

STACKS 7

RECEIVED

OCT 20 31

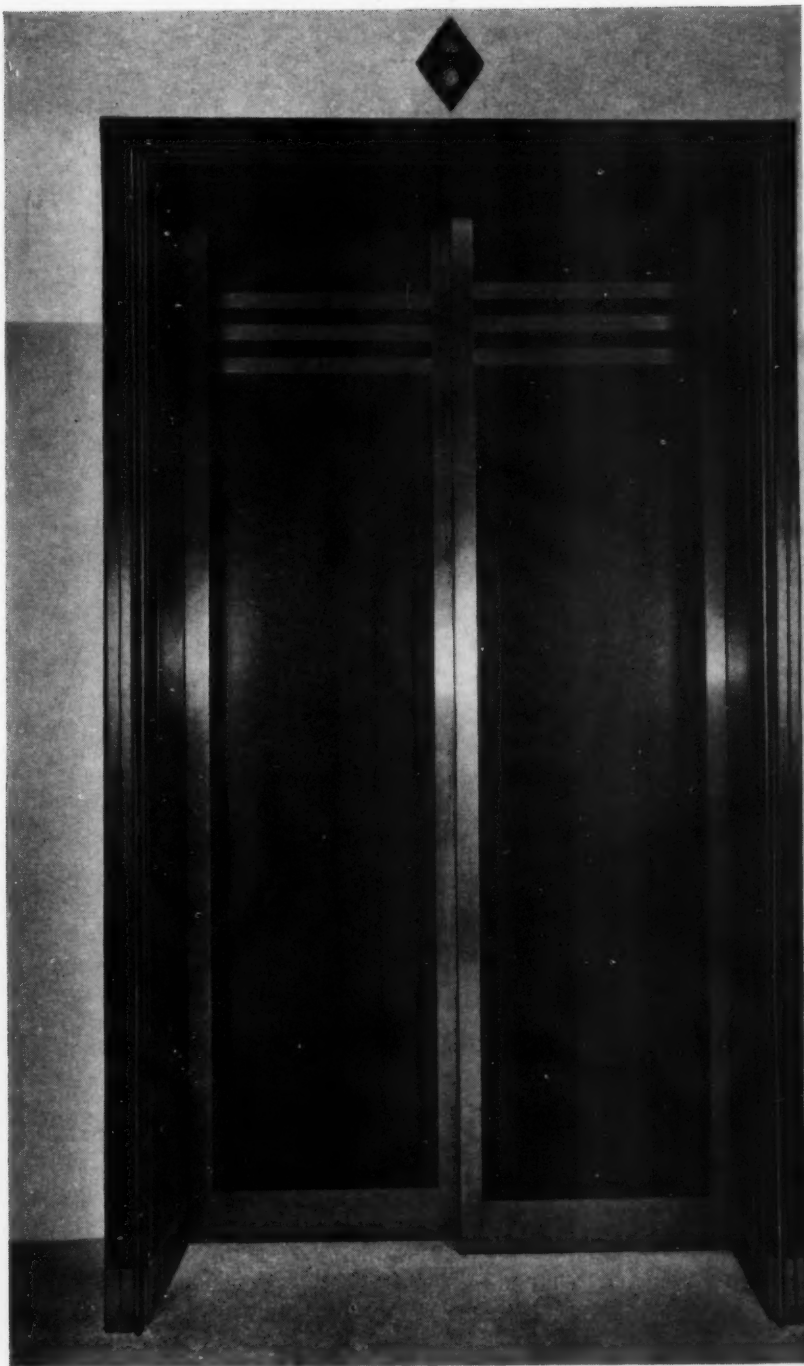
MIAMI UNIVERSITY
LIBRARY



AMERICAN ARCHITECT

FOUNDED 1876

November 1931



Specify **THORP DOORS**

NORTHWESTERN BELL
TELEPHONE CO.
Minneapolis, Minnesota

HEWITT & BROWN, Inc., Minneapolis
Architects and Engineers

The elevator enclosures shown here, typical of all elevator doors above the main lobby, are being furnished and installed in the new 24-story building of the Northwestern Bell Telephone Company by Thorp in accordance with the architect's designs and specifications.

THE doors, cabinet jambs and trim are furniture steel finished in a special shade of blue enamel to harmonize with the marble trim. The relief effect is white bronze, emphasizing a handsome simplicity. The enclosures carry the labels of the National Board of Fire Underwriters. This involved special designing to hold to the architectural requirements while meeting the Underwriters' standards. Thorp's contract covered the complete equipment including 12-gauge bucks, sills, hardware and installation.

THORP FIREPROOF DOOR CO.
MINNEAPOLIS MINNESOTA



Forty big doors opened and closed by one man!

over
50 years
1880/1931

R-W dooR-Way
installation at
St. Louis Arena

Here's another instance how R-W engineers met a big problem in a big way with R-W equipment. Four 68 ft. openings 15 ft. high are each equipped with 10 doors. One entrance door at each end is hinged to the supporting column of the building and folds back against the wall. The remaining doors slide around the corner, supported from an overhead track, leaving the entire width of each 68 ft. opening clear.

The intricacies of this dooR-Way problem were made simple by the use of R-W equipment. Free passage and thorough ventilation are features which are second only to the ease and speed of operation. Up-keep costs on this equipment are negligible. The installation brought economy as well as convenience to the operation of this huge arena.

Whatever your dooR-Way problem may be, consult an R-W engineer without cost or obligation. Meantime, write for illustrated literature describing R-W equipment in use on big doorway installations.



"Quality leaves its imprint"

Richards-Wilcox Mfg. Co.

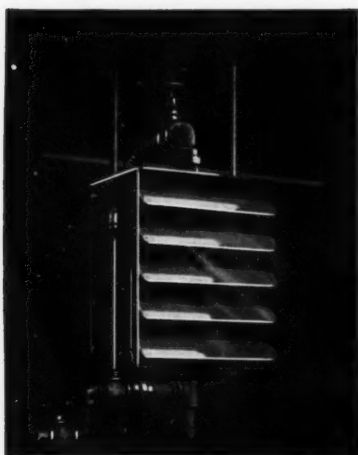
"A HANGER FOR ANY DOOR THAT SLIDES"
AURORA, ILLINOIS, U.S.A.

Branches: New York Chicago Boston Philadelphia Cleveland Cincinnati
Indianapolis St. Louis New Orleans Des Moines Minneapolis Kansas City
Los Angeles San Francisco Omaha Seattle Detroit Atlanta Pittsburgh
Milwaukee Richards-Wilcox Canadian Co., Ltd., London, Ont., Montreal, Winnipeg



only Controlled and Directed Heat is » » » PROPER HEAT

VENTURAFIN UNIT HEATERS GIVE
BOTH . . . AND AT A PRICE YOU
CANNOT AFFORD TO OVERLOOK



AFTER all, it is not just a question of how *much* heat. Heat, to be beneficial, economical and right in every way, must be also *controlled* and *directed* heat.

Because they force heated air downward at *controlled* speeds *where* and *when* it is wanted and *as much as* is wanted, Venturafin Unit Heaters have become one of the most widely sold unit heaters in the country. A Venturafin Unit Heater equipped factory, shop or plant is free from heating irregularities . . . no icy drafts at doorways . . . no heat "pockets" or cold corners . . . no wasteful heating of ceiling areas first, just even, clean and economical heat.

Venturafin Units are made in a number of sizes to fit every type of steam heating requirement. They can be easily and quickly installed in out-of-the-way places, saving valuable floor space and increasing efficiency. They can be installed in new buildings or old, singly or in groups, to replace or supplement present heating equipment.

Whether planning a new building, or making alteration in an old, you will find it worth while to investigate the many advantages of Venturafin Unit Heaters. Phone our nearest Branch Office for the new illustrated Venturafin Catalog and Application Guide, or write direct to the factory.

AMERICAN BLOWER CORPORATION, DETROIT, MICH.
CANADIAN SIROCCO CO., LIMITED, WINDSOR, ONTARIO
BRANCH OFFICES IN ALL PRINCIPAL CITIES
H E A T W I T H U N I T H E A T E R S

Venturafin Unit Heaters are made for high, medium or low pressure steam applications. Installation from wall or ceiling with ordinary 3/4-inch hanger pipes prevents sagging pipes, assures permanence. They are equipped with a 3-speed (high, medium, low) switch and can be automatically controlled by a Mercoid Thermostat.



(1183)

American Architect, published monthly by International Publications, Inc., 57th Street at 8th Avenue, New York, N. Y.; Yearly subscription \$5.00. Entered as second class matter, April 5th, 1926, at the Post Office, at New York, N. Y. under the act of March 3rd, 1879. Issue number 2601, dated November, 1931.



Painted Decoration

BANKS
CHURCHES
CLUBS
SYNAGOGUES
HOTELS
RESTAURANTS
THEATRES
PUBLIC
BUILDINGS

Under the direction of the Architects, we have executed decoration in the following buildings:

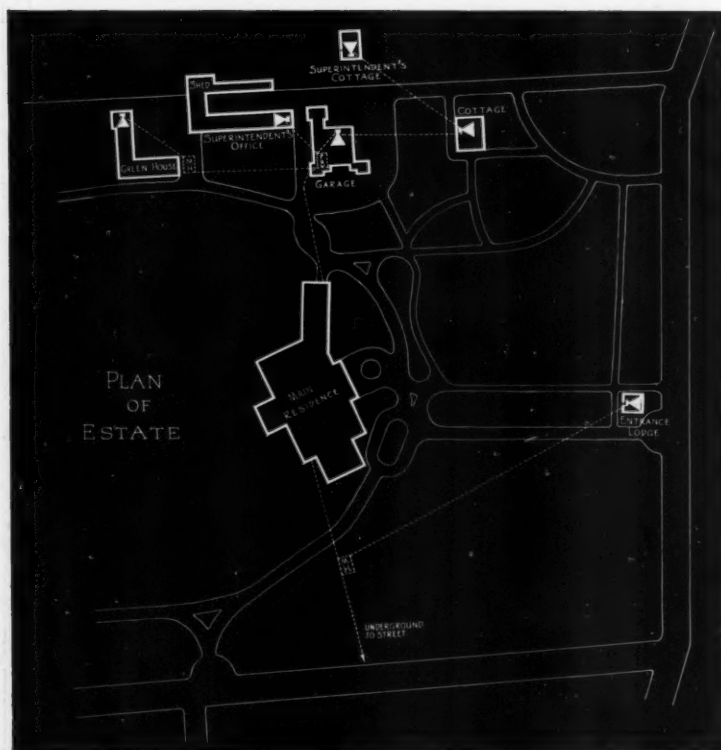
- Empire State Building New York City
SHREVE, LAMB AND HARMON, ARCHITECTS
- New Waldorf-Astoria Hotel . . . New York City
Main Foyer, Lobby, and Appurtenant Rooms
SCHULTZE AND WEAVER, ARCHITECTS
- National Title Guaranty Co. Bank . Brooklyn, N. Y.
CORBETT, HARRISON AND MacMURRAY, ARCHITECTS
- Club Boca Raton Boca Raton, Florida
SCHULTZE AND WEAVER, ARCHITECTS
- 120 Wall Street, Lobby New York City
FIRM OF ELY JACQUES KAHN, ARCHITECTS
- City Bank Farmers Loan and Trust Co. . N. Y. City
CROSS AND CROSS, ARCHITECTS
- Horn and Hardart Restaurants (2) . New York City
F. P. PLATT AND BRO., ARCHITECTS
- Roxy Theatre New York City
WALTER W. AHLSCHLAGER, ARCHITECT
- Paramount Theatre Stapleton, Staten Island
C. W. AND GEO. L. RAPP, ARCHITECTS
- Warner Bros. Madison Theatre . Albany, New York
THOMAS W. LAMB, ARCHITECT
- St. James' Cathedral Chicago, Illinois
MAYERS, MURRAY AND PHILLIP, ARCHITECTS
- St. Catherine of Sienna's Church . New York City
WILFRID E. ANTHONY, ARCHITECT
- St. Thomas' Chapel (timber ceiling) . . N. Y. City
TALBOT F. HAMLIN, ARCHITECT
- St. Gabriel's Church Washington, D. C.
MAGINNIS AND WALSH, ARCHITECTS
- Temple Beth Elohim Brooklyn, New York
MORTIMER J. FREEHOF, ARCHITECT

RAMBUSCH
Painting, Decorating and Murals
2 West 45th St. ~ New York City





BUILT-IN CONDUIT AND 78 OUTLETS PROVIDE FOR TELEPHONE CONVENIENCE ON THIS ESTATE



TODAY, communication from room to room, over regular Bell telephones, is usual in the residences of large estates. The comfort of the occupants makes it desirable. The efficient operation of the establishment makes it imperative. . . . And direct communication with other buildings about the grounds is equally important.

An interesting example of this complete telephone convenience is the estate of Mr. Hubert T. Parson, West Long Branch, New Jersey. In the residence itself are 67 telephone outlets, distributed conveniently on all floors, including ten in the basement and one in the sub-basement. There are five more outlets in the service wing and one in each of six detached buildings,

Complete telephone convenience is assured on the estate of Mr. Hubert T. Parson, West Long Branch, New Jersey, by a Bell intercommunicating system and built-in conduit connecting 78 outlets. 75 of these outlets are shown on the plans. One in the sub-basement and two in the fourth floor solarium complete the total. HORACE TRUMBAUER, Architect, Philadelphia.

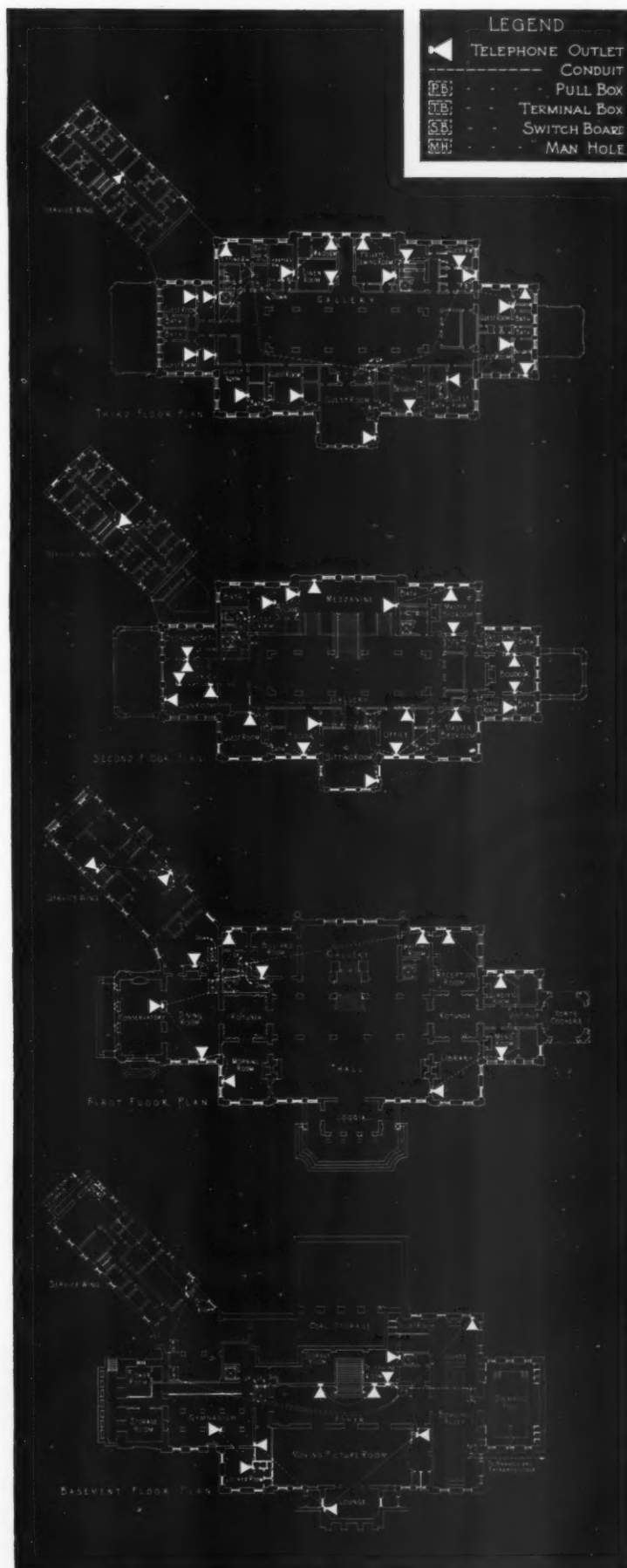
connected with the residence by underground conduit—a total of 78 in all. A number of individual rooms contain two outlets, thus offering a choice of telephone locations.

These 78 outlets are served by 53 telephones, some of which may be moved from one outlet to another as occasion demands. The telephones are linked together by a 740-A Bell intercommunicating system, with four central-office trunk lines.

This equipment makes it possible to talk from any part of the residence to any other—to other buildings on the estate—or to the outside world—with equal ease, over the same Bell instruments. It saves endless steps and countless minutes—keeps servants more content—and owners more comfortable.

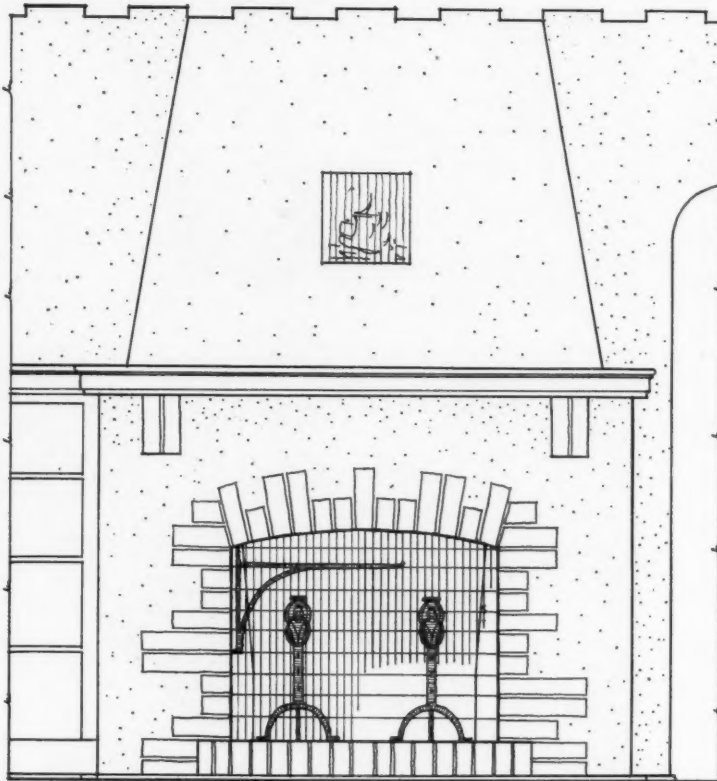
Telephone convenience is as much a proper part of the modern small house, as of the large. It is easily provided for in *any* house by including telephone conduit in walls and floors during construction. The conduit permits outlets to be located wherever they're wanted, conceals all wiring and protects against certain kinds of service interruptions.

Telephone convenience always ought to be planned carefully in advance. The local telephone company can help you—without charge. Just call the Business Office.

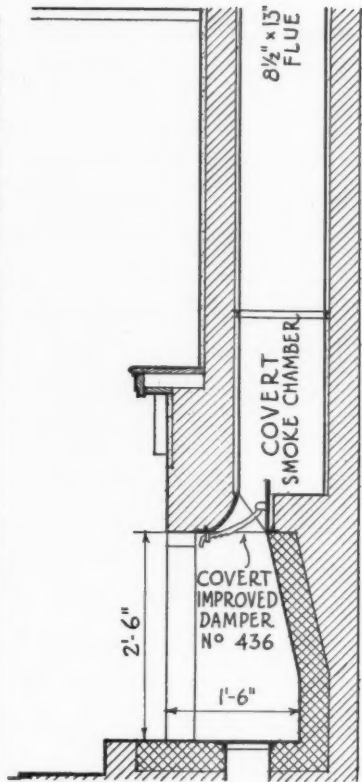


COVERT

Fireplace Construction



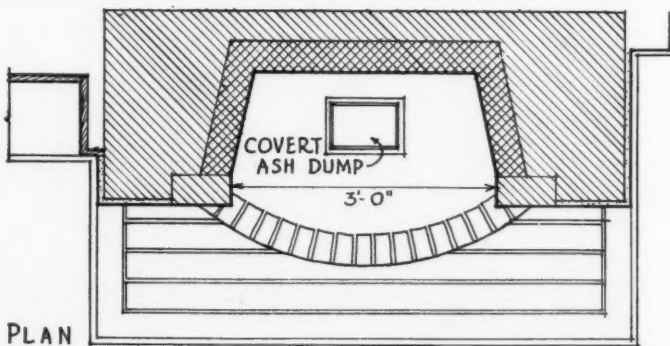
ELEVATION



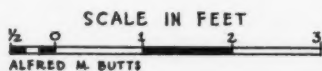
SECTION

FIREPLACE- RESIDENCE AT LARCHMONT, N.Y.

L. S. BEARDSLEY, ARCHITECT



PLAN



COVERT

FIREPLACE DAMPERS



THIS IS THE SIXTH OF A SERIES ON "SUCCESSFUL FIREPLACES"
IF YOU WILL SEND US YOUR ADDRESS WE SHALL GLADLY FORWARD YOU A COMPLETE SET OF THE SERIES
THE H. W. COVERT COMPANY, 229 East 37th Street, New York



PREVENT EFFLORESCENCE

Efflorescence is caused by the presence of soluble salts in masonry materials. When reached by water, these salts dissolve and thus work their way to the surface of the wall. . . . Brixment never causes efflorescence because it contains less than $\frac{1}{2}$ of 1% of soluble salts. . . Furthermore the waterproofing in Brixment mortar prevents water from entering the wall and dissolving any salts which may be present in the sand or the brick. Brixment is therefore endorsed by manufacturers of face brick.

LOUISVILLE CEMENT COMPANY, *Incorporated*, LOUISVILLE, KY.

District Sales Offices: 1610 Builders Bldg., Chicago; 600 Murphy Bldg., Detroit; 101 Park Ave., New York

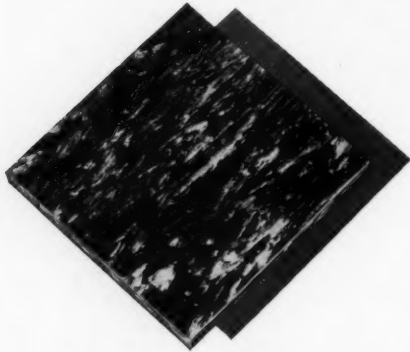
Mills: Brixment, N. Y. and Speed, Ind.

BRIXMENT

A Cement for Masonry and Stucco



Let These Floors Help You Make An Office as Attractive as a Home



ARCHITECTS know that in recent years men have come to realize the value and pleasure of attractive offices. In Stedman Reinforced* Rubber Tile is found a new kind of floor beauty, and a new kind of floor comfort, possible only with this material. Practical values are there, too:—the practical value of easy maintenance in a constantly fresh condition, and the practical value of a long and useful life.

Our architectural catalogue with color charts will be gladly sent you on request.

STEDMAN RUBBER FLOORING COMPANY
South Braintree Massachusetts

Stedman Reinforced* Rubber Tile

***REINFORCED:** In selecting a Stedman floor, you secure all the recognized advantages of rubber flooring intensified by the exclusive Stedman method of reinforcement and manufactured by a company which makes only this single product and in one quality only—the best that it is possible to produce.



Private Offices,
24th and 25th Floors,
221 North La Salle St., Chicago
Wallace F. Yerxes, Architect



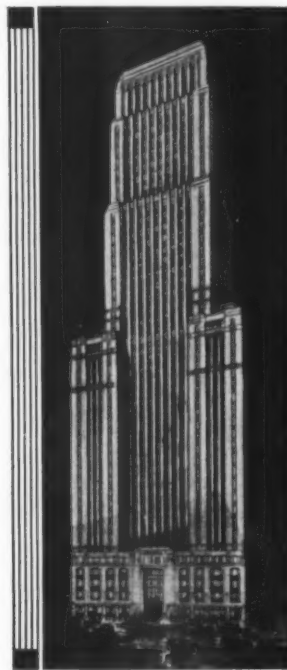
Top: An attractive lobby; attractively lighted.

Bottom: Every office can provide as high intensities as the most particular tenant would require.

Assuring the ELECTRICAL FUTURE of the ONE LA SALLE BUILDING

L. J. SHERIDAN & COMPANY,
Exclusive Agents

By K. M. VITZTHUM, of
K. M. Vitzthum & Co., Architects,
Chicago



Adequate office illumination, for the present and for the future, is a prime attraction for tenants in the One La Salle Building.

ADEQUATE office illumination was used as a selling point by the renting agents in obtaining tenants for the new One La Salle Building in Chicago. And this advantage, which helped to fill the building to 90% of capacity in quick time, will remain an advantage for years to come, even though lighting standards advance rapidly. Reserve capacity has been provided which assures the building against quick electrical obsolescence.

In setting standards for present and probable future lighting requirements in this building, the co-operation of the Lighting Bureau of the local electric service company proved to be of great value. Here was found a knowledge of the trend toward increased use of electricity, together with a fund of experience concerning inadequate electric service in buildings

now only a few years old. With this knowledge and experience as a basis, a practical and economical wiring and lighting installation was designed that triumphed over the architectural difficulties and accomplished the sought-for results.

There is an average installed lighting intensity throughout this building of more than two watts per square foot. In actual working areas, of course, this intensity is even higher. And for the future, when demands for lighting and electricity may be expected to reach a level higher than today, the wiring installation can carry double the electricity now used.

Building for permanence cannot tolerate a skimpy or inflexible electrical installation. Buildings erected today must be adaptable to developments that are typified by the ever-increasing use of electricity.

For information about trends in lighting standards, and about adequate wiring, call on the Lighting Bureau of your local electric service company, or write direct

NATIONAL ELECTRIC LIGHT ASSOCIATION, 420 LEXINGTON AVENUE, NEW YORK, N. Y.

L. SONNEBORN SONS, Inc.

GUARANTEE:



A Complete Line of Products For Preserving and Waterproofing Foundations, Walls and Floors

IF YOU, AS AN ARCHITECT, tried to investigate every product which bids for your approval, you wouldn't have time for anything else. Sonneborn does not expect you to keep our products all in mind. But—

Remember that if you want a product for preserving any kind of walls, floors or foundations, Sonneborn has it.

Remember that Sonneborn guarantees the job . . . stands behind it . . . makes good.

Remember that Sonneborn offers a Consulting Service which expertly helps you to solve any problem of wearproofing or waterproofing, inside or out.

Our many years of laboratory research . . . our experience in treating thousands of office structures, institutions, factories and buildings of every type—many of the most famous in the world . . . our widely varied lines and far-reaching service facilities . . . all this, we believe, is assurance that your specifications will be met to the letter.

If you want to preserve any part of a building, old or new, call in Sonneborn. Learn to know us, to use us. Our experts will honestly give you their best. Write us for information.

S

Some Sonneborn Products

LAPIDOLITH

Liquid chemical concrete floor hardener welds loose particles into a close-grained mass, granite-hard.

LIGNOPHOL

For finishing, preserving and wearproofing wood floors. Penetrates wood with life-giving gums and oils.

HYDROCIDÉ NO. 633

Plaster bond and damp-proofing paint for interior of exterior walls above ground.

HYDROCIDÉ NO. 648

Mastic, Semi-Mastic

For waterproofing and damp-proofing foundation walls and footings.

HYDROCIDÉ INTEGRAL

Paste, Powder

For waterproofing mass concrete, stucco, cement plaster and brick mortar.

CEMCOAT FLOOR ENAMEL

Interior and Exterior Paints

For all types of floors where attractive finish is important. Produces dustless, sanitary, high-gloss finish. Extremely durable. Comes in colors.



L. SONNEBORN SONS, Inc., 114 FIFTH AVENUE, NEW YORK



*The W. V. C. Ruxton stable at Greenwich, Conn.
Ludlow and Peabody, Architects*

In the Modern "Home of the Horse"

... stable fittings by FISKE

THE W. V. C. Ruxton stable at Greenwich, Conn., is another notable FISKE installation.

That FISKE fittings are found in so many of America's finest "homes of the horse" is in itself a tribute to the FISKE organization. Architects know that the FISKE background of 73 years of specialized experience is the owner's guarantee of *the best* in design, materials and workmanship.

FISKE maintains consultatory and design services which are gladly offered to architects interested in stable erection or reconstruction. Write for illustrated catalogue of what FISKE has done for others in "the home of the horse."

J.W. Fiske IRON WORKS
80 Park Place — New York
ESTABLISHED 1858



FISKE also makes a specialty of every type of ornamental metal for residential and industrial purposes. Entrance gates, fencing, grilles and railings, sundials, gratings and frames for the drainage systems of private estates are a few FISKE products. Booklet on any of our specialized lines will be sent on request. Kindly mention products you are particularly interested in.

See our pages in "SWEET'S"

SPECIALISTS IN ORNAMENTAL METAL WORK

FOR NOVEMBER 1931

11



Residence
Bayville, L. I.

Architects
Delano & Aldrich

Perfect Harmony

Variegated Vermont Slate, in softly blended colors and graduated thicknesses, following a carefully worked-out design, give this Tudor Stone Roof a dignity and restraint in perfect harmony with the architecture of this stately Georgian residence.

Rising and Nelson Slate Company

WEST PAWLET, VERMONT

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

CHICAGO

DETROIT

PHILADELPHIA

BOSTON

100% *Better* reflection!

WINDOWS are important. They can add immeasurably to the beauty of a finished building—or they can detract from it. That's why more and more architects, to make

sure of beautiful windows, are specifying Pennvernon Window Glass.

If you could see two buildings side by side—one glazed with Pennvernon, the other with ordinary window glass—the difference between the beauty and reflective qualities of the windows of the two buildings would be immediately obvious to you.

For Pennvernon, in its two-sided brilliance of finish, its life-like transparency, its unique freedom from distortion and its fine reflection, more nearly approaches plate glass than any other window glass.

The reason? Our exclusive method of manufacture. It not only gives Pennvernon greater beauty—but longer lasting beauty, too. For Pennvernon's greater density makes its surfaces more impervious to wear and abrasion.

Pennvernon is easily obtained—in standard thicknesses up to $\frac{3}{8}$ ". Any warehouse of the Pittsburgh Plate Glass Company can supply you—as well as glass jobbers. Ask to see samples. And write for our interesting booklet on the manufacture of this brighter glass. Address Pittsburgh Plate Glass Company, Grant Building, Pittsburgh, Pa.



Pennvernon
flat drawn
WINDOW GLASS



Only Bi-Flax

Combines Insulation with Metal Lath

This One Building Material gives you Flax-li-num Insulation, Waterproof Building Paper and Flat Expanded Painted Metal Lath . . .

WHEN you use Bi-Flax, you are getting the high insulating efficiency of Flax-li-num and the acknowledged superior plaster base qualities of metal lath.

Flax-li-num, by bureau of standards tests has a thermal conductivity of 0.31, per 1" thickness. In Bi-Flax, none of the insulating efficiency of Flax-li-num is sacrificed. Bi-Flax has a lower thermal conductivity by test than any insulating plaster base yet developed. For the first time it is possible to put real insulation into a

building with an insulating plaster base. In addition, Bi-Flax can be used effectively in sound deadening.

The building industry has accepted metal lath as the ideal plaster base. In the development of Bi-Flax, every known metal lath was analyzed and tested. The lath used in Bi-Flax is diamond mesh flat expanded



Flax-li-num insulation, water-proof building paper and metal lath plaster base, economically installed at one operation.

painted—all is subject to rigid tests and manufactured to specification.

Bi-Flax represents the highest possible standard of quality and efficiency. At the same time it is economical. Combining three materials into one unit, applied in one operation, Bi-Flax saves 44% of the labor cost of applying each separately.

Architects have given Bi-Flax an unusual acceptance. Introduced a little more than a year ago, architects specifications have put more than 6,000,000 feet of Bi-Flax into all types of construction. We believe you will be interested in Bi-Flax—will recognize that Bi-Flax meets a definite demand for an efficient insulating plaster base. May we send you a sample?

FLAX-LI-NUM INSULATING CO., St. Paul, Minnesota

Dept. A.A. 6

Please send for my inspection a sample of Bi-Flax.

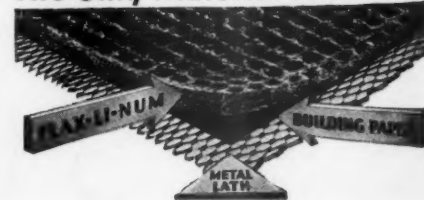
NAME _____

FIRM NAME _____

ADDRESS _____

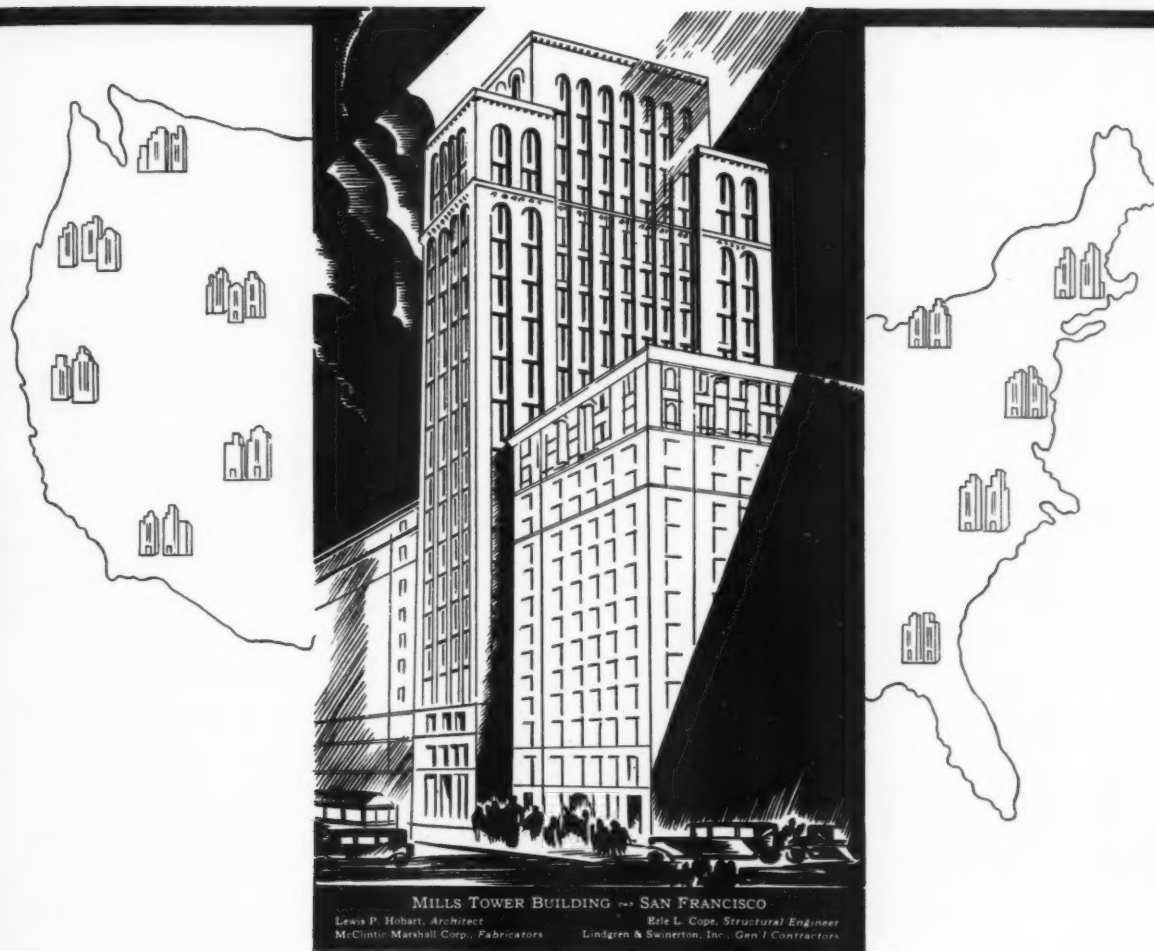
BI-FLAX

The *Only* Material of Its Kind



AMERICAN ARCHITECT

NATION-WIDE POPULARITY



MILLS TOWER BUILDING - SAN FRANCISCO

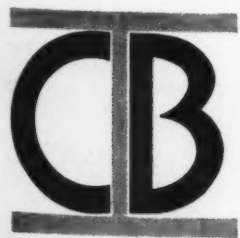
Lewis P. Hobart, Architect

Erie L. Cope, Structural Engineer

McClintic Marshall Corp., Fabricators

Lindgren & Swinerton, Inc., Gen'l Contractors

PICTURED above is the Mills Tower Building in San Francisco, one of the more recent additions to the imposing list of buildings in which C B Sections have formed the steel framework. Across the continent, from New York to San Francisco, the magnificent skyscrapers of this modern era of construction form impressive silhouettes against the skylines of our cities. A conspicuous feature in this notable construction is the use of C B Sections. Such popularity is the best indication of their adequacy to the needs of architects and designers. The advantages of C B Sections apply to any type of construction involving the use of structural steel.



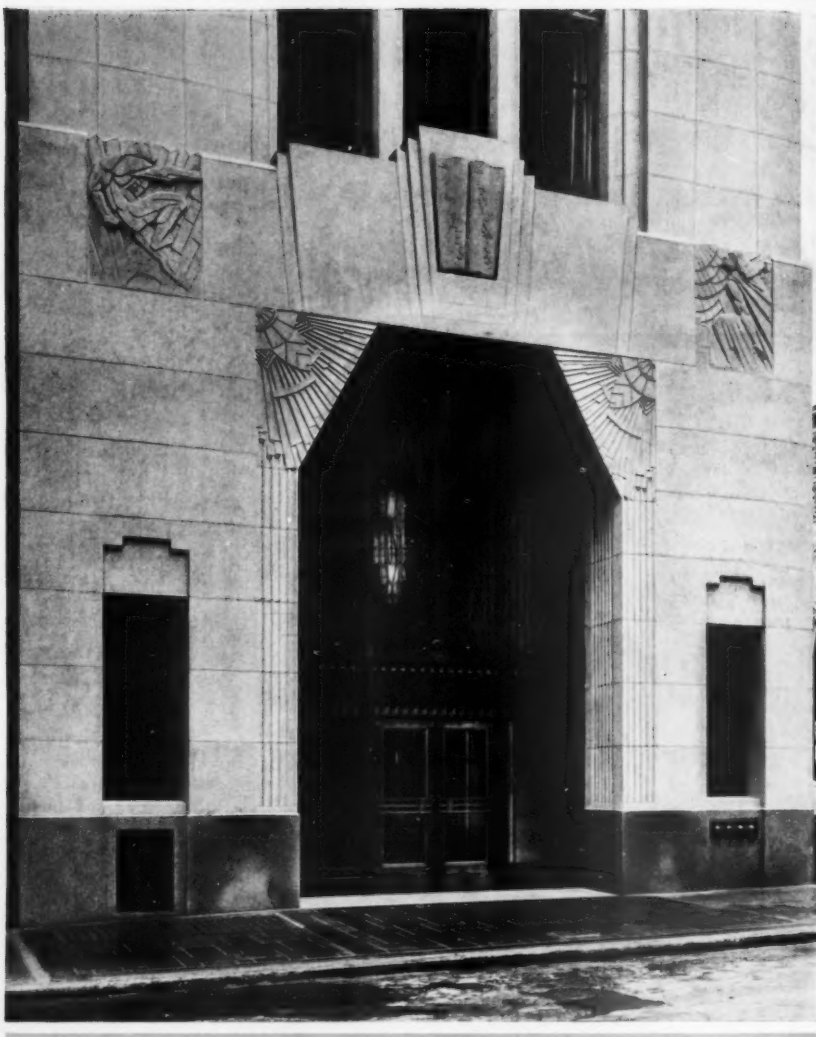
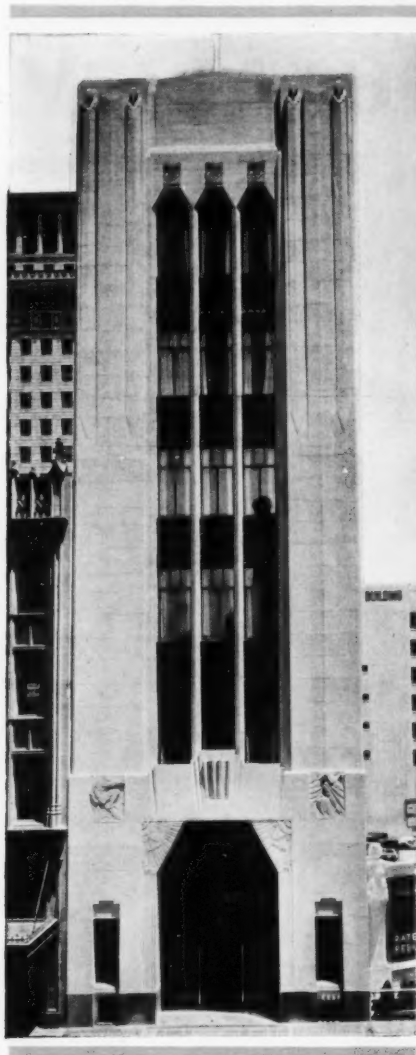
CARNEGIE STEEL COMPANY - PITTSBURGH

Subsidiary of United States Steel Corporation

157

SECTIONS

The Title Insurance and Guaranty Building, San Francisco, faced with cast stone of Atlas White portland cement. O'Brien Bros. & W. D. Peugh, architects; Industrial Construction Co., general contractor, all of San Francisco. Cast stone furnished by Stonetex Corporation, San Francisco.



A building stone that is made to order

THE exact color or combination of colors desired, a variety of textures, an enduring stone at an economical cost—these are some of the advantages secured with cast stone of non-staining Atlas White portland cement. Since it is made to order, cast stone made with white portland cement places at the disposal of the designer of buildings a wide choice of colorful facing stones. It opens to the owner a selection of warm, distinctive exterior effects for new or remodeled buildings.

Cast stone manufacturers will furnish on request samples of fine cast stone made with Atlas White or Atlas *Waterproofed* White portland cement.



CONCRETE FOR PERMANENCE

Universal Atlas Cement Co.

Subsidiary of United  States Steel Corporation

CHICAGO • NEW YORK • PITTSBURGH • MINNEAPOLIS • KANSAS CITY



© U. A. C. Co.



This Month's Cover

MURAL IN WALDORF-ASTORIA

PROBABLY the most talked about murals of the year will be those done by Jose Maria Sert, a Spanish artist, for the new Waldorf-Astoria. So effective are they that the room was at once christened the "Sert Room." Some of the most interesting of the murals are printed on pages 38 and 39 of this issue.

The artist limited his colors to black, claret red and white over a silver background. When unlighted, the effect is sombre, almost gloomy. But when lighted, the sombre colors become alive and fascinating.

Senor Sert is regarded as one of the outstanding artists of today. Some of his most admired paintings adorn the Municipal Building in Barcelona. Much of his work is found in the cathedrals of Spain and in the Royal Palace in Madrid. The only American examples of his work, outside of the murals in the Waldorf-Astoria, are those for the Joshua Cosden house at Palm Beach, which have as their subject, "Sinbad the Sailor."

