THE AMERICAN ARCHITECT

COLMAR—THE ALSATIAN ROUEN, SAMUEL CHAMBERLAIN

EDITORIAL COMMENT — ARCHITECTURAL ORNAMENT IN HAMMERED BRONZE — THE NEW GENERAL MOTORS BUILDING, NEW YORK — DESCRIPTION AND ILLUSTRATION OF MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO — TOPICAL ARCHITECTURE — IRON GATES — BUILDINGS OF MODERATE COST

IN TWO PARTS JULY 20, 1927 PART ONE
Wallpaper
A Flexible Medium for Artistic Expression

More and more architects are personally selecting wallpaper to accentuate the charm of the interiors they create. Because of its flexibility, it offers unlimited opportunity for artistic expression in perfect keeping with any architectural design. For three hundred years artists have been working out wallpaper patterns, the very best of which are represented in the papers of today. With such a variety of color and design, it is comparatively easy to find the particular wallpaper that will make of any room a harmonious whole.

Wallpaper Manufacturers Association
Of The United States
461 Eighth Avenue
New York, N. Y.
ENTRANCE GATES TO HOSPITAL, CHARTRES, FRANCE

(Copyright, 1927, The Architectural & Building Press, Inc.)
LOUIS XIV GATE, PARIS, FRANCE
GATES TO THE PREFECTURE, VERSAILLES, FRANCE
The name KEWANEE on a heating boiler inspires confidence in the building owner, not merely because KEWANEE means 35 years of square shooting in the heating business, but because other dependable people are ready to stake their own reputations on KEWANEE integrity.

There won't be an orphan heater in the basement if you buy your boiler from a responsible concern.

KEWANEE BOILER COMPANY
Kewanee, Illinois

Branches in Most Leading Cities

STEEL HEATING BOILERS, RADIATORS, WATER HEATERS, TANKS AND WATER HEATING GARBAGE BURNER

The influence of XVI Century Romans is unchallenged for elegance of line, symmetry of form, charm of setting.

Northwestern Terra Cotta

adds to these three cardinal graces the beauty of color to enhance coming American Architectural Masterpieces.

The Northwestern Terra Cotta Company

Denver    Chicago    St. Louis

Not just one type of Concrete Pile
Not just one weight of Shell

Included in the list of Concrete Piles we make are Standard (tapering); Stub; Composite (Timber plus Concrete); Precast Composite; Composite with a Precast Concrete Section; and Straight Precast Piles.

A great many Engineers and Architects do not appreciate the fact that we are not limited to one standard size and weight of tapering steel shell with the same size wire. The weight of shell we use is suited to the conditions to be met.

Every Standard Raymond Concrete Pile is poured into a tapering shell of spirally reinforced steel and every shell is left in the ground.

RAYMOND CONCRETE
New York: 140 Cedar Street
Montreal, Canada

A Form for Every Pile

PILE COMPANY
Chicago: 111 West Monroe Street
Branch Offices in Principal Cities

A Pile for Every Purpose
Lipman
Again Specified

When the Medical Arts Building was erected in 1923 a Lipman Model 1000 was installed. The owners are now ready to erect another building directly adjacent to this structure. The plans include the installation of a Model 2000 Lipman, replacing the Model 1000 and supplying the refrigeration for both buildings.

The excellent performance of the first Lipman earned this second, larger installation. The fact that Lipman was again specified is a convincing testimonial to the dependability and economy of the original Lipman equipment.

Architects and building managers are invited to write for complete Lipman data.

Above is Model 2000 Lipman to be installed in the Medical Arts Building, Dallas, Texas. "Lipman" is noted for dependable, economical performance, sound construction and sound engineering. There is a size for every service. Service Stations everywhere.

General Refrigeration Company
121-93 Shirland Ave., Beloit, Wisconsin, U.S.A.

Please send me full particulars including Free Descriptive literature on Lipman Refrigerating Machines.

Name __________________________ St. __________________________
City __________________________ State __________________________

THE AMERICAN ARCHITECT
WITH WHICH IS CONSOLIDATED THE ARCHITECTURAL REVIEW

VOLUME CXXXII • JULY 20, 1927 • NUMBER 2525

TEXT MATERIAL

Colmar—The Alsation Rouen ...................................................... Samuel Chamberlain ... 71
The Alexander McKinlock Memorial Campus,
Northwestern University, Chicago ................................. James Gamble Rogers
Childs & Smith .......................................................... 78

Editorial Comment .......................................................... 117
Architectural Ornament in Hammered Bronze . . . . . . . . . . . . . . 127
The New General Motors Building, New York ........................... Shreve & Lamb ... 133

PLATES

Topical Architecture—Iron Gates ............................................. Insert
A Street in Palm Beach, Fla. Working Photographs—Series II .......... Dwight James Baum . Frontispiece
McKinlock Campus Buildings,
Northwestern University, Chicago, Ill. ................................ James Gamble Rogers
Childs & Smith .......................................................... 16 Plates
Buildings of Moderate Cost .................................................. 8 Plates

OWNED AND PUBLISHED BY
THE ARCHITECTURAL AND BUILDING PRESS, INC.

E. J. ROSECRANST WALTER C. HOWEY VERNE H. PORTER
President and Treasurer Vice-President Secretary

Publication, Editorial and Advertising Offices: 239 West 39th Street, New York City

EDITORIAL DEPARTMENT

WILLIAM H. CROCKER, Editor
BENJAMIN FRANKLIN BETTS, Associate Editor
R. W. SEXTON, Associate Editor, Department of Interior Architecture
E. K. BRUNNER, Editorial Assistant
Contributing Editors

SAMUEL CHAMBERLAIN CLINTON H. BLAKE, Jr. FLOYD W. PARSONS
Sargent locks, which safeguard and protect the guests, respond instantly to the right key. They are grouped in a master-key system, selected by architects and management, that facilitates the hotel’s operation. The specially designed trim is illustrated.

Sargent hardware is a sound investment for any type of building. Representative dealers in all cities will gladly give further information.

SARGENT HARDWARE  STEVENS HOTEL
Chicago, Illinois  Holabird & Roche, Architects

To CALL it “the world’s greatest hotel” scarcely does the new Stevens, in Chicago, justice. Grandeur of vision. Magnificence of accomplishment. These were necessary before such a structure could open its doors. It is a compliment to outstanding worth that Sargent locks and hardware of solid bronze should be installed on the doors of the three thousand rooms of this great building.

SARGENT & COMPANY  Hardware Manufacturers  New Haven, Conn.
New York: 94 Centre Street  Chicago: 150 N. Wacker Drive (at Randolph)

AMERICA NEEDS MORE GARAGES IN HER CITIES


In Boston fill this big Garage with Shoppers' Cars

Since as keen merchants as this old-established company, along with a goodly number of others of equal standing, recognized the need for and profit in a Parking Garage for their customers' care—

doesn't the fact stand out, clear and bold, that other department store owners will soon be following suit? There's an architectural commission waiting the man who puts over the idea. Can we help you work up a proposition for someone you have interested?

Our Garage Data Sheets and the booklet "Building Garages for Profitable Operation" will be helpful.

RAMP BUILDINGS CORPORATION
21 East 40th Street New York, N. Y.

GARAGE ENGINEERS
CONSULTANTS ON PROMOTION AND GARAGE MANAGEMENT

NATURE took ages to make this natural stone—and in the making she gave it such time-and-service-resisting qualities as no other material has. Look at these qualities, and measure their value in terms of permanence and economy:

Hard, dense, close-grained, non-porous, non-absorbent, non-staining—heat-and-cold-proof, acid-and-alkali-proof—will not chip, peel, pit or split—can be sawed, tongued, grooved, turned, bored, shaped and fabricated in structures of any form and of unmatched rigidity—color, a pleasing light gray, a good light reflector, harmonious with any color scheme.

For more than 40 years, Alberene Stone had been a standard material of demonstrated superiority for:

- Stair Treads and Landings
- Laundry Trays and Sinks
- Toilet Partitions and Urinals
- Shower Stalls and Dressing Rooms
- Laboratory Equipment
- Fireplace Linings and Hearths
- Range Hearths and Backs
- Flooring and Trim
- Acid-resistant Floors
- Electrical Work

Get the Catalog of Alberene Stone, showing its manifold uses and advantages. Then—incorporate it in your specifications.

Alberene Stone Company
153 West 23rd Street
NEW YORK
Since 1690 a Home of Distinction

This home was built in Farmington, Connecticut, in 1690; over two hundred and thirty-seven years ago—almost a century before this nation was born. The home still stands, the entrance still invites. Built of sturdy Pine, it is a good example of the true American Home.

Today Shevlin Pine fills the needs of good home construction. It has the same qualities as the wood of our ancestors. It endures. It is easy to work with. Its fine texture readily takes any finish and holds it. It gives the home an air of distinction.

The craze for flimsy construction and the popularity of lumber substitutes is passing. Time and the elements soon disclose the true qualities of building materials. Builders and architects everywhere are turning once more to homes like this one built over two centuries ago. Pine has again proven itself to be the most economical building material.

For forty years the Shevlin interests have specialized in Pine. There is a sufficient supply for generations ahead in the best timber stands of the country. When it reaches you, Shevlin Pine is always properly seasoned, rigidly graded and smoothly milled.

Five varieties can be furnished by leading lumber dealers: Shevlin Ponderosa Pine, Shevlin Northern White Pine, Shevlin California White Pine, Shevlin Norway Pine and Shevlin Sugar Pine. There is a grade and a variety for every construction need.

Shevlin, Carpenter & Clarke Company
900 First National-Soo Line Bldg., Minneapolis, Minn.
Chicago Sales Office: 1866 Continental and Commercial Bank Bldg.
Sold in New York by N. H. Morgan, Room 1104, 103 Park Avenue
Casement Frames
In 289 Shapes

Andersen Casement Frames offer a choice of many shapes to express individuality in window arrangement. Andersen dealers with complete stocks can furnish 289 different sizes.

Casements of wood impart that homelike character to residences which only wood can give. They harmonize with interior trim and with every architectural design.

You can use narrow casings and still have weathertight construction as Andersen Frames may be had with wide blind stops.

Most lumber dealers can furnish Andersen Frames. Catalog No. 300 contains complete information.

Andersen Lumber Company
Dept. B-7, Bayport, Minn.
OUR versatile correspondent, Samuel Chamberlain, has journeyed to Alsace, and in his article presented in this issue, sets forth with pen and pencil and in his usually happy manner, his various impressions. Once upon a time we heard it said by a man, speaking to a large audience of children, that they should learn to "stand on their hind legs and look out of their eyes." This statement, greeted by a ripple of amusement by his audience, he insisted should be taken seriously. That man, while designated as a biped, was more often a quadruped in action. He gravelled on all fours and by too closely following the contour of the ground failed to look aloft where beauty was to be found. The power of observation is born in most of us, but seldom fully developed. When that power is cultivated to its fullest extent and coupled with it a perfect co-ordination of eye and hand, the result is that of the trained artists. Many men have travelled the highways and byways of Europe, but only those who "stand on their hind legs and look out of their eyes" can achieve the results set forth by Chamberlain.

The series of illustrations and accompanying article describing the McKinlock Campus Buildings at Northwestern University, Chicago, are interesting features of this issue. These buildings embody some of the most modern ideas in architectural design and are, in fact, a decided step forward in the development of scholastic buildings in this country.

Issue of August 5 will be largely devoted to school buildings. While in no sense a "special issue," the illustration of recent school buildings will dominate. Special issues that present the "last word" of their topic have certain merit, but when used as a vehicle to resurrect illustrations that are staled by constant repetition, are of doubtful value.

The feature of this issue will be an article by William B. Ittner, F.A.I.A., of St. Louis, Mo. Mr. Ittner has designed an unusual three building school group at Longview, Washington. The school policy of Longview favors centralization, or planning for a restricted number of complete schools rather than for a larger number of segregated buildings. This three building group represents a concentration of educational facilities so that children in all grades may have largely increased educational opportunities. This group stands on a 39 acre site in the center of the city's residential district. The problem is a most unusual one and has been solved in a masterly manner by Mr. Ittner.

In a recent issue there appeared an article and illustrations setting forth the modern tendencies in theatre design in New York City. It is not the opinion of those who are competent to judge that the present tendency adds anything worth while while in the development of the modern theatre.

In sharp contrast to what is taking place in the East is the newer style theatre now being erected in Germany, Arthur Woltersdorf, F.A.I.A., of Chicago, has lately been to Germany, and while there, made an intensive study of the newer theatres. His reactions are set forth in a more than usually interesting article to appear in our issue of August 20. The accompanying illustrations will be very valuable to the subscribers of THE AMERICAN ARCHITECT. Personally selected by Mr. Woltersdorf after consultation with various architects, they present a wealth of good suggestive material,—particularly the various floor plans which have been carefully poched in the offices of the architects in Germany, especially for this issue.

A further feature of this issue of August 20 will be a Chinese theatre at Hollywood, California. This is a most unusual structure and embodies with skill and restraint the many decorative features that are present in theatres in China.

The subscriber is asked to bear in mind that the insert, Topical Architecture, is a part of every issue. This valuable series will be continued indefinitely. When grouped together, they will present suggestive material that will be appreciated by every reader.

And while referring to recently added features, we want to say a word as to the constant feature, Buildings of Moderate Cost. We shall endeavor to make this of sound value, but we shall need the cooperation of the men in small communities to make it what it should be. Send us your small town work.
A STREET IN PALM BEACH, FLA.
WORKING PHOTOGRAPHS—SERIES II
FROM THE ORIGINAL NEGATIVE BY DWIGHT JAMES BAUM, ARCHITECT

THE AMERICAN ARCHITECT
THE essence of the true Alsace cannot be found more pleasantly expressed than in the sleepy town of Colmar, nonchalantly seated in the rich valley of the Rhine. Colmar, city of smoky taverns and coffee, cake and toy shops, of fantastic peaked roofs and spiny towers and storks' nests; the Colmar made famous by the sympathetic "Oncle Hansi." whose drawings and posters and books have endeared him and Alsace to all of France, especially to the children. Colmar has suffered little of the industrial fever which has seized its neighbors, Strasbourg and Mulhouse. This is, of course, fortunate from an artistic point of view, making Colmar far more intriguing to the travelling pencil pusher than...
to the travelling salesman. Provincial torpor has preserved its Old Town intact, saved its tortuous streets from being widened and its vast overhanging houses from being razed to make way for apartment buildings. Such are the blessings of commercial stagnation.

Colmar was a German city ten years ago, and its complexion has undergone little change. The skyline is jagged with warped German roof lines. There is a vast perpendicular department store, strongly reminiscent of Munich, which has been re-

named "Aux Villes de France," and there are coldly archaeological bank buildings, built of stone the color of half-boiled calves liver, which are now emblazoned with the names of French banks. The policemen are uniformed as all good gendarmes should be, but they speak a hoarse Teutonic patois. All of the signs in the town have been repainted in French, but the names posted about are reassuring reminders of what one sees out of the train windows when passing through Milwaukee. The people are awkward and rosy cheeked, like wooden dolls. Paunches, gutteral voices and bristling pompadours are fairly abundant. Gross silhouettes and shiny noses are found in place of feminine chic.

Calves are noticeably plumper. The German love of music, of shaded parks, of beer and good groceries is evident everywhere. There are numerous beer gardens, strolling with bald and somewhat silly Doric columns. Excellent orchestras play soft Viennese waltzes while buxom lasses bring in the foaming bock in sizable scuttles, accompanied by gigantic pretzels. If you ask them, they will serve you that Alsatian chef d'oeuvre, "choucroute garnie," and how! A steaming mountain of glorified cabbage, saucily spiced, around which snuggle a brood of unimaginably tender boiled potatoes, a shimmering slab of ham and two plump, juicy, tomato-red sausages! (After this outburst, I really expect to be approached by the agencies to write luscious-luscious advertisements for the ladies' magazines.)

If the Colmarians appear quite German as far as externals go, they are, in spirit and sympathy, extremely French. Colmar is the judicial capital of Alsace and the heart of a strongly patriotic movement. No city was happier to bring forth the Tricolors which had been hidden for forty-seven years in attics and cellars, and to fly them triumphantly from the window ledges on that unforgettable day.
FROM THE ORIGINAL SKETCH BY SAMUEL CHAMBERLAIN
in November, 1918, when the Armistice was signed. The architectural charm of Colmar lies in its haphazard and casual structure. There is none of the geometric in the town, none of the T-square and triangle, nothing that remotely resembles city planning. One house springs up with utter disregard of its neighbor, leading to a complexity of twisted walls and roofs which is rarely surpassed. An immense variety of old houses results from this architectural caprice, varying from grotesquely quaint, nursery-rhyme houses to statuesque Renaissance mansions. Of the latter, particular mention may be made of the "Maison des Têtes," which is now transformed into a musty inn. It is dizzy with ornament to the very peak of its pointed facade. Three grimacing heads protrude from every pilaster, whence its name. The doorway is exquisite, embellished with escutcheons and a grille in fanciful Alsatian pattern.

The half timber work of the region has a character quite its own, differing radically from that of Normandy. The horizontal, vertical and diagonal elements appear in about equal proportion, producing an effect more blatant than is ordinarily obtained with timbers.

The present Mairie, once the ancient Customs House, is an astounding old building, rambling about in an aimless manner, with no one facade bearing any resemblance to any other. There is a large cloistered opening beneath it, supported by sturdy carved oak columns, furnishing refuge on rainy days for the town loiterers and also the vista for the wash drawing here reproduced. It glories in a clock tower, a sun dial, a handsome exterior staircase, wrought iron in abundance and many jeweled bits of sculpture and Gothic detail, among them the Austrian double eagle, which has weathered the stormy centuries with the patient Alsatian people. Add to these stray timbered towers, carved wood balconies, delicate Renaissance portals and ponderous Gothic ones with massive hinges, windows of leaded bottle glass and, topping it all, a giddy enameled tile roof, set in a bright pattern of green, blue and white. All told, a delicious melange, a complete architectural hors d'oeuvres garriées.

The critics call it vulgar, (which it probably is), and in truth it does seem rather coarse beside the delicacy of the quaint little building which now serves as the Commissariat de Police. The flawless little balcony which adorns this facade, a glimpse of which is found in the lithograph of the market place, is a bijou of the Renaissance which can scarcely find a competitor in all Alsace. It was from this miniature loggia that the Magistrate of Colmar read proclamations to the assembled townspeople, and from here were announced the names of belligerent citizens who were due for a public flogging. What is said to be the oldest house in Colmar soars up next to it, ornamented with one of the shop signs for which Alsace is noted.

Colmar is proudest of its Museum, installed in the cool cloisters of a former Dominican convent. It is named after Schongauer, whose atelier was long in the town, but it possesses only a feeble representation of the master's work. However, it does contain the famous retable of Isenheim by Mathias Grunewald and Nicolas de Haguenau, which was rescued from the fury of the Revolution, and which has come to be considered the masterpiece of Rhenan art. The realism of some of these Central European primitives is as amusing as it is sometimes sickening. All of the Madonnas are plump-faced and blonde, with bulging foreheads in true Teutonic fashion. We won't go into the unappetizing side just now.

The church of St. Martin, over whose authorship a rather acrimonious and puerile dispute has arisen between the French and German archaeologists, is well worth fighting over. One need not question the German source of the quaint old spire, nor of the Chinoiserie of its final cresting, yet the lines and Gothic detail of the church as a whole could hardly be more purely French. The dispute arises over the nationality of the architect, Le Maitre Humbret. The rival critics become quite warm under the collar in claiming the illustrious master, with honors about even.
THE MARKET PLACE  
COIMAR

FROM THE ORIGINAL LITHOGRAPH BY SAMUEL CHAMBERLAIN
The color of the stone of St. Martin, which the present pencil sketch must fail dismally to convey, is unique among the churches of France. Quarries in the region of Colmar yield stone of a great variety of colors, ranging through an entire grayed spectrum, and the builders of St. Martin seem to have omitted none of them in weaving a pattern of soft and symphonic colors. To do the stonework of this church justice, one needs a palette cooler, but quite as varied as that needed to make a color cartoon of the stained glass of Chartres.

The interior of the church has suffered periodically during the centuries, and recently has been refitted in a manner which all too unhappily savors of the ecclesiastical shops on the rue St. Sulpice. St. Martin is the only church in Colmar, I believe, which is not crowned with a stork's nest. Many of the spires of the city are capped with this huge basket of straw, like a pom-pom on a dunce cap. Most of the nests are inhabited by authentic storks, while some are mere iron baskets, hospitably placed to encourage tenants of this variety.

There is a touch of Bruges in the clump of fanciful old houses which make up Colmar's "Little Venice." Their long roof lines are reflected in a stream whose lazy waters barely suffice to transport long flat barges laden with turnips and cabbages. At intervals are the traps of fish merchants, filled with plump trout. The fisherman scoops up an assortment in a crab net for the approval of passing housewives, who place the selected specimen in market baskets, floundering frantically among lettuce heads. The stream's edge resounds with the paddling of energetic laundresses and the water is milky gray from the presence of strong soap. Whether the imprisoned fish find this to their fancy is not certain, but one may hazard a guess in the negative.

Colmar merits a closing paragraph full of flourishes and superlatives, but just at the moment when these should be forthcoming we have discovered three villages so perfect, so unreasonably, violently picturesque that Colmar appears as an imperfect jewel indeed. They go under the ponderous names of Ammerschwihr, Kaisersberg and Riquewihr, and if the lead pencils don't run out, they will claim space in a forthcoming number of THE AMERICAN ARCHITECT.
MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.
JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
THE ALEXANDER McKINLOCK MEMORIAL CAMPUS,
NORTHWESTERN UNIVERSITY, CHICAGO

JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS

This very interesting group of buildings embodies some of the most modern ideals in architectural design. The Montgomery Ward Memorial Building itself is a decided step forward in the development of scholastic buildings in this country. While it is not developed as much as the contemplated Cathedral of Learning by Klauder in Pittsburgh, nevertheless, it shows what can be done in many storied construction for handling large required spaces in intimate contact with each other, and, as in this instance, on a limited ground area. Where these floor spaces, as required in the Montgomery Ward Memorial Building, become so enormous, is it not possible that a two or three-storied building would be out of date? In a three-storied building, it would require practically a trolley car or some other conveyance to carry one over the vast spaces required and supplied in this building, in a comparatively limited area.

The light and air feature, the ease of access fea-
McKinlock Campus Buildings, Northwestern University, Chicago, Ill.
James Gamble Rogers and Childs & Smith, Associated Architects
ture, proper construction, the economical heating arrangements, the economical plumbing arrangements, where the equipment is of such a complicated nature and where a single large distributing pipe will reach many superimposed areas, the economical use of electricity and the ease of electrical connections—all of these factors have been properly handled in this fourteen-storied Montgomery Ward Memorial Building, carried still higher in architectural treatment by the majestic tower rising to a height of nineteen stories or more.

It is very interesting, from a design standpoint, that in Chicago and on a plot of ground where the recessional idea is not required in this particular case, that some of the elements of high buildings required by modern zoning plans, should be carried out in this building.

One can still see the impress of Oxford or Cambridge in its scholastic treatment and in the details of the various buildings in this group. Publicly, the success of their design has already been established by two architectural juries, in the award of the gold medal of the Lake Shore Trust and Savings Bank of Chicago.

In all of these unusual types of buildings, we shall look forward with much interest to see if more recognition will come later, as our permanent ideas about architecture in this country along lines of modern touch will probably be tempered by the years. A group consciousness of good design in these giant examples will be had by all and general expressions of artistic thought and judgment, which have been formed after more mutual consideration.

By referring to the group plan it will be seen that the buildings erected and shown in the illustrations are cross-hatched. The future buildings to the west of Fairbanks Court and to the south of East Superior Street, shown on this group plan, are extensive hospital buildings, which will gather in years to come around the Montgomery Ward Memorial Building as a nucleus.

The small building shown on the plan as future extension immediately to the south of the Montgomery Ward Memorial Building, will probably be as large, when finally planned, as the Montgomery Ward Memorial Building itself, and is contemplated as a great central clinic, similar to the Cornell or Mayo clinics. When this extension is carried out, it will give three floors of added space to the present capacity of the medical class rooms and laboratories.

