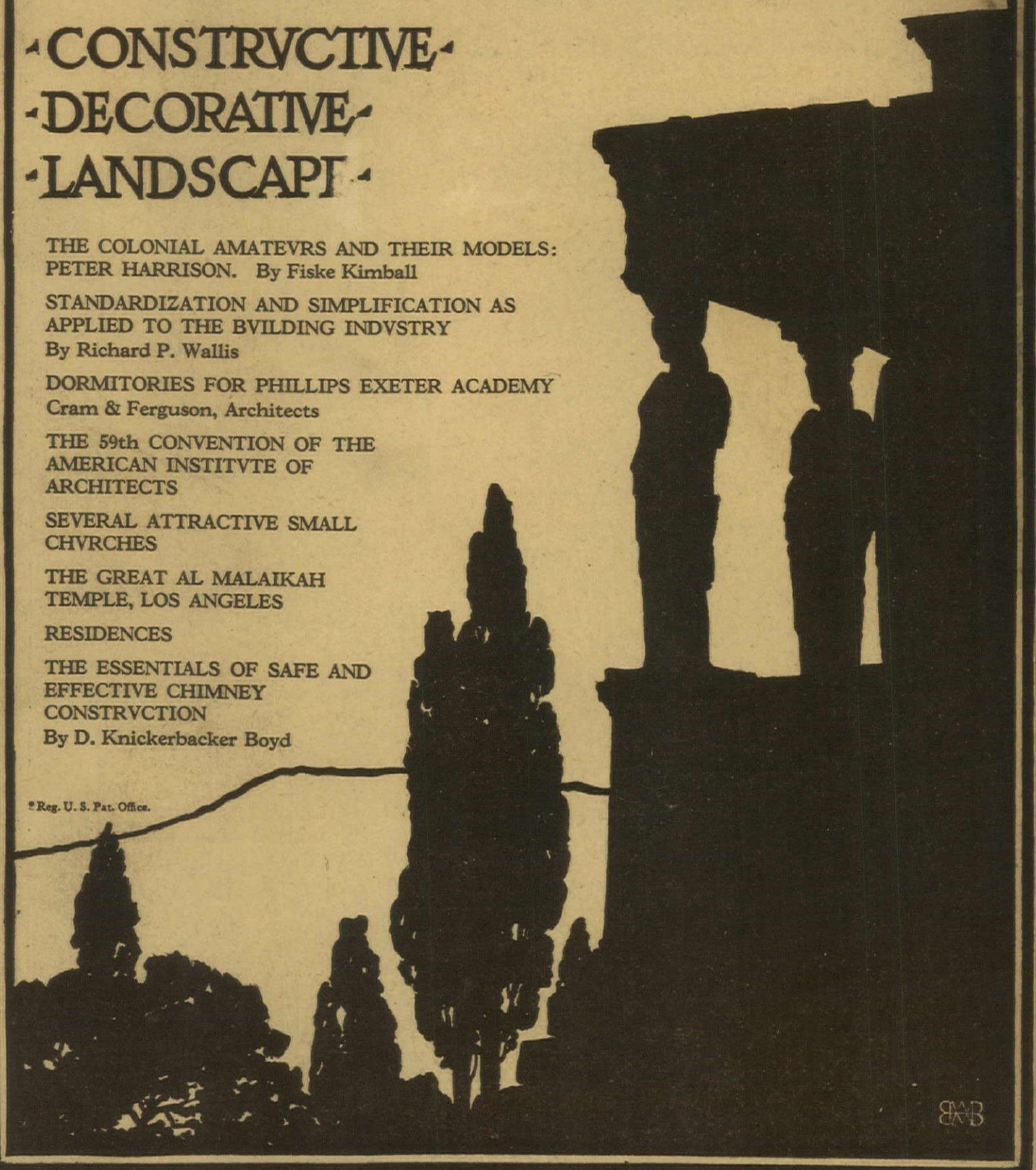
Vol. LIII No. 6 JUNE 1926 ONE DOLLAR A COPY

ARCHITECTVRE*

-CONSTRVCTIVE-
-DECORATIVE-
-LANDSCAPE-



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CHARLES SCRIBNER'S SONS
FIFTH AVENUE AT 48th STREET, NEW YORK
7 BEAK STREET, LONDON, W. 1

ARCHITECTURE

INDEX—VOLUME LIII

JANUARY—JUNE, 1926

ILLUSTRATIONS

ARCHITECTURE—INDEX

TEXT

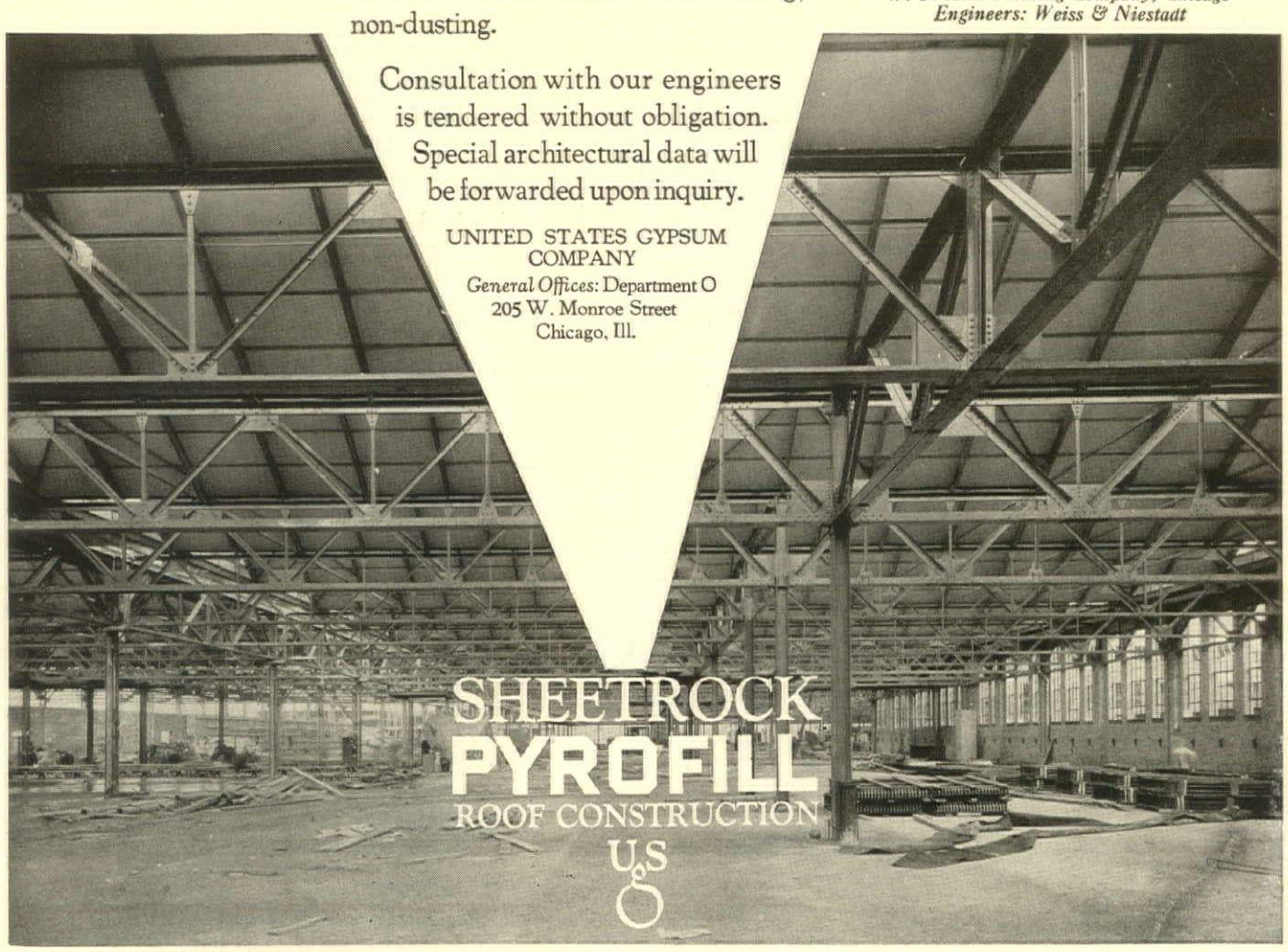
They deserve your attention

ROOF decks of Sheetrock Pyrofill construction have proved themselves so dominatingly superior as to earn the attention of the most exacting. Their *light weight, high insulation* and *fire resistive* properties commend themselves to your appreciation of what efficient roof decks can and should be.

You will approve, too, of the economy with which such decks are constructed —economy of supporting steel, time and labor.

Sheetrock Pyrofill is adaptable to literally all types of construction. The finished deck is solid and secure, costing little for upkeep. The undersurface is formed of Sheetrock—non-flaking, non-dusting.

W. F. Hall Printing Company, Chicago
Engineers: Weiss & Niestadt



Consultation with our engineers is tendered without obligation. Special architectural data will be forwarded upon inquiry.

UNITED STATES GYPSUM COMPANY
General Offices: Department O
205 W. Monroe Street
Chicago, Ill.

UNITED STATES GYPSUM COMPANY, Department O, 205 West Monroe Street, Chicago, Illinois
Please forward your architectural data on Sheetrock Pyrofill Construction.

Name .....

Address .....

ARCHITECTURE, published by CHARLES SCRIBNER'S SONS, 597 Fifth Avenue, New York, N. Y. June, 1926. Volume LIII, No. 6. Published monthly on the 28th of the month. Entered as Second-Class Matter, March 30, 1900, at the Post-Office at New York, New York, under the Act of March 2, 1879. Regular yearly subscription price, $10.00; to members of the architectural profession, $5.00.

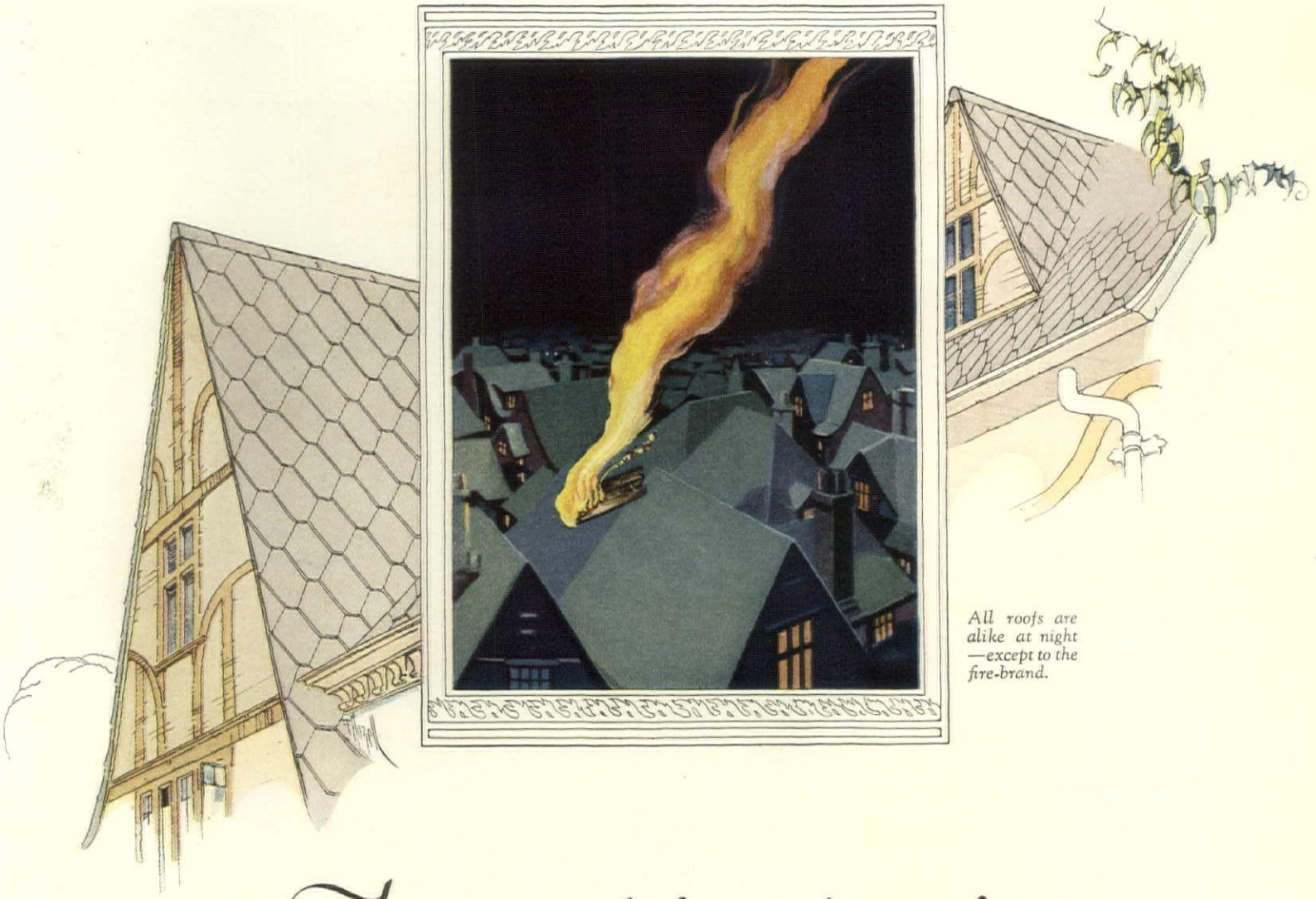
Let's Work Together

ARCHITECTS and others who are interested in mechanical ventilation are urged to accept the service of this Company's engineers in connection with any heating and ventilating problems. Many special adaptations of our PeerVent Units have already been worked out, in cooperation with different architects for various buildings. Some of these are shown in the PeerVent Catalogue, and information concerning others can be had on request.

It is easy to plan for PeerVent Units, for the PeerVent Unit System is extremely flexible. Installation is simple, and the first cost is lower than for any other system of mechanical ventilation. There is no bulky apparatus to provide for, no apparatus room or boiler pit, no network of built-in or sheet metal ducts.

Operation is economical, as heating and ventilating can be stopped instantly in unoccupied rooms. Each room is heated and ventilated independently, exactly as needed, without waste of fuel.

Send for the PeerVent Catalogue and keep it in your files. If you want special information, please call upon us for it at any time.



All roofs are alike at night —except to the fire-brand.

The most inexpensive of all fire-proof shingles

Asbestos, a wonderful fibrous rock is the basis of these shingles.

THIS might seem an empty advertising claim were it not for several undeniable facts about the economy of Johns-Manville Hexagonal Asbestos Shingles.

Their purchase price is remarkably low — only a little more than temporary, combustible roof-stuffs.

We are enabled to keep their cost down because of their shape—the very thing that gives them that interesting beauty on your roof. This shape provides weather-tightness with the most economical use of material—the minimum of overlapping.

That's why per dollar, per square, they are so inexpensive to buy.

Since first cost is their only cost — you never need to re-roof again—this roof becomes a permanent economy.

The famous blow-torch test proves their fire-safety.

Whether you are roofing a new home or re-roofing an old one (right over the old shingles) it is important to know this: Johns-Manville Asbestos Shingles are neither flexible nor surfaced for protection. Each is a rigid slab of permanence.

A Johns-Manville roof defies the ravages of time.

JOHNS-MANVILLE Inc., 292 Madison Ave., at 41st St., N.Y.C. *Branches in all large cities.* For Canada: Canadian Johns-Manville Co., Ltd., Toronto

JOHNS-MANVILLE
ASBESTOS SHINGLES

John Davey's great contribution to America

JOHN DAVEY, Father of Tree Surgery, "*Do it right or not at all*"

John Davey was born in England, June 6, 1846, at a time when there were no public schools. This hardy and humble genius was twenty-one before he knew his A B C's. So he started in as a full grown young man to learn to read by the slow and painful process of self-education. He began with a little copy of the New Testament and a small dictionary, picking out one word at a time. Later he acquired a grammar so that he might put the words together properly, meanwhile studying horticulture and landscape gardening during a full apprenticeship at Torquay, England.

Then he heard the call of America, this great land of freedom and opportunity; and, like millions of other sturdy sons of Europe, he came here to work out his destiny. He pursued his education still further, working by day and studying by night, until he acquired an education that would do credit to the majority of college graduates.

Perhaps one of the most striking things about him was the fact that he became one of the finest Americans. He learned every word of our Constitution. He learned every word of every verse of America and the Star Spangled Ban.. .; and, until old age laid its heavy hand upon him, he could sing those songs with a zeal and a fervor that was good to see.

He became a full citizen at the first opportunity under our law, and to him it was a sacred day when he raised his right hand and forswore allegiance to the British crown and swore allegiance to the Constitution and the flag of America. And always, during his fifty years in his adopted country whenever he passed by Old Glory, he would tip his hat in veneration.

John Davey saw with eyes of understanding and sympathy the appalling neglect and butchery of America's trees, and he set out to find a way—a systematic, scientific way—to save them, little dreaming that a great business would be developed on the science that his love and genius created. And thus came into being the wonderful profession of Tree Surgery.

His first book, The Tree Doctor, was published in 1901, and then began the gradual development of The Davey Tree Expert Company, incorporated in 1909, doing a business of nearly $2,000,000 in 1925, and now having in the field nearly 700 master Tree Surgeons, all carefully selected, thoroughly trained, properly disciplined, and regularly supervised, and giving superior service to the tree owners of America. For twenty years the business of this institution has been managed by his son, Martin L. Davey, whose highest aim has been to perpetuate the ideals and philosophy of his pioneer father.

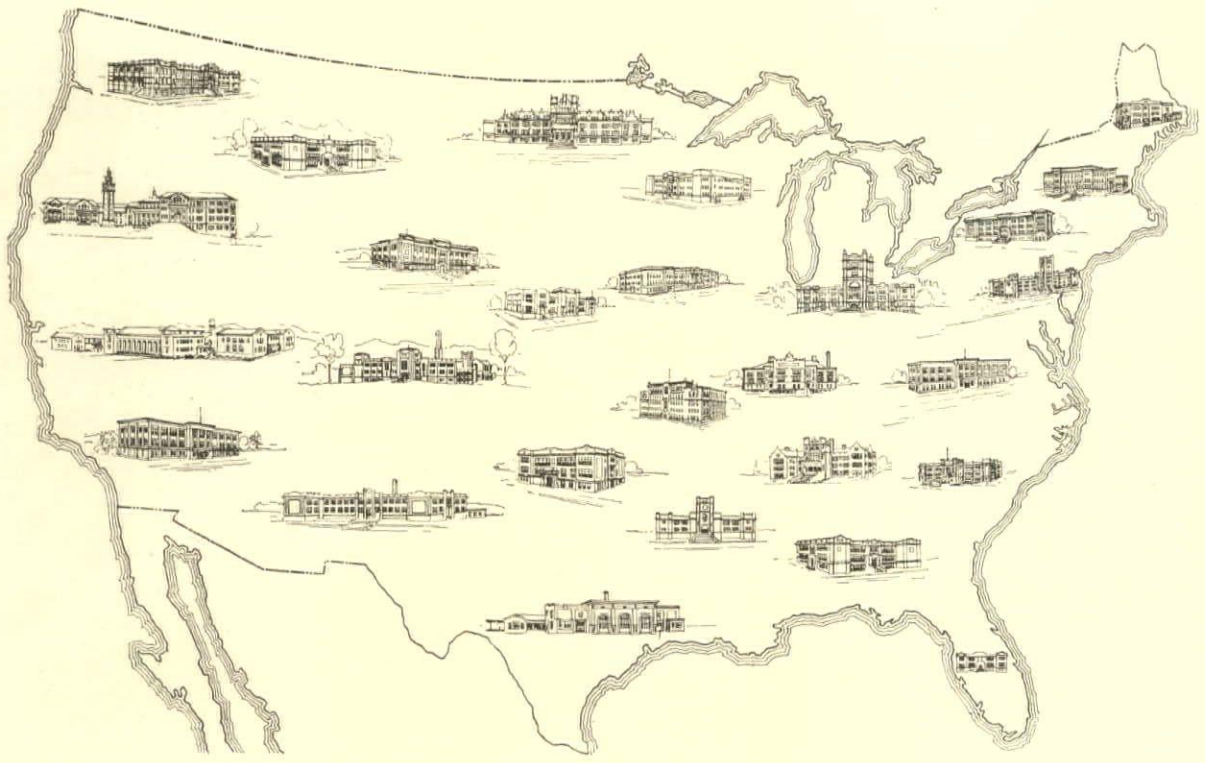
John Davey, though not now living, still lives in the spirit and purpose of the magnificent service that he rendered his adopted country—he taught the American people to think in terms of the living tree. Greater even than his creation of the invaluable science of Tree Surgery is his contribution as the apostle of the tree as a living thing.

THE DAVEY TREE EXPERT CO., INC., 322 CITY BANK BLDG., KENT, OHIO

Branch offices with telephones: New York, 501 Fifth Ave., phone: Murray Hill 1629; Albany, City Savings Bank Bldg.; Boston, Massachusetts Trust Bldg.; Philadelphia, Land Title Bldg.; Baltimore, American Bldg.; Washington, Investment Bldg.; Pittsburgh, 331 Fourth Ave.; Buffalo, 110 Franklin St.; Cleveland, Hippodrome Bldg.; Detroit, General Motors Bldg.; Cincinnati, Mercantile Library Bldg.; Indianapolis, Fletcher Savings and Trust Bldg.; Chicago, Westminster Bldg.; St. Louis, Arcade Bldg.; Kansas City, Scarritt Bldg.; Minneapolis, Andrus Bldg.; Montreal, Insurance Exchange Bldg.

DAVEY TREE SURGEONS

Live and work in your vicinity—quickly available, within easy motoring distance—no carfare charged



—in schools for a million!

NINE O'CLOCK . . . And more than a million boys and girls answer the roll call in almost 6,000 Webster-heated schools and colleges from Portland, Maine, to Portland, Oregon.

In an ever-lengthening list of American cities, Webster Systems are heating, *not one*, but a *substantial percentage* of the modern school buildings. The preference for Webster Systems is not confined to recent years—nor limited by geographical boundaries. It is nation-wide, as shown by the list at left.

Schools, however, are but one of many types of buildings in which Webster Systems are so largely used. Whether your project be for a school, office building, apartment or what-not, if it's a building of the finer type, it deserves a Webster System—backed by Webster Service. Ask us for details.

Typical "Webster" School Cities

Here is a list of some of the larger American cities which have shown a marked preference for Webster Systems. At the right is the approximate number of Webster-heated schools. Scores of smaller cities and towns have Webster-heated schools almost exclusively.

Atlanta	17
Atlantic City	9
Buffalo	40
Baltimore	9
Camden	11
Chicago	20
Cincinnati	22
Cleveland	30
Denver	50
Detroit	58
Duluth	20
Evansville	14
Fort Wayne	9
Grand Rapids	20
Harrisburg	10
Houston	23
Indianapolis	22
Jersey City	25
Kalamazoo	8
Kansas City	22
Lansing	12
Los Angeles	37
Minneapolis	20
New York	54
Oak Park	10
Omaha	14
Pittsburgh	24
Rochester	11
Saginaw	8
Seattle	38
South Bend	10
Toledo	15

Warren Webster & Company

Pioneers of the Vacuum System of Steam Heating

Camden, N. J. 50 Branch Offices

In Canada, Darling Bros., Ltd., Montreal

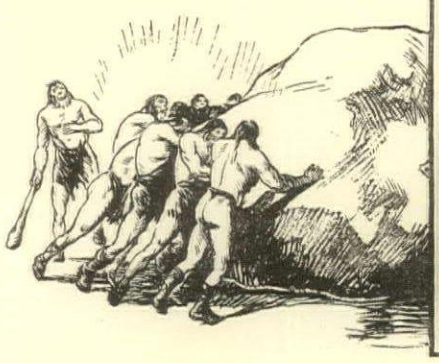
- since 1888

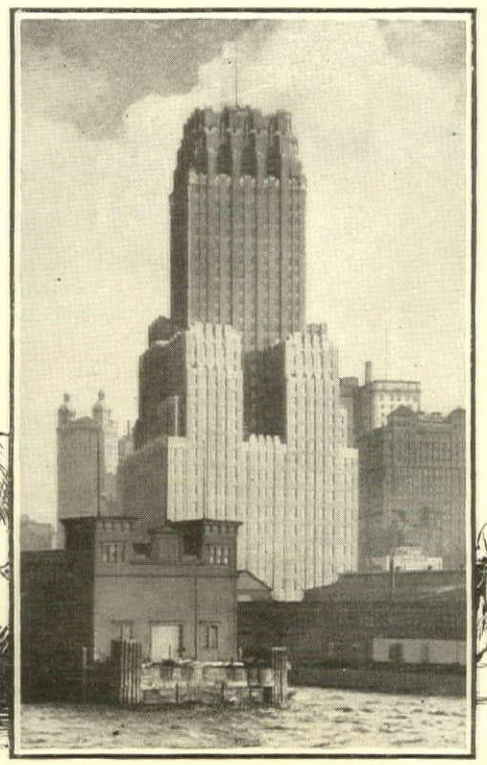
Webster Systems of Steam Heating

More than 37,000 installations in America's finer buildings

The Roller's Contribution to Science

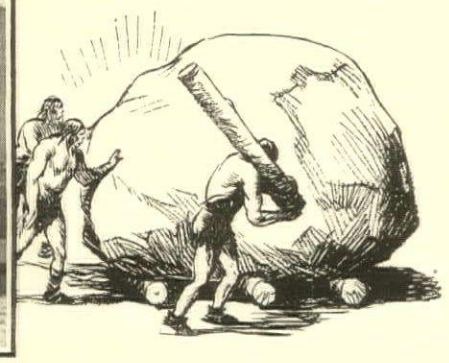
When the ancients discovered that rolling friction was much less than sliding friction, their prehistoric brains probably failed to realize the great contribution they had made to science. Ball bearings provide a modern application of this age old principle.





New York Telephone Building

McKenzie, Voorhees and Gmelin, New York, Architects. This building is equipped with Stanley BB168 and BB181 heavy duty ball bearing butts (cold rolled steel and wrought bronze).



Ball Bearing Butts give life long service

MANY doors on public buildings and dwellings move back and forth from 250,000 to 1,500,000 times a year. Metal-to-metal friction results in quick wear; and the cost of repairs, adjustments and replacements is high. By eliminating this cost, Ball Bearing Butts will more than pay for themselves.

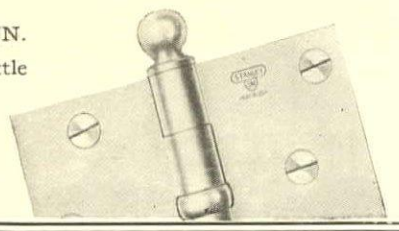
The Ball Bearing feature is an investment—not an expense

The Stanley Works has originated the important butt improvements since 1852, including cold rolled steel, ball bearing butt, non-detachable washer, non-rising and self-lubricating pin and improved finish.

Butts manufactured from cold rolled steel and wrought bronze according to Stanley's improved designs and processes have a superior toughness and quality. Look for the Stanley trademark as a means of identification.

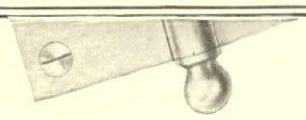
The "Architects' Manual of Stanley Hardware" contains information which will aid you in selecting and specifying the correct hardware. We will gladly send you a copy.

THE STANLEY WORKS, NEW BRITAIN, CONN.
New York Chicago San Francisco Los Angeles Seattle



STANLEY BALL BEARING BUTTS

STANLEY S.W.



PENRHYN STONE

PENRHYN Stone is the product of a series of quarries operating in the Penrhyn Hills on the border line of the State of Vermont.

The wonderful texture and colorings of this material allow of harmonious Roof combinations that are adaptable to any type of Architecture or period reproduction.

The various shades and variegated colorings of Purple, Grey, Green, Brown, etc., are so intermingled and weathered that a newly-laid roof has all the aged appearance that is characteristic of roofs on the ancient castles and homes in England.

Penrhyn Stone is produced by skilled craftsmen and quarried, split and trimmed entirely by hand into such sizes and thicknesses that each individual roof requires as determined by a study of the Architects' plans.

Our Architectural Department in New York will be pleased to prepare estimates and make suggestions based on any plans submitted.

PENNA. OFFICE
DRAKE BUILDING
EASTON, PA.

J. W. WILLIAMS SLATE CO.
(A VERMONT CORPORATION)
PRODUCERS OF HIGHEST QUALITY
SLATE ROOFS AND SLATE SPECIALTIES

VERMONT OFFICE
POULTNEY
VERMONT

Architectural Service Department: 103 Park Ave., New York

The Civic Center by PERRY R. MAC NEILLE, *Town Planner*

THE ARCHITECT'S VISION OF THE FUTURE

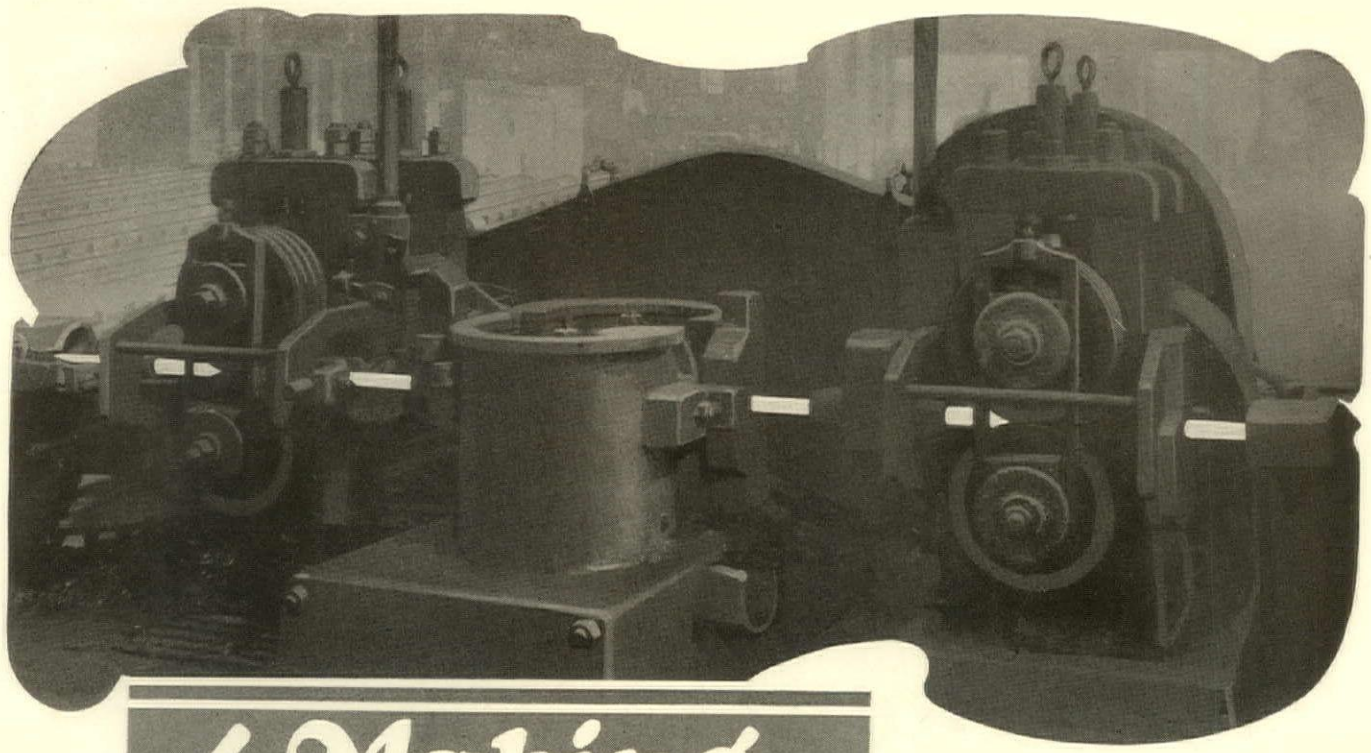
PERRY R. MAC NEILLE here presents his conception of the city of the future with its civic center around which the activities of life are grouped.

"The future," Mr. Mac Neille says, "will demand the saving of time. This calls for centrally located buildings with arteries of traffic leading to centers of industry, recreation and residence. Concrete presents the strongest, most economical, and rapid type of construction yet developed."

TOWARD TOMORROW WITH LEHIGH CEMENT

THE growing demand for concrete construction will find Lehigh shaping its policy with eyes to future needs, just as today it is meeting all requirements with twenty mills from coast to coast.

Any architect or engineer can secure the series "The Architect's Vision of the Future," of which the above is one. Address Lehigh Portland Cement Company, Allentown, Pa., or Chicago, Ill.



The pipe passes from the transfer table to these special rolls where it is reduced slightly in diameter and increased in length. By thus rolling the pipe, the hardened welding-scale is loosened, drops from the pipe walls and is later removed by being either washed or blown out.

Making Good Pipe Better

AN important link in the chain of manufacture is the series of specially designed rolls pictured above, by which "NATIONAL" Butt-weld Pipe is made *free from scale*. Here, entirely by mechanical means, the little patches of scale, which caused pipe consumers so much "grief" before this process was invented, are eliminated.

When the pipe leaves the welding furnace, and while still hot, it is passed through the sizing rolls and then across a cooling or transfer table to these scale free rolls. The sizing rolls slightly reduce the diameter and stretch the pipe lengthwise, and the welding-scale (which forms on the skelp in the furnace) is partly loosened. In the specially designed scale free rolls, the pipe is further reduced in size and lengthened. This working of the metal laterally and longitudinally breaks off the scale which has become brittle in cooling so that it falls from the pipe walls and is later blown out by compressed air or washed out with water. This process is applied to "NATIONAL" Butt-weld Pipe (sizes ½ to 3-inch).

Pipe free from scale has clean, smooth surfaces for galvanizing or other coatings; friction losses caused by rough interior surfaces are reduced, and the working capacity of the pipe is greatly increased; the clogging of pipe or small orifices and damage to valve seats and delicate apparatus by loose scale in the line are practically eliminated, and the tendency to pitting is minimized. For details of this process and its advantages, write for a copy of Bulletin No. 7.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.

DISTRICT SALES OFFICES IN THE LARGER CITIES

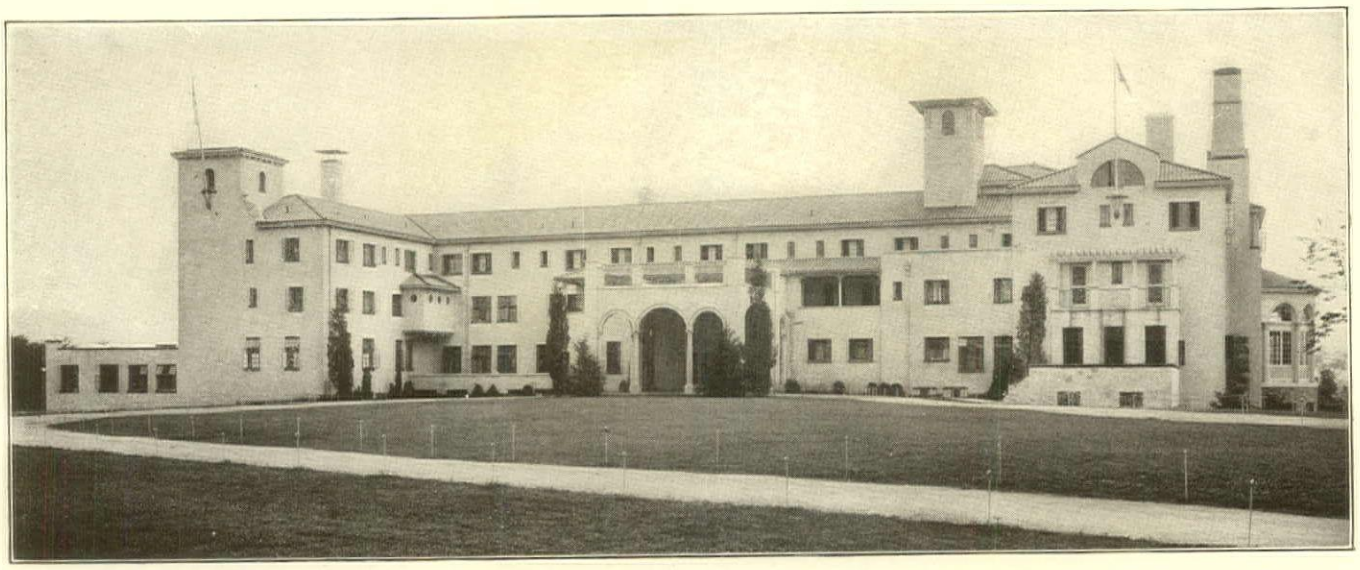


Photo by Leet Bros., Washington, D. C.