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

ERNEST EBERHARD, *Managing Editor* WALTER E. DEXTER, *Advertising Manager*
RAY W. SHERMAN, *Editorial Director* R. F. GARDNER, *Business Manager*

IN THIS ISSUE

Cover—Gayety: A mural by Jose Maria Sert

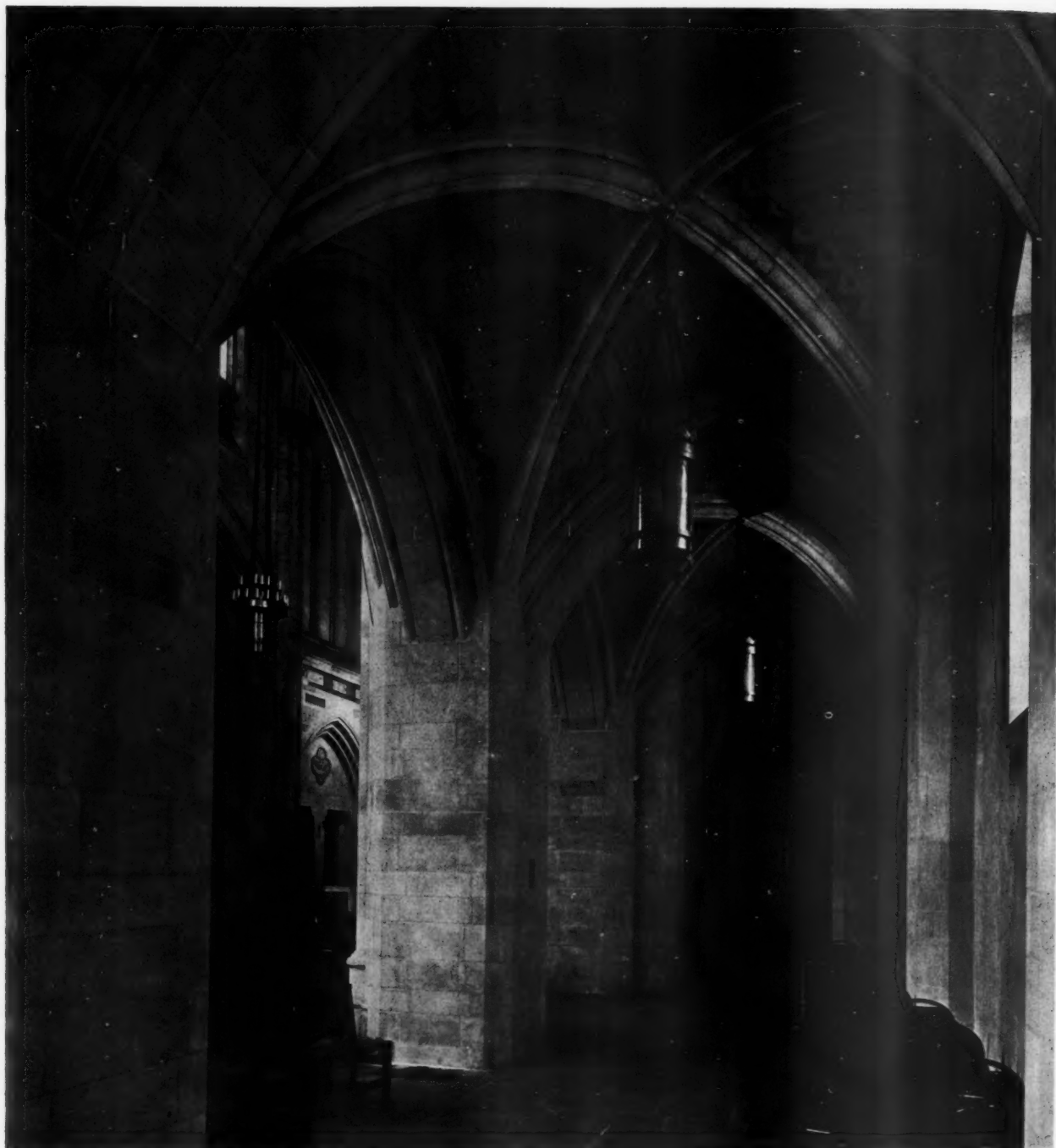
Will It Be Just Another Report?.....	Benjamin F. Betts	19
Let's Talk About the Business We Have Got.....	Ernest Eberhard	20
Northwest Architects Criticize Government.....		22
With an Outdoor Living Room.....		24
Good Ideas.....		26
Land of Don Quixote.....	Birge M. Clark	28
How We Get New Clients by Using Movies.....	Louis A. Brown, Jr.	32
Gardens on the Roofs of Radio City.....	L. Andrew Reinhard	34
How to Set Up a System for the Cost Plus Fee.....	Harold R. Sleeper	36
Murals in the New Waldorf-Astoria.....	Jose Maria Sert	38
A Plan to Rebuild Our Slums.....	Rossel Edward Mitchell	40
Metalwork in Irving Trust Building.....	Eugene Clute	42
Great Builders I Have Known.....	J. A. Schweinfurth	48
As It Looks to the Editors.....		50
Out of the South.....	Edwin Key Hodgkins and M. E. Boyer, Jr.	52
What Architects Are Talking About.....		54
Books		60
New Catalogs		99

Next Month

PLASTER CRACKS—What causes them and how to avoid them
DECORATION—How Voorhees, Gmelin and Walker handle it
STEEL—Some hints that make work quicker, better, cheaper

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

William Randolph Hearst, President; Thomas J. White, Vice President; John Randolph Hearst, Vice President; Arthur S. Moore, Secretary; Austin W. Clark, Treasurer. Copyright, 1931, by International Publications, Inc. Single copies, 50 cents. Subscription price, United States and Possessions, \$5.00 per year; \$7.00 for two years; Canada, \$1.00 extra; foreign countries, \$2.00 extra. Entered as second-class matter, April 5, 1926, at the Post Office at New York, N. Y., under the act of March 3, 1879. AMERICAN ARCHITECT is fully protected by copyright and nothing that appears in it may be reproduced either wholly or in part without permission.



FIRST UNITARIAN CHURCH, Chicago, Ill.

DENISON B. HULL & STANLEY W. HAHN
Associate Architects

ACOUSTIC MASONRY

Timbrel Tile Ceiling Vaults in Aisle and Nave of Masonry and Designed with a Soffit Course of Akoustolith Sound Absorbing Stone with Special Colored Akoustolith Borders and Conoids

R. GUASTAVINO COMPANY

40 COURT STREET, BOSTON, MASS.

225 WEST 34th STREET, NEW YORK, N. Y.

R. GUASTAVINO CO., OF CANADA, Ltd., New Birks Building, Montreal, P. Q.

WILL IT BE Just Another Report?

By BENJAMIN F. BETTS, A.I.A.

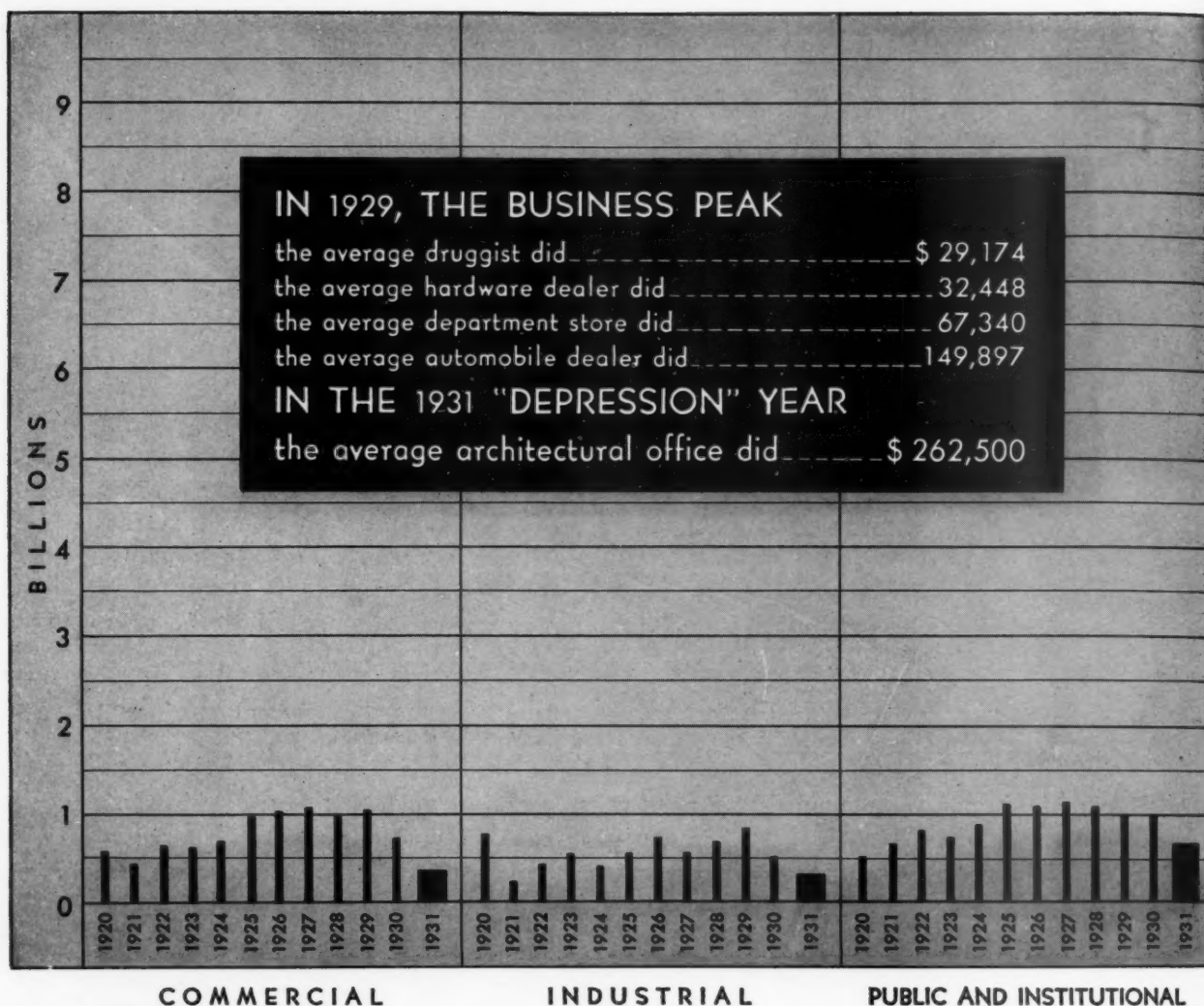
PRESIDENT HOOVER has announced a conference on housing and home ownership in the United States. This conference is to be held in Washington, D. C., from December second to fifth. Representatives of all interests in the field of housing, including architects, contractors, builders, real estate operators, bankers and sociologists will attend. Some twenty-five committees have been studying various aspects of the housing question for several months. It is anticipated that about one thousand citizens associated with building and housing activities will contribute to this home building forum.

This announcement offers food for thought. Perhaps it means that the importance of the housing question in relation to our national welfare is at last realized and is to be given the intense study it deserves. Its results may be invaluable economically, aesthetically and socially. It is probable that lack of success in housing movements has often been due to failure to coordinate the many factors that go to make any building project successful. The necessity of coordination is recognized by the President's conference, in which these various agencies are to be brought together on common ground.

THE conference can be depended upon to afford an opportunity for the master minds of the building industry and allied interests to discuss housing from the standpoint of the particular interest of each. Free discussion is bound to develop ideas. Some of these may be new. The majority have probably been known and talked about for a long time. After each idea is condensed it will probably be found to be a basic factor. With the reconciliation of the basic factors of many different interests, the solution of housing may be considered as well on its way toward accomplishment.

On the other hand, a conference of a thousand minds is unwieldy, likely to be side-tracked by arguments over minor details and develop into a discussion of interesting but intangible abstracts. If this happens the conference will be a waste of talent, time, money and energy that will only recall what we already know and indicate that we are faced with an immense problem that is beyond our ability to solve at present.

Too often conferences of this kind, seriously undertaken, end in the publishing of a masterful report which is filed away and soon forgotten as new fields of exploration are found. If this conference results thus, it will be unfortunate for we shall then be little nearer a solution of housing in the United States than we are present.



» » » Let's Talk About the

By ERNEST EBERHARD

Managing Editor, American Architect

"There isn't any building going on."

"Things are at a standstill."

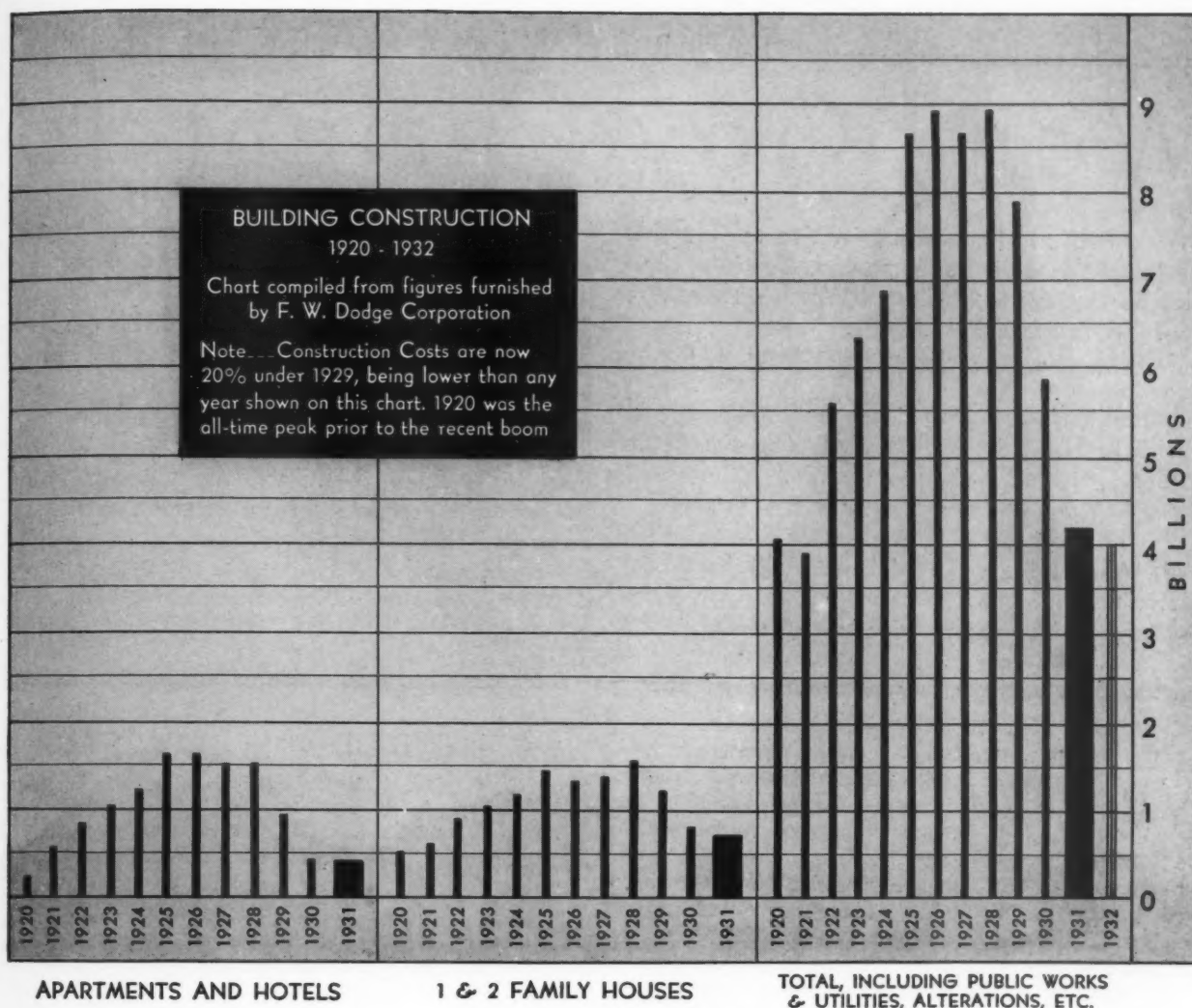
"Nobody's doing anything."

ONE often hears such ill considered remarks, remarks that tend to blind one as to the very real amount of building that is going on right now. In the few months just past, in New York City alone, there arose such nationally famous structures as the Empire State Building, the Irving Trust, Waldorf-Astoria and a number of others but little less prominent. This coming year will witness the greatest project of all—Radio City. Never has there been a year of such outstanding construction achievement—yet we hear people right in New York say, "There isn't

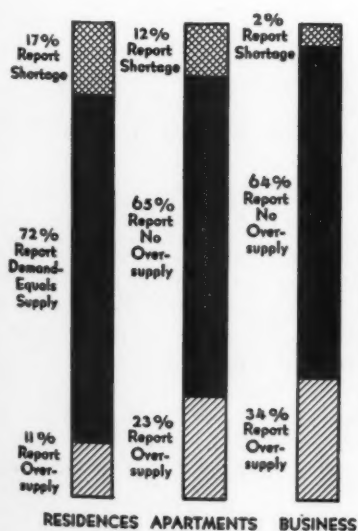
any building going on." And what is true of New York is largely true of other cities.

There has been so much talk about the depression and lack of building construction that it is time we took stock and talked about the business we *have* got.

The present year, 1931, will close about two hundred million dollars over the four billion mark—a boom year any year prior to 1922. The year from October 1931 to September 1932 will probably be slightly less than this—about a four billion dollar total. This total is despite the fact that there is nothing in sight to indicate anything but the usual seasonal activity, though it is quite possible that factors may arise which will considerably increase this figure of four billion, factors such as the successful operation of President Hoover's



Business We HAVE Got



381 CITIES

in the United States were surveyed last spring by the National Association of Real Estate Boards. Due to decreased construction, there is probably now a greater shortage than was reported at that time

proposed real estate mortgage bank, and similar plans.

To get a fair picture of just how much this four billion dollars is, it is necessary to take into consideration the fact that the 1931-32 building cost is twenty per cent under that for 1929, and also that present costs are lower than at any time since the beginning of 1920—and probably for several years before that. Thus, estimated in 1929 building dollars, the amount of construction to be done during the coming year would represent no less than five billions of dollars.

At the present time, not a few architects have all the business they can handle. Others are doing little more than making expenses. Still others have little or no work. Yet there is no getting away from the fact that plenty of work is being done.

Just how much business is the average architectural office handling at the present time? It is conservative to estimate that 50% of all construction passes through architectural offices. (70 to (Continued on page 68)

NORTHWEST ARCHITECTS Want Government to

"Wide Publicity Has Been Given to the Number of Private Architects Employed, But We Must Not Be Deceived by Weasel Words—There Are Those Who Have Been."

R. E. Borhek, president, Washington State Chapter, A. I. A.

"Californians Don't Want Some Bureaucracy to Write to Them for a Picture of a Palm Tree So It Can Get the Spirit of California."

H. W. Doty, president, Oregon State Chapter, A. I. A.

"We Always Have To Make a Fight for Local Materials."

Hon. Samuel B. Hill, representative, 5th District, Washington

"There Is An Acting Supervising Architect Who, It Would Appear, Is Not An Architect But a Judge."

Hon. Addison T. Smith, representative, Idaho

"Unorganized Business and the Individual Have Been Swallowed Up in the Whirlpool of Paternalism."

G. P. Backman, secretary, Chamber of Commerce, Salt Lake City

"Our Contractor Hails From California, the Granite Is From California, the Cement From Wyoming, the Plumbing Is To Be Done by Kansas Folks and the Painting Job Seems To Be In the Hands of a Chicago Firm."

G. P. Backman, executive secretary, Chamber of Commerce, Salt Lake City, speaking of two new federal buildings for that city.

WAYS and means of securing the decentralization of the work of the Federal Supervising Architect's office were considered on September 12, 1931, at a conference sponsored by the Construction and Industry Committee of the Chamber of Commerce of Spokane, Washington. One hundred thirty-seven delegates attended the conference, which was addressed by business men and United States senators and representatives.

As a result of the conference, resolutions were passed condemning the entrance of the government into competitive business fields; urging the employment of local labor, materials and designing ability to the fullest extent practicable; and endorsing the establishment of western supply depots by the government to permit western manufacturers and products to meet government requirements. These resolutions are to be placed in the hands of Congressional representatives of the Northwestern States the building trades and professions.

Facts brought forth at the conference would make it apparent that the work of the Construction and Industry Committee should be far reaching in effect. If similar conferences were held in every state of the Union, it is probable that the question of getting the government out of the architectural business, now causing grave concern and thoughtful consideration in every branch of the building industry, would be quickly settled to the satisfaction of the industry and the taxpayers.

NOW IS THE TIME FOR ACTION

Hon. Robert S. Hall, Representative, Mississippi:

"**Y**OUR movement is well launched, but you must not falter in your endeavors. The plan which you have promulgated here must be sold to the American people and you must present a united front when you come to Congress for action. . . ."

HEATH DODGES QUESTION

Hon. C. C. Dill, United States Senator, Washington:

"**I** MADE it a point to call upon the Supervising Architect, and upon Mr. Heath. . . . I asked them whether they thought it would be necessary for Congress to pass a mandatory law to compel the employment of local architects and compel the mentioning in specifications of local materials. . . . I needn't tell you that I didn't get a very hearty reception to that question. . . . I asked Mr. Heath. . . . to answer the letter which I took to him and comment on the proposal that I was making. . . . I have a letter in reply to mine. I am not going to read it to you because it absolutely dodges that question entirely; it doesn't even refer to it. . . ."

"I wouldn't urge action by legislation if it affected only the Northwest, but this is a principle that ought to be applied to the entire country. . . ."

SUPERVISING ARCHITECT SHOULD BE AN ARCHITECT.

Hon. Addison T. Smith, Representative, Idaho:

"**A**S it has been stated, there is no Supervising Architect in Washington, D.C. There is an Acting Supervising Architect who, it would appear, is not an architect, but a judge. It would seem to me that it might be well to select a man of modern architectural ideas to fill the office of the Supervising Architect. . . . I do not wish to quote from the statement of a cabinet officer, but I may say that as a result of my interview with the Secretary of the Treasury, I was left very definitely with the impression that Mr. Mellon's feeling was that the work on these buildings should be distributed among private architects. . . ."

REGISTER PROTEST

Get Out of Business

"Valves Specified were so antiquated and Out-of-Date That the Plumbing Contractor Couldn't Find Them In the Catalogs."

Hon. Ralph A. Horr, representative, First District, Washington

"There Is Abundant Evidence to Show That the Best Architectural Skill Is To Be Found in the Ranks of the Private Profession."

Hon. Samuel B. Hill, representative, 5th District, Washington

"Work Costs Less If Done by Private Parties and Can Always Be Done Faster."

From a letter by James E. Blackwell, former chief of a division in the Supervising Architect's office, read by Stuart Rice, secretary, Chamber of Commerce, Spokane, Washington

"Government in Business Has the Same Economic Result, No Matter Whether It Be In the United States Or In Soviet Russia."

R. E. Borhek, president, Washington State Chapter, A. I. A.

"I Wish To Do All That I Can To Help You Correct a Condition of which I Believe You Have Just Cause to Complain."

Hon. Addison T. Smith, representative, Idaho

"Your Plan Must Be Sold To the American People and You Must Present a United Front When You Come to Congress for Action."

Hon. Robert S. Hall, representative, Mississippi

CONGRESSMEN FOR DECENTRALIZATION. Hon. Wesley L. Jones, United States Senator, Washington:

SENATOR JONES said that he is in hearty accord with the decentralization of government activities. Senator Jones read a letter from Major Heath, Assistant Secretary of the Treasury, which outlined the policy of his department in the employment of private architects. This policy is generally well known today.

DECENTRALIZATION IS A NATIONAL ISSUE. Hon. Lindley H. Hadley, Representative, 2nd District, Washington:

"WHEN the Veterans Bureau was organized, centralization of function was found to operate to the disadvantage of the work it was intended to perform. As a result . . . regional offices were established and the bureau was brought into closer contact with those it was designed to serve. The change amply has been justified, and an infinitely more satisfactory service, a more sympathetic relationship, greater flexibility and better coordination of units has been the result. . . . If we hope to secure results from legislation this movement must become national in scope and we must have the cooperation of the entire country. . . ."

RED TAPE WASTES MONEY

Stuart Rice, Secretary, Chamber of Commerce, Spokane, Washington

ASKED to cite a few specific examples of waste and inefficiency in government departments, Mr. Rice quoted, among others, the following: "There was specified a 6x12 timber twenty-four feet long to be used as a

bumper, the material to be of long leaf yellow pine, No. 1 common. The inspector would not permit the use of Idaho, Oregon or Washington pine nor of vertical grain old growth fir. It was necessary to have shipped from Quitman, Mississippi, a timber of the dimensions above stated, which cost approximately \$6.50 at the mill plus a freight charge of \$45.75. . . ."

"At Fort Lewis, foundation walls for the non-commissioned officers' quarters surrounding the unexcavated portion of the building area, were carried from four to five feet below the ground surface to get below the frost line! Eighteen inches would have been ample, and the saving on this one item might have been sufficient to have paid the fee of an architect to design and supervise the work. . . ."

SUPERVISING ARCHITECT NOT ONLY OFFENDER. H. W. Doty, President, Oregon State Chapter, A. I. A.:

MR. Doty referred to bureaucracy as stifling initiative in our citizens and contrary to the principle of our government. He called attention to the fact that ". . . the outstanding buildings in every city in this country are designed by private architects, constructed by local builders and made of local material. . . ."

"This thought of bureaucracy doesn't only pertain to the Supervising Architect's office. Our newly elected congressman said it is worse in the Quartermaster's Corps, where they employ a clerk, an architect supposedly, to design army quarters. He said army barracks were the same in Alaska as in Florida, the same in one section of the country as another; that they are 40 years behind the times. They are antiquated. Why? Because just as has been said before, they take their specifications and plans out of the files and use them many times over. . . ."

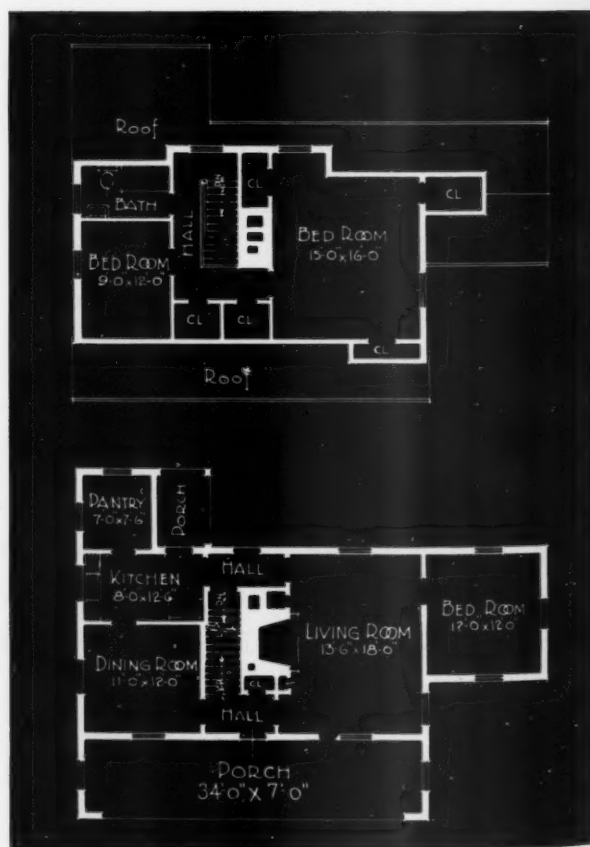
(Continued on page 84)



with an
OUTDOOR
LIVING
ROOM

House of Mrs. Alice Nisbet at Kent, Conn.
CHARLES RASQUE, Architect

Photographs by Van Anda





A beautiful view and the desire for something more comfortable than the conventional porch resulted in this outdoor living room, which meets the client's practical and esthetic requirements

\$10... Have YOU an Idea for

Now and then every architect is faced with a tough job—some himself. It may be big or little—the solution will be of interest solutions in this department. Sketches should be sent if illustra-

• HOW TO RENDER ON PHOTOSTATS

By Gerald Lynton Kaufman, A.I.A.,
New York

THE following process has proved to be an effective short-cut, and an inexpensive one, for the quick presentation of preliminary sketches.

Get a complete set of photostats and have the office-boy mount them on Compo-Board; first wetting both sides of the photostats, then drying off the back of each, and covering the entire back surface with Higgins vegetable glue, in generous quantities. A "floated mount" of detail-paper on the back of the Compo-Board will keep it from curling.

When the photostats are thoroughly dry, mix a half-glass of water with a small tube of yellow-ochre water-color, and a touch of burnt sienna. Since it is impossible to "run a wash" on photostat paper, this mixture is then *blown* over the entire mount with a fixatif atomizer, stopping to let the paper dry every now and then, before further blowing. Enough ochre wash should be blown on to tint both plans and elevations the color of old parchment.

After the photostats are thoroughly dry, go over the plans with a paint-brush, clear water, and a blotter, removing the ochre entirely up to the exterior wall-line, and leaving each floor-plan a clear white, standing out prominently against the remainder of the ochre background. Then, having seen what the pure water and blotter will accomplish, "take out" some fleecy white clouds around the elevations, and "pick up" high-lights on walls, etc., the same way. It is also possible to run a few *quick* "dry" washes over roofs and in windows, and to indicate bushes and grass here and there, provided the color is applied with a light touch so as not to disturb the ochre coating on the photostat.

No trouble will be experienced in pochéing the walls of the plans in vermilion, since this color is opaque and forms a good bond with the ochre. Furthermore, this also is office-boy work and can be done while the client is on his way to the conference.

For a finishing touch, take a sponge and clear water, and go around all border lines, taking off the ochre and



G O O D

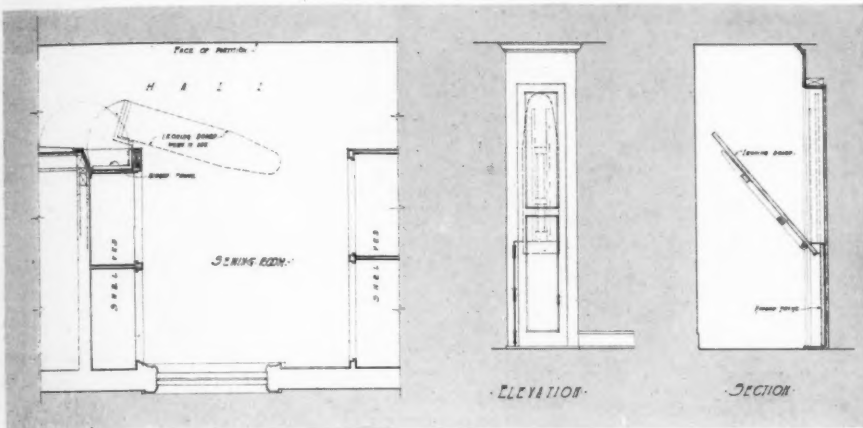
leaving a white "mat" of photostat paper. Then get out the passe-partout tape and mount it around all drawings so as to cover the edges of the Compo-Board, and the job is done.

The time taken for the entire process described above is rarely more than an hour's work for two men, and the result has proven so effective in this office that we usually make up the photostat renderings in duplicate and let the client keep one set for his own use—besides which we find that we can often do without the trouble of making any perspective or other rendering, merely letting the fleecy clouds on the presentation-drawing bring cheer and hope to the heart of the Owner.

The illustration shown herewith is an example of the extreme that may be obtained in rendering on a photostat. The perspective was a line-drawing on tracing paper. Photostats—in duplicate—were made and mounted, and a cobalt-blue wash was blown on, instead of the usual ochre, because of the amount of sky and water in the picture. The highlights on the house were "picked off" with clear water and a blotter, and the rest of the rendering was done in quick, dry washes. Two complete renderings, mounted and bordered, were made of this house in one morning.

THIS Department? ... \$10

thing he didn't learn at school and which he must figure out for to all his fellow architects. American Architect will publish such tions are necessary. \$10 will be paid for each idea accepted



• 2 FUNCTIONAL CONVENIENCES

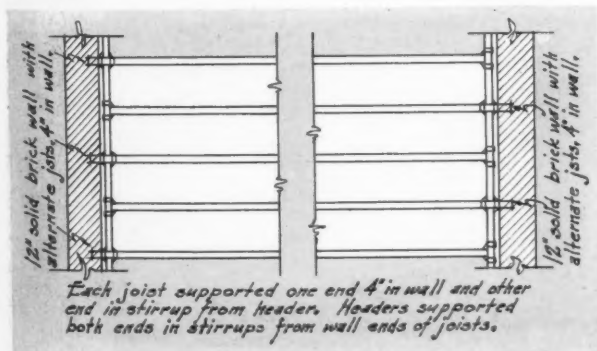
By Edgar I. Williams, A.I.A.

The built-in ironing board and library bookcase, shown at the left and below, are contributed by Mr. Williams, who practices architecture in New York

• BUILT-IN IRONING BOARD

The owner wanted a built-in ironing board in an alcove off a narrow hall. To conserve space, the board was recessed at the end of a cupboard and attached to a hinged frame which threw it into a convenient place when used

I D E A S

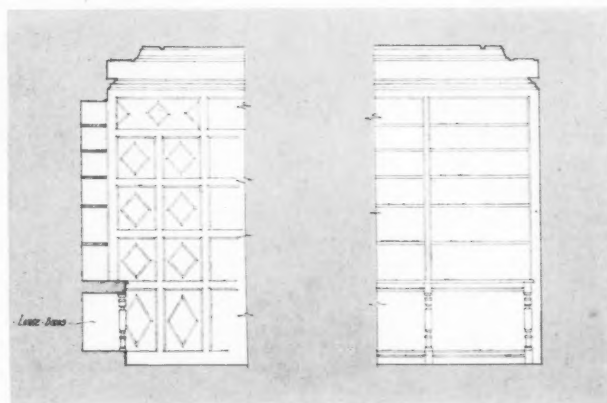


• JOISTS IN OLD PARTY WALLS

By Wm. F. Mickelson

Architect, Racine, Wis.

CONFRONTED with the problem of placing joists in party walls already erected in two adjoining buildings between which a new building was constructed, the writer used the construction shown on the accompanying drawing with success.



• LIBRARY BOOKCASE

The problem was to provide sufficient space for large books in a library bookcase. The solution indicated in the above elevation and section has proven quite satisfactory

Both party walls were of solid brick twelve inches thick. To insert both ends of a joist into the walls would necessitate the cutting of very deep holes in one wall or the other, with danger of breaking through plaster on the inside of the wall, as well as making the setting of the joist a difficult bit of juggling.

With the construction used, the number of holes necessary were reduced one-half and they were but four inches deep, which, because of the fire cut or splay on the end of the joists, were easily cut on a batter.

The same construction was used for steel bar joists in the first floor construction with equal success and saving in labor cost and with no danger or damage to the adjoining buildings.



GALLOWAY

FOR LODGING, we were told the monastery of Guadalupe was the very thing. It has such a profusion of levels and steps that even an architect doesn't know where he is going to come out. One cloister is of an architecture which so far has not appeared in the United States, Mudejar, a combination of Moorish and Gothic

"WE THOUGHT Spain was full of villages where autos had never been, inadequate inns, and peasant cottages like this one near Jaca. But to our surprise, we found it greatly modernized"



GALLOWAY

The Land of Don Quixote

Picturesque Spain Is Worth Any Architect's Time

By BIRGE M. CLARK, A.I.A., PALO ALTO, CAL.

who, with his father, designed President Hoover's house in that city

HAVING been engaged for some years in designing houses which clients and friends usually call Spanish and which we fondly believed were Californian, we looked forward to the Spanish portion of our trip with a great deal of architectural interest but with some apprehension as to the practicability of auto touring for people who spoke no Spanish. We had read several books on touring Spain and they were full of references to roads like plowed fields, inadequate inns, and broken axles in villages where autos had never been seen before. Actually, nothing could be further from the truth. To our astonishment Spain has been greatly modernized. They have an excellent system of paved highways and the country is better equipped to take care of the foreign traveler than many of the other European countries.

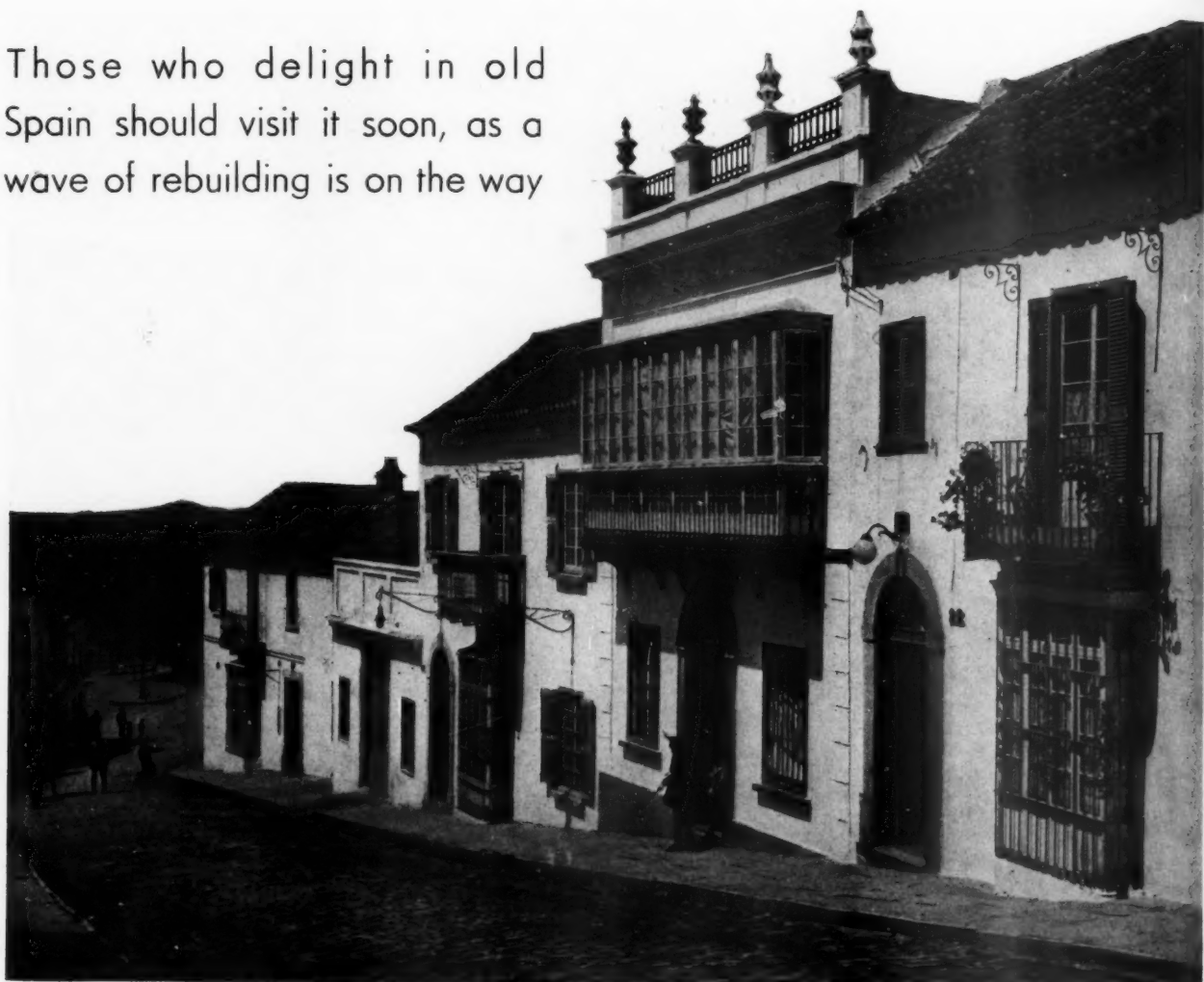
On the wide, paved highways stretched through the

country there are as yet few automobiles and only innumerable donkeys. These donkeys do not bother the motorist much. Unlike Italy where they are allowed to take their own time in getting out of the way, a Spaniard will almost lift his donkey off the road to hurry it out of the path of an approaching car.

The sixteen days we spent in Spain were productive of a greater amount of joy and inspiration than any similar period on our trip, and while we were disillusioned about many things the architectural and natural beauties were all and more than we anticipated.

It was the continual touch of modernism and Americanism which provided the first surprise. Entering on the eastern coast, Barcelona was our first city of any size and was the most American of any city we saw in Europe. Extremely wide and beautifully lighted streets with electric signs flaming in the sky greeted us as we

Those who delight in old Spain should visit it soon, as a wave of rebuilding is on the way



GALLOWAY



BACK VIEW of modern apartment houses in Barcelona, the most American of any city seen in all Europe

BALCONIES ARE LIKED, as in the more modern part of San Roque, a hilly town located between Malaga and Algeciras

approached the business center. Large Listerine ads on all street cars assured us that the best friends of the Spaniards are just as reticent as those in this country.

The modern architecture of Barcelona of course leaves much to be desired. The combination of the rectilinear cubes of the art moderne apartment houses with the Spanish love of bizarre ornament is not happy. In fact, anything more terrible than some of these new apartment houses would be hard to imagine unless it were some of those being erected in the suburbs of more than one of our own cities. Of course we saw the new church with its peculiar ornament, which looks very much as though the carved foliage of a Gothic building had started to grow and sprout like a potato left in a damp place.

The 600 kilos. from Barcelona to Madrid is on a beautiful, wide, paved highway through barren country and little, squalid, medieval towns some of which were of architectural interest. Unlike France and Italy where the traveler becomes accustomed to having the highway dwindle down to a cobblestone alley when passing through a village, in Spain (Continued on page 56)



NO RAIN had fallen for seven months, yet throughout Spain, in even the most squalid locations, were found window ledges and balconies lined with flower pots. This street scene in Granada is typical of the streets in Toledo and Seville, where Moorish and Renaissance architecture has been logically combined

BY
LOUIS A. BROWN, JR.

Pruitt & Brown, Architects
New York

WHEN this office was started it was recognized that among other problems faced by architects today are those of contacting prospective clients quickly and at reasonable cost; obtaining a good reputation by arousing the interest of the public and individual clients as well as by doing good work; and the application of sound business methods in the practice of architecture so that work could be produced efficiently and economically.

From experience, we have found moving pictures to be an effective method of telling our "story" to prospective clients. A total stranger will usually grant us fifteen or twenty minutes to view the showing of a film. In a darkened room his attention is concentrated on *our* subject and the story of the picture sustains *his* interest. Not only has he seen the building under construction but he has been impressed with the fact that we were the architects. We have also been given an opportunity to tell him in words what we want him to know and more quickly and effectively than we could in a longer period of time and armed with a thousand photographs, letters and publications.

We have found that the interest created by this method has removed a certain amount of formality and lead to the granting of more important interviews at a later time. It has created a good impression of our work and given us an entree which could not otherwise have been obtained without the expenditure of a large amount of time, effort and money.

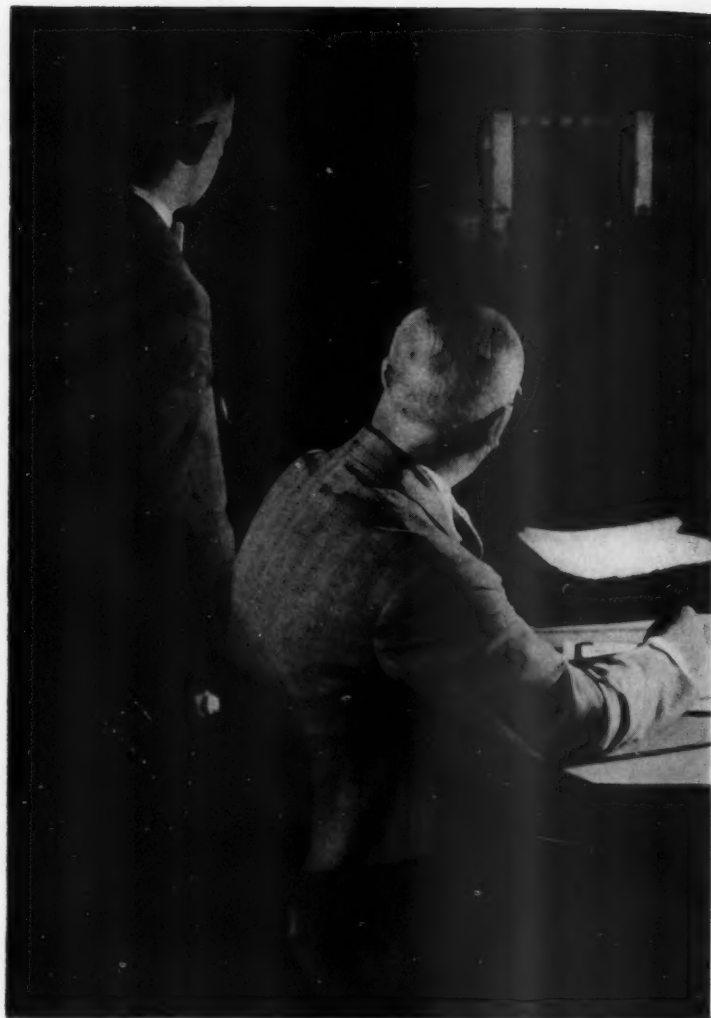
Depending upon interesting prospective clients by means of publication of our work in newspapers or articles in magazines has been found a slow process. Material of this kind to be effective must be viewed by the prospect in the quiet of his home or during a leisure period in his office. This ordinarily means contacts with the prospect over long periods of time and under conditions that are not easily brought about.

It has also been found from experience that a busy client, fully occupied by his own business, cannot spare much time to read detail reports of the progress of a building under construction. And brief outline reports are seldom satisfactory. Yet it is important to keep him interested in the work and the way his architect is hand-

ling the job. This often plays an important part in the securing of future commissions. Job reports offer an excellent opportunity for an architect to make a good impression on his client.

An analysis of this kind indicated that a good solution of making a lasting impression on clients and prospective clients quickly and easily would be worth finding. Study of the problem led us to believe moving pictures, even of amateur quality, might contain the answer to our problem.

We borrowed a "movie" camera and started our experiments by photographing two small roadside restaurants which we had recently completed for the same owner. Views were taken of the fronts, roadside, approaches, interiors, close-up details and the general neighborhood. After these were spliced together in a fashion which, it seemed to us as amateurs, would make an im-



HOW WE GET by Using



Mr. Brown showing a
motion picture of one
of his firm's jobs

NEW CLIENTS Movies

pressive showing to our clients, we asked several of our personal friends to view them. This preliminary showing indicated that the projector and its mechanism excited their interest, but that at about the middle of the film they began to lose interest in the picture and they began to talk about other subjects.

This at once indicated that something was wrong and we set about finding the reason. The conclusion was reached that the picture lacked continuity and sufficient human interest to hold the attention of the observer.

So, at the first opportunity to make another movie, we wrote a scenario for a simple story and set about filming the scenes as well as amateur equipment and experience permitted. We encountered many difficulties. Not the least of these were due to people who stopped on the street to watch us, and the lack of knowledge of how to properly light interiors under conditions where

photography is affected by the color of woodwork and furnishings.

