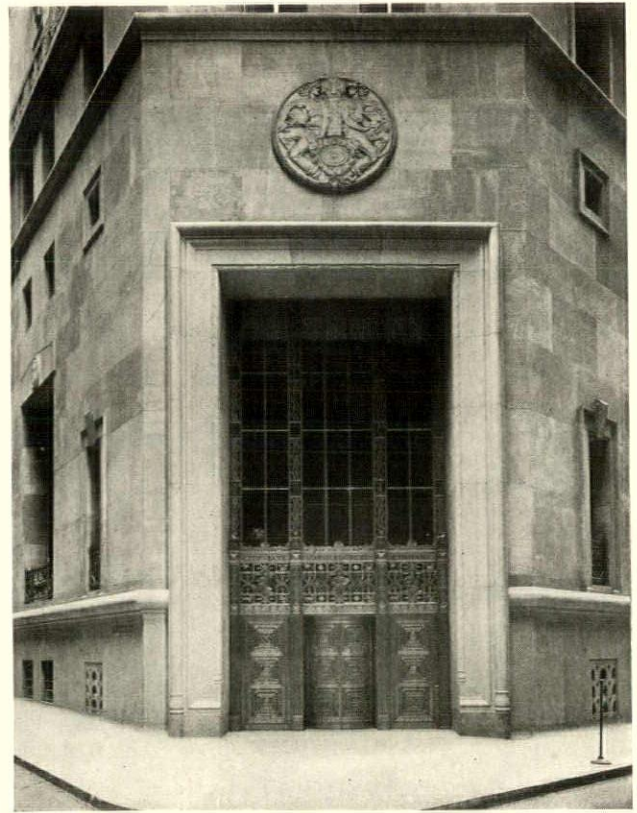






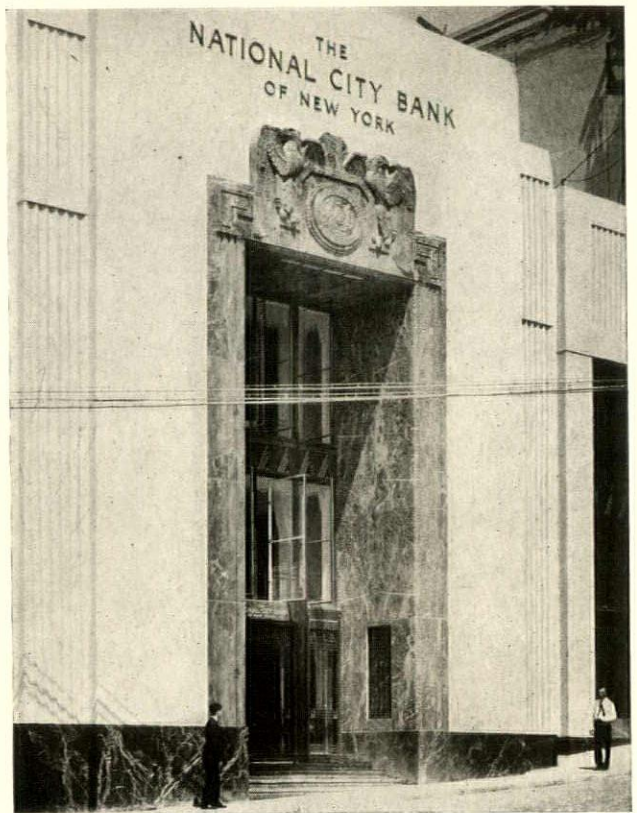
*The Bloomfield Bank and Trust Company,  
Bloomfield, N. J. Mowbray & Uffinger*

*Integrity Trust Company, Philadelphia  
Paul P. Cret*



*City Bank Farmers Trust Company, New York City  
Cross & Cross*

*The National City Bank of New York, Porto Rico  
Walker & Gillette*







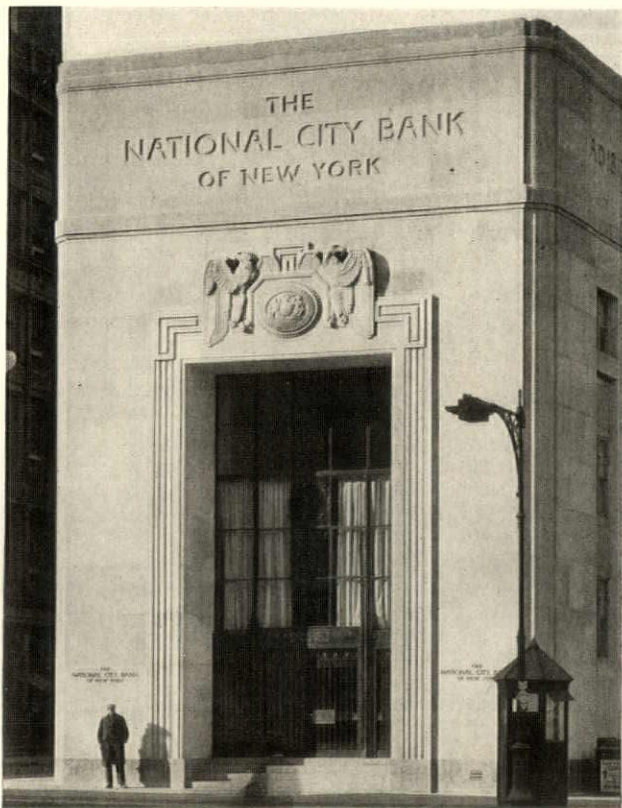
*Essex County Trust Company, East Orange, N. J.  
Dennison & Hiron*



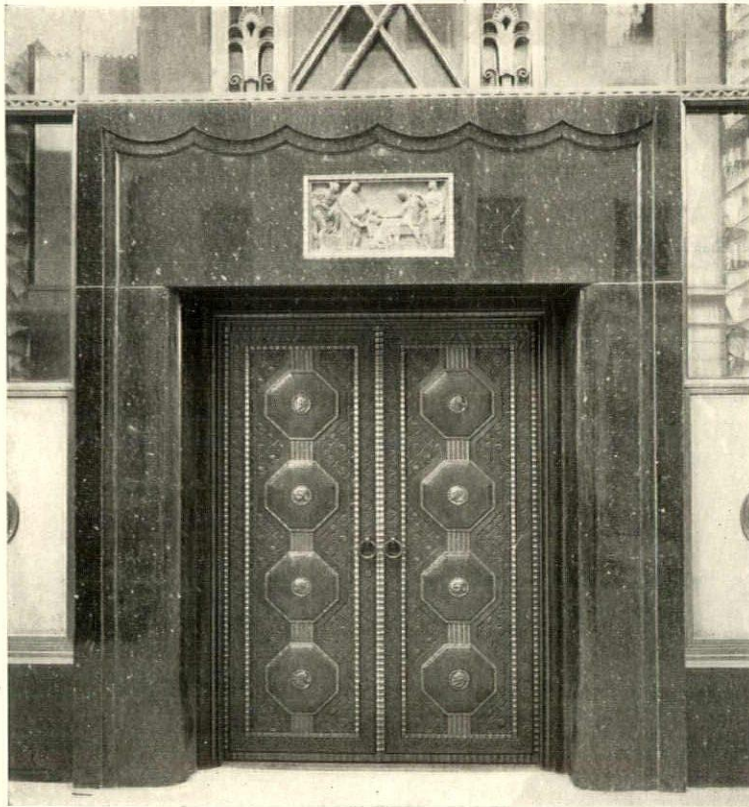
*Bankers Trust Company, Detroit, Mich.  
Smith, Hinchman & Grylls*

*The National City Bank of New York, Branch,  
New York City. Walker & Gillette*

*American Bank & Trust Company, New Orleans, La.  
Moise H. Goldstein*







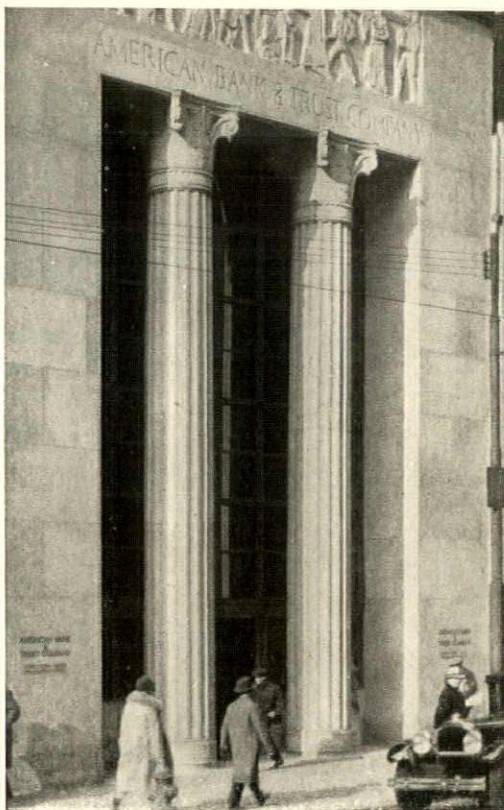
*Integrity Trust Company, Philadelphia  
Paul P. Cret*