Congressional Country Club, Washington, D. C.
Contractor, M. Serretto, Washington, D. C.
Architect, Philip M. Jullien, Washington, D. C.

Permanent!

The concrete floors of this Washington Country Club will never dust or wear

THERE will never be any dusty, worn-out concrete floors in the Congressional Country Club in Washington. Mr. M. Serretto, the Washington contractor, recently treated all the concrete floors in this building with Lapidolith. He knew that this floor hardener would *permanently* guarantee floors that are dustproof, waterproof, and wearproof.

Lapidolith is a liquid chemical. This compound can be applied as easily as water, and dries overnight. It is remarkable how quickly Lapidolith penetrates the porous cement, fills in the voids and binds the concrete particles together. It changes even an old concrete floor surface into a dense, smooth structure that is as wear-resisting as granite.

Lapidolith has been used by leading architects and contractors for more than fifteen years. Lapidolith is used by the Campbell Soup Company, Fisher Body Company, Ford Motor Company, Standard Oil Companies, Swift and Company, Kresge Stores, McCrory Stores and many others that are equally well known. We will gladly send you samples and literature that will give you more complete information about this product.

LAPIDOLITH
TRADE MARK

Other Sonneborn Products

CEMCOAT—A paint that stays white longer than any similar paint; can be washed again and again; sticks to brick or concrete as easily as to wood; and usually requires one less coat. Made for both interiors and exteriors in white and colors, and in gloss, eggshell, or flat enamel finish.

STORMTIGHT—The famous semi-liquid compound for mending and preserving roofs. This thick, adhesive, rubberlike material can be applied by anyone, over any kind of roof, and it gives a tight new surface that lasts for years. Mends one leak or waterproofs an entire roof surface.

HYDROCIDE—A complete line of water-proofing and dampproofing products for walls, copings, foundations, etc. There is a special Hydrocide for each class of use. For instance, on exterior walls Hydrocide Colorless retains the natural beauty of the wall.

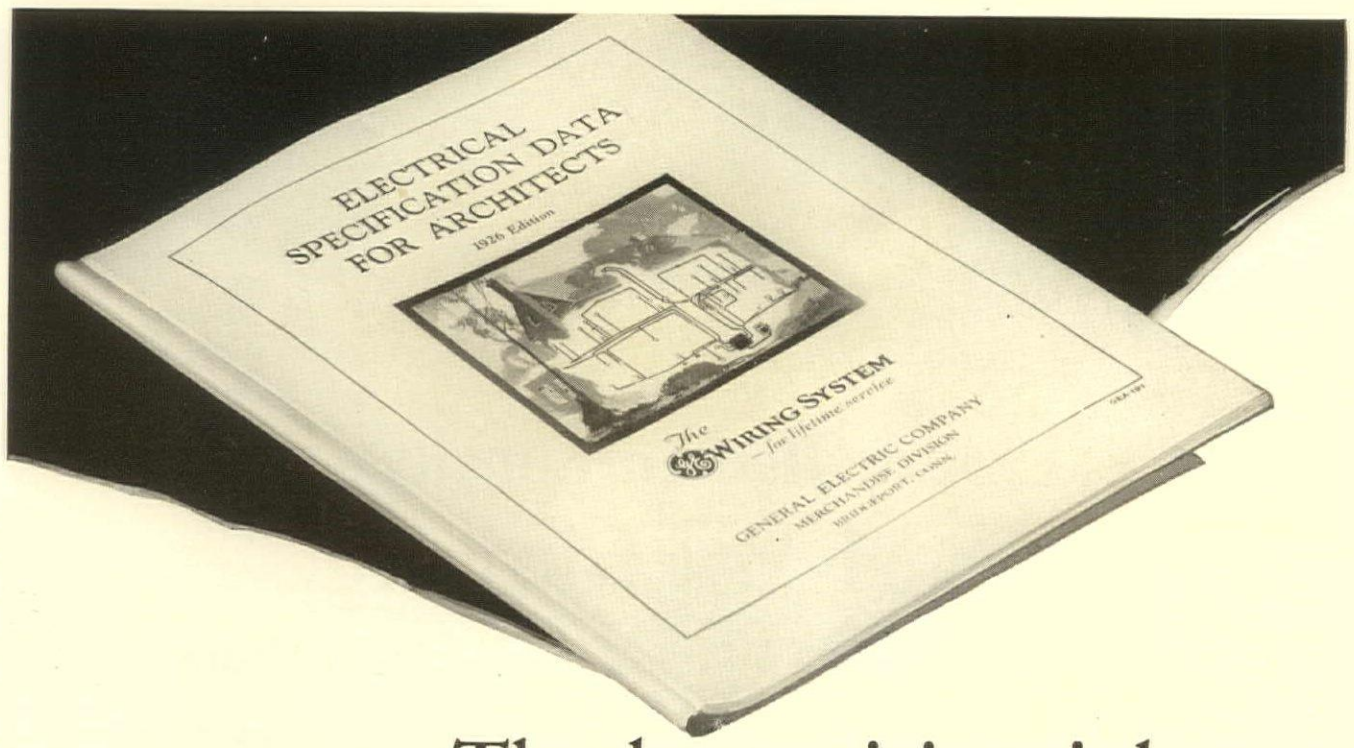
LIGNOPHOL—A preservative dressing for wood floors that penetrates and restores the natural oil and gum of the wood. Lignophol prevents rotting, drying out, and splintering; it is not sticky; it can easily be washed; and does away with ordinary floor oils.

Send for free sample of any of these products

L. Sonneborn Sons, Inc.

114 Fifth Ave., New York City

Please mention ARCHITECTURE in writing to manufacturers



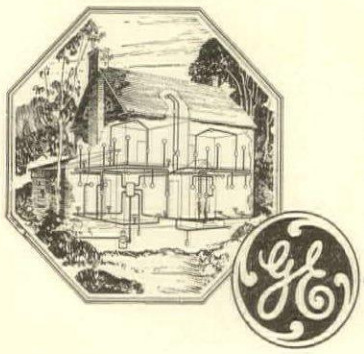
The best wiring job is now the easiest to specify

THE architect of today is expected to give specific attention to each of the thousand and one details which make the modern home modern, but unfortunately this increasing demand upon his time is not being matched by a corresponding increase in his compensation.

Realizing this situation, the General Electric Company has published *Electrical Specification Data for Architects,* which makes possible specification, "by number," of a G-E Wiring System which will fulfill all requirements. It will save time—save work—and yet assure you of a quality job of the type you wish installed.

The G-E Wiring System is a system of housewiring embodying adequate outlets, conveniently controlled, and using G-E materials throughout. If interested, address: Sec. A-6

Merchandise Department
General Electric Company
Bridgeport, Conn.

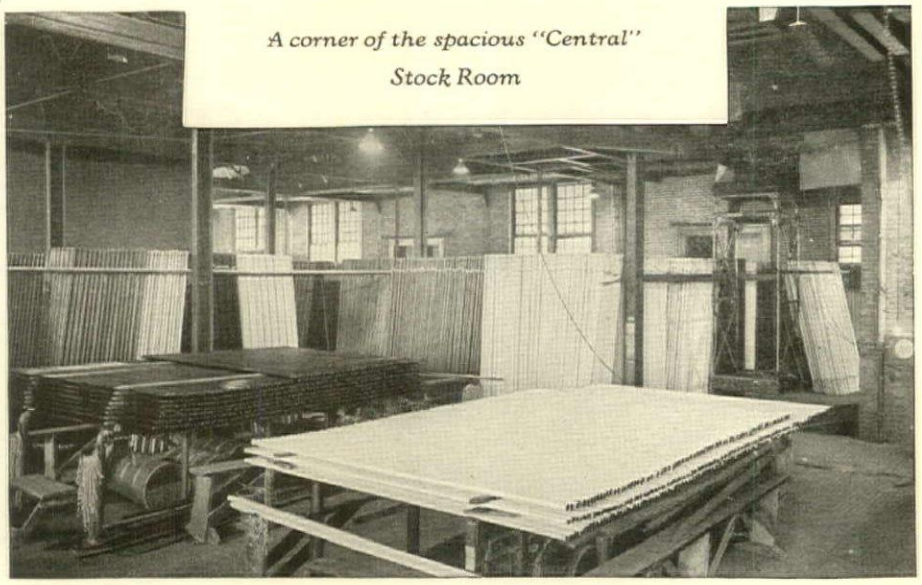


WIRING SYSTEM
—for lifetime service

GENERAL ELECTRIC

A. I. A. File No. 31c

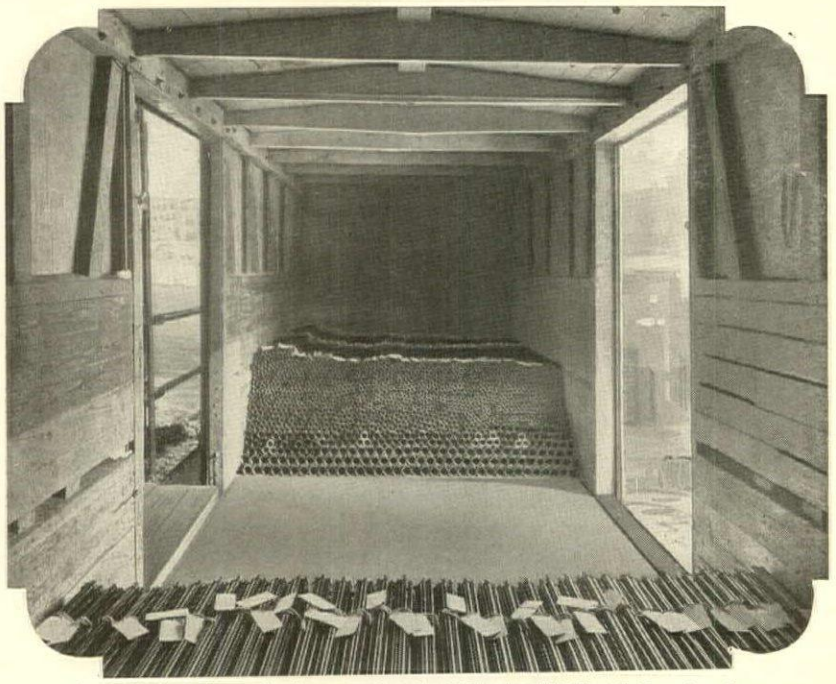
A corner of the spacious "Central" Stock Room



In arranging "Central Black" and "Central White" Conduit in the stock room each bundle is placed in vertical position as illustrated here. This is done to protect the coating and to facilitate handling.

The Means and The Method of "Central Service"

The fina stages of your journey through the "Central" Plant show the stock room. Adjacent to it is the railroad siding where "Central Black" and "Central White" Conduit is loaded in a box car as illustrated below.

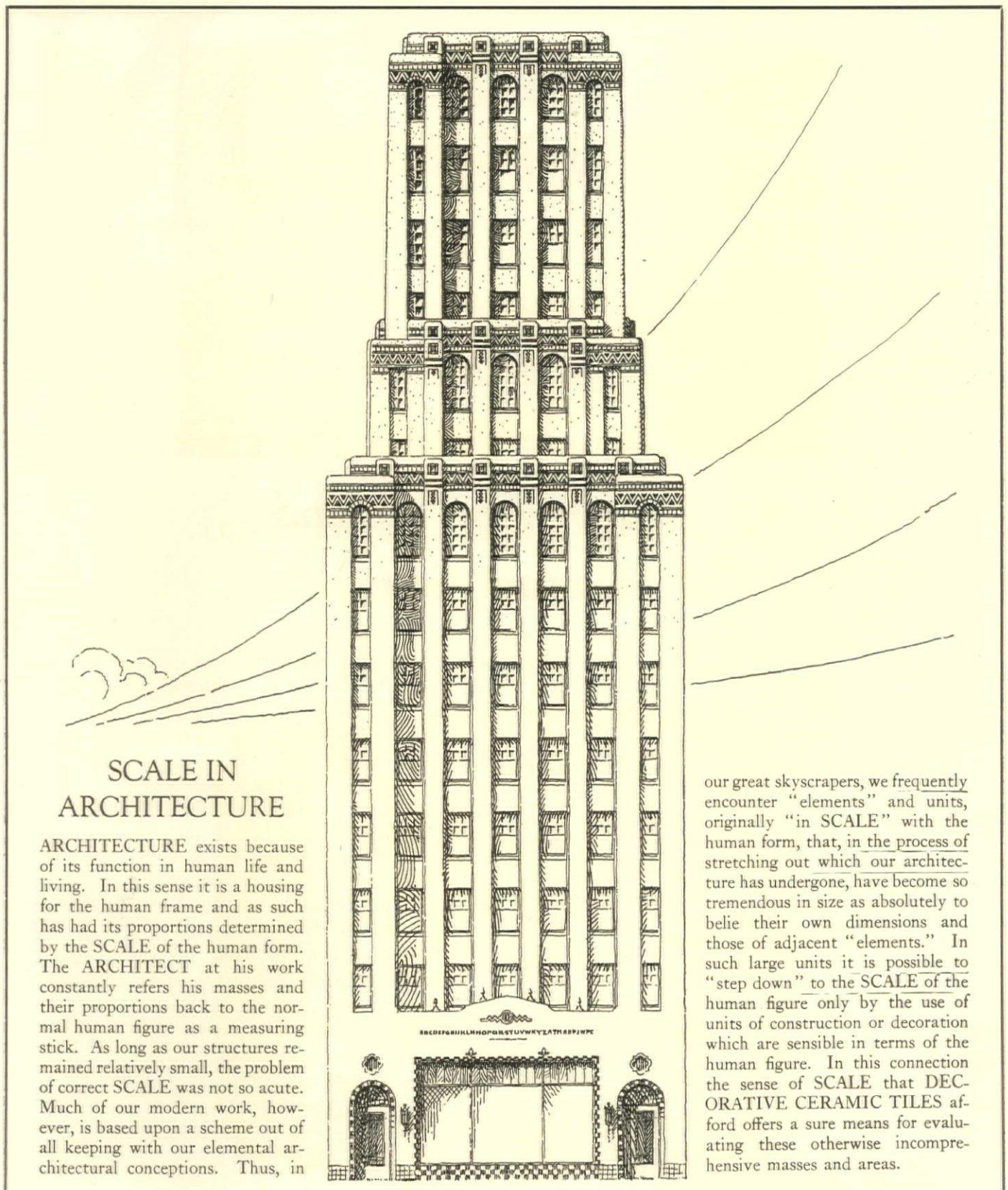


"Central" Conduit is carried into the car one bundle at a time. The larger sizes are placed on bottom and the load is built up until completed. Then it is blocked securely to prevent shifting

An interior view of a box car in the "Central" Yard showing how "Central Black" and "Central White" Conduit is loaded.

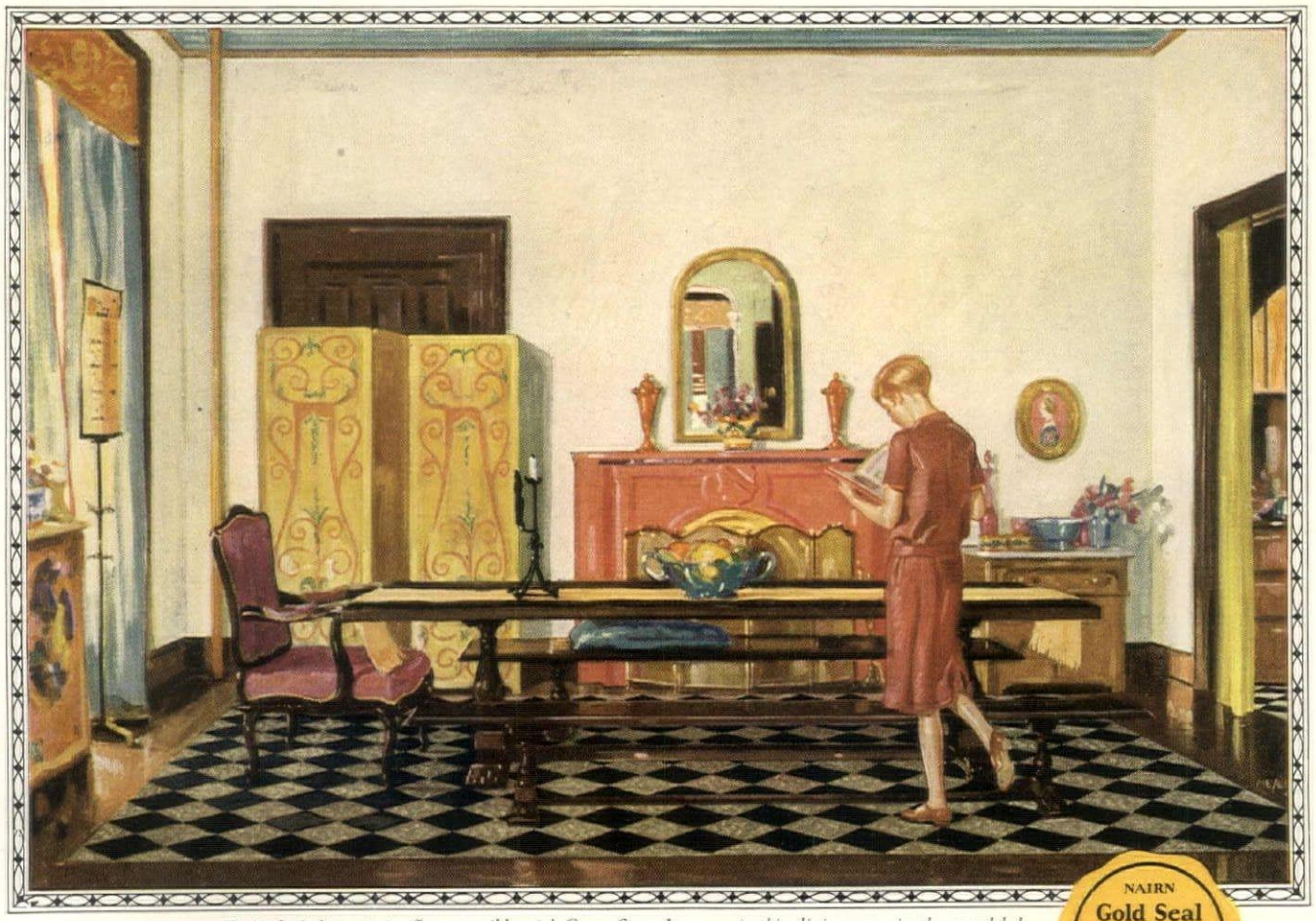
CENTRAL TUBE COMPANY

GENERAL OFFICES ~ FIRST NATIONAL BANK BUILDING
PITTSBURGH
DISTRIBUTORS IN ALL LARGE CITIES



SCALE IN ARCHITECTURE

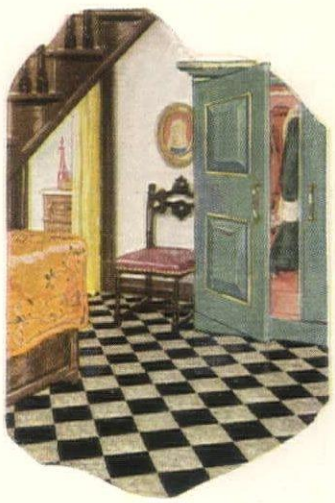
ARCHITECTURE exists because of its function in human life and living. In this sense it is a housing for the human frame and as such has had its proportions determined by the SCALE of the human form. The ARCHITECT at his work constantly refers his masses and their proportions back to the normal human figure as a measuring stick. As long as our structures remained relatively small, the problem of correct SCALE was not so acute. Much of our modern work, however, is based upon a scheme out of all keeping with our elemental architectural conceptions. Thus, in our great skyscrapers, we frequently encounter "elements" and units, originally "in SCALE" with the human form, that, in the process of stretching out which our architecture has undergone, have become so tremendous in size as absolutely to belie their own dimensions and those of adjacent "elements." In such large units it is possible to "step down" to the SCALE of the human figure only by the use of units of construction or decoration which are sensible in terms of the human figure. In this connection the sense of SCALE that DECORATIVE CERAMIC TILES afford offers a sure means for evaluating these otherwise incomprehensive masses and areas.



Typical of the artistic effects possible with Gold Seal Inlaids *is this dining room in the remodeled house of Mr. John M. Hatton, Architect, Scotch Plains, New Jersey. Belflor Pattern* No. 2047/8

NAIRN
Gold Seal
INLAID
SATISFACTION GUARANTEED OR YOUR MONEY BACK
REMOVE SEAL WITH WET CLOTH

Beauty and economy in remodeling



As in the dining room, the introduction of this formal patterned floor into a richly colored scheme of decoration gives unusual distinction to the entrance hall of Mr. Hatton's remodeled home.

REMODELING an old house calls for real ingenuity. But what charming effects can be secured, often at small outlay.

In the dining room above, the center of the floor was laid on a lower level than the fine old hardwood border to accommodate a high pile carpet.

Why not, thought the architect-owner, install a modern floor of inlaid linoleum in its place and leave the mellow hardwood border to set it off?

So a *Belflor* pattern of Gold Seal Inlaids was selected, with the decidedly pleasing result shown above. Note with what an air of distinction the patterned floor unifies the colorful Old World furnishings—as an ordinary floor never could.

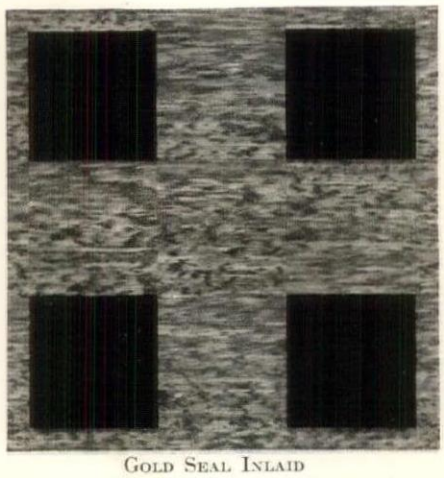
Gold Seal Inlaids are permanent floorings that can be installed over old as well as over new floors at moderate cost. The many patterns permit a selection that will harmonize with any interior.

Moreover, the practical advantages of Gold Seal Inlaids recommend them to homeowners. They never need expensive refinishing and their durability is assured by the Gold Seal guarantee and the Nairn reputation for quality.

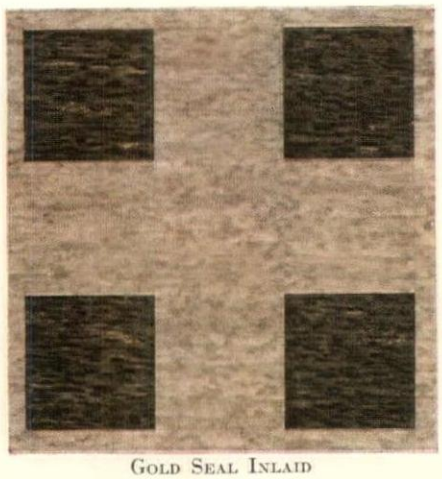
(*See next page*)

NAIRN

GOLD SEAL INLAIDS



GOLD SEAL INLAID
Belflor 6" Inset Tile Pattern No. 2155/2



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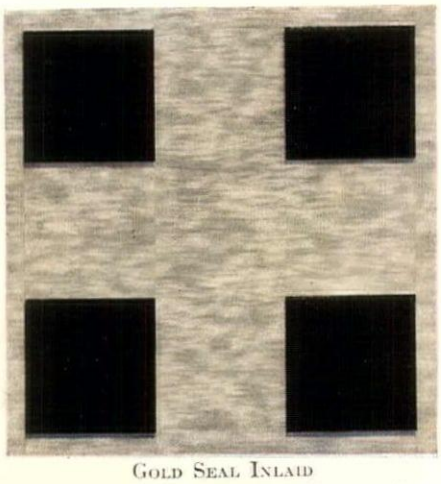

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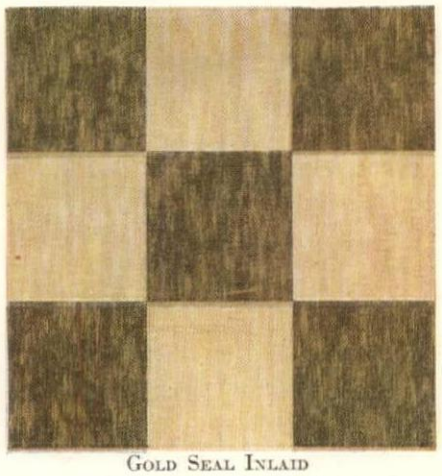

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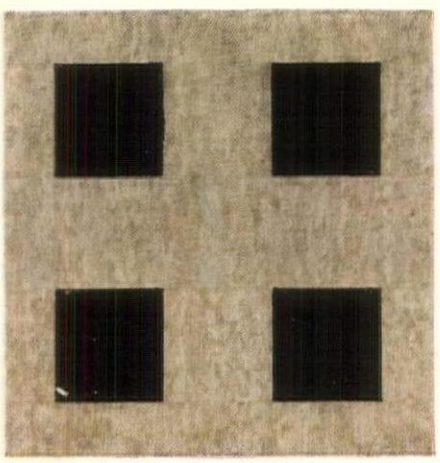

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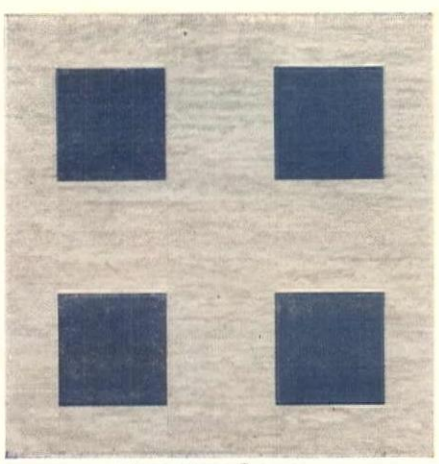

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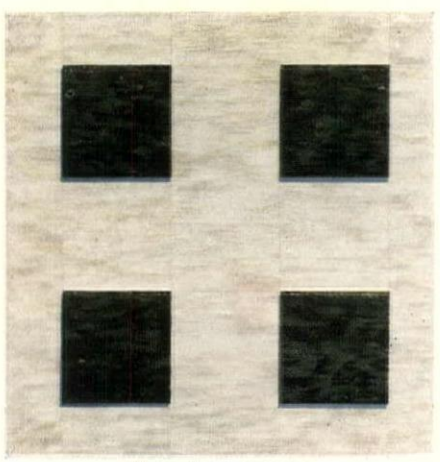

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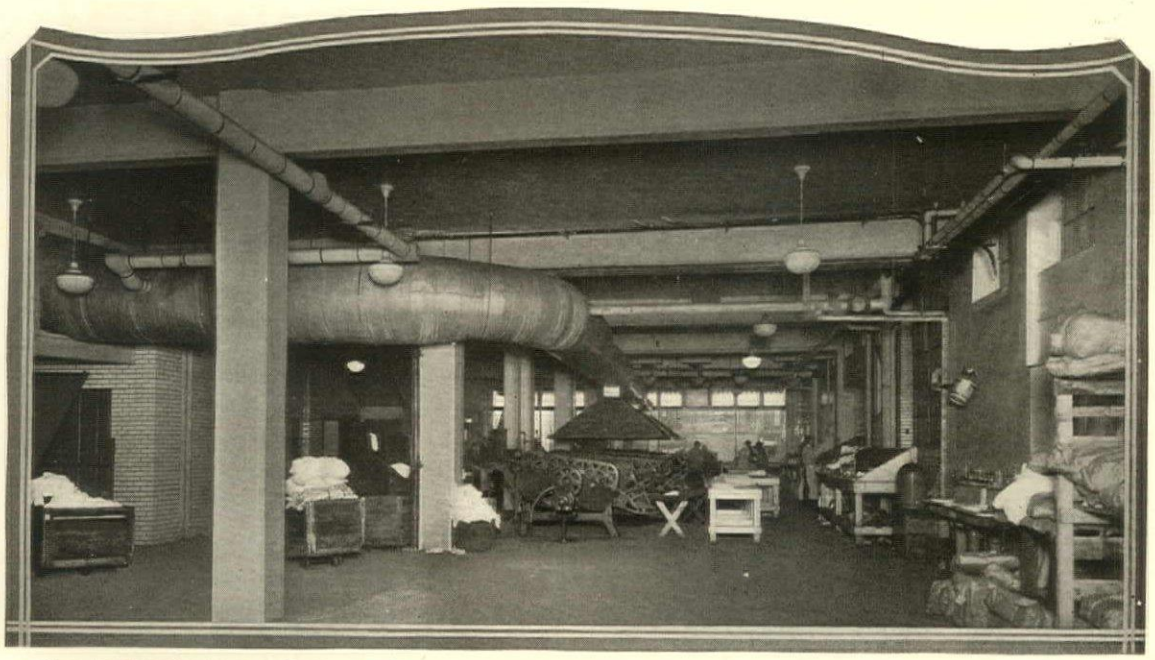

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ARCHITECTVRE*

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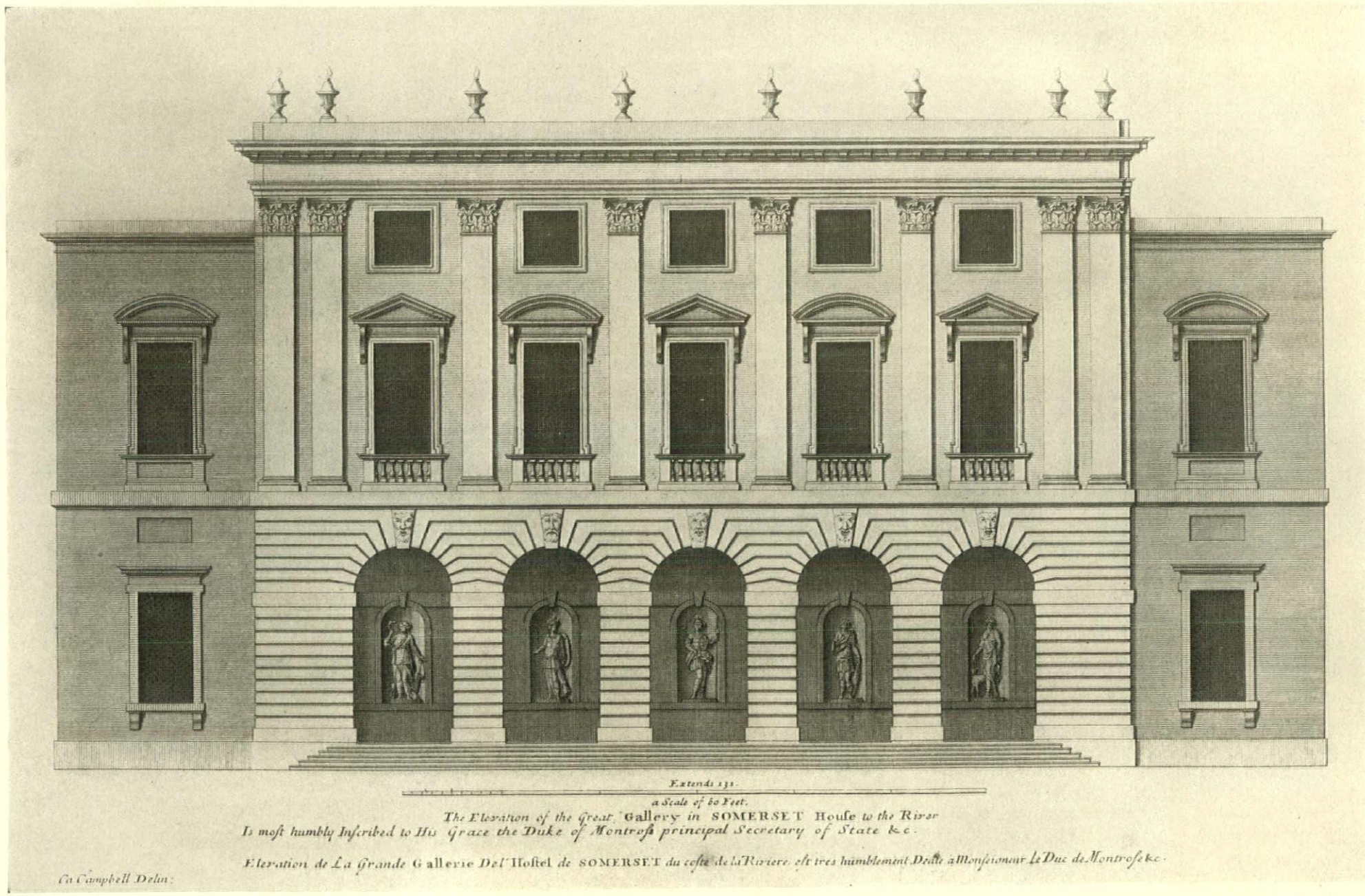

THE PROTOTYPE FOR HARRISON'S BRICK MARKET.

Engraving of old Somerset House in the "Vitruvius Britannicus," 1715.

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ARCHITECTVRE *

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THE PROFESSIONAL ARCHITECTVRAL MONTHLY

VOL. LIII JUNE, 1926 NO. 6

The Colonial Amateurs and Their Models: Peter Harrison

By Fiske Kimball

Author of "Early American Domestic Architecture"

THE amateur in architecture during the seventeenth and eighteenth centuries held a place which the professional of to-day finds it difficult to credit. Our own experience with the plans of clients and their claims to the design of buildings for which they think the architects have merely "drawn the plans," renders us sceptical of any suggestion that laymen were actually responsible for the design of fine

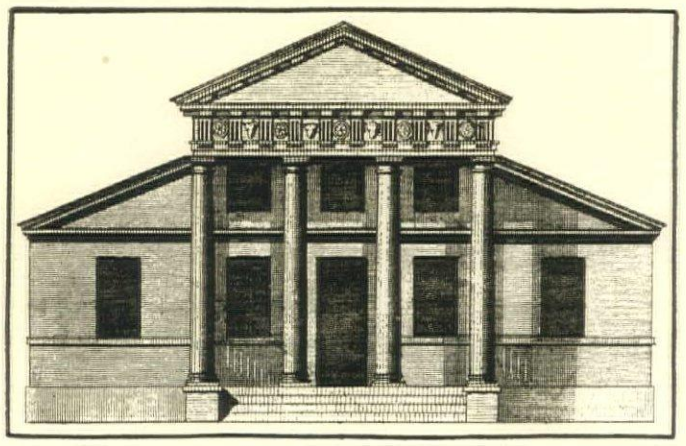
Redwood Library, Newport, 1748. Peter Harrison, Architect. The rear extensions were added later. Courtesy of Sam'l F. Batchelder.

buildings at any earlier period. We tend to insist that there must have been a "ghost," and do not make allowance for totally different conditions, in which often no competent ghosts were to be found.