The Wieboldt Hall of Commerce, the central building with the monumental smokestack, will extend later to the south. Levy Mayer Hall of Law, immediately adjoining its Law Quadrangle, which is now surrounded by cloisters, will have the Thorne Memorial Auditorium, and still later, there will be a future building east of the Elbert H. Gary Library of Law, probably as large in cubic content as the Levy Mayer Hall of Law.

By studying the illustrations, one will observe
LINCOLN HALL, LEVY MAYER HALL OF LAW

LOWDEN HALL, LEVY MAYER HALL OF LAW

MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.
JAMES GAMBLE ROGERS AND CHILDREN & SMITH, ASSOCIATED ARCHITECTS
that the scheme of design has been to keep the lower buildings toward the Lake Front and to build up in great stony craggy masses the roof of Levy Mayer Hall of Law, the higher roof of the Wieboldt Hall of Commerce with its setbacks and its gigantic chimney stack, these again leading up to the exceedingly interesting mass group of the Montgomery Ward Memorial Building itself—this building culminating in a majestic tower of English proportions and design to a height of 260 feet.

The Montgomery Ward Memorial Building is fourteen stories in height, with an additional six stories in the tower. The lower seven floors are arranged for the Medical School; the next six floors for the Dental School. The utilities used for both of these schools are placed in the fourteenth floor and in a portion of the tower. The administration department, including the president's suite, the alumni suite, the business offices, etc., occupy the remainder of the tower. The medical department, by being placed on the lower floors, will have direct connection with the main clinic and general hospital, to be built later immediately to the south.

and also will be in close touch with Wesley Hospital, Passavant Hospital and the other general hospitals surrounding the Montgomery Ward Memorial Building to the west and south.

The large wings to the east and west of the Montgomery Ward Memorial Building form excellent spaces for laboratories, with ideal light and air on four sides. The central wing extending to the north is used on a number of floors for lecture rooms. The general floor plan has been developed with the idea of a 16-foot depth, which would supply excellent light and air to all the offices and class rooms in the building.

The medical system of instruction contemplated is that of very small groups. On the dental floors, from the eighth to thirteenth, inclusive, a slightly different system is used, with groups of forty students in each section.

The equipment in both the Medical and Dental Schools is the most modern in type, much of it being built especially for this particular school. Great interest has already been manifested in the arrangement of the dental chairs.
ASSISTANT DEAN DAVIES' PRIVATE OFFICE, WIEBOLDT HALL OF COMMERCE

DR. SCOTT'S PRIVATE OFFICE, MONTGOMERY WARD MEMORIAL BUILDING

DEAN BLACK'S PRIVATE OFFICE, MONTGOMERY WARD MEMORIAL BUILDING

DEAN CUTTER'S PRIVATE OFFICE, MONTGOMERY WARD MEMORIAL BUILDING

MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.

JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
The Wieboldt Hall of Commerce, in the center of the group, houses the School of Commerce, which has the enormous capacity of about four thousand students, most of whom are taken care of in two or three hour classes early in the evening. This school has a capacity of twenty rooms, seating about 1500 students. It has large offices, a research department, a library and club rooms for men and women students. On the upper floor is housed the Open Court Publishing Company.

The heating plant for the entire group is placed in the first two floors of the School of Commerce, to the rear: it has a potential capacity of double that of the cubic contents of the present buildings.

The Law Buildings to the east of Wieboldt Hall of Commerce, consisting of Levy Mayer Hall of Law and the Elbert H. Gary Library of Law, are more nearly like the Oxford buildings in height and general character. More architectural treatment, so far as textures and materials are concerned, has been employed in the Law School buildings, where color has been given great importance.

One will be especially interested in the large lecture room called Lincoln Hall, which recalls in many respects the seating in the House of Commons in London.

All of these buildings are of the best fireproof construction, with the finest type of commercial equipment possible to secure. The architects have endeavored to carry out the wishes of Mrs. Montgomery Ward—that her memorial be monumental, useful and enduring.

**ORNAN H. WALTZ DEAD**

ORNAN HUBBARD WALTZ, architect, of Ithaca, N. Y., died on June 16th. He was in his 50th year.

"Mr. Waltz was a personality possessing qualities which endeared him to his associates and colleagues in the profession, not only in the territory of the Central New York Chapter of The American Institute of Architects, but also in the National body. He and his partner, Mr. Gibb, had attained a position and a reputation very gratifying to them and their friends. With this as a background it was interesting to note the enthusiasm with which Mr. Waltz undertook any of the architectural commissions with which he was entrusted or when acting in any public matter calling for service which involved the knowledge and experience which he possessed.

"He gave generously of his time and thought to all matters affecting the City which he had adopted, and there was no demand made upon him in the interest of the profession of architecture which he refused or even attempted to evade. Speaking on behalf of his colleagues in the Central New York Chapter, I wish to say his death has removed one of the very important men of the Chapter, one who was faithful in his attendance at all meetings, and that it is with profound regret and sorrow that we record his passing away."

ALBERT L. BROCKWAY

**THOMAS E. TALLMADGE RECEIVED HONORARY DEGREE MASTER OF ARTS**

DURING the sixty-ninth annual commencement of Northwestern University, Chicago, Thomas E. Tallmadge received the honorary degree of Master of Arts. The citation read as follows:

Master of Arts—Thomas Eddy Tallmadge, architect, with a special interest in the planning of churches: Fellow of The American Institute of Architects; Professor of Architectural History in Armour Institute of Technology; lecturer at the Art Institute of Chicago; Vice President of the Chicago Society of Etchers; for some time President of the Art Commission of the City of Evanston. Distinguished contributor to the literature of his profession and of other fields of art; painter of enviable attainment; a versatile man of liberal culture.

**MEDAL FOR TRIBUNE TOWER DESIGN**

JOHN MEAD HOWELLS and Raymond Hood have been awarded the gold medal by the Chicago Chapter of The American Institute of Architects for their design for the Chicago Tribune Tower. This is a noteworthy award as it is the first year for five years past that the Chapter medal has been awarded.

But two other buildings erected in Chicago have won for their designers this distinguished honor. These were the Blackstone Hotel, Marshall & Fox, architects; and the Chase Apartments designed by Schmidt, Garden & Martin, architects.

**DESIGN AND MASS PRODUCTION**

There seems as much need to restrict the amount of design for industrial needs as to promote it, states the Builder in a recent issue. We could heartily wish to see commercial pottery come in simpler guise, or that textiles gave rest from superabundant pattern. How agreeable to look into a shop window where design was beautiful because it was rare, and grew rather from feeling for beauty than market inducements. We can all recognize the necessity for mass production, but we do not realize that the conditions necessitate simplicity and restraint and the avoidance of pretending to give what in the nature of mass production can hardly belong to it. If mass production could be directed to work within the limits which wholesale manufacture requires we should find it was thus greatly improved.
LEVY MAYER HALL OF LAW
WIBOLDT HALL, SCHOOL OF COMMERCE
MONTGOMERY WARD MEMORIAL BUILDING

McKINLOCK CAMPUS BUILDINGS NORTHWESTERN UNIVERSITY, CHICAGO, ILL.
JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
PERSPECTIVE VIEW, TAKEN FROM NORTHWEST, SHOWING RELATIVE POSITION OF THE FOUR BUILDINGS
MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.
JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
PORTICO IN COURTYARD, LEVY MAYER HALL OF LAW
MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.
JAMES GAMBLE ROGERS AND CHILDs & SMITH, ASSOCIATED ARCHITECTS
MAIN ENTRANCE DOORWAY. LEVY MAYER HALL OF LAW
MCKINLOCK CAMPUS BUILDINGS. NORTHWESTERN UNIVERSITY. CHICAGO. ILL.
JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
FACULTY ROOM, LEVI MAYER HALL OF LAW

MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.

JAMES GAMBLE ROGERS AND CHILD & SMITH, ASSOCIATED ARCHITECTS
FRONT ELEVATION, ELBERT H. GARY LIBRARY OF LAW
MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.
JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
ELBERT H. GARY LIBRARY OF LAW

McKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.

JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
DETAIL OF WEST ELEVATION, WIEBOLDT HALL, SCHOOL OF COMMERCE

MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.

JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
NORTH ELEVATION, WIEBOLDT HALL, SCHOOL OF COMMERCE

McKinlock Campus Buildings, Northwestern University, Chicago, Ill.

James Gamble Rogers and Childs & Smith, Associated Architects
MAIN ENTRANCE, WIEBOLDT HALL, SCHOOL OF COMMERCE
MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.
JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
NORTH ELEVATION, MONTGOMERY WARD MEMORIAL BUILDING
MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.
JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
MAIN ENTRANCE, MONTGOMERY WARD MEMORIAL BUILDING

MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.

JAMES GAMBLE ROGERS AND CHILD'S & SMITH, ASSOCIATED ARCHITECTS
ENTRANCE CORRIDOR, MONTGOMERY WARD MEMORIAL BUILDING

MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.

JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
READING ROOM OF LIBRARY, WIEBOLDT HALL, SCHOOL OF COMMERCE

MEN'S CLUB ROOM, WIEBOLDT HALL, SCHOOL OF COMMERCE

MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.

JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
CONFERENCE ROOM, WIEBOLDT HALL, SCHOOL OF COMMERCE

DEAN HEILMAN'S PRIVATE OFFICE, WIEBOLDT HALL, SCHOOL OF COMMERCE

*MCKINLOCK CAMPUS BUILDINGS, NORTHWESTERN UNIVERSITY, CHICAGO, ILL.

JAMES GAMBLE ROGERS AND CHILDS & SMITH, ASSOCIATED ARCHITECTS
The report of the Committee of The American Institute of Architects on School Building Standards, recently issued, is a comprehensive document prepared by a group of men who have for years been known as the best exponents of school building design and plan. An investigation as to the relative merits of large and small schoolhouses has been in progress and it is the unanimous opinion of the Committee that efficiency in the use of money and efficiency in education are separate ideals: that while a greater economy to the taxpayer will result when larger buildings are adopted, the educational value of such buildings is not as large as where smaller units are the rule. "It may be," the report states, "that when the huge school fails to achieve its purpose, it is not chiefly due to its size, but because its proponents are more interested in the reduction of operating charges than in learning."

Expansion, it is believed, leads to difficulties in teaching and administration, and becomes in time not merely a greater handicap, but in effect new problems. Principals and teachers are, it appears, dismayed by the constantly increasing numbers of their pupils, and many are of the opinion that the size of a senior or junior high school should not exceed 1500 pupils, while a number believe the maximum should not be in excess of one thousand pupils.

The solution of this problem, it is believed, lies in the creation of a new plan, and not the inflation of a scheme which while at one time suited its purpose, has now been clearly demonstrated to practical educators as obsolete and reaching to such cumbrous proportions as to warrant the most careful consideration of a newer method.

Naturally, if a school is to be a utilitarian and artistic success, there must, in the words of this committee report, be in its designer's mind a vivid realization of its meaning in the scheme of life. It is as important to our civilization, as was the Church to Europe in the twelfth century, that within the walls of our schoolhouses an effort should constantly be made to impart to the student a desire for knowledge and appreciation of the beautiful in art, literature and morals. When conceived in that spirit, continues the report, the school building becomes not merely an oratorical temple of learning. Architecturally it should be the outstanding example of learning in its community.

In the past there has been much discussion as to just how large a school room should be to accommodate a given number of pupils. While this, of course, is a vital consideration, the size of the school itself involves much more serious pedagogical and architectural questions.

In concluding its comprehensive report the Committee states that the tendency of the age in business enterprise is toward concentration of capital, men and machinery. The motive is to increase profits by lowering the cost of production. Following along this line, it is but natural for Boards of Education, composed in the main of business men, to pursue the trend of thought generally accepted as sound in business principle and to set up a parallel between the successful conduct of a business enterprise and the business administration of a school.

If the efforts of this Committee result in bringing these principles clearly before school boards, in making them see that there can be no practical results where educational methods are ruled by business principles, then it will have accomplished a much desired result. Undoubtedly teachers are almost unanimously of the opinion that the modern trend toward what the report designates as "jumbomania" tends to nullify their efforts.

Many architects in this country who have more largely worked on the problems surrounding the designing and planning of schoolhouses, will undoubtedly receive this report with a measure of surprise. It will tend to lead them into newer and broader considerations of schoolhouse problems. If they accept in the whole the report of this Committee, they will be confronted with the task of converting to this new and, we believe, more logical point of view. Boards of Education that for years have regarded the school building as purely a financial problem and not as a true temple of learning.

Royal Cortissoz, in a paper recently read before the annual convention of the American Federation of Arts, in which he more particularly discussed our debt to the past, takes a look back over our architectural development. "What we owe to the past is a body of established ideals," says Mr. Cortissoz. As most of us today are apt to accept such ideals as part of the unwritten laws of our profession, it is well to follow the reasoning of a man so well trained in critical analysis and learn something of the personalities of the men whose work laid the foundations of these unwritten laws. The first man to whom he refers, whose influence was exceedingly valuable in the development of purity of
design, is Joseph M. Wells. This man, whom Mr. Cortissoz knew intimately in his youth, magnificently illustrated our debt to the past. In Cortissoz's own words. He was a disciple of fundamentals. The beauty of an old building meant to him, he says, good proportions, perfect balance of line and mass and above all restraint in decoration. What he finds in Wells' work that he so heartily commends, he also finds in other great men of architecture that have succeeded him.

Architecture in this country has leaned heavily on the past. Mr. Cortissoz does not overlook the crass copyist that has run wild in this country, but he rather chooses to look back at such men as Richardson, Hunt, Goodhue and Bacon, who were lovers of beauty and of the highest architectural laws. We have, unfortunately, in architecture, as we have in the allied arts, a certain tendency toward what is known as "modernism," often mistakenly called "originality." If we are to use the word modernism in its correct sense, we must apply it to the work of the master minds of architecture, who, taking the basic laws and the fundamentals of the past as their foundation, have evolved the master work that stands today. This being true, it is easy to see that the erratic minds that have created what they term the "modernistic" school of today, have appropriated a distinctive word that in no ways fits the awful extent of their transgressions. They regard the past as something that is, in a literal sense, departed, finished, filed and docketed: while the truth is, of course, that the past is a long series of continuing processes, dateless and eternal. The past should not discourage the present, but rather enlighten it and renew its power.

Summing up, Mr. Cortissoz concludes that our debt to the past lies in allowing us to feed our minds on beauty of line and proportion, thereby fertilizing our imaginations in the contemplation of noble things. We may draw from the past fundamental principles with which to adorn the present and express modern individuality.

MARKING the progress of the history of an invention from what at the outset was a scientific toy, later to become a daily necessity, it is interesting to trace the sources from which light and heat are developed and how they have been harnessed to produce the power, today everywhere employed, and the extremes of cold as instanced in the recent development of modern refrigeration.

Ages ago, designated by geologists as the Carboniferous period, portions of the earth's vegetation died, fell into swampy areas, became covered with sediment, was subject to pressure and possibly heat, metamorphized, and formed large areas of carbon. In effect heat from the sun was stored away to be released ages later through a material, mined from the earth's crust, known as coal. This natural product and the process through which it came into being have ever been things to wonder at, for man has yet to find a means of storing the sun's heat and releasing it at will in quantities large or small and transporting it from place to place.

The sun's rays packed away in the coal mines were found to contain light as well as heat. Bituminous coal burned in retorts, produces a generous amount of gas commonly called illuminating gas. While the discovery of gas is recorded in early history, it was not put to practical use until the middle of the eighteenth century. Produced in quantity and piped under city streets, where thus available, it gradually replaced oil for illuminating purposes. With the development of electricity and the incandescent lamp, gas for lighting was generally displaced. In turn, gas largely because of its convenience, at first a luxury, became a necessity for the modern house to replace coal for cooking. The invention of the gas engine made this vapor an energy for producing power. With the development of an efficient boiler for burning gas owners found, and continue to find, it convenient to utilize the sun's rays in the form of gas to heat their buildings with gas fired boilers. Today we have the antithesis of heat from the sun's rays in the form of refrigerators chilled to icy temperature through the agency of a small gas flame.

If at present we have not yet found a way to make the sunshine provide the comforts and necessities of today or tomorrow, we have through modern inventive genius made the sunshine of ages ago conform to our needs of light and power, heat and cold.
BUILDINGS OF MODERATE COST
FURTHER IMPRESSIONS OF AN ARCHITECT'S VISIT TO PEASANT FRANCE
BEING A SELECTION FROM A SERIES OF PHOTOGRAPHS MADE BY FRANK J. FORSTER, AND PRESENTED HERE TO SERVE AS MOTIVES FOR THE DESIGN OF BUILDINGS OF MODERATE COST

FARM BUILDING AT QUEVILLON, SEINE, INFERIEURE

FARM AT ST. LÉGER SOUS BEUVRAY SAGNE ET LOIRE

DETAIL OF FARM COTTAGE NEAR CAUDEBEC, SEINE, INFERIEURE
THE AMERICAN ARCHITECT

FARM HOUSE, AQUIGUY, EURE

SOUTH OF CHEVERNY, LOIR ET CHER

DETAIL, FARM HOUSE AT ST. MARTIN DE MAILLOC, CALVADOS

122
HOUSE NEAR ST. MARTIN, CALVADOS

DETAIL AT MENNETON SUR CHER, LOIR ET CHER

MOULINS, ENGILBERT, NIEVRE
COTTAGE NEAR TOREY, SEINE, INFÉRIEURE

MONT ST. MICHEL, ILLE ET VILaine

DETAIL AT LAUDEREAU, FINISTERRE
COTTAGE AT VINTS FOQUET, SEINE, INFERIEURE

COTTAGE NEAR TOSTIES, EURE
ST. PAUL’S CHURCH, NEWBURYPORT, MASS.
PERRY, SHAW & HEPBURN, ARCHITECTS
R. CLIPSTON STURGIS, CONSULTING ARCHITECT

The church building is constructed of stone, with a slate roof with pitch waterproofing. Floors are of reinforced concrete. Partitions are of wood studs, covered in various cases with wood and metal lath. The surfaces of the interior walls are finished in hard white plaster, painted. The finished floor is treated variously. In the aisles of the auditorium, tile is used, while inside the pews carpet is laid. The basement floor is of concrete and the floor of the chancel and vestibule is of marble. Trim is of wood. The interior color scheme is carried out in three tones of French gray. Hardware of colonial pattern is installed and cathedral glass is used in the wood window frames. The building is heated by steam and hot air. Electric light is installed throughout the building. Built in 1922-23, the church cost approximately 45 cents per cubic foot.
AN unusual problem confronted the architects of the chapel of the House of the Good Shepherd at Troy, N. Y., inasmuch as it was necessary to provide for three chapels—one each for the Sisters, the penitents, and the Magdalene girls and orphan children—each seemingly entirely apart from one another, yet all making use of the same altar. While the children and Magdalene girls appear to use the same chapel, they are in reality separated by a high screen, so that their privacy is retained. Morgan & Milliman, the architects, were successful in devising a plan, based on the idea of the cathedral, so that a chapel was located in either side of that portion which would normally be considered as the transept and the third in what would ordinarily be the nave, allowing for the placing of the altar at the crossing where it might be seen by all.

The problem of designing the altar presented the greatest difficulty, owing to the different angles from which an unbroken view had to be attained. Rambusch, the designers, were commissioned to execute this phase of the work, in co-operation with the architects. The baldachino type of altar was agreed upon as being most suitable, with three identical sides so that the view from all chapels might be the same. The baldachino was designed to serve, as it naturally should, as the central feature, introducing such emblems of the order as would lend themselves to decorative purposes, always considering those rules of the church which govern the design of such accessories.

The method of constructing the baldachino is unusual. Its material is wood, overlaid with hammered bronze as ornamentation. The bronze was hammered entirely by hand, after heating it to render it malleable. The method of giving form to the
on each elevation, in which are introduced figures representing Our Lord the Good Shepherd and two adoring angels kneeling at either side. The figures are all hammered in bronze and applied to the wood background.

The columns and framework of the baldachino are of gilded oak, overlaid with hammered bronze decorative features. The soffit of the baldachino is squared off into panels, each of which has been glazed in a deep blue and ornamented with a bronze rosette. The tabernacle and the candlesticks are of bronze, and the cross on the tower and the curtain holder are of wrought iron gilded.

The steps to the altar proper are of Eastman cream marble with inlays of sienna, verde antique and red verona. There are four dossals in all—one red, one white, one purple and one green—one color for each of the four church seasons. There are also four veils for the tabernacle. In the designing of the altar, the rubrics have been closely adhered to, guaranteeing a free and careful fulfilling of the ceremonies of the Mass.

The architectural and decorative treatment of the three chapels is similar in every respect excepting only as to the furnishings, which are varied to suit different needs. The stalls for the nuns are placed in facing pairs, in accordance with the rites of their order, and the seating of the other chapels
is arranged to best fulfill the particular requirements.

The walls throughout are of rough mortar and have been treated in al secco in warm gray tones, which effectively emphasize the rich polychrome treatment of the timbered beams of the ceilings. The ceiling at the crossing, directly above the baldachino, has been richly decorated on a deep blue ground. The design of the ornamentation is of symbolic Gothic character. In direct contrast to the warm tones of its surroundings, the ornamental bronze of the baldachino has been finished in varying shades, running from bright yellow to deep reds. By this carefully studied treatment both as to color and form, the baldachino attains the prominence it was the intention to give it, and also the undisputed interest its fine treatment deserves.

The idea of applying hammered metal to a wood base is not a modern method of decoration for it can be traced to old medieval times. It is frequently observed in the work of Spanish and Italian craftsmen. The idea, however, has not generally been employed in this country and its adaptation here is therefore all the more interesting.


(From the scale drawing by Rambusch)
DETAIL DRAWING OF THE COLUMN CAPS, FRIEZE AND CRESTING OF THE BALDACHINO, SHOWING THE DESIGN OF THE HAMMERED BRONZE ORNAMENT WHICH IS APPLIED TO THE WOOD CONSTRUCTION. AT THE LEFT IS THE ORNAMENTAL MEMBER WHICH SURROUNDS THE TRIANGULAR PANELS. A PHOTOGRAPH OF ONE OF WHICH IS SHOWN DIRECTLY BELOW. (From the detail drawing by Rambusch)

REPRODUCTION OF THE DETAIL DRAWING OF THE FIGURES IN THE CENTRAL TRIANGULAR PANELS OF THE BALDACHINO. THE STANDING FIGURE REPRESENTS OUR LORD THE GOOD SHEPHERD, AND AT EITHER SIDE ARE TWO KNEELING FIGURES, REPRESENTING ADORING ANGELS. THE FIGURES ARE HAMMERED IN BRONZE AND CUT OUT IN SILHOUETTE. (From the detail drawing by Rambusch)

THE TRIANGULAR CENTRAL PANEL ON EACH ELEVATION REPRESENTS OUR LORD THE GOOD SHEPHERD AND TWO ADORING ANGELS. THE FIGURES ARE HAMMERED IN BRONZE AND APPLIED TO THE WOOD BACKGROUND. THE DRAWING AND ALSO THE EXECUTION OF THE METAL FIGURES AND OTHER ORNAMENTS CALL AND ALLOW FOR A SHEET METAL TREATMENT WHICH IS VERY DIFFERENT IN EFFECT FROM CAST WORK.

ONE OF THE FIGURES OF ADORING ANGELS HAMMERED IN BRONZE READY FOR APPLICATION TO THE WOOD. THE FIGURE IS SHOWN HERE CUT AWAY FROM THE BRONZE BACKGROUND. THE HAMMERED BRONZE WORK IS OF A HAND DRIVEN REPOUSSE CHARACTER. IT IS INTERESTING TO NOTE THE SCALE OF THE DETAILS. ALL METAL HAS SCALE AND IT IS THE DUTY OF THE DESIGNER TO CONSIDER THAT SCALE.
THE BALDACCHINO AS SEEN FROM SISTERS’ CHAPEL, HOUSE OF THE GOOD SHEPHERD, TROY, N. Y.
MORGAN & MILLIMAN, ARCHITECTS—RAMBUSCH, DECORATORS

131
The process of hammering bronze into ornamental forms begins by tracing the design on the back of the sheet metal. With the sheet metal laid over a sand bag, the design is hammered up roughly. A prepared tar is then poured into the hammered surface, and the design is then worked up in detail from the front. The figure at the extreme left shows the design roughed in over the sand bag. In the center figure, the design is being finished over the tar. The figure at the extreme right shows the ornament cut away from the background, ready for application to the wood.