*Grand Rapids Trust Company, Grand Rapids, Mich. Smith, Hinchman & Grylls*

*American Bank & Trust Company, Philadelphia. Davis, Dunlap & Barney*

*City National Bank, Huntington Park, Calif. Harbin F. Hunter*







*Tenth National Bank, Philadelphia  
Davis, Dunlap & Barney*



*Title Guarantee and Trust Company, New York City  
John Mead Howells*

*Bank of America of California, Redlands, Calif.  
Swasey & Hayne*

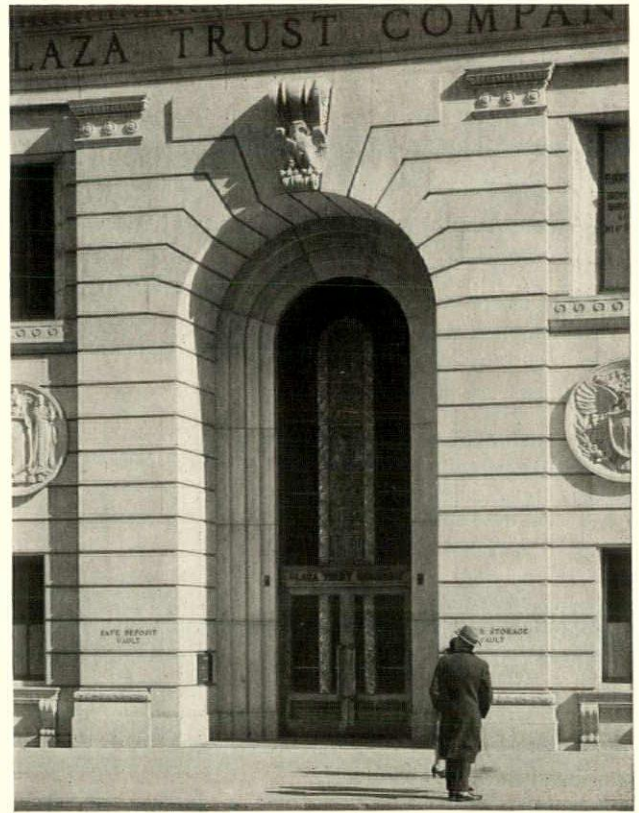
*E. W. Clark & Company, Philadelphia  
Zantzinger, Borie & Medary*



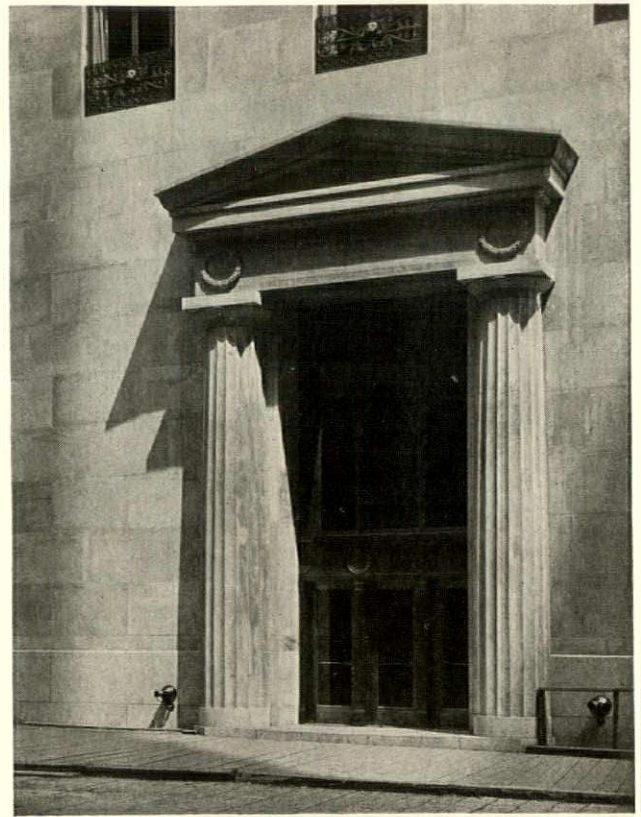
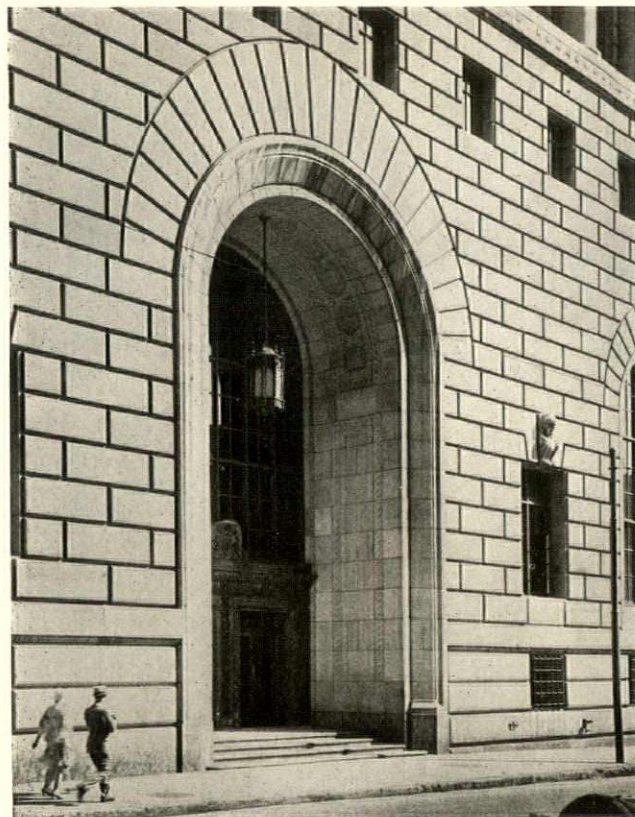




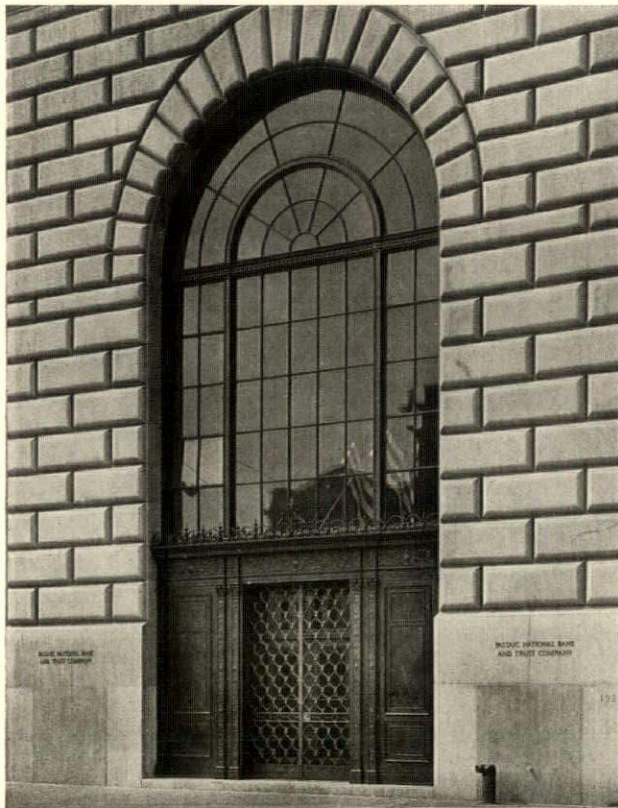
*The Farmers' Loan and Trust Company Building,  
New York City. Starrett & Van Vleck  
Royal Bank of Canada, Montreal  
York & Sawyer*



*Plaza Trust Company, New York City  
Corbett, Harrison & MacMurray  
Bank of Lee, Higginson & Company, New York City  
Cross & Cross*







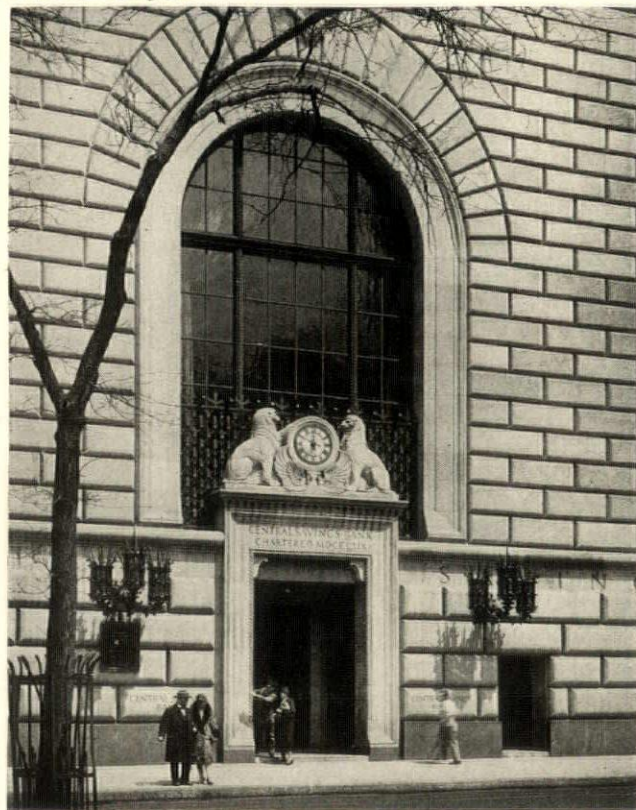
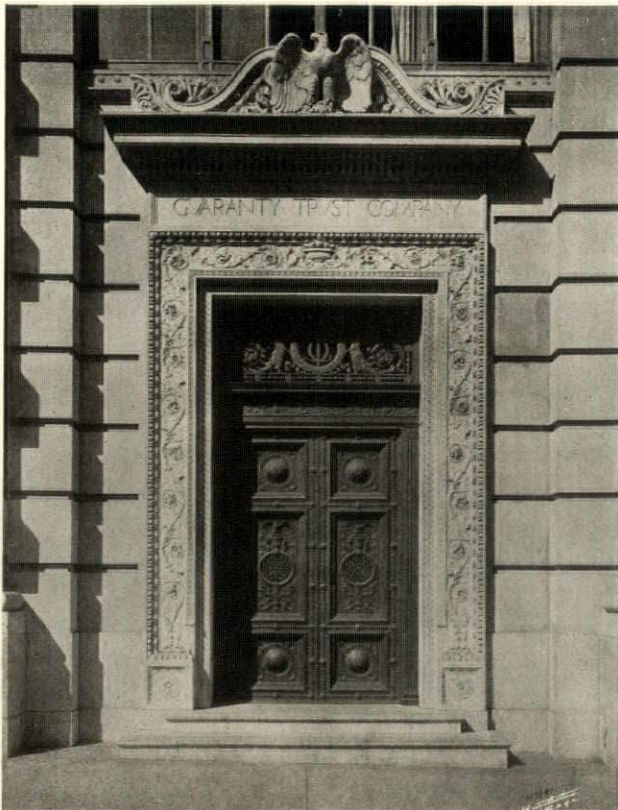
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Passaic, N. J. Harry Leslie Walker*