In the Renaissance period and subsequently, there were circumstances which rendered the activity of amateurs not only possible but indispensable to the realization of classical ideals. These ideals were first adopted and championed by scholars, rulers, and other men of gentle birth, while the builders and craftsmen in general still followed traditional forms. With each conquest of fuller knowledge of antiquity, with the penetration of the new doctrine into fresh territory beyond the Alps or across the sea, cultivated and travelled laymen found it necessary to assume the rôle of designers if they were to secure conformity to ideals which were foreign to men of the craft. In outlying regions, and especially in Colonial America, no *profession* of architecture yet existed, and the first men to become professionals were recruited among the self-trained amateurs. The possibility of such self-education in design, without a long apprenticeship in practical matters, was due partly to the technical competence of the workmen, partly to absence of modern complexity of life and structure, partly also to the broader education of the gentleman, who was to be fitted—in the words of Milton—to perform "all the offices, both public and private, of peace and war." It was due primarily, however, to a peculiar characteristic of post-Renaissance architecture. The codification of an accepted body of classical formulæ, set forth in admirable illustrated manuals, enabled any gifted layman, with study, to design a building of respectable academic proportion and detail.

We scarcely realize how many of the greatest architects of modern times, whom we are accustomed to revere as the founders of our profession, turned to architecture relatively late in life, without any formal professional training. Leaving aside the universal artists of the Italian Renaissance itself, we have, in France, Claude Perrault—"de mauvais médecin devenu bon architecte"; in England, all three of the great triumvirate, Jones, Wren, and Vanbrugh; in America, Bulfinch, who, after his grand tour, began by designing houses gratuitously for his friends, and Thornton, who says in a fragment of autobiography: "In my travels I never thought of architecture," and "I lamented not having studied architecture." Far from depreciating the ability of these men, the knowledge that they all began as amateurs makes us appreciate their gifts the more. At the same time it enables us to believe that others, like Lord Burlington and Jefferson, who never abandoned an amateur status in financial matters, were also competent masters of architecture.

It has been universally recognized that Peter Harrison was the most gifted designer of buildings in the American colonies during the middle years of the eighteenth century.



Prototype of the Redwood Library. Headpiece to Book Fourth in Hoppus's Palladio (1735).

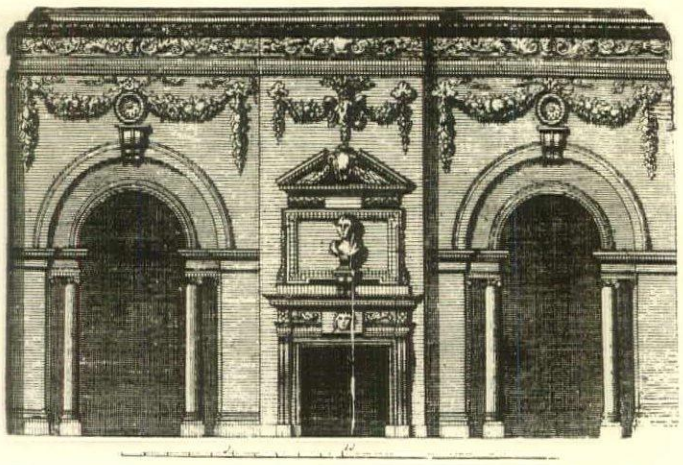
Redwood Library, Newport (1748). Peter Harrison, Architect. The original rear façade. Courtesy of Sam'l F. Batchelder.

The competent and scholarly character of his work has led many to the assumption that he must have had a professional apprenticeship and training in architecture.* He has been reputed to have worked at Blenheim, and thus to have been an assistant to Vanbrugh, although Vanbrugh's connection there had ended in 1716, the year Harrison was born, and Vanbrugh died ten years later. To be sure, work went on there under Moor and others down to the Duchess of Marlborough's death, in 1744, but we do not hear of Harrison in any of the English accounts of it.

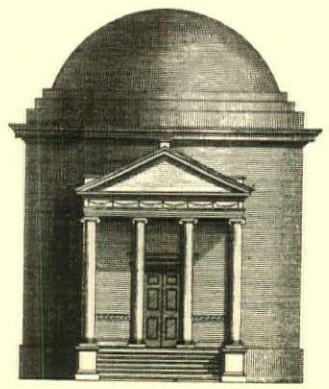
Peter Harrison, a gentleman "in point of family second perhaps to very few in America," came to this country in 1740, and settled in Newport, R. I., by 1745. He spent a useful life in mercantile pursuits, dealing in wines, rum, molasses, and mahogany, and for the last seven years before his death, in 1775, was collector of the customs in New Haven. Meanwhile he had served on various civic committees, and made public-spirited use of his talent for drawing and design, without any remuneration, but often with handsome acknowledgments. Thus, for his survey of Newport Harbor in 1745 the Assembly voted him a piece of plate worth £75. In 1757 the Assembly appointed the Speaker of the House and one other "to wait on Captain Peter Harrison and render him the thanks of this government for all the favors they have received from him; and in particular for the two plans of the Fort."

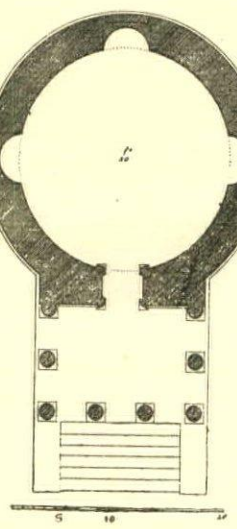
For his designs of buildings, likewise, there is generally no record of his receiving a fee. For the Redwood Library, the Brick Market, and the Synagogue in Newport, as well as for King's Chapel in Boston, his services seem to have been gratuitous and complimentary. When King's Chapel was built, soon after his establishment at Newport, he was invited to make plans, which he took his own time about furnishing, owing to a "multiplicity of business." Only in the last of his designs, for Christ Church in Cambridge, which had no claim on him, do we know that he took compensation, in the sum of £45.

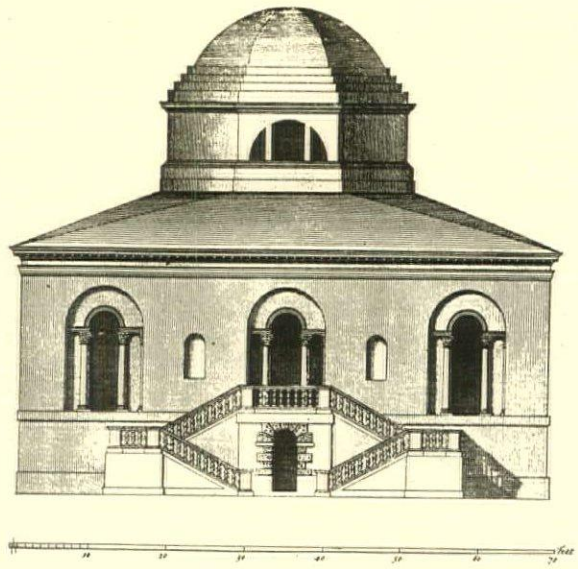
* Charles Henry Hart: "Peter Harrison, the First Professional Architect in America," in *Proceedings of the Massachusetts Historical Society*, vol. 49 (1916); Samuel F. Batchelder: "Peter Harrison," in *Bulletin of the Society for the Preservation of New England Antiquities*, vol. VI (1916), pp. 12–18.



A prototype of treatment of rear façade of Redwood Library. Headpiece to Book Second, Hoppus's Palladio (1735). Courtesy of Geo. Marshall Martin.







A prototype of the treatment of the rear façade of the Redwood Library. The rear of Burlington's Villa at Cheswick, as shown in Kent's "Designs of Inigo Jones" (1727), Vol. I, Plate 73.

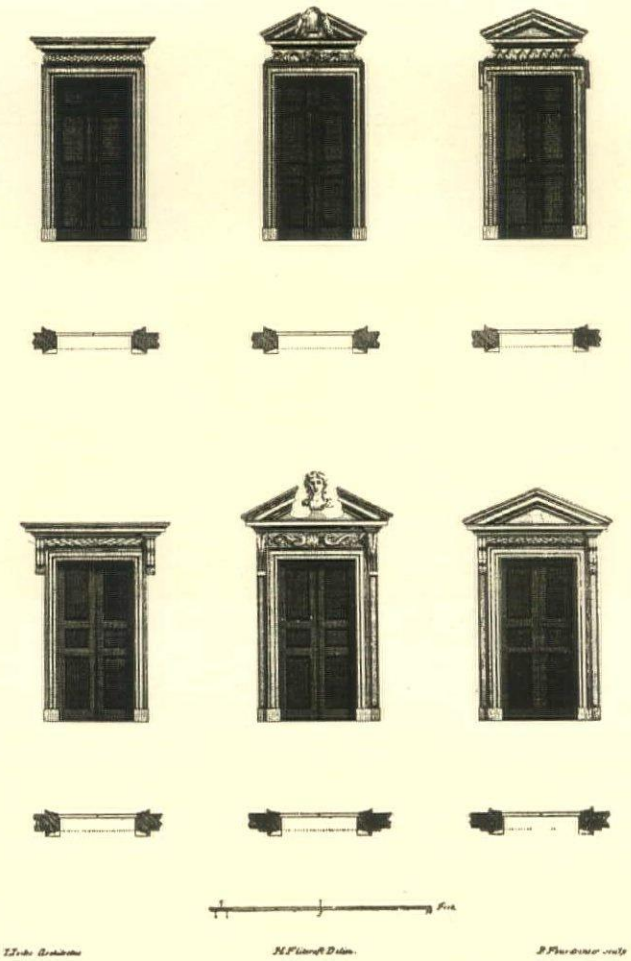
Front doorway of the Redwood Library (1748). Peter Harrison, Architect. The glazed door, though modern, seems to follow the old. Photograph by J. Rugen.

How the gentlemanly amateur could have designed this admirable body of work is what has puzzled earlier writers. "In its plastic handling of the most varied requirements, in its combination of massive dignity and sensitive refinement," one of them has said, "it is totally different from the weak and awkward 'carpenter's Colonial' style, obtained ready-made in sections to suit, from the obliging pages of Batty Langley's 'The Builder's Jewel' and 'The British Palladio.'"

What shall we say, however, when we compare the Redwood Library (1748) with one of the engravings in Edward Hoppus's edition of "Palladio," published in London in 1735? This is a book revealing many evidences of the powerful influence of Lord Burlington's "Palladianism," in rebellion against the baroque of Wren and Vanbrugh. The headpiece to Book Fourth shows a small garden temple, inspired by one of Burlington's temples at Chiswick. A design identical with Hoppus's plate, but having a dome, is also shown on Plate 38 of Isaac Ware's "Designs of Inigo Jones and Others," a casino for Sir Charles Hotham by Burlington's great follower, William Kent.* They give us the façade of the Redwood Library, almost line for line. Discretion was scarcely necessary as to the general treatment, except in Harrison's initial choice of a model.

Spurred by this revelation of Harrison's dependence on the books, we begin to look for the source of other motives.

* The same design was used at Holkham, where Kent was again the designer, and is illustrated in Mathew Brettingham's "The Plans . . . of Holkham," 1761.



The lower centre figure shows Harrison's model for the door of the Redwood Library with the identical carved frieze. The upper right-hand figure shows a suggestion for the gallery doors of the synagogue. Kent, "Designs of Inigo Jones" (1727), Plate 55.

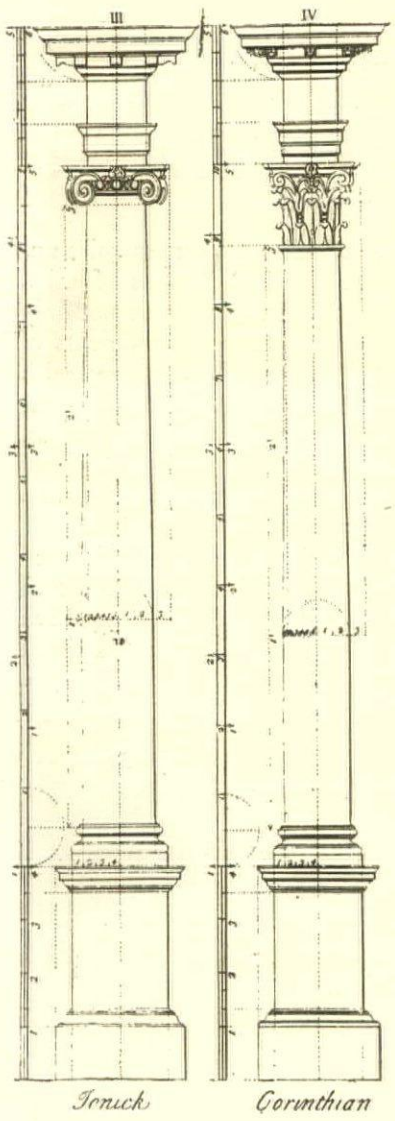
The doorway of the Redwood Library betrays quite unequivocally an inspiration from Kent's "Designs of Inigo Jones." On Plate 55 the lower centre figure shows not only its proportions and membering, but the very ornaments of the frieze, a central shell with two dolphin-like creatures, with twining foliate tails. Even the door panels are the same, although some of them have since been filled with glass. Harrison has omitted the pediment, as it is omitted in other figures of the same plate, since the front adopted left him no room for it.

The Palladian window under a large relieving arch, used on the rear of the Library (now at the side), had been first introduced in England by Webb's Whitehall designs. Lord Burlington had employed it again in General Wade's house

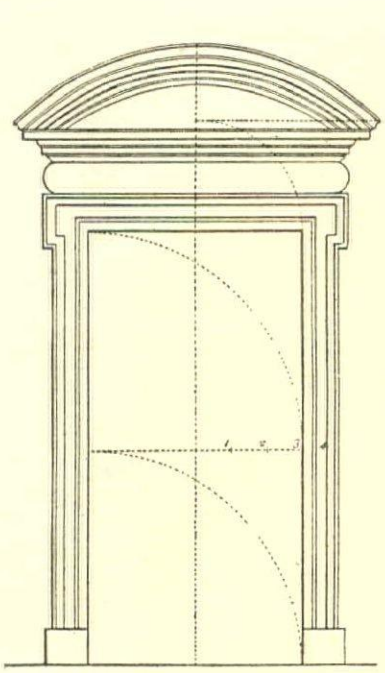
The Brick Market, Newport (1761). Peter Harrison, Architect. From an old photograph in the Codman Collection, Metropolitan Museum of Art.

Side of the Brick Market, Newport (1761). Peter Harrison, Architect.
Photograph by J. Rugen.

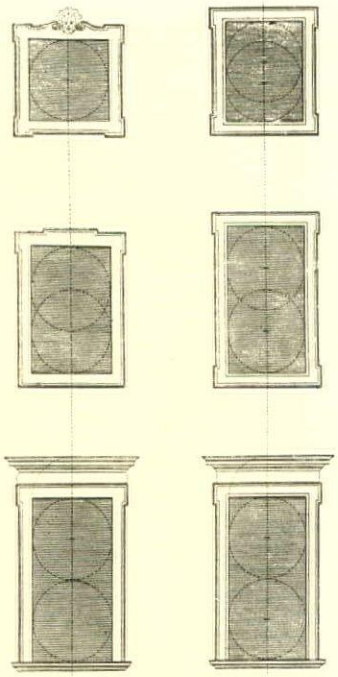
(1723–24) and in his own villa at Chiswick (1727–36). The villa, where a range of three such windows, with Corinthian columns, marked the rear façade, is illustrated in Kent's "Designs of Inigo Jones," published in 1727. An example of the same feature occurs in a design shown in Hoppus's "Palladio" as the headpiece to Book Second, and republished in Langley's "Ancient" masonry Plate CCCCXXX and in Ware's "Designs of Inigo Jones and Others," Plate 38: "A Design for the Great Dining Room, Houghton," by Kent. Although it represents the motive as used in an interior, it bears close analogies to Harrison's treatment, both in proportions and in the use of the Ionic order. It would seem that Burlington's design, Harrison's familiarity with which we have just established, had suggested the general idea, Hoppus's or Ware's the treatment in detail. The interior of the Library has been much remodelled, but it retains some of the original bookcases. These are very architectural, with a pedestal below containing cupboards, and an entablature above. On the ends of those which projected to form alcoves are raised panels, with their corners cut out in the form of a quadrant. All these features are found in the plate of Langley's "Treasury of



Harrison's models for the orders of the Brick Market and the colonnades of King's Chapel and Christ Church. Gibbs's "Rules for Drawing" (1732). Plate II.



Harrison's model for the large windows of the Brick Market.

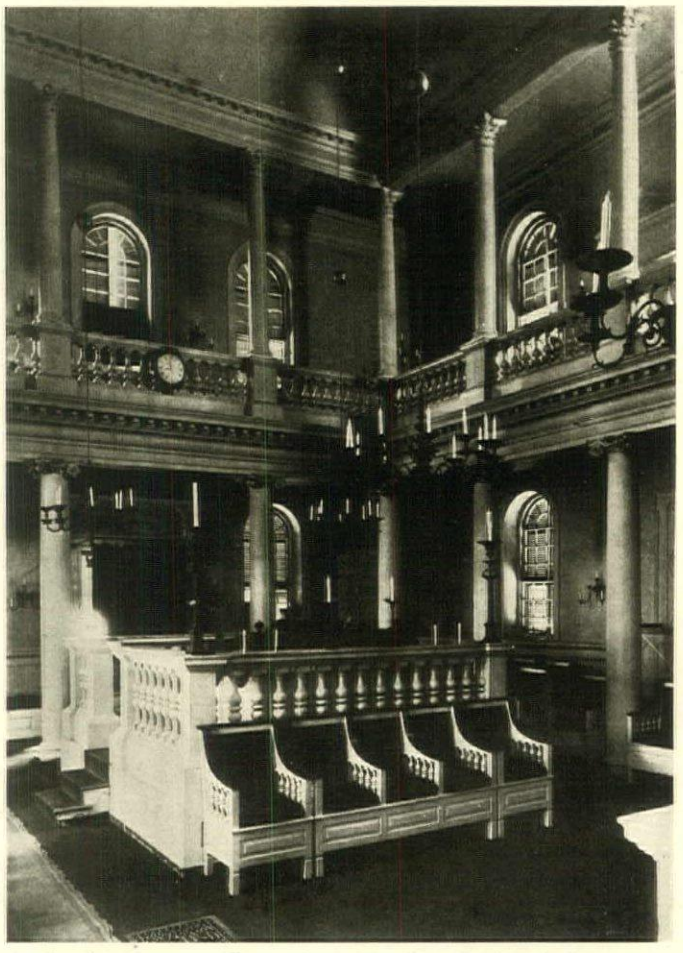


Models for the small windows of the Brick Market.

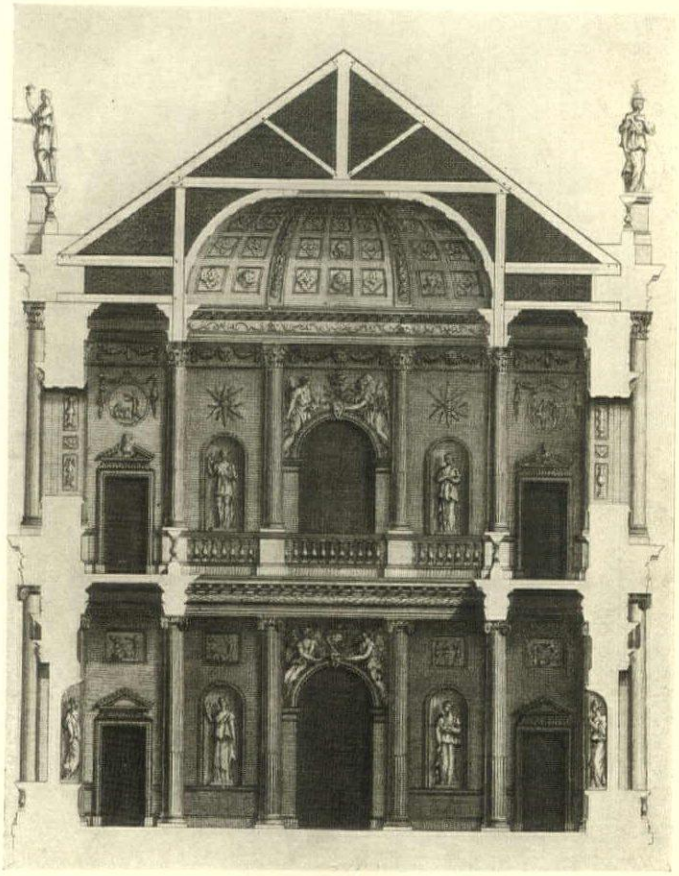
Gibbs's "Rules for Drawing" (1732). Plates II and XLV.

Designs" (1745), from which, as we shall see, he later derived his design for the Ark of the Synagogue in Newport, and there can be little doubt that he used this suggestion for his bookcases also.

Harrison's design for the Brick Market in Newport (see frontispiece) (1761) vies with the Redwood Library in its conformity with European academic standards. Its motive, an

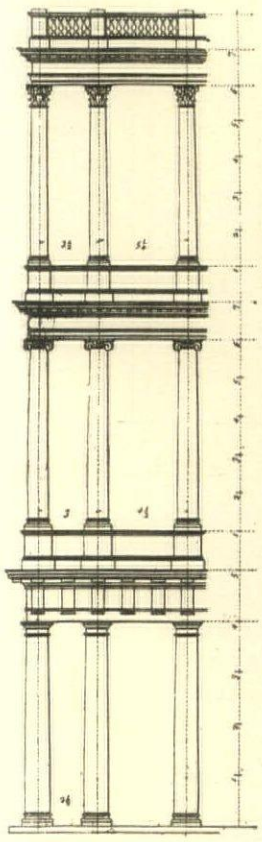


Interior of the Synagogue, Newport (1762–63). Peter Harrison, Architect.
Photograph by John Rugen.

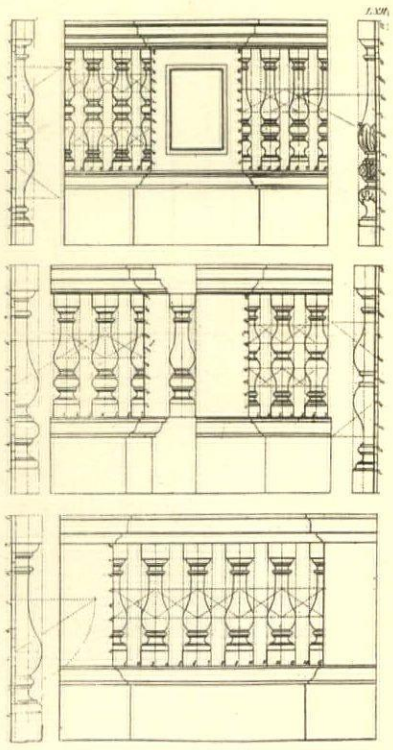


Harrison's model for the interior of the Synagogue. Part of Webb's designs for the Whitehall Palace. Shown in Kent's "Designs of Inigo Jones" (1727), Vol. I, Plate 50.

order embracing two stories above a high basement, traced its lineage to Michelangelo's Palazzo Senatore. Never used by Palladio, it had had a greater vogue in France than in England. In the seventeenth century, to be sure, it had been used by Inigo Jones and Webb in Covent Garden, Somerset House, and Lindsey House, but since 1715 a

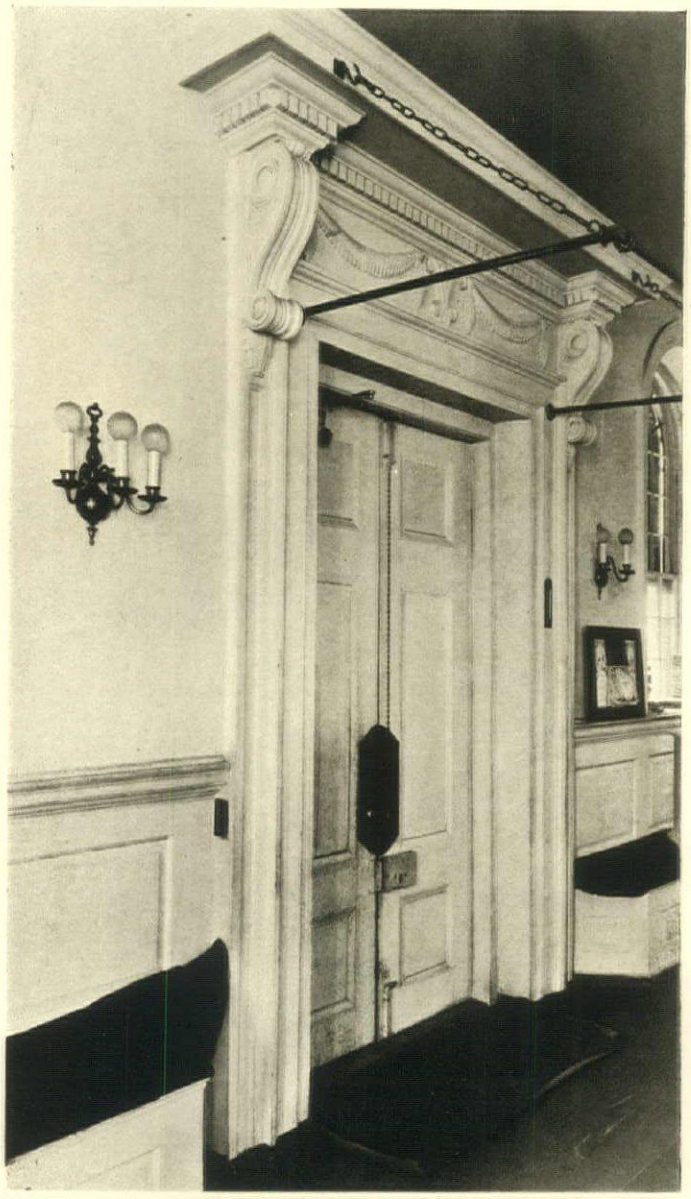


Harrison's model for the colonnades of the Synagogue.



Harrison's model for the gallery balustrade of the Synagogue.

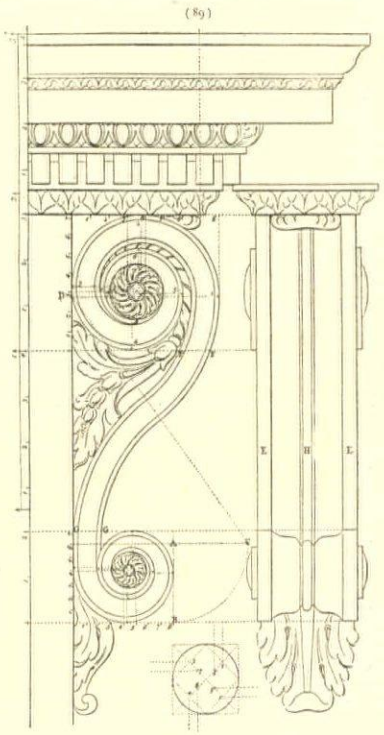
Gibbs's "Rules for Drawing" (1732).



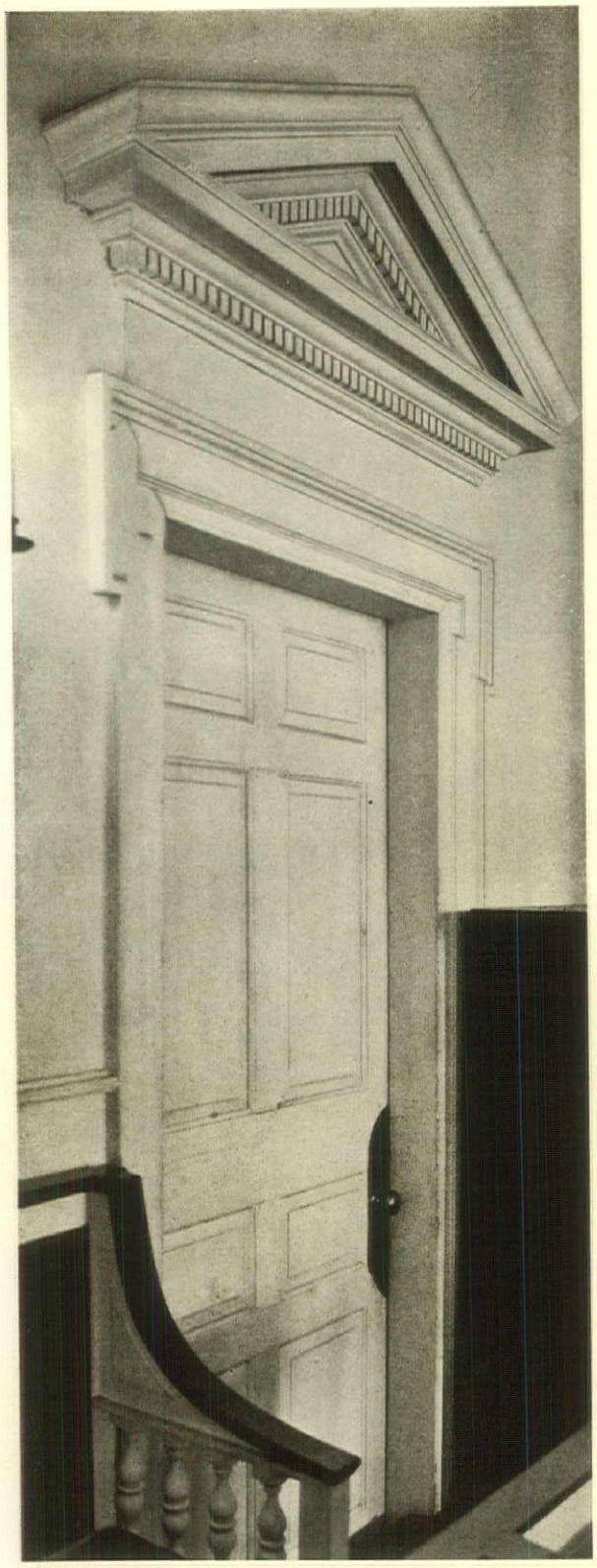
Interior casing of the main doorway of the Synagogue. Photograph by John Rugen.

puristic interpretation of Vicentine doctrine had become all-powerful in England. The engraved models available to Harrison, especially ones with an arched basement, were thus none too numerous, and it is not fanciful to believe that his example was precisely the elevation of old Somerset House in the "Vitruvius Britannicus" (1715), volume 1, plate 16. Features of similarity which, though themselves common enough, tend cumulatively to reinforce this view, are the alternation of triangular and segmental pediments, and the doubling of the end pilasters.

In its details the Brick

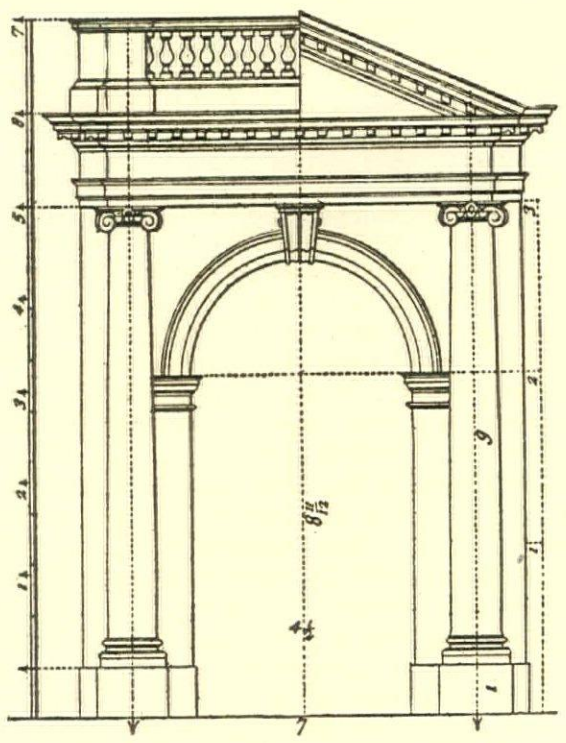


Harrison's model for the consoles of the Synagogue doorway. Harrison omits the pediment shown by Gibbs. Gibbs, Plate XLVII.



Doors in the gallery of the Synagogue. Peter Harrison, Architect.

Exterior of the Synagogue, Newport (1762–63). Peter Harrison, Architect.



Harrison's model for the porch of the Synagogue. Gibbs's "Rules for Drawing," Plate XXXIX.

Market shows many minor variations from Somerset House, which suggest that they were drawn from some other book showing the forms at a larger scale. Comparison with the various handbooks of detail current at that date leaves no doubt that the one Harrison employed was the finest of them, James Gibbs's "Rules for Drawing the Several Parts of Architecture" (1732). The large windows follow the right-hand figure of Plate XLII, line for line, except that they have ears at the bottom also, instead of merely blocks. The small windows follow the upper right-hand figure of Plate XLV with great fidelity. The details and profiles of the angular Ionic order are identical with those of Gibbs's version on Plates II, X–XII, and XIV.

(To be concluded)

The Essentials of Safe and Effective Chimney Construction

By D. Knickerbacker Boyd
Consulting Architect

THE need for some positive means of controlling chimney and flue construction, especially in residences, is forcefully demonstrated by the latest report of the National Board of Fire Underwriters, which shows that there is a home fire every four minutes. The greatest hazard in the home lies in defective chimneys and flues and the record of fires caused by such is appalling. During 1923 defective chimneys and flues were second on the list of major fire causes. The cause of fire defined as defective chimneys and flues is one which is strictly preventable and one which could be completely eradicated if proper care were exercised in the construction of chimneys and flues.

According to the latest figures available, about 46 per cent of the value of all construction now under way in this country is residential and the real need for some means to control chimney construction lies in residential class—not only single, but multiple dwellings, otherwise known as apartment-houses, flats, duplex, double-deckers, three-deckers, etc., etc.

Unfortunately, the vast majority of small houses are built without architectural advice or adequate supervision, whereas chimneys for high-pressure boilers and for heating apparatus in large and tall buildings are usually carefully designed and properly constructed as a matter of safety and dollar-and-cents savings.

In addition to being installed large enough, all flues must of course be absolutely tight. Therefore any method by which the number of joints of a chimney can be reduced or protected is of the greatest value. Formerly this was done by "parging" or plastering the inside of the flue, but as this has been shown to be unsatisfactory and even dangerous many codes have definite provisions prohibiting its use.

The answer has been found through the development by manufacturers of the product now known correctly as flue linings, not flue tiles. Standard linings of fire clay, being two feet in length (except in the larger sizes which are 2 feet 6 inches), reduce the number of exposed mortar joints for brickwork from ten to one. Most progressive codes, as well as the National Board of Fire Underwriters Ordinance and the proposed American Society of Heating and Ventilating Engineers Code, require a fire-clay lining in every flue—and of course the lining must start below the smoke entrance and continue to the very top. Some give credit for the use of lining by reducing the required thickness of the brickwork from 8 inches to 4 inches, requiring at least the 8-inch thickness for an unlined flue. Even with 8 inches of brickwork, however, a lining should be required to prevent the danger which may arise from faulty construction and possible leakage of flames or sparks through the continuous joint, often only partially filled with mortar, which occurs in all header-brick courses in 8-inch walls.

The thickness of the chimney wall irrespective of the flue lining governs the strength and insulating properties of the chimney. Except in free-standing chimneys, and sometimes in those, 4 inches of brickwork with a flue lining is generally conceded as sufficient indoors.