The first of our troubles was eventually overcome by retaking exposures that had been ruined by people passing in front of the camera or by some other cause. The second was finally solved by seeking the advice of a professional moving picture photographer. With the assistance of a friend in electrical contracting, a number of portable Klieg lights were obtained and these proved to be satisfactory for our purpose. A few experimental exposures, however, showed that we were using the wrong type of film, and so we tried again using pancromatic film which corrected that difficulty.

By this time we understood some of the problems of the motion picture director, for it does involve a great deal of study, effort and patience to plan the picture, train the actors, rehearse them, arrange the lighting equipment, record the actions and finally assemble the scenes in their proper sequence.

Having solved some of our practical difficulties we proceeded to "shoot" the final scenes, ordered titles and had the films developed. The various scenes were then cut apart and assembled in accordance with the scenario. A new problem then loomed up. We had had no experience in splicing films! So we fastened the cut film together in proper order with adhesive tape and asked one of the movie camera dealers to have

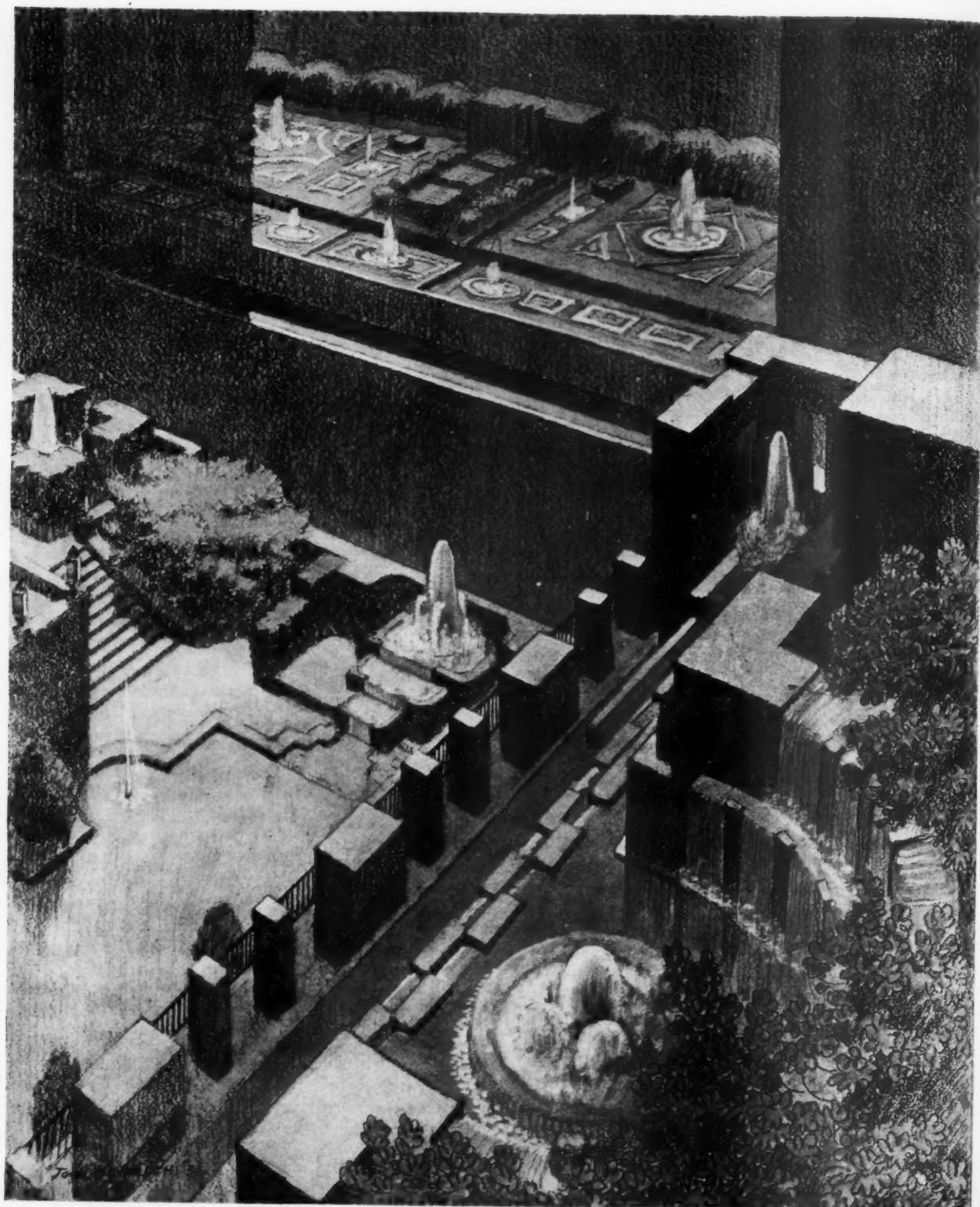
the film spliced.

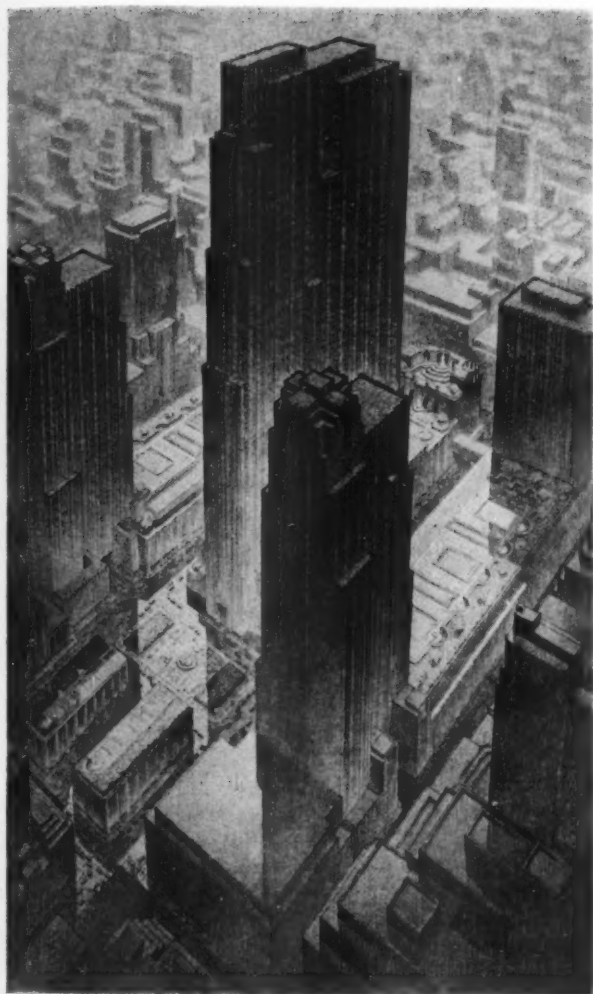
When the film was run through the projector it was found that there were many duplicate actions. These were cut out of the film and the film respliced. A second trial showing, revealed a few remaining duplications. These were cut out and we felt rather elated at the result of our efforts.

This film was then tried out on our former audience and with better results for the story which ran through the scenes held their attention and at the same time told our side of the story. This film made a marked impression on the owners of the building around which the story was told, such an impression that a duplicate was ordered and sent to one of their associates who lives in England.

The story told in this particular film is that of a man who discovers that he needs (Continued on page 78)

» » » GARDENS ON THE ROOFS OF RADIO CITY





Tenants ordinarily see only a mass of flat, uninteresting roofs. But in Radio City, the buildings are to be staggered, the set backs and low roofs being landscaped with trees, shrubs and fountains so that tenants in upper stories may enjoy a good view

WHEN the airplane progressed to the point that its general acceptance as a means of transportation was only a matter of time, thoughtful observers said, "Now more attention must be given to the design of the roofs of buildings since they are going to be in full view of all who utilize air transportation." With the growth of tower buildings, the question of roof design, particularly in the case of lower buildings, was again forcefully brought home to architectural designers. But no one did anything about it. At least no one did until the architects of Radio City had progressed beyond the solution of the economic phase of this project and could begin to consider its architectural design. Now that this has happened the treatment of the roofs of the structures composing this gigantic project will be given careful study as landscaped areas on a scale never before undertaken above the level of the ground.

Designers in large densely built up cities have ob-

Based on an interview by

Benjamin F. Betts, A.I.A.

with

L. ANDREW REINHARD, A.I.A.

of Reinhard & Hofmeister, Architects

served that in the rush and hurry of getting from one place to another the average person rarely has an opportunity of seeing more than the lower stories of a building from the street and are forced to view an expanse of nondescript roof surfaces from the windows of higher buildings. The development of Radio City as a series of high buildings, staggered in plan, and surrounded by structures of lesser height, made it apparent that here was an opportunity to change the old order of things and make the lower open areas and roofs of setbacks useful and beautiful to view from the windows of the higher buildings in the group, as well as those commanding a view of the development from outside this area.

So, a comprehensive scheme for the development of the three city blocks bounded by Fifth and Sixth Avenues and Forty-eighth and Fifty-first Streets in the heart of New York City includes the devoting of approximately seven acres of ground and roof area to trees, hedges, pools, fountains, waterfalls, grass plots and statuary. This will be done at a cost of between one quarter and a half million dollars.

A fitting approach to the group will be afforded by a sunken plaza covering an acre of land and containing a thirty-foot fountain, smaller fountains, grass, flowers and statuary. This plaza, which will be seventeen feet below the street level will be approached through a sixty-foot promenade between two six-story buildings facing Fifth Avenue. Above the roof of the sixteen story wing back of the main building of the group there will be a curved waterfall approximately forty feet high which will send a tumbling torrent down through a series of cascades to a reflecting pool at the roof level. These will be the dominating features of the landscaping.

Where grass plots and shrubbery occur, the roofs of the buildings will be covered with earth fill about eighteen inches deep. Thirty or thirty-five foot trees will be planted in a fill of two and a half to three feet of earth. The trees will be anchored by a system of bronze or iron bars about six feet apart forming a gridiron to which the roots of the trees may become attached. An underground system of piping will irrigate all landscaped areas. Water used in the waterfall, fountains and pools will be recirculated and used in conjunction with the air conditioning systems of offices, broadcasting studios, and theatres.

Unlike the average city block, single control permits the development of three blocks with both low and high buildings that allows the staggering of the tower buildings. By arranging the units so that there are at least two or three hundred feet from the corner of any tower to the diagonal corner of the nearest adjacent tower, adequate light and air can be assured on all sides of the towers.

(Continued on page 74)

How to Set Up a System for the COST PLUS FEE

DRAFTSMAN *James Jones* **1** WEEK ENDING *July 18-31*

Draftsman only the actual time of work

JOB NO.	DESCRIPTION	M	T	W	TH	F	S	S	TIME	RATE	TOTAL
210	Working Drawings		7						7	2.00	14.00
210.1	"		1						1	2.00	2.00
215	Details	8	4			4			12	3.00	36.00
215.2	"										
220	Preliminary		2						2	2.00	4.00
220.1	"		2		4	4			10	2.00	20.00
220.2	"				2				2	2.00	4.00
Office	Lost Time				2	2			4		8.00
"	Research				1				1		2.00
"	Office Drafting				1				1		2.00
I CERTIFY THAT I HAVE WORKED THE ACTUAL TIME AS ABOVE INDICATED											
RECEIVED PAYMENT										10.00	89.00

James Jones

Number in O are overtime

TIME CARD COST RECORD **2**

Job No. 210

Name White Hotel Burlington

Indicate whether the drafting covers Preliminary, Working, Contract or Detail Drawings. A separate account should be kept for each section of the work, especially for Extra Work.

Name of Draftsman	Week Ending 3/3/31		Week Ending 3/10/31		Week Ending		Week Ending		Week Ending		Totals (Individual Draftsman)	
	Hrs.	Amt.	Hrs.	Amt.	Hrs.	Amt.	Hrs.	Amt.	Hrs.	Amt.	Hrs.	Amt.
<i>J. Jones</i>	7	14.00	3	6.00							10	20.00
<i>J. Hae</i>	3	6.00	18	36.00							21	42.00
<i>J. Smith</i>	2	4.00	40	80.00							42	84.00

1 DRAFTSMAN'S time-card. Some responsible person should be delegated to make the office rounds daily at closing time and have each worker set down his time for the day, which eliminates procrastination. The worker should sign the card at the end of each week, as shown

2 ON THE TIME-CARD cost record are charged the drafting, corrections, specification writing and supervision. Each person's time is charged to a job or to the office in intervals of not less than one-half hour. This then becomes a part of the overhead. It is important to have definite categories for all time to be charged

By HAROLD R. SLEEPER

Associate of Frederick L. Ackerman, Architect, New York City

Records prepared by Joanna K. Arfman

POSSIBLY one reason why the "cost plus fee" basis of charging for architectural service is not more widely used is the fact that the details of the operation of this system are not more widely known by members of the profession. Relatively few offices have made use of this system which has many good points that commend its more general application. The future of this method of charging rests in the hands of those architects who are now able to obtain work on this basis. If they handle the work economically and yet profitably, it is probably only a matter of time before the percentage charge will become passé. If they flounder along with inaccurate or questionable records, or set up contracts either unfair to themselves or their clients, the system will collapse and the old roulette system will stay enthroned.

The principal elements of the cost plus fee system are: first, the recording of the architect's direct cost and expenses incurred by the job; second, determining the

overhead cost due the architect; and third, agreeing upon the architect's profit.

The first should be based upon records of fact; the second on an equitable interpretation of facts; the third on an agreement satisfactory to both parties.

The complications of this method of charging are not great, but they do involve very definite methods of recording actual expenditures and of knowing what is cost, what is overhead and what is fee.

To tell an owner that you will do his work on a "cost plus fee basis" means little. You must explain the overhead, agree on the profit and outline how your costs are established. You must give the client confidence that you are equipped to make a true and fair accounting for the work done, and that your profit is fair.

You would not expect the owner to walk into a department store and order an icebox, the bill to be based on the cost of manufacture (Continued on page 64)

JOB COST RECORD 3

Job No. 210

Name of Job White Hotel, Burlington

Date	Description of Items	Time Card Cost	Clerk of Works	Engineers	Blue Prints	Traveling	Misc. Telephone Postage, etc.	Totals
3/27		23.00						23.00
3/28		104.00						104.00
3/29	Trip - Burlington					35.00		35.00
3/29	Salary - E. Smith		300.00					300.00
	E. Kimball			100.00				100.00
	Perfection				15.00			15.00
	Telephone						3.00	3.00
	Postage						2.00	2.00
	Travel Jackson						2.00	2.00

3 JOB COST RECORD, on which is entered expense items incurred out on the job such as traveling expenses, telephone calls, hotel bills, postage and similar charges

4 EXPENSES for traveling are entered on expense slips and paid through the petty cash account. They are then entered in the job cost record shown in "3"

5 OVERHEAD is recorded as shown below. For individual jobs, the monthly overhead is figured on the ratio between total overhead and the time-card cost

EXPENSE ACCOUNT RECORD 4

Charge Job No. _____

On Account of _____

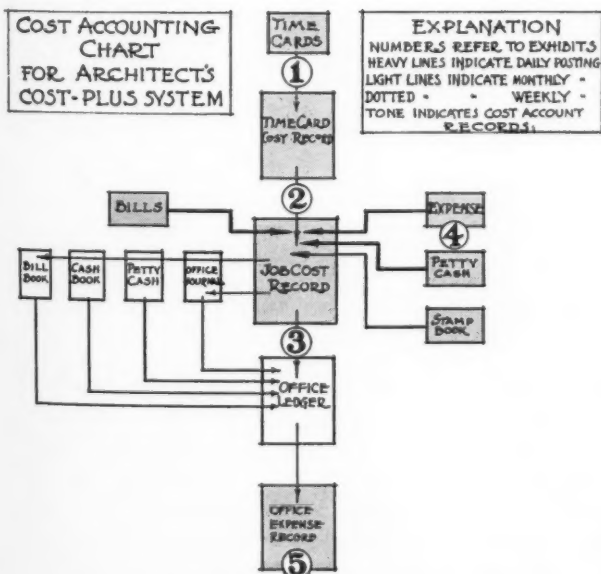
Expense	Date	Amount
Travelling		
Meals		
Hotel		
Taxi		
Miscellaneous		
Total		

Signature _____

OVERHEAD EXPENSE RECORD 5

For year _____

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<u>Costs Chargeable to Overhead</u>								
Salaries								
General Exp.								
Rent								
Professional Serv.								
Printing & Sta.								
Photographs (Misc.)								
Travelling								
Drawings Materials								
Blue Prints (Misc.)								
Electric Light								
Telephone								
Exhibition Exp.								
Renewals & Rep.								
Magazines								
Postage								
Insurance								
Bad Debts								
Drafting								
For Office								
Lost Time & Vacations								
Research & Investigation								
<u>Total Overhead</u>								
Current Year								
Previous "								
<u>Time Card Cost.</u>								
Superv. & Engineers								
Drafting charged to Jobs								
Engineers Fees								
Clerk of Works								
<u>Total Time Card Cost, etc.</u>								
Current Year								
Previous "								
<u>Percentage Relationship</u>								
Overhead to Job								
Costs as per Time Cards, etc.								



RECORDS NECESSARY in setting up a system for the cost plus fee system, showing daily, weekly and monthly postings in "Explanation"



"THE NIMBLE"



"THE TIGHT ROPE WALKER"



MURALS in the New Waldorf-Astoria

■ Vigorous and dominating in their active rhythm are the murals painted by Jose Maria Sert for the new Waldorf-Astoria, New York, of which Schultze & Weaver are the architects. Senor Sert, in his Paris studio, chose a Spanish subject for the murals, that adventure of Don Quixote known as the wedding of Quiteria with its attendant orgy of entertainment—though the bride married another than the appointed bridegroom. There are fifteen panels in the room, known as the "Sert" room, each fourteen feet high and varying in width from six to twenty-two feet. One of these panels is reproduced on the cover of this issue. The windows, which have the effect of mirrors, between the murals are framed in dull gold; the ceiling is silver



"THE WELCOMING"



"ARRIVAL
OF THE WILD BEASTS"



"VERY
TIRED"



"THE
ORCHESTRA"



Coal miners' houses near Johnstown, Pa.

GALLOWAY

A Plan to Replace THESE

By ROSSEL EDWARD MITCHELL

Architect and Engineer, Washington, D. C.

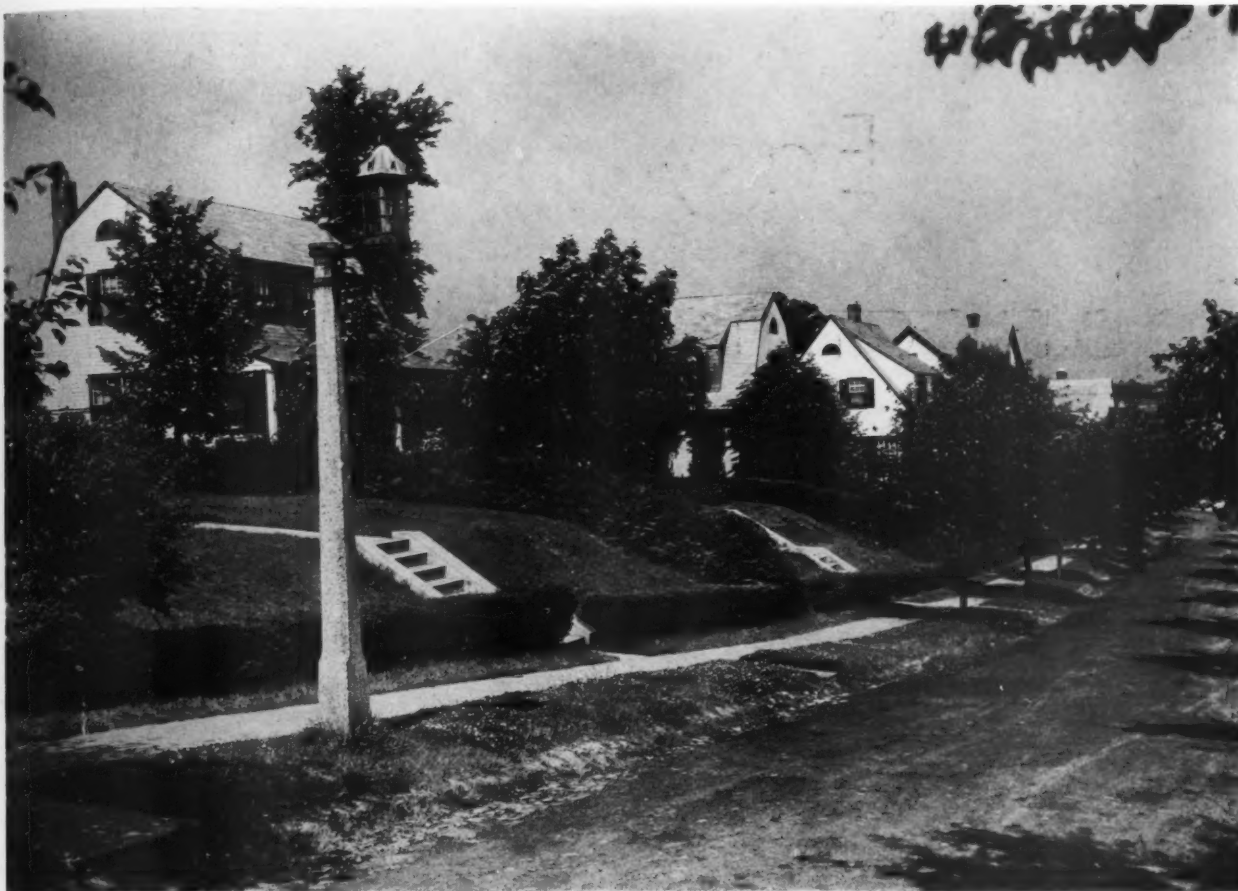
A NEW field of industry and achievement for architects, builders and producers awaits joint action by these interests. Billions of dollars a year can be added to the total volume of residence and kindred structures and meet an imperative need in America today.

This great and almost virgin field for a tremendous expansion of the building industry lies in the well-known need for a complete rebuilding of the industrial sections of American cities. The deplorable conditions which exist in this field have been commented on time without number by town planners and civic-minded persons. The great and inescapable stumbling block has always been—finance! To suggest a practicable means whereby this obstacle may be completely and permanently overcome is one of the objects of this essay.

Let us face a few of the hard and unpleasant facts about the housing situation in America—the wealthiest country on earth. That so many people are very poor, we have regarded as a sort of “act of God”; although some of us have exonerated Deity and lambasted selfish

industrialists who flooded our shores with the poverty-stricken of Europe in order to get cheap labor. But as to remedying their living conditions—here we have “fallen down” completely, and, according to experts, the housing situation during even the years of prosperity preceding the recent slump, has steadily grown worse. Further, we have acted on the assumption, apparently, that there is nothing at all to be done about it.

The fact that miserable, slovenly, unsanitary, unhygienic, not to mention unesthetic, conditions of housing are widespread and well-nigh universal in a least *some* portion of nearly all American cities is apparent to anyone who has traveled even a little. Manufacturing cities are the worst sinners. In truth, it appears that primacy in manufacturing leads to degeneracy in housing. Even Washington, which is distinctly *not* a manufacturing city, has thousands of “alley dwellers”; people who live in miserable tenements in crowded alleys, in the very heart of the city, without even a back lot for air. Crime, disease and ignorance flourish here. True, zealous Congressmen have demanded that these conditions be eliminated;



GALLOWAY

Mill workers' houses near Worcester, Mass.

WITH THESE . . .

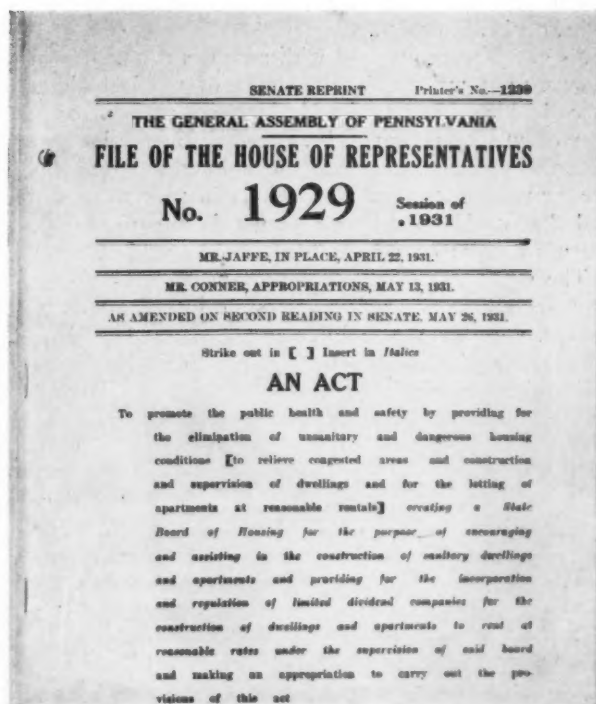
they have offered bills and even passed them. But the alley dwellers keep right on dwelling in the alleys.

That the industrial population of our cities is now no better off is susceptible to a simple ocular demonstration. Get on any railroad train and keep your nose glued to the window pane as you enter and leave city after city. The outstanding architectural feature, to degrade a good term, consists of serried rows of dilapidated houses with squalid honey-combs of small and dirty back yards. Houses built directly on the streets; no playgrounds, no parks, no lawns or shrubbery. Houses planned to yield the greatest possible amount of dividends to speculative builders and the least possible convenience and comfort for the tenants.

Millions of Americans are living in these deplorable surroundings. Millions of children, born into the world bright-faced and happy, have their lives shadowed by want, their bodies weakened for lack of proper recreation, air, sunshine and hygiene. Their minds are stunted and debased by sordid (Continued on page 102)

» » » » » BILLS LIKE THIS

providing for limited dividend companies may promote house building but if they are to be satisfactory they should, according to Mr. Mitchell, promote public good rather than private profit



DESIGNED FOR

Easy Fabricating

IRVING TRUST COMPANY BUILDING
ONE WALL STREET, NEW YORK

VOORHEES, GMELIN & WALKER, Architects

By

EUGENE CLUTE



ORNAMENTAL metal work, in general, has been designed as though there were still only two methods of fabrication—cast and forged—despite the fact that for some years much of the metal work has been built up from parts formed in various ways; extruded, rolled, drawn and cast. The actual method of execution has been, with rare exceptions, denied in design.

As everyone acquainted with architectural metal work knows, most massive bronze doors of public buildings, office buildings and banks are built up, and not cast as they often may appear to be. The rails and stiles are of extruded metal sections neatly joined together, the panels are comparatively thin castings set in the frame work, and the mouldings around the panels are of drawn or extruded metal or are cast separately and fastened on.

The general practice has been, and still is, to design ornamental metal work as though intended for cast bronze, excepting wrought iron designs, and to depend upon those who execute the designs to devise ways of fabricating the work. This condition came about and persists because the art of design has lagged behind, while science, invention and business have rapidly progressed.

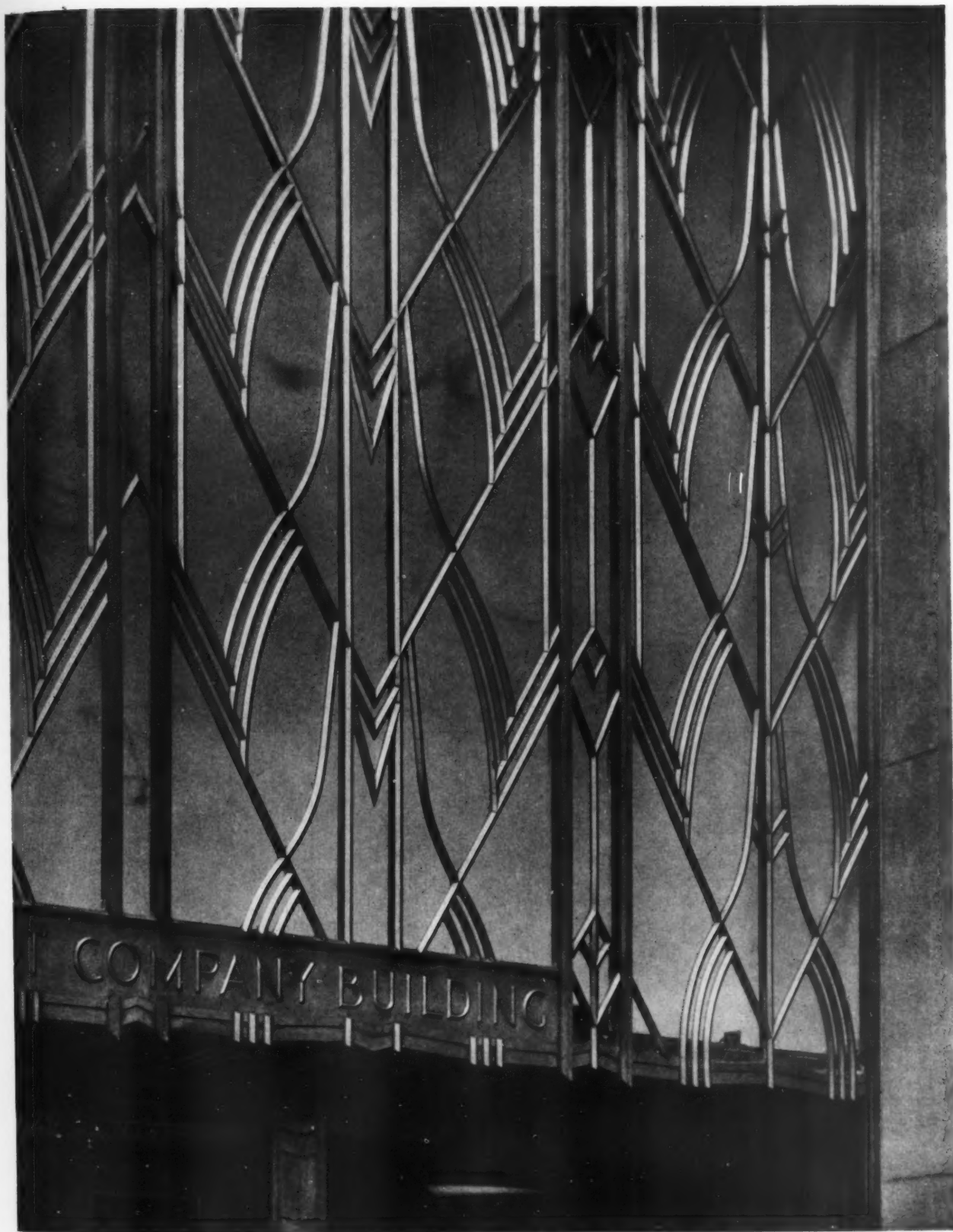
In the execution of designs of historic character, consistency demands the outward appearance of methods contemporary with the designs, while a reasonable regard for economy usually requires modern methods, which are used and concealed. Even when the design is not traditional, there is seldom an expression of the method by which the work is fabricated. The result is a loss of opportunities to do interesting and progressive things.

An important factor in the fabrication of metal work is the process of extrusion, which produces long, straight pieces of metal of practically any desired section, with sharp, clean arrises and smooth true surfaces. Hot metal is forced, under tremendous hydraulic pressure, through an opening in a steel die that determines its section—a method that is modern if anything is. For the straight members—plain or moulded in section only—that form so important a part of architectural work, extruded metal is especially well adapted.

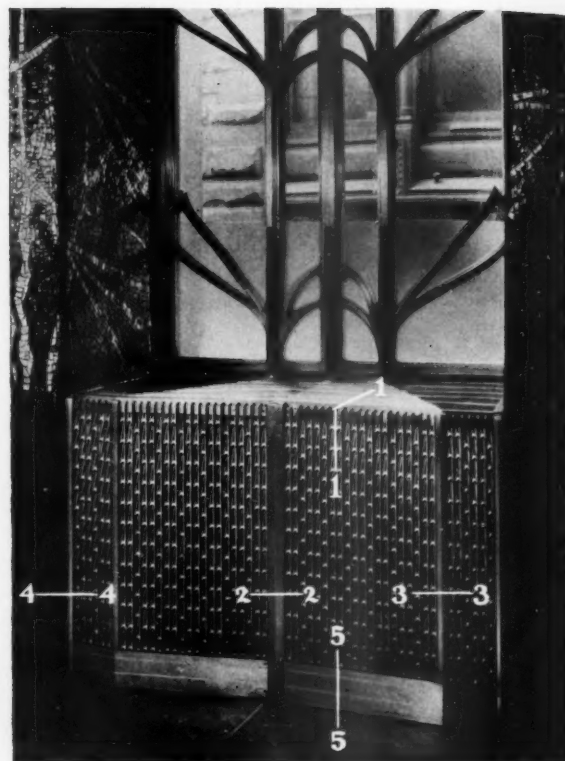
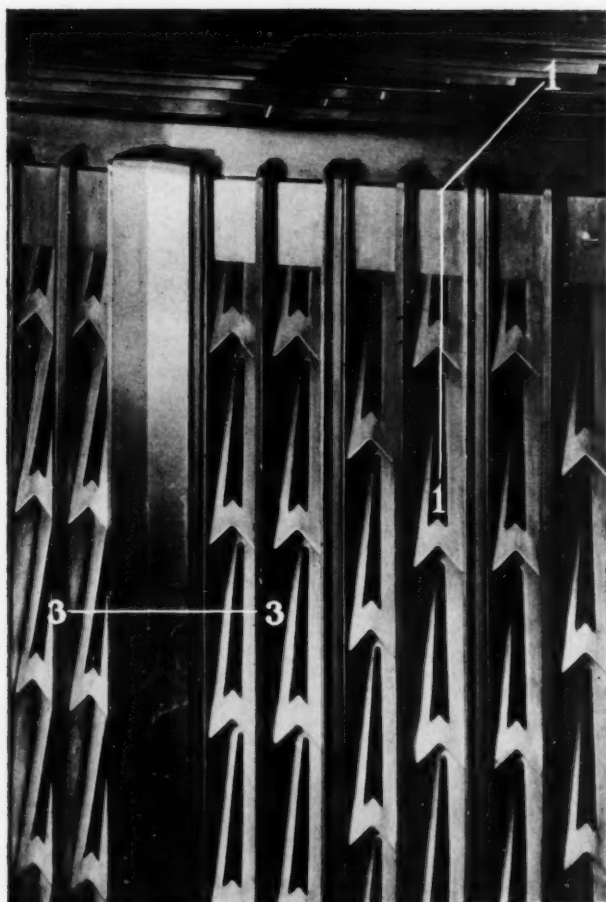
Extruded sections, plain or moulded, used in combination with sheet metal and plates with castings for the more ornate parts, go to make up fabricated ornamental metal work. Each of these forms of the material is used for the parts for which it is best suited by its nature and they are made to form a consistent whole.

Some of the ways in which the fabrication of metal work can be expressed to advantage in the designs are seen in the Irving Trust Company Building. These designs were made by the architects with the collaboration of Clifford Parkhurst, as consultant. The work was executed by the General Bronze Corporation.

An idea which is widely applicable is seen in the design for the radiator enclosures under the windows in the main reception room of the bank. The front, or screen, that takes the place of the usual grille is made up of vertical fins of extruded bronze with small louvers of sheet bronze between them, all soldered together at the back. The ventilating grilles in the walls of this room are designed on the same principle. The tops of these radiator enclosures are unusual, also. They are formed of zig-zag louvers that were originally designed



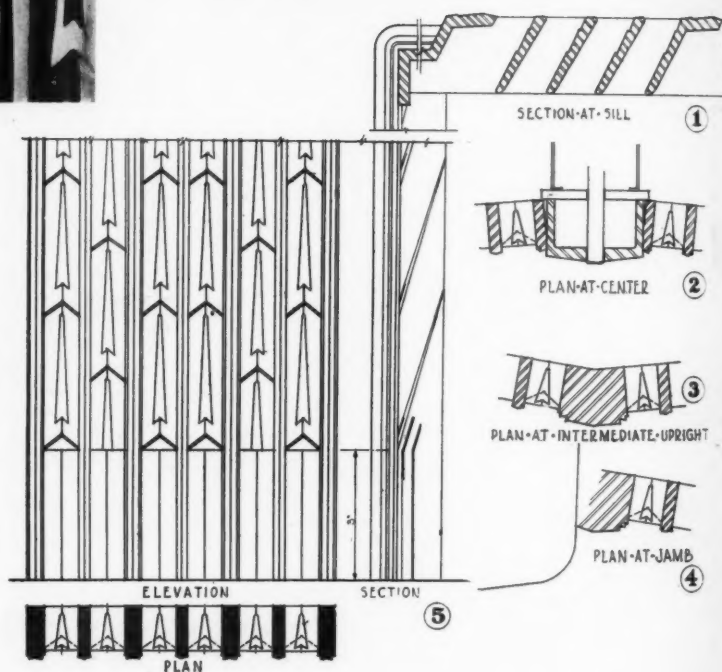
MAIN ENTRANCE IN BRONZE. Vertical members are extruded, others are cast. The cast sections form muntins holding the glass. At the soffit, continuity of design has been effected by carrying the vertical extruded members through as a continuation of the main design. These latter members are cast shapes



LOUVER ELEMENTS of this radiator enclosure are punched out of sheet metal which, in assembling, are lapped so the radiator cannot be seen and yet free air circulation is afforded. Vertical divisions and top of enclosure are of cast bronze. Curved members of window in illustration at right above are cast, straight verticals extruded

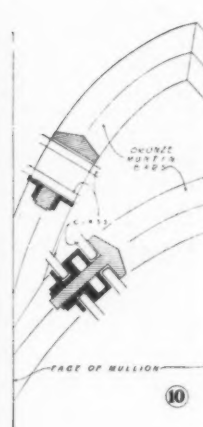
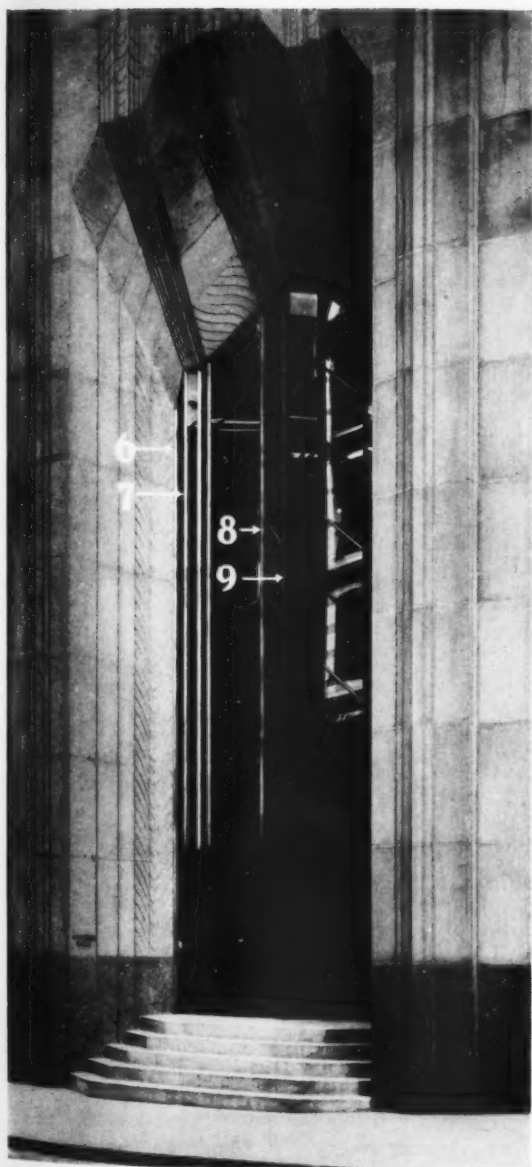
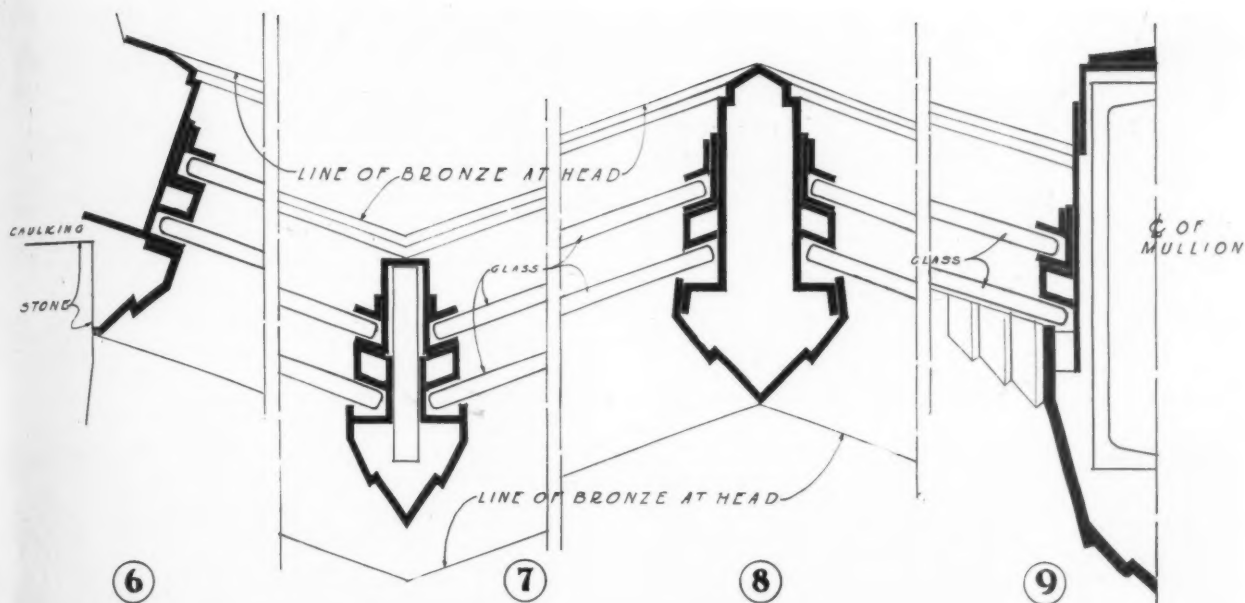
to be made by bending extruded sections and fastening them to a frame. Though they are cast, they retain the character of extruded metal which harmonizes with the fabricated fronts. This is turning the tables; extruded metal has long been compelled to appear in the guise of cast metal, here cast metal has been made to simulate extruded metal. Until the fabricating of such parts as these tops from extruded metal becomes an established practice, it is regarded as unduly expensive, though it is entirely practicable.

The windows in this room have metal traceries of bronze. Though modern, they are as logically designed as Gothic traceries, the necessary structural parts being so formed as to constitute the ornamentation of the window opening. These parts are the moulded vertical members of extruded bronze and the curving muntin bars that connect them. These muntins were intended to be



made by bending extruded sections—made solid so that they would not collapse under the bending—and all of their curves are part of a master curve. There was to have been a cast iron jig with this curve around which to bend the bars. They were to be mitered and joined together and to the uprights by welding or brazing. While designed with this method in mind they are, however, cast, each group of two bars being a single casting, which retains the structural intention of the design.