*Guaranty Trust Company, New York City  
Cross & Cross*

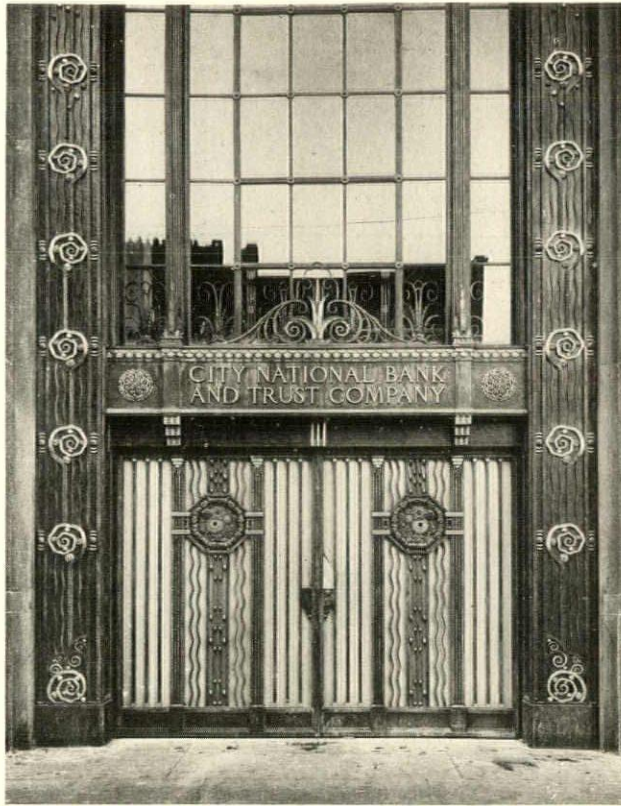


*Chase National Bank, New York City  
Graham, Anderson, Probst & White*

*Central Savings Bank, New York City  
York & Sawyer*







*City National Bank and Trust Company,  
Bridgeport, Conn. Dennison & Hiron*  
*The Dime Savings Bank, Bensonhurst, Long Island  
Halsey, McCormack & Helmer, Inc.*



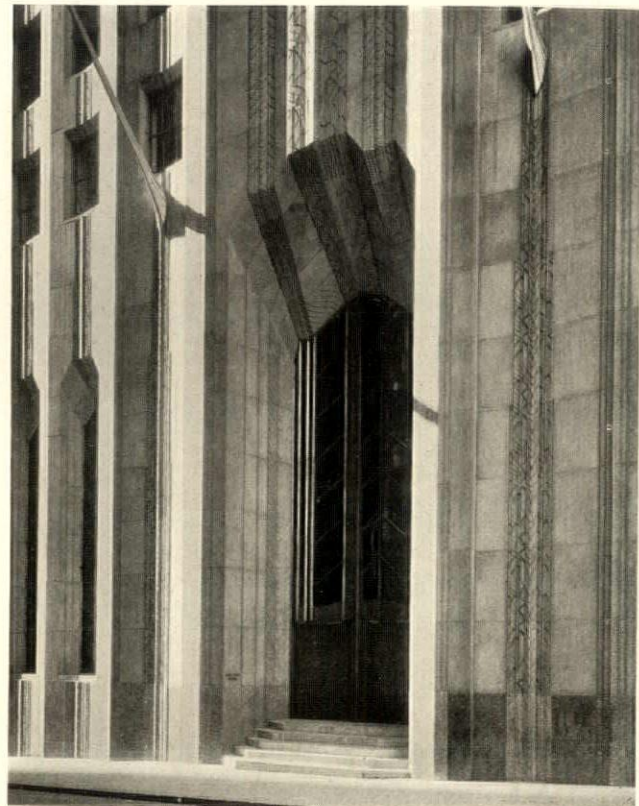
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John and Donald B. Parkinson*  
*The Savings Institution, Williamsport, Pa.  
Godley & Sedgwick*







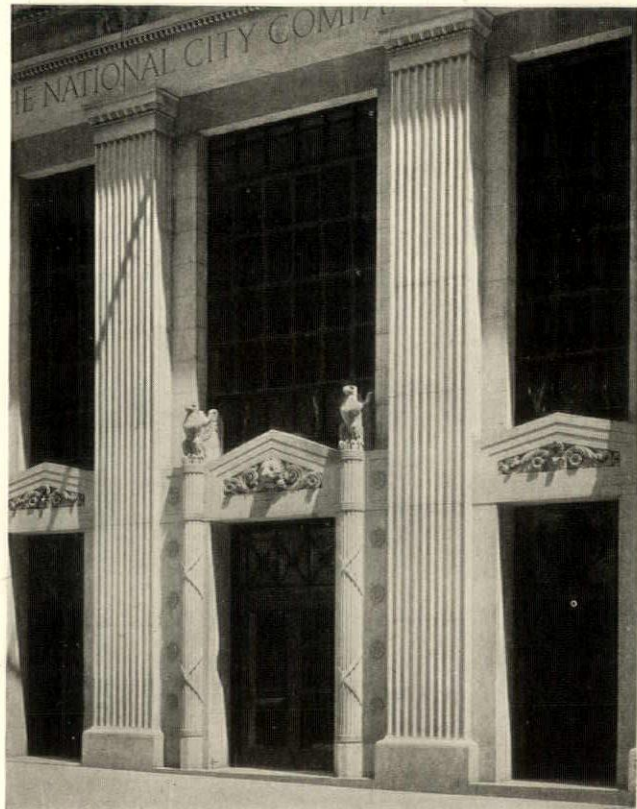
*San Jacinto Trust Company, Houston, Tex.  
Joseph W. Northrop, Jr.*



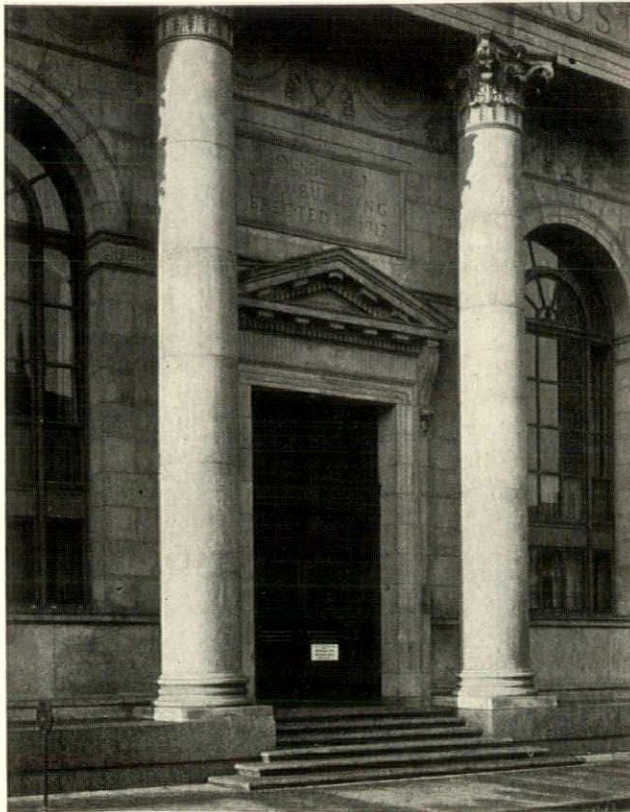
*Irving Trust Company, New York City  
Voorhees, Gmelin & Walker*