The frieze of the baldachino showing the ornamental fleur de lis, illustrated in process of development above, applied to the wood. There are certain limitations put on the design of hand hammered bronze ornament. It is due to these limitations that the distinction between hand wrought and cast ornament is drawn. It is further due to these limitations and a knowledge of them that hand hammered ornament possesses individuality. Ornament is rightfully an expression of individuality in terms of the material in which it takes form. In this case, interest is due to the fact that the bronze has been given a shape similar to that of a fleur de lis; not that the craftsman has accurately produced a fleur de lis in bronze.
THE NEW GENERAL MOTORS BUILDING, NEW YORK CITY

Shreve and Lamb, Architects

The new General Motors Building, occupying the block bounded by Broadway, 58th Street, Eighth Avenue and 57th Street, New York, which was completed ready for occupancy on May 1st of this year, is the result of an unusual combination of economic planning, engineering and architectural design on the part of the architects and engineers, and well organized and efficient handling by the contractors' organization.

The low building previously occupying the site was erected about five years ago and consisted of three stories and basement with a center court extending through the two upper stories. Most of the street floor and basement was under long-term lease to various motor car companies as sales and show rooms, while the upper floors were occupied and used as offices.

The steel columns and footings, however, were designed for 22 additional stories based on a plan which, above the third floor, took a "U" shape with the court opening to Eighth Avenue, and contemplated the construction of a theatre within the "U" at the base of the court. When the Broadway Motors Building Corporation secured the property, the theatre scheme was abandoned. The architects were confronted with the problem of planning 22 additional stories of offices with all the attendant utilities over an existing occupied structure, restricted by construction provided for the contemplated theatre and with the added handicap of tenants who might not be unreasonably disturbed by the new construction work.

A careful economic analysis showed conclusively that a "U" shaped plan would not yield in rentable area the percentage which should be developed on this site. The architects, therefore, recommended that the new structure be in the form of an "H," even though the change entailed the placing of twelve new columns, the reinforcement of eight existing columns, together with difficult and expensive shoring operations, and complicated founda-
Existing and New Ground Floor Plans Combined

tion work to support the new altered steel. The typical floor plan, with all the utilities in the center, illustrates the economy of the 'H' plan. Above the setback, which occurs at the 18th floor, the advantage and value of this type of plan are even more clearly demonstrated.

On the accompanying plan showing the new ground floor plan overlaying the old, it will be seen that in the new plan the existing elevators could be maintained until the new elevators were ready to operate. This made it possible to carry on the work and still leave all of the important tenants in possession of their space—a very important consideration, in view of the fact that it meant an uninterrupted income of $300,000 a year.

The plan of the existing ground floor indicates by cross-hatching the unoccupied areas used for contractors' working spaces. The engineering and construction problems were rendered more difficult because of the tenants. The used-car show rooms in the basement demanded the uninterrupted use of an automobile lift to the street floor. As the existing lift was required for construction purposes, a new temporary lift was installed in the space allotted to the new Broadway entrance. In several cases, column footings extending under occupied areas and under an automobile turntable required enlarging or replacing. The basement floor was shored and timbered, while the workmen drilled and excavated below. Wherever columns had to be replaced, or existing column footings enlarged, girders and beams had to be shored and supported throughout all stories. Structural alterations in tenanted areas were accomplished with minimum interference by constructing temporary wall board enclosures around columns as necessary. These enclosures were painted, prepared for erection, and set up at night so that at no time was the conduct of business hindered by workmen. As soon as the work required on any existing column was completed, the temporary enclosure was removed. It was essential that the interior be protected from roof water while alterations were in progress. Removable boxes covered with waterproof paper were built to fit over the column stubs projecting through the roof and over any small opening required in the existing roof.

Columns requiring strengthening were enclosed with reinforced concrete, after removal of the fire-
proofing, and the columns provided with new or increased footings. Where new columns were required, existing beam and girder connections were burned off and, after placing new columns, extended connections were provided.

While the shoring and reinforcing operations were proceeding, the new steel of the superstructure was being fabricated, based on a design accepting centers given on the old erection drawings, even though a careful checking and survey had shown that the location of existing columns varied considerably in some cases from the position fixed by the dimensions on the original drawings. This resulted in a displaced bearing for new columns at these points, which was overcome by a careful calculation of the area in bearing and the addition of sufficient plates to produce the required area, the full column load being developed through the splice plates and rivets without dependence on butt bearing of the members.

Lange and Noska were the consulting engineers on the steelwork. The efficiency of the builders' organization, the G. Richard Davis and Company, Inc., will be appreciated when it is stated that starting with a three-story structure in 1926, the finished structure, as shown, with a total rentable area of 550,000 square feet, was ready for occupancy on May 1, 1927, including many special features required by the General Motors Company, who leased the fourteen upper floors, comprising an area of 225,000 square feet. It is of special note, and to the credit of all concerned, that the finished structure was carried out precisely as shown by the first sketches of the architects, and completed in the required time and within the estimated cost. Close co-operation was responsible for this achievement.

What is presumed to have been an American offer to purchase another piece of Old London has been refused. Grosvenor House, formerly the residence of the Duke of Westminster, is being pulled down and its historic eighteenth century gates, which are described as "wonderful filigree work such as cannot be reproduced today," have been removed. A big offer for these valuable gates was made to the agents of the estate on the understanding that they were to be taken abroad; but the owner declines to permit them to leave England.
ROOF OF COLONNADE BUILDING SHOWING COURT OPENED FOR CONSTRUCTION. NOTE WATERPROOF BOXES OVER COLUMN STUBS TO PROTECT LOWER STORIES FROM THE WEATHER.

SHORING GIRDERS AND BEAMS IN BASEMENT TO PERMIT EXCAVATING FOR NEW FOOTING UNDER EXISTING COLUMN.
DETAIL OF NEW CONNECTION BETWEEN EXISTING BEAMS AND NEW COLUMN. EXISTING BEAMS WERE CUT OFF AND CHANNEL EXTENSION CONNECTIONS RIVETED ON EITHER SIDE

EXCAVATING FOR NEW FOOTING UNDER AN EXISTING COLUMN
STRENGTH OF EXISTING COLUMN INCREASED BY USE OF REINFORCED CONCRETE.
REINFORCING BARS IN POSITION; READY FOR FORMS AND CONCRETE.
GENERAL MOTORS BUILDING, NEW YORK—SHREVE AND LAMB, ARCHITECTS
March 10th, 1927.

American Brass Company,
Waterbury,
Conn.

Gentlemen:

Copper, brass and bronze are indispensable for many purposes in connection with building construction, and the scope of their use is widening continually. This is due not only to their durability but also to the important factor that now their moderate initial cost brings this quality of permanence to the modest home as well as to the great commercial structures.

The experts in all our departments appreciate the valuable qualities of copper, brass and bronze in connection with building construction and are constantly co-operating with architects and engineers to secure for our clients the great advantages to be derived from the use of these time- and weather-resisting materials.

Very truly yours,

Hugh White

President.
MUCH has happened since that August afternoon in 1826 when John Stevens built a wood fire in the odd-looking contrivance that was to startle the natives by traveling around two concentric circles of wooden rails that had been laid down upon his New Jersey lawn. Few of those present at the time appreciated what the steam train was ultimately to mean to America. They did not realize that very soon our legislatures would be besieged for railroad charters, and the crack of axe and pick would be heard all over our country slashing out rights of way for what was to be the greatest national transportation system in the world and the cornerstone of America's economic progress. Our railroad mileage would now belt the earth a dozen times, and, when we include the cost of equipment, we have here a total investment in rail transportation facilities of $25,000,000,000. Our expenditure for improved highways and motor vehicles exceeds that for railways, while one and one-fourth billion dollars have been spent for river and harbor improvements.

But notwithstanding our great progress in this vital field of transportation, the work has hardly more than commenced. Time is money, and delays in moving merchandise and people add materially to the cost of doing business. In 1921 and other years of depression, a lack of haulage facilities was always a contributing factor in the slowing down of industry. Probably one reason for the protracted continuance of our present period of prosperity is the fact that there has been no shortage of freight cars during the last four years.

But transportation in America must now undergo a revolution. The old order is now facing new and radical forms of competition. One has to do with moving the Atlantic Ocean into the heart of the North American continent. Our Great Lakes ports will become ocean ports, thereby removing the freight disadvantage which affects forty million Americans residing in what we call our midwest region. Farmers and manufacturers in this section learned long ago that it is ten times as expensive, ton for ton, and mile for mile, to move goods over the land as it is to move them over the ocean.

Since these folks could not go to the ocean, they decided to bring it to them, and this will largely overcome the handicap of America in competing for the world's grain markets. The important cities of Russia and the farming countries of South America are on the seacoast and the farms not far away. Here in the United States the grain-growing districts face a land haul of from 500 to 1500 miles, which has helped to reduce the buying power of the American farmer's dollar. With this situation corrected a new era will commence in all of our midcontinent States.

Then there is the serious problem of adequate, surfaced highways to permit the free movement of more than 25,000,000 self-propelled vehicles. If all the motor cars now in use in the United States were lined up one behind the other and given a spacing of 20 feet, these cars would cover a mileage greater than one-fourth of our 550,000 miles of improved highways of all types. We must now produce 3,000,000 automobiles a year in order to replace only those that are scrapped.

The amazing development of self-propelled passenger and freight vehicles over both long-haul and short-haul routes has created a necessity for highways and streets that will stand up under intense stresses the year round irrespective of heat, moisture and cold. We must have better brakes, better signal devices, better illumination and better vehicular control. Radical measures must be put into effect to conserve street space. Every Saturday night in several of our larger cities, there are over a thousand more automobiles than there were the Saturday before. It is literally true that when the traffic officer in South Chicago holds up his hand, the automobiles in the same line in Michigan City stop.

It is not enough merely to say that the remedy for our difficulty is more roads. What we must also understand is that yesterday's methods are obsolete. Instead of arresting people for going too fast, the principal offense will be for going too slow. Chief attention will be given to the enforcement of minimum speed laws. We must spend millions of dollars for double-deck thoroughfares with overhead or underground crossings for cross traffic.

Highway construction in a near day must provide for express, local and freight traffic. There will be at least three classes of roads: the primary, or arterial highways, and the secondary roads which will include feeder systems, and the local roads that take care of short-haul traffic. The primary highways will be wide enough to allow for three or four traffic lanes to pass at one time in both directions. The express service traveling at high speed probably will run on an elevated structure built above the main road.

These arteries of travel will be perfectly lighted for night traffic, have no grade crossings, be policed by stop and go signals, and have speed limits fixed at a minimum—not a maximum. Buses and trucks will be subjected to regulations as to rates and service as the railroads are now, and all vehicles will have to pay a fair tax for use of the highways.

All of which bears heavily on current practices in business and industry throughout the United States.
MUTE testimony of quality—when the Book Building was constructed, Carney Cement was used exclusively for the mortar. When the Tower was added, Carney Cement again had the distinction of being used exclusively.

THE CARNEY COMPANY
Cement Makers Since 1883

DISTRICT SALES OFFICES: CLEVELAND, CHICAGO, DETROIT, ST. LOUIS, MINNEAPOLIS

THE BOOK TOWER
Detroit, Michigan

Architect—LOUIS KAMPER
Contractor—STARRETT-DILKS COMPANY

Carney Cement was used
for all the brick and tile mortar in this project.

Specifications:
1 part Carney Cement to
3 or 4 parts sand depending upon quality of sand.

CARNEY CEMENT
for Brick and Tile Mortar

THE LAW AS TO ARCHITECTURE

By Clinton H. Blake, Jr., of the New York Bar

A YEAR or more ago I had occasion to discuss in these columns the situation with which architects are sometimes confronted in connection with bonds furnished by them for work performed for the federal government or for some one of the state governments. I referred at that time to a case in which a bond had been furnished for state and federal work and the work had then been delayed for a long period, but the architect had been forced to continue to carry the bond and the bond premiums. A very similar situation has come to my attention within the last few weeks, and emphasizes anew the injustice which an architect, wholly without his fault, may suffer in this way, if he is not careful with respect to the wording of the bond in the first instance.

The difficulty seems to be that in nearly every case bonds of this type provide that they shall be effective until the completion of the work, without any qualifying phrases. Where they are so worded, they have been interpreted to refer to the completion of the job itself, and not to the completion of the architect's work. The natural result is that, where the work is stopped for some reason and its completion is delayed, the bond under its terms still applies and the architect is not relieved of the bond liability pending the final completion of the job; but is forced to keep the bond alive, so as not to be guilty of a breach of his contract, and, in order to keep it alive, he of course is compelled to pay from year to year the premiums as they fall due. The result is a rank injustice to him, as the delay is not in any way his fault. He is not only held up under such circumstances in the payment of the balance of his fee falling due on the completion of the work, but is actually compelled to pay out substantial annual sums for bond premiums. In the case which has most recently been brought to my attention in this connection, it appears that the amount of these premiums will probably at least equal the amount of the compensation which the architect will receive for the work remaining to be completed.

It would seem that in any case, as a matter of plain equity, the client, whether it be the federal or state government in such case, or municipal governing body, should agree to some change in the bond or to its reduction or cancellation. Various rulings, however, have been made to the effect that such a proceeding is not proper and that the bond must remain in effect. If a test case were made, it seems to me that there might well be a chance that the courts would hold such a ruling unreasonable and untenable, in a case where the delay is not in any way the fault of the architect, but due wholly to the failure of the client to prosecute the work to completion. It is an exceptional case, however, in which it would be worth the while of the architect to get into litigation to determine the matter, and the result is that the architect will usually take his medicine and pay the premiums.

In order to meet this situation in advance and prevent being placed in such an unenviable position, the architect will be well advised if he provides in the bond and contract that the bond shall terminate on the completion of the architect's services, and that, if the job is not proceeded with and the completion either of the job or of the architect's services is delayed or made impossible by the work being held up without the fault of the architect, the bond shall terminate at that time or at the very least shall be reduced in amount to a sum sufficient only to cover the balance of the work remaining undone. If such a reduction be made in the amount, a substantially corresponding reduction, of course, in premium will follow. The provision for reducing the bond is not as safe, from the architect's point of view, as the provision that the bond shall terminate, if the work is delayed, as the delay might well take effect after a very small part of the work had been done. If the architect was only entitled to have the bond reduced proportionately, the reduction might not, under such circumstances, be sufficiently substantial to lighten materially the burden on the architect for bond premiums.

If the dealings were had with individuals, rather than with governmental bodies, there would be no difficulty in the ordinary case, and a proper adjustment could be made. Where an architect is dealing, however, with the federal government or a state or municipal government, he must bear constantly in mind the fact that such dealings are on a very different basis, as a practical matter, from dealings with individuals or private corporations; that there are various statutes and governmental red tape involved, and that, proverbially, dealings with governmental bodies are, as a rule, far less satisfactory than those had with private citizens. Anyone dealing with a government—municipal, state or federal—is at a decided disadvantage, and must exercise correspondingly greater care to see that the terms of his employment are properly covered and that everything is done which can be done to prevent him being placed in a false position and subjected to loss through no fault of his own.

LEGAL DECISION

A RESIDENT of a village died leaving a will which, among other things, provided that the village might construct a library building at a cost as nearly as practicable of $25,000, and that the cost thereof should be paid out of the testator's estate. The
Fifteen Dwellings Burn Every Hour! Every four minutes a fire breaks into some unprotected home. It costs so little and is worth so much to protect with plastering on Milcor Metal Lath that no building should be planned without this safeguard.

Five Schoolhouses Burn Every Day! Milcor Metal Lath and Milcor Metal Roofing protect thousands of buildings from such attacks.

Five Churches Burn Every Day! Not only does Milcor Metal Lath prevent, but it furnishes the ideal base for permanently beautiful, crackfree, unblemished ornamental, or textured, color-toned plastering.

One Hospital Burns Every Day! Consider this your solemn duty—to stop this frightful loss of life and property!

Six Department Stores Burn Every Day! Cracks and Dust Streaks bring further losses to thousands of others that escape fire’s plotting. Milcor methods and materials prevent such losses.

Fifteen Hotels Burn Every Day! And an average of 96 Farm Buildings, 4 Warehouses, and many other structures are daily victims of Fire, Cracks and Dust Streaks.

This gang plots destruction!

FIRE, Cracks, Dust Streaks—the gangsters, arch criminals, plotting constantly throughout the field of building construction! In their ruthless depredations they respect neither life nor property. Fifteen thousand persons killed—sixteen thousand injured—annually, in the United States, by FIRE! Five and a half millions of dollars in property laid waste last year, by FIRE!

Stop him! You know how. Specify plastering on Milcor Metal Lath and allied products. By insisting on this modern, firesafe construction you also curb Fire’s henchmen—Cracks and Dust Streaks. Both rob! And Cracks sometimes slugs and kills. The losses they bring through depreciation, unnecessary repairs and redecorating expense are tremendous. Stop them! You know how!

If you haven’t “The Milcor Manual” and “Modern Modes in Better Plastering” write for these valuable Books now. They will help you in your campaign for safer construction!

Also write for samples of Milcor Stay-Rib and Netmesh Metal Lath. Compare them with other types of metal lath. On comparisons we shall be glad to rest our case—you be the judge.

MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wis.
Chicago, III. Kansas City, Mo.
La Crosse, Wis. Boston, Mass.

MILCOR
METAL LATH for SAFETY

All Milcor Lath now available also in ARMCO Ingot Iron. Look for this metal tag on every bundle.
plaintiff, an architect, entered into a contract with the Village, whereby it was provided that he should prepare plans and specifications for the building and receive a stipulated percentage of the cost for his compensation in the ordinary way. Plans were prepared and accepted by the Village, and bids called for. When the bids were opened, it was found that the cost of the work would be very greatly in excess of the $25,000 limit provided for by the will. The architect claimed that the plans could be changed to reduce the cost within this limitation, and offered to make the necessary changes. The Village, however, refused to proceed further with this architect, and employed another architect to prepare plans, and erected the building in accordance with the plans prepared by the second architect.

The Village still refusing to make payment to the first architect for his services, he brought suit therefor. The Village claimed that the contract entered into with the plaintiff was invalidated because the cost of the building as he planned it would exceed the $25,000 limitation set forth in the will, that it had not used the plans and had received no benefit therefrom and that it therefore was not liable to the architect for any compensation to him. The architect claimed that, until bids were received, it was not possible to tell exactly how much the work would cost, and that he had properly performed his obligation when he prepared the plans and specifications and offered to make such changes in them as might be required to bring the actual cost within the amount of the limitation. The court held that the limitation as to cost being provided for in the will and the contract referring to the building specified in the will and the parties having knowledge of the provisions of the will, the cost limitation would be read into the contract between the architect and the Village and would be considered to be an enforceable term thereof, notwithstanding the fact that the contract itself did not in so many words provide for a $25,000 cost limitation. The court further held that the claim of the Village that the contract was invalidated because the bids received exceeded the $25,000 could not be upheld; that the architect, being ready to change the plans so as to bring the cost within the $25,000, was entitled to be employed as architect and as provided in the contract; that the Village could not defend its claim on the ground that it had not used the plans and had received no benefits therefrom; and that, having prepared the plans in good faith and been ready to make the necessary changes, he should be entitled to compensation for his services. The court says:

"It could not be accurately known until bids were received just what the cost of the improvement as planned would be. As council refused to deal further with the plaintiff, after he had prepared the plans and specifications, which the members of council, as trustees of such fund accepted, the village breached the contract. The maximum damage to plaintiff for the drawing of the plans and specifications would not exceed three per cent of the maximum amount stipulated for the improvement in such will. Insofar as the two per cent for supervising the construction of the building was concerned, as no building was erected, under these plans, and no supervision required, the damage would be merely nominal. There was no evidence presented showing any damage to plaintiff on account of failure to have supervision of erection of such building."

"One of the defenses set up in the answer was that the plans and specifications did not substantially comply with the provisions of Item 3 of the will. (The item of the will dealing with the erection of the library.) It is true that when bids were received it was found that the building as planned would be more expensive than contemplated, but that was an error which could have been corrected, had plaintiff been given an opportunity so to do. However, that does not invalidate this contract made with the village. The work on the plans had been done, and the village had agreed to and did accept them, thereby making a contract which was valid and binding as between the parties."
Cork Insulation on Steel Roof Decks

STEEL roof decks, like concrete and wood decks, when insulated with the proper thickness of Armstrong's Corkboard, are practically impervious to heat. The rooms under them can be kept many degrees cooler in summer, and in winter are heated more uniformly and with much less fuel. They will not "sweat."

Insulating with Armstrong's Corkboard requires no change in the specification for the laying of either the deck or the roofing. The corkboard is laid directly on the deck in asphalt or pitch, and since Armstrong's Corkboard is furnished in thicknesses from 1 to 6 inches, only one layer is required whatever the thickness specified. Thus the cost of labor and materials is reduced as compared with building up thin materials in multiple layers. The roofing is then laid on the corkboard in the regular way.

Armstrong's Corkboard is nonabsorbent. It does not buckle, or swell, nor will it open up at the joints. It is so light (less than a pound per board foot) that the weight factor is negligible. It is slow burning and fire retarding. It does not deteriorate—a firm, substantial base for roofing, and permanent insulation that retains its efficiency unimpaired.
The greatest volume of construction ever undertaken during the first six months of any year on record has been registered since the opening days of 1927, according to statistics compiled by the Associated General Contractors of America. Continuance of operations on a vigorous scale last month placed the total for the six-month period of this year four per cent above the figure established during the corresponding period of 1926 which held the previous record.

The June volume shows an eight per cent increase over operations carried on during May. If even a moderate increase is made during July, the supremacy of 1927 as the greatest building year on record will be extended for another month.

Strong indications that the present record-breaking pace will be maintained are found in the enormous amount of contracts for future construction work that recently have been awarded. The volume of awards made in May was greater than any recorded for that month in any previous year. The total of awards for the first five months of 1927 exceeds by five per cent the figure recorded for the corresponding period in 1926.

A scale which places the 1913 average at 100 as its basis shows the June volume of construction to have reached the 212 level. Index figures for the first five months of this year are: 129; 121; 135; 166; 197. Corresponding figures for the same months of 1926 are: 137; 117; 119; 151; 179. The index figure for volume of contracts awarded during May is 233. The May, 1926, mark was 227.

PERSONALS

Wallace H. Hubbert, architect, 808 French Bank Building, San Francisco, Cal., desires to receive manufacturers’ catalogs.

Smith, Moss & Mitschke, architects, have moved their offices from 1112 Union Trust Building to 916 Francis Palms Building, Detroit, Mich.

Harry W. Wachter, architect, Thomas D. Best, Horace W. Wachter have moved their offices from 420 Close Realty Building to 1220 Madison Avenue, Toledo, Ohio.

John M. Paul, architect, is now located at 8 Church Street, White Plains, N. Y., having moved from 185 Main Street, that city. Manufacturers are requested to send catalogs and samples.

C. Godfrey Poggi announces his association with William B. Bragdon under the firm name of C. Godfrey Poggi and William B. Bragdon, architects, 275 Morris Avenue, Elizabeth, N. J.

J. J. Schwarz, architect, has established offices for a general practice of architecture at the Garrick Building, 64 West Randolph Street, Chicago, Ill. Manufacturers’ samples and catalogs are desired.

The new firm of John J. Flad and Frank S. Moulton, architects, has opened offices at 300 American Exchange Bank Building, Madison, Wis. Manufacturers’ catalogs and samples are requested.

Sam Biderman, architect, 1203 Athletic Club Building, Dallas, Texas, has installed an A. I. A. filing system for manufacturers’ catalogs and would be pleased to receive catalogs with A. I. A. filing index printed on them.

Donald Omar Dunn, formerly of the firm of Walker & Weeks, architects, and Munroe Walker Copper, Jr., architect, have formed a partnership under the name of Dunn & Copper, architects, 4500 Euclid Avenue, Cleveland, Ohio.

Fred C. Medicus and John H. Samuels, architects, have formed a partnership for the practice of architecture under the firm name of Architectural Offices Fred C. Medicus-John H. Samuels, Ltd., 211 Chapel Place, Youngstown, Ohio.

Ludlow & Schwab and C. J. Palmgreen, associated architects, have moved their offices from the Chamber of Commerce Building to suite No. 504-505 McCance Block, 305 Seventh Avenue, Pittsburgh, Pa., where they will continue their general practice of architecture.