The combining of extruded and cast shapes in the

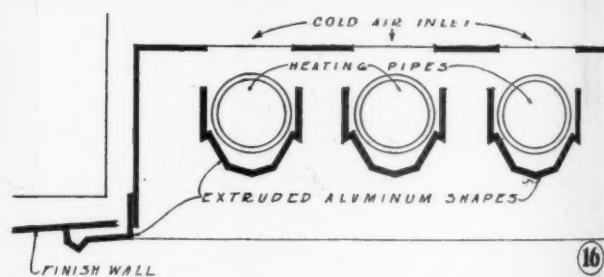
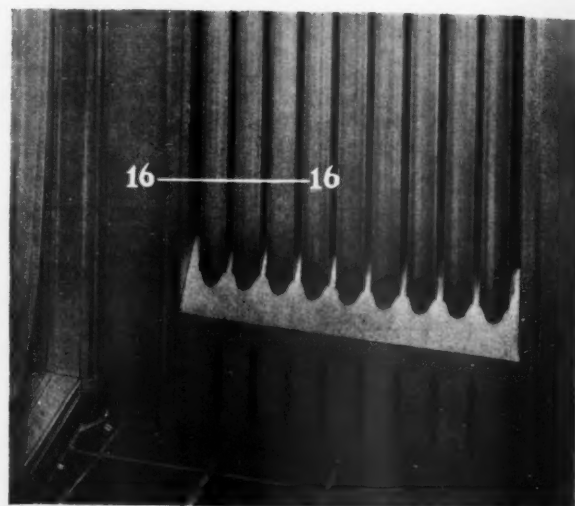
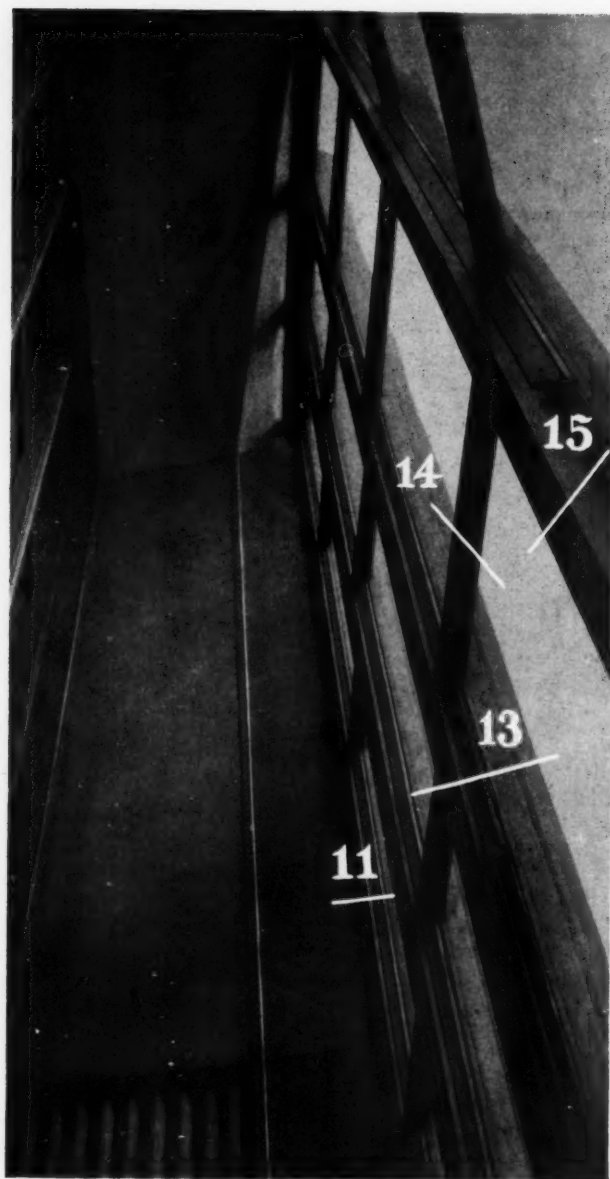
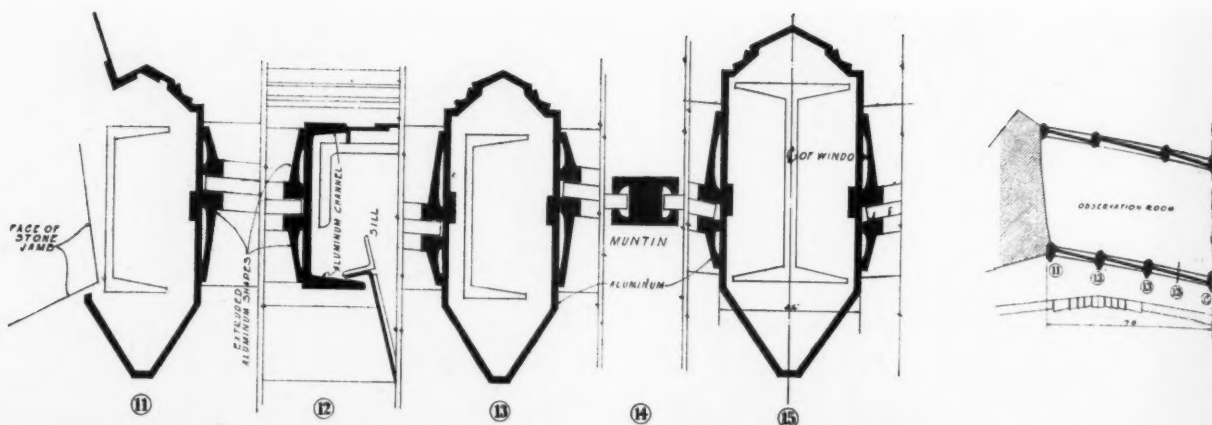


SPLAYED JAMBS required changes of horizontal glass planes and presented the problem of reducing the number of die shapes needed because of angles. Vertical members are extruded; curved members are cast. Windows, double glazed

same design always introduces a problem for the maker of the metalwork to solve. The two methods require different alloys. Different alloys produce different colors. The problem consists in finding alloy combinations that will satisfy the producer's problem and give to all intents and purposes the same color.

Extruded shapes are economical where straight lines predominate and the design is not too much "broken up." Where the design would require numerous joints to be fabricated by hand or numerous bent shapes economy dictates the use of cast forms. This is especially true in the case of intricate designs that are frequently repeated.

In the entrance to the bank and in the main entrance of



LARGEST WINDOW of aluminum ever made, about 15 feet wide and 34 feet high. Structural alloy aluminum was used over structural steel shapes. Mullions were located to require a minimum of die shapes for bed moulds, which are repeated throughout. At right above will be seen details of radiator in "observation" room

the Irving Trust Company Building are glazed grilles or traceries fabricated from extruded and cast bronze very much after the manner of the window traceries.

The windows of the main banking room and other windows in the lower stories are united vertically with those above by spandrels of cast bronze in a design derived from laminated construction with chevron-like incised lines that harmonize with the fabricated metal work.

Aluminum plays an important part in this building, for the large windows of the great lounge on the forty-ninth floor, facing the east and west, have aluminum jambs, sills, mullions, and frames.

Many interesting details of this work in aluminum are shown in the accompanying drawings. For instance, note how the mullions are formed from a single section of extruded aluminum reversed to lock together and how the number of dies has been reduced to a minimum in other instances by using the same unit in many places. It is especially noteworthy (Continued on page 59)



KAPA SHELLS COVER THE GRAND LOUNGE CEILING

A detail of the window at the far end of this forty-ninth story lounge is shown on the facing page. Walls are of fabric designed by the architects in an American Indian war bonnet motif in warm gray, buff and dark red

GREAT BUILDERS I have known

ONLY those of us who have climbed a difficult mountain can fully appreciate its wonderful immensity, its grandeur and its Great Architect. Only those who have followed the course of architecture in this country for the last quarter of a century or more can begin to appreciate the stupendous progress made, not only in the design of buildings, but in the work of those who realize the design of the architect in tangible materials. It used to be a trade. Profession, as well as trade, we should now call it, for it vastly transcends the importance it held in earlier days.

The builders have nobly grown with the demands made upon them. They have risen to the occasion. When we built seven or eight stories, we had seven or eight-story builders. Now that buildings of more than fifty or sixty stories, and more than a thousand feet in height are common, there come master builders to rear them. How easily and quickly they seem to mount upward! And we look back to the time when practically no steel was used, but only cast-iron columns, railroad-irons and a few rolled-iron beams. And when that famous Chicago architect reared the first steel-framed skyscraper, he little knew what marvelous possibilities were opened up for the future of architecture throughout the world!

Now we actually realize the Hanging Gardens of Babylon—rows of pilasters ascending indefinitely—suddenly stopped, with a new series of terraces arising back of them, and repeated so on up into the clouds. How are they supported? It would have made construction engineers of the early days dizzy to contemplate them. Who knows the limit in size or in height of modern building? What an organization it requires, and what so-called executive ability in managing the small army of all the trades concerned. Yet without managing ability, how easily financial tragedy overtakes the builder!

Does the average architect or the man in the street



GEORGE A FULLER, founder of the George A. Fuller Construction Co., started business life as an architectural draftsman and hummed Gilbert and Sullivan operas as he worked

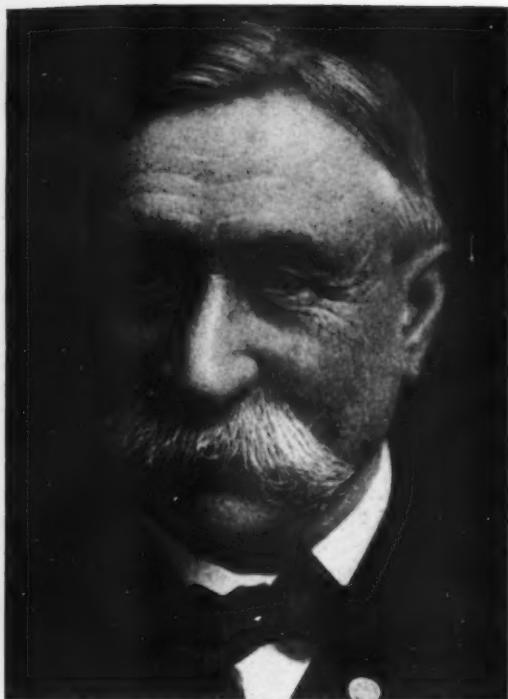
ever ponder on this—on the builder's responsibilities in executing the work, often at a competitive price, with a time limit definitely set? How fortunate are those who can work on a cost-plus basis!

Such were my thoughts when daily passing one of the largest construction projects ever built, outside of Chicago or New York. First came the demolition of the buildings cumbering the site—the old structures melted like wax from behind a smoke-screen of dust—a fence soon enclosed the site—excavation started and went down until one wondered whether, in this new era, there was any limit to depth, as there seemed to be none to height. The earth was being eaten out of that great hole in huge mouthfuls by a wonderful mechanism which seemed to be endowed with a mind of its own—a close approach to the "Robot" of the day. A mouthful was a load—spewed into one of the huge waiting motor-trucks which soon disappeared around a corner—and all without the loss of a motion or a minute's delay. And we recalled the endless string of hod-carriers toiling painfully up the ladders—hand labor and the sweating teams of a forgotten age.

Soon there appeared above the fence a blue and white sign bearing the name of the "George A. Fuller Construction Company, General Contractors."

George A. Fuller, from whom this company takes its name, started in life as a draughtsman in the offices of various architects in Massachusetts. He was more than a draughtsman. He was always George A. Fuller, and

"WHATEVER WE NEED TO BUILD . . . THERE



O. W. NORCROSS, of Norcross Bros., Boston, when travelling liked to read Trautwine's Handbook to pass the time, and said that it gave him all the information in the world

those who knew him always loved him. His associates, by retaining his name for the title of the present firm, have testified thereby to their high regard for his attainments. To have one's name go down in history as a great builder, when to be a builder means something in these days of astonishing progress, is high enough honor for any man!

He was, in early manhood, chief draughtsman in the office of Peabody & Stearns, then the leading architects in Boston. When I first had the privilege of meeting him, he was working on a drawing of an ornate interior. I was introduced to him as a new "student" in that office, and he was directed to "find something for him to do." This drawing, to my youthful eyes, was very fine, and the man simply wonderful. Tall, slender, with massive forehead and chin, long face decorated with "burnsides," and lighted by the most piercing black eyes I had ever seen, and such a captivating voice and smile. As a draughtsman, he was among the best of his time, more inclined to construction than to design, and his standing in the office, his opinions and policies were unquestioned by "the firm." A worker by day and by night, he was indefatigable. His only recreation was an occasional visit to the Gilbert and Sullivan operas—then just commencing to be popular—and as he worked, he would sing snatches from those that pleased him.

Outside of office hours, at that time, he was engaged in building for himself a two-story wooden apartment. He kindly permitted me to assist with the drawings.

By

J. A. Schweinfurth F.A.I.A.

These memories of great men in the building industry were the last literary effort of one who also left his imprint on architecture in America. Mr. Schweinfurth died September 29 at his home near Boston

This was probably his first venture in building. He was sent to New York City to take charge of the firm's expanding business there—and had charge, among other things, of the Union League Club, on Fifth Avenue, and the United Bank Building, at the corner of Wall Street and Broadway. On their completion, he left architecture and went as a building contractor to Chicago, where he erected many important works—mostly skyscrapers. Since then his name has graced the rising walls of countless important buildings throughout America. The Pontiac Building in Chicago, said to be the first "skeleton skyscraper" built in America, about 1885, which I am told is still standing, was one of his first construction job in Chicago.

There is no question but that his architectural education contributed greatly to his success as a builder. The practice of architecture in this country, apparently so full of opportunity, is yet a trying ordeal. The words of a well known itinerant architectural bookseller—"the world is full of talent, but only the supreme genius counts"—seems to be more applicable to the architectural profession than to any other.

THERE passed away a few years ago another remarkable builder, Neal McNeil. Born in Nova Scotia in extreme poverty, he was one of the few builders of his time who made a fortune and retired with it. His work was principally large residences, and he built many of those in Newport, doing business with, and having the confidence of, many of the greatest financiers of the day, who trusted him implicitly. If he told the owner that his house would be finished on a certain day, often to their surprise, it was finished on that day. He was at his office before six o'clock in the morning, finished his office and shop-work by eight o'clock, and was "on the job" soon after. He knew at the end of each day what had been accomplished and its cost; and if the figure varied from his estimates, he proceeded to find out why, keeping in touch with all his widely scattered works. He had no fear of the labor unions, and his word was his bond. He carefully scrutinized all the architect's drawings and saw that he had a fair deal. On one occasion, in looking over the full-size details, he exclaimed: "My God, Mr. S——, I (Continued on page 92)

COME MASTER BUILDERS TO BUILD THEM''

As It Looks

To Sell Good Architecture

GOOD architecture is one of the easiest commodities to sell that exists today. Buildings touch the lives of everyone at some point. The public is therefore already interested in buildings and people desire buildings in which to live, work and play. To interest any person in any commodity and arouse the desire of possession is more than half of a selling battle. All that remains to be done to sell good architecture to the public is to get its attention and present sufficient convincing argument on why good architecture pays. Plenty of good arguments exist and the public is eager to listen. And it is not difficult to get public attention.

Architectural Appreciation

THE Board of Education, New York City, has announced that three new courses of study awaited the students returning to school this fall. One is a course in which music appreciation is stressed and closely related with English literature, art, history, geography, nature study and the lives of the composers. Another is a course in foreign languages, which aims to develop the ability to read foreign languages with enjoyment. The third course is in vocational civics, which is intended to provide students with a thorough knowledge of the opportunities that exist for them in business, banking, and professional fields. What a fine thing it would have been, had a course been included that would develop an appreciation of architecture in the minds of the youth of that city.

Wonders of Electricity

BEFORE his death, that electrical seer, Steinmetz wrote, "We call this the electrical age—but it isn't. The electrical age is yet to come. And it will be a great age." Steinmetz was a scientist of vision and he foresaw great things for the future. In his life time he had seen electricity applied to horizontal and vertical transportation, communication, power, illumination. He knew that it was only a matter of time when "white coal" would be greatly extended in the fields of supplying heat and removing heat and other diverse fields. He probably visualized the big opportunities for that little miracle known as the photo-electric cell or tube, often called the "electric eye," which is put to so many different practical uses to day. He must have been familiar with the breaking of electric circuits by means of mercury in a tube and the possibility of its application to the now standard tumble switch. The finding of hidden defects in metals through the development of 200,000 volt X-ray tubes was perhaps one of his dreams. Since the death of Steinmetz there has been perfected a device that magnifies an electric current ten quadrillion times. Steinmetz was farsighted. Perhaps we are not living in the electrical age, but we are certainly getting nearer to it.

Need Closed Specifications

HOW many architects write a specification calling for definite equipment or materials and then permit some one to change their decision before the job is completed? Many are the plausible excuses that are presented as reasons why another material should be used. In some instances it probably makes little difference whether one or another make of material is used. In other cases it does make a difference, from either the practical or esthetic standpoints, or perhaps both. Often there is a vast difference in the cost of the two materials. In any event, the original decision was probably carefully considered and determined upon for a very good reason. Specification changes should not be hastily made for they may work an injustice to both the architect and his client. The architect should not be called upon to spend time upon a second investigation or possibly jeopardize his reputation through failure of a substituted material. It takes courage and backbone to make a decision and then stand squarely in back of it. One way to forestall changes in specifications is to make sure that the contractor orders materials well in advance of the time he needs them.

Central Mortgage Bank Proposed

PRESIDENT HOOVER, recent news reports state, has been looking into a plan presented before the National Association of Real Estate Boards last May to create a central mortgage rediscount bank that would provide a free flow of credit to those who desire to finance or refinance real estate property. While this is stated not to be a desire to create cheap money or promote a building boom, it would have a beneficial effect in releasing frozen assets in the form of money secured by existing mortgages. This money could be released through the rediscount bank and be put to work. The plan as proposed at this time would not include the financing of apartments or office buildings by the central bank. It would specifically benefit the small home owner since it contemplates discounting only mortgages of less than ten thousand dollars, a field in which relief is doubtlessly needed. Probably much of the money thus released would go back into building construction. A large amount of money would at least be put back into circulation and this should benefit all businesses.

Architects Tell Clients

THERE was a time when an architect's clients told him what to do and he usually did it. That day is gone. Today it is the architect's duty to tell the client what should be done. Few clients want to be bothered with details and the necessity of making decisions. As Robert D. Kohn has expressed it, "the architect to day must be the doctor and not the prescription clerk."

to the Editors . .

Another Page In History

ON the initiative of the Committee on Industrial Relations of The American Institute of Architects, nineteen groups of the construction industry recently met in Washington, D. C., and laid the foundation for an organization to be known as the Construction League. The purpose of the alliance is to "co-operate for the common good of the industry and better serve the nation." This is a step that has long been needed by the building industry. Problems that affect any one branch of the industry are too often also the concern of the entire industry. Much that cannot be accomplished by individual groups can be done through co-operative action. Representing thousands of persons and billions of invested capital the Construction League, representing architects, engineers, contractors, building material producers, and labor, has the opportunity of becoming one of the most powerful and valuable forces in business and industry in the United States.

Architects Business Men

SPEAKING at the New School for Social Research, Albert Mayer recently traced the architect in history, beginning with the time when the architect was also his own engineer and builder and perhaps his own quarryman and interior decorator as well. Steel and reinforced concrete construction—and Mr. Mayer might also have included plumbing, heating, electrical work, refrigeration, sound proofing, and air conditioning—brought about a change. New developments made the task too much for one man to master in their entirety. With centuries of artistic background behind them it was natural that architects should assume the artistic responsibility and Mr. Mayer said, "Their idea was that beauty could not go with utility or practicability." However, another change has taken place, for the speaker added, "There are only a few of those architects now left." Architects are rapidly realizing that buildings must not only be beautiful, but economically sound as well.

An Omission Regretted

IT is deeply regretted that proper credit was not given to Robert H. Orr, President of the State Association of California Architects, in conjunction with the report of the Unification Committees published on page 42 of the September 1931 issue of AMERICAN ARCHITECT. Unification of the architectural profession throughout the United States has been one of the dreams and fondest hopes of Mr. Orr for some time. He has actively promoted the idea and it is due largely to his efforts that this matter, so important to the entire profession, is on the threshold of accomplishment. It is with a true sense of duty and pleasure that the editors take this opportunity to make belated acknowledgment of Mr. Orr's invaluable service to the architectural profession.

Cornerstone Records

WHETHER or not the placing of mementos in cornerstones is more than a gesture is a question brought to mind by a discussion, in the Technical News Bulletin of the National Bureau of Standards, of the preservation of cornerstone records. Poli's Theater, Washington, D. C., was recently razed. The building was forty-seven years old. Records that had been placed loose in a zinc box in the cornerstone had so deteriorated that they were for the most part indecipherable. The box was not air-tight and no provision had been made to drain water away from the niche in the stone. The Bureau collaborated in devising a method of preserving records placed in the cornerstone of the District of Columbia's War Memorial. Typewritten records were made on special paper manufactured from cotton fiber and sealed in an air-tight copper box from which the air had been removed and replaced with nitrogen. The niche containing the box was designed so that water will drain away from it.

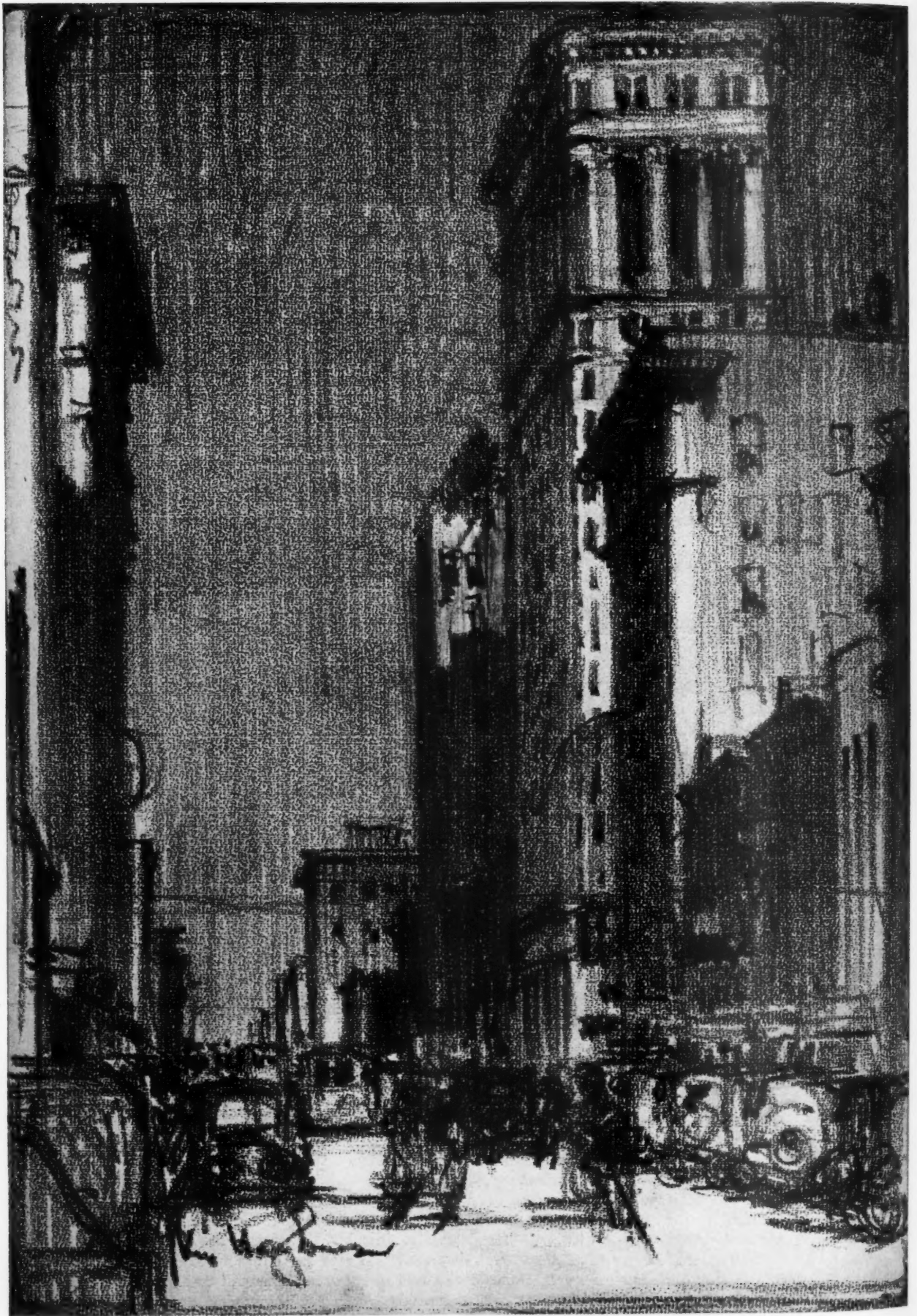
In Japan even greater precautions are known to have been made in at least one instance where records were made on special paper, wrapped in oiled silk and asbestos, and placed in air-tight fused quartz containers in which the air had been replaced with argon gas. The containers were covered with asbestos and carborundum. It is said that these precautions should preserve the records for at least ten thousand years.

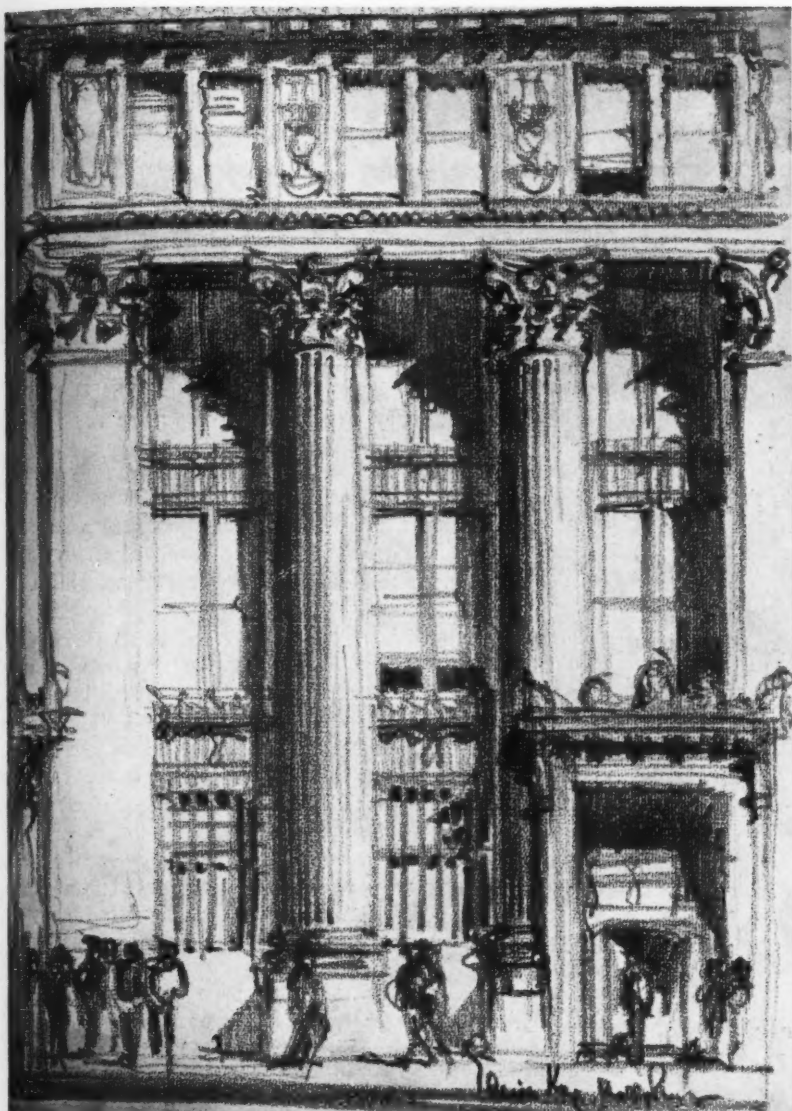
Dean of Sculptors Dies

ON October 7, 1931 Daniel Chester French, sculptor, died at Stockbridge, Massachusetts, at the age of eighty-one. Revered as the dean of American sculptors, Mr. French's work was well known by architects everywhere. His skillful handling of sculpture used in architecture won for him many commissions of this kind. His work invariably possessed merit of high order, a fine sense of proportion and fitness to its surroundings. He achieved fame early in life through his statue of "The Minute Man." Among his finest and best known figures is that of the Lincoln Statue in the Lincoln Memorial, Washington, D. C. During his lifetime he was the recipient of many honors both here and abroad. Daniel French's passing will be mourned by those who knew him intimately, but his work will remain for many, many years to be admired by millions of people.

Modest Boston

THE statues of two unclad youths are above the entrance of the new \$100,000 Mission Hill public library. Nearby residents complained that the youths constituted an immodest display. Mayor Curley, after inspecting the statuary, ordered stone masons to drape a granite ribbon around the figures. This will cost about \$1,000. Maybe even fig leaves are not modest enough for Boston!





Out of the South

BY
EDWIN KEY HODGKINS
AND
M. E. BOYER, JR., A. I. A.

NOON DAY SKETCH of the Crawford Building, Birmingham, Ala. Drawn in less than an hour with a lithographic pencil on grained paper. Edwin Key Hodgkins, the artist, is connected as a designer and delineator with Willis Irwin, architect, Augusta, Ga., which firm won the Gold Medal awarded at the first Southern Architectural Exposition, 1929, for the best residence costing over \$20,000

BUSINESS DISTRICT of Birmingham, Ala., titled, "Looking Back on First Avenue." Drawn with lithographic pencil on grained paper by Edwin Key Hodgkins. At the left

● **BUILT IN 1774** by H. Alexander. The sketch was made on cardboard with a 6B clutch pencil, by M. E. Boyer, Jr., A. I. A., Charlotte, N. C.



WHAT ARCHITECTS



BONNEY

NEW THEORY IN SHOP DESIGN

Designers and decorators collaborate in Paris, France, to make "streets of modern shops" with good display

THE largest single mortgage loan on real estate ever negotiated has been placed on Radio City by the Metropolitan Life Insurance Company. The mortgage totals \$65,000,000 and will draw 5% interest. The bonds will be amortized over a period of about 20 years.

APARTMENT house construction is approaching the limits of its present form, according to Irwin S. Chanin, who predicts that all-metal buildings are likely

Detroit Paper Interviews Architects
Radio City Gets Largest Loan
Apartment House Construction Is
Approaching Limits, Says Chanin

to be a revolutionary development of future residential building.

INTERVIEWS with architects are being conducted by Miss Florence Davies under the sponsorship of the Detroit Chapter, A. I. A. The interviews will appear in the Sunday building section of the Detroit News.

THE profit that lies in remodeling old structures is indicated by the experience of W. D. Bosler, attorney for the estate of J. B. Howard, New York. On July 1 of this year he was placed in charge of buildings on Columbus Avenue which had been allowed to run down since 1907, with 23 out of 34 apartments vacant. He installed hot water, porcelain sinks and tubs, electricity, put linoleum in the kitchens, placed new shades on the windows, supplied new gas stoves where necessary and redecorated. Every apartment is now rented; the revenue is \$21,000 instead of \$12,000; the value of the property has been increased 30%. Cost of alterations, \$6,500.

CHICAGO business men have organized to end the disposition of the federal government to go into business as a competitor of private individuals and groups. They feel that they can educate voters in general so that small business may be able to defend itself. The president of the association is Charles A. Wilson, president of the Chicago Livestock Exchange.

"PUTTING Value Into Buildings" is the title of a page circular prepared by the Northern Section of the State Association of California Architects, copies of which may be obtained for one cent each. It will be distributed to banks, building and loan associations, etc.

AT VALLEY STREAM

Hangars at the Curtiss-Wright airport, Valley Stream, Long Island, N. Y. Designed by Kenneth Franzheim, architect



TEBBS & KNELL

AMERICAN ARCHITECT

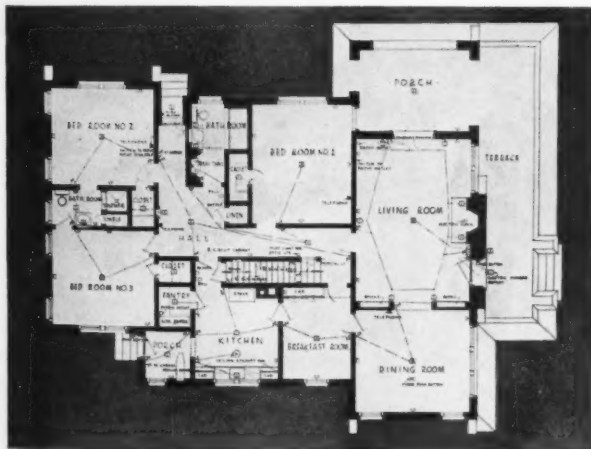
ARE TALKING ABOUT

Increased Rental in One Year
More Than Paid Remodeling Cost
Subdivision Is Architect's Function
California Prepares Sales Circulars

Another circular being prepared by the Association is "Advice and Counsel in the Planning, Designing and Construction of Public Buildings: A Discussion of the Services of the Architect," which is intended for distribution to such public bodies as boards of supervisors, boards of school trustees and city councils.

"NOT only from the standpoint of economy but from the more important standpoint of design real estate men are willing to concede that the plotting of subdivisions is becoming more and more the function of the architect," according to Frederick W. Garber, Cincinnati, a director of the American Institute of Architects, who predicts that the future of group housing will be a combined effort of the real estate man and the architect. He goes on to say:

"When I began practice, it was rare for an owner



A WIRING LAYOUT THAT WON A PRIZE

The southeastern division of the National Electric Light Association recently conducted a contest for the best wired buildings in various classes. The plan shown above was awarded a \$500 first prize in the residential class under \$12,500. E. W. Mann, architect

to consult the architect before he acquired a site. Today, invariably the wise owner consults his architect before a purchase is made. The architect's judgment is sought. . . Good design was never so important as now. It has a real money value to the investor. Every branch of the building industry, and those outside, have come to a realization of this fact.

"In all branches of the industry, large and small, the



NEW STYLE OFFICE PARTITIONS

Ordinary corrugated wire glass is used for partitions in the office of the Hazard Advertising Agency, New York. Framework is of iron painted a dull black. Designed by D. Baker, former art director of the agency.

architect is expected by the owner and contractor to furnish the leadership. This makes it necessary for the architect to be a business man capable of managing all the necessary diverse branches created by his design. He must also have a knowledge of how his client's work can be financed.

WHOLESALE prices of building materials are 22.5% lower than in 1921, according to the National Association of Real Estate Boards, which bases its figures on U. S. Bureau of Labor statistics.

A COMPETITION for a monument to the memory of the first permanent settlement of the west at Harrodsburg, Ky., will be held by the government. Designs should be submitted by December 1, 1931. Full particulars may be obtained from the Quartermaster General, Munitions Building, Washington, D. C.

LOS ANGELES COUNTY has abolished the office of county architect. Twenty positions in the county architect's office have been eliminated, the remaining employees being transferred (Continued on page 108)



The sag in the handrail at the top is less than that of the big girder resting on the brick pier and the balcony has been built up several times. The "stone joints" are painted on stucco. In Toledo

The Land of Don Quixote

(Continued from page 30)

they have taken down a whole row of houses making a large plaza-like roadway right through the center of the village, or have swung in a large arc around the outskirts.

We arrived in Madrid in the midst of the general strike and thought possibly we had found the revolution which has since occurred. The strike was a somewhat thrilling affair that afternoon but was over the next day and the orderliness and discipline of the reputedly hot-headed Spanish people under circumstances which might easily have led to riots and bloodshed was remarkable. Madrid itself has little of interest to an architect other than the Prado, which we felt richly deserves its rating as the world's finest art gallery.

From Madrid we went to Toledo which, like Carcassonne in France and Rothenburg in Germany, in a medieval city left almost untouched. Here we saw our first evidences of the Moorish influence in doorways and a few remaining mosques. We would liked to have spent several days wandering around the streets but felt that we must hurry on to the southern part of Spain.

We left in the early afternoon for the monastery of

Guadaloupe. We had considerable misgivings about attempting to stay at the monastery. We had heard in San Francisco that this was the only desirable stopping place between Toledo and Seville; that we would be cared for by the monks and in the morning could pay whatever we desired for our night's lodging. Not speaking any Spanish this all sounded rather appalling and we had decided not to attempt it, but in Madrid Mr. and Mrs. Arthur Byne, whose many books on Spanish houses and gardens we had enjoyed, were good enough to give us some advice about places to see and had told us by no means to fail to include an overnight stop at Guadaloupe.

So, feeling somewhat like a small boy on his first trip alone to the city, we started out, but as in the case of all our other misgivings about Spain our fears were entirely baseless and our visit to the monastery was one of the most delightful experiences of the entire trip. The country between Toledo and Guadaloupe is high table land and the deep arroyos and distant mountains recall the ruggedness of Wyoming and New Mexico.

Just before dusk we left the main road and followed a small winding stream up toward the mountains. The little town of Guadalupe suddenly appeared, surmounted by a monastery with its high walls and turreted towers all jumbled together in a most amazing picturesque mass. A small boy guided us to the proper doorway where we were taken in charge by two women, who opened the door of a fair sized Renaissance church into which we drove the car, neatly parking it in a side chapel. I may say right here that the architecture of this particular church was like all the too many Renaissance churches, of a very indifferent, mediocre character, and it is to be regretted that more of them cannot be turned into garages. Of course the monastery had another larger Gothic church in addition to this one.

We were led up several flights of stairs along various twisting and winding corridors, up and down occasional steps, and finally, after ducking through a doorway with a low lintel, we came into our room, which was apparently above the side aisle of the main church and looked down on the village square from a height of forty or fifty feet. Before dinner we were taken on an amazing trip through the monastery by a young and intensely enthusiastic monk with limited but adequate English. Although it was almost dark we were shown all that part of the monastery which is not cloistered from visitors.

"Our Lady of Guadalupe," the miraculous image of the virgin which was discovered in the fourteenth century, is mounted on a revolving stand and approached from the back through a little sacristy. It is a small, blackened wooden figure which, according to tradition, was buried for several hundred years and after the expulsion of the Moors was dug up when the virgin herself appeared to a cow herder with instructions as to where to dig. A great chest contained many jeweled robes with which the image is decked on various occasions, the finest of which is semi-circular in shape and nearly eight feet in diameter. It is solidly covered with pearls arranged in intricate designs which involve an endless amount of grading. The main floor of the church is on a much lower level than the smaller room containing the image of "Our Lady," so that she appears in her niche high above the altar. As the candles are lighted a large electric light bulb hanging on a wire without a

fixture of any kind flashes on just above her head to provide an incongruous touch of modernity.

The entire monastery is built on a hillside and has such a profusion of levels and steps that even an architect becomes a little bewildered as to just where he is going to come out next. The main sacristy, which is more or less Italian in style, is the richest part of the monastery. The walls and ceilings of this large hall are covered with painted pilasters, panels, capitals, cornices, and other details in the best baroque manner. When we say painted we mean that the flat surfaces have the orna-

ment carefully painted on with all shadows so cleverly cast that in the fading light it was impossible to see that many of them were not actually standing out in relief.

At dinner all of the travelers who were guests at the monastery, together with the monk who was responsible for our entertainment, were seated at one large table. Two young Spanish civil engineers, two Portuguese gentlemen, a Spanish priest, an Englishwoman with a young Irish girl who were motor-ing to Africa, a Frenchman and his wife and ourselves made up an even dozen. Everyone except the French couple made a stab at one language beside his own. The monk translated the Portuguese jokes, which were many, into English for our benefit and some of us retranslated them into French. The food—and drink—was excellent and plentiful. In all it was a most hilarious, exciting dinner party, and our opinion of monasteries underwent further violent revision.

In the morning, following coffee and churros, we were taken out into the cloisters which it had been too dark to see the night before. The principal one, which is the really unique architectural feature of the monastery, is of an architecture which so far as I know has not yet appeared in the United States, Mudejar, or a combination of Moorish and Gothic, built in the sixteenth century by Moorish workmen who were attempting to follow Gothic tradition. Two-story open cloisters with horseshoe arches surround the entire courtyard. The details of the balustrades are quite Gothic. The arches have been built of brick which are plastered and white-washed. In the center stands a superb fountain or rather a well house covering a hexagonal pool. This little building, constructed of brick with panels of deco-



Seen from a bedroom of a hotel in Toledo

rated stucco and with colored tile insets, and yet with its whole feeling distinctly Gothic, was one of the most delightful bits of architecture we saw in Spain. At that time it was entirely covered with scaffolding and was to be restored. In the light of some of the other restorations going on we were sorry to see this.

THE second cloister is known as the Gothic cloister and here restoration is going on in full blast. The Father explained that in 1870 when the monks were expelled from Spain the stone walls were an easy source of supply for the neighboring villagers who proceeded to tear down and remove the stones from this part of the building. We fairly gasped when we found that in restoring this cloister the outside is being built with the utmost similarity to the existing walls, while the inside is being constructed as a modern inn, including an elevator, and in the future, guests who come to Guadalupe will be cared for here. This made us particularly glad we had arrived when we did and were able to occupy our room with its brick flooring, heavy beamed ceiling and iron balcony looking out over the village square. In the morning I found that our room was indeed built against the wall of the center aisle of the church, and on looking along the corridor I could see at several points the old buttresses.

The village of Guadalupe itself is fantastically picturesque—a much overworked word in Spain but the only one which seems to suit. All of the buildings have a second story, projecting out over the sidewalk, which rests on columns of various shapes and forms. The large twisted and sagging timbers running between these columns, which carry the stone walls of the second story, were cut in the days when Spain had trees far larger than any now growing there. On the window sills and balconies there were innumerable flower pots with gaily blossoming geraniums and trailing vines. Although there had been no rain in Spain for seven months, from one end of the country to the other and in the most squalid surroundings we found the window ledges and balconies lined with these flower pots in which the luxuriant growth proclaimed great care and attention.

After a reluctant departure in the early morning we were on our way to Seville. Shortly before noon we reached the old town of Merida. Here Roman ruins abound and the old Roman bridge half a mile in length and nearly 2000 years old is still the only way to cross the river. On this bridge, which was wide enough for two machines to pass, we overtook a herd of pigs, sheep and goats. Their herder was bringing up the rear with one pig on a long rope. This pig was reluctant to leave the town and kept making futile backward dashes, each dash being terminated by the herder neatly flipping the pig over on his side with a jerk of the rope. We had slowly passed about two-thirds of the herd when there was a terrific squealing underneath our auto and with a series of bumps I felt the back wheels rise up in the air. As I stopped the machine and backed down off the bump, the herder appeared beside me and bending down he dragged the pig from under the back wheels. It gave one long last expiring squeal which gradually ran down like a punctured tire, and I had time to wonder how much pigs cost and if it would not be better to pay for it even if it had deliberately run under our car from behind—when the pig jumped up

and dashed away trailing its rope. That was the last Roman bridge we crossed and the only pig we ran over.

In Seville we were fortunate in having letters to an American woman who had lived there for several years and who obtained admission for us to several large, fine Spanish homes. In Seville the residences are built right out to the sidewalk, and while very plain on the outside even the poorest have patios and the better homes are extremely rich within. Peculiarly enough the Spaniards seem to have developed a style which combines the Moorish and Renaissance but with each form of architecture kept in its own place. As nearly as we could make out this came about somewhat in the following manner: when the Moors were driven out of Spain they left one-story buildings with patios surrounded by horseshoe arched cloisters. The Spaniards added a second story to these buildings with Renaissance cloisters and arcades above the horseshoe arches. This way of doing things apparently became so fixed that today the fine new homes are being built in the same way. This not only holds good in the patios but on the interiors. The first story will be a mass of rich, dull coloring with tile wainscot, ornamental pressed plaster, leather covered doors, and heavily beamed and decorated ceilings. When one ascends the stairway all richness of color stops at the second floor and except for a colored tile base one finds himself in almost dazzling whiteness. The ornamental pilasters, decorated cornices, architraves, and moldings are all of the Renaissance.

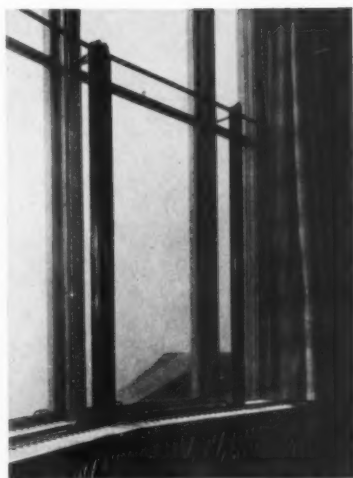
FROM Seville we drove on to Ronda, which has been described so often, and then along the sea coast to Cadiz, Algeciras and Gibraltar. From the hills back of Tarifa we could see the mountains of Africa rising tier on tier. We saw many Spanish ranch houses which in the distance looked as if they would have crowned the hills of Hollywood or Pasadena, but on closer inspection like the ones in Italy, they revealed themselves as a mass of farm buildings with pigs and chickens running in and out of what was apparently the front doors, and cows and farm machinery occupying what at a distance had appeared to be a garage. The so-called Spanish architecture of the United States and California is the farm house and ranch type of building which has been made adaptable to the suburban dweller. Our interiors of course bear little resemblance to the interiors of Spain.

From Malaga we crossed over the high mountains to Granada, which has been described by travelers since the time of Washington Irving and of which nothing new can be said. We found it wholly delightful and again saw many attractive old homes and buildings. From Granada we went on to Cordova, back to Madrid and up to Burgos and San Sebastian and into France. As we drove north the architecture became steadily more bleak and severe but was always picturesque.

Unless the revolution should follow in the footsteps of the one in Russia I believe that Spain is on the verge of a great amount of rebuilding and those who delight in Spanish architecture as we have known it should not delay their visit too long. In the northern cities new buildings are being erected of a standard international character. All Spain has been electrified and the peasants in the outlying villages have gone directly from candles to electric light. Presumably the Spanish peasant will now go directly from the donkey to the automobile.

Designed for Easy Fabricating

(Continued from page 46)



DOUBLE WINDOW

in small lounge, 49th floor. The shield above the radiator cover is supported by a structural steel member. The glass screen is set in a metal frame of extruded metal similar in design to the window itself. At the top of the window is a concealed device to operate the sash

that only two designs of glass moulding are made to serve all of the windows in this part of the building, which are set in an outcurving broken line, by the clever placing of the mouldings a little backward or forward on the different mullions and by adjusting the angles at which the mullions stand. This is shown by one of the drawings. Note also that where joints are necessitated in the long vertical runs, they are made with a lap joint formed as an incised chevron that becomes both an ornamental and practical feature.

These great windows are double, with a space several

feet wide between them in which one can walk about. Here in the walls at either side, between the inner windows and the outer windows, are tall recessed radiators, grouped vertical steam pipes covered from top to bottom with extruded aluminum sections. Between the pipes are vertical strips of sheet aluminum held by horizontal straps of the same metal forming, together with the pipe covers, screens that hide the radiators and permit the circulation of air. The verticals pass through splayed surfaces of sheet aluminum at the top and bottom. Their tops extend some inches above the upper member and they are free to move vertically to permit expansion and contraction of the metal.