*Bank of New York and Trust Company,  
New York City. Frank E. Newman*

*The National City Company, New York City  
McKim, Mead & White*

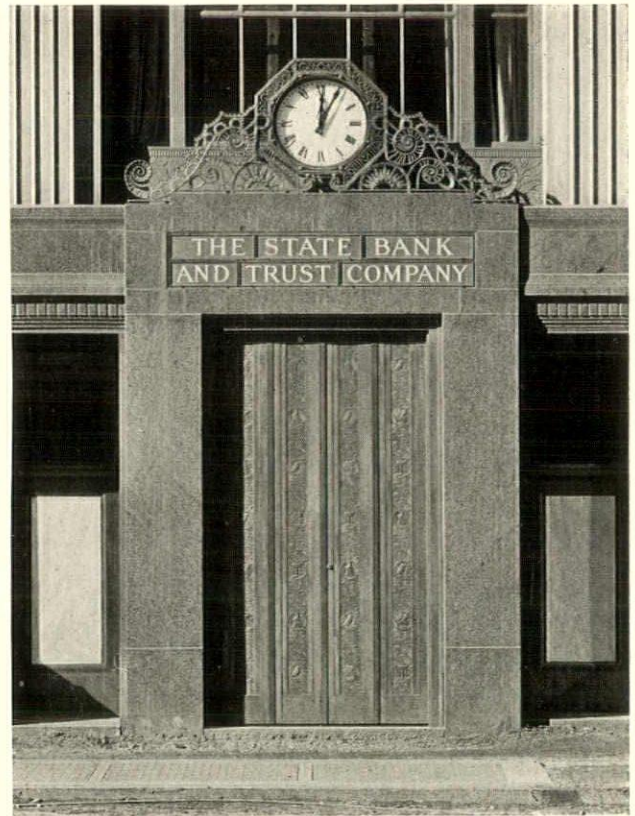






*Rhode Island Hospital Trust Company,  
Providence, R. I. York & Sawyer*

*First National Bank, Azusa, Calif.  
Robert H. Orr*

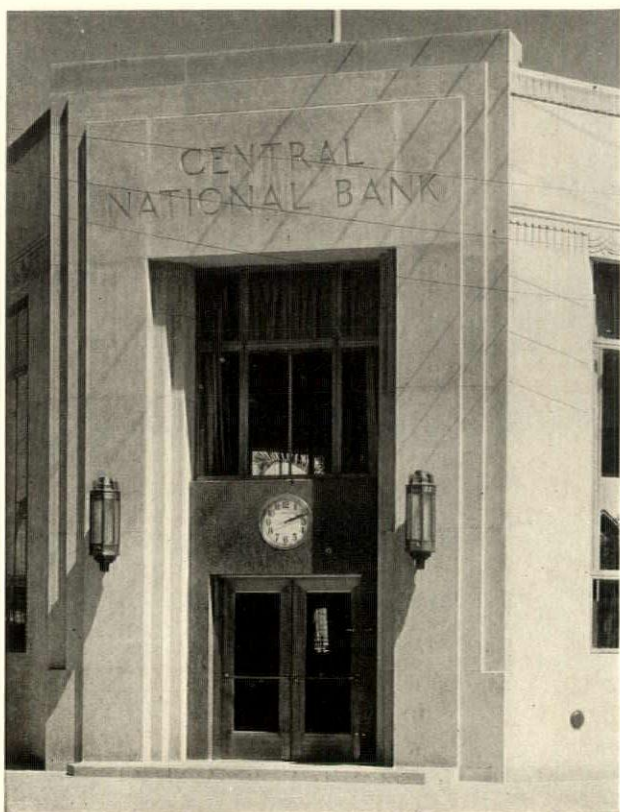


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Dennison & Hirons*

*City Bank Farmers Trust Company, New York City  
Cross & Cross*







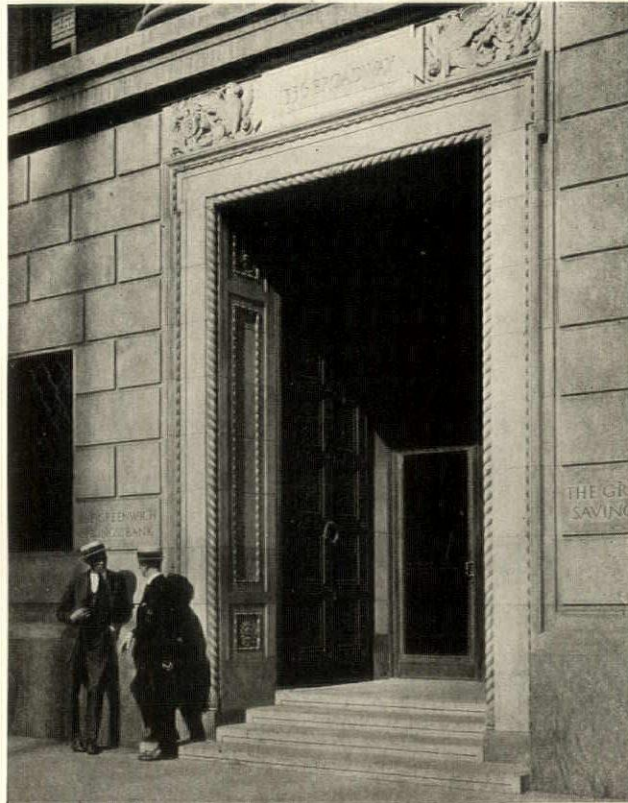
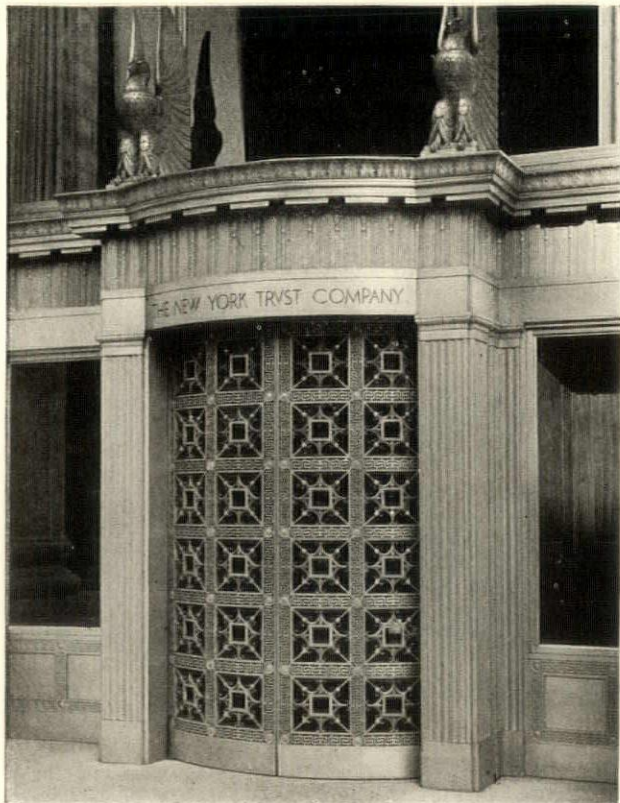
*Central National Bank, Mineola, Long Island  
Frederic P. Wiedersum*



*The First National Bank and Trust Company,  
Mamaroneck, N. Y. Office of John Russell Pope*

*The New York Trust Company, New York City  
Cross & Cross*

*The Greenwich Savings Bank, New York City  
York & Sawyer*







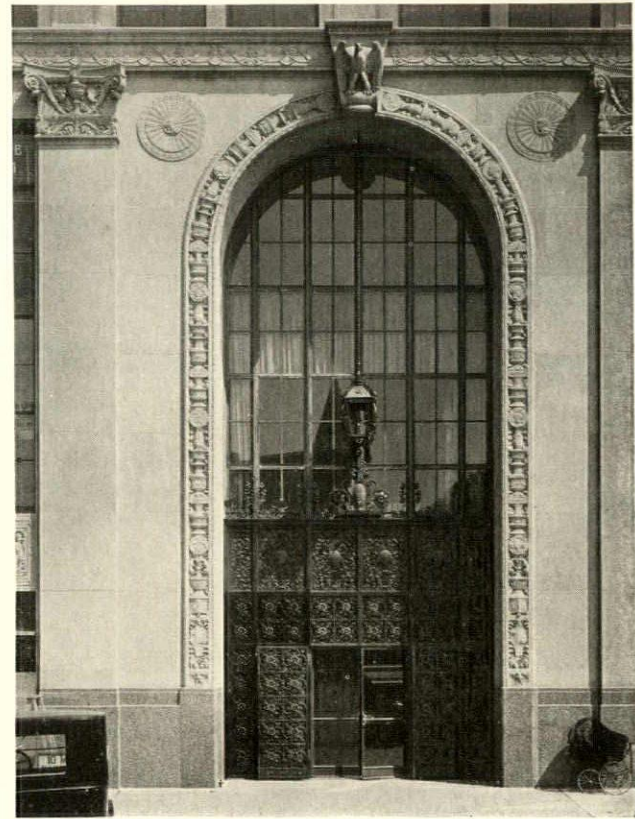
*Union Dime Savings Bank, New York City  
Alfred H. Taylor*



*First National Bank, Jersey City, N. J.  
Alfred C. Bossom*

*First National Bank and Trust Company,  
Hamilton, Ohio. Childs & Smith*

*State Bank and Trust Company, Evanston, Ill.  
Childs & Smith*



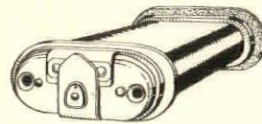




Sun Life Assurance Co., Montreal. *Darling & Pearson, Toronto, Archts.*  
Largest Building in the British Empire *A. J. C. Paine, Assoc. Archt.*



Central Tube Station, State Mutual Life Assurance Co., Worcester, Mass.  
*Parker, Thomas & Rice, Archts.*  
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See our Catalog in Sweet's Archt'l Catalog, 1931 Ed. pp. D6350-52.  
In Canada see Specification Data.



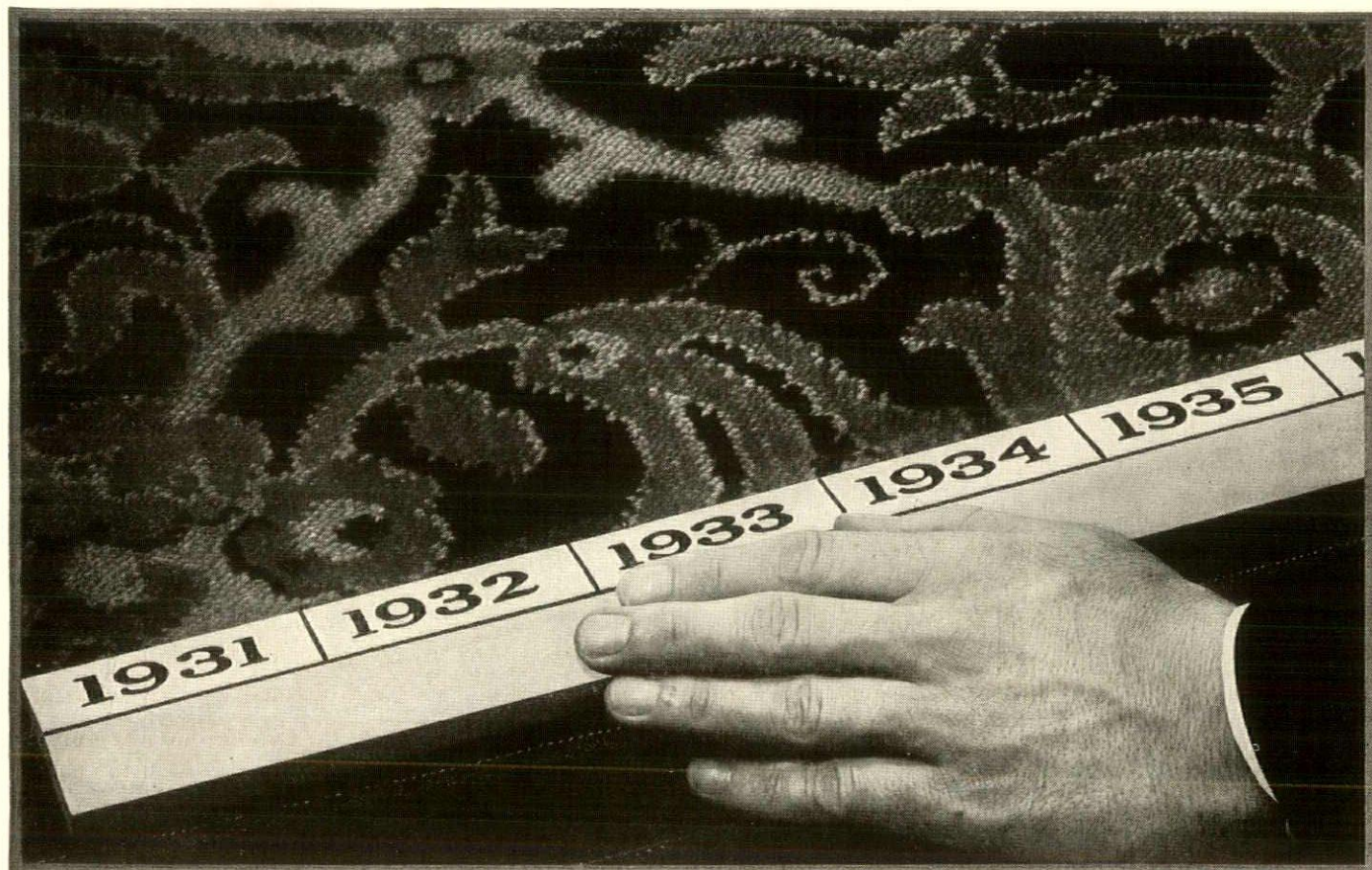
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*when you measure . . .*