I would urge upon the framers of building codes and upon officials who are responsible for compliance with their requirements, that provision should be made that the outside walls of chimneys where exposed to the weather in cold climates should be not less than 8 inches thick. This would tend to keep the chimney warmer, prevent condensation in it and thereby better draft conditions, which were among the points raised by the American Society of Heating and Ventilating Engineers, as explained by Professor Woolson in his discussion of the Chimney Ordinance at the 1922 Convention when he, also, advocated 8-inch walls exposed to the weather.

This requirement would also have the psychological effect of causing more chimneys to be placed on the inside of buildings where thinner walls, when properly lined with fire-clay flue lining, could be used and where excess heat would be radiated into living-quarters in the winter time, thereby increasing the heat content of the building, while also conserving fuel through minimizing the cooling-off process.

These and other structural details, strength of materials and the necessity of fire-clay flue linings are known and acceptable facts, but not so much information has been available about the minimum areas for flues. Regulation of sizes is not a new feature by any means but is already included in many building codes. Such requirements are certainly justified in all codes, just as plumbing ordinances are justified, for they safeguard the health, comfort, and safety of the citizen.

A flue which is too small not only will be costly and annoying, but will create an additional fire hazard because there is danger from attempts to force the furnace in cold weather, causing overheating of the smoke pipe—and even the flue—and also from attempts to secure heat from other and perhaps unsafe means.

A flue which is too small will be a liability to the community in other ways. It is impossible to get proper combustion without adequate draft, which means that when the flue is too small, the air of the city is constantly being contaminated with soot and poisonous gases which should have been consumed in the fire-box. Smoke in itself is costly and detrimental to the health of the community and should be eliminated wherever possible.

The minimum inside effective area of all flues connected with heating apparatus has a definite bearing on the health of people because it is impossible to adequately heat a house when the flue is too small. Every winter much sickness is caused by improperly heated dwellings. Especially in the poorer quarters, cold, damp houses, often due to the heating apparatus failing to function because of inadequate flues, are the cause of many cases of pneumonia and tuberculosis. These conditions could have been avoided with little or no extra expense when the house was built, by having the flues large enough to utilize the heating equipment to the best advantage and, what is very important to the poorer classes, obtain more heat without additional operating expense.

It is true that a building code cannot be responsible for negligence or poverty which may cause sickness and discomfort, but it can and should regulate those things which come within its particular scope and which cannot be controlled by the occupants, who need all the protection which building officials can provide them in these days of clamor for lowered standards on the basis of so-called economy.

The building code cannot afford a consulting service in itself, but by specifying a minimum-sized flue, it is tantamount to recommending that a suitable size be used for any heating equipment which has a capacity greater than the minimum.

Regulations for flue sizes are also desirable in order to permit greater flexibility in the selection of the kind or size of coal. Frequently, in recent years, there have been serious interruptions of the normal coal supply, necessitating resort to variations from the fuel usually burned. At such times it has been found impossible, in many instances, to successfully use the smaller sizes of coal, or even wood, which at that particular time might more easily have been obtained. This lack of adaptability of heating-plants to different kinds or sizes of fuels is in a large measure due to the lack of flue capacity and may have serious effects in cold weather upon the health of an entire community.

After giving home owners ample flues and tight chimneys well located and having the co-operation of coal operators and coal dealers on the one side and of builders and home-owners on the other, there is still an obligation on the part of architects and engineers and on the part of manufacturers of heating and cooking appliances and of heating contractors, to specify, make and instal appliances for attachment to flues in which buckwheat or any other size or kind of coal can successfully, conveniently, and economically be burned.

During some of our recent work it was necessary to refer to the building ordinances governing chimney construction in various parts of the country. We took nine codes from among the nearly two hundred in our library and studied them in detail.

Only five of the nine had even a pretense of requirements as to minimum area and in practically every case these requirements were inadequate and indefinite and were not expressed in sizes of commerically available flue linings or of brick construction, if unlined.

The requirements bore little relation to the possible demands which would be made upon the flue and permitted, in many cases, what would be highly uncomfortable and dangerous construction. For instance, one code stated that:

"Not more than two stoves or two furnaces shall be connected with an 8-inch by 8-inch flue, nor more than four stoves or three furnaces with an 8-inch by 12-inch flue, and one flue only may serve more than one story if properly offset to prevent backdrafts,"

which is practically equivalent to saying "The more crooked you build a chimney the more appliances you can connect to it,"—while at the same time authorities like the A. A. of H. & V. E. and the N. B. F. U. are urging single flues with as few offsets as possible.

That the minimum flue area set forth by a code is in many instances too small is apparent when viewed from a practical standpoint. The ordinance just referred to is plainly of that class when it states that three furnaces may be connected with one 8-inch by 12-inch flue. A similar case was brought to our attention recently by a manufacturer of heating apparatus in a city in Illinois, where it was desired to have the minimum size of the flue increased from 8×12 inches to 12×12 inches (which should really be stated 13×13 inches) because, as was mentioned in a letter requesting information regarding this subject, "Our trouble here is that 98 per cent of furnace users are burning soft coal and most all of our chimneys are 8×12 inches, which means that the flue lining in the 8×12 inches is a scant 7×11 inches inside, and in several instances after we have installed the furnace and have gotten away from the job, the customer will attach an automatic water-heater or laundry stove to this 7×11-inch flue. This causes us all kinds of trouble."

This amendment was later passed, requiring a minimum flue of 12×12 inches for all basement heaters, and our correspondent wrote: "We believe that this amendment to our building code will be of great benefit to the customer as well as the installer in our city, and we sincerely thank you for your co-operation."

Similar trouble is prevalent not only in sections of the country burning bituminous coal or even wood, but in anthracite regions as well.

The American Society of Heating and Ventilating Engineers in its "Preliminary Draft of the Code of Minimum Requirements for the Heating and Ventilating of Buildings," before referred to, recommend a minimum fire-clay flue lining of $8\frac{1}{2} \times 13$ inches, which is a standard size, for furnace, hot-water and steam boilers. This size is nominal and the actual inside dimensions are approximately $7 \times 11\frac{1}{2}$ inches. The inside area is 81 square inches, but scientific tests have proven that a rectangular flue loses effectiveness due to lack of draft action in the corners, and that the effective area is only 70 square inches for a nominal $8\frac{1}{2} \times 13$-inch flue lining. Building codes which specify an 8×8-inch flue theoretically approach an area of 64 square inches but all the area is not effective, and in addition, it is not usually specified whether the given dimensions are outside or inside.

A round flue lining is effective throughout its total inside area but round flues are very seldom used in dwelling-houses, due to the difficulty and additional expense encountered in building the chimney wall.

The proper cross-sectional area for a flue depends upon the rating or size and type of the heating-appliance, that is whether it be warm-air heater, steam or hot-water boiler, stove, range or domestic hot-water heater.

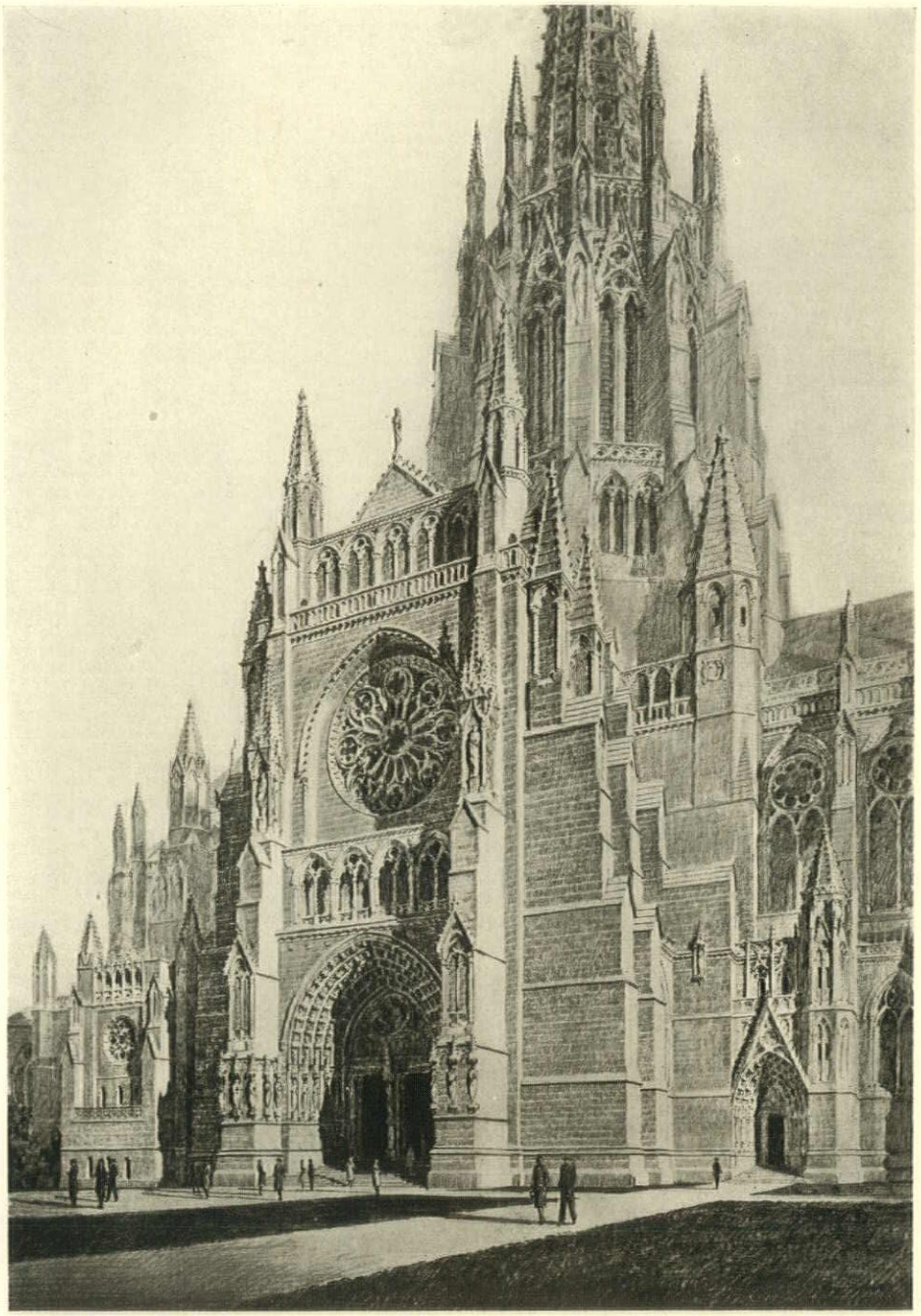
Upon the size of the flue is dependent the satisfactory working of any of the above-mentioned appliances, and for this reason manufacturers of heating and cooking apparatus have always made it a practice to include in their catalogues, tables of flue and smoke-pipe sizes for their particular type of heater.

In few of these cases were the actual inside effective areas of the flue linings taken into consideration.

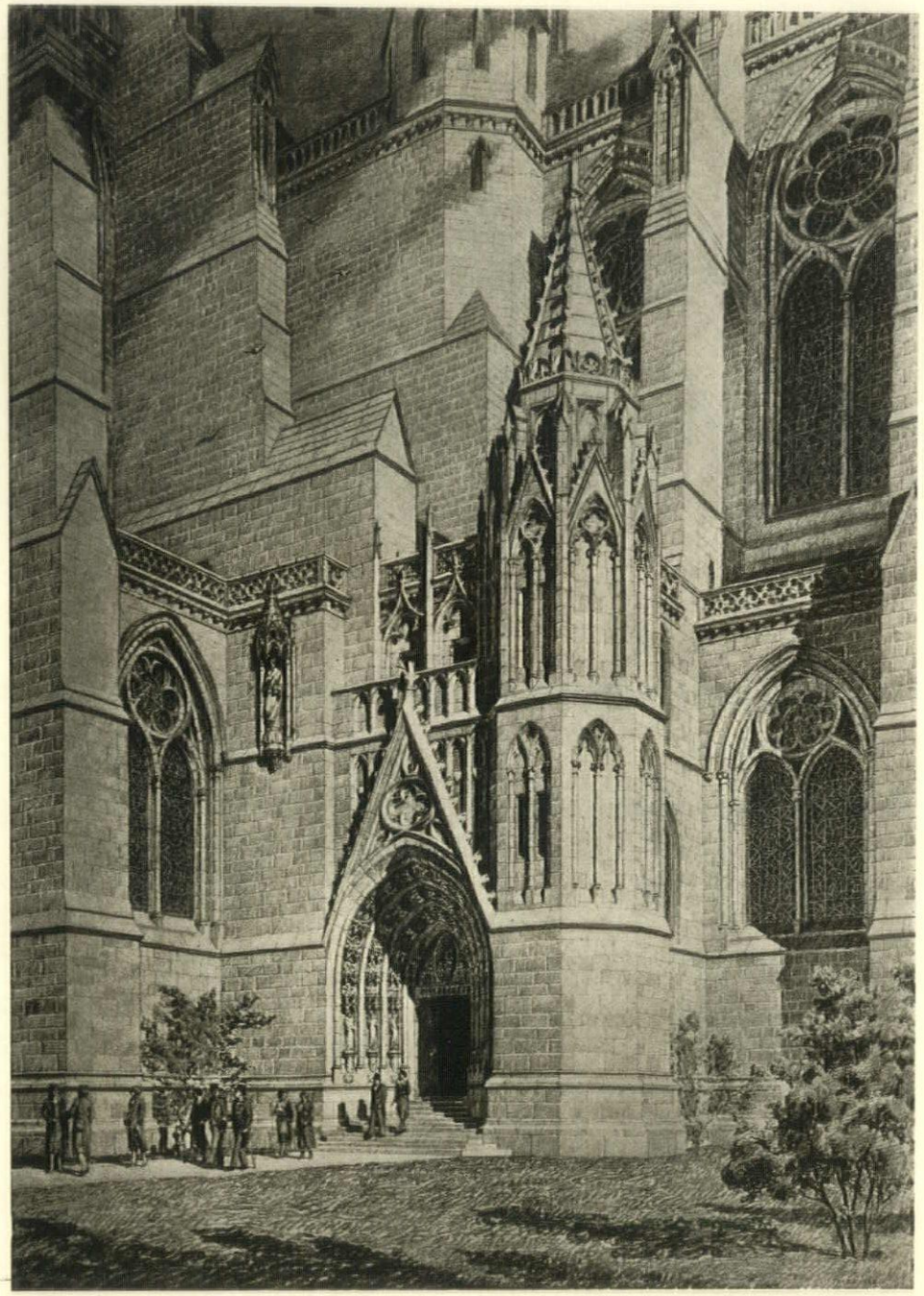
In some tables, the sizes were admittedly purely theoretical and bore little relation to the actual sizes of flue linings commercially available. In other words, they left to the architect or heating engineer the figuring of the flue linings which would give the theoretical dimensions stated in the table and the cross-sectional area most suitable for that particular type of heating-appliance.

It was also found that the table of "Minimum Chimney Flue Sizes and Heights" contained in the "Ordinance for the Construction of Chimneys" of the National Board of Fire Underwriters, did not list the sizes of flue linings which would conform to the standards commercially available. Furthermore, this table was figured on outside sizes and the actual cross-sectional inside area was not stated, nor the thickness of the shell of the lining taken into consideration.

We in America seem to have a prejudice against what in England and other European countries can be made, and are made, features of no mean importance in the design and architectural effectiveness of buildings. If architects, encouraged by engineers and those responsible for building codes, make larger and higher chimneys the fashion, they will be followed everywhere.

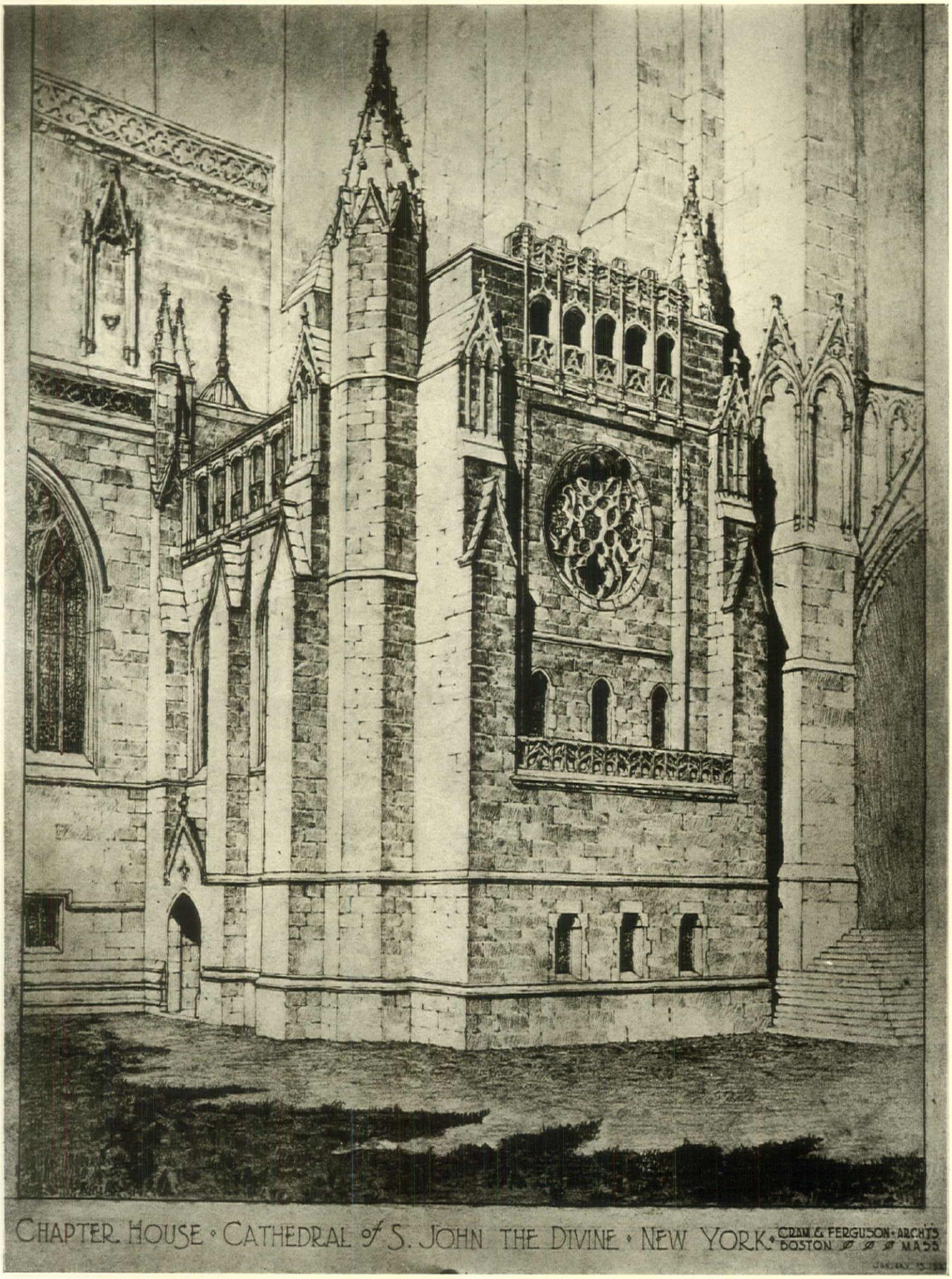


PROPOSED DESIGN FOR THE NORTHWEST TRANSEPTAL PORCH.



PROPOSED DESIGN FOR THE NORTH TRANSEPT.

CATHEDRAL OF ST. JOHN THE DIVINE, NEW YORK CITY.
Cram & Ferguson, Architects, March, 1926.


CHAPTER HOUSE • CATHEDRAL of S. JOHN THE DIVINE • NEW YORK.
CRAM & FERGUSON • ARCHTS
BOSTON MASS

ARCHITECTVRE*
Published by Charles Scribner's Sons
THE PROFESSIONAL ARCHITECTVRAL MONTHLY
*Reg. U. S. Pat. Office

Editorial and Other Comment

A Notable Advance

WE have often wondered why some one didn't think of applying the principle of the skyscraper steel frame to domestic architecture. These great buildings are assembled in detail on the building site, and they go up almost overnight, it seems to the passer-by. The parts fit absolutely and are put together with marvellous skill and stability by the workers in steel.

Ionic column from Temple of Artemis at Sardis. Courtesy Metropolitan Museum of Art.

For years we have been hearing and reading warnings of our depleted forests, of the need for conservation of lumber and reforestation. The wooden house has been a matter of course in most parts of the country for generations, and trees have been cut down ruthlessly to supply the materials for home-building.

In the steel frame invented by John Carroll Broderick and used in a model house designed by A. F. Gilbert, architect, we are on the way to a new era of construction that will mean a tremendous increase in the steel industry and a great advance in the fireproof dwelling. The walls may be of brick, tile, terra-cotta, gypsum, what you will, they might even be covered with a veneer of wood, but the essential thing is that the entire framework is of steel.

The opening of the *Herald Tribune* model house, made of interchangeable steel-frame units, was made an event, and justly so. Representatives of the steel mills and insurance companies were present, and the governor of the State was present in the shape of his understudy, Lieutenant-Governor Lowman.

If the steel men will only get together and have a series of designs made by capable small-house architects, proof against the local builder's "improvement," it would be a blessing to all concerned.

Our small-house architecture has improved, but there are thousands of jerry-built and atrociously designed things going up everywhere.

A series of really good designs that can be easily assembled and offered to home-builders would help the steel house to become the commonplace structural idea of thousands of prospective home-owners.

Bennett Chapple, of the American Rolling Mills, said: "Just as the steel mills have changed the skyline of large cities, the use of steel-frame units in private dwellings will revolutionize the modern home."

Making the Architect Known to the Man in the Street

EVERY member of the architectural profession owes a debt of thanks to Mr. Harvey Wiley Corbett for what he is writing about the profession in *The Saturday Evening Post*. He is a true missionary for a good cause, and he is saying things that even the layman who doesn't care for the arts at all will find entertaining and instructive. Mr. Corbett has a delightful sense of humor, a bit of wit besides, a fund of stories, and he writes in the jargon of every-day thinking, not in any highbrow or "precious" affectation of fine writing.

You read him and are quite sure he is a good fellow, a very human gentleman, and withal one who knows his job and has won high distinction in his profession.

He is writing about "New Stones for Old," and telling a lot of things about architecture and what it means.

We have often wanted to have some one define for us "The Ingredients of an Architect." Here is the answer:

"The medical schools are crammed to the doors, the law is overstocked, engineers abound, but architects are only a drop in the educational bucket. The reason is not far to seek. An architect must first of all be an artist. If he does not possess a love of the beautiful to a paramount degree, if he hasn't the feeling for line and form and mass characteristic of the true artist, he may as well turn over his drawing-board to the cook to mix dough on and take up the saxophone.

"But modern architecture demands, in addition to these rare gifts, a severely practical knowledge of mathematics, keen business judgment, and, above all, the ability to handle men. It is not enough for the architect to design buildings; he must be a strategist, a politician, and a born diplomat."

Good Doctrine

"TO a number of brethren who have written us that they intend to build a church without an architect, permit us to say: *Don't!* . . . The mere ability to make nice drawings bears precisely the same relation to designing a church that beautiful penmanship bears to a good sermon. Many people can draw nice pictures, and produce beautiful floor-plans and elevations, but not one in ten thousand can translate these into building materials, and make the result look as it should."

So it is written in that instructive little magazine, *Lutheran Church Art*. There are many good sermons in stone and brick, some of them inspiring in their grandeur or simplicity, and there are hundreds of small churches all over the country that are enough to put the best of choirs out of tune and make the ministers look for another flock.

Congregations are victims of the man of taste and little

knowledge of the practical difficulties of good building combined with good design.

Preaching is a profession that requires special study and training and architecture is an exacting art that demands something quite beyond the mere presumption of a little book knowledge or "taste," perhaps based on a Cook's six weeks' tour of Europe, or a swing around the circle in this land of ours, where the churches, with few exceptions, of the small communities have always been a cause for sadness.

"It is simply impossible for an ordinary draftsman, or a contractor, or a structural engineer, or a young man who makes drawings for real estate promoters or sash and door mills to turn out designs for a satisfactory church. We have seen too many failures to be misled by theory."

The Baltimore Museum of Art

BALTIMORE is soon to have an adequate building for its Museum of Art. Incorporated in 1914, the war prevented the inauguration of the museum until 1922, when the old Garrett mansion, on Mount Vernon Place, was lent for an experimental period.

Under the presidency of Blanchard Randall, and with Florence N. Levy as director, the Baltimore Museum of Art has grown steadily in interest and the attendance has increased proportionately, until the present location has been outgrown.

The new Museum of Art will be built from a million dollar fund that was provided by popular vote at the 1924 election, when an ordinance was passed with a safe majority in every ward of the city. The site finally selected for the museum is in the most beautiful residential section of Baltimore, adjacent to Wyman Park and Homewood, the estate of the Johns Hopkins University academic department. This site of six acres was presented by the Hopkins University. It is beautifully located with wooded groves near by and many possibilities for fine landscaping effects, and faces one of the most travelled thoroughfares in the residential section of Baltimore, the main artery to the famous Roland Park-Guilford district.

The Municipal Art Commission has just selected as architect of the Museum of Art Howard Sill, one of the best known architects in Baltimore, and an authority on colonial architectures. With him will be associated John Russell Pope, of New York, who is the architect of several buildings of the Johns Hopkins University group.

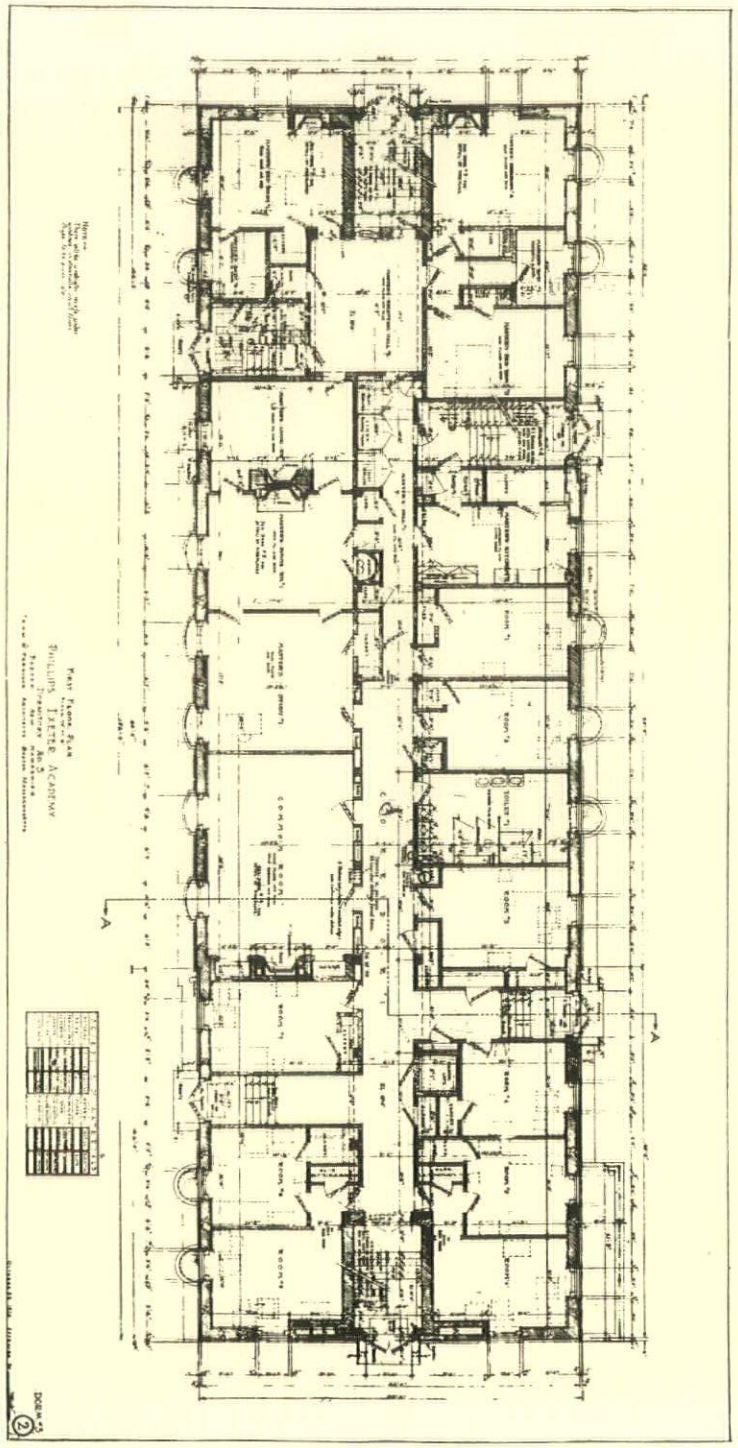
Until the new building is completed the Baltimore Museum of Art will continue to function in the house at 101 West Monument Street.

COURT IN WING K, METROPOLITAN MUSEUM OF ART, NEW YORK CITY.

In the creation of this court a threefold intention has been kept in mind: first, to show Greek and Roman works of art in something like the setting and atmosphere in which they were seen in antiquity; second, to illustrate the important part that color played in classical architecture; and third, to offer the visitor some place where he can find distraction from the customary routine walk through gallery after gallery, where he can rest and meditate undisturbed by any sound save the tranquil plashing of water.

CILLEY HALL, SOUTH STAIRCASE END AND WEST FRONT, FACING COURT. Cram & Ferguson, Architects.

DORMITORIES FOR PHILLIPS EXETER ACADEMY, EXETER, N. H.



PLANS.

COMMON ROOM IN WENTWORTH HALL. Cram & Ferguson, Architects.

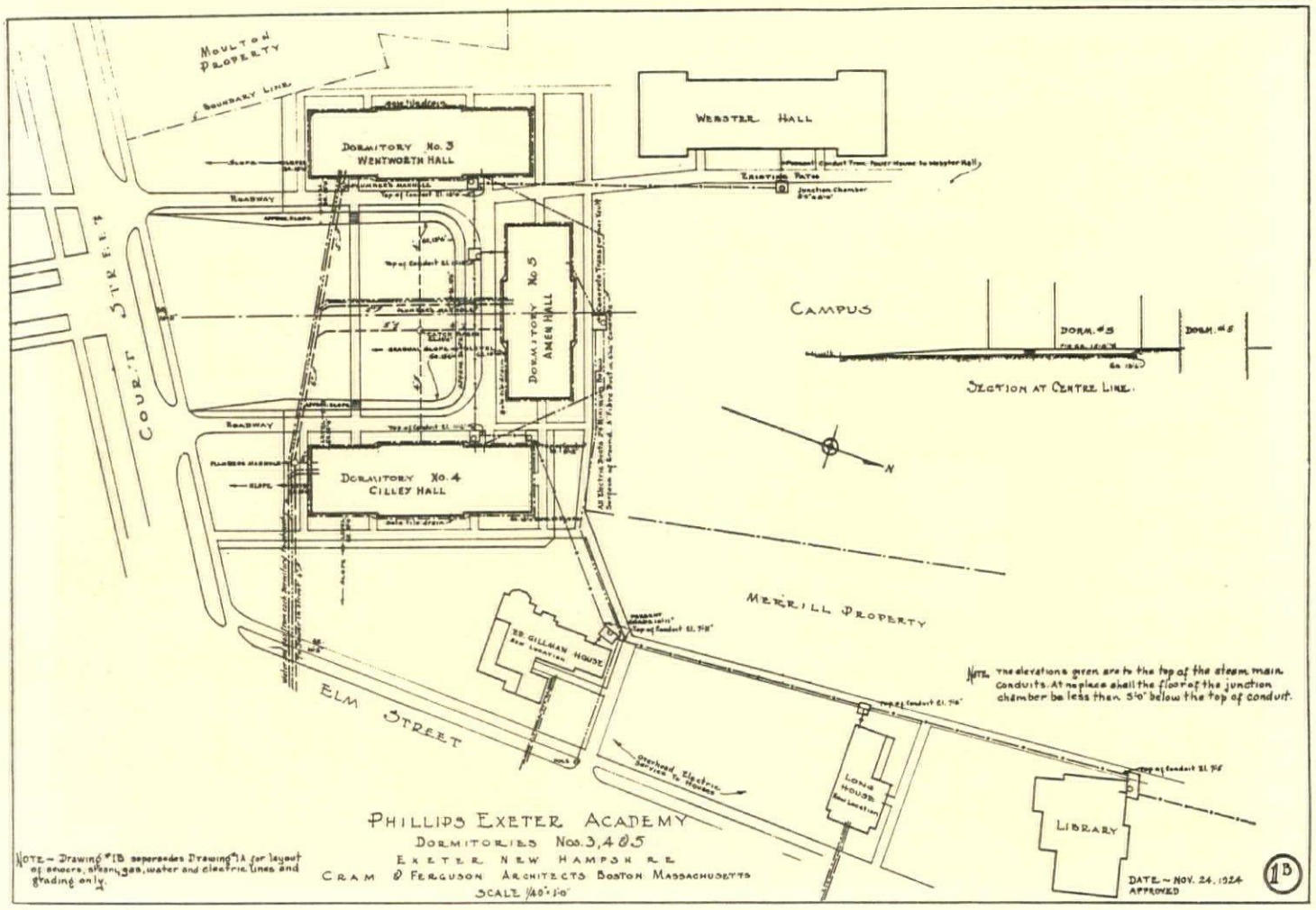
(Similar common rooms in Cilley and Amen Halls.)

DORMITORIES FOR PHILLIPS EXETER ACADEMY, EXETER, N. H.

AMEN HALL, VIEW OF OPEN COURT, DORMITORIES FOR PHILLIPS EXETER ACADEMY, EXETER, N. H.

Cram & Ferguson, Architects.

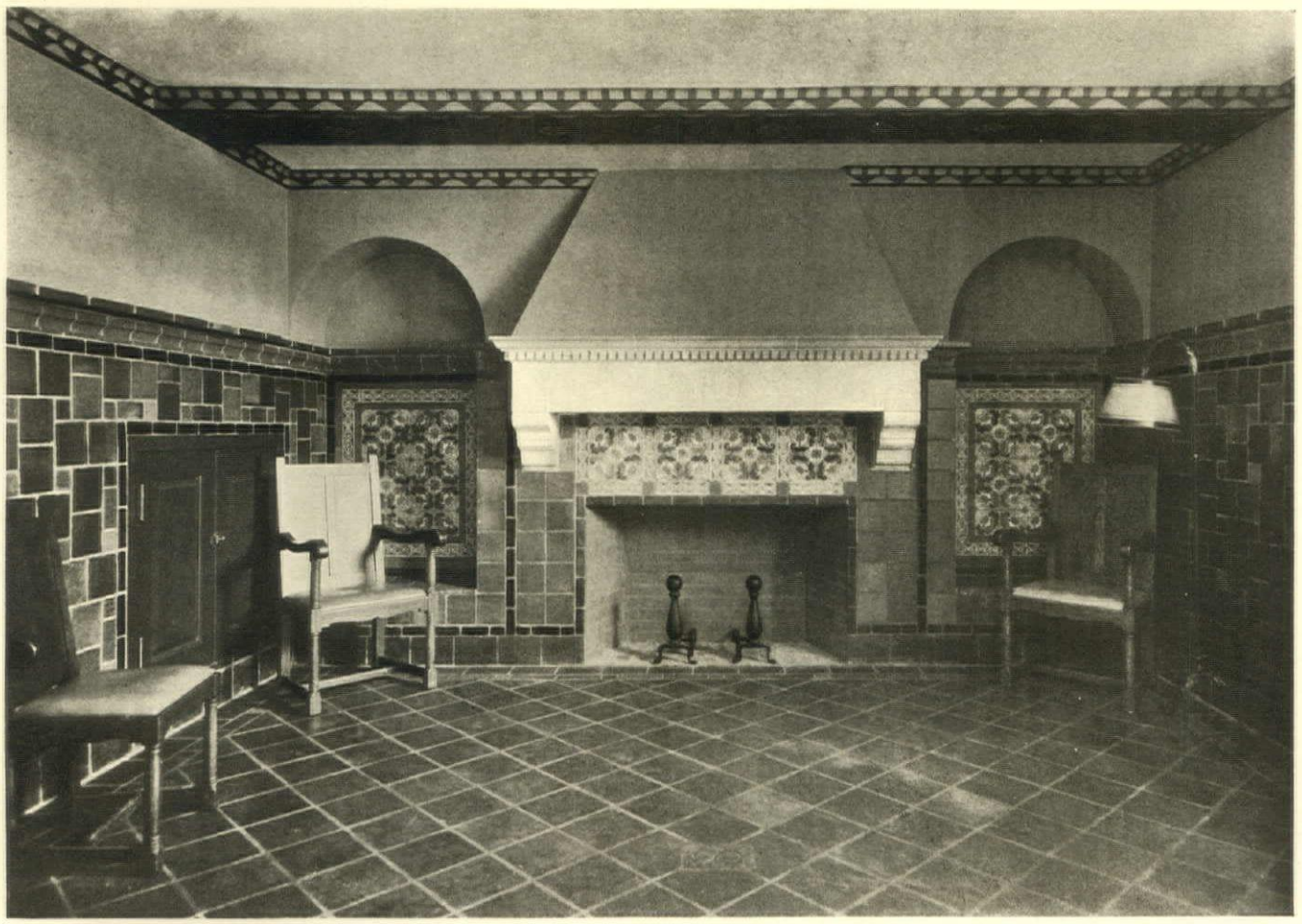
GENERAL VIEW FROM SOUTHWEST. WENTWORTH ON LEFT, AMEN IN CENTRE, AND CILLEY ON THE RIGHT.