Throughout the building, machine work and modern methods of fabrication have been given full recognition in the designing of the ornamental metal work, and care has been exercised to secure the same color and quality of surface in all parts, whether of extruded metal, sheet metal or castings. The appearance of the extruded metal, which is dominant, was taken as the standard. This is, indeed, an advance in the art of using ornamental metal.

Public Building Program Going Slowly

OFFICIAL STATEMENTS from Washington about the public-building program are discouraging states an editorial in the Engineering News-Record. A total of \$300,000,000 of contracts for public buildings will have been let by fall, say the government spokesmen. The fact is that most of the amount has already been let, and adding the remainder will contribute only a small item to the volume of employment.

In view of the great amount of idleness that is likely to be with us next winter and the severe distress it is sure to entail because of the fact that millions of workers have been without income for a long time, the rate of progress in getting work going on public buildings is

desperately slow. Under the circumstances the administration is either cold-blooded or childishly naive in citing the public-building work as a factor in coping with the emergency that confronts the country.

If public works are to be made of any real service in relieving the winter's threat, they must be increased in vastly larger proportion than anything yet proposed by the government, and they must be pushed forward with an energy and an intelligence proportioned to the seriousness of the situation. All the indications are that our powerful national machinery is to be left unutilized in fighting the aftermath of the depression. This is anything but an encouraging prospect.



The house around which a book was written. From "An Early American Home"

AN EARLY AMERICAN HOME—AND THE FUN WE HAD BUILDING IT

By Claude H. Miller. Published by Thomas Y. Crowell, New York. Illustrated; indexed; 238 pages; size $6\frac{1}{2} \times 9\frac{3}{4}$; price \$3.50.

ONCE in a while some untrained layman with the architectural instinct highly developed decides to build—and with happy results. Mr. Miller, in a way, belongs to this class though, to be sure, he had built some twenty houses and had capably served as associate editor of *Country Life*. Yet through his entire book one gets the impression of an architectural layman having a mighty good time, for his psychology is always that of the "liver in" rather than the "builder of." Yet, perchance, could any trained architect have a better instinct?

Reading the book, which is highly amusing and as well written as a popular novel, one can't help but get a better appreciation of what a client thinks about at the various stages of his career—the things he wants, the things that trouble him, and the things he really likes. He sort of takes the client out of the class of bill payer and makes him a being who, in spite of his frequent unreasonableness, really is human and lovable no matter how he may vex his architect.

From all of which, one may gather that this is an interesting book which, though written for lay consumption, is yet worth the time and attention of the practicing architect who is fond of chuckles and who wants to further study the genus client.

MODERN COMBUSTION COAL ECONOMICS AND FUEL FALLACIES

By Clarence V. Beck. Published by the Mid-West Coal Retailer, 20 West Jackson Blvd., Chicago. Illustrated; 382 pages; size $7 \times 10\frac{1}{2}$; price \$3.

A POPULAR text-book of the latest developments in fuels and their combustion. It is primarily intended to give one a clearer picture of comparative fuel values and improved methods of using coal.



Kappa Epsilon at Massachusetts Institute of Technology. From "Designing and Building the Chapter House"

DESIGNING AND BUILDING THE CHAPTER HOUSE

By Oswald C. Herring, A.I.A. Published by the George Banta Publishing Co., Menasha, Wis. Illustrated; 64 pages; size $8 \times 11\frac{1}{4}$; price \$1.25.

COSTS, materials, equipment and other factors in the design and construction of college fraternity houses are discussed in this book, stated to be the first of its kind. Much of the material is of somewhat a popular nature, particularly the chapters on the "Meaning and Value of Architecture" and "Choosing the Architect: Preparing the Plans." Another chapter is on "Equipment and Landscaping," and there is one on "Financing." The book is illustrated with a number of chapter houses, and a few plans.

CHINESE GARDEN ARCHITECTURE

By Edwin L. Howard, A.I.A. Published by the Macmillan Company, New York. Illustrated; 50 plates; size $9\frac{1}{2} \times 12$; price \$6.

MR. HOWARD recently returned from a trip to China, where he had taken a number of photographs. Some of those of minor Chinese buildings and gardens he put into this book. Each of the pictures is a full page, with a description on the back of the facing page.

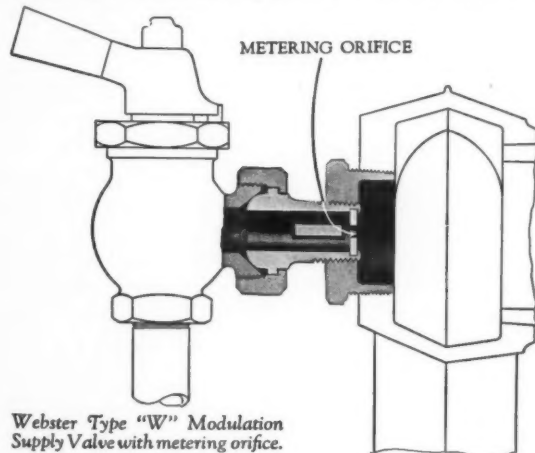
In the introduction Mr. Howard tells something of the Chinese Garden. He writes, "The chief aim of the Chinese garden designer has been to heighten and intensify the effects of nature; rocks and trees are selected

And now that
little cold room
in the corner gets
its full share of heat

at the same time as
the living room . . .

You probably know of more than one installation where a condition like the above exists—where one or more rooms at a distance from the source of steam are “hard to heat” simply because they don’t get heat until last. This difficulty can be remedied in existing installations and built out of new installations by applying the “steam metering” principles of the Improved Webster Systems.

This marked improvement is accomplished first by the high efficiency of the system as a whole and second by incorporating in all radiator valves a correctly sized metering orifice which restricts the



flow in accordance with the need for steam at every point of radiation . . . Thus all radiators get steam at the same time and in substantially the same proportion. No overheated rooms, no cold spots.

In addition to these marked advantages in heating service the Improved Webster Type “R” and Vacuum Systems offer definite advances in operation. Your damper regulator becomes a useful regulating device instead of a mere “safety”—moreover any type of automatic temperature

control works better with an Improved Webster System.

The advantages of Webster metering orifices can be quickly incorporated in existing vapor systems. Used in connection with other needed Webster Equipment they convert existing faulty and obsolete installations to 100% Improved Webster Systems, and assure remarkable efficiency in the control and distribution of steam as well as safe, economical operation and freedom from service costs. Arrange in advance to avoid those troublesome “cold room” jobs.

All that is necessary to assure your clients of the marked advances in heating comfort and economy afforded by the Improved Webster Type “R” System is to incorporate three short paragraphs in your present standard Webster specification. Bulletin containing these paragraphs will be sent upon request, together with complete information. The coupon below is for your convenience.

Warren Webster & Company, Camden, N. J.
Pioneers of the Vacuum System of Steam Heating
Branches in 60 principal U. S. Cities—Darling Bros., Ltd., Montreal, Canada

R 28 AR

-since 1888
Webster
Systems of
Steam Heating

WARREN WEBSTER & COMPANY, Camden, New Jersey:

A. A. 11-31

Please send me your Bulletin describing the Improved Webster Type “R” System including suggested specification paragraphs.

Name.....Address.....City.....



Summer house of reinforced concrete.
From "Chinese Garden Architecture"

for their most extreme characteristics, paths are twisted fantastically, water is poured in strange cataracts or used to make the most of a beautiful reflection. Yet in all their gardens they adjust them to, and associate them with, man by appropriate buildings; buildings which seem like flowers in themselves without copying flower forms."

There is an introduction by Everett V. Meeks, F. A. I. A., dean of the School of the Fine Arts, Yale University, who was in China with Mr. Howard. The frontispiece is in color.

THE NEW STYLE

Published by Charles Scribner's Sons, 597 Fifth Avenue, New York. Illustrated; indexed; 207 pages; size 9x11 1/2; price \$8.50.

"THE New Style, Architecture and Decorative Design; A Survey of Its First Phase in Europe and America, with an Introduction Adapted from the French of Maurice Casteels." So reads the title page of this book, which accurately sums up the scope of its contents.

The first chapter is headed, "The New Direction." It deals with whither we are going, discussing the acceptance which modern art has secured and the reasons for its being. Next comes a chapter headed, "Architecture," which is somewhat of a history of the reasons for the change in architecture since the war. And the final chapter is headed, "Decorative Art," treating of things which the designer must keep in mind when working in this new style.

Forty-three pages of the book are taken up by the text; the rest of it is devoted to full page illustrations of modern American and European work, mostly the latter.



Church designed by L. Azema, M. Edrei and J. Hardy, Paris

MODERNE KERKEN IN EUROPA EN AMERIKA

By Prof. Ir. J. G. Wattjes, B.I. Published by N. V. Uitgevers-Maatsch, Amsterdam, Holland, and obtainable in the United States through Van Riemsdyck's Book Service, 55 West 45th Street, New York City. Illustrated by 303 pictures; size 9 1/2 x 1 1/2; price \$10.00.

"MODERN Churches in Europe and America" is a book of churches, not one of which is Gothic. It is a book to delight the heart of the architect who has tired of traditional forms in church architecture and wishes his own work to reflect the spirit of the times.

The text is given in several languages, including English. Countries whose churches are illustrated include Sweden, Finland, Denmark, Germany, Czecho-Slovakia, Austria, Hungary, Switzerland, France, Spain, Belgium, Holland, England, and the United States.



Italian Pavilion at the Liege Exhibition. Pagano and Montalcini, architects. From "The New Style"



This Famous Vista, typical of New York, shows to excellent advantage the place of Ludowici Tile in important building operations . . . From the left, the new PIERRE and the SHERRY-NETHERLAND—Schultze & Weaver, Architects for both—have the setbacks covered with Ludowici Promenade Tile . . . Next in order the SAVOY-PLAZA, McKim, Mead & White, Architects—the SQUIBB BUILDING and BERGDORF-GOODMAN'S, The Firm of Ely Jacques Kahn, Architects for both—and the PLAZA, H. J. Hardenbergh, Architect—all roofed with Ludowici Tile . . . Lasting beauty—character—complete and permanent protection—are dominant qualities of this tile . . . Made in a wide variety of patterns, textures and colors, it is adapted to all types and sizes of buildings and all styles of architecture . . . Our representatives, located in principal cities, are at your service.

LUDOWICI TILE *Made by* LUDOWICI-CELADON COMPANY

NEW YORK: 565 FIFTH AVE. • CHICAGO: 104 S. MICHIGAN AVE. • WASHINGTON: 738 FIFTEENTH ST., N.W.

How to Set Up a System for the Cost Plus Fee

(Continued from page 37)

plus the profit, the store to decide what the overhead and profit would be. No more can you interest an owner in a cost plus fee arrangement, unless you tell him frankly what it means.

The architect's position in work taken on this basis becomes one of unusual trust and his methods, for his own protection and for the good of the profession, must be carefully set up and strictly carried out. A cost plus bill, subject to questioning, is a serious matter and never worth chancing.

Two slightly different methods of accounting are possible in recording costs and expenses; one for use where a cost plus job may come along now and then, and the other for use in an office where several large jobs may be expected to go along simultaneously. In the first type, monthly accounting of the job costs and expenses are made; in the other, such accounting is perpetually and automatically recorded—that is, at any moment, the costs to date can be determined directly from the job cost book, and not at the end of the month when postings are made from cash book or journal.

The method here described is that wherein costs are known at any time. Such a method reverses the usual system of bookkeeping in that the cost accounting charges are made initially and not through the office journal; they are subsequently posted in the ledger.

The first step toward setting up a system of this kind is to properly number every job and every major or distinct feature of a job. The first is generally done, but should be augmented where possible to give the owner subdivided bills. The use of the decimal number is the easiest way of subdividing, although letters may be used. For instance a large country estate job might be subdivided as Main House 210, Grounds and Exterior Work 210.1, Garage 210.2, Tennis House 210.3, and Pump House 210.4.

How to Charge Expenses

FOR the proper billing of fee and overhead, expenses must be segregated from direct costs. The architect incurs certain expenses in connection with a job which are not for architectural services, but which he pays for the owner's convenience. He is not entitled to either profit or overhead on such items, which may be summed up as follows:

1. Postage.
2. Blueprinting and specification reproduction in case this is done by other than the stenographer).
3. Telephone, telegraph, radiograms, cables.
4. Traveling expenses and carfare.
5. Testing and inspecting laboratories' fee.
6. Clerk of the Works (this may be placed under "Costs" if so agreed).
7. Engineers' fees when not part of the architect's organization.
8. Models and special perspectives or renderings.
9. Surveys.
10. Legal Fees.

These charges are billed at actual cost and hence at

their point of origin a definite record must be made stating the amount and the job to which they belong.

At the telephone desk, every out-of-town call should be listed together with the job number. The monthly telephone bills are checked against these and the amounts entered in the job cost book. A duplicate of radiogram, cable and telegraph messages is filed and when the bills are received, these are entered against the job costs.

Traveling expenses are first entered on expense slips—Form 4—and signed by those entailing the expense. These expenses are usually paid through the petty cash account and immediately entered in the job cost record—Form 3.

Blueprinting and specification reproduction are recorded on the order slip and each month these slips are checked with bills and the amounts entered into the job cost book. All other petty cash expenses are entered into the petty cash book with the job number and later transferred to the job cost record. In other words, all expenses should be charged to the job as soon as paid.

Daily Allocation of Costs

DRAFTING, specification writing, supervision and correction of shop drawing time is allocated on daily time-cards, as shown by Form 2. Each person doing such work charges his time in intervals of not less than one-half hour, either to a job or to the office. The charges "to office" are not part of any one job except as they become part of overhead. It is important, however, to have definite categories for all "time" to be charged, such as lost time, holidays, vacations and other items not definitely chargeable to any one job. This, then, becomes part of the *overhead*.

The cost includes the following:

- (1) Drafting.
- (2) Specification writing and preparation.
- (3) Supervision by the architect or representative.
- (4) Administration, including conferences, letters, investigations, follow-up, etc.
- (5) Engineers' fees where same are not set up as expenses.
- (6) Clerk of the Works if not in expenses.

The architect's definite responsibility lies in making absolutely sure that these time cards are accurately and truthfully kept. Some responsible person should be delegated to make the office rounds daily at closing time with the time-cards and have each worker set down his time for the day, as shown in Form 1. Only in this way will procrastination and forgetfulness be eliminated. The card should be signed by each worker at the end of the week under a statement such as "The above is a true record of my work for the week."

Stenographers, bookkeepers, office manager and office boys are not usually required to keep time-cards unless they perform special services on a job. Their time is part of the overhead.

The firm's or associates' time may or may not be set up on time-cards. This is altogether dependent upon the architect's-owner's original agreement. "Bosses"

How A. D. T. Protects Public Buildings

THE City of Memphis was not content to call its Municipal Buildings adequately protected without the ever-watchful electrical fingers and eyes of A. D. T. Central Station Service.

The Shelby County Court House, containing the administrative offices of the City of Memphis as well as the county, is equipped with A. D. T. Watchman's Compulsory Tour, Emergency Alarm Box, Burglar Alarm, and Police Call Services. The City Treasury is protected day and night against holdups and burglaries.

The Department of Parks, Prisons, Streets, Sanitation and the Public Library use A. D. T. Protection Services in various forms.

A. D. T. has been specified by leading architects for the newest, biggest and best buildings of all kinds. It protects more than 22 billion dollars worth of property and has been a Symbol of Security since 1873.

Complete engineering assistance is given to architects. For description and general specifications see Sweets.



Shelby County Court House, Memphis, Tenn.
Hale & Rogers, Architects.



Landmarks of Modern Protection

Controlled Companies of
American District Telegraph Company
155 Sixth Avenue, New York, N. Y.

are by all means the most difficult ones in the office to check up as to how they passed their day. Their secretaries must be instructed to fill out their cards daily even if third degree methods of questioning are required.

All inspection or supervision trips should be charged to the job.

The clerk of the works may be charged in one of two ways, and this point should be settled in the agreement. The clerk of the works' salary and expense may be set up as direct expense, with no overhead or profit attached, or as "costs" such as drafting, which takes its share of overhead and profit. Building Department permit, fee, etc., would naturally come under "expenses." From the time-cards the costs are distributed to the time-card record—Form 2. This gives at any time the total drafting cost on any job, the draftsman's name and the time he spent. The totals of each job are posted weekly from these cards to the job cost record.

To Determine the Overhead

ALL cost and expenses that cannot definitely be allotted to jobs must be summed up and their cost apportioned to each job. Such cost includes rent, light, heat, water, salaries of all those who do not use time-cards, cleaning, ice water, stationery and supplies, insurance, and similar items. Also all amounts on time-cards that are assigned to "office" must be placed under overhead. These include lost time, vacations and sickness.

Next a decision must be made as to how to know the proportion of overhead that is fair to charge to each job. There may be several equitable methods of doing this, but any method adopted should be based on an average over a long period. The method adopted should be explained in advance to the owner.

In order to have a record of monthly "overhead" total some definite relation must be determined between overhead and the cost as reflected by the total time and costs. If the total of *all time-card costs* for a month are compared with the total overhead for a month and related, we have a definite comparative ratio. Then the time-card costs on any one job will indicate by use of this ratio the amount of overhead that should be charged to that job. These ratios will vary and are naturally higher when work in an office is slack. They should run between 70 and 100 per cent and the extreme range should not run below 50 nor above 150.

Suppose that the overhead cost for a month totals \$900 and time card cost \$1,000; then $900 \div 1000 = .9$ or the ratio of one to the other. If the time-card records on a job show \$200 for the month, its share of the overhead would be $200 \times .9 = \$180$. See Form 5.

What Should Profit Be?

THE overhead and the profit are the *plus*. Just what this profit may be is dependent upon the type of work the architect does; how much time and effort he will personally give to the work and how valuable his services will be. In any case, the amount is dependent on the original agreement with the owner. It may be set up as a definite lump sum amount. It may be related to the "time-card cost" or it may be related to the total cost of the building. If it is related to the "time-card cost," then there exists a double responsibility in having these costs correct.

Kind of Agreement

BESIDES actually recording and segregating costs, the architect must be conversant with the various types of cost plus agreements in order to discuss this point with an owner and thereby reach a basis mutually satisfactory. The system is so flexible, depending upon the type of client, type of job and type of architect, that no one solution can be set down as the one satisfactory for all cases. Its flexibility is one of its best features.

The owner must have faith in the honesty and ethical qualifications of his architect to deal with him upon such a basis. A frank explanation of this method of charging will prevent later misunderstandings and apprehensions on the part of the owner.

In return for the owner's confidence, the architect must be zealous to fairly allot costs, to use only men who give a good return for their salaries, and to run the office in an economical, efficient manner. A poor draftsman might ride along for months on the boss's sympathy on a percentage fee basis. However, he has no place on a "cost plus" job. A top-heavy clerical force or a too elaborate or oversize office will handicap the architect seeking cost-plus work, as his overhead will be out of proportion.

"Cost-plus" means the use of the time-clock idea and must be accepted as a necessary evil of a good system; but it also means an efficient office—a blessing to all concerned.

The agreement with the owner should definitely settle the following points:

- (1) How will overhead be charged? Will it be based on the average for the last five years? Seven years? From date of contract or from the date of billing?
- (2) Will the following items be classed as direct cost or as expenses?
Engineers.
Clerk of the Works.
- (3) Will the firm's time be set up on time-cards or will their recompense be all in profit?
- (4) What will the profit be—a definite percentage of "time-card cost," lump sum, or percentage of total building cost?

If the job is of short duration, the last five or seven years' average may be taken for the overhead. However, if the job is likely to extend over a long period of time the amount should remain flexible and be determined anew each year on the basis of the overhead costs for the preceding five years.

The owner will logically wonder "plus what?" when asked if he wants to use the cost plus method. The overhead can be explained, but the profit is not so easy to explain and not so easy to set up for explanation.

What is a fair profit? Many architects are satisfied if they can average 20 to 30 per cent profit of the total fee. Others hope for 33-1/3 per cent. Using overhead at 1.00, such a ratio would mean one part job cost as per time-cards, one part profit, one part overhead, or the total bill would be job cost-cards multiplied by three. This assumes that the principals—that is, the firm and associates—will make no time-card charges against jobs.

No rule can be set up to establish "profit." So far as known no minimum requirement has ever been set

Honoring a Distinguished Location

MARKET STREET NATIONAL BANK BUILDING
Philadelphia, Pa.

Architects: Ritter & Shay

Plumbing & Heating Contractor: Wm. M. Anderson.

At the apex of the "golden triangle" in Philadelphia, the new Market Street National Bank has a proud position and occupies it well. Standing at the very center of the mercantile, financial, and governmental life of the city, and with the principal railway stations, hotels, and theatres only a few steps away, it towers above neighboring structures and has light, air, and outlook. Its style is both dignified and modern. Its plan and equipment embody all that is most approved and most desirable in an office building. As a whole, its distinction is evident.

The choice of any material for use in such a project is a recognition of undoubted merit in that material. In the Market Street Bank Building, the major pipe tonnage is NATIONAL—

America's Standard Wrought Pipe

NATIONAL TUBE COMPANY

Subsidiary of United States Steel Corporation

PITTSBURGH, PA.



NATIONAL PIPE

FOR NOVEMBER 1931

up by any architectural organizations for the cost plus fee. The type of job, its complications, extent, etc., must be considered in arriving at a fair compensation. The time-card cost, however, may serve as an index and the fee proportioned to that item. It may range from 33-1/3 to 100 per cent of the "time-card cost."

If it is agreed that the firm members and associates will make time-card charges at a specified nominal fixed rate, then this profit should be lowered to anywhere from 25 to 50 per cent of the "time-card cost."

The cost plus bill may be worked into a formula for the job in hand and a record of this formula should be clearly set up in the bookkeeper's or secretary's records, available immediately when sending out bills. For instance, assume that an overhead of .70 has been set up in the contract and a fee of .50. The monthly bill would equal expenses + costs + (costs x .70) + (costs x .50), a formidable set-up but very definite and easy to solve if the expenses and costs are known.

On small work a simple formula may be used such as: The whole architectural cost may be three times the drafting cost—as per time-cards. This set-up in a formula would be 3 times costs, expenses not being charged as per their cost but borne by the architect as part of the overhead.

The A. I. A. cost plus fee form dated 1926 assumed a lump sum fee which is feasible to use where the amount and type of work is clearly defined in advance;

but when changes and additions are likely, such an arrangement would require modification during the job and the standard form suggests no such modification. Neither does this form state whether or not associates and junior firm members are to be classified under direct costs or whether they receive their remuneration out of the upset fee.

This form also suggests that overhead be a pre-determined percentage of the time-card cost—shown on Form 2.

The A. I. A. description of this system contains valuable suggestions, some of which should be incorporated in the contract. The contract form, however, does not fully cover the lump sum basis. It suggests that the fee may be based upon a percentage of the total cost of the work. To accept this is to introduce one of the most unfortunate elements of the percentage fee system, as savings due to lower building costs—if the general contractor is on a cost plus basis—lowers the architect's fee—an obviously unfair feature.

Accounts should be rendered monthly, to the owner, of all disbursements of the previous month with the proportionate amount of fee due at that time. Usually the agreement states that the fee will be paid in monthly installments. The Institute form suggests that 15 or 20 per cent of the fee may be withheld until the final payment. This seems unnecessary and an added complication to a complex bill.

Let's Talk About Business We Have Got

(Continued from page 21)

75% when only buildings are considered.) This means that of the four billion two hundred million dollars worth of work done during 1931, two billion one hundred million will pass through the hands of architects. There are about 8,000 architectural offices in the United States. Since 8,000 architectural offices do two billion one hundred million dollars worth of work, each office will average \$262,500 for the year 1931. For 1932, this average may be slightly less, about \$250,000. This, judged by other lines of business, represents an unusually high volume.

For instance, during 1929, the business peak, government figures indicate that the average drug store did a business for the year of \$29,174, hardware stores did \$32,448, department stores \$87,340 and automobile dealers, new cars, \$149,897. It may readily be seen that \$262,500, the volume of business passing through the average architectural office in the depression year of 1931, totals almost as much as the total average of these four leading businesses in a peak year. As about half the cost of a building goes to labor, the remaining half goes for the purchase of building materials and equipment. Thus, during 1931, the average architectural office will specify about \$131,250 worth of materials and equipment. Such figures indicate the tremendous influence of the architect upon national prosperity, an influence which is not generally realized even by the profession itself.

One important factor hampering a sane outlook in times such as the present is the tendency for business men to feel that if they do not make more money than

they did the year before they are headed towards ruin. During boom times there is much truth in the theory that a business which does not show a gain is in reality showing a loss. But in that theory lies the danger of stressing volume instead of profits and in creating a business which cannot function profitably except in boom times.

MANUFACTURERS and architects alike will have to learn to operate profitably on a smaller volume except when they may be able to offer such a superior service as to make it possible to secure more than their share of business. That large volume does not necessarily mean large profit is a principle which is beginning to be appreciated. As an example, automobile manufacturers are now actively helping their dealers to make money. One company states that during a recent month, 2,500 dealers showed a substantial profit, even though their business was only a little more than half of what it was for the corresponding month in 1929.

Architects, like manufacturers, vary in business ability. One man will go broke on a volume that will afford another man a highly satisfactory living—it is all a question of intelligent management.

One ill effect of the recent boom is that industries expanded their facilities to keep pace with the increased demand. As a result, many industries are over-built. Their businesses must return to the 1929 level before they will require much additional space.

Residential work will probably be the first to show

No Service Panel saves \$8 to \$10 per bathroom —and that's quite an item—especially on a big job!

The "Manhattan" Bath Fixture is outstanding because of its remarkable simplicity—everything being accessible from the face of the wall—as trouble-proof as it is possible to make it.

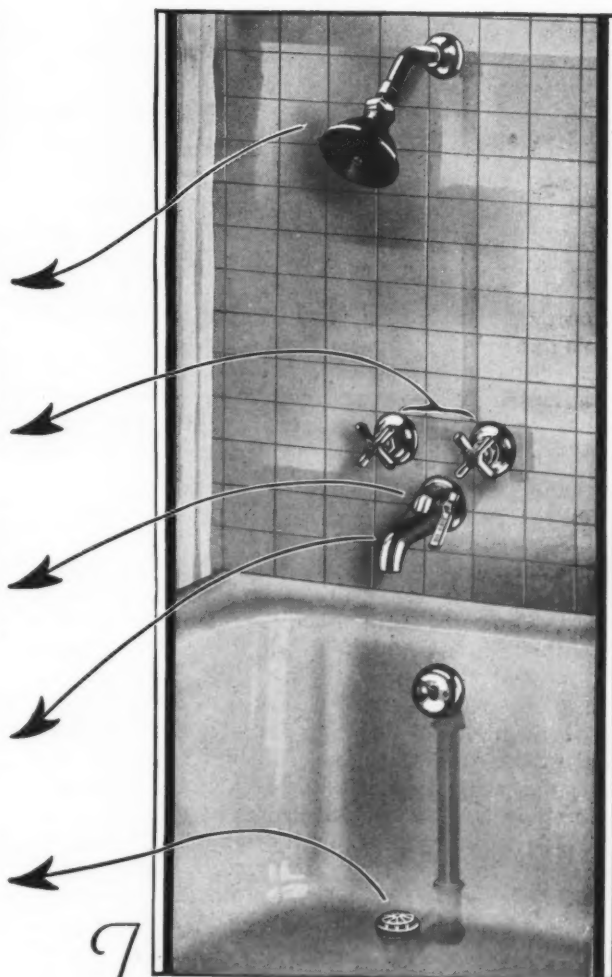
SHOWER FACE PLATE comes off by merely loosening the center screw. Asbestos face plate washer. All-metal ball joint perfectly machined. No packing washer to break up and clog holes.

ONLY TWO VALVES, separate hot and cold, in the wall. Readily accessible from face of wall. Made with the standardized unit that's renewed as easily as changing a light bulb. All wearing parts come out with the loosening of the cap. Seat made of Monel Metal. Also furnished with integral, automatic stops which shut off water when Quatern valves are removed for re-washing.

DIVERTER VALVE in spout on wall—not in wall. All metal—no rubber—no spring. Operates by water pressure and gravity. Shower bather tempers water at spout and lifts lever, which switches same water to shower. That prevents accidental scalding. When shower bather shuts off hot and cold valves, diverter automatically drops back to tub position. There it stays until lifted, thus preventing unexpected showers.

ONE-PIECE FITTING provided for tub and shower connections. Real adjustability for varying wall thicknesses.

POP-UP BATH WASTE with stopper in the outlet of the tub. No need to get at anything from behind.



The **MANHATTAN**

THE CHICAGO FAUCET COMPANY, A.A. 11-31
2700-22 N. Crawford Ave., Chicago, Ill.

I'd like to know more about the "Manhattan" Bath Fixture, so send along your catalog.

Name
Address

This catalog is chock-full of faucets and fixtures of every description—many with exclusive features obtainable in no other line. Mail the coupon today.

CHICAGO FAUCETS

unusual activity. Out of each 100 of our population, 75 have not as yet been able to afford good housing standards. There is here a tremendous, unworked market, a market which may possibly be developed by new methods of construction which will make it possible to provide better accommodations at lower costs. Should such developments take place, and there are indications that they will, it is logical to expect that many outmoded dwellings will be cast in the discard and be replaced with cheaper and better structures. The semi-philanthropic group housing in New York, Chicago and Pittsburgh, to provide \$8 and \$10 rent per room per month, shows the possibilities in such activities, for these indicate an investment return of 5% to 10% on the equities as a practical certainty.

THE fact that any particular class of structure is overbuilt in any one city does not by any means mean that other structures of that same class may not be successfully promoted in that same city. In New York, for instance, an apartment house on Riverside Drive was completed October 1 of this year and was 90% occupied on that date in spite of the fact that New York is by no means lacking in apartment space. The analysis of this operation, incidentally, will appear in the December issue of AMERICAN ARCHITECT. Other apartment houses in this same city have recently been erected with equal success due to a careful analysis of what people want and taking advantage of an undeveloped side of what on the face of it appears to be an over-developed market.

Intelligent analysis and intelligent promotion are at the back of most successes. Take, for instance, women's apparel. Compared with 1929, this industry had a serious slump in 1930, a slump which continued downward in 1931. Contrary to this general movement, Golflex dresses sold better in 1930 than in 1929, and in 1931 the first six months showed a gain of 28% over the corresponding period of 1930. This company advertises heavily despite the depression. One month this company was the only advertiser of its kind—and "apparently all the readers of the magazine who bought dresses in our price range that month bought our dresses. . . ."—twice as many as the previous high record.

A St. Louis concern, started four years ago, did a volume of a million dollars last year and expects to exceed that this year. Its president, James R. Kearney, states, "We're not the largest company in our field, but we are the largest advertisers in it, and we have the largest sales force of any company in the underground-overhead electrical equipment business. . . . The business is there, if you'll go out and get it."

DURING the last depression, the president of a large building material company ordered every department head and office man to spend two days a week "ringing doorbells." Business jumped to new highs. During the present depression, new control of this same company met each slump in sales with a cut in personnel and a cut in salaries. The company's business is still slumping.

One member of a firm of New York architects

spends much of his time "ringing doorbells." At first, his associates poked fun at the idea of visiting strangers who quite evidently had no building in mind. But one day, returning from a visit where he had been told his firm was not to get the work, he located three school house jobs, each running over a million dollars. This office is now busy and has taken back many of the men who had been let go when the depression started. "Ring-ing doorbells" paid.

There is every evidence that the architectural profession, through experiences such as the one just quoted, will emerge from the depression far stronger and more influential than they ever have been before. There is a strong tendency to bring an architect into the picture before land is bought or leases signed on property requiring remodeling for purposes such as restaurants. Some architects, in certain types of work, are going so far as to guarantee their estimates. Certainly they are as a class far more sales-minded than they were two years ago and are better equipped than ever before to retain leadership in the building field. Their necessities have proven to be a blessing in disguise.

It is logical to expect that this greater sales sense will lead to the employment of architectural services in many structures which heretofore have been erected without the services of an architect—structures which would be better and less expensive if an architect were employed. Cooperative advertising campaigns such as that instituted under the leadership of Indiana architects are straws which show which way the wind is blowing. *There is, in the buildings erected without competent architectural service, enough potential business to make present depression years more profitable to the profession than were the so-called boom years.* But such increases will depend largely upon what use the profession makes of the educational and sales value of paid advertising.

THOSE with the welfare of the profession at heart are greatly encouraged at the sales work being done by many architects, such as the use of motion pictures described in this issue of AMERICAN ARCHITECT. This sales work has been extended by certain architects to modernizing; they find the present an excellent time to present a financial statement showing the increased return from run down property if modernized to meet changed conditions.

Those architects who have more time on their hands than they care to think of are in a position to do much constructive thinking, thinking which inclines them to cast aside out-worn traditions and to become more business minded. Too, they are more prone to investigate unfamiliar products which heretofore have been slighted through lack of time—an attitude which particularly favors the manufacturer who has something to offer of genuine interest to the profession. Such manufacturers are being presented with an opportunity to serve and educate the architectural profession which may not again present itself for years to come.

We must accept things as they are, realizing that there is plenty of building going on—four billion dollars worth of it—and that this business will inevitably gravitate to those who go after it most aggressively.



FROM SWEETS' TO BONDED ROOF RU-BER-OID BUILT-UP ROOFING SERVICE IS DEPENDABLE

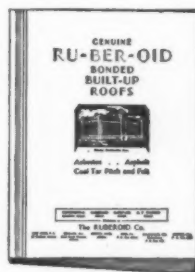
From the time you refer to Sweets' until the roof is bonded, Ruberoid gives architects dependable service. This service covers all types of built-up roofs—Asbestos, Coal Tar Pitch and Felt, and Asphalt in their numerous weights, thicknesses and finishes.

RU-BER-OID Built-Up Roof Specifications have been drawn to meet varying conditions of climate, unusual wear, roof design, life of the building, etc., and in a price range to fit every job.

Regardless of the specification chosen, Ruberoid's rigid laboratory control assures you of uniform quality materials. This RU-BER-OID quality, coupled

with careful application by approved roofing contractors, has enabled Ruberoid to provide roofs guaranteed as to material and workmanship for 10, 15 or 20 years, according to the specification used. The guarantee is backed by a National Surety Bond.

For your convenience you will find a complete catalogue of RU-BER-OID Built-Up Roofing Specifications in both 1931 and '32 Sweets'. Should you desire additional data, or face an unusual roofing problem you can depend upon sound advice from the Ruberoid engineering department at each of the offices listed below.



The RUBEROID Co.

ROOFING MANUFACTURERS FOR OVER FORTY YEARS

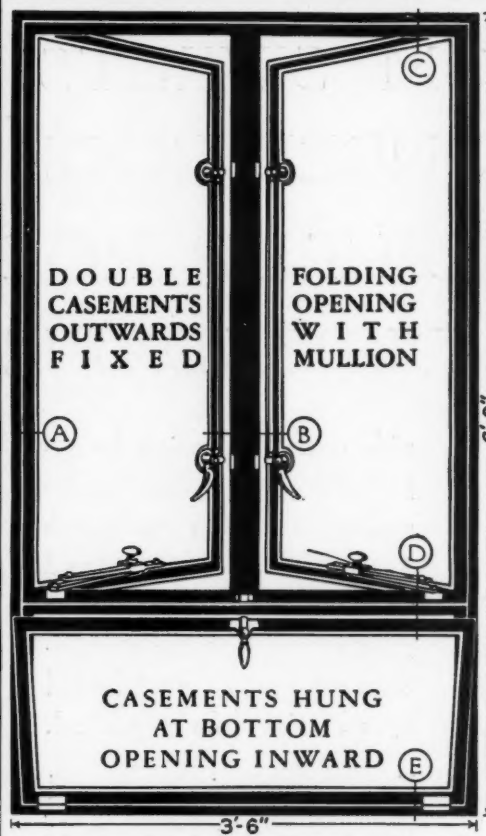
Sales Divisions: RUBEROID MILLS—CONTINENTAL ROOFING MILLS
SAFEPAK MILLS—H. F. WATSON MILLS—ETERNIT

ASPHALT SHINGLES AND ROLL ROOFINGS—ASBESTOSCEMENT SHINGLES AND CORRUGATED SHEETS—ASBESTOS, ASPHALT, COAL TAR PITCH AND FELT BUILT-UP ROOFS—ASBESTOS, SHEATHINGS, FELTS, MILL BOARD, PIPE COVERINGS—KRAFT WATERPROOF PAPERS—COAL TAR AND ASPHALT FELTS AND SHEATHINGS—ASPHALT WATERPROOFING PAINTS AND CEMENTS—DRY FELTS AND SHEATHINGS

Offices & Factories: New York, N. Y.—Chicago, Ill.

Millis, Mass.—Erie, Pa.—Baltimore, Md.—Mobile, Ala.

INTERNATIONAL CASEMENTS



• ELEVATION •

The above is one of the 24 standard types.

FEATURES OF CONSTRUCTION

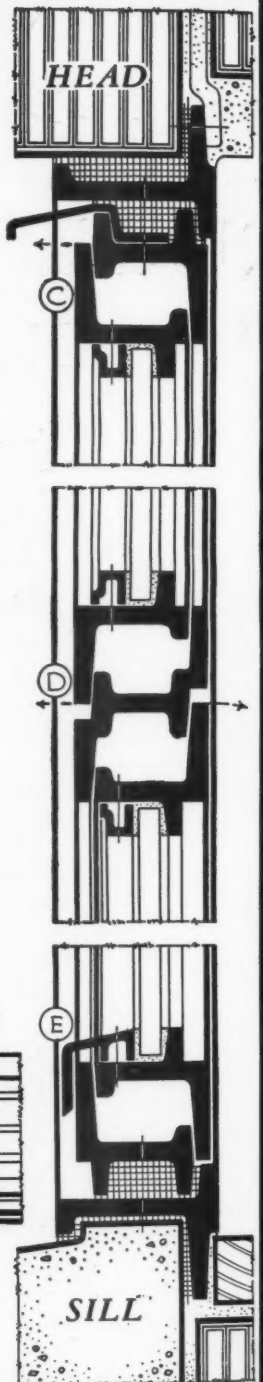
Combined weight of sections (exclusive of sub-frame) 3.55 pounds per foot.

All sight lines are equal.

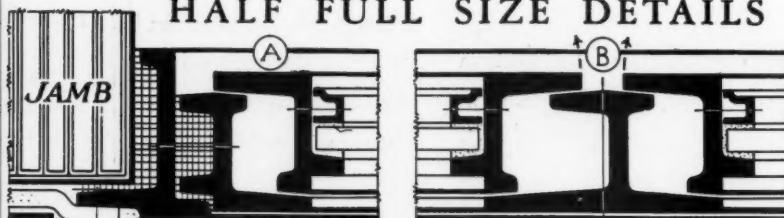
Casements and frames are solid welded and provide continuous double weathering contact. Loose or applied linings for weathering are not employed and the dangers which follow when linings are forced away by corrosion are avoided.

2040 sub-frames permit casements to be installed after the rough trades have left the building.

Flat integral screens can be provided if required and casements can be operated without interfering with the screens.



HALF FULL SIZE DETAILS



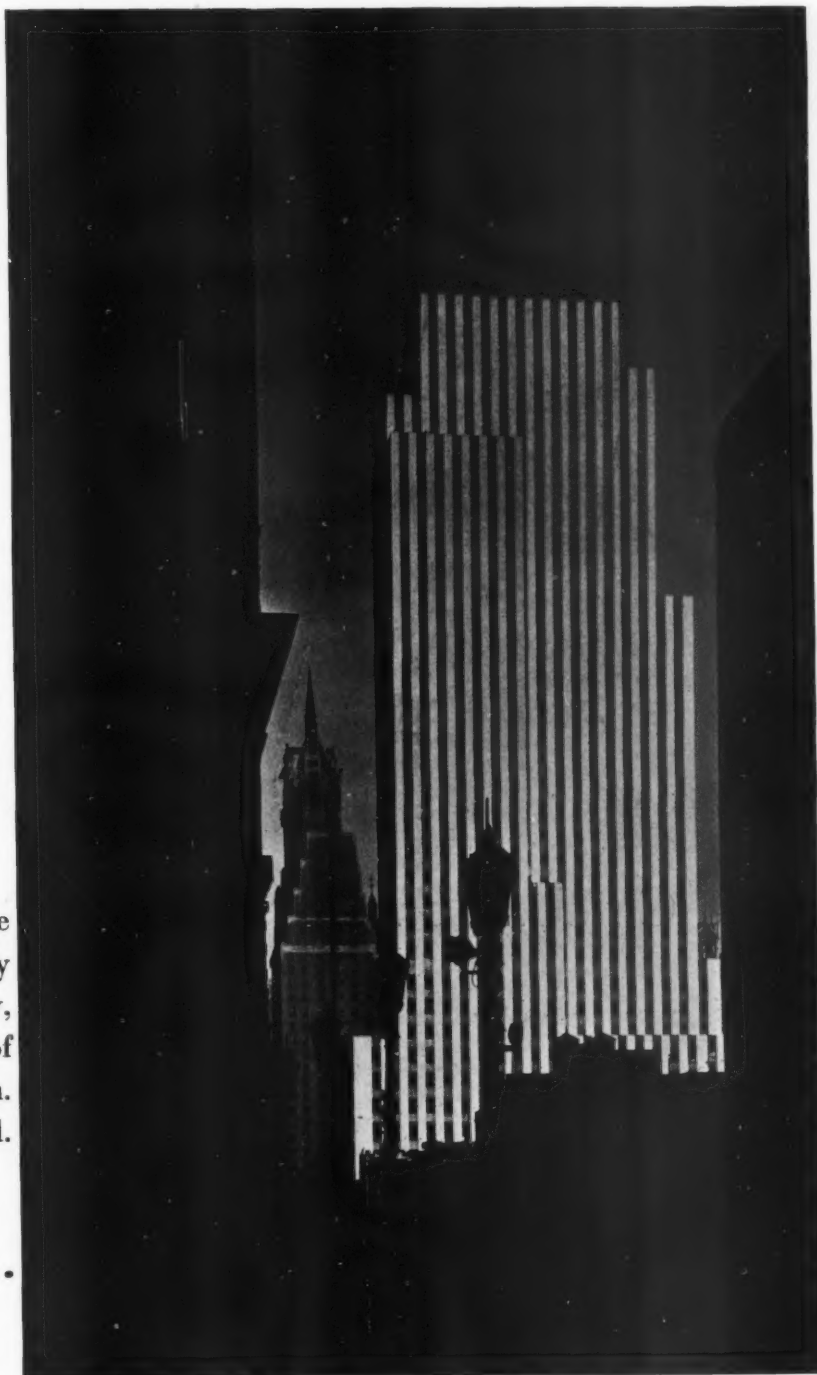
Send for
Catalogue
No. 18

INTERNATIONAL
"HOPKINS"
WINDOWS

INTERNATIONAL CASEMENT CO. INC.
JAMESTOWN, NEW YORK

The 11,000 square yards of fine linoleum installed in the Daily News Building, New York City, were made by one of the units of the Sloane-Blabon Corporation. Architects, Howells & Hood.

.....

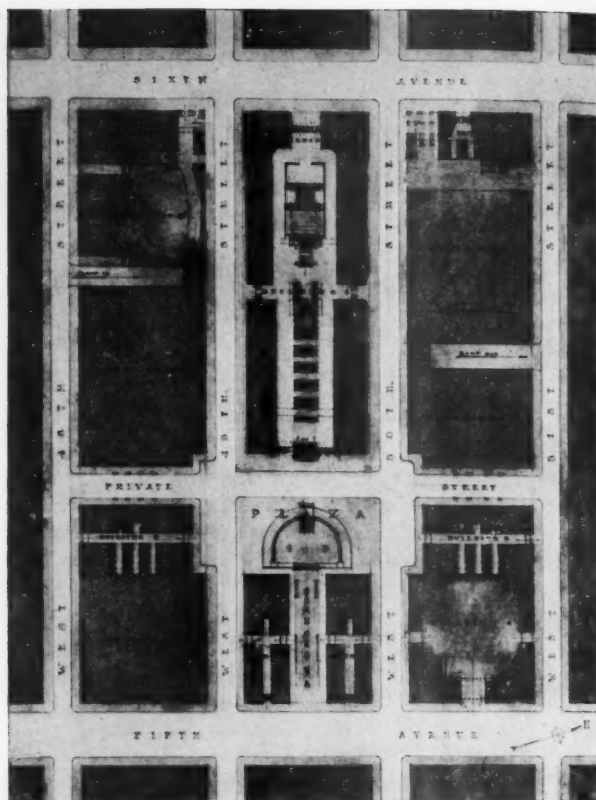
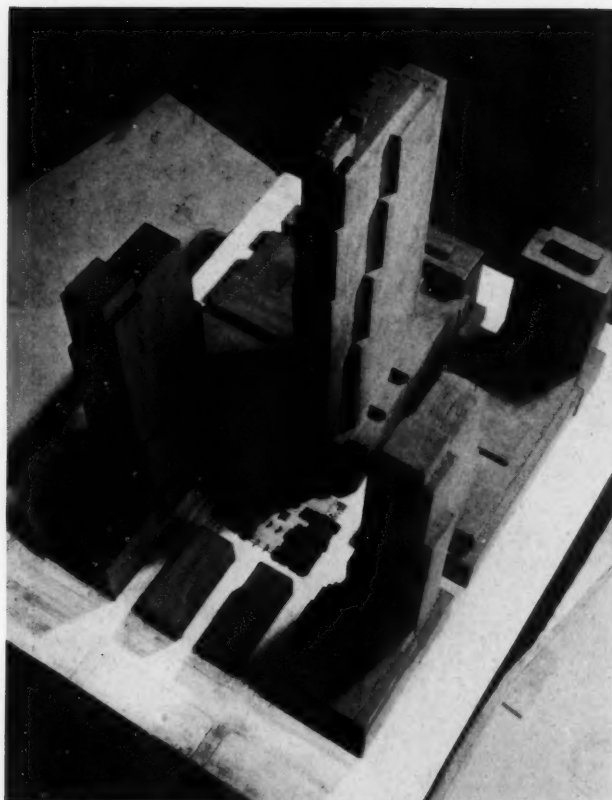


SLOANE-BLABON LINOLEUM



.....