The architectural firm of Shilling & Eastman, Fairbanks Building, Springfield, Ohio, has been dissolved. W. K. Shilling has taken new offices at 903 Fairbanks Building; R. F. Eastman and Ernst Budke, Jr., have formed a partnership under the name of Eastman & Budke, architects, 926 Fairbanks Building, same city.
To help your client
Select the Color

The completed home stands as testimony to your ability—it adds or detracts from your reputation. From an architectural viewpoint it is an achievement. On the matter of color selection much depends. Either the general favorable impression will be enhanced or it will be marred.

The Pee Gee Color Selector precludes the possibility of poor judgment being exercised by your clients in the selection of colors.

Fifteen groups of colors each comprising a complete harmony are presented by simply turning the dial. The selection of colors is made quickly. The highest priced interior decorator could do no more.

Good paint is as essential as good colors. Since 1867—the Pee Gee trade mark on a can of paint has symbolized the finest quality—there is none better.

Peaslee-Gaulbert Company, Incorporated

For Kitchen Convenience and Efficiency

Delight your clients by providing for FRIGIDAIRE

In planning the new home, you will please your client by arranging to have Frigidaire in the kitchen—assuring the many advantages that have made Frigidaire the choice of the majority of users of electric refrigeration.

With Frigidaire, you need make no provision for outside ice supply—no sacrifices in the arrangement that permits the greatest convenience and highest efficiency.

And because Frigidaire eliminates the ice-box alcove, it saves time, labor and material in construction—it enlarges the floor area of the kitchen.

Practically any specification can be met with Frigidaire. There are self-contained models, compressor-in-basement types and Frigidaire direct cooling units that convert standard makes of ice-boxes into Frigidaires.

Mail the coupon today for helpful data in planning any building that calls for dependable, economical, permanent refrigeration service.

FRIGIDAIRE CORPORATION
Subsidiary of General Motors Corporation
Dept. Z-107, Dayton, Ohio

FRIGIDAIRE PRODUCT OF GENERAL MOTORS

FRIGIDAIRE CORPORATION, Dept. Z-107, Dayton, Ohio
Please send me "Information for Architects A. I. A. file 52D," and the Frigidaire Catalog.

Name.................................Address..............................

Ever Look at it This Way?

Quality in finishing lime is reflected in more than one way:
First, it saves labor costs. A journeyman is free and unhampered to give his utmost in speed and skill if he is using a finishing lime of the highest quality.

Second, the results cannot be hidden. Walls and ceilings stand out bold and bare to the critical scrutiny of all who have eyes. Imperfections are easily detected. Only lime of the highest quality makes perfect walls.

Third, a continuously successful manufacturing experience covering a period of over twenty-five years, plus the use of Blue Bag brands in some of the outstanding building projects of the country, are evidence of “quality from stone to finish.”

These facts are realized by the building fraternity—architects, contractors and owners quickly concluded that if a manufacturer was so sure of the superior and uniform quality of his lime that he gladly packed it in a distinctive and easily identified package, it was a safe brand to use.

Have you ever looked at it this way? There is a building supply dealer in your territory who handles a Blue Bag brand.

THE WOODVILLE LIME PRODUCTS COMPANY
TOLEDO, OHIO

A "Feature Convenience" in over 50 Homes in J. C. NICHOLS COMPANIES' Country Club District

WHEN J. C. Nichols Companies conceived the Country Club District, the goal was a residential community from which every unwholesome and injurious influence should be permanently excluded.

In no small way, the Kernerator has helped to fulfill this ideal. It is installed in over fifty homes and in many apartments in this world-renowned residential section of Kansas City, Mo.

Instead of foul smelling, ugly garbage cans and rubbish heaps, the Kernerator eliminates all household waste as fast as it accumulates.

Not only garbage, but tin cans, old papers, sweepings, broken dishes — every sort of trash — is dropped through the handy hopper door in or near the kitchen. Falling to the brick combustion chamber in the basement, it quickly air-dries. Lighted with a match, it burns of itself without fuel or operating cost. Tin cans and similar non-combustibles are flame sterilized for removal with the ashes.

Over 2500 architects and contractors use and recommend the Kernerator. Selected for Home Owners Institute Model Homes in 30 principal cities.

For additional information see Sweet's 21st edition, pages C3054-C3055. Or telephone your Kernerator representative. Offices in 89 cities.

KERNER INCINERATOR COMPANY
719 East Water Street
Milwaukee, Wisconsin

Did you get your copies of the Kernerator catalogs arranged in A.I.A. Folder for convenient filing?

KERNERATOR
THE CHIMNEY-FED INCINERATOR
"Garbage and Waste Disposal without Leaving the Kitchen"

FOLDER-WAY adds utility to public buildings

In BUILDINGS of a public character, where rooms must often do double duty, FoldeR-Way partition door hardware makes it possible to utilize floor space to a maximum advantage. Almost automatically, FoldeR-Way converts any number of small rooms into one for general gatherings, and as easily and quickly re-converts them for individual use. Doors fold out of the way—noiselessly and smoothly—all in one direction, to either side.

FoldeR-Way economizes in valuable space—important in these days of high land values. Write us for full particulars.

Richards-Wilcox Mfg. Co.

A Hanger for any Door that Slides.

New York • • • AURORA, ILLINOIS, U.S.A. • • • Chicago
Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
Montreal • RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. • Winnipeg

In this installation, doors fold to either side. Weight is carried by ball-bearing hangers running on overhead track.

Largest and most complete line of door hardware made.
REFERENCE LIST OF BUSINESS LITERATURE
A Service arranged for the use of the Architect, Specification Writer and Architect Engineer

THIS list of the more important business literature of Manufacturers of building material and equipment is arranged according to the Standard Construction Classification adopted by the American Institute of Architects. Each issue of this list contains a reference to the Standard Construction Classification. Any of these publications may be had without charge, unless otherwise noted, by applying to The American Architect, 239 West 59th Street, New York, or obtained directly from the manufacturers. Either the titles or the numbers may be used in ordering.

Arranged according to the Standard Construction Classification adopted by the American Institute of Architects.

1. PREPARATION OF SITE
2. EXCAVATION
3. MASONRY MATERIALS
- Concrete
- Brickwork
- Stone Work
- Architectural Terra Cotta
- Block Construction
4. PAVING
12. ROOFING, SHEET METAL AND SKYLIGHTS
13. METAL AND STEEL
- Miscellaneous Steel and Iron
- Ornamental Metal Work and Physical Properties of Materials
6. FIRE RESISTING DOORS, WINDOWS, AND TRIM
17. SPECIAL DOORS AND WINDOWS
18. VAULTS AND SAFE S
19. CARPENTRY
20. PERRING AND LATHING
21. PLASTERING
22. MARBLE AND SLATE

Concrete Steel Co., 42 Broadway, New York City.

1196. Hauser's Bar and Building Products. Complete description of various products made by this company for use in all types of reinforced concrete construction and fireproof buildings. Specifications for the use of these materials are included. An informative booklet for filing. 40 pp. Illustrated. Size, 8½ x 11 in.

International Cement Corporation, 342 Madison Ave., New York City.

1182. Concrete Date. Series of folders each folder devoted to a separate subject. Folders include data on sidewalks, foundations, mixing and gaging. Each folder 4 pp. Illustrated. Size, 9 x 11 in.

Mitchell-Tappen Company, 16 John St., New York, N. Y.

1183. Booklet 20 on Standardized Metal Casing. Description of various ways of reinforcing the concrete fireproofing on structural steel work, with particular reference to Standardized Metal Casing.


356. Concrete Floors—Proposed Standard Specifications of the American Concrete Institute. Specifications with explanatory notes covering covering materials, proportions, mixing and curing. Plain and reinforced slabs are covered as well as one and two course floors and wearing courses. 18 pp. Size, 6 x 9 in.

Concrete Data for Engineers and Architects. A valuable booklet containing the reports of the Structural Materials Research Laboratories at Lewis Institute, Chicago, in abbreviated form. It is of great value to writers of specifications. 18 pp. Illustrated. Size, 9½ x 11 in.

5. BRICK WORK

American Face Brick Association, 1754 Peoples Life Bldg., Chicago, Ill.

1154. Architectural Details in Brickwork. Series One, two and three. Each series consists of an indexed folder case to fit standard letter file, containing between 30 and 40 half-tone plates in fine quality paper. These collections are inspiring aids to all designers. Sent free to architects who apply on their office stationery; to others, 50 cents for each series. Size, 9 x 11 in.

1157. English Papers for Modern Brickwork. A book of plates and measured drawings of Tudor and Gothic brickwork, with a few recent variations of modern architect's brickwork of the kind of the old work. Price, 2 00. 100 pp. Illustrated. Size, 9 x 11 in.

1158. Brickwork in Italy. An attractive and useful volume on the history and use of brick in Italy from ancient to modern times. Profusely illustrated with 69 line drawings, 300 half-tone and 20 colored plates with a map of modern and XLI centuries Italy. Bound in linen. Sent postpaid upon receipt of $6.00. Half Moroco, $7.00, 299 pp. Size, 7½ x 10½ in.

1159. Industrial Buildings and Housing. The planning of the modern manufacturer's monument—his factory—is treated in detail. Suggestions are given for the interior arrangement, including restaurants and rest rooms. Price, 2 00. 112 pp. Illustrated. Size, 9 x 11 in.

Atlantic Terra Cotta Co., 19 West 44th St., New York City.

"Unusual problems faced in building the Grand Stand at Atlanta Baseball Park"

"The design of the Grand Stand at the Baseball Park used by the Atlanta team, in the Southern League, presented some rather unusual difficulties," said Mr. L. W. Robert, Jr., of Robert & Co., prominent Architects and Engineers, at Atlanta.

"Just take the roof, for example. It had to withstand summer heat and winter cold. It had to be waterproof and fireproof—cooler than the ordinary roof, too, and capable of withstanding the frequent impact of baseballs fouled to the roof of the stand.

"Obviously we had to devote a great deal of earnest attention to the problem. The construction of the stands, however, has proved eminently satisfactory."

A Carey Built-up Roof covers the stands at the Park of the Atlanta Baseball Club—a "season-proof," white-topped Asbestos Roof which deflects the rays of the sun and affords a cooler shelter for Atlanta's "fans." A fireproof roof, too—approved by the Underwriters' Laboratories with "Class A Label."

THE PHILIP CAREY COMPANY
Lockland, Cincinnati, Ohio

"A ROOF FOR EVERY BUILDING"
13. STRUCTURAL STEEL & IRON—Continued
Carnegie Steel Company, Pittsburgh, Pa.

15. ORNAMENTAL METAL WORK AND PHYSICAL STRUCTURAL STEEL & IRON—Continued
Portfolio containing indexed details of metal doors, trim, frames, partitions, elevator enclosures and metal laths and finishes prepared for use in the drafting room, together with general catalog, showing detailed photographs of executed work, partial list of installations and specification data. 160 pp. Illustrated. Size, 8^ x 11 in.

1171. Hollow Metal Doors and Trim. Catalog for general but limited distribution to practicing architects contains details of doors, trim, mouldings, partitions and enclosures, photographs of executed work, partial list of installations and specification data. 160 pp. Illustrated. Size, 8^ x 11 in.

Crittall Casement Window Co., Detroit, Mich.

1172. Crittall Universal Casement, Catalog No. 22. Contains complete description, photographs, specifications and details of steel casement windows for banks, schools, residences, churches, hospitals, set directly into masonry and with auxiliary frames. 76 pp. Illustrated. Size, 9 x 12 in.


Dahlsheim Metallic Door Co., Jamestown, N.Y.

1174. Architectural Catalog. Illustrated catalog showing styles and types of Dahlsheim Hollow Metal Doors and Trim. Conدوo-Base, etc. Also various types of frames, lamb construction and architectural shapes. 178 pp. Illustrated. Size, 8^ x 11 in. in looseleaf.

The General Fireproofing Building Products, Youngstown, Ohio.


1176. GF Steel Standard Casement Windows. 1926 edition, architectural details, sizes and specifications for standard steel casement windows that can be combined to fill Ill in any opening. Valuable information for the drafting room. A.I.A. File No. 16c. 16 pp. Illustrated. Size, 8^ x 11 in.

International Casement Co., Jamestown, N.Y.

1177. International Casements. Catalog No. 7. A complete catalog, including working details, hardware, screens, specifications and full illustrations of modern American installations as well as 16th Century Tudor and Jacobean residences in England. 224 pp. Illustrated. Size, 8^ x 11 in. Sent to practicing architects on request or when prices letterhead. Size, 8^ x 11 in.

1178. Casement Catalogs. Catalog No. 10. Steel casements with steel muntins or leaded lights in standard sizes and designs. Details of hardware, sash and suggested frame details. Schedule of standard sizes. Suggested specifications for use of the architect. 18 pp. Illustrated. Size, 8^ x 11 in.

Jamestown Metal Desk Co., Inc., Jamestown, N.Y.


The Knaure Company, Niles, Mich.


1181. Lupton Projected Sash. A. I. A. File No. 16d. Details and descriptions of standard steel sash units, projected type for offices, schools and commercial buildings. 24 pp. Illustrated. Size, 8^ x 11 in.


1182. The Domus Awnings Type Steel Window. A catalog con­taining details, specifications and complete description of the work­manship and advantages of the Truscon-built Donovan Awnings Type Window especially adapted for schools, hospitals and other buildings. 12 pp. Illustrated. Size, 8^ x 11 in.

The Knearl Manufacturing Company, Columbus, Ohio.


17. SPECIAL DOORS AND WINDOWS
Irving Hamlin, 1500 Lincoln St., Evanston, Ill.

1184. The Resonant Sound-Proof Door. Also The Hamlinized Folding partitions. A circular explaining the construction of a sound-proof door and folding partitions heretofore patented, and details of the fire door hangers, tracks and fixtures; also hinges, locks and accessories. Details, dimensions and installation diagrams. 98 pp. Illustrated. Size, 8^ x 11 in.

The United Metal Products Co., Canton, Ohio.


The Rivet-Grip Steel Co., 2730 Prospect Ave., Cleveland, Ohio.

765. The Rivet-Grip System of Bank Vault Reinforcement. This handbook explains the fundamentals of bank vault design and the steps in the production of lumber are briefly told in an interesting fashion. 6 pp. Illustrated. Size, 8½ x 11 in.

J. G. Wilson Co., 11 East 38th St., New York City.

766. Sebastian and Rolling Partitions. Hygienic School Wardrobes Catalog 27. This catalog illustrates the construction and details of the partitions and wire mesh partitions with plans for and photographs of installations. 40 pp. Illustrated. Size, 8½ x 11 in.

20. FURRING AND LATHING

The Rostick Steel Lath Company, Niles, Ohio.

1724. Rostick Economy. Booklet describes the advantages of metal lath, its application and uses for exteriors and interiors. Tables of standard sizes and weights of various types of lath and specifications are included. Accessories such as corner beads, base beads, "Invisible" picture molding and wall ties are also shown. 30 pp. Illustrated. Size, 7 x 9½ in.

Concrete Engineering Co., Omaha, Nebr.


Concrete Steel Co., 42 Broadway, New York City.

363. Precast Concrete. Booklets descriptive of materials and uses. Includes metal lath; furring channels; flats and angles; wallboard; copper steel basement windows; curb bars; steel tiles and metal lumber. Architects' specifications for application of all types of metal lath. 40 pp. Illustrated. Size, 8½ x 11 in.

Milwaukee Corrugating Co., Milwaukee, Wis.


Truscon Steel Company, Youngstown, Ohio.

314. Hy-Fi and Metal Cabinets. General data and illustrations of Hy-Fi and metal lath constructions. 6 pp. Illustrated. Size, 8½ x 11 in.

21. PLASTERING


Portland Cement Association, 33 West Grand Ave., Chicago, Ill.

1110. Portland Cement Slats and Panels. "Book for architects' files. Illustrating in color various stucco finishes with description; steps required to obtain these finishes are illustrated. Specifications for Portland cement stucco, recommendations for Portland cement stucco, notes on prepared stucco, color materials, overcoating and maintenance of Portland cement finishes and construction details. 94 illus. 140 pp. Illustrated. Size, 8½ x 11 in.

The Georgia Marble Co., Tate, Pickens Co., Ga., New York Office.

1285. Georgia Marble Co. Booklet. 34½ x 6 in. Gives analysis, physical qualities, comparison of absorption with granites, opinions of authorities, etc.

23. FLOOR AND WALL TILE, LINOLEUM AND ACCESSORIES

Armstrong Cork Company, Linoleum Division, Lancaster, Pa.

1194. Enduring Floors of Good Taste. Armstrong's linoleum for all types of buildings, description and illustrations in both black and white and in color. Information on how to choose linoleum, how to lay linoleum and proper care after laying. Typical patterns reproduced in color. 40 pp. Illustrated. Size, 6 x 9½ in.

1324. Armstrong's Linoleum Floors. Fifth Edition, March, 1927, completely revised. Linoleum gauges and weights, tests for judging the quality of linoleum, complete specifications, color plates and information on characteristic features of the material, notes on assembly of units, standard details and specifications and partial list of installations. 84 pp. Illustrated. Size, 8½ x 11 in.

The Georgia Marble Co., Tate, Pickens Co., Ga., New York Office.

1285. Georgia Marble Co. Booklet. 34½ x 6 in. Gives analysis, physical qualities, comparison of absorption with granites, opinions of authorities, etc.

23. FLOOR AND WALL TILE, LINOLEUM AND ACCESSORIES

22. MARBLE, SLATE AND STRUCTURAL GLASS

Alberene Stone Co., 150 West 21st St., New York, N. Y.

1270. Alberene Stone Tile Partition. Shower compartments and wall surfaces for use as floor treads, doors, paneling, windows, accent pieces, fireplace surrounds, mantels, stair wainscoting, and other interior and exterior uses. 94 pp. Illustrated. Size, 8½ x 11 in.

The Georgia Marble Co., Tate, Pickens Co., Ga., New York Office.

1285. Georgia Marble Co. Booklet. 34½ x 6 in. Gives analysis, physical qualities, comparison of absorption with granites, opinions of authorities, etc.

23. FLOOR AND WALL TILE, LINOLEUM AND ACCESSORIES

Western Pine Manufacturers Association, Portland, Ore.

1206. Stories of Flushed—A dog's story of the making of the Pines, a narrative that gives the reader a comprehensive idea of the forest. Pine from forest to finished lumber: 6 pp. 34½ x 6 in.

J. G. Wilson Co., 11 East 38th St., New York City.

766. Sebastian and Rolling Partitions. Hygienic School Wardrobes Catalog 27. This catalog illustrates the construction and details of the partitions and wire mesh partitions with plans for and photographs of installations. 40 pp. Illustrated. Size, 8½ x 11 in.
REFERENCE LIST OF BUSINESS LITERATURE—Continued

23. FLOOR AND WALL TILE, LINOLEUM AND ACCESSORIES—Continued

1159. Battellec Linoleum. Explains the advantages and uses of this durable, economical material.

1160. Decorated Cork Composition Tile. Complete information on cork-composition tile and the many artistic effects possible with it.

1161. Decorated Cork Composition Tile. Shows a variety of colors and patterns of this adaptable cork composition flooring.

1162. Cork Composition Tile. Description and color plates of this super-quiet, resilient floor.

1163. Practical Working Specifications for installing battelinc linoleum, cork composition tile and cork tile.

Stedman Products Co., South Braintree, Mass.

Zenith Company, Inc., Newark, N. J.
1282. Zenith Floors. Booklet describes and illustrates the use of Zenith Floors as a flooring material for a variety of types of buildings. The qualities and properties of Zenith are set forth in the text. Zenith is a material suitable for interior or exterior use. Data on colors and standard sizes, and a partial list of architects who have specified Zenith are included. 16 pp. Illustrated. Size, 9 x 12 in. 25¢.

1283. Zenith Walls. Booklet giving a comprehensive idea of the outstanding qualities of Zenith as a building material, particularly for use as a wall covering in schools, offices, and public buildings. All other data are included. Partial list of installations are included. A. L. A. File No. 239g2. 22 pp. Illustrated. Size, 8 x 11 in.

21. PLASTIC FLOORS

F. E. Baker & M. A. Baker, Inc., Warwick, III.

Thomas Moulding Brick Co., 130 West Washington St., Chicago.
1277. Floors of Permanence and Beauty at Low Cost. Folder descriptive of Mouldings "Moulstone". Flooring for residence, office buildings, schools, hospitals and other buildings. 4 pp. Illustrated. Size, 8 x 11 in. 25¢.

PAINT, PAINTING AND FINISHING

Craftex Co., 37-39 Antwerp St., Brimmond Station, Boston, Mass.
1323. Do You Belong in the New-Grow-Olds. Booklet illustrated in color with an outline history of wall textures and decoration. The physical make-up of Craftex is stated and a partial list of installations are included. 24 pp. Illustrated. Size, 8 x 11 in. 75¢.


1328. Craftex Textures and Ceiling Finishes. Data sheets of full size details of "Craftex" awning transom sliding and folding partitions door hardware. Catalog No. 40. 32 pp. Illustrated. Size. 8 x 11 in.


1331. Craftex Textures and Ceiling Finishes. Catalog No. 41. This catalog describes a new line of hollow metal saah and profile of membera. Size. 16 x 21 in.


24. GLASS AND GLAZING

1326. Window Glazing in the Making by William L. More. The story of a glass from its origin and composition to its manufacture and use. 400 pp. 25¢. Also overhead trolley equipment. 24 pp. Illustrated. Size, 8 x 11 in.


The Kowner Company, Niles, Mich.


25. MATERIALS FOR CONSTRUCTION

Big Door Hardware Catalog No. 40. This catalog describes a new line of hollow metal saah and profile of membera. Size. 16 x 21 in.

26. HARDWARE

F. P. & C. Corbin, New Britain, Conn.
1105. Early English and Colonial Hardware. Reproductions of historic originals and designs based upon wrought-iron hardware precedent, made in rustless metal reproducing the surface and color of the wrought iron originals. Latches, knobs, handles, knockers, hinges, key plates and other articles for doors, windows, shutters and other hardware, revised to conform with products now being manufactured. Certain articles have been eliminated and other new ones have been added. This is a valuable hardware reference book. 486 pp. Illustrated. Bound in board covers. Size, 8 x 11 in.

1097. Special Purpose Hinges, Catalog No. 42. Devoted exclusively to special purpose hinges for every purpose. Hinge problems solved by Engineering Department, catalog sent on request. 26 pp. Illustrated. Size, 8 x 11 in.

325. Big Door Hardware Catalog No. 41. This catalog describes a complete line of hardware for partition doors hung without rails, also overhead trolley equipment. Also overhead trolley equipment. 24 pp. Illustrated. Size, 8 x 11 in.

1010. Sliding and Folding Partition Door Hardware. Catalog No. 40. A complete line of hardware for partition doors of all kinds and for all places. Descriptions, specifications, all details and directions for ordering. 32 pp. Illustrated. Size, 8 x 11 in.
Phenix Company, 500 Fourth Avenue, New York City.


Reading Iron Co., Reading, Pa.


Sheffield Pipe Association, Brown-Marc spindle, Birmingham, Ala.

137. Avoid Hidden Danger. Description of the equipment of accidental purposes in all types of buildings. A chapter on the correction of metal to metal is included. 16 pp. Illustrated. Size, 8 1/2 x 11 in.

The Whittlock Pipe Co., Hartford, Conn.

146. A looseleaf folder of water storage tanks, preheaters, water treatment, details and sales manual. 16 pp. Illustrated. Size, 8 1/2 x 11 in. Bulletins, leaflet, details and data water heaters and fuel oil heaters. 32 pp. Illustrated. Size, 8 1/2 x 11 in.

Zahn Manufacturing Co., Kansas City, Mo.

1323. For Better Homes—Metal Sinks—Shower Doors. Booklet illustrates, describes and gives dimensions and waste pipe sinks, various types of different pipe and capabilities. 12 pp. Illustrated. Size, 8 1/2 x 11 in.

20. HEATING AND VENTILATING

American Gas Products Corp., 376 Lafayette St., New York City

1371. New Guide To Oil Heat for Homes. A non-technical compilation of information and data on the subject of oil heating for homes. A practical guide to oil heat including advantages, cost estimates and principles upon which oil for home heating is based. 22 pp. Illustrated. Size, 8 1/2 x 11 in.


American Boiler Co., New York City.