PLOT PLAN. Cram & Ferguson, Architects.

DORMITORIES FOR PHILLIPS EXETER ACADEMY, EXETER, N. H.

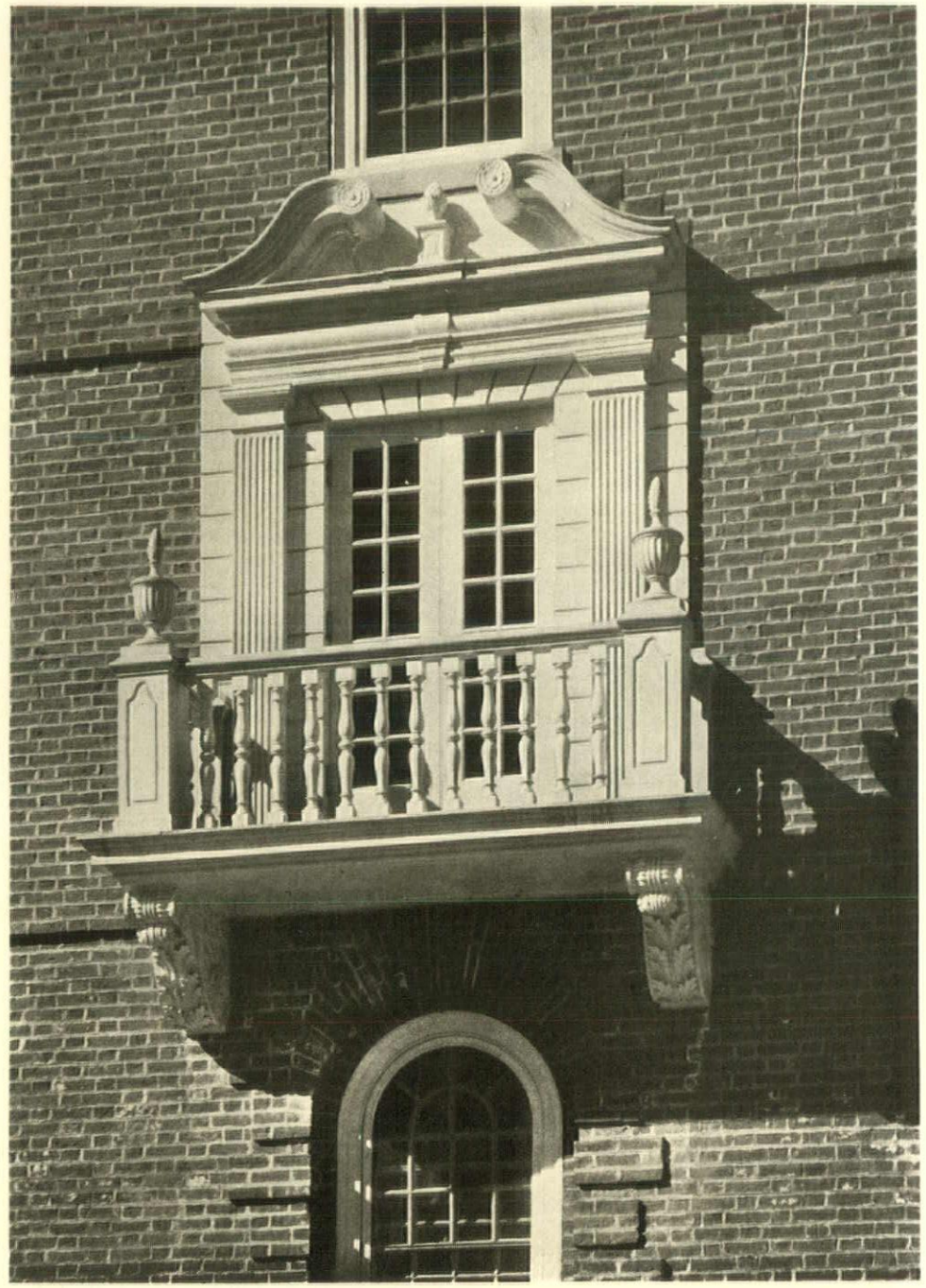
COMMON ROOM IN CILLEY HALL. (Similar common rooms in Wentworth and Amen Halls.)



SMOKING–ROOM IN AMEN HALL. (Similar smoking-rooms in Wentworth and Cilley Halls.) Cram & Ferguson, Architects.

DORMITORIES FOR PHILLIPS EXETER ACADEMY, EXETER, N. H.

DETAIL OF ENTRANCE TO CILLEY HALL.



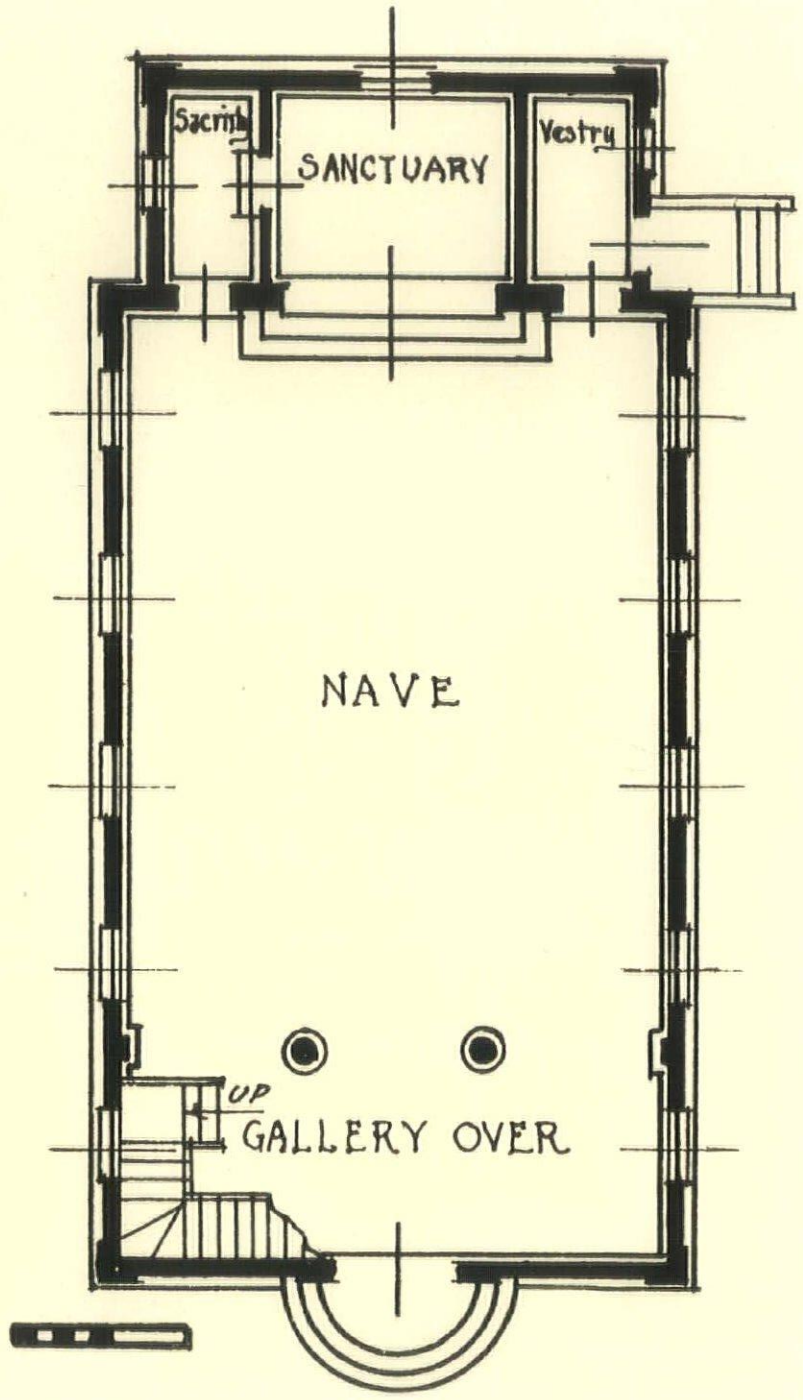
A BALCONY ON WENTWORTH HALL. Cram & Ferguson, Architects.

DORMITORIES FOR PHILLIPS EXETER ACADEMY, EXETER, N. H.

WHITEFIELD MEMORIAL CHAPEL, BETHESDA ORPHANAGE, SAVANNAH, GA. Simons & Lapham, Architects; Levy, Clarke & Bergen, Associate Architects.

This little chapel was designed in the character common to those found in the old parishes of South Carolina and Georgia during the early part of the eighteenth century.

INTERIOR.



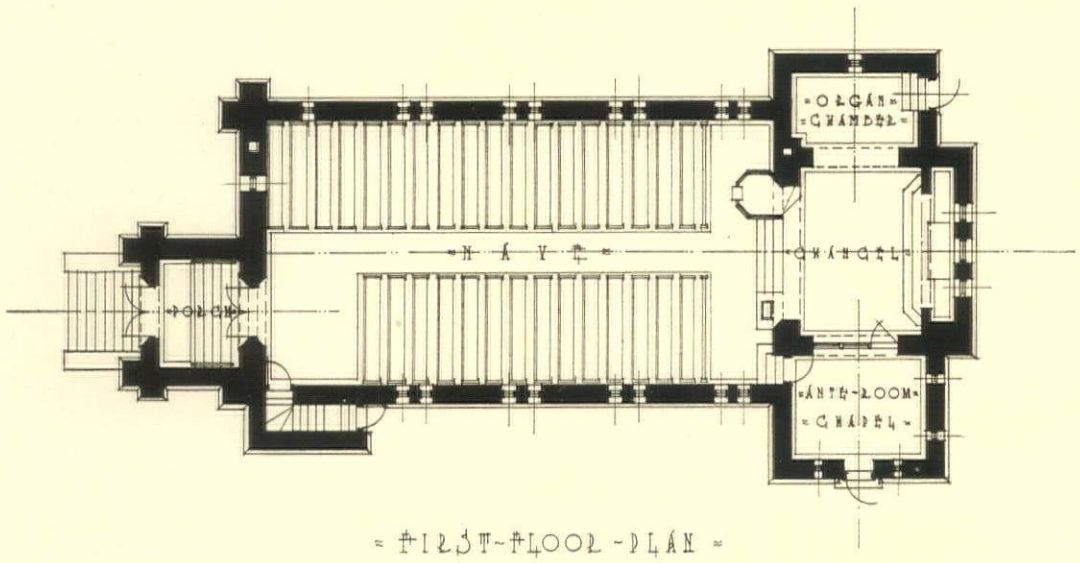
PLAN.

WHITEFIELD MEMORIAL CHAPEL, BETHESDA ORPHANAGE, SAVANNAH, GA.

Simons & Lapham, Architects; Levy, Clarke & Bergen, Associate Architects.

Chapel built by Georgia Chapter, Colonial Dames of America, as a memorial to George Whitefield, founder of Bethesda Orphanage in 1740.

HELEN HUGHES MEMORIAL CHAPEL, SILVER BAY-ON-LAKE GEORGE, N. Y. Allen & Collens, Architects.

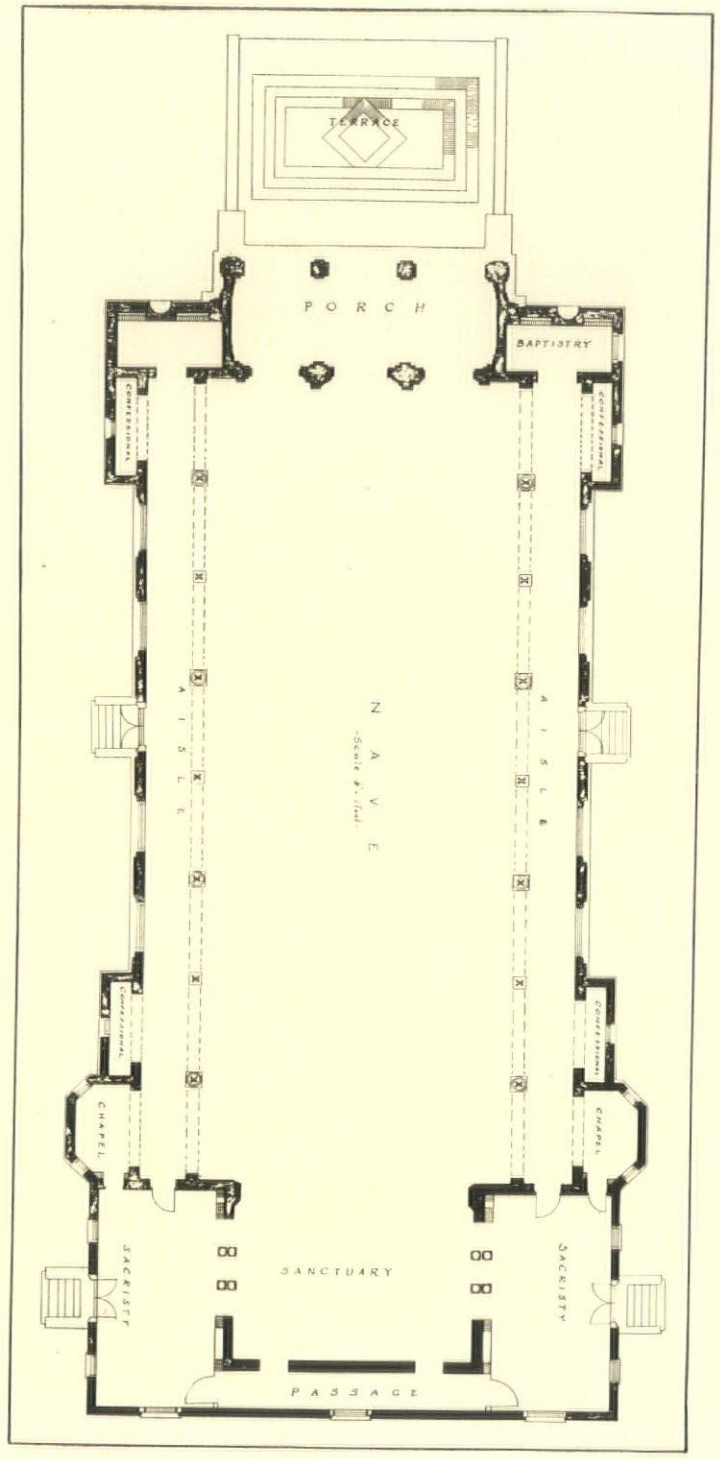


FIRST-FLOOR PLAN

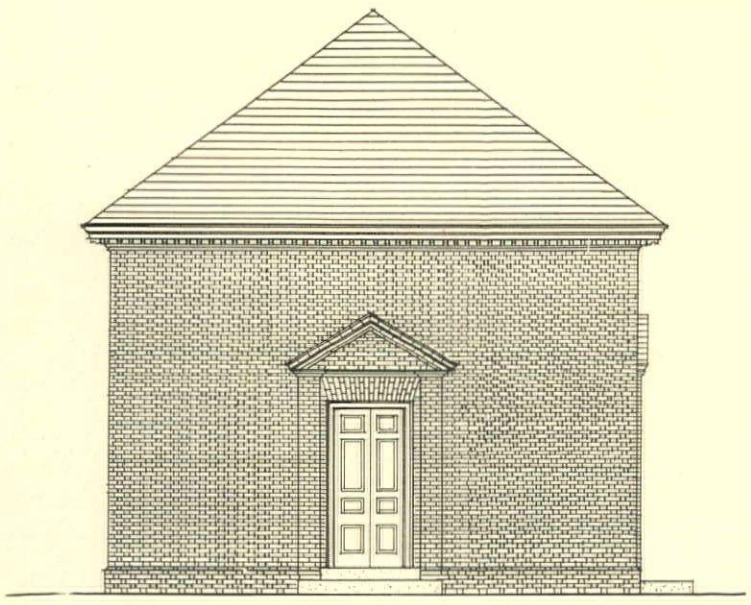
HELEN HUGHES MEMORIAL CHAPEL
SILVER BAY-ON-LAKE GEORGE, N.Y.

HELEN HUGHES MEMORIAL CHAPEL, SILVER BAY-ON-LAKE GEORGE, N. Y. Allen & Collens, Architects.

CHURCH OF ST. ANTHONY OF PADUA (ROMAN CATHOLIC), NEW ORLEANS, LA.

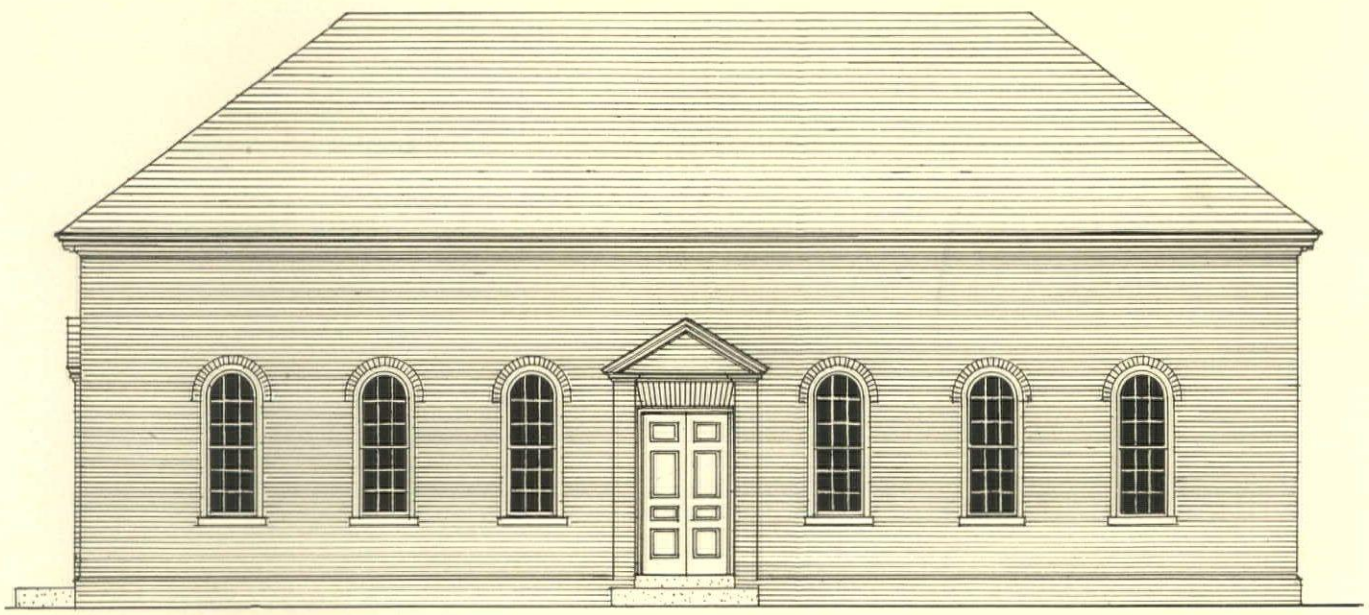


Wogan & Bernard, Architects.



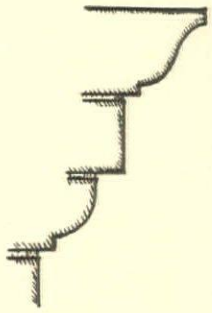
West Elevation

Scale 2 4 6 8 10 12 14 16 18 20 Feet



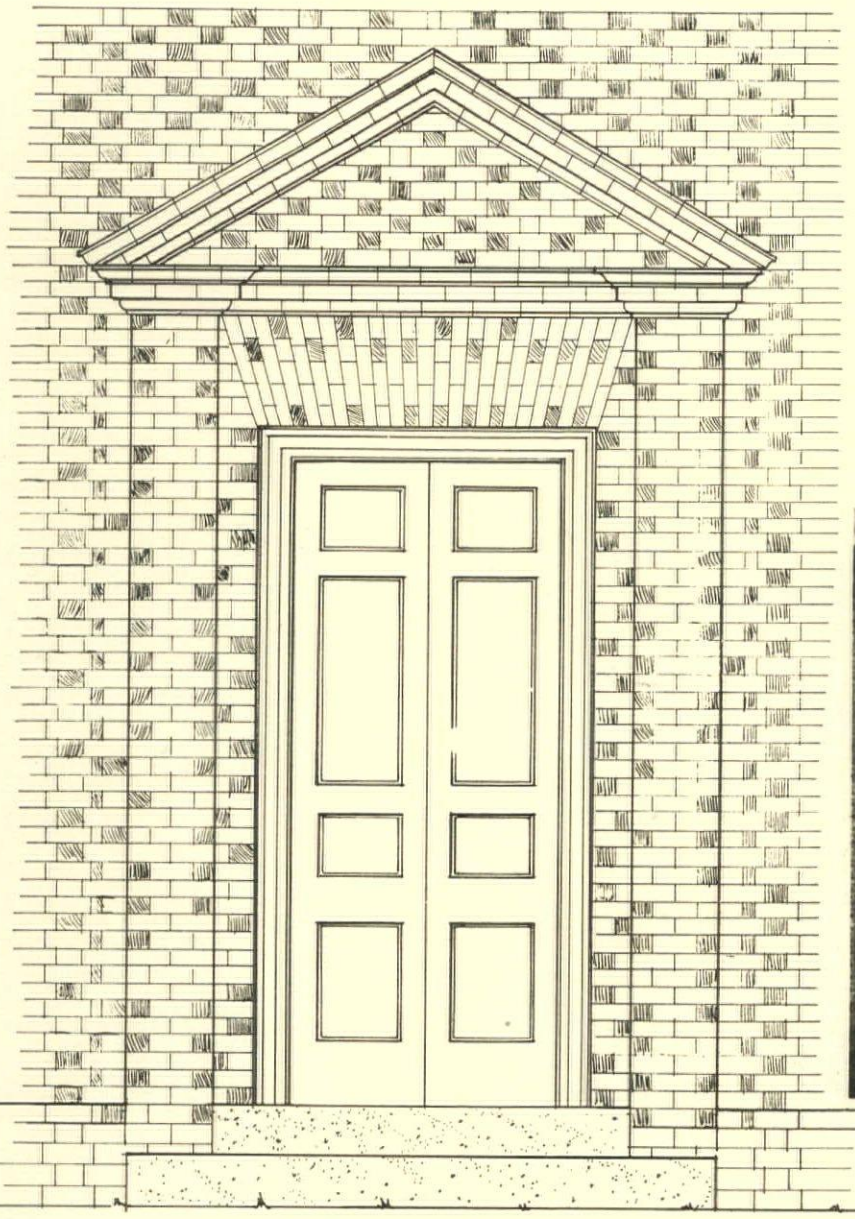
South Elevation

Lambs Creek Church,
Lambs Creek, King George County,
Virginia
Built in 1717
Measured and Drawn by Albert P. Erb 1925

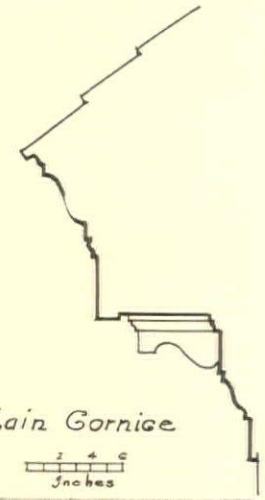


Detail of Cornice on Doorway

1 2 3 4 5 6
Inches

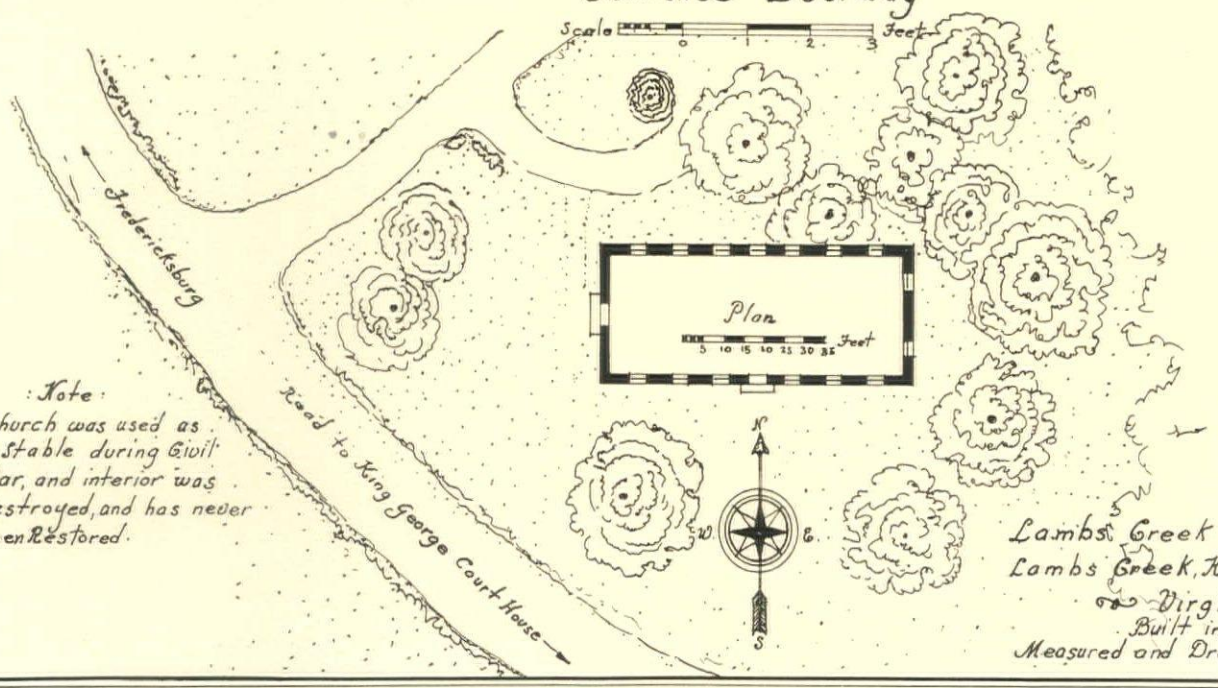


Entrance Doorway



Main Cornice

1 2 4 6
Inches



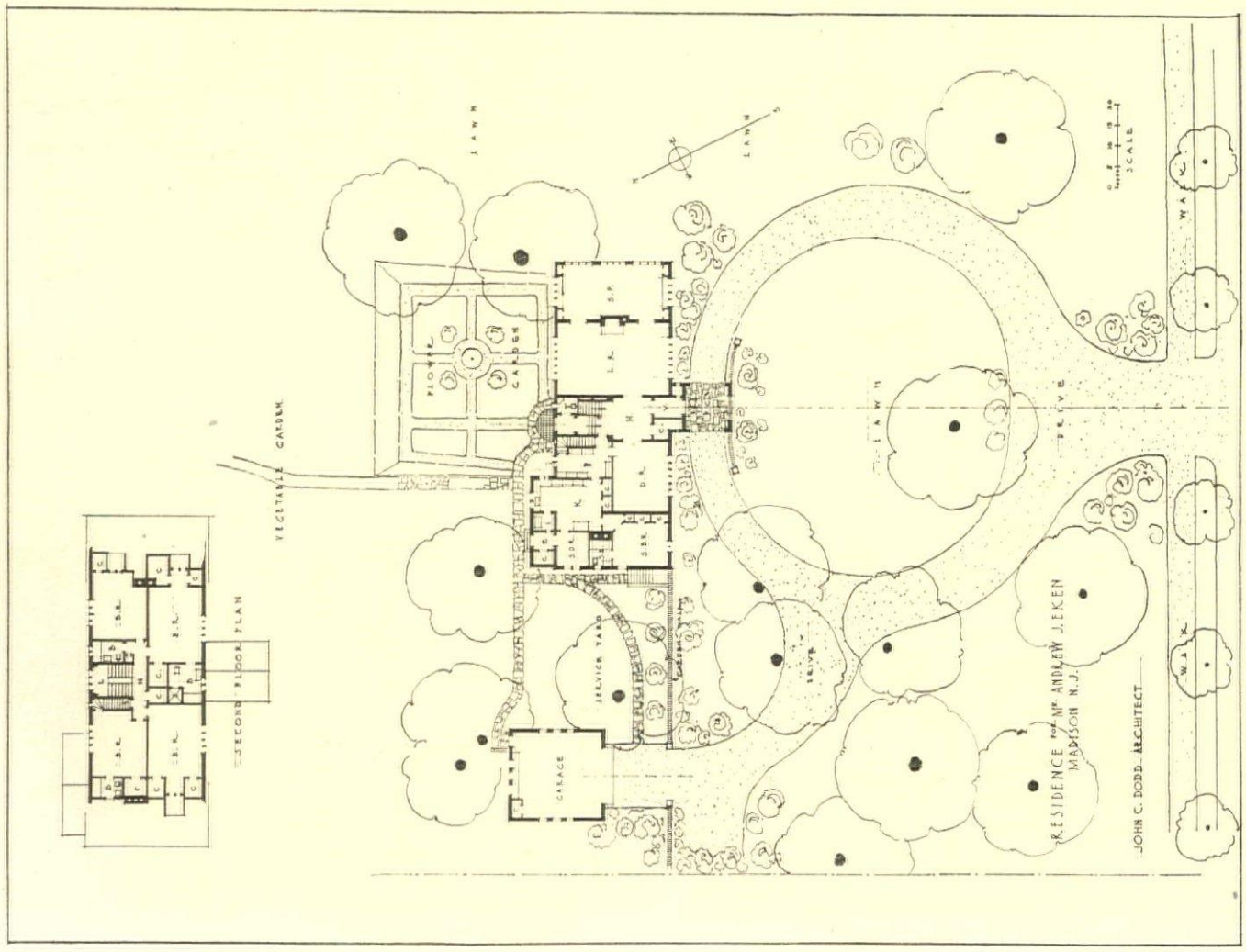
Note:
Church was used as a Stable during Civil War, and interior was destroyed, and has never been Restored.

Lambs Creek Church
Lambs Creek, King George County.
Virginia
Built in 1717
Measured and Drawn by Albert P. Erb 1925

RESIDENCE, ANDREW J. EKEN, MADISON, N. J.

John C. Dodd, Architect.

GARAGE.



PLANS.

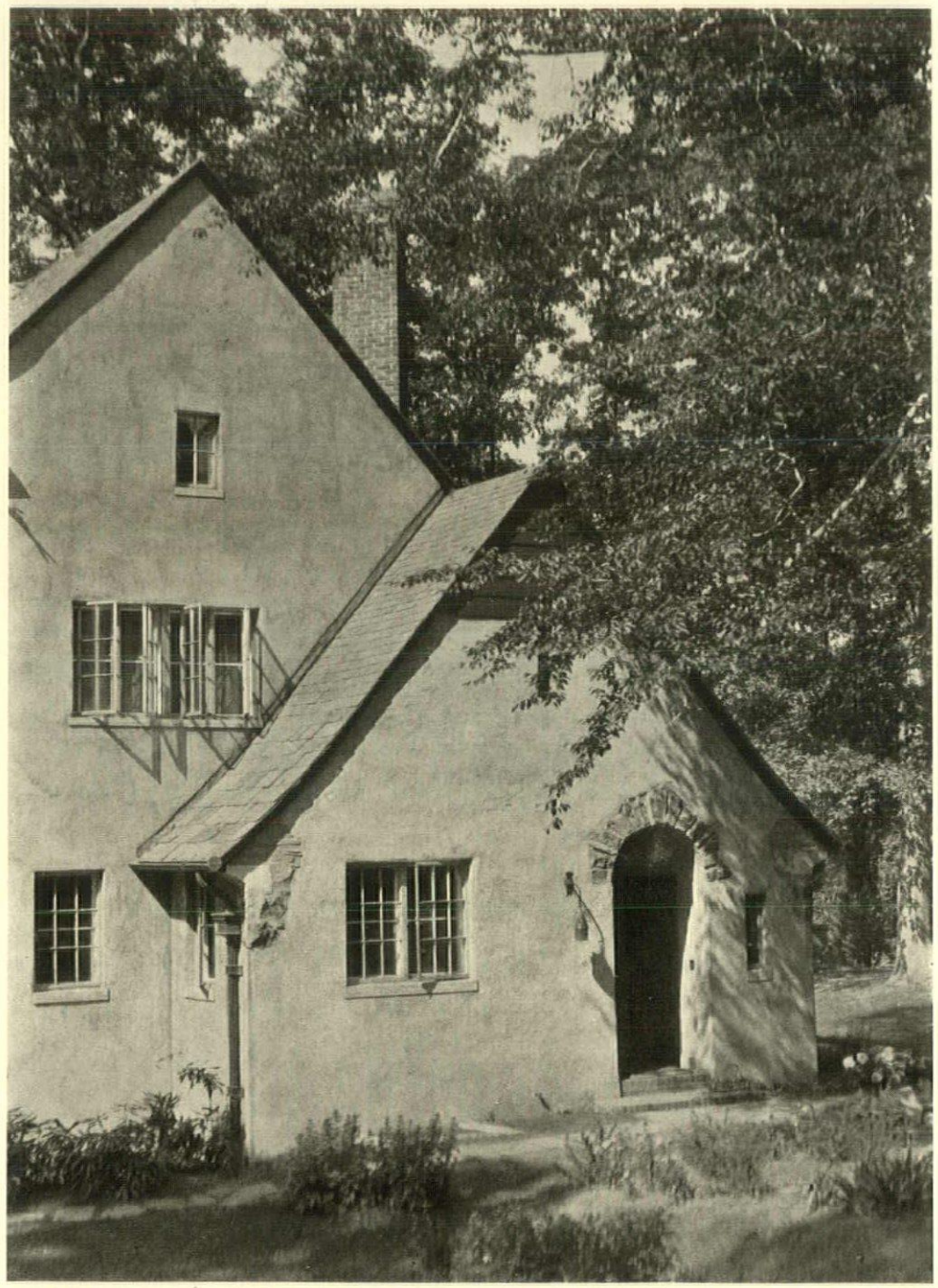
RESIDENCE, ANDREW J. EKEN, MADISON, N. J.

John C. Dodd, Architect.