THIS PORTFOLIO WILL PROVE VERY HELPFUL WHEN SPECIFYING LINOLEUM FLOORS. WE SHALL GLADLY SEND YOU A COPY ON REQUEST. W. & J. SLOANE, 577 FIFTH AVENUE, NEW YORK



Buildings will be staggered as shown by this model and plot plan of Radio City

Gardens on the Roofs of Radio City

(Continued from page 35)

Economists in recent years have strongly advocated the developing of an entire city block or even blocks as comprehensive units. City planners have argued similar developments as a necessity, from their point of view, as an aid to the salvation of cities particularly where skyscrapers dominate. Corbusier, in his volume "The City of Tomorrow," says "... the centers of our great cities must be pulled down and rebuilt. . . ."

The assembling of practically the entire area of the three city blocks in the heart of New York composing Metropolitan Square by the Rockefeller interests, has afforded the first opportunity of putting into practice the theories advanced by both economists and city planners. Realizing that this development will be closely watched by other cities and that failure of any part of the project would be a severe blow to progress in building and city planning, the architects and managers of Radio City have given close attention to the economic, financial, engineering, and architectural phases of the problem.

Bearing in mind the development of an area of ground sufficient for thirteen Chrysler Buildings or ten Graybar Buildings, the economic problem of building to secure a fair return on a total investment that has been estimated to be in the neighborhood of two hundred and fifty million dollars, and the reconciliation of high ideals in city planning, one begins to obtain some conception of the importance of this undertaking and the burden of responsibility placed upon the Metropolitan Square Corporation and its architects.

The ultimate solution of the problem is the product of many minds and is undoubtedly unique in the history of building and financing. Originally studied as a project revolving around the Metropolitan Opera House, radio eventually came to be the pivotal activity, surrounded by various entertainment features, retail shops and offices. About one-quarter of the space in the entire development will be used as offices, studios and theatres by the Radio Corporation of America, the National Broadcasting Company, Radio-Keith Orpheum Corporation and their affiliates.

Other interests have also agreed to take over space for various activities. The leasing of the various units in the development is now in a formative stage, and, as a result, drawings and models are at present by no means final. In this respect, again, the project is unique in the field of commercial architecture.

Commercial ventures may in general be projected upon one of two principles. First, a structure is built and tenants found who must adapt their requirements to the physical limitations imposed by a building built for no one in particular or second, the building is erected for a specific tenant and designed to meet his specific requirements. It is upon the second principle that Radio City is being developed.

Before the project could be taken very far as a matter of design, it was essential to make a financial set-up in the form of a tentative schedule of probable income, cost of land, and construction. This together with pre-

THE HERMAN NELSON CORPORATION



Architects who insist on effective heating results as well as modern interior beauty are turning to the Herman Nelson Invisible Radiator in increasing numbers.

This compact heating unit not only fits within the wall, where it is completely out of view and out of the way, but incorporates engineering principles proved correct by years of successful heating experience.

The Herman Nelson Invisible Radiator comes completely equipped with a sturdy, specially designed steel case, graduating damper, and choice of six authentic outlet grilles. For larger and taller buildings, where access to control valves is required, a removable panel is provided.

For a residence or any building that will have a steam, hot water, vapor, or vacuum heating system, insure your client's satisfaction by specifying Herman Nelson Invisible Radiators. Do you have our catalogue? A request brings it to you.

HERMAN NELSON *Invisible* RADIATOR

The Herman Nelson Corporation are makers of the *Univent System of Ventilation*, the *Her-Nel-Co System of Ventilation*, the *Herman Nelson Invisible Radiator*, the *Herman Nelson hiJet Heater*, and other heating and ventilating equipment.

A HERMAN NELSON PRODUCT

Factory at Moline, Illinois

DELFEST, ME.
BOSTON
SPRINGFIELD, MASS.
PROVIDENCE, R. I.
HARTFORD, CONN.
NEW YORK CITY
SYRACUSE
ALBANY
ROCHESTER
BUFFALO
PHILADELPHIA

SCRANTON
KINGSTON, PA.
HARRISBURG
PITTSBURGH
JOHNSTOWN, PA.
ALLENTOWN, PA.
ERIE, PA.
WHEELING, W. VA.
WASHINGTON, D. C.
BALTIMORE, MD.
CHARLOTTE, N. C.

GRAND RAPIDS
SAGINAW, MICH.
DETROIT
CLEVELAND
COLUMBUS
CINCINNATI
TOLEDO
INDIANAPOLIS
EVANSVILLE, IND.
CHICAGO
PEORIA, ILL.

DES MOINES
MILWAUKEE
APPLETON, WIS.
MINNEAPOLIS
DULUTH
ST. LOUIS
BIRMINGHAM
NASHVILLE
CHATTANOOGA
MEMPHIS
NEW ORLEANS

MIAMI
DALLAS
OMAHA
EMPORIA, KAN.
KANSAS CITY
DENVER
SALT LAKE CITY
BUTTE MONT.
SPOKANE
PORTLAND, ORE.
SEATTLE

SAN FRANCISCO
LOS ANGELES
VANCOUVER, B. C.
TORONTO, ONT.
WINNIPEG, MAN.
CALGARY, ALTA.
LONDON
OSLO
MELBOURNE
TOKIO, OSARA
BUENOS AIRES

Sales and Service Offices in All Principal Cities

liminary studies of various possible solutions including studies of the traffic and street problem, and a study of possible types of tenancy, required an entire year's work, and resulted in the accepting of the radio as a sound, logical basis around which the entire project would revolve. This provided a tangible point from which to start on the way toward a definite goal in the form of definite types of buildings and the reconciling of the financial set-up. As a conclusion to this stage of intense study, what might be termed an economic building envelope was evolved and made public early in 1931 in the form of a model, an account of which was published in the April, 1931, issue of *AMERICAN ARCHITECT* and in numerous newspapers and magazines throughout the country.

This procedure was essential for a preliminary lease for certain space had been made with radio and theatrical interests. In order to obtain a financial set-up on this space and a definite basis for a final lease it was essential to develop a plan of the entire property. Tentative financial set-ups, development schemes and cost of building obviously had to go along more or less simultaneously.

With the model of the economic envelope as a basis, each new possible addition to the tenancy is studied in the light of its own requirements. Several schemes are made and a balance reached between its design, engineering and financial demands. The final scheme is then incorporated in the model of the entire group.

Made to a scale of one sixty-fourth inch to the foot, a clay model of the development is corrected daily and all studies are made insofar as possible by models rather than drawings. The entire design is thus kept in a flexible, fluid or liquid state. This procedure will be followed until the structures covering all three blocks are completed.

This method of procedure is in direct contrast to that of developing a "grand" scheme and then attempting to make the various units "fit." Past experience has generally shown the fallacy of this idea even when the grand

scheme has apparently considered every contingency of future additions and changes.

The method of design adopted by the designers is indicated by the consideration given space to be used for office purposes in the tower buildings. Here the ideal size and grouping of elevators are determined together with the ideal structural spans and office unit depths. These are carried to the exterior and studied in mass. In other words all known forces are brought into place, following the basic idea that a building is designed from within or that if the interior is right the exterior will be or can be made right. Thus the design is begun with no preconceived idea of what the exterior appearance will be. This again contrasts with the basis so often used of starting with an exterior design and making the interior fit, or of attempting to design both at once.

At the same time the architects agree that design is a most important consideration, since no economic or engineering solution can be right unless the design is right. The basis of the design of Radio City can be summed up as a constant study of finance and form with ornament a last consideration.

While the underlying thought of this gigantic project is the demonstration of the value to cities of unity in the developments of large areas, it must at the same time be financially sound. Since Columbia University owns the major area of the property and released it on a long term lease, this institution is interested in making sure that any use made of the land is financially good. If the project cannot provide a reasonable return on the investment, similar developments in New York or elsewhere probably will not be undertaken. The desirability of the harmonious development of large areas is recognized by architects and city planners, and the architects of Radio City believe that it will be just healthy architecture, and an important contribution to the cause of architecture to make this particular development financially attractive.

What Makes Lath-marks on Plaster?

DUST streaks on walls and ceilings, usually called "lath-marks" have been pretty much of a mystery. Recent tests by Dr. W. J. Hooper of Battle Creek College, Battle Creek, Michigan, not only reveals the cause of this trouble, but also show the way to prevent them.

The tests showed that lath-marks are due to differences in the temperature of the plaster surface. These differences are due to the fact that plaster and wood have different values as heat conductors from wood. Consequently, there is often a difference between the temperature of the plaster between the lath and that of



THE TEST: Where insulation is used, lath marks are slight. Where not used, the marks are well defined

the plaster over the lath.

A hot body repels dust, but dust is freely deposited on a cold body. When air carrying dust passes over plaster on wood lath, it therefore comes in contact with areas of different temperatures, due to the difference in insulating value of the plaster and the lath. The result is that the dust is deposited over the lath sections, since the wood lath is the poorer conductor.

Dust streaks can be prevented, according to Dr. Hooper, by providing sufficient insulation so that

the temperature difference of all exposed areas is negligible.

SUPERIORITY

in Lighting Glass

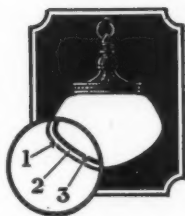


**through
CELESTIALITE'S
three-layer
process**



INTO the crucible within the furnace, where the molten glass flows like sunlight, the hollow steel tube is dipped and deftly turned. A puff through the tube, a shaping of the gather, another dip, this time into another crucible to add the white middle layer, and finally a third dip to add the transparent outer layer, and another Celestialite globe is on its way.

In providing close approximation to daylight, in giving a satisfactory quantity and a high quality of light, Celestialite's three-layer construction is without equal. 1. The crystal clear glass provides volume and strength. 2. The middle layer of white glass diffuses the rays and softens the light. 3. The inner layer of blue glass whitens and perfects the light.



Just as sunlight comes first through the blue ether, then through the white clouds, and finally through the transparent layer of air immediately above the earth, so the light from the miniature sun of the incandescent lamp passes through the successive blue, white and clear layers of Celestialite's next-to-daylight glass.

In great factories throughout the United States, Celestialite has made a significant contribution by making possible properly illuminated industrial plants, thereby speeding production, bettering the quality and eliminating eye strain. No factory shadows and dark corners with Celestialite, the next-to-daylight illumination!

The Celestialite installation in the Silk Winding Dept., U. S. Testing Co., is shown at the right. Write us at once for information that will secure you as fine a lighting system. We will also send you a free fragment of Celestialite, showing its three-layer construction.

CELESTIALITE

(Registered and Patented)

"NEXT TO DAYLIGHT"

Gleason-Tiebout Glass Company, 200 Fifth Avenue, New York





The author using his motion picture camera to record the progress of a job

How We Get New Clients By Using Movies

(Continued from page 33)

a new pair of shoes, looks for a store, goes in, makes his purchase, meets the manager and is shown about the premises. The architecture thus becomes a background for the story, yet at the same time is given sufficient prominence to serve our purpose.

We do a large amount of work for the Childs Company. To write a story around each restaurant would be monotonous. Accordingly, we have planned and are now in the process of filming a story that embraces several restaurants that we have designed for this company. The story in this case is written around a young woman who visits several of the restaurants in search of a position. She finally goes to the company's main office and is advised to see the architects who can tell her when the new restaurant will be ready for occupancy. After she does this she visits the new building and watches it through its construction period until it is completed.

This will be the most expensive film that we have undertaken, but we believe that its cost will be justified. It will be used in contacting prospective clients, exhibition to personal friends, and afford us an opportunity to tell that we are architects and that we have designed many restaurants owned by the Childs Company.

On a large office building we have been making films of portions of the building at various stages of construction. The pictures on this operation serve a double purpose. Each exposure is used as a private report to the owner and is then stored away. After the building is completed the films will be assembled and spliced to cover the story of the erection of this building.

From the mechanical standpoint we have learned by

experience not to waste film on shots that are meaningless or that do not fit into the scenario. We have found that we must practice what we preach to our clients—work to a plan. Again experience has indicated that if possible the story should be told in a film not exceeding four hundred feet in length. Of one thing we are certain a human interest story is essential as a background to sustain the interest of laymen who are not interested in architecture as such.

Following is the scenario for the movie of the shoe shop of Babers, Ltd., 428 Madison Avenue, New York, which outlines the basis of an effective presentation.

SCENES

1. Long shot of Madison Avenue looking North from 41st Street.
2. Madison Avenue. Sam waiting for traffic lights to change. Steps off curb into puddle.

TWO GOOD FRIENDS ON THEIR LAST LEGS

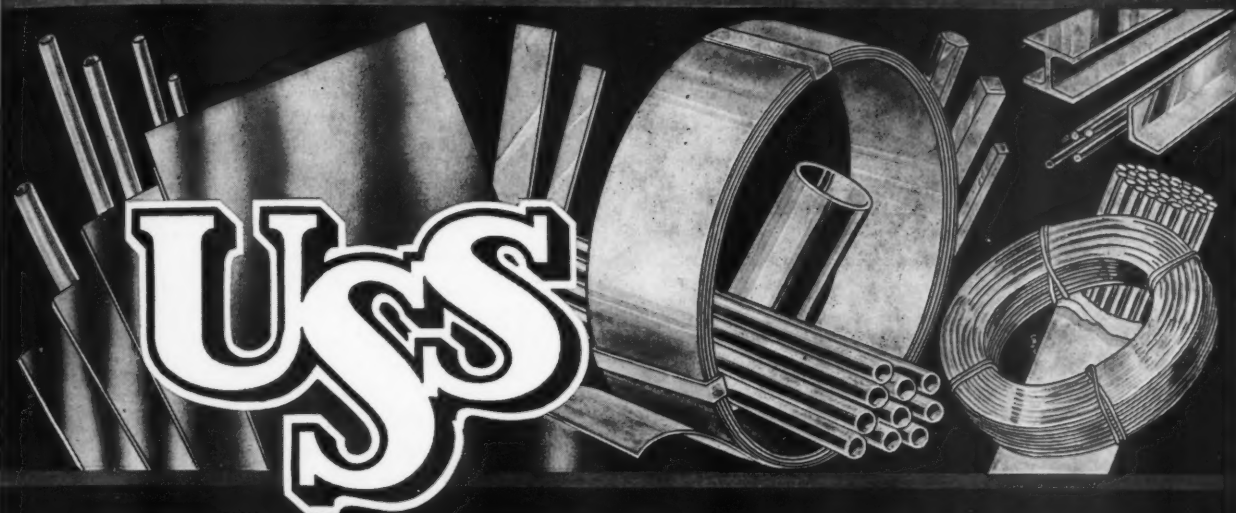
3. Close up of shoes. Hole in bottom of one.

MUST HAVE ANOTHER PAIR.

4. Sam steps back on pavement.
5. Sam starts up Madison Avenue looking in windows.
6. Close up of a shoe store show window.
7. Close up of another shoe store show window.
8. Close up of Sam. Shakes head and looks worried. Turns around—stares.
9. Close up of trade-mark and crest of Church & Co. Ltd.

(Continued on page 80)

MODERN STEELS *for* MODERN USES



STAINLESS AND HEAT RESISTING ALLOY STEELS

ONLY a few years ago the terms "STAINLESS" and "RUSTLESS" could not be used as descriptive of the properties of ferrous metals. Scientific research and modern metallurgy have brought about a new order of things by placing at the disposal of architects, engineers, technologists and manufacturers a series of alloy steels to which such adjectives may now be very properly applied. Both the industries and the arts are daily taking advantage of these metals for hundreds of useful applications.

Correspondence is invited and your inquiries will receive careful attention by any of the five subsidiary companies of the United States Steel Corporation listed below:

AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh
Sheets and Light Plates

AMERICAN STEEL & WIRE COMPANY, Chicago
Cold Rolled Strip Steel, Wire and Wire Products

CARNEGIE STEEL COMPANY, Pittsburgh
Bars, Plates, Shapes, Special and Semi-Finished Products

ILLINOIS STEEL COMPANY, Chicago
Bars, Plates, Shapes, Special and Semi-Finished Products

NATIONAL TUBE COMPANY, Pittsburgh
Pipe and Tubular Products

Pacific Coast Distributors: COLUMBIA STEEL COMPANY, Russ Building, San Francisco
Export Distributors: U. S. STEEL PRODUCTS COMPANY, 30 Church Street, New York City

Typical Uses:

¶ **AUTOMOTIVE and AERONAUTIC**—For radiator shells, hub caps, lamps, bumpers, moldings, polished parts and fittings, hardware and trim, airplane parts and instruments.

¶ **MANUFACTURING and INDUSTRIAL**—Machinery and furnace parts, dampers, fans, preheaters, pumps, conveyors, turbine blades, nozzles, plungers, and machinery specialties.

¶ **CHEMICAL**—Vats, tanks, stills, digesters, condensers, retorts, paper and pulp manufacturing equipment, circulation systems, and laboratory apparatus.

¶ **OIL REFINING**—Bubble caps, still tubes, linings, heat exchangers, ducts, containers, tanks, agitators, and other refining equipment.

¶ **FOOD HANDLING**—Pasteurizers, tables, hospital and hotel kitchen equipment, restaurant fixtures, cafeteria trays, food preserving and dairy machinery and accessories, ice cream and milk containers and utensils.

¶ **ARCHITECTURAL**—Structural members and supports, hinges and hardware, decorative metal embellishments, flat surface facings, moldings, doors, grilles, panels, and ornamental work.

¶ **HOME APPLIANCES**—Kitchen equipment, cooking and canning utensils, furniture, cabinets, electrical appliances, sinks, plumbing fittings, stoves, ranges, and tableware.

¶ **MISCELLANEOUS**—Packing house equipment, soda fountain counters and fixtures, display cases, humidors, handles, hooks, trays, golf clubs, skates, switch boards, metallic mirrors, laundry machinery, tank cars, railway car parts and fittings, and many other uses where beauty and resistance to corrosion are important factors.



USS Chromium-Nickel Alloy Steels are produced under licenses of the Chemical Foundation, Inc., New York; and of Fried. Krupp A. G. of Germany.

CHROMIUM-ALLOY STEELS	CHROMIUM-NICKEL STEELS
<i>Ferritic</i>	<i>Austenitic</i>
USS — 12	USS — 18-8
USS — 17	USS — 18-12
USS — 27	USS — 25-12

You'll see this seal on the letters of progressive manufacturers whose products still stand thorough examination by the keenest, most progressive buyers.



AT CLEVELAND WILL BE SHOWN

... the products which will come into extensive use in buildings now on the boards.

Manufacturers you meet here are those who are leading the industry in its phenomenal development. Leading architects from all over the world will view the exhibits.

You and your firm should profit by this outstanding opportunity.

Be present and you will not be passed in the swift march of progress.

AN INTERNATIONAL EVENT HELD EVERY TWO YEARS

Under the auspices of the
American Society of Heating & Ventilating Engineers
Managed by the International Exposition Company

Ⓕ 1052X

10. Sam smiles and goes out of frame across street.
11. Long shot of Babers, Madison Avenue. Sam walks forward to window—stops—looks in:
12. Close up of window.
13. Sam opens door and goes in store.
14. Inside looking toward Madison Avenue door. Barnett greets Sam as he walks in—ushers him toward lounge. Others are being fitted in shop. Sam sits down on davenport. Worsdall sits on fitting stool.
15. Close up of Sam's foot being measured.
16. Worsdall gets up walks out right.
17. Worsdall selecting box from shelves—walks out left.
18. Close up of Sam being fitted. Tries out shoes—sits down—nods approval.
19. Shot of hosiery case—Worsdall hands box of shoes to Miss Seagrist—Sam stands at case.
20. Close up of shoes—Miss Seagrist places hose over them. Sam feels quality of hose—indicates approval.
21. Shot of hosiery case—Sam nods approval—digs in pocket and hands out money—Miss Seagrist wraps up shoes and takes money delivering parcel—Sam receives same—smiles asks where Mr. Lawrence is—is told—exits toward stairs.
22. Shot of stairs—Barnett enters left and talks to Sam, who then walks upstairs and out of frame.
23. Lawrence's office—at desk—Sam enters—sits down—talks to Lawrence who shows him photos of the shop.
24. Cut in here a series of 6 lap-dissolves of still pictures of the shop.
25. Lawrence's office. He completes the exhibition of the photos—talks to Sam and they get up—Sam picks up his effects and exits out left.

BULLETINS

X-RAY PROTECTION. Handbook, Bureau of Standards, No. 15, covering storage of X-ray film and general protection from X-rays. For sale by the Superintendent of Documents, Washington, D. C. Price 10 cents.

COMPRESSIVE STRENGTH OF CONCRETE IN FLEXURE AS DETERMINED FROM TESTS OF REINFORCED BEAMS. By Willis A. Slater, C.E., and Inge Lyse, B.S. in C.E. Lehigh University, Bethlehem, Pa. Price 20 cents.

WOOD-LIQUID RELATIONS. Technical Bulletin No. 248. By L. F. Hawley, of the Forest Products Laboratory. Published by the United States Department of Agriculture, Washington, D. C. For sale by the Superintendent of Documents, Washington. Price 10 cents.

FACTORS AFFECTING THE STRENGTH OF MASONRY OF HOLLOW UNITS. By Douglas E. Parsons. Research Paper No. 310 of the U. S. Bureau of Standards. Superintendent of Documents, Washington. Price 5 cents.

CLAY TILES FOR FLOORS AND WALLS. Second edition. Simplified practice recommendation R61-30. Published by the U. S. Bureau of Standards. For sale by the Superintendent of Documents, Washington, D. C. Price 10 cents.

STEEL REINFORCING BARS. Simplified practice recommendation R26-30. Published by the U. S. Bureau of Standards. For sale by the Superintendent of Documents, Washington, D. C. Price 5 cents.

You can BORROW our floor stylists

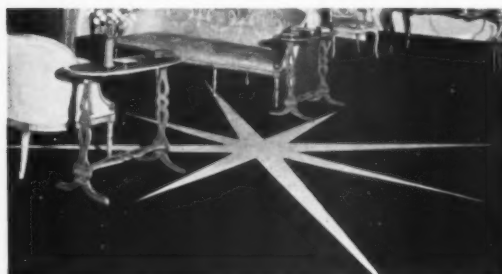


Some of the floors in the new Armstrong's Decorative Series (this pattern is No. 194) are designed to meet the growing popularity of Directoire rooms. When cemented over linoleum lining felt, they have all the beauty of hand-set floors.

YOU have seen these modern floors—some of them standard Armstrong designs—some custom-tailored from various plain colors of Armstrong's Linoleum. But do you know that we'll gladly help plan such floors at no expense to your clients? The Armstrong Service Bureau for architects will supply designs or will adapt your own designs to linoleum.

All you need do is describe the interior you are planning, send sketches if possible, and our floor stylists will go to work with you. Years of experience have taught them how to plan floors that form harmonious backgrounds for every type of interior. They know what designs and colors will give you the effect you are striving for.

The complete story of these special floors is told in our new file-size specification book. Ask also for the "Home Decorator's Idea Book" containing helpful suggestions on interior decoration. You'll find us in Sweet's. Address Service Bureau for Architects, Armstrong Cork Company, Lancaster, Penna.



Linoleum layers right in your town can install floors like this in the interiors you plan. This special linoleum floor is distinguished by a white star set in a plain black background.

How Armstrong's Linoleum Floors Will Save Your Clients' Money!

MODERATE FIRST COST . . . INEXPENSIVE INSTALLATION
. . . LOW UPKEEP COST . . . LONG WEAR . . . COLOR
AND DESIGN WITHOUT INCREASED EXPENSE . . . NO
REFINISHING . . . ECONOMICAL FOR REMODELING JOBS.

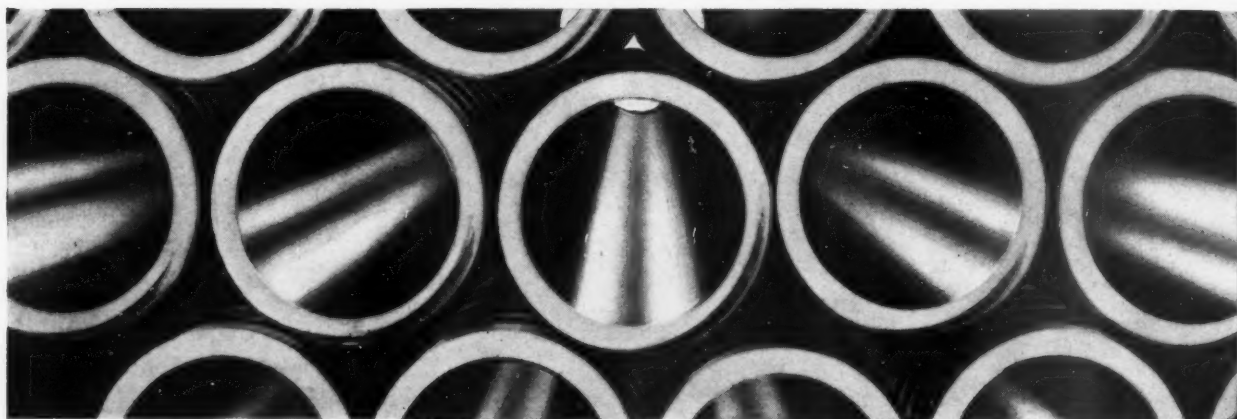
Armstrong's Linoleum Floors

FOR EVERY ROOM IN THE HOUSE

PLAIN • INLAID • EMBOSSED • JASPÉ • LINOFLOR • LINTILE • CORK TILE • ASPHALT TILE



ENDURING PROTECTION FOR WIRING SYSTEMS



G-E WHITE RIGID CONDUIT

For wiring that must resist water, oil, acids, or alkalis, choose G-E WHITE. Its hot-dipped galvanizing and coating of Glyptal give lasting protection under conditions that would be too severe for conduit not so well protected. Its long life is well known.

Architects and engineers assure themselves of the highest quality for their work by specifying G-E WHITE. Contractors and central stations save trouble by using it because its

flexible alloy steel makes bending easy and simplifies installation. Owners like to have it used because it bears the famous G-E monogram, which they know as a mark of quality.

G-E WHITE rigid conduit is stocked by G-E Merchandise Distributors located conveniently near you. They will be glad to supply your needs and give you information, or you may write to Section C-9811, Merchandise Department, General Electric Co., Bridgeport, Conn.

GENERAL  ELECTRIC
RIGID CONDUIT

MERCHANDISE DEPARTMENT, GENERAL ELECTRIC COMPANY, BRIDGEPORT, CONN.



Double drain board Monel Metal Sink. Made in nominal sizes of 72" x 21" and 60" x 21".



Eight Points of Superiority . . .

- 1 Rich, lustrous beauty...with a satiny, glass-smooth surface.
- 2 Rust-proof...highly resistant to corrosion...easy to clean and keep clean.
- 3 Solid metal clear through, with no coating to chip, crack or wear off. Steel-like strength gives lifetime durability.
- 4 Neutral, silver tone that blends with any kitchen color scheme. Gives new freedom to kitchen decoration.
- 5 10 standardized models and 6 standardized sizes. A model and size for any type of kitchen.
- 6 31% more working space than an ordinary sink of same nominal size.
- 7 One-piece construction of heavy gauge Monel Metal. No joints or seams. Reinforced and sound-deadened.
- 8 Standardized construction and quantity production bring prices within reach of the average purse.

NOW...

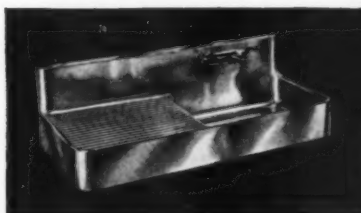
*Sinks have "gone modern"
... architects will welcome
these aids to kitchen beauty*

ONE LOOK is enough to convince any forward-thinking architect that the new standardized Monel Metal kitchen sinks are a real boon to modern kitchen planning! Their crisp, silvery beauty is in perfect keeping with the trend of present-day decoration—the growing use of corrosion-resisting white metals. Their soft, neutral tones harmonize with every decorative scheme, allowing full freedom in the choice of kitchen colors. Their lines are gracefully modern, yet thoroughly practical—giving increased working space without sacrificing cleanability. Monel Metal Sinks have no joints, seams or sharp corners to accumulate dirt.

When you specify Monel Metal Sinks you automatically eliminate the kitchen color problem besides bringing your clients advantages available in no other standardized sinks. And remember—Monel Metal Sinks are priced within reach of the average purse!

Write for Monel Metal Sink literature and specification details.

Below: Single drain board Monel Metal Sink. Available with either right- or left-hand drain board, and in nominal sizes of 50" x 21" and 41" x 21".



Above: Monel Metal corner sink. Available with corner splasher at bowl end and with drain board either right- or left-hand, and in nominal sizes of 51" x 21" and 42" x 21".

A HIGH NICKEL ALLOY
MONEL METAL
NICKEL ALLOYS LOOK BETTER LONGER

Monel Metal is a registered trademark applied to a technically controlled nickel-copper alloy of high nickel content. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL ST., NEW YORK, N. Y.

OUTSTANDING BUILDINGS DESERVE EXTERIOR LIGHTING FIXTURES

by
SMYSER-ROYER



In Aluminum - Bronze - Iron

BOTH the Architect and Builder have found Smyser-Royer service and craftsmanship most helpful in solving their exterior lighting problems.

Experience in scientific foundry practice since 1840 has enabled Smyser-Royer to faithfully reproduce even the most intricate designs in aluminum, bronze and iron. Because of their remarkable freedom from imperfections, Smyser-Royer fixtures are as beautiful and as enduring as the building itself.

If stock designs are preferred, Smyser-Royer has a comprehensive portfolio of several hundred fixtures designed to meet every exterior lighting requirement.

Sweet's Catalogue, Section D, pages 6034 to 6044 also illustrates over two hundred styles of exterior fixtures by Smyser-Royer.

Our catalogue of distinctive stock designs will gladly be sent at your request.

SMYSER-ROYER CO.

Main Office and Works, York Pa.

Philadelphia Office, 1700 WALNUT STREET

Northwest Architects Want Government to Get Out of Business

(Continued from page 23)

COULD NOT COMPETE SIX BLOCKS AWAY. George F. Herington, Executive Secretary, Associated General Contractors, Portland, Oregon:

"We have contractors on this coast who can carry out in infinite detail and with meticulous accuracy, and with complete responsibility anything that contractors can do in the east. We have architects on the coast who can build and design and bring into being as beautiful buildings as can any architects anywhere. . . . Individuals grow up everywhere. . . . Are all the individuals going to center in Washington or are men going to be found elsewhere who can build buildings? . . ."

"I am going to tell you about a rather humorous situation. . . . one of our largest furniture manufacturers. . . . makes desks. He wanted to bid on desks for a government enterprise in Portland. . . . Could he do it? No. Because he had to make his petition for the Oregon-made desk in the same manner as anybody else, delivered in Washington, D. C., and then shipped back to this country. He had to consider in his theory of bidding, that he had to haul his own stuff 3,000 miles to Washington and 3,000 miles back in order to deliver it six blocks away. . . . in order to compete with someone else and bring him down to that six blocks. . . ."

ARCHITECTS NOT LOOKING FOR HANDOUTS. Roland E. Borhek, President, Washington State Chapter, A. I. A.:

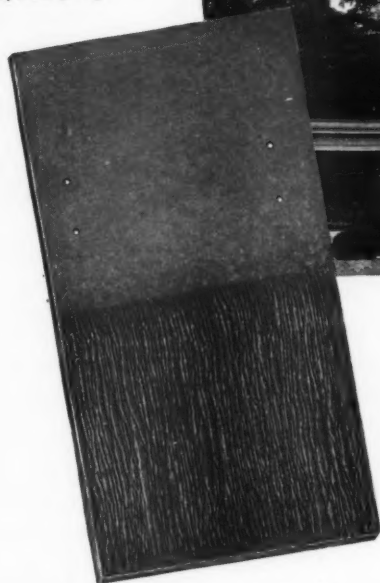
"LET me emphasize. . . . this is not the private affair of the architectural profession. . . . Its principal objective is in the interest of the entire construction industry in all its ramifications and through that industry the ultimate benefactor is John Doe, plain American citizen.

"Bland statements of how many private architects are being employed or how much greater the money value of the work they are engaged in as compared to the work the department is doing isn't the crux of the matter. In the first place, a very appreciable portion of the work by the private architects is in connection with the federal building program in Washington, D. C. . . ."

"No, this is not the crux of the matter—a few more jobs here and there for a few architects. . . . for the same purpose as pouring oil on troubled waters—this is not the objective we have in mind, nor is it going to bring any appreciable benefits to the construction industry as a whole.

"Of course, they have been quite busy lately giving wide publicity to the number of private architects they are employing, but we must not be deceived by weasel words—there are those who have been. . . . Their statements seem reasonable enough but. . . . they don't stand up under close analysis. These are the reasons which are used by the department to justify its position. . . ."

It is a matter of pardonable pride with us that Mr. B. G. Royal, chose Ambler 99 "Weathered Effect" asbestos shingles of random widths for his country home in Wenonah, New Jersey.



Satisfying both the Artistic Eye and the Practical Mind

A roof "old as the hills" and modern as tomorrow is the architect's mental picture for many types of residences. You can secure them both at one stroke with Ambler Asbestos Shingles in the new "Weathered Effect." Many soft, pleasing colors are available in these lasting, rigid shingles of asbestos fibres and cement. *Fireproof*, not merely fire-resistant, they reduce insurance costs and eliminate painting, repairs and replacements. To the eye, these "weathered effect" shingles duplicate all the mellow charm of ancient hand-split cedar, but to the elements they present an endurance and life that outlasts the house itself.

You remove roof complaints when you

say—Ambler Asbestos "Weathered Effect"—in the roofing specifications.

The standard colors of "Weathered Effect" Shingles include Royal Red, Sylvan Green, Lindenwold—a mossy green-black—and four blended tints of soft autumnal browns known as "Rustic Blend." In addition as many as thirty other variations of these shades can be made to order.

**Keasbey & Mattison
Company**
Ambler, Penna.

SALES OFFICES:

Baltimore Boston Chicago Cincinnati Cleveland
Detroit Milwaukee Minneapolis New York City
Philadelphia Pittsburgh St. Louis Washington
Mines at Thetford, P. Q., Canada, and Bear Canyon, Arizona

DECENTRALIZATION MUST COME

B. H. Kizer, attorney, Seattle, Washington

MR. KIZER, a man with strong convictions on the subject of decentralization of the government departments, recalled an experience of forty-eight years ago when the Northern Pacific Railroad subdivided a tract of land of 320 acres, which it owned adjacent to the business district of Spokane. The railroad engaged an engineer in the middle west to plot out the land. This engineer had no opportunity to visit the site and, assuming that the plot was level, laid out the streets without regard to the topography. The result is that in this section of the city the grade of no street is easily overcome. Several streets were cut through with impossible grades, so that today traffic tends to "go around the hill." Adjacent developments, planned by local engineers, recognized the grades involved by the topography and laid out beautiful, usable streets.

Continuing, Mr. Kizer said, "Our railroads . . . were far-seeing enough. . . to decentralize their headquarters. . . . A great part of the popularity of the Federal Reserve System with the people is due to the fact, that the Federal Reserve Board. . . was decentralized. . . .

"Because the work of architecture is done at a central point. . . there is almost complete disregard of the local situation. Every city has its own character, architecturally speaking. That character arises out of the character of the people, and it arises also out of the materials locally available for the construction of buildings. . . .

"Wherever you go you see a certain type of government building and you know it as far as you can see

it. . . just a duplication of what they do everywhere else. There has been of late years a little variety to it, but not very much.

"The chief center of the government has to be close to the people. . . . It must be decentralized, and if men will approach the problem with a determination to decentralize it, it can be done. . . . As they become apt in the decentralized functions it will be discovered that the performance of its functions will be more satisfactory from every standpoint."

PUBLIC MONEYS ARE WASTED

Eric A. Johnston, president of the Spokane Chamber of Commerce:

"PEOPLE everywhere realize that unless the work of the Supervising Architect's office is decentralized, the vast sums of money. . . expended for new structures for the welfare in the main of the unemployed. . . will be wasted, insofar as local benefits, beyond the use and occupancy of the buildings, are concerned. . . .

"Local contractors are in many instances practically deprived of an opportunity to successfully bid on federal buildings in the northwest, and to use western products, due to the fact that when eastern products are specified they don't have the low-down quotation on prices of eastern goods. . . . This is a problem which is of primary interest and importance, to the associated industries of the northwest, and in the last analysis to all the people because it involves the very roots of the American democratic form of self-government." (Cont. on page 88)



Press room, Brooklyn New York Times Building. Albert Kahn, Architect. Bronze sash by William H. Jackson Co. Presses shown are Wood presses.

Controlling Clerstory Sash In Pairs

In this press room, it was desirable to break up a long line of ventilating sash into groups of two. The vertical control rod for sash in each pair of adjacent windows is carried down against the pier between them.

The horizontal shaft is so placed that the usual hazards of bottom hung sash are eliminated.

Equipment is the Lord & Burnham Vertical Screw Thread type.

Lord & Burnham Co.

SASH OPERATING DIVISION
GRAYBAR BLDG., N. Y. CITY

Representatives in principal cities of the United States and Canada



Vertical section through windows, showing apparatus.

Depression lends perspective

Pocket books may not fatten on depression, but judgment and experience can. Those who have the eyes to see and the minds to interpret can draw many lessons from the perspective of fat and lean years that range themselves behind us.

In building, none is more apparent or better worth thought than this: the structures that have been the worst hit by slack times, whose realty values

have fallen, whose security values interest no banker, and whose tenants have fled are those which were poorly planned, cheaply built.

Conversely, buildings planned by competent architects, constructed of carefully selected materials still show a respectable tenant roster, still can raise money on the mortgage market, and still have substantial appraisal values.

The moral is as salutary as it is obvious.

Valves  **CRANE**  Fittings
CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO
NEW YORK: 23 WEST 44TH STREET
Branches and Sales Offices in One Hundred and Ninety Cities

Some buildings, and they are with convincing regularity those whose dividends

disappoint the promoters, show a motley make-up . . . a lack of harmony . . . an absence of central plan.

The successful builder, on the other hand, leaves motley where it belongs, on the fool's back. He avoids it by a very simple

MOTLEY

expedient. He trusts his architect's judgment. He realizes that the man whose

trained imagination conceived the building, and whose experience directed its construction is alone capable of finishing it. He allows none to destroy a harmonious and honest plan by interfering with his architect's specifications.

Valves  **CRANE**  Fittings
CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO
NEW YORK: 23 WEST 44TH STREET
Branches and Sales Offices in One Hundred and Ninety Cities

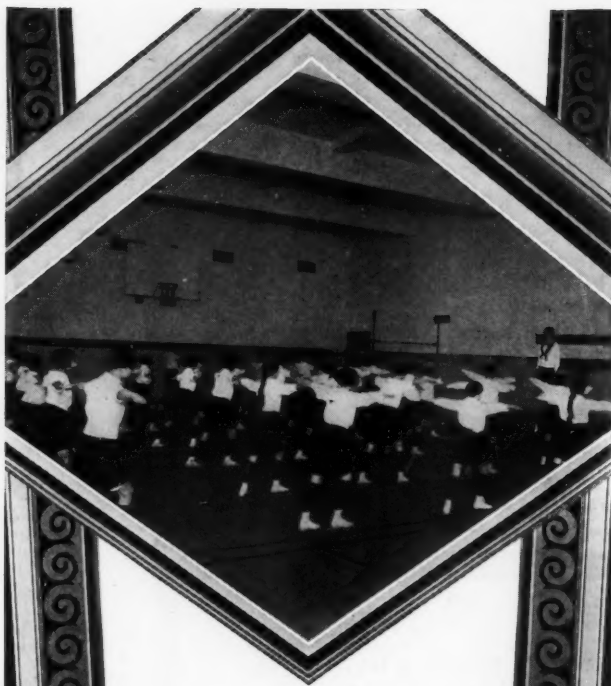
Dedicated to earn just recognition for Architects

The two ads reprinted here are dedicated to carrying on the campaign which Crane Co. has always fought; the gaining for architects of just recognition on the part of both home and speculative builders. They are

part of a series sponsored by Crane Co., published in magazines that circulate nationally in the building investment and management field where the architect is too often hampered by the interference of others.

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO
NEW YORK: 23 W. 44TH STREET
Branches and Sales Offices in One Hundred and Ninety Cities





RICHARD F. HAYES

DIRECTOR OF
PHYSICAL EDUCATION, BENJAMIN
FRANKLIN SCHOOL, YONKERS,
N. Y., GIVES EXPERT TESTIMONY

HE WRITES:

"The Bloxonend Floor gives no evidence of wear and appears to be splinter-proof. The resiliency of this floor is remarkable. I have never seen anything that compares with it in this respect. This feature is especially important for basketball players, runners, and the teacher who spends his whole day on it. The cross grain of the wood gives a traction in every direction, yet the floor is not sticky"

G. HOWARD CHAMBERLIN,
Architect

WRITE FOR SPECIFICATIONS

**CARTER BLOXONEND
FLOORING COMPANY**
KANSAS CITY, MISSOURI

Representatives In Leading Cities

**BLOX-ON-END
FLOORING**



Lays Smooth
Stays Smooth

Bloxonend comes to job in 8 ft. lengths. The blocks are securely dovetailed to baseboards. Laid with splines and nailed.

PROTESTS ANSWERED BY FORM LETTERS. Hon. Samuel B. Hill, Representative, 5th District, Washington:

"I have on more than one occasion taken the matter up with the Supervising Architect's office and urged upon the officials there the advantage both to the government and the state in recognizing western materials and the employment of local architects. . . . The replies to communications addressed to this office have the appearance of a form letter and though we have made many representations as to the feeling of our constituents, the practices and policies of the Supervising Architect's office appear to remain virtually unchanged.

"There is abundant evidence to show that the best architectural skill is to be found in the ranks of the private profession and I for one can see no reason why modern ideas should not be brought into government buildings or why the old pyramid style should appear to be so closely adhered to. Federal buildings should in my opinion express the latest ideas in construction, typify the character and atmosphere of the community, and in the general plan, outlets should be provided for the development of individual initiative, enterprise and creative ability. . . . Certainly the matter must be approached from a national standpoint and the question at issue is just as important to the man from Florida, the man from Maine or the man from the middle west as it is to our own citizens. . . ."

BUREAUS GROW BIGGER NOT SMALLER. Gus. P. Backman, Executive Secretary, Chamber of Commerce, Salt Lake City, Utah:

Mr. Backman called attention to the growth of bureaucracy in Washington by starting with the transfer of the seat of government from Philadelphia to Washington in 1800. At this time the government was eleven years old, represented some five million people, had an office force of fifty-four clerks and it is said required seven small and five large boxes to transport all of its books and papers. Today, population has increased twenty-three times, and the government, exclusive of the Army and Navy, employs some 800,000 men and women. In 1800, the government appropriated for all services including Postal, eleven millions, or about \$2.08 per capita. The 1930 expenditures amounted to nearly five billions or \$38.42 per capita.

"When a department or bureau is once established. . . the newly appointed head looks around for new worlds to conquer, and the only time a halt is called is when he conflicts with another department, and once entrenched in a bureaucratic job, the idea is to make more jobs no matter what the cost to the individual or corporation operating in legitimate fields. . . ."

Transactions through the Veterans Bureau in connection with the Indianapolis Veterans Hospital were recalled by Mr. Backman, as an example of "the inefficiency of the government in business." This hospital was authorized by President Hoover, December 19, 1929. Nearly seven months were consumed in the inspection and consideration of sites. In the meantime,



Rosenthal's Store, Chattanooga, Tenn. A Desco Store Front—installed by the Detroit Show Case Co.

...for New or Remodeled Buildings Use

Desco **METAL** STORE FRONTS

REG. U.S. PAT. OFFICE

For full architectural details see Sweet's catalog. Write us for complete working data and price list. Remember, too, wherever you are there is a distributor near you. We also carry a complete line of "Desco" construction material in our New York City Warehouse.