477. Ideal-Arcos Heating Outfit. A book describing a system of hot water heating for small and medium size houses. The boiler is in the stove. A new type of oil central heating for a stovetop. No cellar required. The ash carrying reduced to a minimum. 24 pp. Illustrated. Size, 8 1/2 x 11 in.

Buckeye Boiler Co., Columbus, Ohio.


Buffalo Forge Company, 690 Broadway, Buffalo, N. Y.

971. Steam Heating Outfit for Houses. An engineering handbook in three parts: Physical properties of air, heat and humidity; air movement for heating; and table of heating capacities of air washing and humidifying equipment. A valuable booklet for compiling and reference. 54 pp. Illustrated. Size, 8 1/2 x 11 in.

Burnwell Boiler Corp., S. W. 8th Ave., Cleveland, Ohio.

989. Letters To and Fro. A booklet which explains the difference between steam, hot water and forced air systems of heating and cooling, relative advantages of each. Questions, answers and boiler data. 34 pp. Illustrated. Size, 7 x 10 in.


1329. Special Copper Boiler installations of 2,000 gallons or larger. Pressure tested, beehive Lake copper. Also expansion joints. 4 pp. Illustrated. Size, 6 x 9 1/2 in.

The Duriron Company, Dayton, Ohio.


Electrol, Inc., of Missouri, St. Louis, Mo.

1324. Heat, How and When You Want It. Oil heating with the Electro. Booklet illustrating and describing the Electro oil burner for use in residences, public buildings, commercial and industrial buildings. Partial list of installations of electro is given. Specifications of the equipment are included. 20 pp. Illustrated. Size, 6 x 9 in.

The Frost Manufacturing Co., Galesburg, Ill.

1143. Ross Steel Boilers, Catalog 64. Describes Ross steel boilers for steam or hot water heating, complete with specifications. Dimensions and data for boilers of steam ratings from 400 to 27,000 sq. ft. or hot water, 4,000 to 12,200 square feet. 16 pp. Illustrated. Size, 9 x 5 in.

1144. Frost Boiler, Catalog No. 172. Illustrates and describes frost radiant boiler for 100 and 150 pounds working pressure. Details, measurements and tables of material specifications required for setting. 32 pp. Illustrated. Size, 8 1/2 x 11 in.

General Electric Co., Schenectady, N. Y.


Griffin & Googheam, 565 West Broadway, New York City.

1608. The G & G Thermostatic Heat. A catalog containing specifications in two forms: (1) using manufacturer's name, and (2) without using manufacturer's name. Forth and adaptations for use in all types of buildings. A chapter on the correc­tion of metal to metal is included. 16 pp. Illustrated. Size, 8 1/2 x 11 in.

Hardinge Brothers, Inc., 4149 Eauavon Road, Chicago, Ill.

1358. Hardinge Fuel Oil Burner: From Baldwin to Skyscraper. Booklet illustrating and describing the Hardinge fuel oil burner, including the history of Hardinge and advantages of this burner. For domestic and industrial heating plants. 20 pp. Illustrated. Size, 8 1/2 x 11 1/4 in.


1623. Wrought Grille, Folds, and Ventilation. Booklet containing examples of the best methods of installing grilles under conditions most commonly encountered. Details and specifications. 6 pp. Illustrated. Size, 8 1/2 x 11 in.

Hoggs Simplex Boiler Co., Joliet, Ill.


Heat Warming and Ventilating Co., 1307-1229 South Western Ave., Chicago, Ill.


Illinois Engineering Co., 21st St., Racine Ave., Chicago, Ill.


Jenius Bros., 80 White Street, New York.


30. HEATING AND VENTILATING—Continued
Johnson Service Company, 149 Michigan St., Milwaukee, Wis.
3149. Mention of apparatus, engineers, etc. under this heading has been
limited to those manufacturers and dealers who manufacture or deal in
equipment and apparatus for heating, ventilating, air-conditioning, and
related services, and to those who manufacture, sell, or distribute
specialties or accessories which are not parts of household or
building heating equipment. This list is not intended to be complete.

31. ELECTRICAL WORK
Frank Adam Electric Co., St. Louis, Mo.
3128. The Control of Lighting in Theaters. A book describing means
for automatically maintaining uniform temperature. 63 pp. Illustrated.
Size, 9 1/4 x 11 in.

32. REFERENCE LIST OF BUSINESS LITERATURE—Continued
Johnston Electric Thermostat, Valves and Controllers. A
description of devices mentioned in the title. 26 pp. Illustrated. Size, 6 x 9 in.

Kewanee Boiler Co., Kewanee, Ill.
3840. Kewanee Boilers. Catalog No. 78, Firebox Boilers; Catalog No. 79,
Power Boilers; Kewanee Boilers in Omaha Schools. Complete
details, prices, and copy of specifications and accessories. 32, 36 and 16
Illustrated. Size, 6 x 9 in.

Kewanee Radiator and Equipment. Catalog No. 77, Radiators
Catalog 73, Water Heating Garbage Burners. Tobacco Water
Heaters and Tubs of all kinds. Selecting the Heating Boiler. Complete
details, dimensions, setting diagrams. Designing data and
specifications. 24, 30 and 16 pp. Illustrated. size, 6 x 9 in.

Kewanee Boiler Co., Kewanee, Ill.
3840. Kewanee Boilers. Catalog No. 78, Firebox Boilers; Catalog No. 79,
Power Boilers; Kewanee Boilers in Omaha Schools. Complete
details, prices, and copy of specifications and accessories. 32, 36 and 16
Illustrated. Size, 6 x 9 in.

Kewanee Radiator and Equipment. Catalog No. 77, Radiators
Catalog 73, Water Heating Garbage Burners. Tobacco Water
Heaters and Tubs of all kinds. Selecting the Heating Boiler. Complete
details, dimensions, setting diagrams. Designing data and
specifications. 24, 30 and 16 pp. Illustrated. size, 6 x 9 in.

Modine Manufacturing Co., Racine, Wis.
3148. Thermodynamic Unit Heater. Catalog No. 137 contains complete
description of standard, dimensions, designs, weighing arrangement,
capacities, and architectural and engineering data on the
Thermodynamic Unit Heater. 24 pp. Illustrated. Size 8 1/2 x 11 in.

The Herman Nelson Corporation (formerly Molin Heat), Moline,
Ill.
3111. Unibred Ventilation: Architects' and Engineers' Edition. A scientific treatise on ventilation for schools, offices and similar
buildings. 320 pp. Illustrated. Size, 8 1/2 x 11 in.

The Herman Nelson Corporation (formerly Molin Heat), Moline,
Ill.
3111. Unibred Ventilation: Architects' and Engineers' Edition. A scientific treatise on ventilation for schools, offices and similar
buildings. 320 pp. Illustrated. Size, 8 1/2 x 11 in.

New York Blower Co., 2208 South Halsted St., Chicago, Ill.
3112. Comet Unit-Heaters. Bulletin No. 85. Folder contains general
description, dimensions, general data and capacities of Comet
Unit-Heaters. 4 pp. Illustrated. Size, 8 1/2 x 11 in.

Pacific Steel Boiler Corp. of Illinois, Waukegan, Ill.
Descriptive Illustration of Pacific Steam Residences Boilers; and DD-20 Pacific
Down Draft Boilers.

Peerless Unit Ventilation Co., Inc., Skillman Ave., and Hule St.,
Newark, N. J.
3145. Peerless Ventilation and Heating Unite. Booklet descriptive
of Peerless Unit Ventilating units, mechanical features and advantages.
Directions for laying out unit systems, complete engineering data and details of standard units. 62 pp. Illustrated. Size, 8 1/2 x 10 1/2 in.

Peerless Unit Ventilation Co., Inc., Skillman Ave., and Hule St.,
Newark, N. J.
3145. Peerless Ventilation and Heating Unite. Booklet descriptive
of Peerless Unit Ventilating units, mechanical features and advantages.
Directions for laying out unit systems, complete engineering data and details of standard units. 62 pp. Illustrated. Size, 8 1/2 x 10 1/2 in.

Pennsylvania Steel Company, Chicora, Pa.
3153. Peerless Industrial Unit Heaters for Factories, mills, garages and
other buildings. Catalog containing descriptive particulars, dimensions
and copy of guarantee Bond are included. 20 pp. Illustrated. Size, 8 1/2 x 11 in.

Richardson & Boynton Co., New York, N. Y., Chicago, Ill.,
3190. The Richardson Vapor Vapor-Pressure Heating System.
An interesting book which presents in clear non-technical language
the principles of Vapor-Vapor-Pressure heating; the economy
over ordinary steam heating, steam and hot water systems may be
stated to use the principle with views of buildings where the V-V-P
system is installed. 44 pp. Illustrated. Size, 8 1/2 x 11 in.

Rome Brass Radiator Corporation, 1 E. 424 St., New York City.
3167. The Robax 20-20. Booklet describes the development and
construction of the Robax 20-20 brass radiator. 12 pp. Illustrat-
ed.

3184. Multivane Fans. Catalog No. 271, A-LA File No. 30-31:
Catalog No. 272, A-LA File No. 30-32: Catalog No. 273, National Board
File No. 30-33: Catalog No. 274, National Board File No. 30-34.

Silencerama Fans. Catalog No. 290. Illustrates and describes
fan equipment for quiet distribution of air in its various forms and
applications, A-LA File No. 30-41. 92 pp. Illustrated. Size, 8 1/2 x 11 in.

REFERENCES LIST OF BUSINESS LITERATURE

31. ELECTRICAL WORK—Continued

The Electric Furnace Mfg. Co., St. Louis, Mo.

1184. Cash Lighting Equipment. Catalog No. 15, in either bound or loose leaf form, illustrating lighting fixtures suitable for public buildings, hotels, banks, schools, residences, etc. A. I. A. File No. 317123. 96 pp. Illustrated. Size, 8 3/4 x 11 in.


Harvey Embbell, Inc., Bridgeport, Conn.


1401. Hubbard Flush Door Receivers. Description of a safe, convenient and practical wall closet for fine residences, clubs, hotels, public buildings and offices. 4 pp. Illustrated. Size, 8 3/4 x 11 in.

Kline Bros., 321 West 55th Street, New York City.

1084. Kline Theatrical, Decorative and Spectacular Lighting. Catalog No. 10. Description of complete line of lighting specialties and lighting effects for stages, etc. Catalog includes stage equipment, stage platforms, stage lights, fixtures, stage electrical equipment and other special lighting apparatus. 128 pp. Illustrated. Size, 7 3/4 x 10 1/2 in.

The Lincoln Electric Co., Dept. 11-11, Cleveland, Ohio.

1126. Lincoln Motors. Two booklets: (a) motors for electric elevators; (b) motors and their construction—(a) 2 pp., (b) 26 pp. Illustrated. Size, 8 1/2 x 11 in.


1104. Show Window Lighting. A. I. A. File No. 31 17. A booklet illustrating and describing various types of reflectors, conduit, spot lights, flood lights, and color lights used for show windows. Book contains valuable technical data and details of space required for proper installation. 28 pp. Illustrated. Size, 8 3/4 x 11 in.


304. Inter-Communicating Telephone System. Bulletin No. 1017 A, pamphlet giving just the information required for the installation of intercommunicating systems from 2 to 322 stations capacity. 13 pp. Illustrated. Size, 7 3/4 x 10 in.

Youngstown Sheet and Tube Co., Youngstown, Ohio.

1817. Electrical Conduct. Circular giving complete data about Buckeye Road Conduct and Maxi Flex Steel Armored Cable with specifications. 6 pp. Illustrated. Size, 8 3/4 x 11 in.

32. REFRIGERATION

Baker Ice Machine Co., Inc., Omaha, Neb.

661. Baker System Refrigeration. A catalog explaining the application of refrigeration for hotels, hospitals, institutions and res­

2126. Icyjman Automatic Refrigeration. A series of folders setting forth the advantages of the use of Lipman machines for automatic refrigeration as applied to various uses, such as restaurants, hotels, commercial, florist shops, dairy's, etc. Each folder 4 pp. Ill. Size, 8 3/4 x 11 in.

Jamison Cold Storage Door Co., Hagerstown, Md.

1321. Cooler and Freezer Equipment, Refrigerator Rooms and Automatic Ice Chutes. Catalog No. 13. Complete description and information on cold room products, such as standard cooler and sharp freezer doors, fireproof cooler and freezer sliding cold storage doors, vertical sliding cold storage doors, cold storage windows, refrigerator rooms, cap piping ventilators, and automatic ice chutes. 70 pp. Illustrated. Size, 8 3/4 x 11 in.

The New York Refrigerator Company, 27 Chandler Street, Buffalo, N. Y.

635. Manual of Refrigerators. This manual completely describes the construction of refrigerators for use in hotels, clubs, hospitals, institutions and residences, with specifications. Numerous plans showing size and arrangement of refrigerators in kitchens, service and lunch rooms are included. 30 pp. Illustrated. Size, 8 3/4 x 11 in.

L. Mundet & Son, Inc., 461 Eighth Ave., New York City.


The Servel Corporation, 51 East 42 St., New York City.

1290. Frigidaire. Catalog 742. A brochure explaining the appli­

1276. Servel Electric Refrigerator for Household Use. Architec­


The ABC of Refrigeration. A pamphlet giving just the information required for the installation of hand power dumb waiters and elevators for all purposes. Interlocking door controllers, bar locks and accessories. 56 pp. Illustrated. Size, 8 3/4 x 11 in.


Otis Elevator Co., 260 Eleventh Ave., New York City.

651. Otis Gearless and Gearless Traction Elevators. Leaflets describing all types of geared and gearless traction elevators for stores, factories, warehouses, buildings, hotels, offices, clubs and restaurants. 6 pp. Illustrated. Size, 8 3/4 x 11 in.

Otis Elevator Co., 260 Eleventh Ave., New York City.

795. "Icyman" Elevator Door Hardware. Catalog No. 37. A catalog showing hangers for every type of elevator door hand operated, interlocking door controllers, bar locks and accessories. 56 pp. Illustrated. Size, 8 3/4 x 11 in.

Sedgwick Machine Works, 159 West 15th St., New York City.

1736. "Icyman" Dumb Waiters and Elevators. Catalog P contains valuable information, standard sizes, installation details and other data on hand power dumb waiters, fuel and log lifts, freight elevators, invalid elevators, automobile elevators and sidewalk elevators. Experience of nearly 35 years in the design, manufacture and installation of hand power dumb waiters and elevators for all purposes has been drawn up in the compilation of this catalog. 32 pp. Illustrated. Size, 8 3/4 x 11 in.

A. B. See Electric Elevator Co., 52 Vesey St., New York City.

159. Photographs and description in detail of elevator equipment manufactured by the A. B. See Electric Elevator Co. Size, 6 x 9 in.

34. POWER PLANT

Delco Light Co., Dayton, Ohio.

1218. Cooling Your Drinking Water Supply with Frigidaire. Descrip­

1319. A. B. See Electric Elevator Co., 52 Vesey St., New York City.

35. EQUIPMENT STATIONARY

American Store Co., St. Louis, Mo.

1858. Handbook on Gas Ranges for Architects and Builders. A practical book of data on gas ranges and pipe sizes for the fll of the architect and specifi­

35. EQUIPMENT, STATIONARY—Continued

Champion Dish Washing Machine Co., 15th and Bloomfield St., Chicago, Ill.

1178. Safe Road to Increase Profits. Illustrated catalog which points out proven ways in which hotels can save through the use of economy equipment. Specifications for each Champion model are given. Price covers delivery. Illustrations are also available. 36 pp. Illustrated. Size, 7 x 10 in.


National Store Co., Division of American Store Co., Clevelaud, Ohio.


583. Deagan Piano Chimes. Describing the important features of Deagan Piano Chimes and including information concerning the space requirements and construction required for installing chimes in towers and belfies. 8 pp. Size, 8 1/2 x 11 in.


1161. Kitchen Equipment for Hotels and Institutions. Several catalogs covering a line of cooking apparatus.


582. Perfect Service-Quick Service Pneumatic Tube Systems. A circular explaining the advantages of pneumatic tube systems for department stores, hospitals, hotels, banks, and industrial plants. Illustrations of installations and details. 12 pp. Illustrated. Size, 4 1/2 x 11 in.

Kerr Insulator Incorporated, 641 E. Water St., Milwaukee, Wis.

1291. Insulators (Chimney-fed). Catalog No. 19. (Architects' and Builders' Insulators. Specifications and Design of Kerrator chimney fed Insulators for residences, apartments, hospitals, schools, apartments, churches, and other buildings. Shows all standard models and gives general information and working data. 16 pp. Illustrated. Size, 8 1/2 x 11 in.

1296. Insulation Catalog and House and Household Waste. Folder contains complete information on the Kerrator for residence and institutional use. 8 pp. Illustrated. Size, 8 1/2 x 11 in.

Richardson & Boynton Co., New York, N. Y., Chicago, Ill.

1520. Spencer Central Cleaning System. Vacuum cleaning apparatus for all purposes. Booklet completely describes the Spencer System of vacuum cleaning. A large number of buildings using this system are illustrated. 37 pp. Illustrated. Size, 8 1/2 x 11 in.

1468. Felt and Boiler Coverings. Catalog 1362. A catalog and manual of boiler and pipe coverings, cements, etc. Contains a number of valuable diagrams and tables. 71 pp. Illustrated. Size, 8 1/2 x 11 in.

1452. Furnace, Cook and Range, Metal Co., 141 Mill St., Boston, Mass.

430. Heat Insulation. A treatise on the methods of securing insulation for various kinds of buildings and conditions by using different insulating materials. 26 pp. Illustrated. Size, 7 1/2 x 10 1/2 in.

The Philip Carey Co., Lockland, Cincinnati, Ohio.

574. coal and Boiler Coverings. Catalog 1389. A catalog and manual of pipe and boiler coverings, cements, etc. Contains a number of valuable diagrams and tables. 71 pp. Illustrated. Size, 8 1/2 x 11 in.

The Insullite Co., Builders Exchange Building, Minneapolis, Minn.

1166. The Insulation of Roofs with Insullite. Containing a complete chart for the calculation of the saving in coal and cost resulting from the insulation of any type roof. In standard A. I. A. folder. Size, 8 1/2 x 11 in.

1811. Preventing Condensation. A folder describing methods in the prevention of condensation and a chart from which the necessary insulations may be calculated. In standard A. I. A. folder. Size, 8 1/2 x 11 in.

18. LANDSCAPE.


1273. Dahoe-Wood Fence. Made in an endless variety of styles. This booklet describes the size, construction and erection of woven wood fences. A list of installations with specifications and costs is included. The use of these fences are well shown by a series of plates. 8 pp. 10 plates. Price. Size, 5 1/2 x 8 1/2 in.

39. ACOUSTICS


National Building Units Corporation, 1600 Arch St., Philadelphia, Pa.

1296. Sound Absorption of Cinder Concrete Building Units. Bulletin No. 1, 'Techniques of sound and noise reduction.' This booklet contains investigations conducted by the University of Toronto and the Detroit Testing Laboratory on the sound absorption of cinder concrete building units and other materials. 8 pp. Illustrated. Size, 8 1/2 x 11 in.

40. REGULATIONS

I PLANS AND DESIGNS

American Design Brick Association, 1754 People's Life Bldg., Chicago, Ill.


The American Pin Company, Waterbury, Conn.

965. American Renderers. A series illustrating the work of American Renderers showing how two are issued. A monthly publication free to architects. Each 4 pp. Illustrated. Size, 9 x 12 in.

The Long Lumber Co., K. A. Long Building, Kansas City, Mo.

1126. The Book of Lawn Furniture. Catalogue containing specifications for all lawn and garden furniture. Sent free to architects who apply on the company letterhead. Size, 8 1/2 x 11 in. 10 cents a copy. 36 pp. Illustrated. Size, 6 1/2 x 9 1/2 in.

Ramp Buildings Corporation, 21 East 40th St., New York City.


1922. Garage Design Data. Service bulletin to architects containing garage design data. Ask for preceding bulletin. 2 pp. Illustrated. Size, 8 1/2 x 11 in.

Truscan Steel Company, Youngstown, Ohio.

628. Duplicating and Drafting Data. Illustrated directory containing blue prints of various steel doors and windows, and waterproof products. Contains also a number of pages of useful formulas and tables for hydraulic computation. 50 pp. Illustrated. Size, 8 x 10 inches.

II GENERAL CATALOGS

American Lead Pencil Co., 220 Fifth Ave., New York City.

260. Books, Catalogs, Vive Pencil in Mechanical Drafting. And interesting illustrated booklet showing the possibilities of the Venus Pencil for drafting. Size, 6 x 9 in.

H. W.Carrier Co., 157 East 40th St., New York City.

775. Fireplace Fittings in Iron and Brass. A catalog of andirons, fire sets, fire screens, fireclay, mantels, wood burners, with oak basket, hearth boards, grates, candlesticks, lanterns and other accessories made in iron and brass. 36 pp. Illustrated. Size, 5 1/2 x 8 1/2 in.

Joseph Dixon Crucible Company, Pencil Department, Jersey City, N. J.

325. Finding Your Pencil. A book explaining the various degrees of hardness of the Eldorado pencil and the grade most suitable for every man, who uses a pencil, be he business or professional man, clerk or draftsman. Accompanied by a color chart of Dixon colored crayons. 16 pp. and 4 1/2 pp. in color. Illustrated. In colors. Size, 3 1/2 x 5 in.

The General Fireproofing Building Products, Youngstown, Ohio.


Truscan Steel Co., Youngstown, Ohio.

318. Truscan Building Products. Form D-376. Contains a brief description of each of the Truscan Products. 112 pp. Illustrated. Size, 8 1/2 x 11 in.

A. Wyckoff & Sons Co., Elmirah, N. Y.

397. Wyckoff Wood Pipe. Catalog No. 42. A description of machine-made wood pipe and Wyckoff's express steam pipe makin. Contains also a number of pages of useful formulas and tables for hydraulic computation. 92 pp. Illustrated. Size, 6 x 9 in.

III FINANCING OF ENTERPRISES

First Presbyterian Church, Hollywood, California
H. M. Patterson, Architect

Zenitherm Company, Inc., Newark, New Jersey
Zenitherm Sales Co., (Cal.) 55 New Montgomery St., San Francisco

Yet the one in the Boston bank is as truly the work of an artist as the one in the Italian cathedral.

SEVENTEEN years went into the making of the beautiful bronze screen that stands in the cathedral of the little town of Prato, near Florence. It is the work of Simone, a master Renaissance metal worker, and as fine an artist as his more famous brother, Donatello.

In the Boston Federal Reserve Bank stands another screen, executed by Art Metal. It surrounds the counters of the paying and receiving tellers. Modern production methods produced this screen in only a few months. Yet it is as truly the work of an artist as the screen of Simone, because it turns a purely useful piece of equipment into a decoration of graceful beauty.

But a counter screen is only a single one of the many items of bank equipment manufactured by Art Metal. The careful skill which has characterized Art Metal work for thirty-eight years also goes into the making of entrance doors, grilles, cage and counter equipment, check desks and elevator doors and trim.

Hollow metal work a specialty

An outstanding Art Metal product is the hollow metal work—doors, trim and partitions—which has been installed in many of the Federal Reserve banks throughout the country. The planning and designing of this and other steel equipment to exactly meet individual requirements makes the Art Metal service unusually valuable to the architects of banks and large public buildings.

We shall be glad to discuss any problems you may have on metal equipment specifications. A letter to us will bring a representative.

Art Metal
JAMESTOWN - NEW YORK
BRONZE AND STEEL INTERIOR EQUIPMENT FOR BANKS, LIBRARIES AND PUBLIC BUILDINGS... HOLLOW METAL DOORS AND TRIM
Fire Safety with Concrete and Rail Steel Reinforcing Bars

Grain elevators comprise only one or the many types of structures that are advantageously built of that high strength combination, concrete and rail steel reinforcing bars.

Furnished in accordance with A. S. T. M. Specification A-16-14 or (in Canada) C. E. S. A.—A 9-1923

New Marine Elevator
Buffalo, N. Y.

JAMES STEWART & CO., Inc.
Engineers and Contractors

Rail Steel Bar Association

Burlington Steel Company, Hamilton, Ontario

Buffalo Steel Company
Tonawanda, N. Y.

Calumet Steel Company
Chicago, Ill.

Connors Steel Company
Birmingham, Ala.

Franklin Steel Works
Franklin, Pa.