RESIDENCE, ANDREW J. EKEN, MADISON, N. J.

John C. Dodd, Architect.

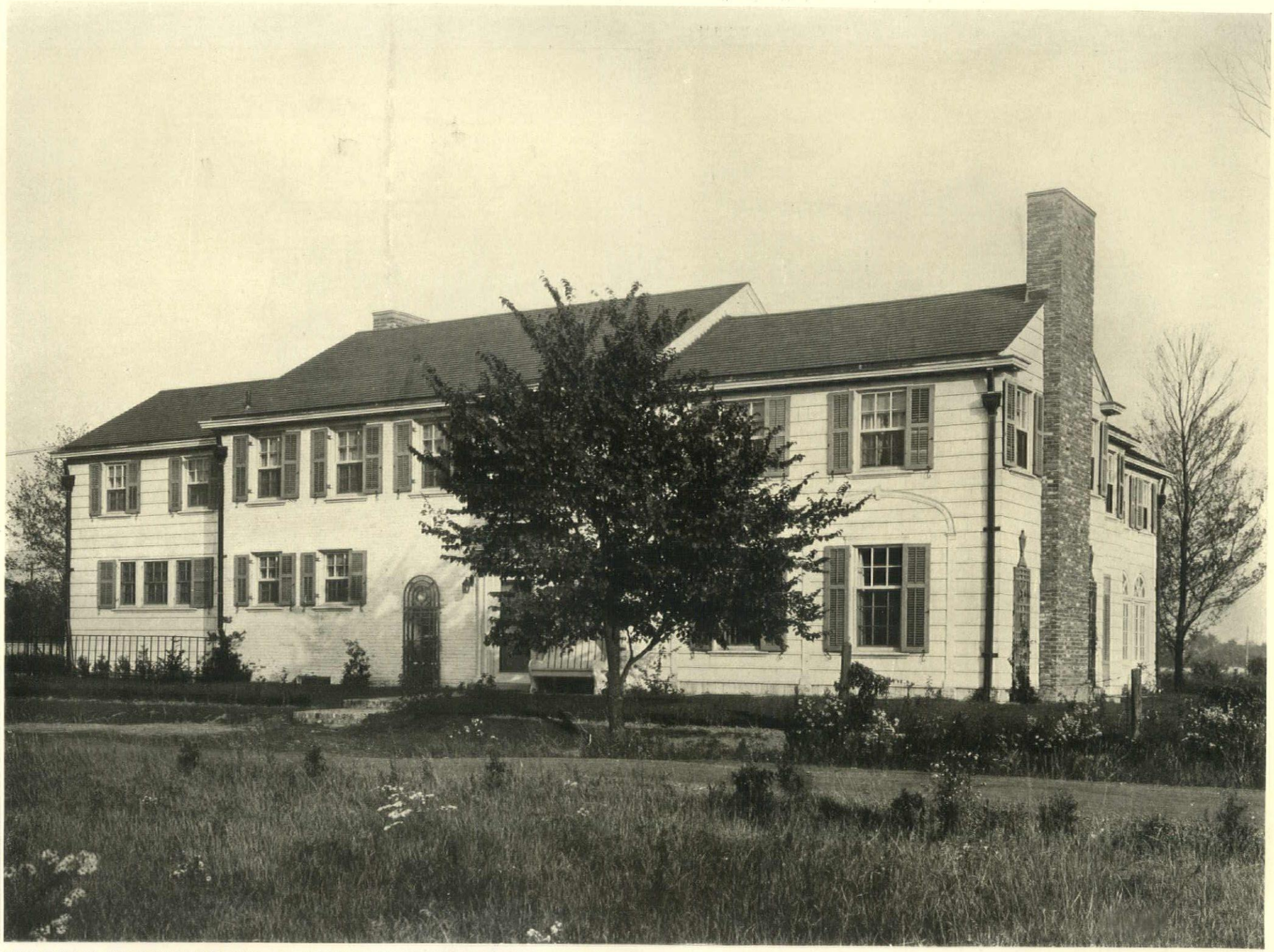
DETAIL.



DETAIL.

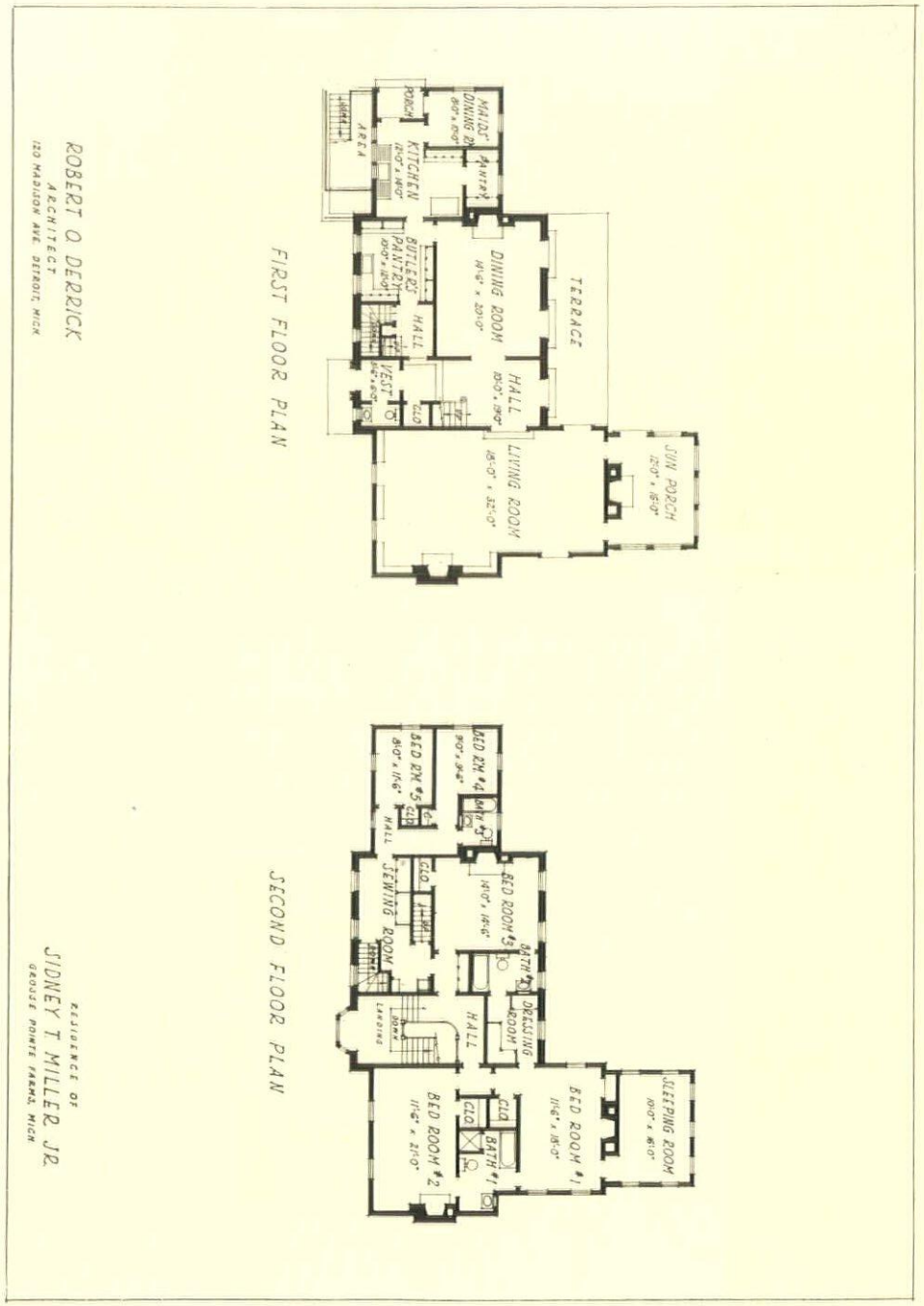
RESIDENCE, ANDREW J. EKEN, MADISON, N. J.

John C. Dodd, Architect.



RESIDENCE, SIDNEY T. MILLER, JR., GROSSE POINTE FARMS, DETROIT, MICH.

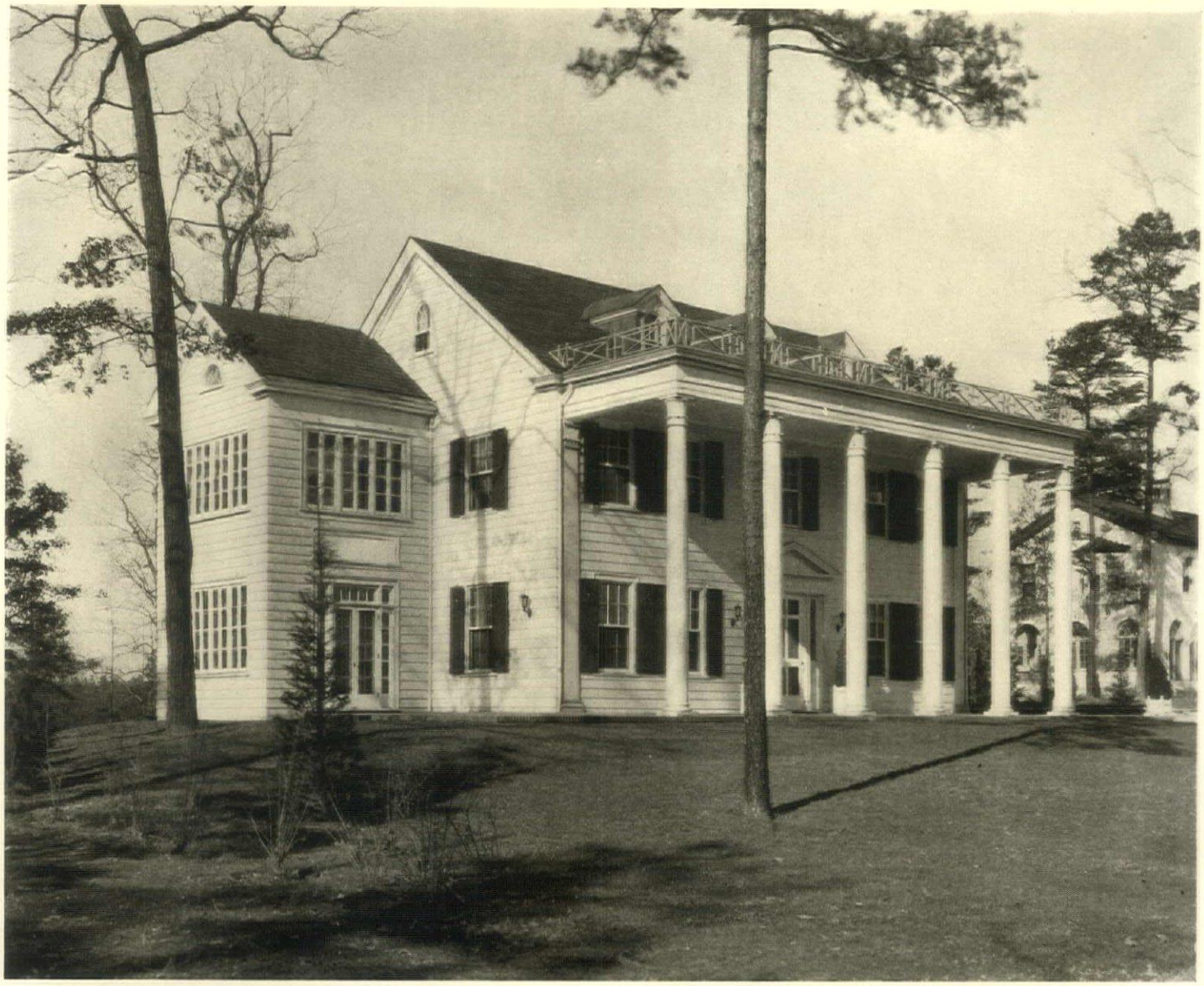
Robert O. Derrick, Architect.

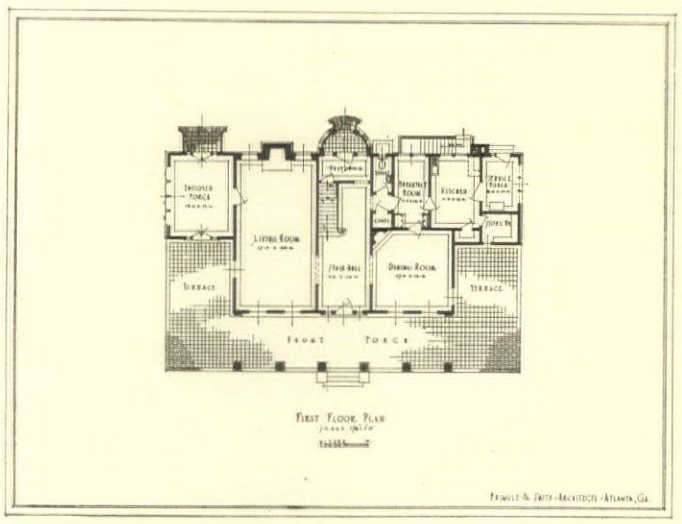


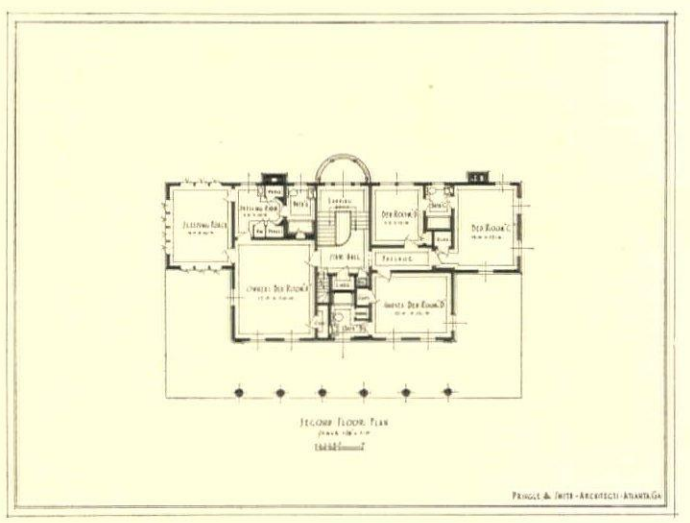
PLANS.

ENTRANCE DETAIL. Robert O. Derrick, Architect.

RESIDENCE, SIDNEY T. MILLER, JR., GROSSE POINTE FARMS, MICH.

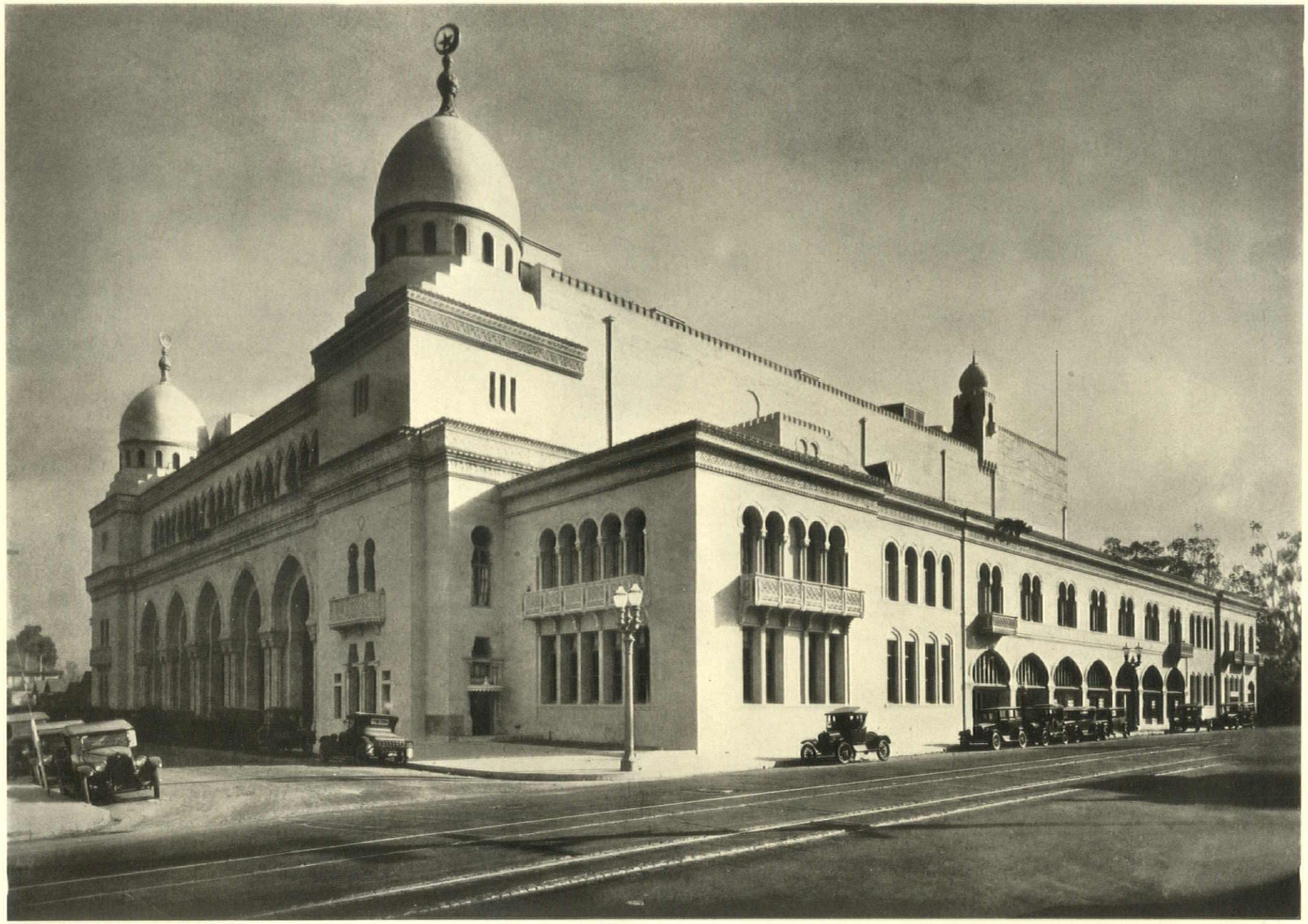






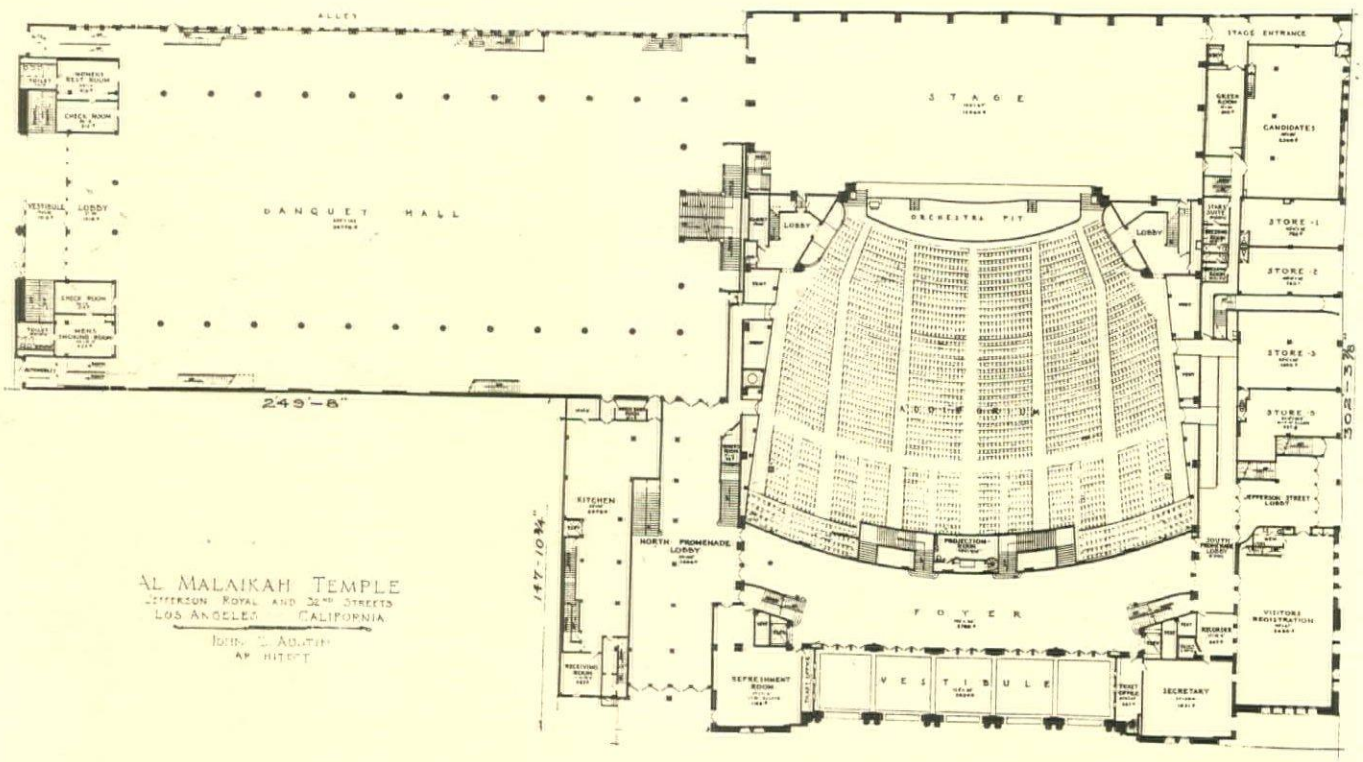
RESIDENCE IN ATLANTA, GA.

Pringle & Smith, Architects.

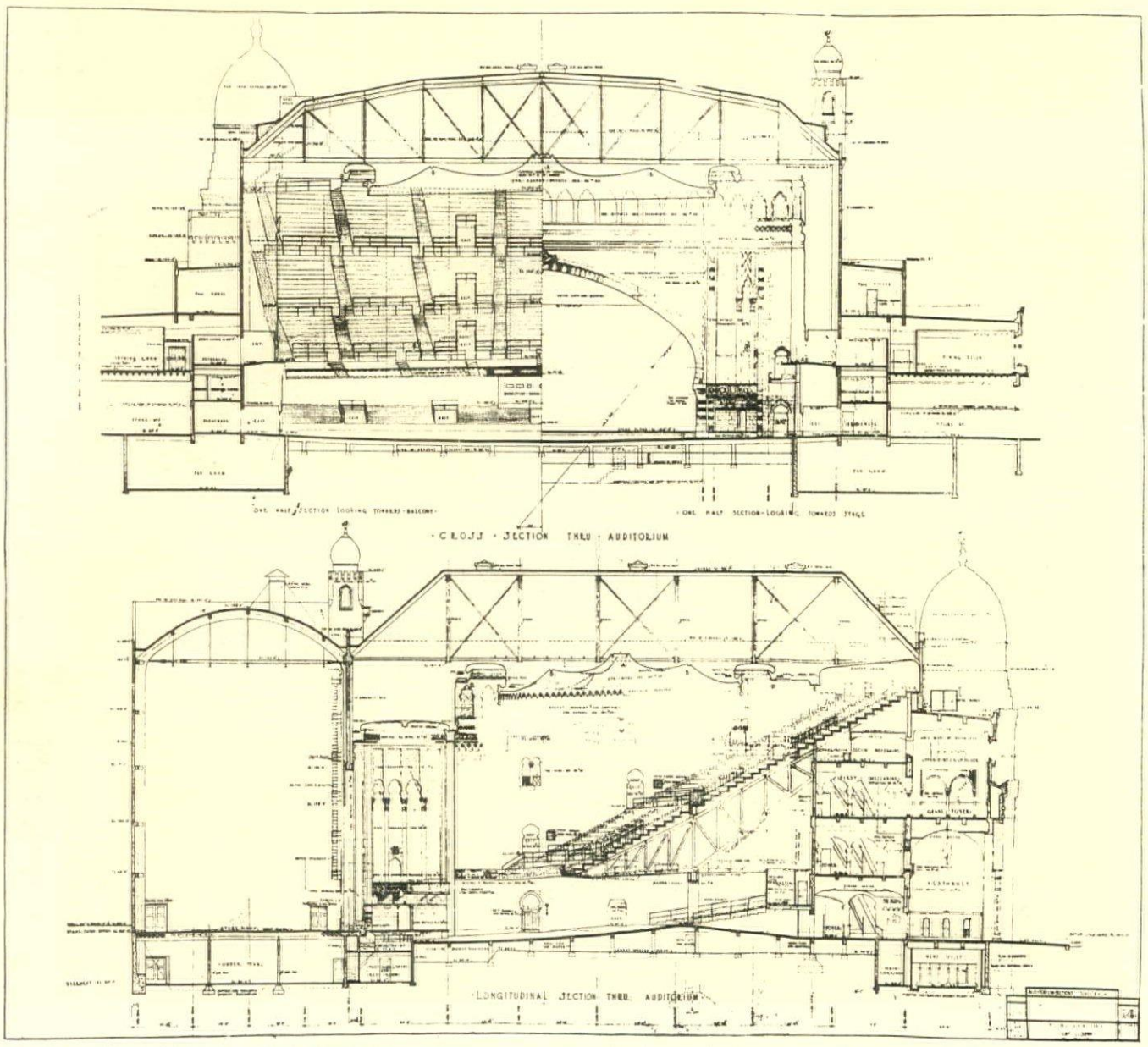


AL MALAIKAH TEMPLE, LOS ANGELES, CALIF.

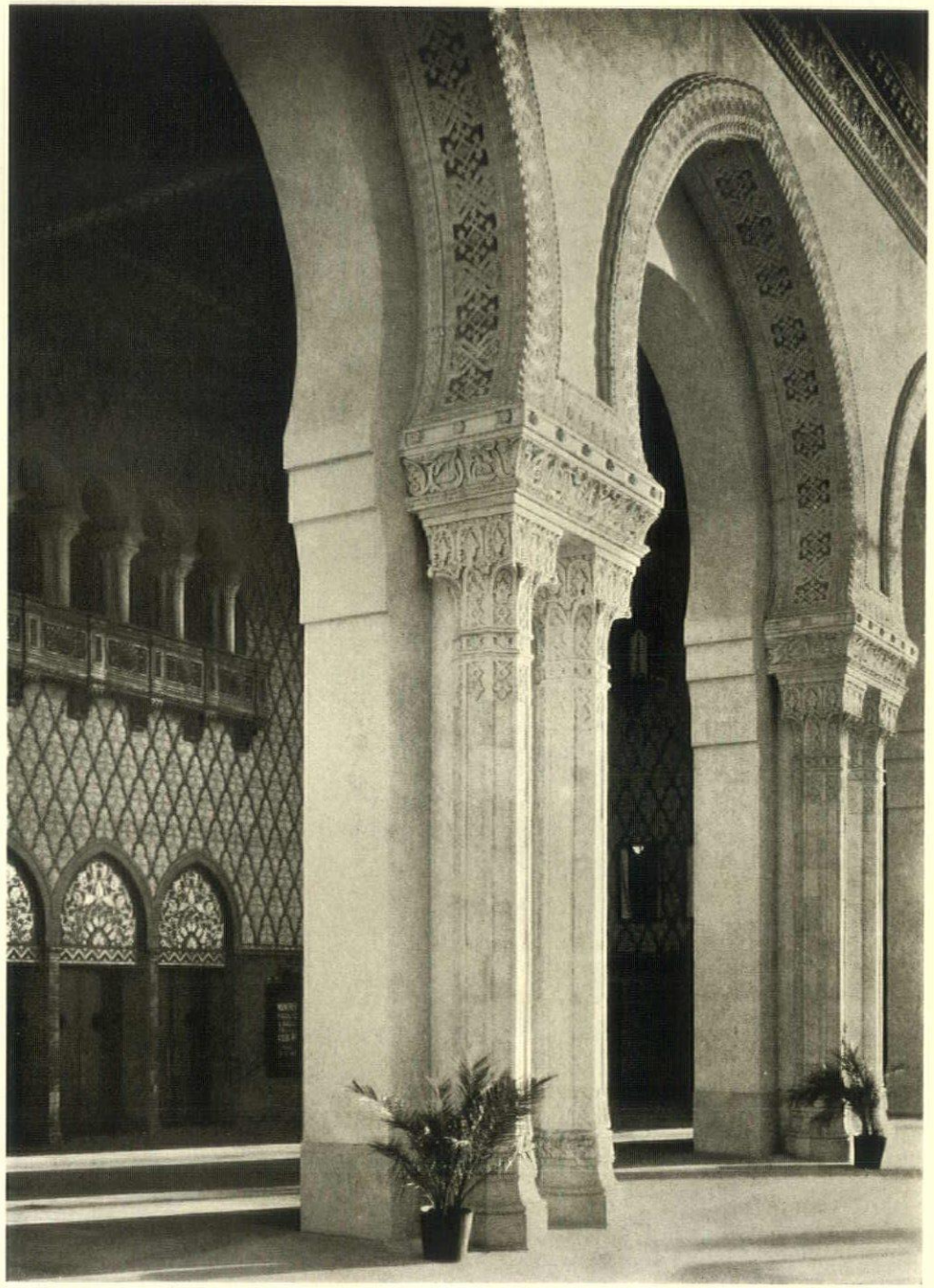
John C. Austin, Architect; G. A. Lansburgh, Collaborating Architect.



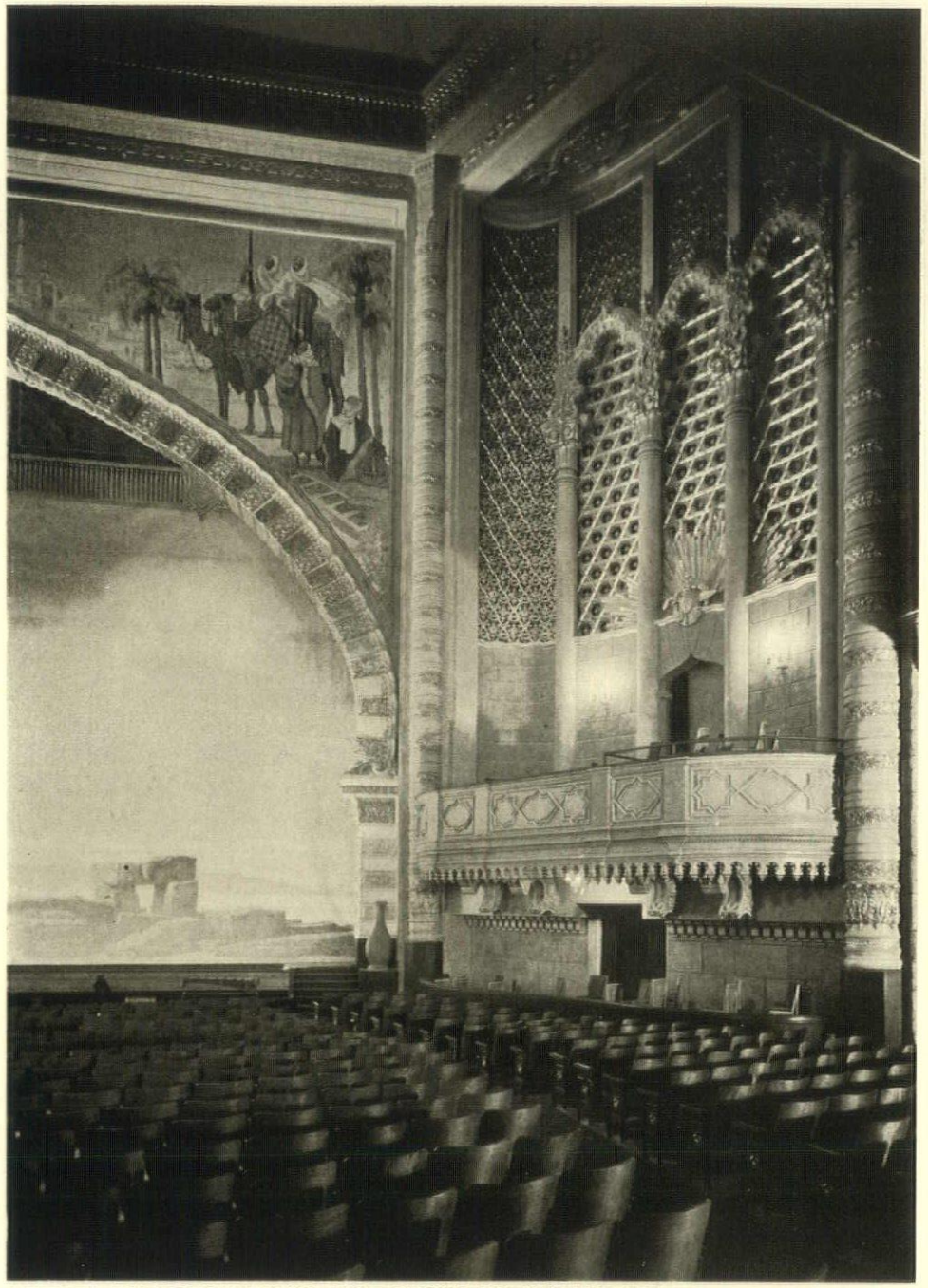
AL MALAIKAH TEMPLE
JEFFERSON, ROYAL AND 36TH STREETS
LOS ANGELES CALIFORNIA
JOHN C. AUSTIN
ARCHITECT



AL MALAIKAH TEMPLE, LOS ANGELES, CALIF. John C. Austin, Architect; G. A. Lansburgh, Collaborating Architect.



DETAIL OF STONE CARVING AND DECORATION OF MAIN ENTRANCE LOBBY.



DETAIL OF PROSCENIUM AND BOXES IN AUDITORIUM.

AL MALAIKAH TEMPLE, LOS ANGELES, CALIF.
John C. Austin, Architect; G. A. Lansburgh, Collaborating Architect.

ONE OF THE PARLORS.

INTERIOR OF PAVILION (BANQUET HALL).

AL MALAIKAH TEMPLE, LOS ANGELES, CALIF.
John C. Austin, Architect; G. A. Lansburgh, Collaborating Architect.

The Al Malaikah Temple and Pavilion, Los Angeles, California

John C. Austin, F. A. I. A., Architect; G. A. Lansburgh, Collaborating Architect

ABOUT three years ago I entered into a contract with the Al Malaikah Auditorium Company to design and supervise the construction of a building, part of which could be used for Shrine ceremonials and, in addition to this, for theatrical and operatic performances. The Shrine needs a large banquet-hall in conjunction with its ceremonials, and the city of Los Angeles has long needed a large auditorium for convention purposes, banquets, dances, and the like.

The auditorium portion of the building will seat 6,480 people, exclusive of the boxes and the orchestra. The orchestra is large enough for 150 players. The proscenium arch is 100 feet wide, and the stage is 78 feet by 195 feet. This stage is one of the largest—if not the largest—in America. There is an organ in two sections—one on each side of the stage above the boxes.

The gallery seats 3,350. It is supported by a steel truss 186 feet clear span and by cantilever trusses passing through and over the main truss. These cantilevers extend beyond the supporting truss 45 feet 6 inches. The weight of the main balcony truss is 250 tons.

The Moorish style of architecture was used so that it would correspond in a measure with the style of dress and ceremonials of the Shrine organization.

The acoustics of the building are remarkably good, it being possible to distinguish clearly a voice from the stage at the farthest seat in the gallery, 198 feet distant. The Public Address System has been installed, making it possible not only to hear everything that is said on the stage throughout the main auditorium, but throughout the banquet-hall adjacent.

The pavilion (or banquet-hall) is so arranged that it can be used in conjunction with the main Auditorium. The same style of architecture has been employed in both portions of the building, both of which are of structural steel and reinforced concrete. The walls and ceilings of the banquet-hall have been decorated directly on the concrete, as there is no plaster on this portion of the building. Neither is there any plaster on any of the lobbies or corridors of the auditorium portion of the building, all of the decoration being done in the same manner as in the banquet-hall.