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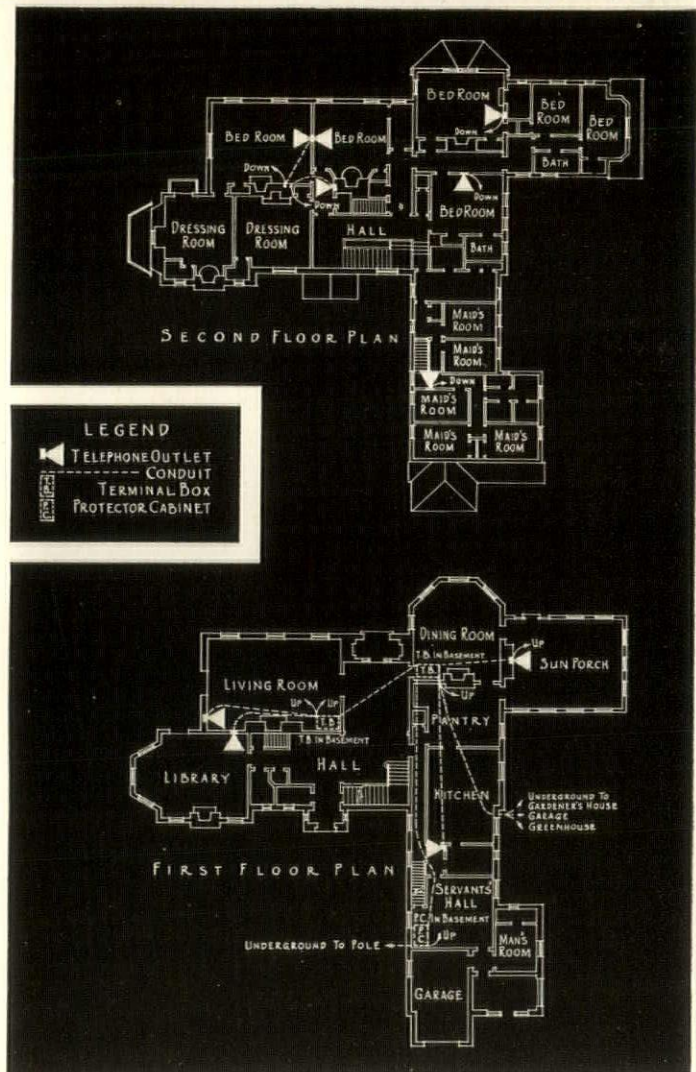
Built-in telephone conduit serves fifteen outlets on the estate of Mr. Halstead Lindsley, Lenox, Massachusetts. Ten are in the residence itself and five in the three outbuildings (two in the garage, two in the gardener's cottage, one in the greenhouse). Underground conduit connects the house telephones with those in each of the other buildings. JOHN C. GREENLEAF, Architect, New York City.

COTTAGES, greenhouses, stables and garages, grouped around a residence, make the large estate a little community. Such a community, like every other, has its own telephone requirements. Communication from one room in the residence to another, or to any outbuilding, is always desirable, often essential.

This complete telephone convenience is best achieved by the aid of telephone conduit, built into the walls and floors of the residence, run underground to outbuildings . . . in combination with one of the several intercommunicating systems developed by Bell engineers.

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Whether you're planning a big estate or a modest home, let the local telephone company help you with the telephone arrangements. Their advice means increased comfort and efficiency. It is given gladly, without charge. Just call the Business Office.







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## NEW RESEARCH DEFINITION

"An organized method of keeping everybody reasonably dissatisfied with what he has." According to C. F. Kettering, vice-president of General Motors, a satisfied customer may be a fine advertisement, but a poor buyer. Dissatisfaction should not be in the non-workability of an article, but it is reasonable dissatisfaction to think: "If I were making a new one of this kind, I would make it a little bit different." New trade literature is ever valuable for its presentation of progress in the industry covered.

## STAINLESS STEEL

The United States Steel Co. has prepared a treatise on "Stainless and Heat Resisting Steels." The brochure contains tables of physical properties, recommended procedure for uses of each grade, and illustrations of typical uses. It is interestingly comprehensive.

## SEEMINGLY SEAMLESS

Carrying its secret in its back is a new carpet from Collins & Aikman Corp., of New York. Instead of ordinary sizing, a resilient material is used that penetrates the bottom of the weave and permanently locks in the pile tufts, forming a self-selva when cut—eliminating sewing and binding. When two edges are put together, the pile meshes and the seam is scarcely discernible. This eliminates the handicap of the old standard of eighteen feet of broadloom carpet. No matter how spacious or unusual the room plan, this new carpeting will seemingly seamless-carpet any room. The back is also waterproof, and dirt and grit will not penetrate the resilient back. Stains and burns can easily be cut out and replaced without loss of original appearance. The Collins & Aikman booklet gives color samples and typical installations. Their slogan is: "Broadloom effect at narrow-width price."

## INSULATING FIREBRICK

A recent bulletin issued by the Babcock and Wilcox Co. discusses a new firebrick with insulating properties. The refractory characteristics are illustrated by means of curves, sketches, and calculations. In the section devoted to the advantages secured by the use of this material, illustrative examples are given. Copies of the publication may be obtained by addressing the company at 85 Liberty Street, New York City, or this bureau.

## MODERN CHURCH LIGHTING

Rambusch has prepared a text-book, artistically illustrated, on Modern Church Lighting. In it have been explained how the latest developments in this field can be used to full advantage in the relighting of old churches, and how the lighting for new churches should best be laid out. Assuming that bad lighting distracts the congregation and that good lighting gives an atmosphere of comfort and one inductive to meditation, the value of this discussion is obvious. Rambusch has also issued an interesting brochure on The Art of Stained Glass.

## LIGHT WITHOUT DISTRACTION

Can be had with the use of Kolsomo Opalescent Glass. It is particularly useful for transoms, partitions, and skylights, and any place where transparency is undesirable. Samples will be sent on request, mention of type of building only being required.

## ABOUT LEAD

One hundred and four pages of practical information on lead have just been published in a cloth-bound booklet, obtainable for fifty cents, by the Lead Industries Association. To those desirous of adding to their knowledge of the properties, the refining, the compounds, and the uses of lead this book should prove of immense value.

## LAMPS FROM TODHUNTER

A very complete illustrated booklet shows new Todhunter lamps. There is every variety—wrought iron and brass, candlestick, table, floor and bridge lamps, in new and interesting designs.

## RESTORATION WITH SALEM SHINGLES

Number three of a series of architectural monographs from the Johns-Manville Corp. gives the interesting story of the restoration of the Hancock-Clarke-House in Lexington, Mass. Valuable in its historical memory and a treasure house to-day of priceless antiquities, the replacement of the old hand-hewn wood shingles of early New England with a roofing of weather and fireproof security, presented a problem. The Johns-Manville Salem Shingle, made of asbestos fibre and Portland cement united under great pressure, offered both the weatherproof and fireproof roof, and the effect of the old weathered hand-hewn shingle; so the charm of the original roof is recaptured and made permanent.

## SEALEX VELTONE

Is a new wall covering perfected by the Congoleum-Nairn Company. It is easily applied over plaster or other bases, and makes a virtually one-piece wall. It is waterproof and easy to clean—practical for new installations or remodelled rooms. It is particularly fine for bathroom and kitchen use. It is offered in special colors harmonizing with modern colored bathroom equipment. Its sanitary features, its ease of application, freedom from cracking or bulging, and its attractive color offerings and low cost solve the problem where modern effects are desired and tiling cannot be afforded. Model installations may be seen at their showrooms at 295 Fifth Avenue, New York City, and information will be mailed on request.

## WELDING OF ALUMINUM

The Aluminum Co. of America has issued a booklet on the "Welding of Aluminum" which can be obtained on request. With the ever increasing use of aluminum for decorative purposes in building this booklet should be of interest to the profession.

*(Continued on page 20)*





APPROVED by leading architects, and pronounced by virtue of hundreds of installations and careful production as STANDARDS. . . .

AUSTRAL WINDOWS and AUSTRAL WARDROBES are as essential to the modern school as the latest text books.

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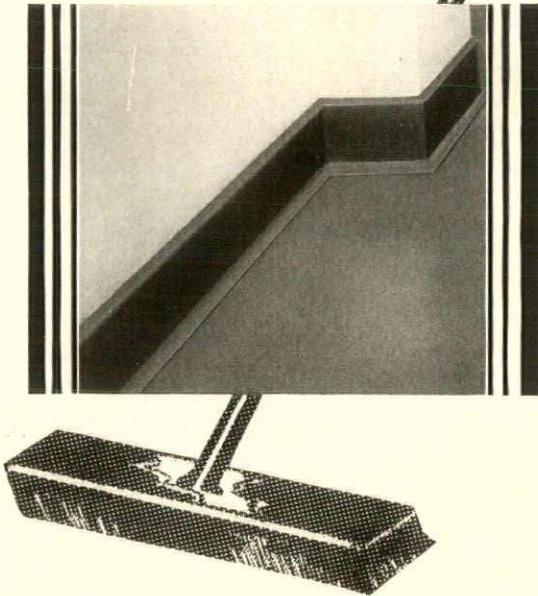
**AUSTRAL WINDOW CO.**

101 PARK AVENUE      NEW YORK CITY



# The Battle of the Broom and Base

is staged in every building



A cleaner's one duty is to clean the building, not to consider whether or not the base will show the results of wear from his daily work. And yet, the base is important. If it is shabby it will ruin the effect of an interior. To keep it in condition is an expense.