Laclede Steel Company
St. Louis, Mo.

Missouri Rolling Mill Corp.
St. Louis, Mo.

Pollak Steel Company
Cincinnati, Ohio

West Virginia Rail Co.
Huntington, W. Va.

Canadian Tube & Steel Products, Ltd., Montreal, Quebec

SMALL BANKS

Architects recognize that Georgia Marble is ideal for monumental buildings. It is a material which helps to express the strength, sincerity, and stability of the institutions that it houses. A small bank built of Georgia Marble looks "every inch a bank," while if it were built of a less fitting material it would be just a small building.

The Georgia Marble Company, Tate, Georgia; New York, 1328 Broadway; Atlanta, 511 Bona Allen Building; Chicago, 456 Monadnock Building.

GEORGIA MARBLE

WHY do architects throughout the country select Ampinco-Kenney Showers for the finer hotels, homes, clubs and apartments? Records show these showers operate without interruption year after year. Constructed of everlasting brass and rigidly tested before shipment, they are bound to measure up to all expectations.

Ampinco showers include both overhead and Kenney Body Needle Shower models. Many have M-VB Temperators, famous for accurate temperature and pressure control. All are outstanding examples of high-grade workmanship.


This booklet, "Ampinco Showers and Bath Fixtures," gives complete description of the shower bath fittings used in apartment house pictured, as well as the many other models included in the Ampinco line. Free to all architects, contractors and plumbers.

A SCOVILL PRODUCT

Scovill is the name of a broad service to industry. It places acres of factories, forests of machinery, hosts of skilled workmen, metallurgists, modern laboratories and trained representatives at the disposal of those who require parts or finished products of metal.
How Solid Is 90 Per Cent?

(Volume Per Cent of Water in Concrete)

In general, concrete practice 25 or 30 gallons of water are used in mixing a cubic yard of concrete. This means that between 3 and 4 cubic feet of water are present in every cubic yard of concrete. As is well known, water is subject to evaporation and unless some chemical action took place between the cement and water, the entire cubic content of water would dry out as the concrete "sets."

As a matter of fact, a chemical action, known as hydration, does set up between cement and water and the cement retains about 25% of the water permanently. There still remains a free volume of water subject to complete evaporation and equal to 10% of the total volume of each cubic yard of concrete. Since water can not be compressed we know that when the concrete is dry there will be one-tenth unoccupied space in the mass—only 90% of the concrete's volume will be a solid.

The 10% space is naturally not a single cavity but millions of tiny pores or pockets from which water has gone and into which water can come again unless it is barred out. The Truscon Laboratories, from the very beginning, attacked the problem of waterproofing concrete from the scientific angle. Realizing that water enters concrete because of the 10% voids left by the evaporation of water, we set about discovering a method of eliminating absorption in concrete.

The result of our many experiments and tests was Truscon Waterproofing Paste Concentrated, a waterproofing product which is mixed with the original concrete, becoming a permanent and integral part of it and protecting the concrete throughout its entire life. This product can be easily and economically used and will pay for itself many times over in the better appearance and the reduced maintenance costs of the construction. No concrete should ever be used without this precaution of integral waterproofing.

*This is No. 5 of a series of non-technical explanations prepared by R. A. Plumb, General Director of the Truscon Laboratories, on the necessity for integrally waterproofing all concrete used in building.*

General Director of the Truscon Laboratories

Write for free data on the practical uses of Truscon Waterproofing Paste Concentrated.

THE TRUSCON LABORATORIES — DETROIT, MICHIGAN
OFFICES IN ALL PRINCIPAL CITIES • • FOREIGN TRADE DIVISION, NEW YORK

TRUSCON
Waterproofing Paste
CONCENTRATED

A Good Building
With Good Windows

The features of Truscon Double Hung Windows installed in the Maccabee Building include heavy welded frames, weathertightness, smooth, quiet operation on concealed roller bearings, heavy muntin bars, rigid sash.

Illustrated Catalog and Drafting Room Standards sent on request.

TRUSCON STEEL COMPANY, Youngstown, Ohio.
Established 1903.
Warehouses and Offices in all Principal Cities.

MODEL "A"

28 Architects in Cleveland Specify Rivet-Grip

In the comparatively short period of three and a half years Rivet-Grip Steel Joists have been accepted as standard for fire-safe floor construction and are being specified repeatedly by architects for work throughout the United States.

In Cleveland alone, where Rivet-Grip Steel Joists are made, 28 different architects have used them in a large number of buildings of various types. Many of these architects have used Rivet-Grip Steel Joists repeatedly, one using them in 18 different buildings.

The repeated use of these joists in Cleveland indicates faith and confidence in Rivet-Grip construction. Cleveland architects and contractors are in the best possible position to judge the merits of a Cleveland-made product.

The buildings pictured here are typical of the Cleveland structures in which Rivet-Grip Steel Joists were used. These include apartment houses, banks, office buildings, hospitals, schools, churches, libraries, theaters, hotels, garages, stores and residences.

THE RIVET-GRIP STEEL CO.
REPRESENTATIVES IN ALL PRINCIPAL CITIES
2402 Prospect Ave. : Cleveland, Ohio

Announcing
Weisteel Leak-Proof Integral
Shower Units

We believe architects all over the country will welcome the addition of the Weisteel Leak-Proof Integral Shower Units into the Weisteel family. There is a definite need for a practical, durable and leak-proof shower unit at an economical price. We have made the Weisteel Shower Stall to fill this need. Complete specifications and details will be gladly sent on request.

WEISTEEL
TRADE MARK REGISTERED
COMPARTMENTS

HENRY WEIS MANUFACTURING CO., INC.
Elkhart, Indiana  (Formerly Atchison, Kansas)

Branch Offices:
NEW YORK  CHICAGO  LOS ANGELES
BOSTON  ATLANTA

Representatives in all Principal Cities
Established 1876

COMMON BRICK
—a rectangle of Mother Earth, burned to flint-like hardness. The mellowness of its coloring, the interesting ways it can be laid, and its indestructibility, make brick one of the finest media through which architects can express their inspiration.

BRICK—your most flexible building material

CAPABLE of infinite variety in color, in method of laying, in styles of panel design. In warmth of color tones and delicate shadings, brick achieves a mellowness of character that satisfies the architect's desire for originality in wall treatment.

Often given a whitewash finish, which is allowed to wear away, leaving a surface of highly colored brick tinted here and there with white, a quaint and charming effect.

Unusual wall handling is possible at a reasonable cost with brick,—numerous skinned formations, the "squeezed joint" treatment, or laid to form a Flemish bond. Architects today are doing more beautiful things with brick than ever before, securing architectural effects that mark the architect as an artist as well as a master in his profession.

There are no restrictions or limitations to what may be done with brick, to endure as a permanent example of the architect's versatility and technique.

Architects Appreciate
This Service

As THE pioneer of modern sanitary refrigeration and the world’s largest manufacturer of refrigerators for all purposes McCray is in a position to render unusual service to the architect.

Complete and reliable information regarding refrigerators of every type and for every purpose is immediately available from the McCray engineering department.

Our recent portfolio especially prepared for architects illustrates and describes the various types of construction of both portable and built-in refrigerators and cooling rooms, and gives standard specifications.

All McCray models are readily adaptable for use with electrical or mechanical refrigeration of any type. And remember the quality of the refrigerator itself determines the character of service, whether ice or machine is the refrigerant.

Without obligation architects may avail themselves of the experience and advice of McCray refrigeration engineers. Be sure you have our new portfolio in your files—it contains information on all types of refrigerator needs. Send the coupon now.

McCray Refrigerator Sales Corporation, 761 Lake St., Kendallville, Ind.
Subrooms in All Principal Cities (See Telephone Directory)

Pure Corkboard Insulation

Pure corkboard insulation, covered with heavy, waterproof, odorless insulating sheathing, hermetically sealed with hot hydrolene cement, is used in all McCray refrigerators, providing an air-tight enclosure which means efficiency and economy.

McCray refrigerators, both regular and built to order, may be used with any type of mechanical or electrical refrigeration. All models are ready for immediate installation of cooling units.

Please send further information concerning refrigerators for \[1\] hotels, restaurants, cafeterias, clubs; \[2\] hospitals, institutions; \[3\] grocery stores, markets; \[4\] florist shops; \[5\] homes.

Name

Address

City

State

The HAVEMEYER TRUSS is adapted to any type of roof as well as floor construction

These illustrations show the use of the Have-meyer truss in a gable roof for the New York Telephone Building, Mamaroneck, N. Y.; McKenzie, Voorhees and Gmelin, architects; Wm. A. Berbusse, Jr., contractor.

Lower illustration shows ends of trusses welded to supports. The Havemeyer truss affords a strong fireproof roof construction at minimum cost. Manufactured in standard units to span from 4 to 31 ft. Immediate shipments from stock. Write for literature.

Concrete Steel Company

42 BROADWAY, NEW YORK. SALES OFFICES & WAREHOUSES IN PRINCIPAL CITIES

Built for the Needs of Today

WHEN YOU INSTALL A VACUUM PUMP there are two essentials which you should demand:

— A high degree of vacuum to maintain the heating system at maximum efficiency with economical fuel consumption.
— Insurance of condensation being returned to the boiler.

Young Pumps meet these requirements in every respect. They not only deliver a continuous, powerful suction that effectively keeps radiators free from air and water, but they give maximum service over long periods of time, due to the absence of wearing parts in the Young vacuum producing element.

Every Young Pump is completely assembled and tested at the factory as a self contained unit. Consequently it is ready to run as soon as the feed wiring is connected.

Factory:
Michigan City
Indiana

In Canada:
C. A. Dunham Co., Ltd.
1523-41 Davenport Rd.
Toronto

Young Pump Company
Dunham Bldg. 450 East Ohio Street, Chicago, Ill.

YOUNG
CENTRIFUGAL VACUUM
AND BOILER FEED
PUMPS

FOR friezes, panels and other special positions Lincrusta-Walton lacquered and decorated reproductions of Japanese Hand-Tooled Leather are very effective. The rich coloring adds charm to any room whether in the Jacobean or Spanish spirit.

Lincrusta-Walton is a combination of lithopone, cement and linseed oil on waterproof backing. It is hung like wall paper and soon becomes a permanent structural material which withstands wear and is easily cleaned.

The line includes not only reproductions of hand tooled leather, such as the one shown, but also many other patterns. Samples and portfolio will gladly be sent for your files.

LINCRAUSTA-WALTON COMPANY,

Division of The Toast Paper and Color Industries, Inc.

Plant and Head Office: HACKENSACK, NEW JERSEY

350 Madison Avenue, New York City

WM. CAMPBELL WALL PAPER CO.

Hackensack, N. J.

HOBBS WALL PAPER CO.

Hackensack, N. J.

How Linoleum Quality is Determined

To secure linoleum that will give best service and lowest ultimate cost, experts test it for pliability, elasticity, density and uniformity.

In each of these respects, certain minimum standards have been set by the U. S. Navy to which linoleum for Navy use must conform.

In specifying W. & J. Sloane Linoleum, architects secure for their clients goods which greatly surpass these minimum standards. Our selling agents will gladly supply you with the results of comparative tests made by an independent testing laboratory.

The Sloane line consists of a fine selection of new patterns in all standard grades and widths. We commend to the particular attention of architects our Battleship Linoleums and our Contract Marble Tile Inlaids. These are especially adaptable to architectural needs, W. & J. Sloane Mfg. Co., Trenton, N. J.

W. & J. SLOANE LINOLEUM

BRANCHES AT:
BOSTON, PHILADELPHIA,
BALTIMORE, DETROIT,
CHICAGO, ST. LOUIS

BRANCHES AT:
DALLAS, LOS ANGELES,
DENVER, SAN FRANCISCO,
PORTLAND AND SEATTLE

W. & J. SLOANE Sole Selling Agents . . . 577 FIFTH AVENUE, NEW YORK CITY

Now Sir, You Can Be Sure!

- that no substitution
- will occur

in

WHITE GLAZED TILES

Look for the GRADE SEAL on barrel head, and Grade Certificate in every barrel. Mast r Grade Certificate, covering entire shipment, furnished on request.

Such wide price differences separate different GRADES of tiles that no one can be sure of getting what he is paying for unless he first makes sure that the grade specified is actually installed.

How to standardize grading rules and make grade identification easy, quick and positive, has long occupied the attention of the best minds in the industry.

The problem has now been solved.

The U.S. Department of Commerce has recently issued Simplified Practice Recommendation No. 61, covering Minimum Grade Specification and Identification. Insist on tiles being graded, sealed and certified accordingly! For herein lies your best guarantee against grade juggling and substitution.

Rossman "BF" Brand white glazed tiles are graded, sealed and certified in strict accordance with these recommendations. Thus when you specify "BF" Brand, you automatically insure yourself, your client, and the contractor of the highest quality tile, properly graded, and easily identified, at no increase in cost over inferior tiles of uncertain grade.

Take full advantage of these safeguards provided for yourself and your clients!

Rossman Corporation
New York, N.Y.

It was Hartmann-Sanders' distinction many years ago to create a better designed, finer looking, longer lasting wood column. Built to correct architectural proportions; from thick, clear woods and given permanent beauty by means of patented, locked joints, Hartmann-Sanders Columns have rigidly maintained the enviable leadership originally established. Send for catalog W-52, Hartmann-Sanders Co., 2154 Elston Ave., Chicago. Eastern Office and Showroom: 6 East 39th Street, New York City.

HARTMANN-SANDERS

Pergolas
Rose Arbors
Colonial Entrances
Garden Equipment
Koll
Columns

One of the G-E Wiring System ads that are teaching the public to demand quality wiring.

The consumer demand for a G-E Wiring System is growing by leaps and bounds. It is the one known wiring installation—and it assures the satisfaction of the home owner as long as the building stands.

Have you the "Electrical Specification Data for Architects" in your files? If not, write us for your copy.

Merchandising Department
General Electric Company
Bridgeport, Connecticut

GENERAL ELECTRIC

Whether it be Special Design or Standard
Guth Illuminators are Specified!

DUE TO the world wide reputation won by Brascolite and GuthLite, many Architects and Illuminating Engineers look upon The Edwin F. Guth Company as manufacturers of standard lighting equipment only.

Actually a very large part of our business is designing and manufacturing special lighting units for monumental structures and other buildings requiring illuminators that will properly complete the architectural picture.

Whether it be a special design or standard equipment, Guth illuminators have been specified for the past 25 years by the leading architects and illuminating engineers, until today monumental structures in every state are lighted by Guth fixtures.

The Guth staff of designers and lighting engineers are available to you for the development of special equipment or to help adapt the most efficient standard units to your particular problem.

A Guth lighting specialist is near you and will be glad to give you any cooperation your need dictates.

THE EDMUN F. GUTH COMPANY, 2621 Washington Ave., St. Louis, Mo. Designers, Engineers and Manufacturers of Lighting Equipment Since 1902

A National Organization with Representatives in all Principal Centers

regarding the

.. "or equal"

Letters like these:

"We had seven feet of water on our first floor and not a drop went thru' any of the (Jamison) doors."

NUCKOLLS PACKING CO.,
Pueblo, Colo.

Facts like these:

\[
\begin{align*}
2 \times 2 &= 4 \\
1 + 2 &= 3 \\
4 - 2 &= 2
\end{align*}
\]

Over 19,000 plants are equipped with Jamison Doors. More Jamison Doors sold—year after year—than all other makes combined. Jamison Doors are used all over the world.

tend to prove:

That the "or equal" at the end of specifications can mean a great deal more in other lines than it does in the cold storage door field.

and that:

There is one sure way of getting the equal of Jamison Doors—by specifying Jamison—and only Jamison!

Q.E.D

For further proof and complete information send for Catalog No. 13.

Jamison Doors
Jamison Cold Storage Door Company
Hagerstown, Maryland, U. S. A.

Excellence of Workmanship . .
that few can achieve

"Jonesteel" Interior Metal Construction
... Doors, Enclosures, Partitions, etc.
... Highly Valued in Important New York Construction Work

The versatility of the "Jonesteel" organization is generously shown in the Academy of Medicine, Roosevelt Hospital and New York Orthopaedic Hospital.

Velvet-action elevator doors, stair-hall doors beautifully finished in hand-grained silver oak with ebony inlay, flush type leather-covered swing doors, borrowed light frames and sash, special partition equipment and radiator enclosures finished to match the walls,— all designed and constructed to achieve a well-balanced, attractive-looking and accurately-fitted result.

Many similar important contracts are engaging the attention of "Jonesteel" engineers and production experts . . . busier than ever because of unusual care and skill employed from rough sketch to installation.

Send for 32-page illustrated book of details and specifications for architects' files. Kindly ask for Book B.

Jamestown Metal Desk Co., Inc. Jamestown, N.Y.

Lower costs—higher efficiency

Buy the highest heating efficiency at the lowest cost—get easily installed, inexpensively maintained HEATING, at a fraction the cost of direct radiation. Heat with Buffalo Unit Heaters.

FOUR TYPES—for every requirement

Buildings have certain characteristics which determine the best type of heater, depending on location of windows, height of ceilings, production methods, etc.

We make four types of unit heaters to meet all of these conditions economically. Why not let us work with you in selecting the right heaters for your buildings?

ASK FOR CATALOG No. 466

Buffalo Forge Company
444 Broadway
Buffalo, N. Y.

In Canada—Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

HEAT WITH UNIT HEATERS

"Buffalo" Unit Heaters
Now—a Rust-Resisting
Time-Tested Iron Made Even Better

Provides greater resistance to rust and corrosion by scientific combination with copper and mo-lyb-den-um

Mt. Vernon Junior High School, Los Angeles, California, in which eleven tons of Toncan Iron is used. Austin & Ashley, Architects. J. Herman Co., Ventilating Contractors. O. W. Ott, Mechanical Engineer.

ARCHITECTS everywhere have long known and specified Toncan Iron for cornices, roofing, ventilating ducts, metal sash—in fact, wherever sheet metal is exposed to moisture and the elements. It has withstood the test of time. It has long since proven its value. Architects placed in it the same confidence they placed in brick and stone.

Now this iron has been made even better. It is the first time that super-alloy—mo-lyb-den-um—has been employed in sheet iron for building purposes. Combined with copper in a pure iron base, mo-lyb-den-um yields a resistance to rust and corrosion never before attained in a commercial iron.

It is a metallurgical achievement no architect can afford to ignore. It means longer life to buildings and better satisfied clients. The new Toncan book, "The Path to Permanence," gives complete information on this greatly improved product. Send for a copy.

CENTRAL ALLOY STEEL CORPORATION, MASSILLON, OHIO
Makers of AGATHON ALLOY STEELS

Cleveland
Syracuse
Detroit
Philadelphia
Chicago
Los Angeles
New York
Tulsa
St. Louis
Cincinnati
San Francisco
Seattle

The known reliability of Von Duprin latches is merely the logical result of their rugged simplicity, their strength of design, their painstaking workmanship.

VONNEGUT HARDWARE CO.
Indianapolis, Ind.
1852 Our 75th Anniversary 1927
Public Rooms in
LARGEST S. S. EVER BUILT IN AMERICA
Equipped with KAWNEER NICKEL-SILVER WINDOWS

Of the many common elements, sea water is one that is recognized as a rapid destroyer of metal. Its saline content, which consists of sodium chloride, corrodes those metals which, under ordinary conditions, show remarkable endurance.

A ten weeks' test, exposing three widely used non-corrosive metals to the spume and spray of the sea, revealed surprising results. A microscopic examination showed that while two were severely effected, the third or Kawneer Nickel-Silver, remained unmolested.

This last mentioned alloy is used in the manufacture of Kawneer casement and weight hung windows—windows which are adaptable to structures for both land and marine use. They require no painting, no future upkeep, offer perfect weathering and blend beautifully with any type of building.

Write for further information.

THE KAWNEER COMPANY
NILES, MICH.

Vita Glass transmits health -- it should be specified wherever possible

A test by the Medical Officer of Health at Smethwick, England, showed that children in rooms glazed with Vita glass grew faster, weighed more and were healthier than other children. Other school tests have produced similar results.

Vita glass transmits the ultra-violet health rays of daylight to the extreme limit of the sun's spectrum, including the vital rays. Its transmission qualities are attested by eminent scientific authorities and have stood the test of time. Ordinary window and plate glass, as you know, entirely obstruct vital ultra-violet irradiation.

Within a few years, it is probable that this new glass will be specified for every new school construction. In this country it has already been ordered or installed for thirty-five hospitals, sanitoria and schools in addition to hotels and office buildings.

For Vita glass not only aids heliotherapy, helps convalescents, and stimulates the growth of children through its transmission of ultra-violet health rays, but it also adds greatly to the energy and health of adults. Its use will become general, for its price is within the general reach.

Vita glass is a genuine glass, manufactured in two forms—clear and cathedral. Both glasses are supplied cut to specification, ready for installation. Each light bears the trade-marked label etched in one corner.

May we tell you in detail about Vita glass? VITAGLASS CORPORATION, 50 East 42nd Street, New York, N. Y.
A massive structure of inspiring architecture, is the new 22-story building of the Ohio Bell Telephone Company, in Cleveland. With the telephone equipment which it shelters, it represents an investment of nearly eleven millions of dollars.

Modern plumbing and heating systems, designed for the health and comfort of some 2,000 workers, form an extensive network of pipes, concealed behind walls and beneath floors, throughout the building.

Such systems, in such a building, must at all hazards be designed to resist rust from within, if untold damage to the premises is to be prevented in future years, and the public is to be served, without interruption, according to the high standards of the Bell Telephone Company. Hence the extensive use of rust-resisting Byers Pipe, in this as in other monumental buildings erected in the past by the Bell Telephone Companies in many important cities.

Byers Pipe was installed for cold water supply and drinking water lines, refrigeration, soil stacks, waste and vent lines, comprising the most vital parts of the plumbing system, and further, also for the return lines in the heating system.

In all of these services, experience has amply demonstrated the advisability of using pipe of more than ordinary rust resistance, and Byers has notably proven its economy by happily combining moderate first cost with long life in service.

It is common experience to find genuine wrought iron pipe of Byers quality only superficially corroded after upwards of 40 years service in buildings and underground, in every part of the country. These records indicate a probable life of upwards of 75 and 100 years for most purposes where Byers pipe is subject to corrosive attack. Backed by such a record of service, it is only logical that Byers should be chosen by the most experienced architects and engineers, for the permanent protection of building investments.

A. M. BYERS COMPANY
Established 1864, PITTSBURGH, PA.

There is but one Master Drawing Pencil and that is

DIXON'S ELDORADO

Drawing with Dixon's Eldorado will open your eyes to the superiority of this Master Drawing Pencil over any other pencil regardless of where it is made.

For Dixon’s Eldorado is made to meet the specific needs of engineers, architects and draftsmen. The standards set by its makers result in a pencil that is unequalled in responsiveness... strength... subtlety.

Will you try, free, full-length samples which we will send you and so convince yourself that Eldorado is the name of the master drawing pencil? When you write, specify what grades you use most frequently.

Joseph Dixon Crucible Co.,
Pencil Sales Dept. 14-J, Jersey City, N. J., U. S. A.

HUNDREDTH YEAR 1827
OF DIXON SERVICE 1927

Every Concrete Floor in the Paramount building is protected by LAPIDOLITH TRADE MARK

The Original Concrete Floor Hardener

LIGNOPHOL
Wood Floor Preserver and Hardener.

HYDROCIDE
A complete line of water and damp-proofing products for walls, copings, foundations.

CEMCOAT
Washable Enamel Paint.

Other Sonneborn Products

CEMCOAT
Washable Enamel Paint.

L. Sonneborn Sons Inc.
114 Fifth Avenue
New York

 Architects
C. W. & G. L. RAPP

 Builders
THOMPSON-STARRETT COMPANY

Strength, Permanence and Beauty

The new Hotel Breakers at Palm Beach, built after fire had destroyed the famous old hotel of the same name, is of portland cement concrete throughout. The contract was awarded in December, 1925, and the hotel was completed and ready for guests in December, 1926. Speed of construction was made possible by the fact that the hotel is of reinforced concrete, thus utilizing the highest proportion of materials available locally or nearby. This was important because of freight congestion and railway embargoes existing in Florida during the construction period. While under construction, the hotel successfully withstood two tropical hurricanes—a most rigorous test of strength. The exterior surface is portland cement stucco of rough texture, high-lighted to a pleasing buff tint; decorative details are of ornamental cast stone, considerably darker than the stucco surface. Strength, permanence, firesafety and beauty are built into the entire structure—a combination which the use of portland cement concrete makes possible in the erection of any building, whether large or small, ornate or simple.