Book Reviews

PRACTICAL PICTORIAL COMPOSITION. A GUIDE TO THE APPRECIATION OF PICTURES. By E. G. Lutz. With Pen-and-Ink Interpretations and Diagrammatic Analyses by the author. Charles Scribner's Sons, New York.

There is no dynamic symmetry in Mr. Lutz's teaching. He believes in the traditional elements of composition and good design, and makes them clear in both text and illustrations, pointing out the principles of good composition and showing their application in famous examples. Good composition is half the battle in a picture, and it is surprising to see how many men and women fail in this essential.

HOW TO STUDY ARCHITECTURE. By Charles H. Caffin. An Attempt to Trace the Evolution of Architecture as the Product and Expression of Successive Phases of Civilization. With over 200 illustrations. Dodd, Mead & Co., New York.

Many will welcome this new edition of Mr. Caffin's interesting and useful book. He was an enthusiast in all his writing, and brought to his work a fine scholarship and a capacity for inspiring his readers with much of his own interest in his subject.

The story of the beginnings and development of architecture is the story of the development of the human race, and each of the varying peoples of the world has manifested its ideals of design and structure after its own particular fashion. Mr. Caffin makes us first acquainted with the character of the people, giving a brief summary of the civilizations identified with architecture from Egypt to modern times, and then points out particular structures and the men who made them possible. The book is written in clear terms without any needless dwelling on technicalities, and makes interesting reading for both the layman and the student.

It is a book from which to get a summary impression of the story of architecture, of the great names associated with its growth, and representative examples of the outstanding architecture of the world. There is a helpful glossary of architectural terms and an excellent index.

SKETCHING IN LEAD PENCIL FOR ARCHITECTS AND OTHERS. By Jasper Salwey, A. R. I. B. A. Charles Scribner's Sons, New York.

This most attractive book places in the hands of student, amateur, architect, and artist instructions, with many examples for study, for direct work in the open. There is a delightful chapter, "A Day's Work," about a sketching journey near London. "A Week with a Sketch Book and Two-Foot Rule" supplements your sketches with helpful and useful measurements. One on "Possibilities and Limitations" and another on "Selected Examples of Subject and Style" show work by many well-known draftsmen, including two drawings by Mr. Eggers. It is a "practical" book, beautifully illustrated.

ROMAN ARCHITECTURE AND ITS PRINCIPLES OF CONSTRUCTION UNDER THE EMPIRE: With an Appendix on the Evolution of the Dome up to the XVIIth Century. By G. T. Rivoira. Translated from the Italian by G. McN. Rushforth. Illustrated. 4to. The Oxford University Press, American Branch.

The author of this notable and scholarly book died in 1919, conscious, however, that his life-work was practically completed. His widow, assisted by friends, undertook the publication of "Architettura Romana" in 1921, and the translator of the volume had the benefit of her advice in the making of the English edition. In the biographical note we are told that "The foundations on which he was to build must be secure, and the real facts about the buildings concerned must be investigated anew, not merely restated on the authority of previous writers." His architectural interests were wide and he had visited and studied in many out-of-the-way regions. Many will remember his volume on "Lombardic Architecture" and "Moslem Architecture," and his theory regarding the Roman origin of the Lombardic vaulted basilica. You realize as you read the chapters of this book the patient and first-hand character of his investigations. In a preface written by himself he says:

"It was in the reign of Augustus, the founder of the Roman Empire, that Vitruvius described the methods of building in his treatise 'Of Architecture,' a book which, in spite of its defects and omissions, still enjoys a vigorous life, and will continue to do so as long as the study of ancient architecture is valued, or until an invasion of barbarism has destroyed the last copy.

"My book is in a sense a continuation of Vitruvius, some of whose omissions it supplies, and some of whose statements it explains. In it I have traced the historical connection and development of the constructive and statical processes which the vaulting systems of imperial Roman architecture involved; systems in which the Roman builders took the lead, and which were the highest expression of their constructive skill."

COLOUR AND INTERIOR DECORATION. By Basil Ionides. With color-plates by W. B. E. Ranken. Charles Scribner's Sons, New York.

This is a book of practical suggestions, addressed especially to the amateur, the home furnisher, or renter of an apartment. It tells you how to use various colors for your walls, floors, ceilings, curtains, cushions, etc. The illustrations include some plates in full color.

The 59th Annual Convention of American Institute of Architects

May 5, 6, 7, 1926, Washington, D. C.

IT is gratifying to note that the sessions of this convention were marked by an unusually serious business spirit.

The reports of committees and the consideration of all matters that came before the convention held the attention and interest of the delegates, to the exclusion of outside attractions at Washington.

Doubtless the Institute has a far-reaching influence, and the delegates who attend the annual conventions have it in their hands to make the most of that lifting power of high standards that the profession proclaims. By close attention and application to the business of the convention they are able to carry back to their chapters something of the inspiration that they are fortunate to receive through these contacts.

It was generally remarked that this was one of the most interesting and helpful conventions for some years. The pervading note of seriousness and thoughtful consideration of important questions was constantly in evidence.

OFFICERS AND DIRECTORS

President and Director, Milton B. Medary, Jr., Philadelphia; *First Vice-President and Director*, William Emerson, Boston; *Second Vice-President and Director*, C. Herrick Hammond, Chicago; *Secretary and Director*, Frank C. Baldwin, Washington, D. C.; *Treasurer and Director*, Edwin Bergstrom, Los Angeles; *Director, Third District*, Paul A. Davis, III, Philadelphia; *Director, Fifth District*, Dalton J. V. Snyder, Detroit; *Director, Eighth District*, A. H. Albertson, Seattle; *Director, Ninth District*, George B. McDougall, San Francisco; *Honorary Members*, George G. Booth, Detroit, George F. Lindsay, St. Paul, George F. Steedman, St. Louis, Major Raymond A. Wheeler, Washington, D. C., Doctor Irene Sargent, Syracuse, N. Y., Thomas E. Donnelly, Chicago, Frederic B. Pratt, Brooklyn.

MEMBERSHIP, 1926

The total membership of the institute on May 3, 1926, was 2,994 (as against a total on April 17, 1925, of 2,941) and it was made up as follows:

Fellows	258
Members	2631
Honorary members	72
Honorary corresponding members	33

Since the last report of the board there have been:

Elected members	143
Reinstated	10
Members advanced to fellowship	7
Honorary members elected	7
Honorary corresponding members elected	4

There have been the following resignations and removals:

Members	73

There have been the following deaths:

Fellows	11
Members	26
Honorary members	1

The total of new active members elected and reinstated has been	153
The total number of resignations, removals, and deaths of active members has been	110
Leaving a net gain in active members of	43
(However, there are, as of May 3, 94 pending applications.)	
The present number of associates	415
The present number of juniors	128

For so small a body, the institute has done much, which only proves the esteem in which it has been held by our fellow citizens. More and more, an ever more discriminating public opinion will turn to our profession for guidance in matters within our province. To serve properly we must prepare; and one lesson we can learn from other professions is the need for determined, convinced, unhesitating and complete support of the institute, by its members. All else are questions of details. This, our professional society, must hold a foremost place in our lives. In its welfare is contained our own. By advancing it to greater recognition through our greater service we perform part of our duty as professional men.

PRESIDENT WAID'S ADDRESS

This nineteen twenty-six annual convention of the American Institute will be held amid pleasant circumstances. We are meeting not in our own home it is true, but not far from our national headquarters, our beloved Octagon, and within the walls of a convention building designed by a past president of our organization.

It is our privilege to-day to welcome delegates and other members and our guests to a gathering which we hope and believe will be a stimulating association not only in architecture, but also all other fine arts. We may very properly combine our efforts "to promote the æsthetic, scientific, and practical efficiency of the profession," and "to make the profession of ever-increasing service to society," by discussing the machinery of our organization, by reviewing differences in our ethics or by imparting to one another facts which we have learned in our practice. But the greatest benefit of our getting together, I anticipate, will grow from the inspiration of good fellowship. If those who have come here from all parts of the wide country place their minds and hearts in contact, there will result strengthening of personal friendship, a sympathy in our professional problems, and a stimulation of our loyalty to the Institute which will carry responding vibrations back to the members who cannot actually be present at the convention.

I glory in the high standards of conscience in the architectural profession whose members often "lean over backwards" in their dignity—lest they be misunderstood in a seeming compromise with wrong. On the occasion of celebrating Founders Day at the Players Club last New Year's eve, William Lyon Phelps, in paying tribute to the memory of Edwin Booth, quoted the great actor's definition of a Christian. It was this, "one who rejoices in the superiority of his rival." I like to think that that phrase characterizes the architectural profession. Perhaps I have been impressed

most by it in my visits to the chapters in various parts of the country. Whatever his own ambitions, each member was proud to point out a successful work designed by his brother architect. That spirit of generosity which often involves toleration of different points of view certainly makes not only for fellowship, but for progress in every line of endeavor.

You will permit your chairman at the opening of this annual meeting to refer to recent progress in architecture. The spirit of "modern art" which is causing concern in the minds of conservative men is a live force and one which must be recognized. A notable illustration was presented in a circumscribed way in the recent Paris Exposition. Remarkable expressions of this new movement in art are seen in new buildings in various parts of Europe. Many interesting projects might be mentioned if time permitted and some of them doubtless will receive your attention in the course of the sessions. America's response to this modern impulse shows with a truly American characteristic the fine attributes of ability and courage and I am gratified to believe is sufficiently sane and conservative to bring achievements surpassing many undeniably clever but not beautiful sensations on the other side of the Atlantic.

The outstanding development of American architecture is commanding high praise from architects abroad. Without more than passing reference to American sculptors and painters at this moment it may be noted that their ability too is recognized abroad. It is reported that a Philadelphia sculptor is designing manikins for a famous Paris dressmaker. That is a straw which indicates how the wind is blowing.

But speaking for a moment of quantity and quality in American architecture, figures which I believe reliable show that 32 per cent in number and 66 per cent in value of our buildings are designed by architects. During the era following the World War what beauty in architecture there was came from the conception of the few, many of whom had passed on. Architects with less ability as creators have brought force rather than beauty into the design of our great buildings. Yet we may believe that we are gradually eliminating that last remaining evidence of ugliness which followed the calamitous destruction of art that marked the period after our Civil War.

Still more in evidence is the vast improvement that has transformed our smaller towns from a condition not reflecting credit on our esthetic taste into places with charm and the finest aspect of domestic refinement. The value of good architecture and community planning is more appreciated since the motor-car has made all sections of the country conscious of adverse criticism by the casual visitor. The influence of quickened methods of transit on architecture must be admitted.

An interesting evidence at once of public appreciation and lack of it was given in an address by Sir Theodore Morison, of the University of Durham, when he said, "I think we do not need to insist that good architecture pays the shopkeeper; he knows it already and is ready to back his knowledge with money. What he has failed to grasp is that he cannot get full value for his expenditure unless he submits to a general design."

This convention will discuss various phases of community planning. Referring at the moment further to the progress of architecture and speaking of quantity particularly, we are told that new building construction during the past year totalled six and one-half billions in cost. An architect's conception of that aggregate may be formed by looking at two one-million-dollar apartment buildings in one block on Park Avenue, New York, and then fancying oneself walking through a Park Avenue five times the length of New York, a Park Avenue seventy-five miles long, lined both sides from end to end with mammoth apartment buildings all erected within one year! Imagination can hardly picture the extent of six and one-half billions of construction spread out in less concentrated form.

American cities are growing faster than architects can be trained to design them. Not enough architects are available to plan the new towns and to guide the growth of the young cities. New York is in serious trouble and has problems to solve costing millions which could have been saved and with better results if wise foresight and skilled guidance had been available. Our great capital city was fortunate in the foresight of President George Washington who selected a great architect to plan it at the beginning. But Washington, D. C., is in danger now, should not the Government be warned in time to take measures lacking which the capital will be disfigured and irretrievably harmed.

Such facts lead our thoughts along many lines in which the "profession can be of ever-increasing service to society." If the Institute is to keep itself abreast of the times, it must be prepared to take advantage of various ways of stimulating the appreciation of the public. The radio provides a marvellous method of broadcasting information.

In another line of effort, as an example, an enterprising organization has sent an exhibition of paintings to a city of 35,000 people and as a result $20,000 worth of artists' work was sold in one small city. Does not that illustration suggest that our chapters might accomplish much by means of public exhibitions, by travelling shows throughout the territories of the respective chapters?

The New York Botanical Society has created a model garden and is conducting garden competitions in the interest of public information on a subject which is a part of architectural study.

The Institute must feel itself under obligations to the public in the matter of better construction, as well as better design. Building and loan associations and other lending agencies should be made to realize keenly not only the value, but also the safety of competent architectural service. If the Institute fulfils its duty, manufacturers should not be tempted to offer free architectural plans in order to increase the use of their product.

Here it may be remarked that it is one duty of the Institute to establish the kind of co-operation with manufacturers which will promote the use of materials suitable for a given purpose—not the sale for the sake of sale and profit regardless of results. Not unrelated to this fact is a situation which exists at the present moment and which should place all architects on their guard. A competition has developed as between structural steel on the one hand and re-enforced concrete on the other. This competition which is being promoted by large producing concerns, interested in one product or the other, has reached such a stage that each side is having its engineers increase its allowable fibre stresses, and decrease the calculated loads, until in many buildings the factor of safety is brought alarmingly low. The condition may be regarded as menacing, and every architect should be careful to have his structural work checked over by the most competent men. With floor loads scaled down to the lowest limit, stresses on concrete run up to the maximum limit and on steel to a higher limit than ever before allowable, it behooves our offices to be sure that wind pressure is not neglected and that every eccentric load is provided for.

Many conditions now present bear evidence to the fact that the American Institute of Architects stands high in public esteem. That respect will continue and grow as long

as our membership maintains and upholds its fine loyalty to professional ideals and continues to build up the present esprit de corps. During the year the Directors and Executive Committee have held quarterly meetings in various parts of the country and have visited many chapters. The Regional Directors have kept in close touch with their respective groups of chapters and all bear witness to good conditions in the Institute as a whole. While our net increase in membership has been less than the ratio of increase in the profession, the morale is excellent.

The great work upon which our profession should congratulate itself, and the whole building industry as well, is the closer association between mechanics and contractors. It would, in my estimation, be difficult to exaggerate the significance of the personal contact of craftsmen, builders, manufacturers of building material, and architects, all welded in the membership of one organization. Such organizations, usually known as Building Congresses, have accomplished much and hold bright promises for the future. Their operation should be studied by institute members of the smaller chapters with a view not to emulate big organizations, but to do in a small but equally effective way, in all communities, a work of equally vital importance for craftsmanship in architecture. Whatever the architects can do for craftsmen affects also what architects can do for themselves. This matter closely touches architectural education. One is reminded of the address of a prominent fellow of the Royal Institute in which he said: "The architectural student of the future will spend less time in drawing and more in the crafts and in the humanities that come through the crafts." (C. R. Ashbee.)

One of the subjects which will come before the delegates at this convention is the honor of fellowship. For several years efforts have been in progress to place the selection of the awards on a more equitable and satisfactory basis. This has unfortunately resulted in deferring awards highly deserved by many members. It is believed that a workable plan has now been evolved, but the directors and jury of fellows realize that there are embarrassing defects in procedure which have yet to be overcome. This convention will undoubtedly find disappointment in this year's election.

As to other topics on which there are marked differences of opinion they are, it is believed, not of a serious nature. They are simply signs that the various chapters are very much alive to the work they have to do.

Severe criticisms occasionally find expression. One enthusiastic but cynical Institute man believes that "few members still have professional ideals" and he characterizes the present directors as the board most successful "in seeing its duty and dodging it." On the whole, your directors have received strong encouragement in carrying on their work not always easy. Our devoted secretary, Edwin Brown, is broken in health from overwork. He hoped, and we also, that he might be well enough to attend this convention. We regret that he cannot be here but are glad to be assured that he is steadily gaining and is looking forward to full restoration of health. Our talented Second Vice-President Steele kindly consented to take up the work of acting secretary, but personal matters compelled him also to discontinue service. Then it devolved upon Director C. C. Zantzinger generously to step into the breach.

At this time we are reminded of Donn Barber, who was chairman of the committee of the last convention. He was a loyal, forceful, outstanding figure in institute affairs for many years. As we mourn his untimely demise, it is with peculiar pleasure that we record the fact that his widow has generously given to the Institute his entire architectural library which we have placed in storage here in Washington awaiting the erection of our new building. Mrs. Goodhue has offered to present us with original drawings made by the lamented Bertram G. Goodhue. We mourn also another member of the Institute of national prominence, Arnold W. Brunner. Mrs. Brunner has notified us of her intention two years hence of placing in our possession the valuable collection in her husband's library. Almost at the same time, Richard H. Hunt informed your president that by consent of himself and his brother, the late Joseph Hunt, provision made in the will of their mother bequeaths to the Institute the library of their distinguished husband and father, Richard Morris Hunt, who was president of the institute from 1888–1891. This is one of the finest architectural libraries in the country.

In connection with these acquisitions to the library of the Institute, it is a pleasure to record a gift from the Mexican Government. Twelve volumes, including a collection of official photographs of ancient Mexican buildings, were intended to reach us at the Fifty-Eighth Convention. The ceremony of presentation occurred just after the convention in the Avery Library at Columbia University, when your president and others representing the Institute received the gift from a group of Mexican diplomats and architects. These twelve volumes are in the custody of the Avery Library as a loan from the Institute for the use of students and visiting architects.

Among the joys and sorrows of holding office in the Institute are to be found many invitations to conferences and dinners from organizations and individuals outside the chapters. Often these invitations require caution; many are opportunities for service. Altogether they are so flattering that while the temporary figurehead is overcome with humility, he is made exceedingly proud of the American Institute of Architects. One of these invitations came last summer when a banquet and highly formal meeting occurred in London. The president of the Royal Institute and his fellow officers sat on a dais with all the dignity of a supreme court. The handsome president, resplendent in his golden chains and badge of office, invited the plain American president to take part in the ceremony which awarded the Gold Medal to Sir Giles Gilbert Scott. That we gratefully mention as a courtesy to the American Institute from our British brother architects.

The Institute is now contributing to architectural exhibitions in foreign countries. It is interested in the efforts of architects abroad who are sending their students to America. It is concerned with the American School in Rome; it is watching the excavations in Athens just beginning and probably the greatest archæological exploration ever undertaken; it knows of the dedication of the Gennadius Library overlooking even the high Acropolis at Athens and dedicated during the past few days in the presence of its architect and other prominent Americans.

When through its officers and committees the Institute reaches out to the architectural societies of France, of Great Britain, of Canada, and other countries it receives instant and cordial response. Our international relations should give us added inspiration in this our present home gathering. But before all other affiliations we must have respect and confidence and affection in our own membership and in our individual selves. May the Fifty-Ninth Convention prove a fellowship which will ever increase the enthusiasm of our members at home and our members here present and more than ever deepen loyal devotion to the American Institute of Architects.

DELIBERATIONS RECORDED

By Delos H. Smith

The history which is yet to be written of the American Institute of Architects will present a coherent account of the thought and achievement of the organization over the entire period of its life since 1857; but to judge of the present in the present is quite another thing. Any account of the convention just concluded in Washington must be limited by an individual knowledge of the past and warmed for the future by personal enthusiasm which may not be the stuff of which orderly chronicles are made.

On the other hand it is to a variety of personal impressions of institute activities year by year that the chronicler must finally turn. For this year one is impressed by their variety, and is tempted to divide into three classes as they command respect, admiration, or affection. Let us see if we may so classify the committee reports. The work on contracts certainly commands respect, for is it not a contribution to law? Likewise Allied Arts, for here we recognize inspiration in other arts. Consider also the work of the Committee on Publications and Public Information of a truly respectable sort although the discussions perhaps more emphasized "self-respect" as antidote for the he-manly slogan "It pays to advertise." Respectable too is the work for Historic Monuments and Scenery, which somehow makes one think of the marriage service, "to love, to cherish, and to obey." We love to seek to cherish our worthy landmarks and our scenery, but what do we obey? The dollar value? Yes, true, that word has not yet been elided.

I asked a journalist who was neutrally observing the convention what he thought of it. He said: "I am surprised to see you architects talking for hours about small houses and structural requirements when I would have expected you to talk about aesthetics and dreams." He seemed to be pleased and I was too much complimented to ask him whether dreams were not after all at the heart of it all. I told him modestly that we tried to be practical and said nothing of what a real effort it was. We discussed the work on registration laws which fell at once into my category of respect and with a potentiality so tremendous as to be fraught almost with fear.

The report of the Committee on Public Works showed the way toward a kind of practical patriotism of peace that was essentially architectural and admirable. It was ably supplemented by that of the Committee on Washington and Environs. In this work the Institute has touched with dignity the great diapason of our national taste and its utmost talents will be demanded until the last great chord of achievement has been struck. Similarly in what we might call "private works" the nation is looking to the architect for interpretation. If the Committee on Small Houses has perhaps lacked in breadth of programme and found confusion because of the organized special pleading of the Service Bureau, the large problem is still waiting solution. And to the officers and directors for the coming year is bequeathed a task of real proportions.

Likewise the Structural Service problem, which also falls into the category of things which might be admirable as Institute activities, must be weighed by the new administration. We have here a perfect example of a material situation the discussion of which so pleased my journalist. And here we would fain step over into the territory of the projects of the Institute which we love to consider. I propose three: Education, the Press, and Community Planning. All three at this convention were presented in a way which demonstrated careful study in committee during the year past. The first means knowledge for ourselves and others, the second means criticism and culture of all we are and hope to be, and the last, a plain duty to humanity. Let the Structural Service and what not fall into place where they will (for each has its worthy place). They are but means to the end of the realization of the architects' inspirations and enthusiasms which, after all, are dearest. (And anyhow you have seen that the journalist expected us to have them.)

And so when all conventions have become history, and history myth, the student of the future will read that the Fifty-Ninth Convention A. I. A. was accorded May weather that was truly Olympian and that the behests of a Jovian Institute were carried out peacefully and almost by acclaim. So smoothly did resolution become law that even a director wondered. True, the future of Eurydice of the Structural Service may yet be in doubt with Pluto the producer trying his strength against Orpheus of the press. The classic story may be modified. It lies now upon the knees of the gods. With head covered and hands extended upward we give thanks that harmony prevailed without extended debate during these soft May days. Icarus, of the Octagon development, is still afloat, his pin-feathers hopefully waxed by a commercial Dædalus, and another flight is promised for next year.

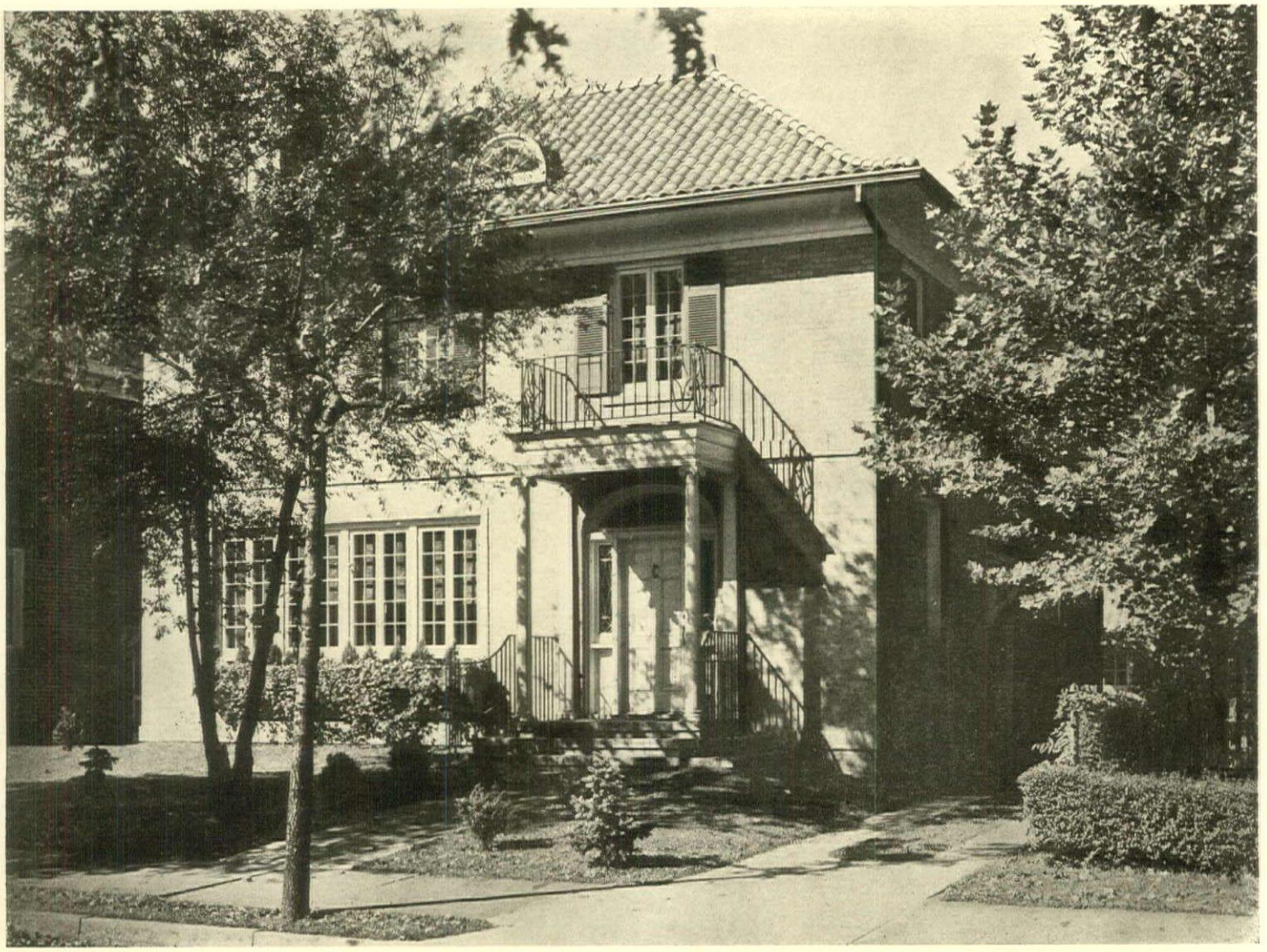
Fortunately for us architects no bloody sacrifice has been demanded for our sins. Rather have we made our libations of wine, honey, and oil, with the burning of frankincense. And be it history or myth the Fifty-Ninth Convention A. I. A. is now concluded. From out a confusion of men and minds I gain an impression of healthy and hopeful organization, for otherwise we could only be like Alexander Pope, who flouted his physician's optimistic diagnosis with the retort, "Here am I dying of a hundred good symptoms."

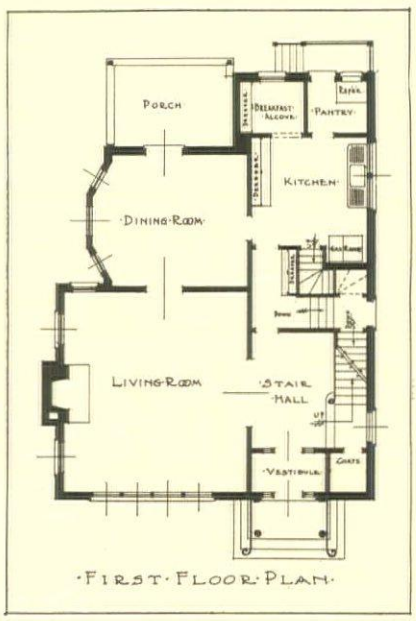
Carnegie's Summer Session in Architecture

As a result of the demand that has been developing during the past few years, courses in architecture, it is announced, are receiving special attention in the plans for the summer session this year at the Carnegie Institute of Technology, in Pittsburgh. Under the plans for the coming summer, the department of architecture of the College of Fine Arts will give intensive six weeks' courses, from June 14 to July 24, to meet the needs of students who desire to continue their work in architecture in the vacation, whether to make up credit, obtain advanced credit, or to prepare themselves better for entrance.

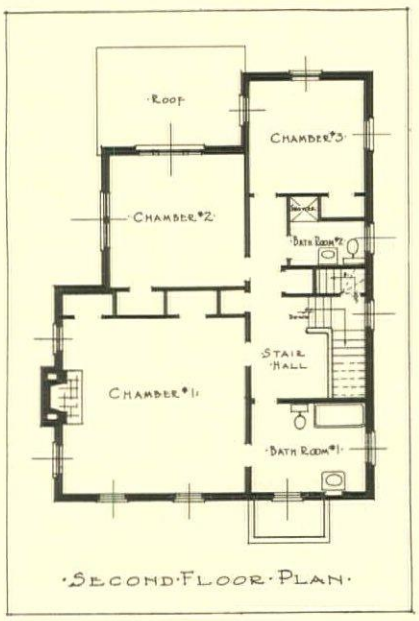
Among the subjects to be offered are architectural design, outdoor sketching, descriptive geometry, shades and shadows, and perspective.

Courses are announced also in chemistry, physics, mathematics, mechanics, English, economics, commercial law, history, drawing, surveying, psychology and education, charcoal and pastel drawing, water-color and oil painting, design, sketching, methods, history of arts, and various shops. Courses of six weeks will be given to teachers and supervisors of public school music, fine and applied arts, and manual and industrial arts.





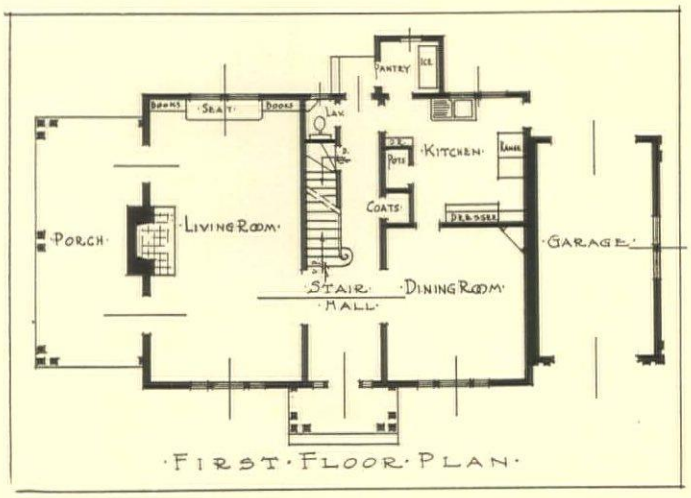
FIRST FLOOR PLAN

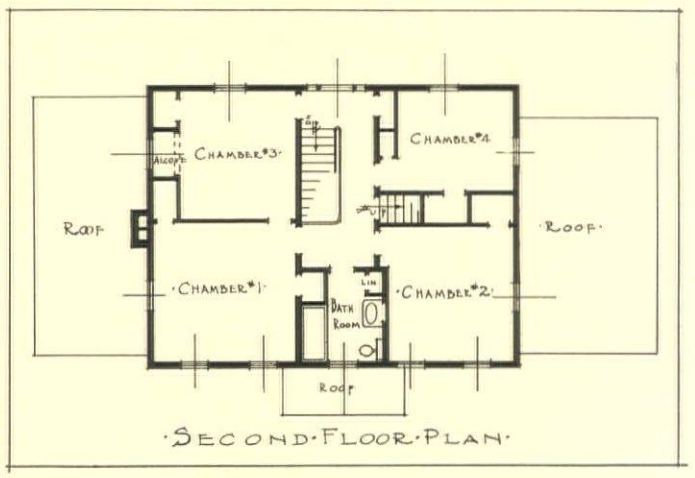


SECOND FLOOR PLAN

HOUSE, CHARLES M. MEYERS, NEWARK, N. J.

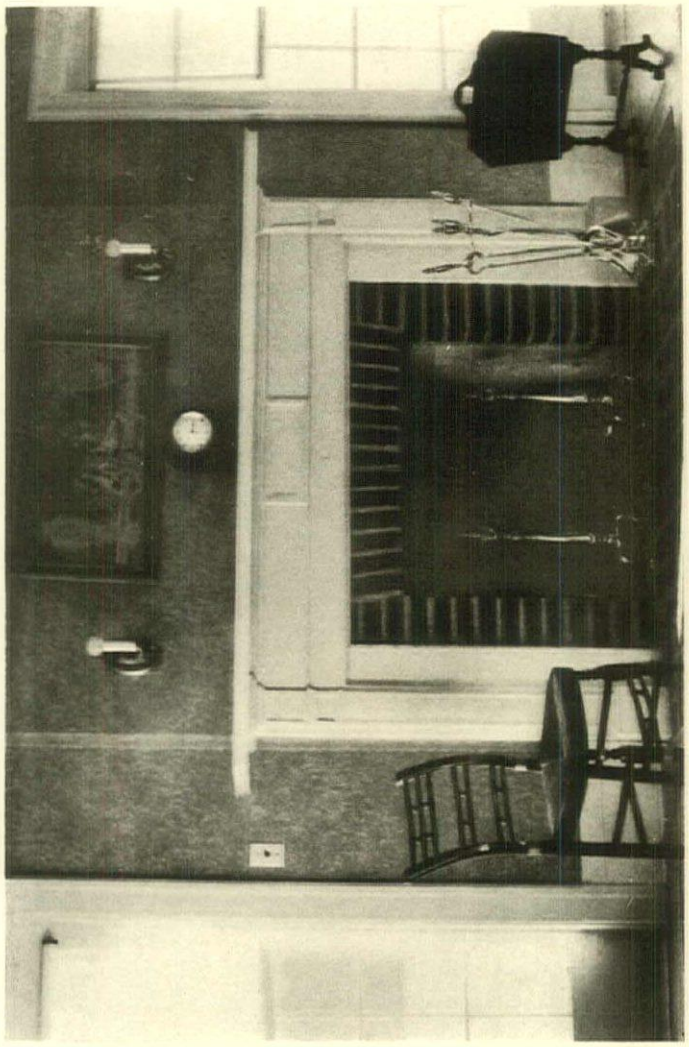
Wm. W. Klenke, Architect.