The architect, when specifications are written, anticipates all of this and writes, "Base shall be of *Pyramid Natural Slate*."

It is installed and forgotten as far as repairs are concerned. No painting or varnishing to be done, to keep it looking clean and presentable . . . its dark, smooth surface will always remain in its original condition, impervious to dirt and wear.



70,000 lineal feet have just recently been installed in the United States Internal Revenue Building at Washington, D. C. In addition to this base, 9,500 feet of treads and platforms and 3,650 plinths went into its construction. All this because slate has earned the reputation of standing up under abuse and hard wear. You will find it in the better buildings.

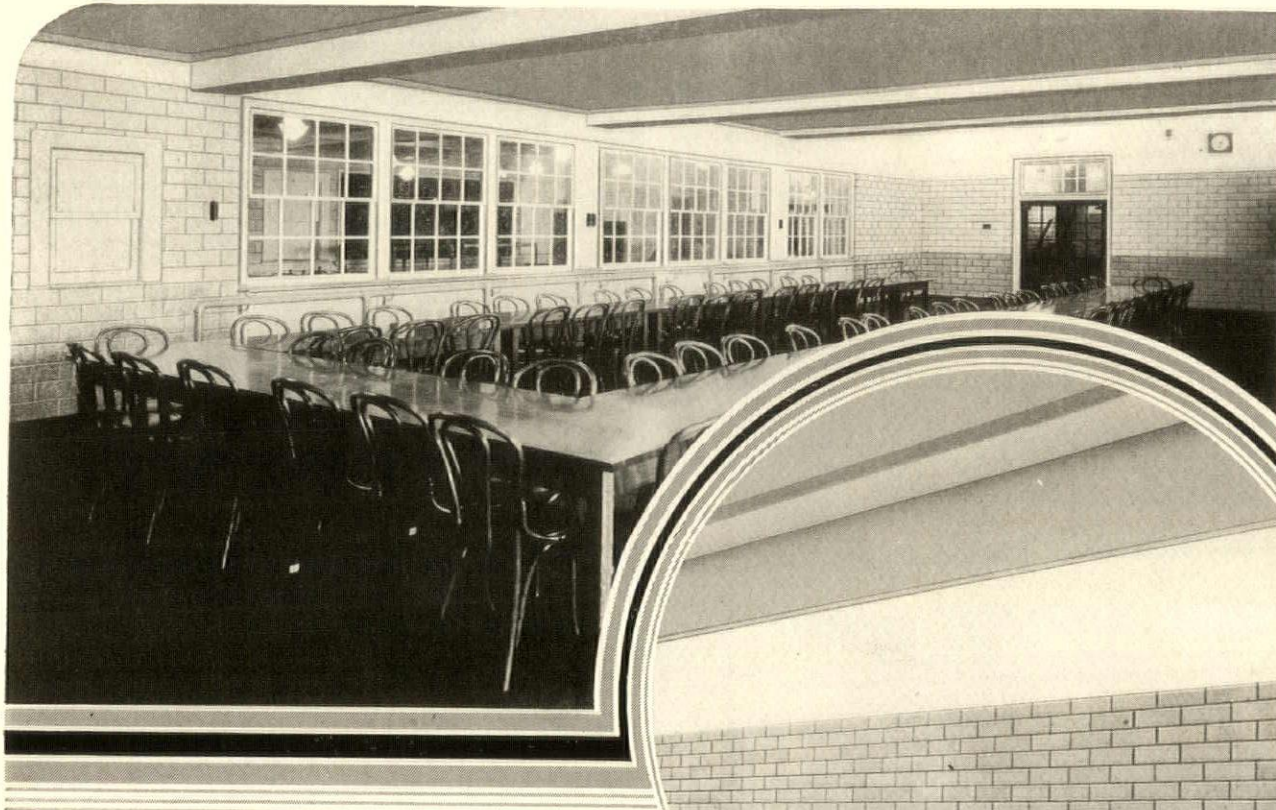


**THE STRUCTURAL SLATE COMPANY**

DEPARTMENT A 8 · PEN ARGYL, PA. BRANCH OFFICES IN ALL PRINCIPAL CITIES







These pictures show the dining room of the cafeteria in the beautiful Roosevelt School, Gary, Ind., Designed by Wm. B. Ittner, architect. Mottled Cream Brown AR-KE-TEX Tile was used wainscot high, with Mottled Cream White texture above. AR-KE-TEX Tile was used in the entire interior, including all class room walls from floor to ceiling.

## The Walls of This School Are Permanently Sanitary

Maintenance costs in the Roosevelt School will be greatly reduced because the interior walls of AR-KE-TEX Tile will never need painting or refinishing. In school buildings with walls of ordinary material, annual costs for painting and repairing, represent a heavy expense.

Walls of AR-KE-TEX Tile are impervious to defacement by any ordinary means. Ink cannot penetrate the high fired glaze of AR-KE-TEX Tile, and neither moisture,

acids, alkalis, oil or grease have the slightest effect on the permanently beautiful finish.

Walls of AR-KE-TEX Tile retain their original beauty as long as they stand, needing only an occasional washing to keep them as fresh and clean as when new. This sanitary feature makes AR-KE-TEX Tile particularly desirable for use in schools, where wall surfaces are subjected to the most severe usage.

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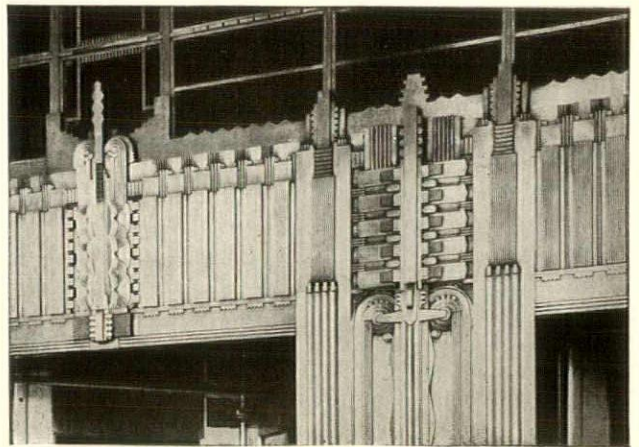




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**COPPER AND BRASS**

The bulletins of the Copper and Brass Research Association contain many practical articles on the various unique and modern uses of copper and brass in present-day building construction. If you are not receiving these bulletins, it will pay you to request inclusion in their mailing list.

**SEMET-SOLVAY PIPING AND VALVES**

Bulletin No. 44 from the Semet-Solvay Engineering Corporation gives complete and excellently arranged information for specification of pipe and valve equipment. It includes blue-prints showing possibilities of combining pipe and branches, full description, drawings, and tables on steel flanges of various pressures and drillings, on expansion joints, and on various types of gate valves. It is an exceptionally well prepared manual for the engineer.

**EMERSON FURNACE BLOWER**

The Emerson Furnace Blower is adapted to year-round use—furnishing an even warm-air flow in the cold months and providing summer ventilation and cooling. An A. I. A. file leaflet from the Emerson Electric Mfg. Co., of St. Louis, gives the latest features on this blower with adequate dimension diagrams and illustrations of the control units.

**GEORGIAN STEEL WINDOWS**

A handsome brochure has been issued by David Lupton's Sons Co., of Philadelphia, on their new Georgian Steel Windows. It includes full description, illustrations, drawings, and specification details. This new steel window resembles in design the fine hand-made wood windows of the Georgian period. Among the advantages stressed are the large glass areas made possible by slender, but adequate in strength, frame, meeting rail, and muntins. They have an improved spring balance suspension integral with the frame and a special parting strip of extruded aluminum functions as a weatherstrip.

**LIGHTING FROM FRONT STAGE**

The stage lighting of the New Earl Carroll Theatre in New York will be controlled from the orchestra pit. The General Electric Co. has designed the control which eliminates the back-stage switchboard. The "Lighting Director" will sit near the orchestra leader, from which vantage point he can see the effects he produces. The electron tube control will be the first installation of its kind in a New York theatre. The mere flick of a small switch will introduce an entirely new color scheme. B. S. Havens, of the G. E. News Bureau, has prepared a very interesting paper covering the special lighting features and their technical operation in this new theatre. Copies are available.

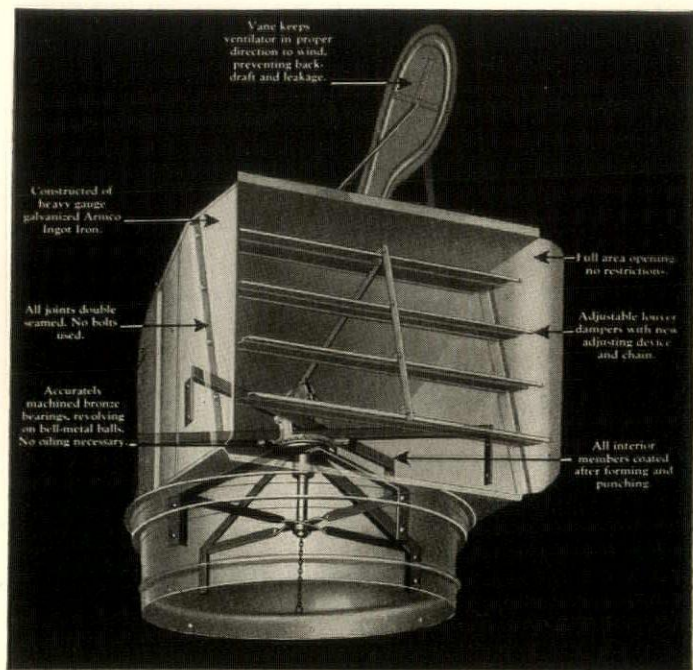
**OAK FLOORS**

The Oak Flooring Manufacturers' Association has just issued a new edition of a book on the "Laying, Finishing, and Care of Oak Floors" and a folder on "Modernizing the Home with Oak Floors," both of which can be obtained by request to the association at Memphis, Tenn., or to this bureau. "Practical Use" has been the watchword in the preparation of this literature.