PORTLAND CEMENT Association
Concrete for Permanence

OTIS ESCALATORS

For use in

DEPARTMENT STORES
RAILROAD and STEAMSHIP TERMINALS
ELEVATED and SUBWAY RAILWAY STATIONS
THEATRES - FACTORIES

The installation of Escalators in Department Stores has had a remarkable growth in the last few years as their great advantages for that class of transportation, as an adjunct to the elevator system, has been fully recognized from the results obtained.

GIMBEL BROTHERS Store in New York went along for over fifteen years without Escalators. Then they installed 10 in their Philadelphia Store. Now they are putting in 26 in their New York Store.

The conclusion is obvious.

OTIS ELEVATOR COMPANY
OFFICES IN ALL PRINCIPAL CITIES
OF THE WORLD
Two views of the New High School at Little Rock, Ark.

Architects —
Associated Architects,
Little Rock.

General Contractor —
Gordon Walker,
Little Rock.

Engineers —
Gurner & Morrow
Little Rock.

175,000 sq. ft. of MEYER Removable Steelforms on this Little Rock High School

The maximum floor area occurred on the second floor where 55,000 sq. ft. of equipment was required.

As in Little Rock, so in hundreds of other cities from Canada to the Gulf and from Ohio to the Pacific Coast, Meyer and Ceco Products are assisting architects, contractors and engineers in lowering reinforced concrete building costs.

MEYER Steelforms in common with other types of concrete joist construction, is most economical for buildings with lighter loads and longer spans, such as apartments and hotels, residences, schools, hospitals, office buildings, garages, light manufacturing buildings, etc. In this class of structure, the dead weight of construction is a considerable factor in the total load, so that the saving in dead load effected by MEYER Steelform construction affords a considerable saving in cost.

The concrete joist floor, like its predecessor, the wood joist floor, has always required less material for ordinary conditions of loading than other types of design. This economy of concrete and steel was never apparent until the cost of formwork was reduced by using a permanent equipment of MEYER Removable Steelforms, by means of which re-use was secured.

In building the formwork for the concrete joist floor, MEYER Steelforms are used as a mould for the joists and intervening slabs, the load being carried by the joists in one direction to the supports. Continuous joists are produced by lapping the Intermediate Steelforms and the ends of the rows of Intermediate Steelforms are closed with endforms.

CECO Reinforcing Bars are rolled only from new billet steel and are furnished in deformed rounds and squares. The deformations are at right angles to the axis of the bar and thus provide a more positive bond. CECO Reinforcing Bars and CECO Column Spirals are tested and inspected by the Robert W. Hunt & Co., and are kept in stock at all warehouses listed below.

Our Engineering Service —
Our sales department is technically trained and ready to assist architects, contractors and engineers in the design and execution of reinforced concrete work. Do not hesitate to ask for this service.

Proved Products — MEYER Steelforms. Adjustable All-Steel Shores and Adjustable Column Clamps. CECO Reinforcing Bars, Column Spirals, Bar Chairs and Spacers, Triangle Mesh and Electrically Welded Fabric. CECO Metal Laths, Hook Hangers, Furring Channels, Beads and Moulding. CECO Metal Weather Strips and Screens. Send for Handbook of Fireproof Construction. Address our Omaha Office, Dept. 271.
An apartment...

how will it rent?

—The floors you specify will help answer that question

As a designer of apartments, you know the importance of planning things that will appeal to the prospective tenant. So you specify such eye-catchers as rough textured walls, an arched doorway, or a built-in bookcase, perhaps.

A still further opportunity may be found in the use of floors of Armstrong's Linoleum. Prospective tenants respond immediately to the beauty, the practicability of these floors. Decorative possibilities are instantly suggested.

Such a floor has an added appeal to your client, the apartment house operator. For a floor of Armstrong's Linoleum requires no annual fixing up, no costly refinishing. Its first cost is its last. Upkeep is very low.

Today with modern building construction tending more and more toward the use of steel and concrete, you cannot select a more practical, more sensible floor than one of Armstrong's Linoleum. It can be cemented right over the concrete underfloor.

Recent developments in linoleum texture and design have been quite startling. If you are not fully acquainted with these innovations and will write us, we will send you samples and colorplates.

We shall also be glad to assist you in planning color schemes for projects you will describe to us, complete even to the wall and woodwork finishes, draperies, and furnishings, as well as floors of correct color and designs.

Armstrong Cork Company, Linoleum Division, Lancaster, Penna.
Happy is the architect permitted to plan a building in which beautiful architecture is a first consideration, not simply a by-product of utility.

Such an opportunity was recently given to Architects Bebb and Gould when the University of Washington at Seattle commissioned them to design a new library for the campus group.

The resultant Gothic building is a notable addition to the many lovely structures which adorn the young cities of the Pacific coast.

Like so many other monumental buildings, planned primarily with dignity and permanence in view, the new library has been equipped with Crane plumbing and heating materials.
Pop thinks all motors are alike

"Listen, Lad——

I was talking with my friend today about getting some more motors from him. I told him all you've been saying about your pet welded-steel motor but he just smiled and said that you've been misled by 'talking points.' He admitted that all motors are basically the same."

"Yes, Pop——

and all men are born equal — but it's to their shame if they stay that way. Specialized endeavor lifts a man out of the standardized class. And that's just how the "Linc-Weld" motor rose above its class. Its whole engineering is directed to a single end: Motors. And this development is sub-specialized into Motors for specific purposes.

If you want a pump motor — there's a "Linc-Weld" motor for just that.

If you want an elevator motor — there's a distinct "Linc-Weld" motor for just that.

If you want a motor for any duty — there is a distinct "Linc-Weld" motor for just that. Name your service and you get distinct, specialized, proved experience on that job exclusively.

Your friend's admission that all motors are born equal was over optimistic sales zest. "Linc-Weld" motors are now in long pants instead of long whiskers.
Fronts That Harmonize

No matter what the architectural period or design, there is a Desco store front that will harmonize perfectly—blend right into the building.

The Stanley Anderson Arcade, in Beverly Hills, Los Angeles . . . designed by Asa Hudson, architect, and built by C. L. Peck, contractor . . . is a fine example of Desco adaptability.

The country over, in every type and size of building, Desco fronts can be found. Everywhere, they are meeting with the full approval of architects and builders because of their superior quality and wide variety of shapes and combinations of designs.

Specify Desco fronts and you will lay the foundation to genuine satisfaction of everybody concerned.

Your request will bring complete working details and a price-list, without obligation. Sureau's Catalogue also contains further information. There is a distributor near you. A complete stock of "Desco" construction materials is carried in our New York City warehouse, 562 West 52nd Street.

DETROIT SHOW CASE COMPANY, 1670 Fort Street, West

DETROIT, MICH.
The combination finish below is very effective. The steel woven cane has a natural cane finish—the body of the Enclosure is walnut grain.

No Accident—
It is no matter of chance that the Hart & Cooley Enclosure “THERMAINO” has been widely accepted as supreme in its field. Such a happy combination of beauty and efficiency would be a winner anywhere.

Naturally enough there are definite reasons why “THERMAINO” has forged its way to the front. Especially noteworthy features are the VERTICAL BAR GRILLE at the top, with its generous open area for the free flow of air, and the AIR-INSULATED Top which keeps this part cool under all conditions.

Other important features are graphically shown below.

Top easily raised for filling humidifier if one is used.

Invisible doors on ends permit access to valves.

Grille with large openings permits free flow of warm air.

Strong and rigid welded angle iron frame.

“H & C” Hinge. Top may be removed for cleaning.

Dust-proof joint. No chance for dust to escape.

An Insulation keeps top cool.

Back at extreme rear allows installation close to wall.

Back may be put in last. Facilitates installation.

Hart & Cooley Enclosures and Shields are all steel—made to serve a life-time. They are available in several grained finishes and all flat finishes to harmonize with other appointments.

A new freely illustrated folder “The Modern Mode” is just off the press. It shows “THERMAINO” and other H. & C. Enclosures and Shields in many different settings. A copy is yours for the asking.

THE HART & COOLEY MFG. CO.
CORBIN STREET
NEW BRITAIN, CONN.

New York Philadelphia Chicago

Manufacturers of “H. & C.” Wrought Metal Grilles and The Air Capacity Line of Warm Air Registers.

Less Time—Less Labor

Kosmortar Increases Output While Saving Cost

As in no other business, time is money in the building industry. Wages go on whether workmen keep busy or—if they're masons—stand idle while waiting for more mortar.

Kosmortar, requiring neither slaking nor soaking, is mixed and used immediately. Its simple preparation saves labor and assures a ready supply. Kosmortar is plastic and smooth; spreads easily; does not drag or work short, and fairly gives wings to the trowel. Without conscious effort, the masons increase their production. When time comes to clean down the walls more labor is saved by the clean-cut Kosmortar joints.

Detailed information covering any point of interest will be furnished upon request. The Ideal Cement for Masonry. KOSMOS PORTLAND CEMENT COMPANY, Incorporated, Kosmosdale, Kentucky; Sales Offices, Louisville, Kentucky.

KOSMOS CEMENT

Heidelberg Castle and the Parker House

The feudal barons of the Middle Ages threw wide their hospitable doors to the homeless traveller. Kings, princes, peers and commoners were welcome guests.

Equally rich are the traditions of the Parker House. A host of notable names throng the pages of its registers... Emerson, Longfellow, Lowell, Holmes, Whittier, Hawthorne and Dickens, who said, "Boston is what I should like the whole United States to be." Here the famous Saturday Club met and here gathered the Alumni of the Boston Latin School—"the oldest school in America." For generations the Parker House has been known in every corner of the earth where travellers meet as the business, social and literary center of New England.

Now, a new and greater Parker House has risen to carry on the time-honored name. And in it Dahlstrom Elevator Inclosures, Metal Doors and Trim uphold the Parker House standards of supreme quality, quiet dignity and unfailing reliability.

Dahlstrom Metallic Door Co.

INcorporated 1904
Jamestown, New York

New York, 475 Fifth Ave.
Chicago, 1950, La Salle St.
Detroit, 1531 Dime Bank Bldg.

Representatives in principal cities

Dahlstrom

CELESTIALITE'S THREE LAYERS

1. Of crystal clear transparency—for body and strength.
2. A layer of white glass—to diffuse the rays and soften the light.
3. A layer of blue glass—to whiten, clarify and perfect the light.

Even in the Wilds of Canada schools are using CELESTIALITE glass. And if those located at such remote points as Temiskaming find it worth while to send all the way to New York and pay duty into Canada on CELESTIALITE for the sake of giving their children the benefits of ideal lighting, then surely our schools here in the United States ought to be equally zealous to protect the eyesight of our school children.

CELESTIALITE consists of 3 layers of patented glass which diffuse and perfect the artificial light of the Mazda lamp. The result is a light resembling clear, natural daylight—unquestionably the best illumination. Pupils have neither to squint nor strain their eyes in it. For it actually rests the eyes and is soothing to the nerves.

Consider your plans for lighting requirements—and specify CELESTIALITE. Permanent lighting satisfaction will follow. Be sure to mail coupon for free fragment showing unique 3 layer construction.

GLEASON-TIEBOUT GLASS CO.
Celestialite Division, 200 Fifth Ave., New York

CELESTIALITE (PATENTED)
MAN'S BEST SUBSTITUTE FOR DAYLIGHT

Apart from the Usual

By using Atlantic Terra Cotta for an entire facade the design can be worked up with originality of detail—in color, texture and modeling.

An unusual color is refreshing and not necessarily bizarre; there are many quiet colors in Atlantic Terra Cotta.

Textures are hand-wrought while the Terra Cotta is in the plastic stage, and a slight roughness lightly glazed gives a delicately luminous sparkle that is most attractive. The textures are widely varied.

The characteristic flexible modeling of Atlantic Terra Cotta is always interesting, whether grotesque or conventional. Low relief can be accented by using black or dark blue in the background. This is particularly effective for modeled detail at some distance from the ground.

The cost of Atlantic Terra Cotta is moderate. May we estimate your drawings?

Atlantic Terra Cotta Company
19 West 44th Street, New York

Atlanta Terra Cotta Company
Atlanta, Georgia
What Is a Good Kitchen?

Consider the kitchen from the viewpoint of the home maker. She wants it adequately lighted, properly ventilated, sanitary and beautiful—every work center carefully arranged in sequence of use—small enough for step-saving and large enough for modern equipment which must include a Red Wheel Gas Range, the center of kitchen activities.

In an old house, a woman will worry along with an old-fashioned, black stove with ovens below the cooking-top. But, she will not long tolerate that kind of stove in a new house or apartment. A large measure of the pleasure of buying or renting a new place is the satisfaction of having a kitchen with a new, clean, white-enamed Gas Range with Lorain Red Wheel.

The Lorain Red Wheel automatically controls the oven heat, maintaining any desired temperature for any length of time. Lorain-equipped Gas Ranges are nationally known, having been advertised in the leading national publications for more than eight years. Over 2100 schools, colleges, and universities use them to teach the art of cookery.

You'll find every conceivable size and style in the six Red Wheel lines—Dangler, Direct Action, New Process, Quick Meal, Reliable and Clark Jewel. For additional information, see Sweet's Catalog, 21st Edition, Pages C2977-C2986 or send for our Handbook on Gas Ranges for Architects and Builders.

AMERICAN STOVE COMPANY
Largest Makers of Gas Ranges in the World
333 Chouteau Avenue
St. Louis, Mo.

Unless the Gas Range has a RED WHEEL it is NOT a LORAIN

LORAIN
29 Years of Service

The cork tile floor shown above was laid 29 years ago in a Bridgeport, Connecticut, restaurant. Today, after years of constant wear, it is practically as good as the day it was laid. The owner, Mr. Carl Schmidt, writes:

"It is still in first class condition and gives good service. I cannot recommend this floor too highly as its resistance to the great wear and tear that is necessarily placed upon it in a business such as mine is a very severe test of any floor."

Yet the wearing quality of a Novoid Cork Tile Floor is only one of its advantages. The various sizes of Light, Medium, and Dark shades in which Novoid Cork Tile comes can be blended into an unlimited number of beautiful patterns. They make a warm comfortable floor, easy to walk on because of the natural resiliency of the cork. A Novoid Cork Tile floor is easy to clean and keep looking new.

Write for Box of Cork Tile Samples

We shall be glad to mail you an attractive box of samples of Novoid Cork Tile, together with a descriptive bulletin in color showing designs and sizes available. We maintain a permanent exhibit at the Architects Samples Corporation, 101 Park Avenue, New York.

Novoid Cork Tile

CORK IMPORT CORPORATION

345 W. 40TH ST. NEW YORK

Novoid Corkboard for Roof and Wall Insulation

Novoid Cork Covering for All Refrigerated Lines

Beauty and Permanence with Insulation for Warmth and Quiet

ATLANTA BOSTON BUFFALO CHICAGO PHILADELPHIA ST. LOUIS

Spencer Central Vacuum Cleaning Systems

Banking institutions, recognizing the business value of cleanliness that invites patrons, are immaculate from the safety deposit department to the general and private offices. Central vacuum cleaning systems installed as building equipment simplify cleaning problems. These systems are economical in operation and reduce cleaning costs. Complete information and engineering service on Spencer Central Vacuum Cleaning Systems are available upon request.

The Spencer Turbine Company
Hartford, Conn.

Domestic Hot Water for Practically Nothing

With Excelso Indirect Water Heater connected to outside of steam or vapor boiler, one fire does double duty. It heats the home or building and heats the domestic hot water supply, too.

A typical Excelso installation. Send for views of other installations and valuable file material.

Excelso Products Corporation
Division of American Radiator Company
63 Clyde Ave. Buffalo, N. Y.

When Heated the Excelso Way

Easily connected to old or new boiler, using present pipes and fittings. Wide range of sizes and capacities. For the bungalow or the skyscraper; for one family or one hundred families.

Single coil heaters from 30 to 120 gal. capacity.
Double coil heaters from 160 to 400 gal. Triple coil heaters, 600 gal. and 800 gal.

Excelso Water Heaters
Nationally Distributed by Leading Wholesalers and Boiler and Radiator Manufacturers.

QUAKER COLONIAL BRICK with its sand-moulded surface, its variegated colors, its irregular shapes, and its unusual markings—gives the architect ample scope to express his own individuality and taste in planning—an opportunity to create something different.

It simulates unusually well, the early hand-made Colonial Brick, and is being used by discriminating architects to recreate again architecture of this most interesting period. It should be laid preferably with raked joints, with gray, buff or white mortar. Comes in vertical or horizontal fire markings.

* * *

May we help you with your building plans? May we send samples? There's no obligation!

LANCASTER BRICK CO., LANCASTER, PA.

DURETTA

has been extensively used to particular advantage in fireproof construction as an indistinguishable substitute for woodwork. It will exactly reproduce the grain and finish of any wood and does not warp or check.

G. E. WALTER

137 EAST 44th STREET—NEW YORK

ORNAMENTAL PLASTERING
COMPO ORNAMENT

Entrance Lobby—Park Central Hotel, New York City—Edmund Ellis, Archt.
Duretta Panelled Wainscot
So natural in appearance is Dubois that it can fit into practically any setting, or blend with any period or design of architecture.

Its use here amid the heavy foliage of Pasadena, over 6000 miles from its home, illustrates the point and shows how widely the vogue for this remarkable fence has spread. New applications for Dubois are being constantly discovered. Its great strength, its long life, its talent for screening unsightly views, its unique beauty combine to fit it for a wider range of service than any other fence.

Dubois is made in France of split, live, chestnut saplings woven closely together with heavy, rust-proof Copperweld wire. Comes in 5 ft. sections, in two heights, 4' 11" and 6' 6". Robert C. Reeves Co., 187 Water St., New York, are the sole importers, from whom prices and erection data may be had upon request.

And in California it finds itself as much at home as in France

Photo by Martin, Pasadena

DUBOIS Woven Wood Fence

RESISTS

What Every Architect Should Know

Concrete and Steel, properly designed and combined, provide the highest known measure of bank vault protection. And in no other system than Steelcrete is there obtained positive 3-Point Protection—resistance to (1) cutting flame (2) drill (3) explosives.

Three-Point Protection stands guard in many of the world's leading banks, including the famous vault of The Federal Reserve Bank of New York, The Bank of England, Royal Bank of Canada at Montreal, Mitsui Bank of Tokio, Japan. And it is adaptable to vaults of every size.

Let us send you typical details and specifications, list of notable installations, and certified reports from owners of Steelcrete Vaults. Ask any Consolidated office.

The Consolidated Expanded Metal Companies

The Steelcrete Building Wheeling, W. Va.

Atlanta Cleveland Pittsburgh New York
Boston Philadelphia Chicago Buffalo

Steelcrete Vaults

Speakman Chromium Plate on Speakman Showers and Fixtures

A Popular Installation

is a rich, lustrous, silver-platinum finish which will never tarnish. It is permanent—always bright—requires no polishing—not affected by acids, salt air or salt water. It will never corrode and requires wiping off only—the same as china and enameled ware.

SPEAKMAN CHROMIUM PLATE unquestionably adds beauty to any room.

We shall be glad to mail you a booklet on SPEAKMAN CHROMIUM Plate, and our catalog of SPEAKMAN Showers and Fixtures made up for your files.

SPEAKMAN COMPANY
WILMINGTON, DELAWARE

SPEAKMAN SHOWERS
and Fixtures

FINISHED ASPHALT COATING

INSULATION

STEELDECK ROOFS NOT OVER 5 lbs PER SQ. FOOT

Illustrated literature on request.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

MODERN SCHOOLS
OF MUSIC

are completely equipping their entire buildings with
HAMLINIZED
SOUND
PROOF
DOORS
and folding
PARTITIONS

In this day of Modern Teaching, haphazard and make-shift buildings are giving way to schools and colleges that are built to meet the demand for concentrated study free from distraction.

THE EASTMAN SCHOOL OF MUSIC
Rochester, New York
Hamlinized Doors are used throughout this building, in all studios and class rooms.
Gordon & Kaelber, Rochester, N. Y., Architects.
McKim, Mead & White, New York City, Associate Architects.

IRVING HAMLIN
1502 Lincoln St. Evanston, Ill.

What Keystone?

WHEN you specify the Keystone of a chemical laboratory—the drain lines—be sure that this material will give perfect, permanent service instead of endless trouble and expense.

Specify a material that does not depend upon a coating or lining for complete immunity from all acids. A material that will not warp, crack, sag or leak at the joints. A material that will pass all plumbing codes.

Then Duriron acid-proof drain pipe will be specified as it alone meets these requirements. In keeping the acid where it belongs, in the drain lines, Duriron guards against maintenance expense, marred finish and unsanitary conditions.

Duriron is produced only by
The DURIron COMPANY
DAYTON - OHIO

LALLY COLUMNS are the MOST EFFICIENT AND COST LESS

ROUND COLUMNS are known to be the most efficient and economical structural shape. Less metal is required to sustain a given load than that required for any other column shape made.

IMPROVED CONNECTIONS and splices make the NEW LALLY COLUMN simple in detail and fabrication. Difficulties formerly encountered in connecting beams to round columns have been solved.

GREATER UNSUPPORTED length is allowed by building codes for round columns than for any other shapes. Less metal and simple connections mean less cost.

Details and Estimates furnished upon request.

LALLY COLUMN COMPANY
ERIE and ALBANY STREETS
CAMBRIDGE - - MASS.
4001 WENTWORTH AVE. 211-249 LOMBARDY ST.
CHICAGO - - ILL. BROOKLYN - N.Y.

Panelboards HERE too!

WHY wonder that so many fine buildings are equipped with @ Panelboards. @ Panelboards give more for the money invested. @ Panelboards are built for long service. Every @ part is made oversize and tested. The @ Panelboard is standardized throughout and is constructed completely in our factory. There is no “on the job” work about an @ Panelboard, except the installation and that at minimum labor.

The new @ catalog is ready. We also furnish estimates without cost.

Frank Adam ELECTRIC COMPANY
ST. LOUIS

District Offices
Boston, Mass. Dallas, Texas Minneapolis, Minn. St. Louis, Mo.
Buffalo, N. Y. Detroit, Mich. Omaha, Neb. Winnipeg, Canada

No space wasting radiators here...

for in the modern home, exposed radiation is obsolete. Nothing must interfere with refinement of interior arrangement and decorations.

Built right into any standard 4" wall or partition—the Herman Nelson Invisible Radiator occupies no floor or wall space. It is not camouflaged—but concealed. Only the attractive outlet grille is visible.

Once installed, the Herman Nelson Radiator is out of sight and out of mind. Indestructible leak-proof and trouble-proof—it is the last word in modern heating.

Architect, heating engineer, contractor, and everyone interested in new home or modern building construction, should know the facts about the Herman Nelson Invisible Radiator.

THE HERMAN NELSON CORPORATION, Moline, Ill.

 Builders of Successful Heating and Ventilating Equipment for 30 Years

Free The Illustrated Book No. 34

Name ___________________________ Address ___________________________

THE BUILDINGS THAT MAKE A CITY

Ninety-five per cent of the buildings in our cities range from two to ten stories in height. The forty-five to 110 story buildings house only a small portion of the prosperous business life of the nation. The so-called smaller buildings housing the great American business man must have safe and dependable and economical elevator service.

THE ELEVATORS THAT MAKE A BUILDING

A ten-story building without elevators would be a total loss as an investment—a building with poor to average elevator service would be but little better. The cautious investor and far-seeing builders of the two to ten-story building are installing Kimball Straight Line Drive Elevators and insuring their buildings against dissatisfied tenants and loss of return on empty space.

For permanent, economical elevator satisfaction use Kimball Straight Line Drive Elevators in your building. Write our nearest office for complete data and prices.

A Kimball Elevator for Every Requirement

KIMBALL BROS. CO.
1119-27 Ninth Street Council Bluffs, Iowa

Elevator Builders for 45 Years

Telling Home Builders
Important Facts About Interior Walls

THERE was a time when the interior walls of the home were looked upon as nothing more than lath and plaster—a method of dividing one room from another.

Today, the attainment of beauty, permanency, and lasting satisfaction in all interior walls is a significant development in keeping with the progress of better home building.