The modern designs of Desco Store Fronts are equally effective with new construction or remodeled buildings. In both cases they reflect beauty and quality, thus making the window displays more attractive and useful. Made in a wide variety of metals, including solid copper (plain or embossed), solid bronze in all standard finishes and aluminum alloy (white metal), Desco Store Fronts harmonize with any architectural style. Then, too, they have the additional quality of flexibility, which protects the glass against abnormal wind pressure. Use Desco Store Fronts on your ground floor shop jobs.

DETROIT SHOW CASE CO.

1670 West Fort Street

Detroit, Michigan

New York City Office and Warehouse: 344-346 East 32nd St.

Philadelphia Office: 316 Commonwealth Building

Pacific Coast Office: 450 Skinner Building, Seattle, Wash.

**GUARANTEED
TO OUTLAST ANY OTHER
MAKE OF DOOR—
ANY CONDITIONS
—AT ANY
PRICE**



There is no "just as good" unless it is another Jamison Door. Back of it is a record of service—made possible by its rugged construction and extra strong hardware—that has led to thousands of reorders. With it is a guarantee that it will give more service than any other door—at any price.

Write for catalog and details
on the new Wedgetight Fastener

JAMISON COLD STORAGE DOOR CO.
CONSOLIDATING JAMISON COLD STORAGE DOOR CO., INC.
AND STEVENSON COLD STORAGE DOOR CO.

HAGERSTOWN, MARYLAND, U. S. A.
Oldest and largest makers of Cold Storage Doors in the World

Branches: 300 Madison Ave., NEW YORK. . . . Builders Bldg., CHICAGO
116 West 24th St., CHESTER, PA. . . . Railway Exchange Bldg., ST. LOUIS
4019 Gaston Ave., DALLAS. SAN FRANCISCO
Agents: Gay Engineering Co., 2650 Santa Fe Ave., LOS ANGELES
. D. E. Fryer & Company, SEATTLE and SPOKANE.
. Southern Ice Supply Co., MARIETTA, GA.
Foreign Agents: Armstrong Cork Co., Ltd., LONDON.
The von Hamm-Young Co., Ltd., HONOLULU. Okura & Co., JAPAN

**Jamison
& Stevenson
Cold Storage Doors**



the "Bureau had on file hospitalization applications for more than three hundred service men throughout Indiana." About six months then elapsed, during which there was much jockeying back and forth of plans and sketches between the Indianapolis Regional office and Washington. The hospital will be completed late in 1931, two years after authorization. ". . . Written by the dead hand of bureaucracy, the final tally on the project will be 'construction work, nine months; administration functions, fifteen months'."

NORTHWEST HAS STARTED SOMETHING. Fred. F. Willson, Member Board of Directors, A. I. A.:

"I SHALL go back to the meeting of our Board of Directors to be held at Louisville, Kentucky, with the conviction that no finer effort in support of the principles for which we are seeking recognition has been made in the United States than that which has found its climax in this conference. . . . the work of this committee. . . . is going to be tremendously appreciated by the American Institute of Architects and it will be a tremendous incentive to them in their endeavors along the lines of this meeting to have your cooperation and support. . . ."

LOCAL ARCHITECTS WORK FASTER

Hon. Ralph A. Horr, Representative, First District, Washington:

"FOURTEEN months elapsed before we had the plans for the Federal Building (Seattle.) The site was ours and all conditions were perfect for the erection of that building. . . . the private architects who had charge of the construction of the Marine Hospital (Seattle) had the plans ready within ninety days. In my opinion, that is sufficient answer to Mr. Heath's statement that our people are unfamiliar with conditions and it takes such a long time when they employ local architects."

In connection with the Marine Hospital, Seattle, Representative Horr stated that the architects, in addition to the building called for, added an extension of approximately two stories, stayed within the appropriation and saved the government \$200,000. He stated that he had been informed that the construction of the Federal Building was antiquated, whereas the Marine Hospital had utilized modern structural design at a saving in the floor construction of approximately 25 per cent.

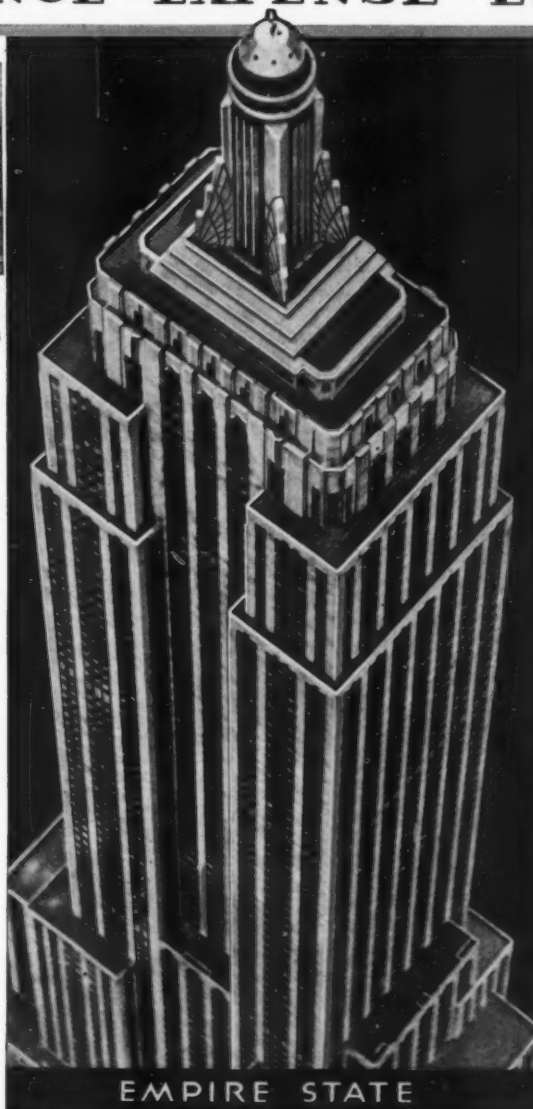
Representative Horr also called attention to the sub-contractor situation on public building work, wherein the general contractor may obtain local sub-contract bids and then "peddle" them, after the general contract has been awarded, to distant contractors in an effort to obtain a cheaper price. In respect to this he added, "I have talked to architects who know their business. I know I cannot be an architect, but I might be a Supervising Architect some time. They tell us it is sound business that if we protect the general contractor, we should protect the sub-contractor. . . . I do not believe it is within the duty of good patriotic citizens to sit idly by and see the condition prevail that actually means the loss of at least 33-1/3 per cent in the construction of our public buildings. . . ."

PARAPETS • PERMANENTLY • PROTECTED

MAINTENANCE • EXPENSE • ELIMINATED



Phantom - showing Cheney Flashing under coping stones — the method employed in protecting parapet walls of the Empire State.



EMPIRE STATE

Looking down on Empire State

Architects : Shreve, Lamb and Harmon
Contractors : Starrett Brothers & Eken, Inc.



Cheney Flashing being installed on the parapet above 36th floor — Empire State. Note key-ways in flashing ready for mortar. Also the absence of dowels.



INTERLOCKING THRU-WALL FLASHING

In selecting Cheney Flashing to protect Empire State, the architects found that the dowels in the stone copings could be eliminated thereby making the Cheney Flashing less expensive than plain copper. It is the only thru-wall flashing that safely permits the elimination of dowels.

Cheney Flashing is the only proved Thru-wall Copper Flashing that runs completely through the masonry wall and forms a positive unbreakable key-bond in every direction within the mortar bed. Cheney Engineers are available to assist in supervising installations and for detailing plans and specifications.

PREVENTS SEEPAGE, LEAKS, EFFLORESCENCE AND "DOES NOT BREAK THE BOND"

THE CHENEY COMPANY

WINCHESTER, MASSACHUSETTS

NEW YORK

PHILADELPHIA

PITTSBURGH

CHICAGO

IN CANADA : CORPORATE STEEL PRODUCTS, LIMITED, MONTREAL



Great Builders

(Continued from page 49)

thought that was a fly-speck on the scale drawings, and you have made it into a carved bracket which will cost me fifty dollars to make!" The bracket was simplified slightly. With all he was a Scotchman, but one of the best type of that race.

He finished his work when he said he would. His experience was so wide, his intelligence so keen and his courtesy so great, that one found it a pleasure to consult with him. He could give information and advice taught in no school but that of Bitter Experience, and he was the kind of contractor who an architect felt would take pride in his work. Brother contractors had such confidence in him that he was often asked to serve as arbiter in disputes between themselves and other architects. After all this is said, it is no wonder that he was often given work without competition, and often given preference when he was not the lowest bidder. On occasions he would sign a contract after an all-night session with the owner and the architect, and at seven o'clock the next morning the job was started. He did as he agreed, and retired, it is said, with a fortune well in the millions.

I first saw O. W. Norcross, of Norcross Bros., in the early morning at his home city of Worcester, Mass., mount a Boston train, where he at once ensconced himself in a compartment and spread out on the table before him drawings, specifications, contracts and corre-

spondence, and began to "figger," so that no time should be lost. When he traveled, his favorite reading was Trautwine's Handbook, which he laughingly said gave him all the information in the world, even the way a baby elephant was brought into the light.

HE would recount his early dealings with H. H. Richardson, how he attended a meeting of a church building-committee with estimates and a bag of samples of stone; and he told of how at the time he built Trinity Church in Boston, so little was known about real masonry that he had his wife translate and read to him Viollet le Duc's various works bearing on this subject, so that he might attack the job with intelligence. This was his first important work, and since then, during the life of Richardson, so much was he appreciated by that great man, that he built most of his long list of important works.

Norcross was a genius in the building profession—but a man encumbered with all the idiosyncrasies of a genius. He was outstanding in enthusiasm, ability, determination, ingenuity, and exceedingly active, with a great sense of business; at sixty-three he tired out all the young men in his employ. But, as those close to him felt, he lacked a certain balance which would have kept him from going into such schemes as having his own brick-yards, stone-quarries, interior-finish factories,



Refrigeration

Cools 16 refrigerators, makes ice, freezes ice cream, and supplies cold drinking water throughout the new \$3,000,000 Harborview Hospital, at Seattle (shown in right background).

The refrigerating machine room contains two 3" by 4" Frick Carbon-dioxide Compressors, high-side and ice tank.

For large or small hospitals, specify Frick Refrigeration. Estimates and literature on request.

Frick Company
WAYNESBORO, PA., U. S. A.
ICE MACHINERY SUPERIOR SINCE 1882

WITH Automatic Room Temperature Control growing in favor by leaps and bounds the Fulton Sylphon laboratory announces outstanding further additions to the Sylphon line—an exclusive type of two-bulb balanced heat control for enclosed radiators and convector heaters, and a new type representing further refinements in appearance and action for control of exposed radiation.

Don't fail to investigate before specifying any other automatic temperature control system, for office buildings, apartments, hotels, hospitals, stores, schools or large homes.

Buildings that incorporate these valves this winter will be at least one year ahead of the procession, for plans were purposely announced too late for attempts approaching duplication by competitors.

Ask for the new advance Bulletin No. VJ-255.
Or ask for a representative to call with
samples . . . Do it today.

European Representatives, Crosby Valve and Eng. Co., Ltd., 41-2 Foley St., London, W. I., Eng.;
Canadian Representatives, Darling Bros., Ltd., 140 Prince St., Montreal, Quebec, Canada

Representatives in All Principal Cities in U. S. A.

carpenter-shops, etc. Times and conditions were changing, even in his later days, and, super-man that he was, he either did not realize it, or felt that it was too late for him to change, as his powers waned from the immense drafts made on them during all his active life.

He was inclined to be brusque at times. For instance, an employee who has since benefited by his experience in Norcross's service, told me the following: "I had been called into his private office to explain the detail of an estimate, and Norcross asked me if it was correct. I said, 'I think so.' Whereupon there was an explosion with '———'. I don't pay you to think; I pay you to know,' emerging from the smoke." Then later, humane as he was, he raised this employee's pay.

NORCROSS would often put off making an estimate on a large project until it necessitated his taking a small corps of assistant estimators aboard a parlor-car enroute to the destination where the bids were to be opened on the morrow. Starting with a compartment, there soon developed an overflow—and estimates and drawings became scattered throughout the whole car.

On one of these trips Norcross took off his shoes to rest his feet, and in the *melée* they became lost in the car. All hands turned out to hunt for them. Finally one was found and handed to him, whereupon he laughed in his inimitable manner and exclaimed, "One shoe is no good: throw it out the window." This was done, and a few minutes after the train drew into the station, the other shoe was found! Yet with it all, he was the

lowest bidder and won thereby one of his greatest undertakings.

As was often the case, the estimators, laboring long, would evolve a figure for the work, while Norcross would sit before the drawings, glancing at them from time to time, lay upon them a two-foot rule, whistle, drum on the table with his fingers, and suddenly exclaim, "Boys, I will build that for —— dollars." And it was said that in at least eight cases out of ten he would be fairly close to the figure arrived at by the more laborious process.

On one occasion he took his wife with him and deposited her in a comfortable hotel in New York City for the day. When the day was over, he was nearly back to Worcester before he thought of his wife.

Norcross lived simply, often engaging a room in a boarding-house in the large city where his work was progressing, installing his foreman and principal workers therein, and reserving for himself a bed against the next time he should visit the place. Once, while figuring a job in an architect's office and seeing the draughtsmen go out for lunch, he said, "Well, I suppose you boys will spend a dollar for lunch; but I am satisfied with a piece of apple pie and a cup of coffee for twenty-five cents." Yet with all his personal economy, "his boys" never suffered from it. In his "palmy days," when a building-committee asked him if he could furnish a bond, he would delve around in his old worn leather hand-bag and bring forth a huge bunch of U. S. Government bonds and offer them to the committee.

At times he was rather difficult to deal with, as he

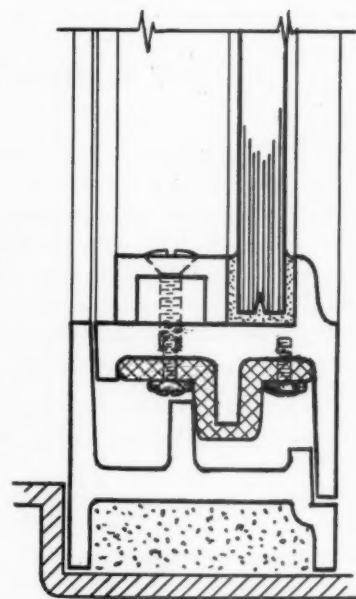
"HALCO" Casement Sash

As installed on the Mooring Mast
of the Empire State Building



THE enormous wind pressures at the top of the Empire State Building in New York City, make it obligatory that there shall be no air leakage around the sash.

"HALCO" aluminum sash, used exclusively on the mooring mast, has a perfect three-point contact with the window frame. In addition to which, there is a solid rubber cushion on the middle contact member, that creates an air tight seal, when the sash is in closed position.



(Patent applied for)

HALBACK
C. E. HALBACK & CO.
Banker Street, Brooklyn, N.Y.
WORKERS IN METALS FOR ARCHITECTURAL PURPOSES

Window openings are closed with "HALCO" Casement sash, on the Mooring Tower of the Empire State Building. Note the three-point contact of sash and frame and the air tight seal of solid rubber, shown by the above detail, which is actual size.

OUTSTANDING

CITY HALLS WHOSE DOORS SWING ON STANLEY BALL BEARING BUTTS

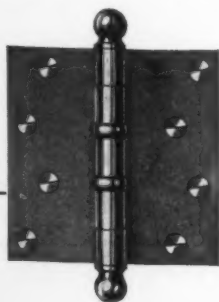
LOS ANGELES CITY HALL
Architects: John G. Austin, Albert C. Martin,
John Parkinson, Associates



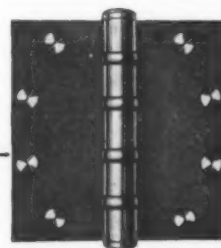
BUFFALO CITY HALL
Architect: Dietel and Wade. Associate Architect: Sullivan W. Jones

The distinctiveness of recent American City Halls is supported by the beauty and efficiency of modern materials and equipment.

The important requirement of smooth, trouble-free operation of the multitude of doors in these outstanding City Halls has been effectively met by the installation of Stanley Ball Bearing Butts.



THE STANLEY WORKS
New Britain, Conn.



STANLEY BALL - BEARING BUTTS

Insulate with U. S. MINERAL WOOL

The Perfect Insulator

**COLD PROOF, HEAT PROOF, FIRE PROOF
SOUND PROOF, VERMIN PROOF**



Reduces Both Furnace Cost and Fuel Expense

Insulating a home with U. S. Mineral Wool has decided money saving advantages in addition to the protection from cold, heat, sound, fire and vermin and the greater living comfort it supplies.

The ordinary type of heating unit is unnecessary — a much smaller, less expensive plant will keep all rooms thoroughly comfortable and create a worthwhile saving. Fuel bills, year after year, will be decreased about one third.

Insulating with U. S. Mineral Wool is a real economy, not an expense. The first nominal cost is the last—it never has to be renewed and will outlast the building. The protection, comfort and saving is described in our FREE booklet. Send for it and also free sample of U. S. Mineral Wool.

U. S. Mineral Wool Company
280 Madison Avenue, New York

Western Connection

Columbia Mineral Wool Co. - South Milwaukee, Wis.

U. S. MINERAL WOOL CO., DEPT. F
280 Madison Ave., New York
Send FREE sample and illustrated booklet to

Name
Address
City State

would often think he knew some better way of building than the architect had devised, or of some different materials, nor did it trouble him whether the contract was signed or not.

Probably the most important work of his latter years was the United States Custom House at Boston. Here a tower about five hundred feet high, supported on concrete caissons which run almost one hundred feet below the sidewalk, was reared in the center of the old building. The contract called for this tower to be built without disturbing the old building of which it was to form a part. This was work which he found kept him busy and active enough—it is said to have shortened his life. The difficulty of sinking the steel shells of the caissons, owing to the cramped space overhead for locks, enclosures and equipment, and the varying hardness of the soil, caused untold trouble both to the architect and to the builder. When the caissons were well under way, the adjoining walls of the old building began to settle. This was a hard nut for him to crack. He solved it by appearing at the building with a large number of steel wedges which he proceeded to drive in at critical points. The settling ceased and the threatening situation was saved.

He figured, in one night's work, the famous Brannigan Building which he built at Providence.

Here was a builder who was said to have done more to improve methods and to advance the character of building than any man in the country in his time. He built at a time when competition was not so severe. There are many builders of to-day who owe much of their success to the experience and training that they secured in his employ—and all refer to his greatness with sincere admiration and gratitude.

Lack of space alone prevents the recording of many other builders, who, by faithful service and pride in their work,—often confronted with unforeseen difficulties and great discouragements—have so ennobled the art of building, that it now ranks among the greatest of human occupations of all time.

"IN these days, with work hard to find, the go-getter architect is somehow always busy, for he keeps following every possible lead and he is on the firing line selling himself to every possible client, sometimes volunteering his services in planning new layouts for expansion and reconstruction of the owner's building, showing how increased revenue may be obtained and often assisting in procuring financing for the project." So states Murray Klein, an architect of Brooklyn, N. Y., in the Brooklyn Magazine, a publication of the Brooklyn Chamber of Commerce and the Associated Builders of Kings County. "The architect today is, first, a business man in his profession and must daily demonstrate his business acumen, else his clients will drift away to his more alert competitors."

LONDON UNIVERSITY, England, will have an entire new plant on a site of over ten acres, stated to transcend anything planned for the city since the time of Sir Christopher Wren. The estimated cost is \$30,000,000. Charles Holden, winner of the medal of the Royal Institute of British Architects last year for his Underground Railway building at St. James Park, has been appointed as architect.



The fittings sell the plumbing job

What contractor doesn't realize this truth when we say that "The fittings sell the plumbing job"?

The average house builder knows little more about the quality of his plumbing job than he can *see*—and he is often sure to judge the job you do by the fittings you have installed. It pays to be fussy in selecting the fixtures that you are to install.

The sink combination above is a typical example of MUELLER fine plumbing fixtures. Modern in design, made of MUELLER bronze and heavily plated with enduring chromium, it is certain to "sell" any kitchen installation on which it is placed. It is a combination faucet with swing spout, indexed lever handles, removable soap dish and adjustable threaded flanges. When you write us, just ask for it by number—G-900.

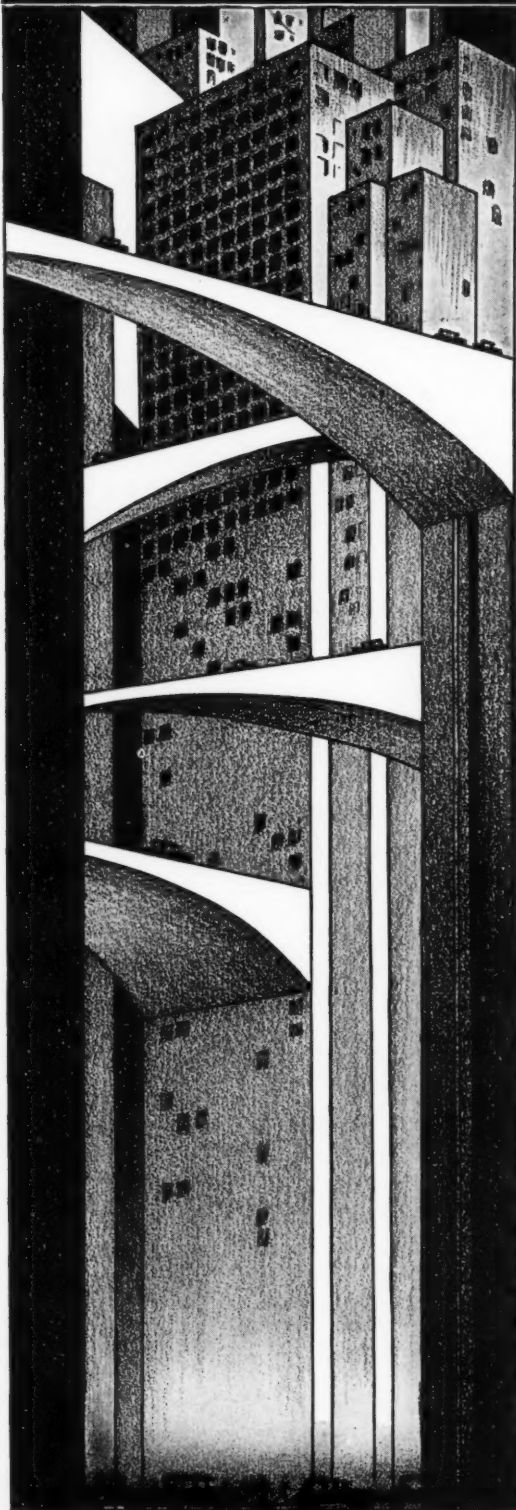
MUELLER CO. (Established 1857) *Factory:* Decatur, Illinois.
Branches: New York, 135th St. & Walnut Ave., Bronx; Telephone, LUdlow 8629-30-3; Dallas, Atlanta, San Francisco, Los Angeles, Chicago.

Canadian Factory: MUELLER, Limited, Sarnia.

MUELLER

Trade-mark Reg. U. S. Pat. Office

LOOKING AHEAD



The E. F. Hauserman Company in the year 1931 is offering the most modern and efficient movable steel partitions available. As in previous years, they have been specified for the large majority of important buildings erected during the last twelve months.

But Hauserman is not resting on the oars. Today's partition design is not a goal, but a milestone. Our engineers are thinking in terms of the future. Constant contact with the country's outstanding designers and engineers keeps our horizon broad and unbiased.

Today's trend of Hauserman thought is dominated by the architectural engineer's desire that the maximum of manufacturing of buildings be done *at the vendor's factory* and all material be delivered to the site in as nearly a completed condition as possible.

This aim, of course, has been accomplished in partition walls, but it is inevitable that other types of walls will be developed to this degree of efficiency. And when this is done, Hauserman will do it.

THE E. F. HAUSERMAN COMPANY "Organized for Service Nationally"

6904 GRANT AVENUE

CLEVELAND, OHIO

Factory Directed Planning and Erection Service from these
14 Factory Branches

Newark	Philadelphia	Buffalo	Boston	Kansas City	Detroit
Cincinnati	St. Louis	Washington, D. C.	Albany	Chicago	
	Pittsburgh	New York	Cleveland		

HAUSERMAN MOVABLE STEEL PARTITIONS

NEW CATALOGS . . .

Readers of **AMERICAN ARCHITECT** may secure without cost any or all of the manufacturers' catalogs described on this and the following page by mailing the prepaid post card printed below after writing the numbers of the catalogs wanted

PRACTICAL DESIGN IN MONEL METAL

218 . . . Presentation of the technique of design and fabrication in white metal prepared for architects, decorators and metal craftsmen. Has a subtitle, "A manual for architects and metal craftsmen defining the decorative uses and limitations of Monel Metal and presenting a technique for developing those uses in the most practical and economical manner." Issued by the International Nickel Co., Inc., 67 Wall Street, N. Y. Covers metals and metal craftsmanship, properties of Monel metal, the personality of Monel metal, practical craftsmanship, practical design, applications, notable decorative details expressed in Monel metal, utilitarian uses, etc. Well illustrated. A. I. A. file 15 g.

CARRIER WEATHERMAKER

219 . . . Illustrated booklet issued by the Carrier-Lyle Corp., 850 Frelinghuysen Ave., Newark, N. J. Discusses, "how to have ideal weather made to order in your home in winter." Explains how the Carrier system works in cleaning, humidifying and heating air.

MODERN FLOORS FOR MODERN HOMES

220 . . . Reinforced rubber floors are discussed in this booklet of the Stedman Rubber Flooring Company, South Braintree, Mass. Illustrations of rooms in which installed, pictures in colors of patterns. General information about this flooring.

FACTS ABOUT ACOUSTICS

221 . . . Illustrated booklet of the Insulite Co., Minneapolis. Discusses acoustics, dead spots and sound foci, selection of acoustical materials, etc. Gives results of sound absorption tests on Insulite Acoustile, also light reflection tests. Includes specifications.

DO IT WITH DUREZ

222 . . . Folder illustrated in colors describing Durez molding compound and products made from it. Issued by General Plastics, Inc., North Tonawanda, N. Y.

CATALOG OF VENETIAN BLINDS

223 . . . Catalog 26 of the Burlington Venetian Blind Co., Burlington, Vt. Illustrates interiors and exteriors of buildings in which this company's blinds have

been used. Contains a sheet showing the colors in which these blinds are obtainable. Has data on measuring, etc.

FEDERAL SEABOARD WALL ASHLAR

224 . . . Booklet of illustrations showing wall ashlar made by the Federal Seaboard Terra Cotta Corp., 10 East 40th Street, New York, as used in various types of buildings. A. I. A. file 9 c.

ARCHITECTURAL GRANITE

225 . . . Booklet issued by the National Building Granite Quarries Association, Inc., Boston, Mass. Gives information about the association of interest to architects and specification writers, shows illustrations of various kinds of granite in different finishes, some of them being reproduced in color. Also gives hints on detailing, specification, etc. A. I. A. file 8 b 3.

LABORATORY EQUIPMENT

226 . . . Booklet illustrated in black and white and colors, describing laboratory equipment made by Maurice A. Knight, Akron, Ohio. A. I. A. file 29 b 81.

BETTER PLASTERING ON METAL LATH

227 . . . A data book called "The Milcor Manual," issued by the Milwaukee Corrugating Company, Milwaukee, Wis. Gives data on Milcor materials and methods, including engineering tables on reinforced concrete construction, details, specifications and general information regarding various products of this company. Catalog 20 E. A. I. A. file 20 b 1.

HIGHTON REGISTERS

228 . . . "Highton Hart & Cooley Straight Flow and Volume Control McKnight Register" is the title of a folder issued by William Highton & Sons, a division of Hart & Cooley Mfg. Co., Nashua, N. H. Illustrates and describes this company's registers, which keeps air currents at right angles to the face of the register. Folder 38 of a series.

ZMA FOR WOOD PRESERVATION

229 . . . Folder describing treated lumber and containing illustrations of places used. Issued by the Curtin-Howe Corporation, timber preservative engineers, 405 Lexington Ave., New York City. A. I. A. file 19 a 31 and 19 a 34.

LARCH: ITS PROPERTIES, USES AND GRADES

230 . . . Illustrated booklet of the Western Pine Manufacturers Association, 510 Yeon Building, Portland, Oregon. Gives considerable information about larch, its engineering features, use for interior trim and millwork, for summer cottages, dimensions. Has tables of recommended grades for various uses, pictures of various grades, and other data. A. I. A. file 19.

MCQUAY CONCEALED AND CABINET COPPER RADIATION

231 . . . Illustrated booklets issued by the McQuay Radiator Corp., 1600 Broadway N. E., Minneapolis, Minn. Gives various data about the radiators made by this company including dimensions, roughing in data, and other installation data. A. I. A. file 30 c 4.

NO POSTAGE REQUIRED ON THIS CARD

Nov. 1931

AMERICAN ARCHITECT

57th Street at Eighth Ave.
New York City

Kindly have mailed to me the following catalogs, whose numbers I have noted, reviewed on this and the following page.

Numbers

Name

Address

City

Occupation

FOR NOVEMBER 1931

These NEW Catalogs may be obtained through AMERICAN ARCHITECT

THE STOTT STOKER

232 . . . Folder issued by the Stott Stoker Company, Inc., Merchants National Bank Bldg., St. Paul, Minn. Describes this company's new method of underfeed firing, with diagrams and illustrations.

TRIUMPH LINE OF VAULT DOORS

233 . . . Illustrated booklet of the Diebold Safe & Lock Co., Canton, Ohio. Gives recommendations for selecting type of vault doors, for fire resistive vaults and record room construction, and similar data based on information collected by the National Fire Protection Association. Also gives data on specifications. A. I. A. file 18 g.

FIREPLACE ROLSCREENS

234 . . . Folder illustrating and describing the use of Rolcreens for fireplace protection. Explains dimensions required when ordering. Issued by the Rolscreen Co., Pella, Iowa; H. A. Bame, distributor, 501 Madison Ave., New York.

HOUSE FOR THE GROWING INCOME

235 . . . Perspectives, elevations and plans of a three room cottage which may be added to from time to time; these additions are illustrated and described, forming an interesting study of the variations and growth of a plan. Specifications included. Designed by Eldred Mowery, A. I. A. Issued by National Lumber Manufacturers Association, Transportation Building, Washington, D. C.

THE ARCHITECT'S GREEN BOOK

236 . . . Illustrated booklet about Cabot's Collopakes, a finish exterior paint, made by Samuel Cabot, Inc., 141 Milk Street, Boston.

SAMPLES OF 1932 WALL-TEX LINE

237 . . . A folder containing samples 20 in. by 15 in. of the 1932 Wall-Tex line, made by the Columbus Coated Fabrics Corp., Columbus, Ohio. Included is an antique finish, stated to be for the first time in fabric wall coverings.

ROOF TILES OF ATLANTIC TERRA COTTA

238 . . . A folder illustrating and describing classical roof tiles, made by the Atlantic Terra Cotta Co., 19 West 44th Street, New York, for the use of architects who design buildings of a monumental character. A. I. A. file 12 e.

G-E NOVALUX ORNAMENTAL FLOODLIGHTING LUMINAIRES

239 . . . Booklet issued by the General Electric Co., Schenectady, N. Y., illustrating and describing this company's luminaires. A. I. A. file 31 f 24.

SNEAD BOOKSTACKS AND STACKROOM EQUIPMENT

240 . . . Illustrated booklet bound in stiff covers of Snead & Company, 92 Pine Street, Jersey City, N. J. Contains pictures and information about this company's bookshelves for use in libraries, etc., together with many interior views.

STEEL AND GLASS PARTITIONS FOR OFFICE AND FACTORY

241 . . . Contains details of office partitions, specifications and similar data pertaining to partitions made by Snead and Co., Jersey City, N. J. A. I. A. 28 a 3.

CORRECTLY CONDITIONED AIR

242 . . . Illustrated booklet issued by Air-Control Systems, Inc., 2240 North Racine Ave., Chicago, describing the

Zephyr 75, which is a compact and small unit air washer for houses, offices, hospitals and industrial plants. Also serves as a cooling plant where refrigerated water is supplied. A. I. A. file 30 f 1.

MCCABE DOOR HANGERS

243 . . . Catalog 31 of the McCabe Hanger Mfg. Co., 425 West 25th Street, New York. Illustrates and describes various types of equipment made by this company, such as ball bearing door hangers, track and hardware for all types of sliding and folding doors, overhead carrying devices, expansion bolts, ball bearing wheels and rolling ladders.

ALUMINUM PAINT: USES, UTILITY AND APPLICATION

244 . . . Illustrated booklet by the Aluminum Company of America, Pittsburgh, Pa. Gives information on aluminum paint for various purposes.

VISIBLE KEY-FILING, KEY-FINDING SYSTEM

245 . . . Folder illustrating and describing TelKee, a system for keeping track of many keys. Issued by the Thayer TelKee Corp., 108 East 17th Street, Los Angeles. A. I. A. 27 b 2.

USG STEEL ROOF DECKS

246 . . . Folder of the United States Gypsum Co., 300 West Adams St., Chicago, Ill., describing an incombustible roof deck stated to afford unusual strength and yet be economical in use of steel with adaptability and easy erection features.

MAGICOAL ELECTRIC FIRES

247 . . . Catalog illustrating and describing Magicoal and Magiclog electric fires, pictures of grates, etc., made by Berry's Electric, Ltd. U. S. agent, H. A. Bame, 501 Madison Ave., New York.

FLOODLIGHTING FOOTBALL FIELDS

248 . . . Bulletin 2241 of the Crouse-Hinds Co., Syracuse, N. Y. Explains types of floodlighting and gives pictures of stadia lighted.

YOUNGSTOWN BUCKEYE CONDUIT

249 . . . The second edition of a book bound in fabricoid, intended for those interested in electrical conduit. Gives useful tables and engineering data. Also describes manufacture of conduit from the ore to the finished product. Issued by the Youngstown Sheet and Tube Co., Youngstown, Ohio.

FIRST CLASS
PERMIT NO. 5
(Sec. 384 1/2 P L & R)
NEW YORK, N. Y.

BUSINESS REPLY POST CARD
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

-POSTAGE WILL BE PAID BY-

AMERICAN ARCHITECT

57th Street at Eighth Avenue

New York, N. Y.

AMERICAN ARCHITECT



In a Famous Stadium—

*Ramps Made Non-Slip
with Alundum Aggregate*

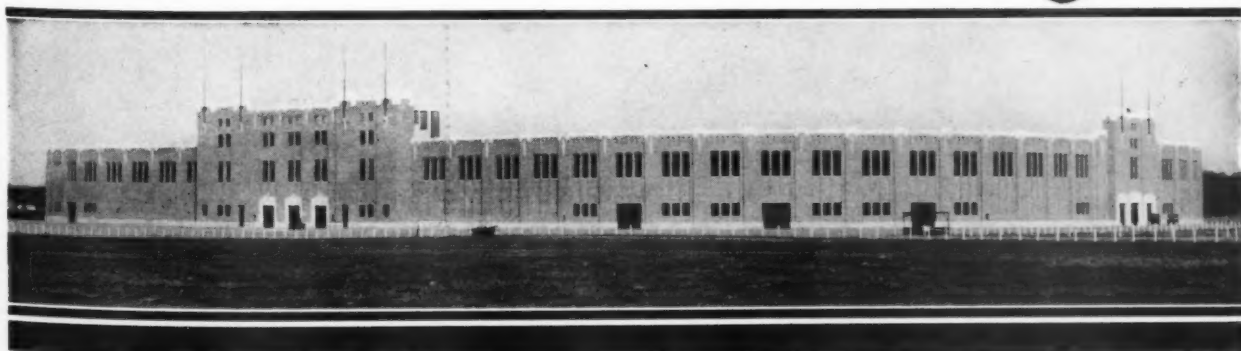
THOUSANDS congregate in this modern stadium to watch Notre Dame's famous team in action. When the crowds gather and when they throng out, a Norton Floors product contributes to their safety. The long ramp leading down to the playing field and the many short but steep ramps leading up into the stands are surfaced with concrete containing Alundum (C. F.) Aggregate.

NORTON COMPANY, WORCESTER, MASS.

Stadium, Notre Dame University, Notre Dame, Indiana; Osborn Engineering Co., Cleveland, Ohio,
Architects and Engineers



T-289



A Plan to Replace These—With These

(Continued from page 41)

surroundings and crowded living conditions. Is it to be wondered at that gangsters, gunmen and similar lawless elements have grown up in, and then defied a society which tolerates such conditions?

Sporadic attempts have been made to ameliorate conditions in various sections of the country. Enterprising and fine-spirited capitalists have, here and there, attempted to provide proper housing for the workers in the industries that absorbed their investments. Vast difficulties confront them. Comparatively few industries can tie up large sums of capital in houses for workers, and at the same time satisfy the demands of stockholders for large dividends.

THE most ambitious and successful attempt to solve America's important housing problem was undertaken by the Department of Labor during the war. A corporation was formed and a builder of outstanding reputation for integrity and accomplishment was placed at the head. He gathered together a staff consisting principally of many of the best architects and town planners in America. All these men were practical people. They were also men of vision. They planned nearly a hundred delightful little towns, suburbs and villages in the environs of navy yards, ship yards, munitions centers and manufacturing plants. The war came to an end before many of these could be erected. About fifty were com-

pleted, and stand today as demonstrations of what intelligent, far-seeing town planning may accomplish when properly undertaken and properly financed.

It is possible that this discarded agency of the Government, so successful in meeting a wartime emergency, may yet prove to be the most practicable means for meeting a yet graver exigency of peace; that it may be rehabilitated and become the means by which deplorable housing conditions may gradually be wiped out. The most hopeful aspect of the situation is, not only does the Government possess the nucleus of the proper agency, but it has also clearly shown the best method of procedure, through the work of an entirely unrelated department.

This procedure dates back about twenty years, when Senator (then Representative) Swanson of Virginia introduced in Congress a resolution for the appropriation of \$50,000,000 for national aid to good roads. His proposal was greeted on some sides as "another pork barrel." It passed, nevertheless, and it will hardly be disputed among the informed, that this measure did more than any one thing, hardly excepting the automobile itself, to bring about an unprecedented era of road building throughout America.

The vast system of national and state roads which now forms a mighty network binding together North

TRUSCON STEELDECKS

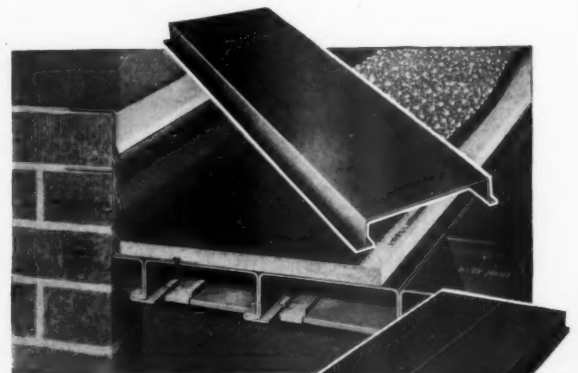
INSULATED AND WATERPROOFED

**For New Buildings or Replacement
with Many Decided Economies**

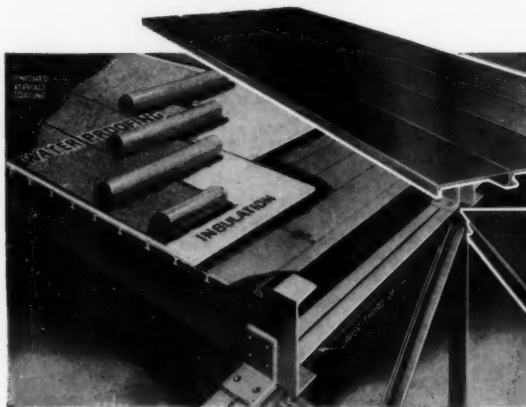
Truscon Steeldeck features include: Low initial cost—light weight—insulation to any degree—elimination of condensation, contraction or expansion troubles—firesafety—types for any load or purlin spacing. Write for designing data.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

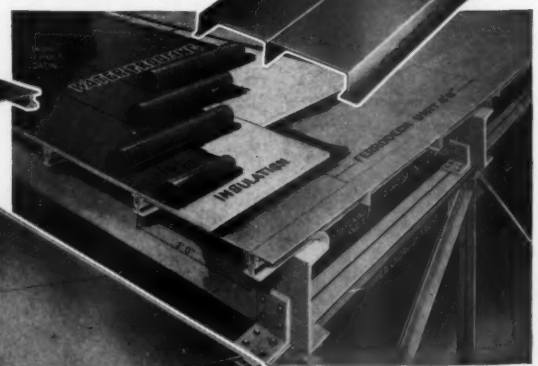
Engineering and Sales Offices in Principal Cities



Ferrobord Roofdeck
6" and 8" Types

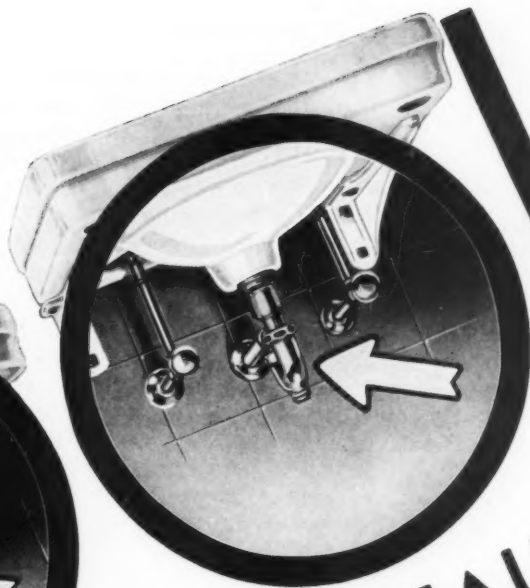


I-Plate Roof Construction



Ferrodeck Roof Construction

The Te-Pe-Co "Gothian" Integral Trap Lavatory is installed in the beautiful Administration Building of The Philadelphia Board of Education. Sanitary Engineer—Bartley C. Reuter. Plumbers—Bulman Bros. Architect—Irwin T. Catharine.



LOOK
COMPARE THE BEAUTY
AND CLEANLINESS

GONE . . . is the customary brass trap! Gone . . . are the unsightly, dust-collecting wall brackets! Te-Pe-Co Sanitary Engineers have scored again! This time with a lavatory so much better looking, so much easier to keep spotlessly clean that a single glance shows its advantages.

TE-PE-CO

INTEGRAL TRAP LAVATORY

is a type that has been *in the minds* of plumbing men for many years. Now you can put it *into the buildings* of your clients. Here is a worthy fixture for worthy buildings . . . a lavatory thoroughly in keeping with good taste and sound judgment. Write today for detailed information concerning the Te-Pe-Co "Gothian" Integral Trap Lavatory.



OUR GUARANTEE

We make but one grade of ware—the best that can be produced—and sell it at reasonable prices. We sell no seconds or culls. Our ware is guaranteed to be equal in quality and durability to any sanitary ware made in the world. The Te-Pe-Co trade mark is found on all goods manufactured by us and is your guarantee that you have received that for which you have paid.

THE TRENTON POTTERIES COMPANY

TRENTON, NEW JERSEY, U. S. A.

National Showrooms:

New York City: 101 Park Ave., Entrance on 41st St.

Philadelphia: Architects' Bldg., 17th & Sansom Sts.

Branch Offices: Boston and Chicago

Export Office: 115 Broad Street, New York City



and South, East and West, is very largely the result of this far-reaching proposal of Senator Swanson. Without the overwhelming stimulus of getting millions of dollars for nothing, as many figure it, the road building programs of numerous States would be far behind their present status.

Congress may now very properly take a leaf from its own notebook of experience and adopt a similar plan to bring about the rebuilding of American homes for industrial and small salaried workers.

Let it be clearly understood that unless this gigantic task is undertaken under the direction of, and with the financial backing of some such nationally constituted agency as the United States Housing Corporation, acting for Congress, it cannot be performed. It is neither essential nor desirable that huge sums of money be appropriated to "dole out" housing to the underprivileged working people of the United States. The help needed from the Government is primarily financial, but such help need not be in the form of a gift. It is well known that financing charges of one sort and another are the principal cause of excessive costs for industrial houses. Those initiated in the minutiae of house-building operations know that if excessive interest, finance charges, mortgage renewal fees, and speculative builder's profits are eliminated, the industrial workers of America can be provided with far better housing than they are now getting, for half or less than half the present cost. Nor is it desirable that the Government go into the building construction business on a large scale. The inability of a Government agency to carry on a nation-wide public

building program, and make satisfactory progress, or achieve noteworthy results, has been thoroughly demonstrated in the past year or two, as well as in previous years.

WHAT Congress should do is to create a revolving fund of not less than one billion dollars, to be known possibly as the Housing Fund. This sum to be raised by a bond issue sold at an interest rate not exceeding three per cent., and loaned out as first mortgage funds on housing operations throughout the country at a rate not exceeding three and one-quarter per cent., and less if possible. This fund to be loaned on housing projects approved by experts attached to the Housing Corporation, who would pass on and approve all projects before any money would be loaned on them. Further, other experts, attached to the Housing Corporation, would pass on the design, location, character and construction of all approved housing operations, exercising a supervisory as well as advisory relationship to them, with full power to see that the approved design, construction and specification are fully carried out. All designing of each special project would be done by architects and town planners, employed in their usual professional capacities, and all construction let out under bids to building contractors.