**POWER FILTER**

The Square D Co., of Detroit, has just published a bulletin on its new Power Filter Unit which converts alternating current into non-pulsating, harm-

(Continued on page 31)

**MORE AIR PER MINUTE PER DOLLAR**

## For Good Ventilation Now and Hereafter, Specify Swartwout Rotary Ball Bearing Ventilators

**T**HEY are the first and only steps needed to assure satisfactory ventilation for your clients for years to come.

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Your "BASE" specification on Roof Ventilators is adequately protected when you say "SWARTWOUT VENTILATORS."

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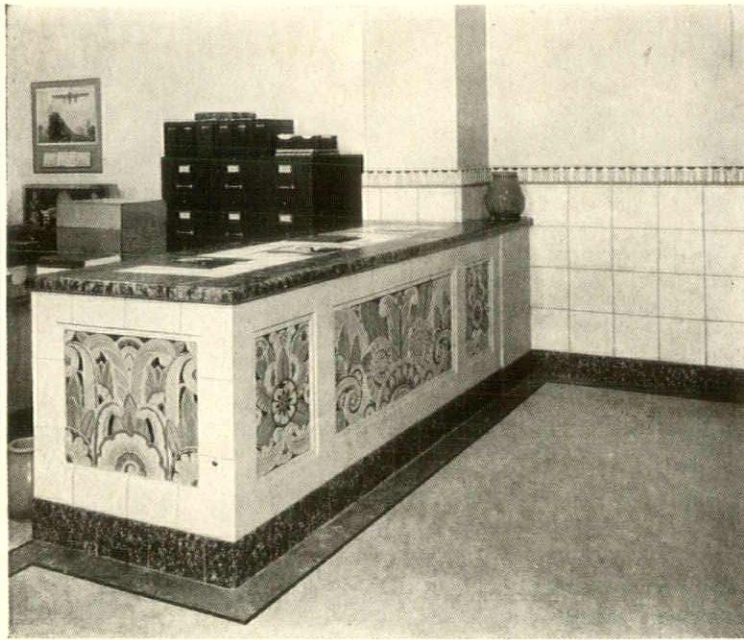
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# Swartwout ROTARY BALL BEARING Ventilators





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- ¶ The designs and color scheme are a product of our technical department. Consult with them without obligation on your problems of design and terra cotta construction.

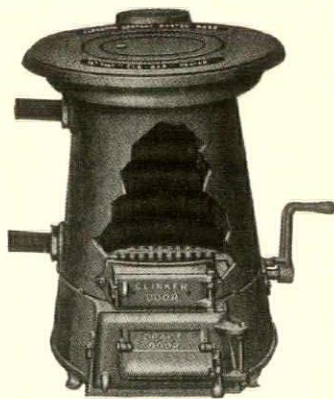
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## *A new Lutz book—* Practical Water-Color Sketching BY E. G. LUTZ

Mr. Lutz has a remarkable gift for being able to impart knowledge of art to others. Here are the chapter headings of this latest of his books: Introductory; Color and Light as the Artist Understands It; Properties of Pigments Used in the Pictorial Arts; Qualities and Uses of Water-Color Pigments; Qualities and Uses of Water-Color Pigments (continued); What Colors to Use for Sketching; Material and Tools for Water-Color Painting; Details of Making Wash Drawings; Light, Shade, and Shadows in Wash Drawings; Some Particulars of Water-Color Sketching; Some Special Methods in Technic; Conclusion.

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less direct current for use on sound-films, public-address systems, inter-communicating, signal, and elevator control systems. The bulletin will be sent on request and Square D engineers will collaborate on special filter problems.

#### RIGID CONDUIT

A critical history of the development of Rigid Conduit has been prepared by the Electrical Testing Laboratories and published by the National Electrical Manufacturers' Association, Utica, N. Y. The study will have appeal for the student of electrical products. It reveals the various attempts to eliminate hazards and the final successful employment of heavy wall mild steel conduit.

#### MIRROR DOOR CABINET

The F. H. Lawson Co., of Cincinnati, announce a new mirror door cabinet with especially designed and equipped side lights—Lawco Model LX. The cabinet is furnished with switch for the lights and plugs for curling and electric irons. The saving on other outlets and fixtures almost covers the cost of the cabinets.

#### ROCOP

Rome Radiation Co., Division of Revere Copper and Brass, Incorporated, announces the introduction of a new concealed heating unit—Rocop. It employs copper exclusively for the heating element, and is offered in a range of sizes designed to meet all standard conditions. A new catalogue on Rocop Convectors is ready for distribution, embodying a simplified presentation of engineering data. Rocop is a companion product of Robras Radiators.

#### PAINT-POINT PRODUCTS

A new catalogue gives a comprehensive idea of what Paint-Point Products Co., of Brooklyn, can offer to paint the new house or seal the cracks and paint the old. Fibre-Coat for sealing leaks and painting in one operation or for transforming the damp cellar into a recreation room—at one cent per square foot; Plumbine cement for repairing leaky pipes, tanks, or tubs; New-tex Textural Coating and weatherproof shingle stain are other products listed.

#### Announcements

A. C. Horn Company announces the organization of Horn Continentale for the sale of Horn products in Europe.

Arthur W. Clark has been appointed managing secretary of the Dealer Division of The American Oil Burner Association.

Edward J. Mehren, vice-president of The McGraw-Hill Publishing Co., has been elected president of The Portland Cement Association.

Page Fence Association announces the publication of a booklet entitled "The Border Patrol."

## Makes Buildings Easier to Rent and Sell

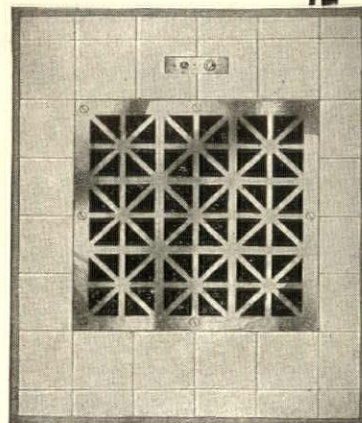
It is little refinements, like Prometheus Electric Heaters, that appeal especially to the ladies.

With a Prometheus Heater in every room, there is no need for chilly rooms at night or early mornings. And it is cheaper to take off the chill with a Prometheus than to keep fires going.

These heaters are built into the wall. Grille of chrome, monel metal, or porcelain in colors, gives a handsome appearance. Enclosed element eliminates fire hazard.

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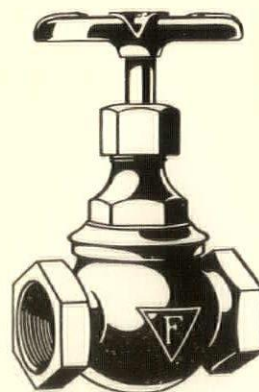
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In thousands of schools, clubs, hotels, and homes this remarkable SAFETY mixer is replacing ordinary mixing valves because it prevents sudden "shots" of cold or scalding water due to the use of nearby faucets, flush valves, etc. *Write for Book.* The Powers Regulator Co., 2741 Greenview Ave., Chicago — also 38 other cities.

## Decorative Wallpapers

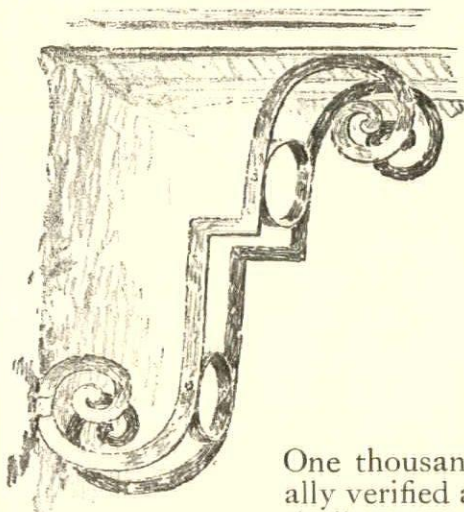
ELSIE SLOAN FARLEY has made a wonderful collection of wallpapers. Included are some classic French papers as well as the finest examples of the modern German and Viennese schools. Samples will be gladly sent to architects or decorators.

### ELSIE SLOAN FARLEY

INTERIOR DECORATOR

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By ALBERT H. SONN

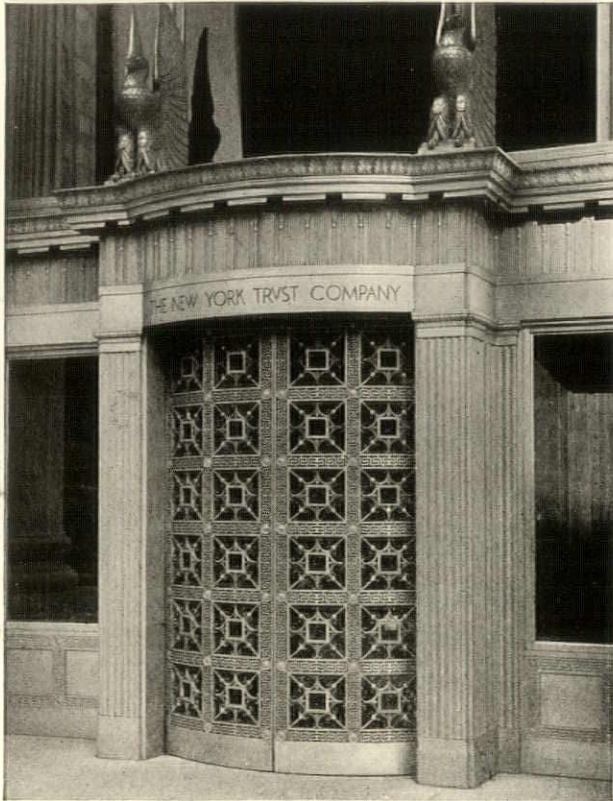
One thousand illustrations accurately executed from examples personally verified and inspected by the author and here reproduced by a facsimile process, admirably preserving the lovely texture of old iron-work.

Rare originals in public and private collections, examples in farm-houses and old dwellings throughout New England, Pennsylvania, and the Southern States, have been judiciously selected. Measurements are given where feasible and in making the drawings proper proportions have been considered. This book is essentially practical, furnishing the collector, architect, iron-worker, designer, and interior decorator valuable information and material suggesting a multitude of ideas relating to the design of iron-work. Three volumes (10 x 12 $\frac{7}{8}$  inches).