To further stimulate this increasing interest, we have prepared an illustrated booklet entitled "Interior Walls Everlasting"—pictured above. To obtain its widest possible distribution to prospective home builders, we began advertising it in the June magazines devoted to the home.

This is a booklet that will interest every home lover who contemplates building or refinishing. It may already be in the hands of some of your clients. Would you like to have a copy?

Best Bros. Keene's Cement Co.
1060 W. 2nd Ave., Medicine Lodge, Kansas

Please send me, free, a copy of your illustrated book, "Interior Walls Everlasting"

Name
Address
City
State

Quietness of operation is one of the big features of all Iroquois Electric Refrigerators—and it is particularly important in apartment house installations—there must be no noise to annoy the neighboring tenants. This new apartment type Iroquois is as quiet as the gentle whispering of the woodland pines—and it is ideal not only for apartments, but for homes with four or five persons in the family.

Imagine a beautiful all-metal cabinet—white enamel inside and outside—that is only 61" high, 22½" deep, 26¼" wide, and yet has as much as 9½ square feet of shelf space, and 5½ cubic feet food storage capacity—both unusually large for an apartment type.

But that isn't all! It also has greater ice-cube capacity than any other machine of its size—110 cubes, or more than 9 pounds of ice—and in addition an extra tray to store ice cubes.

This new quiet Iroquois is thoroughly efficient—it produces cold dry air like the crisp dry cold of a frosty night—and it is so simple in construction that it takes less current to operate, and requires a minimum of servicing. And you need have no hesitancy in specifying the quiet Iroquois, for it is backed by a $40,000,000 corporation engaged in business for a half-century.

GUARANTEED FOR 25 YEARS

No other manufacturer expresses his written confidence in his produce in such positive terms. Only through the use of the finest Lake copper combined with perfect design and workmanship, could these boilers be guaranteed for twenty-five years—a lifetime of trouble-free hot water service.

Complete literature explaining in detail the scientific principles of the Aquatherm and giving full information regarding sizes and types of Dahlquist Combinations, available upon request.

"A Nation's Hot Water Service"

Dahlquist Manufacturing Co.

FOR POWER - - - ECONOMY

The average flow of water over the U. S. and Canadian Falls of Niagara is estimated at 227,400 cubic feet per second, a potential horse power of approximately 4,000,000.

Efficient? More than that—dependable!

The high efficiency of Economy Pumps is important only because it is coupled with mechanical dependability. Simplified design, sturdy in assembly and sturdy in every part, insures the Economy user of satisfactory pump-service.

But important as is the advanced design of Economy Pumps, true economy is impossible without correct application. That is why Economy engineers who are constantly in touch with unusual pumping problems are often able to assist your engineers in securing large savings.

High total efficiency and the resulting economy require both high pump efficiency and correct application.

Whenever the peculiar conditions under which your pump must operate they are similar to others we have met. Let us work with you for a satisfactory solution of your problem.

Economy Double Suction Horizontal Split Case Single Stage Centrifugal Pump

A recent improvement in design, embodying the newest hydraulic development, enables us to feature in this pump a new high efficiency. It is the all around pump for water supply, boiler circulation, hot water circulation, etc., thoroughly conventional in design but with many refinements which add to its life and the satisfaction that it gives.

Outstanding Features

1. High efficiencies.
2. Sturdy mechanical design.
3. Carefully designed bearings with extra large oil wells.
4. Made in large number of cases so that an efficient pump can be furnished for any service.
5. Wearing rings flanged in both upper and lower half of case. No pins used.

Ask for Bulletin No. 404 describing this type of pump in detail. Write us.

Economy Pumping Machinery Company
3451 West 48th Place, Chicago

Whitest of Whites

This building is already a landmark in Portland on account of the brilliant whiteness combined with soft texture that distinguishes Cabot’s DOUBLE-WHITE

This remarkable job is done with only two coats. Two coats of Double-White cover the surface as completely as three coats of lead paint. Double-White is a Cabot Colloidal Compound, with pigment so much finer than common ground paint that it penetrates into the pores of wood, concrete or brick and has such a hold that it will not crack or peel off. Fine, smooth texture; no brush marks; dries flat with no shiny effect.

Cabot’s Old Virginia White

is the other Colloidal White for shingles, and also for stucco or brickwork where the “stain effect” is desired to preserve the natural texture of the material employed. Old Virginia White is the white of Cabot’s Waterproof Collopakes which are made medium-bodied in a great variety of soft pastel-like shades for decorating and waterproofing stucco, brick, stone and woodwork, and heavy-bodied for blinds, shutters, doors, trim, etc.

Cabot’s Creosote Stains

The Original and Standard Creosote Wood-preserving Stains for Shingles and other Rough Woodwork. Samples, color-cards and full information sent on request.

Samuel Cabot  
Incorporated  
Manufacturing Chemists  
141 Milk Street Boston, Mass.

IN commercial buildings Sedgwick Sidewalk Elevators are used extensively for removing ashes, transporting merchandise and similar purposes. Loads are lowered by gravity, the speed of descent being controlled by a powerful, self-locking band brake.

By using spur gearing of ratio suitable to service requirements, loads may be raised with a reasonable amount of effort. Standard outfits are built in capacities ranging from 500 to 2500 pounds, while special outfits to meet unusual conditions are designed where necessary.

THE SEDGWICK ARCHITECTS SERVICE DEPARTMENT is maintained to assist you in the proper selection and writing of specifications for Hand Power Dumb Waiter and Elevator equipment for all purposes.

Write for New Catalog

SEDGWICK MACHINE WORKS
159 West 15th Street New York

Manufacturers of "The Invalid Elevator," Freight Elevators, Fuel Lifts, Trunk Lifts, Ash Hoists, Gravity Drops, etc.

SAVE MONEY

Completely fabricated before shipment.
Shipped knock-down in easily handled sections.
Glued upper chord makes section solid.
Bolt holes bored and straps and splice plates bolted.
Detailed assembling instructions make easy erection.
Temporary scaffolds may be used if hoist is not available.

Satisfaction Assured

McKeown Bros. Company
112 West Adams Street
CHICAGO

Three Standard Types of Wood Roof Trusses
“Bowstring Trusses” “Lattice Trusses” “Factory-Built Trusses”

Recent Purchasers of Factory-Built Trusses:
Atchison, Topeka & Santa Fe Ry.
Chicago Daily News
Chicago, Rock Island & Pacific Ry. Co.
Crane Company
Illinois Bell Telephone Co.
Standard Oil Co.
Swift & Co.
Timken Roller Bearing Co.
U. S. Air Mail Hangars
Wright Aeronautical Corp.

Maintained for Immediate Service

Immediate delivery of materials is vital to the proper carrying out of the architect’s schedule.
The eighty-two plants manufacturing Cinder Concrete Building Units under Straub and Bo Patents maintain reserve stocks that insure these prompt deliveries up to any required amount.

And equally important, a large stock means that only carefully matured materials are permitted to be shipped from these plants.

Thoroughly Matured Cinder Concrete Building Units

The nature of Cinder Concrete makes desirable an aging of the product before it is used in wall construction. In Straub and Bo plants, the large stock is protected by the proper conditions of temperature and moisture during its early life and is thoroughly seasoned before delivery to the job.

The standard processes of quantity production and national organization under which these plants operate make possible this insurance of satisfactory material as well as immediate delivery.

Licensed and Subsidiary Plants throughout the Country

CINDER CONCRETE BUILDING UNITS
Manufactured under Straub and Bo Patents
Address all inquiries to Department M

NATIONAL BUILDING UNITS CORP
1600 ARCH STREET-PHILADELPHIA

Feralun
Anti-Slip Treads

TWO REPUBLICS LIFE BUILDING
EL PASO, TEXAS
Trost & Trost, Architects

Feralun thresholds safeguard elevator doorways. Accidents due to slipping are eliminated at minimum cost.

AMERICAN ABRASIVE METALS CO.
50 Church Street, New York

Beautiful—Enduring—Economical
Long-Bell Oak Flooring is used in homes from coast to coast.

THE LONG-BELL LUMBER CO.
R. A. Long Bldg., Kansas City, Mo.
Lumbermen since 1873

SIGNET
Back Water Trap
FLOOR DRAINS

All-metal construction—no rubber nor composition gaskets to wear out—no floating balls. Trap valve has metal-on-metal seat. Opens by positive pressure—closes by gravity. Leakage impossible.

Write for circular
Crampton-Farley Brass Co. Kansas City, Mo.

**EXPERIENCE**

It is by experience that we learn. Our long experience in manufacturing rugs and carpets for countless public places in all parts of the country is of inestimable value to every purchaser.

HARDWICK & MAGEE CO.  
650 W. LEHIGH AVE. - PHILADELPHIA

---

**MINERAL WOOL**

PREVENTS NOISY APARTMENTS

Mineral Wool, being fibrous and inelastic, is one of the best sound-proof materials available.  
As such it prevents the passage of the ever-present noises from one apartment to another—thus insuring the tenants freedom from disturbances.  
Mineral Wood also:

1—Insulates against heat and cold  
2—Is a fire resistant  
3—Is vermin proof

**SAMSON SPOT**

Sash Cord insures smooth, quiet, and continuous operation of double hung sash.

The Colored Spots are a trade mark which identifies the durable, dependable solid braided cotton cord for you anywhere and protects your specifications.

**APPROVED—BY EVERY USER**

Dayton-Dowd Centrifugal Pumps prove their reputation for economy and correct operation.

A long list of satisfied users containing such names as: U. S. Navy and Army, New York Central and Union Pacific Railways, Swift & Co., Chicago Tribune Bldg., Wrigley Bldg., Central Illinois Light Co., Bethlehem Steel Co., Ford Motors, and General Electric Co.—this list is inspiring even to a company as confident of their product as is the Dayton-Dowd Company.

The pumps which have gained this approval are the result of intensive study, testing and experimenting in design and materials. Complete co-operation between men who are specialists each in his own department, ultra-modern equipment and exacting tests and specifications have built a line of industrial pumps recognized as standard by all authorities.

For a thorough analysis of your pumping problems let a Dayton-Dowd man work with you.

**Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual**
Twinpax Fixtures — Never Empty

There is always a reserve package of toilet tissue. When the paper in one compartment is exhausted that in the other is available. Made in any color of tile. Attractive and convenient. Blue prints, etc., gladly sent on request.

NATIONAL PAPER PRODUCTS CO.
Architectural Service Division Carthage, N. Y.

Ask for A.I.A. filing catalog

For Use with Oil Burning Equipment

The design of the TACO SEMI-INDIRECT makes it especially adaptable for successful use with vertical storage tanks. As this heater is vertical, circulation to the tank starts very close to the floor and a positive circulation is established between the heater and the tank.

Tanks will be heated down to a level with the bottom of the heater.

THERMAL APPLIANCE CO.
542 Madison Ave. New York City

RADIATOR HANGER

--for all types of radiators including all makes of new tube types.
May we send full information?

HEALY-RUFF CO.
787 Hampden Ave., St. Paul, Minn.

Screwless Plates

Made of genuine Bakelite. Clasped in position through pressure of the fingers. Have no metal fastening screws—therefore surface of the plates is completely insulated from the switch or outlet mechanism.

Write for complete information.

HARVEY HUBBELL, INC., Bridgeport, Conn.
NEW YORK CHICAGO SAN FRANCISCO
Higgins’ White Drawing Ink is the most effective medium for correcting or working upon blue or brown prints. On dark backgrounds its opaque quality may always be depended upon to lay a sharp, white line.

ARCHITECTURALLY designed business rooms demand chairs harmonious in conception to complete them.

The B. L. Marble Chair Company
Bedford, Ohio
New York City, 101 Park Ave. Telephone, Caledonia 7026

DIXON’S SILICA-GRAPHITE PAINT

Because of its pigment, flake silica-graphite which has no equal as a paint pigment, Dixon’s Silica-Graphite Paint lasts longer and lowers paint maintenance costs.

This pigment is inert, does not combine with the vehicle and is not affected by acids, alkalies, gases, etc. Because of its flake formation, it expands and contracts and will not crack, peel or flake off. Due to its oily nature it has no equal in keeping moisture away from the under-surfaces. Write for long service records and Booklet 14 B.

American Wire Rope

Send for Illustrated Catalogue
American Steel & Wire Company
CHICAGO—NEW YORK

We show complete illustrations and details in Sweet’s Architectural Manual
RATES for Classified Advertisements
The American Architect
239 West 39th Street, New York

$2 for 25 words or less per insertion and 6 cents for each additional word. Where the answers are to be addressed in care of The American Architect seven (7) words should be allowed for the box number. All advertisements must be accompanied by full remittance. Publication dates 5th and 20th of month. Copy received until 12 m. on 1st and 15th of month preceding publication date.

FOR RENT

VERY light office and draftsroom. Call 156 E. 42nd St., Room 400. Rent $60 per month. Telephone Calendonia 1217. (525)

Specification Service

If you do not find specifications of any particular product, in which you are interested, in the current edition of THE AMERICAN ARCHITECT SPECIFICATION MANUAL we will be glad to supply them on request.

Our Specification Service Department is always at the disposal of our readers and our fifty years of service to the profession and our contact with producers have given us sources of information that are always available.

Write us when you think we can help.
THE AMERICAN ARCHITECT
239 West 39th Street
New York

S-M-C for All Large Jobs

THE use of S-M-C for all large jobs is standard practice among architects and engineers. S-M-C is easy to apply. It automatically takes its proper place both below and beyond the beam flange, well “clear” of the steel, allowing space for the concrete to flow freely. S-M-C gives real protection. It anchors the concrete coating to the steel, making it proof against heat, vibration, knocks and cracks.

On all first class work, specify Standardized Metal Caging (S-M-C) and make sure you get it.

MITCHELL-TAPPEN COMPANY
15 JOHN STREET
NEW YORK
Representatives in Principal Cities

PEOPLE are moving out to their shore cottages again,—cottages always too small to accommodate the week end parties.

An Attic or a Loft

can be made conveniently usable and most easily accessible with a Bessler Disappearing Stairway without taking up space or disturbing the arrangement of the living room below. Thus the whole house is made more roomy and enjoyable.

Particulars on request
The Bessler Disappearing Stairway Co.
Akron - - Ohio

New Doors and Windows by Curtis

Seven years ago the Curtis Companies made one of the most important contributions to small house architecture that had been made since the Age of Handicraft. They offered architects a complete line of standardized exterior and interior woodwork of true architectural character.

Today, the Curtis Companies announce a greatly enlarged and improved line of Curtis Woodwork, including the entrance shown above. These designs have been done under the direction of Frederick Lee Ackerman, New York, with the constructive criticism and co-operation of a score of the country’s leading architects.

These new items are now being stocked by Curtis dealers throughout the country. If you cannot yet see them locally, write on your letterhead for literature and complete information.

CURTIS COMPANIES SERVICE BUREAU
674 CURTIS BUILDING, CLINTON, IOWA
**VENETIAN STYLE**

A De Luxe Cabinet, entirely concealed by the beautiful etched mirror. The last word in bathroom furnishing. Made in three sizes. See Sweet's Index or write for illustrated booklet.

HESS WARMING & VENTILATING CO.  
Makers of Hess Welded Steel Furnaces  
1213 S. Western Avenue, Chicago.

---

**Spanish Tile**

It is wonderful what a remarkable transformation takes place when an "Edwards" Metal roof is properly applied to a house—all of the charm of the old Spanish Terra Cotta Roofing Tile is preserved, even to the color. The house takes on a new lease of life. It seems a better place to live in. An Edwards Metal or Tile Roof is a real commercial asset and will bring a better return in rent or sale.

Edwards Metal Roofing made to have the appearance of wood shingles, tile, slate, or any other roofing effect, and none of these fine artistic effects will cost any more than a plain, commonplace roof.

All Edwards Metal Roofing is easy to lay—no big expense for skilled labor—storms and winds will not wrench it loose or make it a rattle-trap. It is lightning-proof and fire-proof—Reduces Insurance Rates.

When an Edwards Roof is laid, it is there to stay.

Send for our literature—it explains

THE EDWARDS MFG. CO.  
The World's Largest Manufacturers of Metal Roofing, Metal Ceilings, Metal Garages, Portable Buildings, Rolling Steel Doors, etc.  
319-349 Eglinton Ave., Cincinnati, O.

---

**Examine this “Close-up” of Sheldon’s “Waveline” Roof**

Last month we showed you a complete Sheldon "Waveline" roof. Here, now, is a portion of that roof, as seen from near by. From whatever distance this roof is viewed, it conveys an impression of quaint, winning, "regular irregularity," with the added beauty, not brought out by the illustration, of the immaterial effects of Sheldon Semi-Weathering Green and Gray Slate. Please ask us for photographic reproductions, instructions for applying this strikingly individual roof, or any other information you may desire.

F. C. SHELDON SLATE COMPANY  
General Offices, Granville, N. Y.

St. Paul, Minn.  
101 Park Ave., Room 514  
35 Poinciana Apt.

New York City  
Cincinnati, O.  
S. C.

Detroit, Mich.  
Columbia, S. C.  
115 Francis Palms Bldg.

364 Rice St.  
17 Carolina Bank Bldg.

---

**Inter-Comm-Phone System**

The Stromberg-Carlson Inter-Comm-Phone System is satisfying the service demands of offices, factories, public buildings and large residences where simultaneous conversations are necessary but where the volume of traffic is not large enough for a switchboard system and a paid operator.

Easy to operate, it saves everybody's time, cuts down useless running around, speeds production and increases efficiency.

Made by a firm with more than thirty years experience in the making of voice transmission and voice reception apparatus. Write for literature describing Stromberg-Carlson Telephone and Radio apparatus and trade discounts.

Stromberg-Carlson Telephone Mfg. Co.  
1060 University Ave., Rochester, New York

---

EVERYTHING
FOR THE PREPARATION, COOKING
AND SERVING OF FOOD

(W. F. Dougherty, Jr., President, speaking)

"Every successful business owes its Prosperity to the Quality and Variety of SERVICE. This organization is no exception, and so well have we looked after the interests of our customers that the name DOUGHERTY is known for Reliability from Maine to California and from Canada to Florida."

W. F. DOUGHERTY & SONS
Incorporated
1009 ARCH STREET, PHILADELPHIA, PA.
Branch: 914 Atlantic Ave., Atlantic City, N. J.

USE the best possible paint on new buildings. The film that lies nearest the lumber is the key to satisfactory painting in the future.

The first paint applied should be Carter White Lead and pure linseed oil, colored to suit. Then the bogey of paint troubles will be forever banished for your client—provided he always uses as good paint as was originally specified.

The "Carter" label has been found on "the best in paint" for forty years. Be sure it's on the white lead you buy.

CARTER WHITE LEAD COMPANY
1204 S. Peoria Street
CHICAGO, ILL.

THE CUTLER MAIL CHUTE

Contracts, on the form required by the Post Office Department, are written in all cases, to cover the equipment complete ready to be turned over to the Government for Post Office use. Rough floor openings are not included and are usually provided for in the General Masonry Specification.

Send for Details GX 8 and 9

CUTLER MAIL CHUTE CO.
GENERAL OFFICES AND FACTORY
ROCHESTER, N.Y.

WYCKOFF Wood Pipe

Improved Steam Pipe Covering

For more than 70 years Wyckoff Products have been recognized and respected wherever wood pipe and covering for steam pipe is used.

Wyckoff engineering is still ahead of the times in these fields and Wyckoff methods of manufacture more than keep pace with the progress of production.

We have a catalog of real value to architects and engineers. A postcard will bring it to you.

A. WYCKOFF & SON CO., Elmira, N. Y.

The Architect . . .

... who specifies Jewett Refrigerators does so with a sense of satisfaction and security. He knows, positively, that his choice could not be bettered and can not be questioned.

WITHOUT obligation we work hand in hand with the architect preparing illustrations and blueprints based on floor plans showing Jewetts adapted to unusual requirements.

Disappearing Footlights

For schools, lodge rooms, lecture halls, and wherever a footlight is required only occasionally. When not in use they may be closed flush with the stage floor. Made in standard five-foot sections, ready for installation. No. 829, shown above, accommodates fifteen 60- or 75-watt lamps; is wired for independent control of white, red, and blue lights, and is furnished complete, with oak flooring.

OTHER KLEIGL LIGHTING SPECIALTIES

Borderlights Footlights Cove Lights Color Lighting Exit Signs Aisle Lights Step Lights Auto-Calls Wall Packs Floor Packs Panel Boards Dimmers Floodlighting Spotlights Music Stands Scenic Effects

for Descriptive Literature write:

KLEIGL BROS
UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.
ESTABLISHED 1896
THEATRICAL • DECORATIVE • SPECTACULAR LIGHTING
321 WEST 50TH STREET
NEW YORK, N.Y.

The Point is This

On the "boards" in your office you probably have a design of low pitched or flat roof that calls for an exceptional roofing material. One that will lie flat, stay flat and won't crack or peel.

The point is we ought to get together.

WRITE FOR SAMPLE BOOK N

John Boyle & Co., Inc.
Established 1860
112-114 Duane St. NEW YORK 70-72 Reade St.
Branch: 1317-1319 Pine St. St. Louis

A growing demand for finer commercial and residential structures is setting an exacting standard for builders, with the result that greater attention is being given to architectural treatments, quality of construction and conveniences.

Paralleling the gigantic progress of the building industry is the developed appreciation of the public for the beautiful. Building construction is fast combining industrial science with art. But buildings reflecting finished craftsmanship are the result only of long experience and conscientious purpose.

More than a quarter century ago, Julius Tishman & Sons, Inc., launched their first constructional enterprise, resolving then, in 1898, to make "Conscientious Purpose" the cornerstone of each new structure. For nearly thirty years they have endeavored in the construction of many business buildings and apartment homes to master the science and art of planning, building, and property management.

Seven new structures, three commercial and four Park Avenue apartments, will reach completion in 1927.

More proof that Illinois Vapor Systems enjoy a remarkable record for repeat orders among discriminating owners and builders. Write for "Vapor Details" Bulletin 22 (AIA 30c2)

This facsimile of a page from the New York Herald-Tribune shows a group of notable buildings, all equipped with Illinois Vapor Systems.

ILLINOIS ENGINEERING COMPANY
ROBT. L. GIFFORD, PRES.
INCORPORATED 1900
BRANCHES AND REPRESENTATIVES IN 40 CITIES
CHICAGO

Truscon Floretyles are sprung into prongs in the Locktyle Lath. A fast, labor-saving type of construction.

This improved type of steel Floretyle Construction insures absolute accuracy of the reinforced concrete joists and positive attachment of the ceiling below. Truscon Ribbed Steel Floretyles snap into prongs in the Locktyle Lath. Concrete is poured directly around the Floretyles for floor above and plaster applied to the Locktyle Lath for the ceiling below. This superior fireproof construction provides flat ceilings of long span and is light in weight, soundproof and economical. Sixty Truscon offices are ready to give you complete cooperation.

Write for literature and data.

TRUSCON STEEL COMPANY
ESTABLISHED 1903
YOUNGSTOWN, OHIO
Warehouses and Offices in all Principal Cities

ENTRANCE DOORS—WISE COMMUNITY CENTER OF HOLY CONGREGATION
Fechheimer, Horst & McCoy, Architects, Cincinnati, Ohio

THORP ENTRANCES

RAFTMANSHP means an appreciation and understanding of good design as well as mere facility in handling materials and tools. The Thorp organization is made up of men trained in the production of fine things. Their work will always receive that individualized and understanding service that brings the best results.

Thorp doors are constructed of the finest materials and along lines tending to give great strength and long life. Thorp doors are a standard specification.

AGENTS IN ALL PRINCIPAL CITIES

THORP FIREPROOF DOOR COMPANY
Minneapolis, Minnesota

SPECIFY THORP DOORS

More than fifty houses in the new West Atlantic City development, at Atlantic City, New Jersey, have been equipped with Burnham Boilers. This is in line with the policy laid down by the owner, Benjamin R. Fox, for this exclusive property.

His own residence, ranked as one of the finest on the New Jersey Shore, is heated by a vapor system, using a S-36-9 Burnham Square Sectional Boiler as the source of heat.

Our heating engineers are always at your immediate call, in connection with any heating or hot water supply problem. Use them freely.

Burnham Boiler Corporation

Irvington, N.Y.

New York City Office: 30 East 42nd Street
Representatives in all Principal Cities of the United States and Canada