A further fundamental condition would be, that no housing project be allowed a loan under this plan, unless the local state or municipality supplied at least 25% of the cost of the operation.

The Housing Corporation funds of the U. S. Gov-



Conduo-Base

PATENTED

**IN PLACE OF THE
BASEBOARD**

For new buildings or for REMODELING this ideal raceway for electrical branch wiring enables the tenant to have any number of telephones, desk lights, buzzers, or other outlet connections exactly where he wants them.

Specify Conduo-Base for baseboards, run the base receptacle circuits and low tension wires in its two fireproof raceways and Convenience Outlets can be had where or when wanted. THE FIRST THOUGHT IN REMODELING.

WRITE for file data.

CONVENIENT

INEXPENSIVE

FIREPROOF

ATTRACTIVE

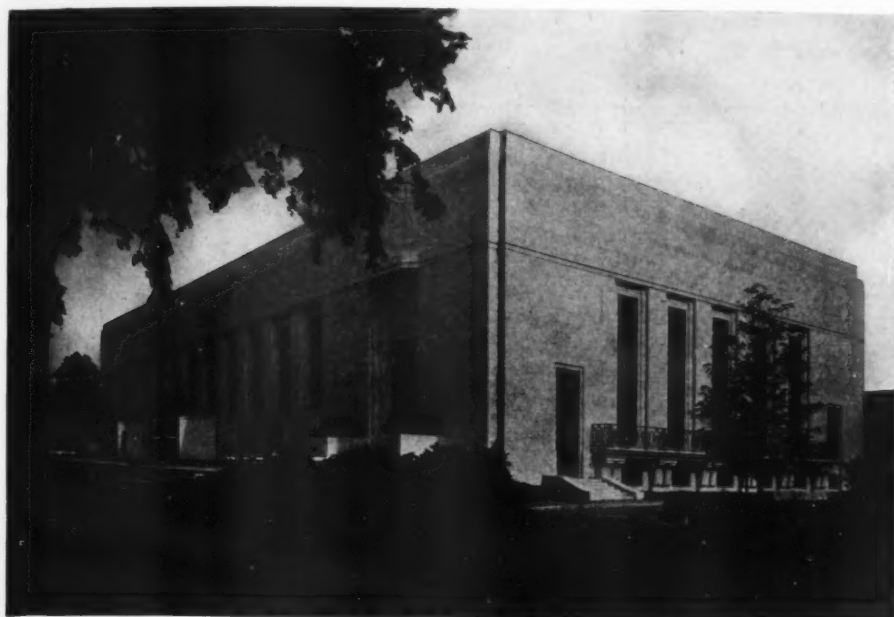
DAHLSTROM METALLIC DOOR CO.
Jamestown, N. Y.

Licensed Manufacturers
KNAPP BROS. MFG. CO.
Chicago, Ill.

UNITED METAL PRODUCTS CO.
Canton, Ohio

CONDUO-BASE..FOR CONVENIENCE OUTLETS

This Georgia Marble building preserves for the ages the Henry Clay Folger collection of Shakespeareana



Left. THE FOLGER SHAKESPEARE LIBRARY, Capitol Hill, Washington, D. C., Paul P. Cret, Architect; Alexander B. Trowbridge, Consulting Architect; John Gregory, Sculptor; James Baird Co., Bldrs.

Below. TABLEAU FROM MACBETH. This is one of nine bas-reliefs, located under the nine windows in the principal facade. Five of Shakespeare's tragedies and four of his comedies are to be depicted. Two bas-reliefs are now finished; the carving on the others is in progress.

JUST as a modern white gold jewel box may contain rare jewels and stones of earlier times, so this modern marble temple will house the priceless Folger collection in a quaint Elizabethan interior.

From the stand point of design, materials used, and mission, this is the most important building of the year. The centre portion of the building contains the library rooms and exhibition gallery; the near bay contains the reception room, offices, and private study rooms. The entire interior of the other bay is a complete "Shakespearean Theatre" where plays will be presented as they were originally in Shakespeare's time.

It was not by mere chance that Georgia Marble was chosen for the exterior of the Folger Library. Georgia Marble was chosen because it measures up to the high standards set by those responsible for the choice of a material that will protect, for generations, the priceless treasures housed within.



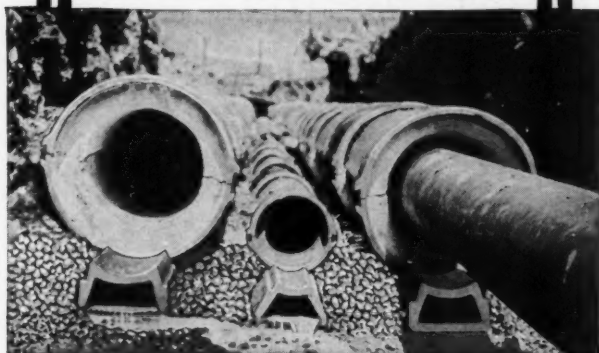
THE GEORGIA MARBLE COMPANY Tate, Georgia

NEW YORK . . 1328 Broadway
ATLANTA . 814 Bona Allen Bldg.
CHICAGO . 648 Builders' Bldg.
CLEVELAND . 1200 Keith Bldg.
DALLAS . . . 622 Construction
Industries Bldg.

GEORGIA
MARBLE

MAKE CERTAIN OF UNDER DRAINAGE

It's a Vital Factor in the
Construction of Underground
Conduit for Steam Pipes



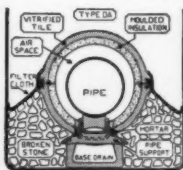
A PHOTOGRAPH OF RIC-WIL DRAINAGE EFFICIENCY

This photograph of three Ric-wil Type DA Conduit Systems in one trench offers definite proof of the efficiency of under drainage in Ric-wil Conduit Systems. Note the water flowing from the Base Drain Foundations—and note how dry the trench is. The Ric-wil Base Drain Foundation provides positive drainage *immediately under the Conduit*—it carries off water instantly, keeping the Conduit dry.

Engineers agree that the efficiency of underground conduit systems for heating or power pipes depends principally upon a water-tight, water-proof conduit.

Ric-wil Conduit is made water-tight by the patented Loc-lip Side Joint, which seals and locks the top and bottom Conduit halves together with a permanent, water-tight joint. Then the Base Drain Foundation, which also supports the Conduit, carries off any surface water immediately. Thus Ric-wil offers two definite and exclusive safe-guards to insure a dry and efficient conduit system.

Without obligation, Ric-wil Engineers will assist with preliminary studies, layouts, etc. Write for full details of this Service and for detailed drawings of typical installations.



Cross section of Ric-wil Type DA Conduit System. Note how Pipe Supports rest entirely on the Base Drain, thus imposing no load on the conduit itself.



THE RIC-WIL COMPANY

1562 Union Trust Building • • • • • Cleveland, Ohio

Branches: New York • Atlanta • Chicago
AGENTS IN PRINCIPAL CITIES

REG. U. S. PAT. OFF.

Ric-wil

CONDUIT SYSTEMS FOR
UNDERGROUND STEAM PIPES

ernment, would be paid back in terms of twenty, twenty-five and thirty years, in regular annual payments, thereby decreasing not only the amount of the loan, but annually lightening the burden on the householder.

Clothed with proper authority, and armed with ample funds the Department of Labor could quickly set up machinery through the Housing Corporation and gather together sufficient trained personnel to translate the program into immediate action. It would find ready at hand in its files, studies, reports and recommendations of the best architects, town planners, engineers and social workers in America. It has, already prepared, housing plans enough to begin several dozen projects on short notice. In a word, the vast accumulation of experience, data, technical research and recommendations which are now reposing idly in the Government files, would be released for action and set to work accomplishing one of the greatest social reforms of the century.

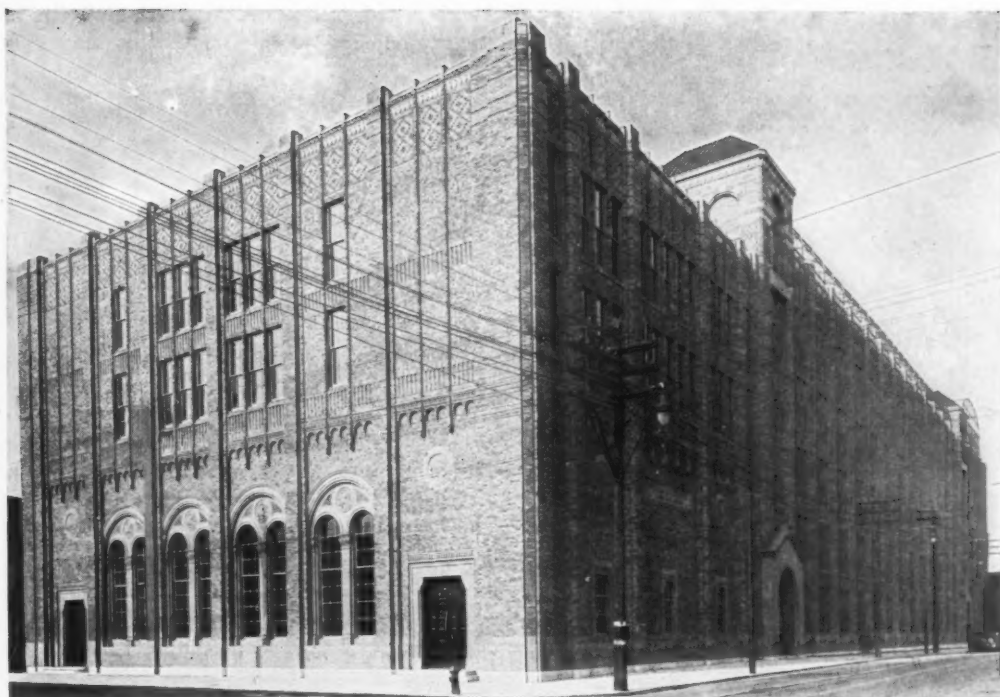
LET us assume, therefore, that Congress has at last awakened to the fact that it is at least as important for people to have decent houses to live in as it is that they have hard roads to ride on. And that the appropriation has been made for industrial housing loans, at low interest rates with the condition that this be expended under the supervision of the Department of Labor, and only then as the money may be supplemented, by the State or city desiring to rebuild.

The town of Jonesburg, for example, desires to wipe out its disreputable and unsavory housing sections and rebuild according to modern hygienic, esthetic and social standards. It passes a bond issue of five million dollars, knowing that a sum three times greater will be available from the National Government. Here are the sinews with which to attack a housing problem in a permanent way.

The best brains, the broadest experience, the soundest financing methods are brought to bear. A study is made of the entire city, its environs, traffic arteries, industries, and all the other features that make up a modern city. Certain disreputable parts of the town, where land and buildings are dilapidated and cheap, are marked for condemnation as parks, playgrounds, or for complete rebuilding. Spaces are set aside for necessary community features such as clubs, churches, schools, recreation and retail centers. New areas are plotted for future harmonious growth. Areas to be improved are secured by purchase, condemnation or both.

THE program is not complete in one season, but proceeds over a period of years. The houses and apartments are sold to purchasers on terms within the reach of their pocketbooks, by virtue of the ability of the Government to handle the project without profit and on longer amortization terms than private enterprises would consider. It is safe to assert that homes could be provided under this method, at a cost of \$3000 each, for instance, that would entail at least double that sum if built in the usual way. Mass purchase of materials, mass construction, absence of ruinous finance charges, payments amortized over a period of twenty, twenty-five and thirty years, interest at three or three and a quarter per cent instead of six, seven or eight, would be effective.

No doubt the fundamental approach to the problem



35,000 square feet of Carey Built-Up Roofing protects the Charles E. Bartlett Junior High School, Philadelphia, Pa.
Irwin T. Catbarine, Architect

Scientific Roof Selection Insures Maximum Roof Service

Carey Built-Up Roofs Include . . .

Slag or Gravel Surfaced Roofs

(Bonded for 10 and 20 years)

- (a) Asphalt Saturated Rag Felt construction
- (b) Tar Saturated Rag Felt construction
- (c) Combination Asphalt Impregnated Asbestos and Asphalt Saturated Rag Felt construction
- (d) Combination Tar Impregnated Asbestos and Tar Saturated Rag Felt construction

Mineral Surfaced Roofs

(Bonded for 10 and 20 years)

- (a) Asphalt Saturated Rag Felt construction
- (b) Combination Asphalt Impregnated Asbestos and Asphalt Saturated Rag Felt construction
- (c) Asphalt Impregnated Asbestos Felt construction

Asphalt Surfaced Roofs

(Bonded for 10 and 20 years)

- (a) Asphalt Impregnated Asbestos Felt construction
- (b) Asphalt Saturated Rag Felt construction
- (c) Combination Asphalt Impregnated Asbestos and Asphalt Saturated Rag Felt construction

ARCHITECTS specify Carey Built-Up Roofs on the basis of such definite factors as the anticipated life of the building, climatic and atmospheric conditions, and the roof deck or slope. This scientific selection is possible because Carey Specifications, which include Asbestos, Asphalt and Tar and Gravel Roofs of all types and weights, are indexed according to service conditions.

Carey branches and distributors carry stocks of Carey Built-Up Roofing materials in all principal centers, thus insuring prompt service. Carey Built-Up Roofs are applied by authorized roofing contractors and are bonded for 10 or 20 years.

The Carey Specification Book, suitable for architects' files, will be mailed on request. Our construction representatives are available at any time for consultation concerning the most serviceable roof for any structure.

THE PHILIP CAREY COMPANY

Lockland, Cincinnati, Ohio

Branches in Principal Cities

BUILT-UP ROOFS
ASPHALT PRODUCTS
ELASTIC EXPANSION JOINT
WATERPROOFINGS
ROOF PAINTS

Carey
PRODUCTS

HEAT INSULATIONS
ASBESTOS MATERIALS
CAREYSTONE CORRUGATED SIDING
ASFALSLATE SHINGLES
BUILDING PAPERS

STORE FRONTS



KAWNEER "B" CONSTRUCTION

A modern frame for modern merchandise... Simple in construction... Surfaces unblemished by rivets or screws... Strong and durable... Easily installed, presenting a unified appearance in the finished front... Made of rolled or extruded Bronze or Aluminum Alloy. Write for Full Size Details and New Catalog "N."



lies in a spirit of altruism which recognizes that under the capitalistic system wealth tends to concentrate in the hands of the few, making conditions steadily more difficult for the many. To offset this, wise statesmanship is gradually introducing measures to bridge the gap and bring about, through government measures, a greater degree of distribution of national wealth. And in what better direction could this distribution proceed, than into channels that will provide homes for those least able to provide for themselves? Especially, since the result may be accomplished in a way that will put a premium on individual thrift, effort and character.

What Architects Are Talking About

(Continued from page 55)

to the mechanical department. All county architectural work will be under the direction of Wm. Davidson, chief mechanical engineer.

IN Colorado, a corporation cannot be licensed to practice architecture, according to a recent decision in the case of Johnson-Olmsted Realty Company vs. the city and county of Denver et al.

NEW major prizes in Beaux Arts programs will be offered for solutions to a problem in illumination, made possible by cooperation of the Illuminating Engineering Society with the Beaux Arts Institute. Annual prizes offered of the Society will total \$1,500.

ROOFS near the Empire State Building, New York, are being painted with names of department stores, which are thus taking advantage of the opportunity of advertising to the crowds daily visiting the tower of the tallest building in the world.

PRIVATE architects will be employed to prepare plans for county buildings, replacing county engineers, in Spokane, Wash. According to Archie Rigg, architect, "In every case where engineering departments have prepared building plans there has been a failure."

AN architectural and building page has been started in the San Francisco Call-Bulletin, a Hearst newspaper, with the cooperation of the Northern California Chapter, A. I. A. It will appear every Saturday and is edited by William I. Garren, A. I. A.

THE American Society of Heating and Ventilating Engineers will hold its annual meeting at the Hotel Statler, Cleveland, Ohio, January 25-29, 1932. The Second International Heating and Ventilating Exposition will be held at the same time. The American Society of Refrigerating Engineers will hold their convention at the same time and place, and there will be a joint session of the two organizations.

SHOPPING of bids was discussed at the October 6 meeting of the Boston Building Congress. William D. Austin, president of the Congress, stated that in city work he had inserted in his specifications the requirement that bidders must list names of subbidders and that bids of manufacturers must be used or approval of the architect secured for "or equal" materials before the signing of the contract. He said he had been successful in the work that he had supervised but that he would

The

WALDORF-ASTORIA

uses 3 carloads of
**ARMSTRONG'S
CORKBOARD**

FROM its private railroad spur in the basement to the tip of its glittering twin towers, the Waldorf-Astoria is *new*. Yet for all its modern building and equipment, the Waldorf is old—old in holding to its famous traditions of “everything for the comfort of patrons.”

Many new ways of providing comfort have been devised since the first Waldorf-Astoria was built in 1893. Insulation, for instance. That's why the architects and builders of the new Waldorf-Astoria have used 3 carloads of Armstrong's Corkboard in the building. Part of this insulation was installed on the roof, where it adds to the comfort of top-floor rooms and reduces fuel bills. The remainder keeps food fresh in the hotel's system of modern refrigerator rooms.

Cork and cork products serve many uses in modern buildings. Armstrong's Corkboard, as roof insulation, assures comfortable top-floors and prevents fuel waste. In some recent buildings, it lines radiator recesses to keep costly heat inside. Air conditioning and ventilating owe a vote of thanks to Armstrong's Corkboard and Cork Covering, both of which help to control the temperatures that make for health and comfort. Armstrong's Corkoustic and Vibracork maintain quiet, the former by muffling air-borne sounds, the latter by absorbing the vibration and quieting the noise of moving machinery.

Bring your files up to date by sending for copies of the booklets and folders that describe Armstrong Products and tell of their uses. Address Armstrong Cork & Insulation Company, 936 Concord Street, Lancaster, Pennsylvania.



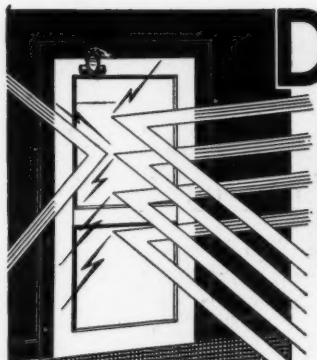
An Architectural Monument in New York! The new Waldorf-Astoria Hotel's shining twin towers rise high above Park Avenue. Architects, Schultze & Weaver. General Contractor, Thompson-Starrett Company.

All Cold Storage Rooms and Refrigerators in the Waldorf-Astoria Hotel are insulated with Armstrong's Corkboard and were installed by the Lorillard Refrigerator Company, New York City and Kingston, N. Y.



Armstrong Cork & Insulation Company

CORKBOARD . . CORK COVERING . . VIBRACORK . . CORKOUSTIC . . INSULATING BRICK



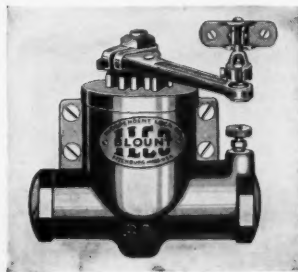
Detour NOISE with Ilco-Controlled Doors

"DETOUR — NO NOISE PASSES THRU HERE!" An Ilco-Blount Door Check on all office doors definitely, positively keeps noise outside. In all building planning or renovating, this factor is worth serious consideration. It will lead the careful architect or contractor to a specification of Ilco-Blount Door Checks, the scientifically designed, carefully constructed method of door control.

In any temperature, in humidity or aridity, under any draught conditions, the Ilco-Blount Door Check has proven both in laboratory tests and in actual use that it will surely, noiselessly "close that door." "Ilco-Blount" stands for more than a single product. It is America's name for complete door control. We invite inquiries and comparison with other devices.

Independent Lock Company
FITCHBURG . . . MASS.

Twelve Branch Offices Throughout the United States — NEW YORK — PHILADELPHIA — PITTSBURGH — BALTIMORE — ATLANTA — CLEVELAND — DETROIT — CHICAGO — KANSAS CITY — DENVER — LOS ANGELES and SAN FRANCISCO



not have been as successful if some of the disgruntled bidders had had more political pull. Opinions expressed were that if the "or equal" clause were omitted, much of the difficulty could be avoided.

"If we are to encourage the use of welding in the construction of buildings, we must insure the public against incompetence," stated Lee H. Miller, chief engineer of the American Institute of Steel Construction, at a recent conference of New York State building inspection officials.

A SCHOOL of welding design to teach engineers, architects, etc., has been opened by the General Electric Company. There is no charge for the course, which takes about four weeks.

THE French travelling scholarship of the American Institute of Architects has been awarded to Robert Camelot of Paris. Mr. Camelot will make a special study of American stadia and playgrounds. He is a graduate of the Ecole des Beaux Arts, having won 16 medals during his studies, including the Rougevins, the Paulin, the Redon prize twice, and the Stillman prize.

COLLEGE trained engineers between the ages of 25 and 35 earn about \$500 more a year than those without such training, according to the American Society of Mechanical Engineers. At age 45, college men make more than \$1,000 a year over engineers not so trained.

A CODE of standard practice for rental display advertisements was made part of the code of ethics of the Real Estate Board of New York, Inc., at its recent annual meeting. Copies of the code may be secured free by interested parties.

SUKERT AND CORDNER have been selected by the Michigan Society of Architects to design the 1932 Ideal Home in connection with the fourteenth annual Builders, Realtors and Better Homes Exposition.

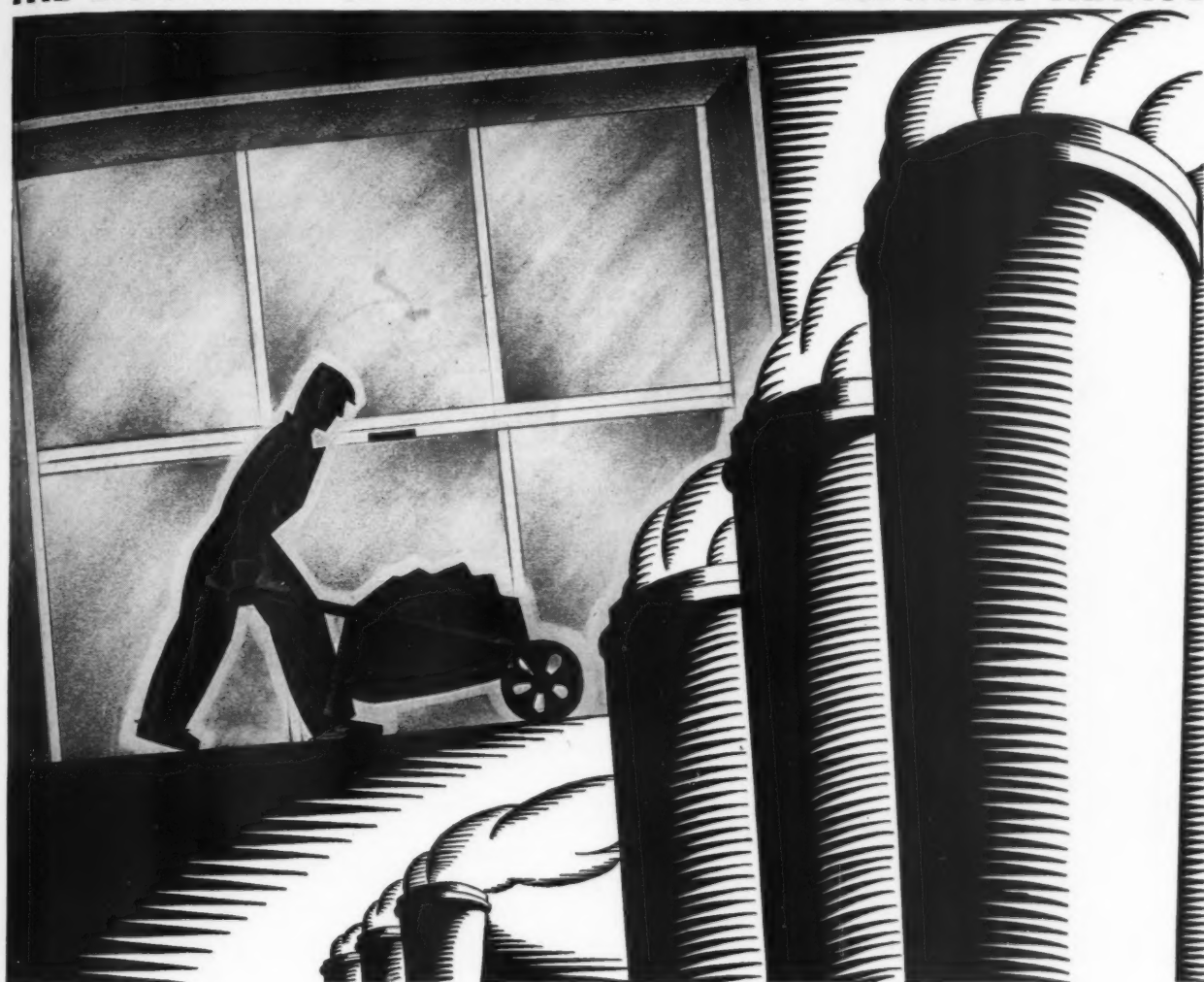
ACCORDING to Ripley in a recent "Believe It or Not!" the oldest house in the United States is in Santa Fe, New Mexico. Coronado used it as his headquarters in 1540.

THE course in architectural design in the Agricultural and Mechanical College of Texas will be extended to five years, effective September 1 of this year. The course in architectural engineering will remain at four years with the possibility that this course may also be extended to five years. Ernest Langford is head of the department of architecture.

DEATHS

Colonel Ernest McCullough, at one time engineering editor of AMERICAN ARCHITECT and editor of Building Age, died October 1 at the age of 64. During the war, he was successively a major of engineers in the Reserve Officers Corps, Lieutenant colonel in the Chemical Warfare Service, and chief engineer for the American Red Cross in France. Later he was assistant commandant of the Lakehurst proving grounds, N. J. Colonel Mc-

THE DOORWAY OF AMERICA'S FREIGHT ELEVATOR TRAFFIC



Motorize horizontal sliding, vertical sliding and bi-fold doors with Pelle operators.

PEELLE MOTORIZED FREIGHT ELEVATOR DOORS

smoke... pennant-like flung from industry's mast-head—the smokestack. Smoke... symbol of activity that bespeaks both the physical energy of man and the mechanical effort of machines. Wherever the smoke of industry signals activity there you will find Pelle Doors in an active role. Products that feed, clothe and amuse a nation, transport it, house it—these things and more travel the vertical shaftway route that passes through Pelle Doors. Their wide-spread installation, their varied use and proven performance presents evidence of recognized efficiency. Motorized—Pelle Doors afford instant entrance and exit at the touch of a button—and by their greater speed and simplicity of operation reduce interior traffic costs. A Pelle catalog will be gladly sent upon request, or consult our engineers.

THE PELLE COMPANY, BROOKLYN, NEW YORK
Boston, Chicago, Cleveland, Philadelphia, Atlanta and 30 other cities
In Canada: Toronto and Hamilton, Ontario

Selected for the
CLEVELAND
TERMINAL GROUP
VICTORIA VENETIAN
BLINDS



The Terminal Group comprising Medical Arts, Builders Exchange, and Midland Bank Buildings. Graham, Anderson, Probst & White Co., Architects. 3265 Victoria Venetian Blinds installed.

... **EXACTLY** in keeping with the progressive spirit prompting this outstanding development and the rigid standards governing the quality of materials employed therein, was the selection of Victoria Venetian Blinds.

Before deciding upon blinds for a new building or an old one, it will pay you to get complete details on Victoria Venetians and satisfy yourself on their many points of mechanical excellence.



See Sweet's for detailed specifications.



Tilting of the slats adjusts the amount and direction of the light.

THE BOSTWICK-GOODSELL CO.

Blinds since 1894

Norwalk, Ohio

Representatives in Principal Cities

VICTORIA
VENETIANS



The Better Blinds

Cullough was born on Staten Island, N. Y., and graduated from the Institute of Technology at Chicago. He was given a military funeral.

Julius A. Schweinfurth, F. A. I. A., died September 29, 1931, at the age of 73. He was well known as one of Boston's leading architects. He was a descendent of D. George Schweinfurth, the African explorer and botanist.

Mr. Schweinfurth was born Auburn, N. Y. For thirteen years he was associated with the architectural firm of Peabody & Stearns, Boston, and then became a partner of C. F. Schweinfurth, Cleveland, which association continued for three years. Mr. Schweinfurth then went abroad for further study and travel. Upon returning to this country, he opened his own office in Boston, designing several schools and municipal buildings in Boston and Brookline, Mass.; Youngstown and Cleveland, Ohio and Champaign, Ill.

He was the author of "Sketches Abroad," published in 1887, and contributed to various architectural magazines and periodicals. His last article, "Great Builders I have Known," appears in this issue of **AMERICAN ARCHITECT**.

Nicholas Gvosdeff, one of the chief designers at Cross & Cross, architects, New York, died September 21st at the age of 45. He was born in Russia and graduated as architect from the Imperial Academy of Arts. He came to New York in 1923, entering the architectural office of Sugarman and Berger as designer. He joined Cross & Cross in 1926.

Francis W. Fitzpatrick, architect, was struck and killed by an automobile recently. He was born in Montreal, Canada, and as a young man practiced in Duluth, Minn. For a number of years he held an important architectural post with the government at Washington. Of late years his activities were centered around Chicago, his home being at Evanston. He was 67 at the time of his death.

PERSONALS

Karl W. Muck has severed his connection with the county of Los Angeles as county architect and has gone into general practice for himself, specializing in public institutional buildings. His office will be in the Architects Building, Los Angeles.

William Dewsnap, architect, announces the removal of his office from 307 Fifth Avenue, New York, to 55 West 42nd Street.

Edward J. Weber, architects, announces that he has withdrawn from the firm of Link, Weber and Bowers, and will continue the practice of architecture under his own name at 5418 Stanton Ave., East End, Pittsburgh, Pa.

S. T. Johnson, architect, 4923 Adams Street, Chicago, desires to receive manufacturers catalogs and samples.

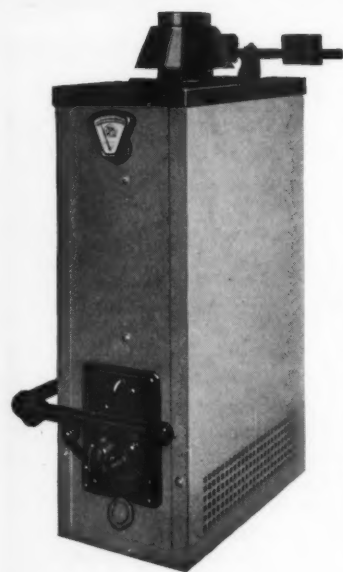
Thomas Pym Cope, registered architect, announces that he has opened offices at 200 East Johnson Street, Germantown, Pa., for the general practice of architecture. He would like to receive manufacturers catalogs and samples.

D. G. McNeil, architect for the Board of Education,

AMERICAN ARCHITECT

AUTOMATIC GAS HEAT

FOR EVEN THE MODEST HOME



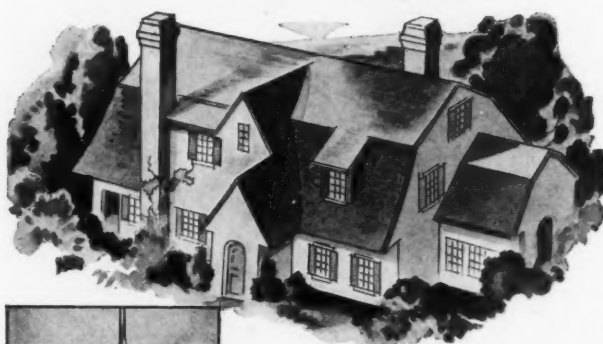
Every home owner wants the comfort, freedom and convenience of Automatic Gas Heat. And now this is practical for small homes as well as large thru the complete line of Ideal Gas Boilers. There is a model for every home . . . built to give the same carefree dependable service which have made Ideal Gas Boilers the choice of architects throughout the country.

Typical of the way in which Automatic Gas Heat has been made practical in small homes is the story of three Long Island developments. In these three projects, in which every dollar of cost has to be justified, *Ideal Gas Boilers will furnish Automatic Gas Heat in 1200 homes.* All of these modern homes will sell for less than \$9000.

Ideal Gas Boilers were selected only after the most careful consideration of the cost of installation and operation.

AMERICAN GAS PRODUCTS CORPORATION
CHRYSLER BUILDING - - - - NEW YORK
DIVISION OF
AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

TRADE **YALE** MARK
**FINE BUILDERS'
 HARDWARE**



For
MODEST RESIDENCE
 or
TOWERING SKYSCRAPER

THE extensive variety of design in which YALE Builders' Hardware is available presents an opportunity which architects have, for years, been quick to grasp.

Whether your preference be for an intricate antique pattern, or the majestic simplicity of the modern school, you can readily select complete equipment that will lend the final note of conforming beauty to any type of structure.

We have created many exclusive individual designs for special purposes.

*Your correspondence
 is invited*



THE YALE & TOWNE MFG. CO.
 STAMFORD, CONN., U. S. A.

Buffalo, N. Y., has moved from the Board of Education Office at 1415 Genesee Building to the Board of Education Office at 816 City Hall, Buffalo. He would like to receive manufacturers catalogs and samples.

John Warren Teasdale, architect, has moved to larger quarters at 4526 Olive Street, St. Louis, Mo.

Ernest R. Gilbert, A. I. A., formerly associated as designer with L. P. Smithey of Roanoke, Va., has moved to 2801 Stonewall Ave., Richmond, Va. He would like catalogs from manufacturers.

Morris H. Whitehouse and Associates, architects, Railway Exchange Building, Portland, Oregon, announce a change in firm name to Whitehouse, Stanton & Church. There is no change in personnel of firm or staff.

Basil Jerard has opened an office for the practice of architecture at 913 Arctic Building, Seattle, Wash.

Joseph Wickes, architect, has moved his office to 140 West 42nd Street, New York.

Bartlett Cocke has announced the dissolution of the partnership of Eickenricht & Cocke, and that he will continue practice with offices at 615 Maverick Bldg., San Antonio, Texas.

Edward M. Plant, architect, has moved his offices to 70 West Chippewa Street, Buffalo, N. Y.

ANNOUNCING

the affiliation of KERNER INCINERATOR COMPANY with



Manufactured by BENNETT FIREPLACE CORP., Norwich, N. Y.

Satisfactory operation of the fireplace is guaranteed by a National Surety Company Bond. Smoke free burning — delivers 4 to 6 times as much heat as the ordinary fireplace—circulates warm air currents along the floors — draws fresh air from outdoors and warms it. Fireplace becomes a valuable heating unit as well as being an architectural feature. The Kernerator Sales Organization will handle all matters pertaining to sales of this product.

KERNER INCINERATOR CO.

3548 N. Richards Street Milwaukee, Wis.
 Offices in over 150 cities



©
 K.I.Co.
 1931



The Modernistic movement

The Trusts and Guarantee Building of Calgary, Alberta, has a most unusual front of Belgian Black marble. Both in design and material it is quite unlike other structures of its kind. The stock was finished in our shops at Peterboro, Ontario, and installed by the Flesher Marble & Tile Company of Calgary.

» » »

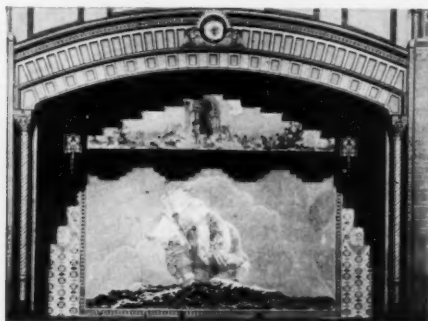
Plate Nine



VERMONT MARBLE COMPANY
Branches in the PROCTOR, VERMONT
larger cities
See Sweet's Catalog for Specifications and Other Data

VERMONT MARBLE

ATLANTIC CITY'S HUGE AUDITORIUM



Another PETER CLARK Installation

In the world's biggest convention hall, you'll find Peter Clark Stage Equipment. The architects considered it the best . . . that's why it was specified here, just as for hundreds

of other theatres from coast to coast.

We will be glad to assist in your next theatre job by suggesting and designing stage equipment. Don't hesitate to write us.

PETER CLARK, INC.

Stage Equipment Specialists for Over 25 Years
544 WEST 30th ST. NEW YORK CITY



INTER-COMM PHONE SYSTEM

The Stromberg-Carlson Inter-Comm-Phone System is satisfying the service demands of offices, factories, 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, cuts down useless running around, speeds production and increases efficiency. Made by a firm with more than thirty-five years' experience.

Write for literature describing Stromberg-Carlson Telephone and Radio apparatus and trade discounts.
Stromberg-Carlson Telephone Manufacturing Co.
Rochester, N. Y.

Stromberg-Carlson

THE CUTLER MAIL CHUTE

The achievement of half a century's experience in meeting the exacting requirements of public use under Post Office Regulations.

Simple, practical and sturdy in construction. Can be opened and closed quickly by Post Office representatives and left in perfect condition, with no injury to structure or finish.

Full information, details and specifications on request.

CUTLER MAIL CHUTE CO.

General Offices and Factory
ROCHESTER, NEW YORK

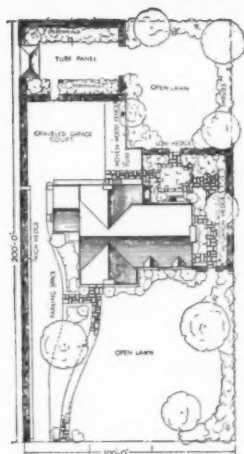


*A house of English origin described in
November Good Housekeeping.
Dunn & Copper, Architects*

In ways that do the most good

GOOD HOUSEKEEPING is one of the few magazines of large circulation which actively promotes the cause of good domestic architecture. Every month it discusses in its pages the design and construction of houses, the selection of building material and equipment—not superficially, but as a major editorial subject, wide in scope and fascinating in its appeal.

Through this editorial service, more than 1,300,000 families are learning to know good domestic architecture, to appreciate the value of the architect's services.



The effect of this on the future of domestic architecture is bound to be far reaching. Not only because Good Housekeeping reaches so large an audience, but also because it reaches a receptive audience. Its readers are mainly of the home owning class, and by standards of living, incomes and environment, among the most logical prospects for the architect's services.

Good Housekeeping champions good domestic architecture in ways that do the architect the most good.

GOOD HOUSEKEEPING

Everywoman's Magazine

INDEX TO ADVERTISERS

This index is an editorial feature, maintained for the convenience of readers. It is not a part of the advertiser's contract and American Architect assumes no responsibility for its correctness.

American Blower Corp..... 2	General Electric Co..... 82	Peelle Co., The.....111
American District Telegraph Co..... 65	Georgia Marble Co., The.....105	Pittsburgh Plate Glass Co..... 13
American Gas Products Corp.....113	Gleason-Tiebout Glass Co..... 77	
American Sheet & Tin Plate Co..... 79	Good Housekeeping117	Rambusch Decorating Co..... 3
American Steel & Wire Co..... 79	Guastavino Co., R. 18	Richards-Wilcox Mfg. Co..... 1
American Tel. & Tel. Co.....4, 5		Ric-Wil Co., The.....106
Armstrong Cork Co., Floor Division.... 81	Halback & Co., C. E..... 94	Rising & Nelson Slate Co..... 12
Armstrong Cork & Insulation Co.....109	Hauserman Co., The E. F..... 98	Ruberoid Co., The..... 71
	Heating & Ventilating Exposition, Second International 80	
Bostwick-Goodell Co., The.....112	Herman Nelson Corp., The..... 75	Sloane, W. & J..... 73
Burlington Venetian Blind Co.....116		Smyser-Royer Co..... 84
	Illinois Steel Co..... 79	Sonneborn Sons, Inc., L..... 10
Carey Co., The Philip.....107	Independent Lock Co.....110	Stanley Works, The..... 95
Carter Bloxonend Flooring Co..... 88	Insulite Co., The119	Stedman Rubber Flooring Co..... 8
Carnegie Steel Co.....15, 79	International Casement Co., Inc..... 72	Stromberg-Carlson Telephone Mfg. Co..116
Cheney Co., The..... 91	International Nickel Co., Inc., The.... 83	
Chicago Faucet Co., The..... 69		Thorp Fireproof Door Co.....Second Cover
Clark, Inc., Peter.....116	Jamison Cold Storage Door Co..... 90	Trenton Potteries Co., The.....103
Conduo-Base Co.104	Kawneer Co., The.....108	Truscon Steel Co.....102, 120
Covert Co., The H. W..... 6	Keasbey & Mattison Co. 85	
Crane Co. 87	Kerner Incinerator Co.....114	Universal Atlas Cement Co..... 16
Cutler Mail Chute Co.....116		U. S. Mineral Wool Co..... 96
	Lord & Burnham Co. (Greenhouse) Back Cover	U. S. Ozone Co. of America.....118
	Lord & Burnham Co. (Sash Operating) 86	U. S. Steel Corp..... 79
Detroit Show Case Co..... 89	Louisville Cement Co., Inc..... 7	
	Ludowici-Celadon Company..... 63	Vermont Marble Co.....115
Fiske Iron Works, J. W..... 11	Mueller Co..... 97	
Flax-Li-Num Insulating Co..... 14		Warren Webster & Co..... 61
Frick Co. 92	National Electric Light Association..... 9	Westinghouse Electric Elevator Co. Third Cover
Fulton Syphon Co..... 93	National Tube Co.....67, 79	Westinghouse Lamp Co..... 9
	Norton Co.....101	Yale & Towne Mfg. Co., The.....114

Trade Mark



Reg. U. S.
Pat. Office

UNITED STATES OZONE COMPANY of AMERICA

SCOTTDALE, PA.

**OZONE AND ELECTROLYTIC WATER STERILIZERS
OZONE AIR CONDITIONING EQUIPMENT
INDUSTRIAL OZONIZERS**

We shall be glad to send
you Complete Information
and Engineering Data

(Business Established 1910)

This Company Controls Exclusively
United States Ozone Company
Pennsylvania Charter
1929



INSULITE ACOUSTILE

*In perfect harmony with
the quiet dignity of this
interior ~*

HERE is a charming treatment, using Insulite Acoustile. The St. Paul Evangelical Lutheran Church at Red Wing, Minn., was not only made acoustically correct through the use of Acoustile, but you will notice how the tile-like units blend in perfect harmony with the whole architectural scheme. This interior is also a remarkable illustration of Acoustile's high efficiency in reflecting light.

Wherever it is desirable to control excess sound energy—in churches, offices, theaters and public buildings, Insulite Acoustile will do the job better, because it has a more uniform sound absorption coefficient over the entire frequency range than any other material.

Furthermore, the rigid, tile-like units of Acoustile have a pleasing texture and can be easily applied to both old and new surfaces in an unlimited variety of designs to harmonize with any architectural scheme. They are attractive in their natural form or they can be decorated to achieve desired color effects. Moreover, their highly reflective, non-glaring surface assures maximum lighting efficiency.

May we send you a copy of our new book—"Facts You Should Know About Acoustics", and the Insulite A. I. A. File of Specifications and Details.



THE INSULITE CO. ENGINEERING DEPARTMENT

The Engineering and Acoustical Research Department of The Insulite Co., will gladly analyze your acoustical problems and submit a practical and economical method of securing the desired results. There is no charge for this service and you are under no obligation.



SACKUS-BROOKS
INDUSTRIES

THE INSULITE CO.
1200 Builders Exchange, Dept. 23 K
Minneapolis, Minnesota
OFFICES IN ALL PRINCIPAL CITIES

INSULITE ACOUSTILE

Made for the . . .

FINEST BUILDINGS

-yet not too costly for any good building



Photo by Hunter Aerial Surveys Company, Cleveland, Ohio.

The Terminal Group, Cleveland, Ohio; Graham, Anderson, Probst and White, Architects.
 Tower Building, John Gill and Sons Company, General Contractors
 Higbee Department Store, Builders' Exchange Building, and Medical Arts Building, Lundoff-Bicknell
 Company, General Contractors.
 Midland Bank Building, Aronberg & Fried Company, Inc., General Contractors

TRUSCON Double-Hung Steel Windows are of the finest quality in construction, workmanship, finish, and hardware.

All parts of the window are electro-galvanized, in addition to shop coat of paint to give double protection. The frames are a solid unit, electrically welded at joints. Spring bronze weather-strips insure easy operation and weather-tightness.

Truscon Double-Hung Steel Windows are available in galvanized steel, bronze, and aluminum, and with heating recess if desired. The various standard types and sizes meet all practical requirements at moderate cost.

Complete data and catalog on request

TRUSCON STEEL COMPANY, YOUNGSTOWN, O.
 ENGINEERING AND SALES OFFICES IN ALL PRINCIPAL CITIES

TRUSCON DOUBLE-HUNG STEEL WINDOWS

Truscon Steel Windows:
 Monumental Projected, Double-Hung,
 Donovan Type, Detention and
 Casement Steel Windows