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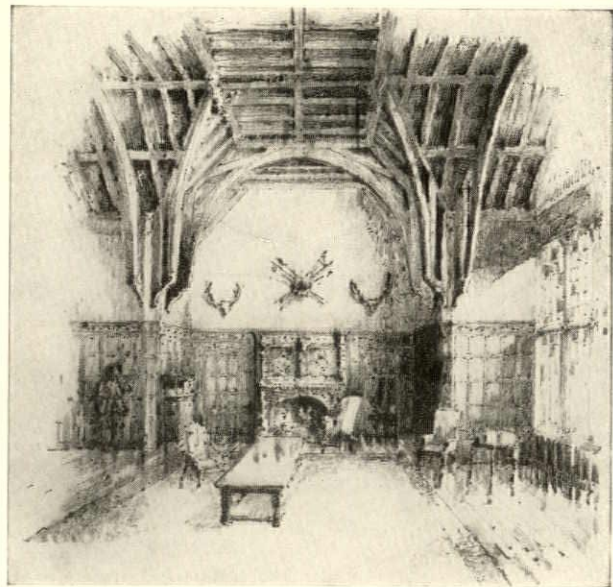
Full information, details and specifications on request.

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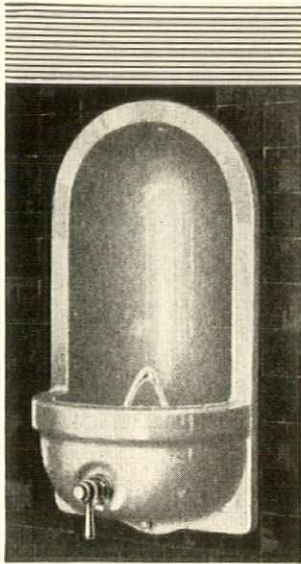
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*Halsey Taylor semi-recessed drinking fountains with automatic stream control and two-stream projector, in color, similar to above, were chosen for this splendid institution.*

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# *Specified for this* UNIVERSITY MEDICAL CENTER



## *Two-Stream Projector*

*A distinctive feature. Fingers or lips do not contact or contaminate source of supply. Positive sanitation.*



## *Ideal Drink- ing Mound*

*Constant height of drinking stream even though pressure varies. Stream always at convenient drinking height!*

NEW York's second gigantic medical center, borders on the East River, between Sixty-Eighth and Seventy-First Streets, and adjoins the Rockefeller Institute for Medical Research. It is being erected by New York Hospital Cornell Medical College Association. In addition to conducting extensive research, it will provide for 1,000 bed patients and 1,000 out patients daily. Naturally, with health-safety so vital a factor, Halsey Taylor Drinking Fountains were specified.

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# HALSEY TAYLOR

## *Drinking Fountains*



# ADVERTISERS' INDEX

## WHAT TO SPECIFY

## WHERE TO BUY

IF YOU ARE INTERESTED IN OBTAINING THE CATALOGUES OF ANY OF THE ADVERTISERS IN THIS ISSUE OF ARCHITECTURE (AS LISTED BELOW) LET ARCHITECTURE'S SERVICE BUREAU SEND THEM TO YOU. ANY ADDITIONAL DATA CONCERNING THE INDUSTRY THAT THE READERS OF ARCHITECTURE REQUIRE WILL GLADLY BE COMPILED FOR THEM BY OUR SERVICE BUREAU.

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## AN ARCHITECT

### Takes an Interest in Advertising

by HAROLD TATTON

IN this day of open competition, sound, intelligent advertising is undoubtedly one of the best means of bringing a product to the attention of the architect.

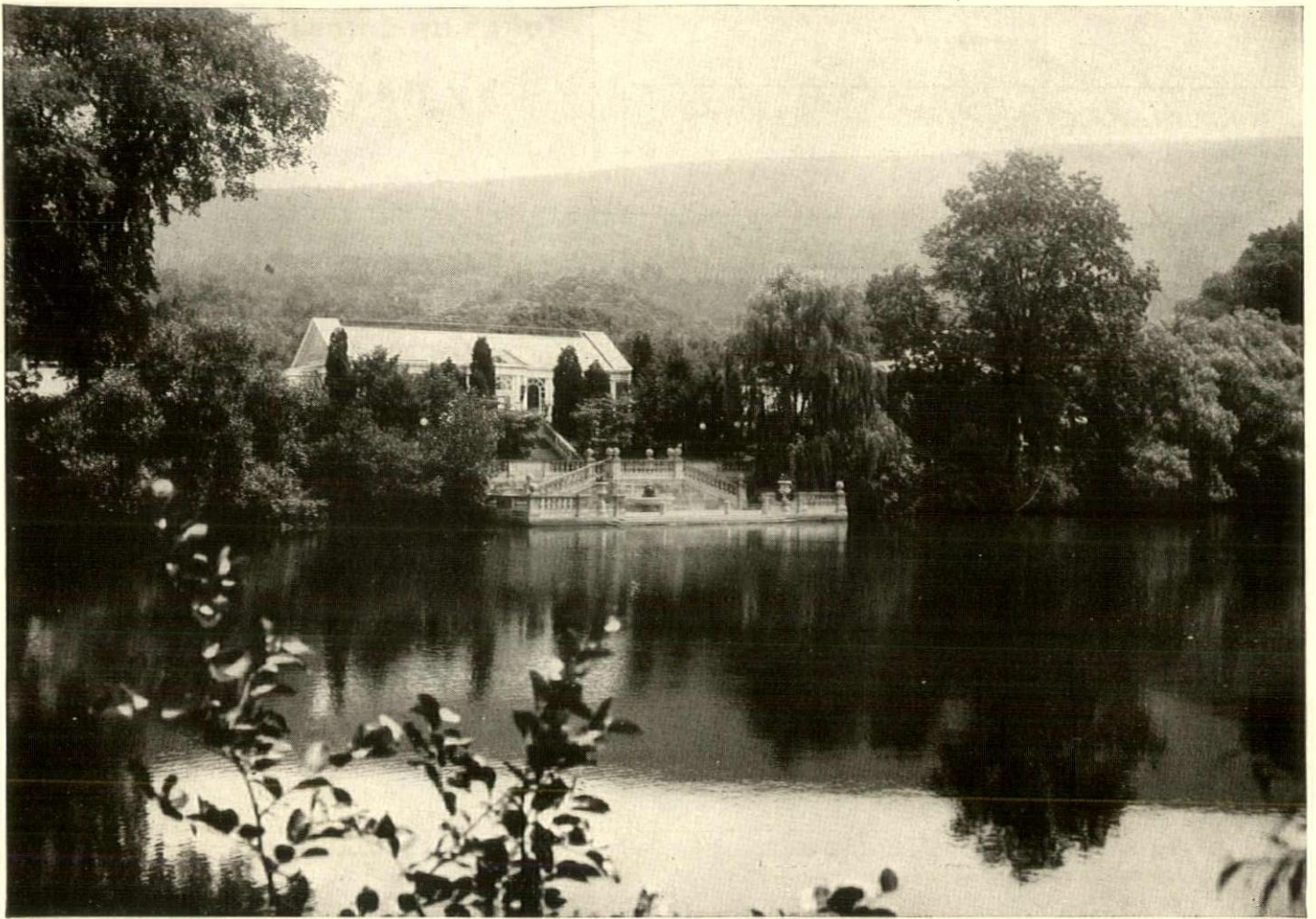
Advertising that will convey technical facts, suitably written, with sufficient distinction to forcibly display what a product stands for, will in time produce the desired result, for in this modern trend, in an age of invention, new methods, new materials, and new applications are being as eagerly sought for by the architect as by the producers.

Buildings of to-day, in order to meet the modern requirements, demand highly specialized products, produced and installed by clever engineers and mechanics, often in a large and highly competitive field which is growing larger every day. While a few old standards still remain, they are far surpassed with new departures that make the modern building a problem of selecting and fitting together materials and machines that are made and collected from almost every part of the globe. This places upon the architect a very difficult task of selecting from such a large and highly specialized field the best and most economical products that will fit his particular purpose, and one of the means often used, either consciously or unconsciously, lies in the fact that he has absorbed from seeing from time to time a product which has been judiciously advertised.

It would be impossible for the architect to interview every producer, to examine every product that is now produced, often the quantity involved would not allow sufficient profit to pay for the time lost. It must therefore be through some other medium that the architect can narrow down the range of products from which he can choose before he commences a close comparative analysis to determine the best to meet his own particular requirements, and it is probably through the medium of advertisements that he is able to make this distinctive selection.

Most advertisements are interesting. They furnish desired information, and in many cases excellent advice, and often furnish the guide sheets that the architect takes along on his shopping tours. Yes, we read them and then pass on the good news.



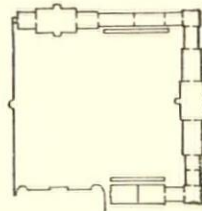


Glimpse on Estate of W. H. WALKER,  
Great Barrington, Mass.

To FERRUCCIO VITALE  
and ALFRED GEIFFERT, JR.

### The Credit Is Due

THE temple-like orangery is but one of the group of extensive glassed-over-gardens, forming practically three sides of the walled gardens. There are numerous fruit houses, general cut flowers houses, not to mention three for orchids.



This group was completed about 12 years ago. Long enough for it to have thoroughly seasoned, so to speak. Long enough for the houses to have indicated their practicalness for growing purposes; and superiority structurally.

However, in thinking of us in connection with these extensive layouts, do not overlook the fact, that the majority of the greenhouses we build are the moderate size ones, 50 to 75 feet long. Ones divided in two or three compartments.

The Improved Master V-Bar Construction has many outstanding points of advantage. Full particulars gladly furnished.

**Lord & Burnham Co.**

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NEW YORK	DETROIT
PHILADELPHIA	ST. LOUIS
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BOSTON	MONTREAL
CLEVELAND	ST. CATHARINES
DENVER	TORONTO

**For Four Generations Builders of Greenhouses**