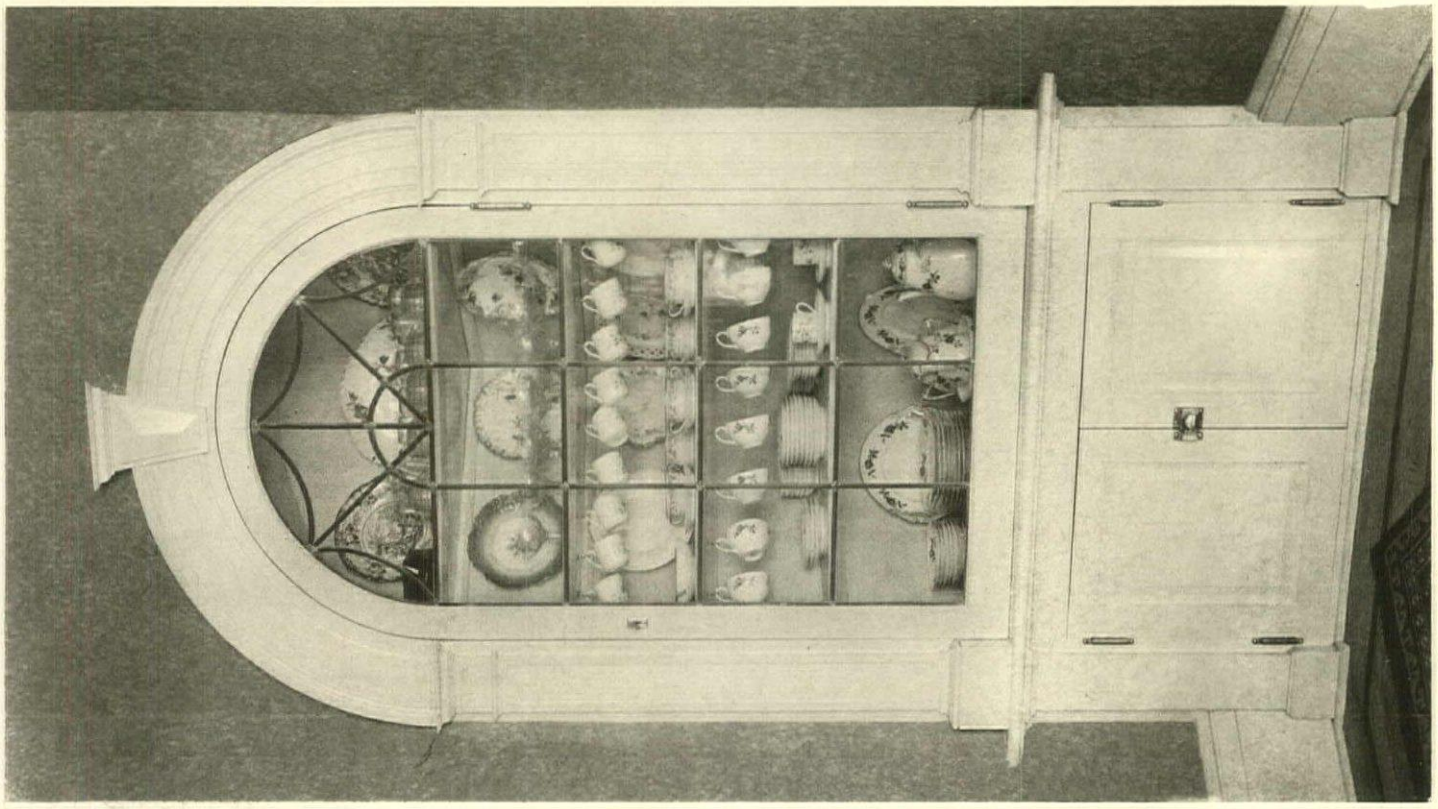
HOUSE, DANIEL H. NESTER, MAPLEWOOD, N J

Wm. W. Klenke, Architect



FIREPLACE IN DINING-ROOM, HOUSE, DANIEL H. NESTER, MAPLEWOOD, N. J.

HALL AND STAIRCASE, HOUSE, CHARLES M. MEYERS, NEWARK, N. J.
Wm. W. Klenke, Architect.



CORNER CUPBOARD IN DINING-ROOM, HOUSE, DANIEL H. NESTER, MAPLEWOOD, N. J.

Standardization and Simplification as Applied to the Building Industry

By Richard P. Wallis

FIRST ARTICLE

DIRT has been aptly described as matter out of place. So in a like manner may we characterize waste as misdirected energy. Effort rightly directed is the mainspring of human accomplishment, the driving power that makes possible the translation of the dreams of the scientist into terms of quantity production. Industrial effort has given us our modern skyscraper, so symptomatic of the spirit of our century. Intellectual effort is responsible for the decorative arts that embellish these public monuments for our enjoyment.

Thus the material and spiritual development of the race as we to-day find it constitutes perhaps the most substantial tribute to the efforts of those who have gone before in the development of our many-sided civilization.

But, as we inquire into this matter of accomplishment, we encounter that inevitable corollary of effort, waste. Waste is the ball and chain about the ankles of industry imposing needless handicaps on the efforts of those most interested in the promotion of human happiness. It seems more than likely that, like the poor, waste shall always be with us, for in truth is not one the creature of the other?

Whatsoever tends to liberate us from these shackles of inefficiency is a matter most worthy of our attention. That is one of the problems which is now engaging the attention of our industrial and economic leaders.

Much emphasis has recently been placed upon the waste and inefficiency incident to the building business. A recent survey of this subject by the Federated American Engineering Society reveals the disquieting fact that while the preventable waste in the average American business amounts to some 49 per cent, that in the business of building construction amounts to approximately 53 per cent. This report further brings out the fact that a sum of $10,000,000,000 could be saved annually in the six industries investigated by a proper application of the principles of standardization and simplification. On the basis of 1922 values this sum would cover payment of all Federal, State, and Municipal taxes, the purchase of all passenger automobiles, gasoline to run them, and all of the homes built in the United States for the year. This is truly a staggering price to pay for the somewhat dubious privilege of conducting business in the well-known honored fashion. It is not a little difficult to grasp the full import of these figures, so utterly at variance with the fable of American efficiency.

Waste is only too apparent in the conduct of building operations. The policy of an eight or nine months building season, the ever-recurring periods of industrial depressions, jurisdictional disputes, the inefficiency of labor, all levy a total on the building public which in turn is passed on to the ultimate consumer—the public at large.

Building costs are high to-day, a circumstance painfully evident to most of us in the guise of high rents and living costs. Building costs have been most emphatically out of step with the general trend of costs since our economic spree of 1919 and 1920. While other costs have receded from the peaks of post-war inflation, building costs have mounted steadily upwards until they now represent an increase of 105 per cent over the halcyon pre-war days of 1913 and 1914. That the trend of labor costs is still upwards is evidenced by the accompanying figures giving hourly wages in certain of the building trades for the years 1924 and 1925:

	1924	1925
Carpenters	$1.06	$1.07
Bricklayers	1.34	1.40
Plasterers	1.39	1.43
Iron-workers	1.15	1.23

In a like manner building material costs have mounted, though in a relatively less degree. On the other hand, ordinary living costs have more or less stabilized themselves at a point some 60 per cent above those of pre-war days.

These unbalanced costs present a serious economic problem. We are all dependent one way or another upon this business of building. Buildings must earn a minimum return on their invested costs. The ultimate consumer pays the bills. The inference is only too evident. Some way must be found to correct this condition. The public must be relieved of the burden of shouldering unnecessary costs. The element of waste should be eliminated in the interests of a balanced budget. There fortunately are many approaches to the subject, but that which we wish to consider in this article is the twin programme of standardization and simplification.

Briefly, standardization refers, within the province of this article, to the universal codification of specifications covering quality, nomenclature, convention, tests, provisions for safety, and so on.

Simplification refers to the elimination of unnecessary types, sizes, and grades in the process of manufacture.

The advantages obtaining under an industrial order subject to such considerations are obvious and their potentialities for good are so vast as to constitute an entirely new influence in our economic world. Its immediate consequences are a tendency toward the elimination of waste and the creation of substantial saving to the ultimate consumer.

There is little of startling originality in this programme, merely the application of common sense on a wholesale basis. The vigorous demands of competition had already forced on the individual concern some conception of the advantage to be obtained through standardization and much individual progress has been attained through their sporadic and isolated attempts to place manufacturing on a scientific basis. We find abundant evidence of this fact in the shop instruction and formula hidden away in the archives of many of our manufacturing plants. The natural consequence of this individual urge has been the establishment of a large number of more or less conflicting standards, satisfactory each in their isolated application but failing utterly to solve the problem as a whole. This establishment of individual shop practice, developed toward the last half of the nineteenth century, was an essential factor in the development of mass production so essential to America's well-being.

The logical development of this thought resulted in the

formation of trade associations by various concerns engaged in the production of similar articles of manufacture and the founding of national technical societies. This outgrowth made possible the establishment of manufacturing standards based not upon the practice of individual concerns but upon the industries as a whole.

In company standardization the problems of administrative technic to be dealt with are comparatively simple. These problems of necessity become more numerous and involved when viewed from the basis of the industry as a whole, owing to their greater scope.

Standardization by industries is the product of the twentieth century. The progress made along these lines has been almost wholly satisfactory as far as aiding the individual industries. We have only to refer to the mass of trade literature published by these various associations and societies regarding shop practice as conducted by the various groups of manufacturers.

One rather interesting phase of the problem of standardization has been the action of the American Institute of Steel Construction in establishing specifications covering the classification of various items manufactured of iron or steel. These items are classified into four groups:

A. Structural Steel and Iron.
B. Ornamental Steel and Iron.
C. Miscellaneous Steel and Iron.
D. Steel Floor-Joist.

This schedule is of especial interest to architects in assisting them to properly prepare their specifications covering these items.

These are given at length below under each classification:

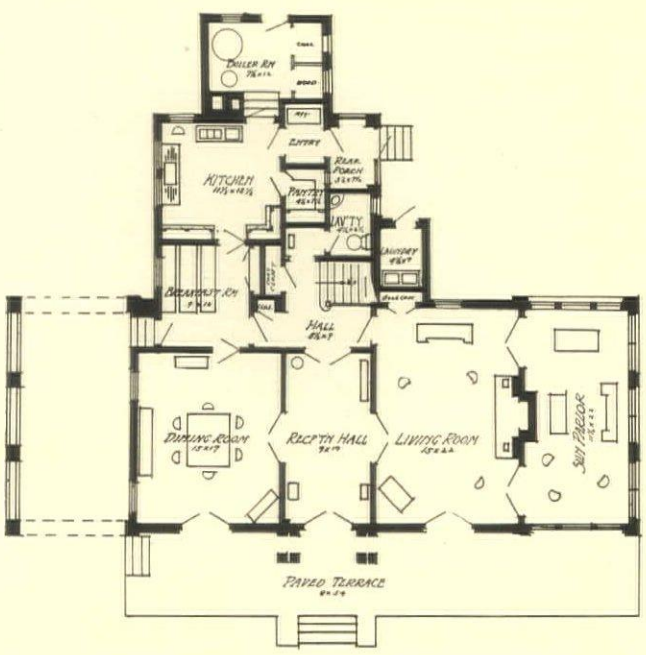
A. Structural steel and iron:
Contracts taken to furnish the structural steel and iron for a building are based on furnishing the following items only:
Anchors for structural steel only;
Bases of steel or iron only;
Beams of rolled structural steel;
Bearing plates of structural steel;
Brackets made of structural steel shapes;
Channels of rolled structural steel;
Channels and angle supports only for suspended ceilings where they attach to structural steel, but not including small channel or angle furring;
Columns, structural steel, cast-iron, and pipe;
Girders of structural steel;
Grillage beams and girders—structural steel;
Hangers of structural steel;
Lintels as shown or enumerated;
Marquise (structural frame only);
Rivets and bolts for field connections, as follows:
1. The seller shall furnish sufficient rivets of suitable size, plus at least 10 per cent to cover waste for all field connections of steel to steel which are designated as riveted field connections.
2. The seller shall furnish sufficient bolts of suitable size, plus 5 per cent to cover waste for all field connections of steel to steel which are designated to be bolted.
3. No fitting-up bolts or washers will be included unless specifically called for.

Separators, angles, tees, clips, bracing, and detail fittings in connection with structural steel frame.
Tie rods.
Trusses of structural steel.
Unless specifically agreed to in the contract, the seller of the structural steel will not provide field connections or field holes for the ornamental steel and iron, the miscellaneous steel and iron, nor the materials for any other trades.

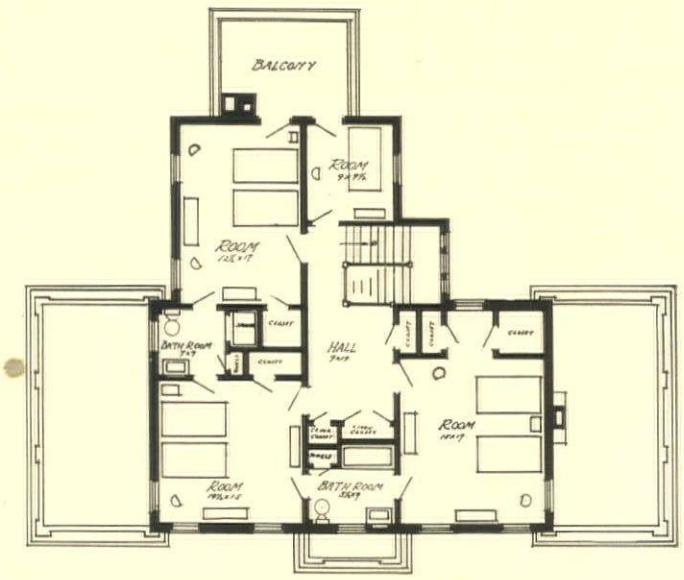
B. Ornamental steel and iron:
Contracts taken to furnish the ornamental steel and iron for a building are based on furnishing the following items only:
All bronze and brasswork, except hardware fittings;
Balconies;
Cast-iron cornices;
Curtain guides;
Elevator fronts and enclosures;
Grilles and gratings;
Iron store fronts;
Lamp standards and brackets;
Marquise (steel or iron, except frame). See Class "*A*;
Ornamental brackets, steel or iron;
Ornamental inside stairs, steel or iron;
Ornamental outside steel or iron stairs, including fire-escapes;
Safety treads;
Railings (gas-pipes, ornamental or brass);
Sills and thresholds (brass, steel, or iron);
Spiral stairs, steel or iron;
Window-sills and frames, steel or iron;
Wirework, ornamental steel or iron.

C. Miscellaneous steel and iron:
The nature and character of the material of this classification makes it impossible to cover all items and it is recommended that the seller taking the contract to furnish the miscellaneous steel and ironwork for a building specify all items in detail which it is intended to furnish. The general list of items under this classification is as follows:
Area gratings;
Cast-iron cover and frames;
Cast-iron rain-water receivers;
Cast-iron down-spout shoes;
Clean-outs;
Coal chutes;
Column guards;
Door frames and bucks;
Foot-scrapers;
Furnace or fireplace dampers;
Flag-pole;
Ladders;
Pin-rails;
Sidewalk doors;
Sills and curb angles, and anchors for same;
Special bolts or anchors where distinctly shown on the plans;
Stairs made of plain structural steel—not including treads of other materials;
Stacks;
Steel and cast-iron platforms;
Steel or iron chimney caps;
Thimbles;
Wall plate anchors;
Wheel-guards;
Window-guards;
Wire-screens for partitions, door and window-guards (this does not include fly-screens).

(*Continued on page* 178)



- FIRST FLOOR PLAN -



- SECOND FLOOR PLAN -

- RESIDENCE OF MR. & MRS. ARTHUR B. LEVY -

·VICTORY DRIVE· ·SAVANNAH, GA· Levy & Clarke-Bergen ARCHITECTS·

(*Continued from page 176*)

D. Steel floor-joists:

Contracts taken to furnish the steel floor-joists for a building are based on furnishing the following items only:

Steel joists which are not a part of the structural steel frame for the building and which are devised to carry the floor or roof panels;

Bracing and bridging for floor-joists, clips for fastening floor-joists;

Stirrup and hanger for floor-joists;

Ties for floor-joists.

The inadequacy inherent in this stage of the development of standardization lies in the fact that certain materials —such as iron, lumber, etc.—are essentials in widely varying types of industry. Were each trade to impose its own individual specification, covering say the physical and chemical properties of the material it required, upon the basic manufacturer it may be readily seen that the problem of diversity would only be shifted, it would not be eliminated.

There are in this country perhaps a thousand organizations that may be regarded as trade associations. We find these bodies—together with the technical societies, various branches of the federal government, in addition to those of the States—vieing with one another in flooding the country with a veritable tidal wave of printed matter regarding specifications, codes, safety requirements, and such like. Can such a chaotic condition lead to anything but confusion and waste?

In order to reach full effectiveness and eliminate the possibilities of discord arising from a mass of conflicting standards—individually constructive but collectively confusing—it became apparent that the subject of standardization must be dealt with on a national interindustrial basis. That is where we find the subject to-day. The future holds forth promise of standardization on even a grander scale, that is on the basis of international participation. Already there have been established nineteen national bodies among the leading industrial nations of the world, all but one of which have been organized during or since the war, and all of which are co-operating to advance the cause of industrial efficiency.

The potential benefits to mankind through the co-operation of these various national bodies fairly stagger the imagination with their possibilities. Industrial strife has been the basic cause of most of the wars of history. May not economic co-operation prove to be the missing ingredient that will cement together the nations of the world in harmonic comradeship—a League of Industries rather than a League of Nations?

(*To be concluded*)

Announcements

Alexander Henderson announces change of address from 384 Hudson Street to 168 Crescent Avenue, Buffalo, N. Y. Architectural perspective in color, line, and wash.

Wasselle, Colla & Galizia, architects and engineers, announce the opening of their office at 44 Court Street, Brooklyn, N. Y.

Russell L. McKown announces the opening of an office for the professional practice of landscape architecture and town planning at 910 Kahl Building, Davenport, Iowa.

Max R. Nippell, architect, announces the opening of his new office in the Carlisle Building, 324 Main Street, Springfield, Mass., and would be pleased to receive literature for his new files.

Charles R. Greco, A. I. A., architect; Edward G. Reed, associated; George B. Mayer; Frank J. Hobson—announce the removal of their offices to 1031–33 Guardian Building, Cleveland, Ohio. Boston office: 11 Beacon Street.

Berlinger & Kaufman, architects and engineers, 66 Fifth Avenue, New York City, announce the removal of their offices to the above address, where they have erected a penthouse on the roof for their own occupancy. This building was the old Macmillan Building, which was altered extensively to house among others the Fifth Avenue Playhouse and a branch of the New York University.

A. A. Aegerter and Norman I. Bailey, formerly associated with the late A. B. Groves, have opened an office for the practice of architecture under the firm name of Aegerter & Bailey, 1904 Railway Exchange Building, St. Louis, Mo. They request catalogues, samples, etc., from material producers.

C. Hobart Sherwood, A. I. A., announces the opening of an office for the general practice of architecture at 226 Bryan Court, Fort Lauderdale, Fla. Manufacturers' samples, catalogues, and other publications are desired.

Andrew H. Knoll announces the removal of his architectural offices to 222 Kearny Street, San Francisco, Calif.

S. N. Crowen and associates, architects, 10 South La Salle Street, Chicago, announce their removal to 22 West Monroe Street.

Edward H. Davis and George M. D. Lewis, registered architects, will be located after April 1 at Suite 809, Board of Trade Building, Linden Street, Scranton, Pa.

Ben J. Lubschez, architect, announces the removal of his office to 729 Seventh Avenue, corner 49th Street, New York City.

On March 22, 1926, Edward Schoeppe, architect, removed from 316 South 15th Street, Philadelphia, Pa., to 1437 Spruce Street, third floor.

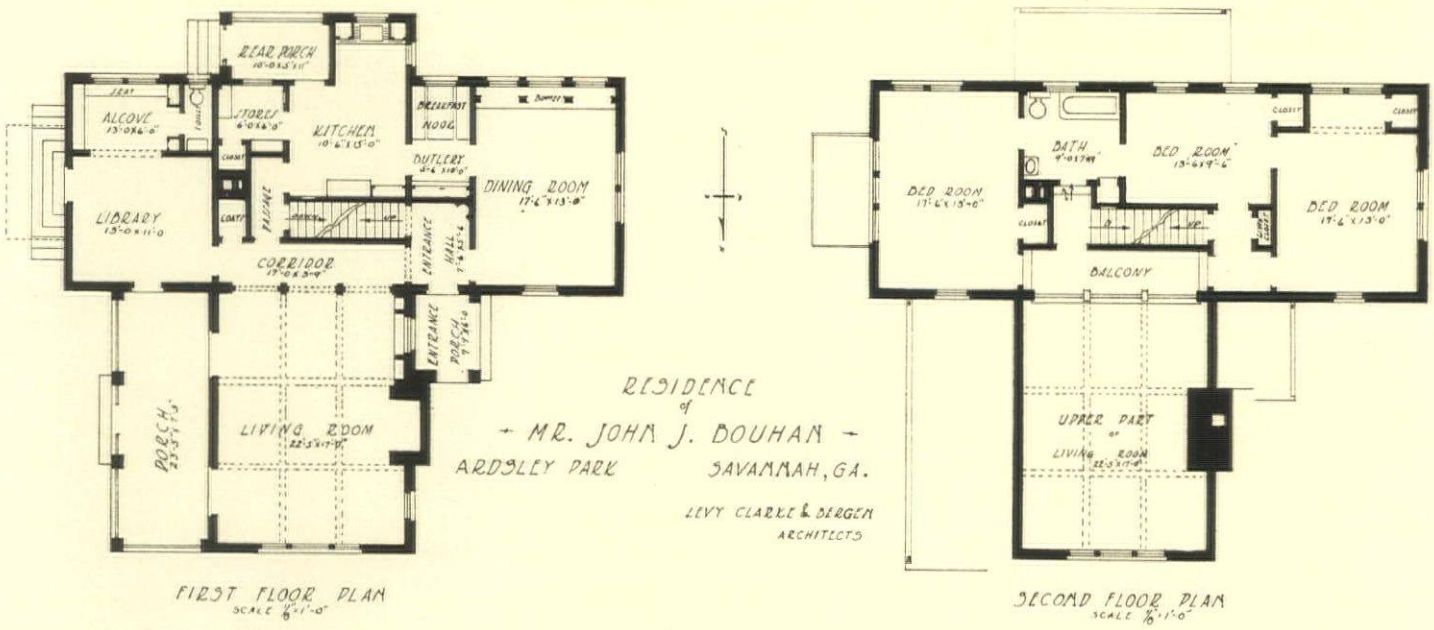
Helen Baxter Perrin and Elizabeth Cope Aub announce that they are making architectural models at 100 Charles Street, Boston.

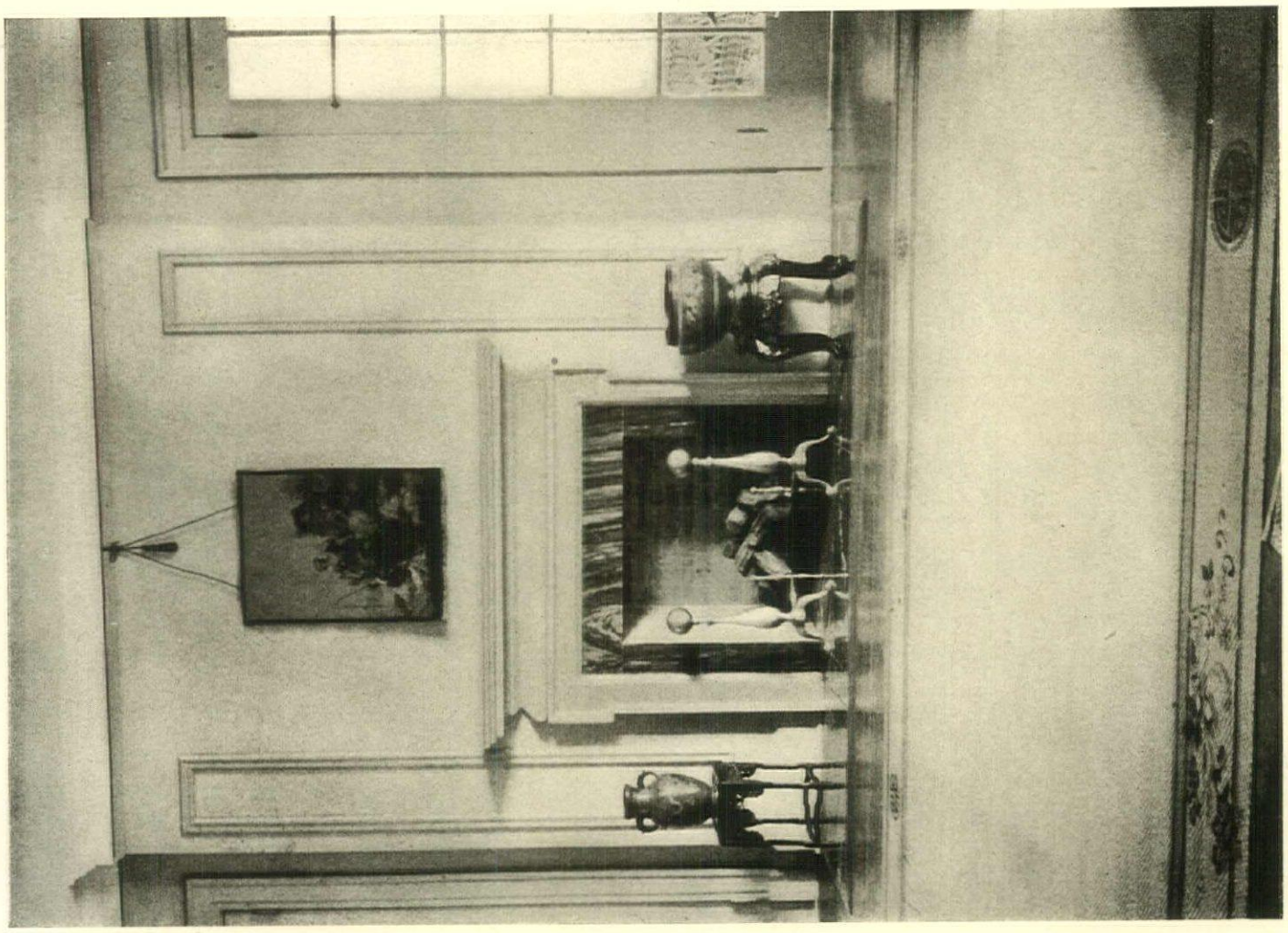
Mr. V. C. Geoffre announces his removal to 625 Field Avenue, Detroit, Mich., and requests manufacturers' samples and catalogues.

Klingensmith, Rice, Wilkins, architects, have moved their offices from the Arcade Building to 1217–18 Louderman Building, 311 North 11th Street, St. Louis, Mo. Kindly address all communications to their new location.

E. A. Ehmann, architect, formerly associated with Martin L. Hampton, announces the removal of his office from 100 Congress Building and the establishment of his permanent offices at 209–11 Miami Realty Board Building, 329 N. E. First Avenue, Miami, Fla.

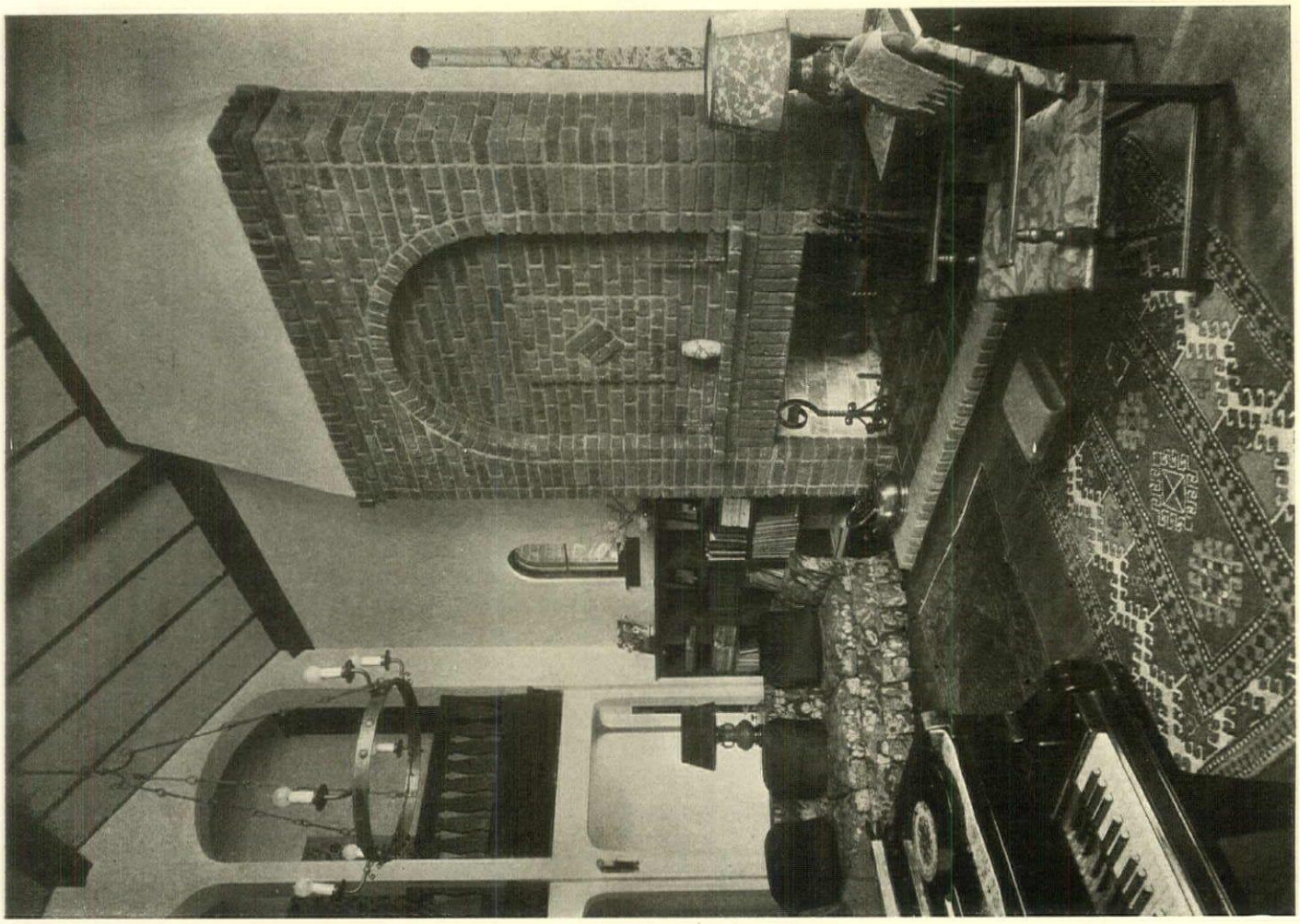
Howard Steitz, registered architect, Weathersbee Building, Pompano, Florida, would be pleased to receive manufacturers' catalogues and samples.


REAR PORCH
ALCOVE
STORES
KITCHEN
BREAKFAST NOOK
BUTLERY
DINING ROOM
LIBRARY
CORRIDOR
ENTRANCE HALL
ENTRANCE PORCH
PORCH
LIVING ROOM
BATH
BED ROOM
BED ROOM
BED ROOM
BALCONY
UPPER PART OF LIVING ROOM
RESIDENCE of MR. JOHN J. BOUHAN
ARDSLEY PARK SAVANNAH, GA.
LEVY CLARKE & BERGEN ARCHITECTS
FIRST FLOOR PLAN
SECOND FLOOR PLAN

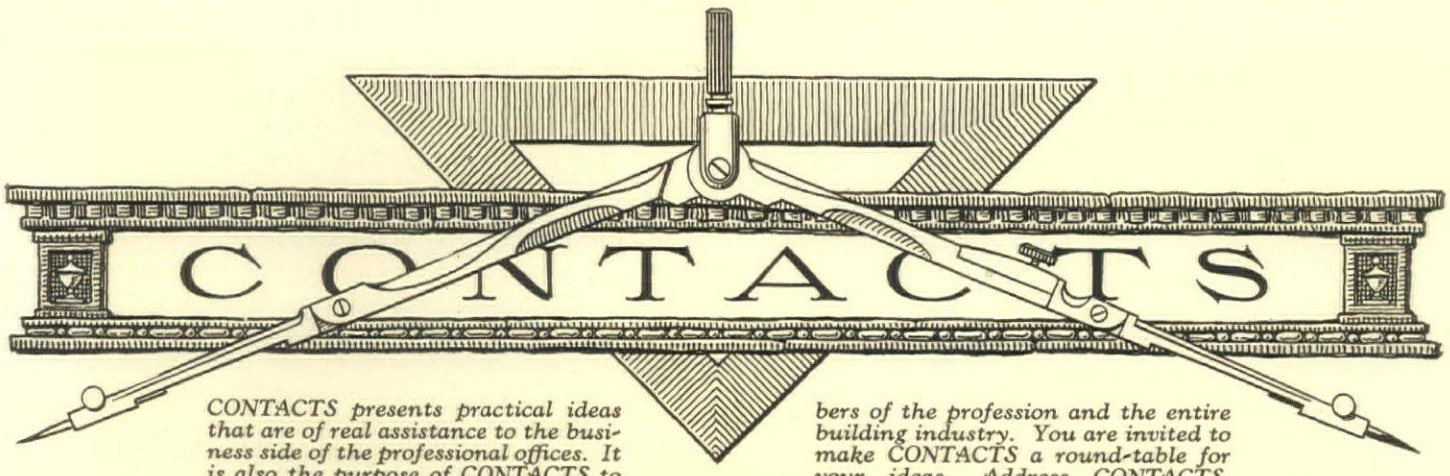


LIVING-ROOM, ARTHUR B. LEVY, SAVANNAH, GA.

Levy, Clarke & Bergen, Architects.



LIVING-ROOM, JOHN J. BOUHAN, ARDSLEY PARK, SAVANNAH, GA.



CONTACTS presents practical ideas that are of real assistance to the business side of the professional offices. It is also the purpose of CONTACTS to bring about a better understanding and co-operation between the members of the profession and the entire building industry. You are invited to make CONTACTS a round-table for your ideas. Address CONTACTS, ARCHITECTURE, 597 Fifth Avenue, New York.

Is the Leadership of the Architect in Danger?

The Architect as the Head of the Building Industry—How the Architect May Retain His Leadership—His Contact with the Contractor

By Robert D. Kohn

Chairman of the Committee on Industrial Relations, American Institute of Architects

I SEE no new danger to the status of the architect by reason of modern development in building operations. The architect has never been in a stronger position than he is in to-day, as I reported to the Fifty-ninth Convention of the American Institute of Architects. He is only in that position to which he is entitled by reason of his knowledge and experience and the efficiency with which he performs the tasks assigned to him.

Every great building project involves problems which grow year by year, and we ought to be frank enough to acknowledge that there are many individuals practising the profession of architecture who are not competent to cope with them. In no small measure, as a result of this, important industrial organizations have been formed all over the country which offer to do not only the building work but also to engage architects or pay draftsmen to do the architectural work.

There are considerable differences of opinion as to the way in which these conditions can be overcome. It may be that the extension of the Small House Service Bureau scheme may bring a larger number of persons in touch with the profession and an understanding of its real function, and educate the architect through the co-operative effort involved. The Committee on Industrial Relations can evidently reach no agreement on this point, for it contains about an equal number of those who favor and those who oppose it.

On the other hand, on the question of education of the architect, we must as a profession recognize the fact that the architects as a whole class are held in poor esteem by many contractors as a result of contact with poor plans and specifications, incomplete, inconsistent, and inaccurate contract documents, unbusinesslike administration, and practices by which some architects are continuously passing on one or another of their own responsibilities to the contractor.

It is a poor excuse to point to the large number of architects of sterling ability who do not practise in this fashion and whom the contractors generally hold in high esteem. This does not alter the fact that there are a large number who are subject to this criticism, and is bound to reflect on the whole profession. The Building Congress in a number of cities has become an excellent means whereby we have secured an insight into this serious situation and started to clear it up. The fact that many contractors are inefficient, or worse, does not lessen the difficulty or excuse the fault.

Volumes have been produced by various committees of the institute on this subject in the past. One member of the Committee on Industrial Relations has said in effect "the architect chooses to consider himself the head of the building industry; he has elected himself to that position, but does the world recognize it?"

It seems evident that the only way that the architectural profession can assume a real leadership over the building industry in all its phases is by increasing the efficiency and the knowledge of those who practise the profession. Then the public also will recognize the distinctive thing which the architect can give to a building project, and which no contractor can furnish to it.

We have heard many proposals made by architects that the architect shall replace the contractor, compete with him in his own field, or at least do many of the things which are now distinctly the contractor's function; and also look after finance, promotion, publicity, subletting of the work on important buildings, etc. All this will be unavailing. The complication of the building process is growing more rapidly than that of any other art. There are plenty of man-sized jobs for the contractor as well as architect. In my opinion, for the architect to attempt to do well more than his own professional job in order to ward off the competition of the contractor is absurd; is, in fact, suicidal.

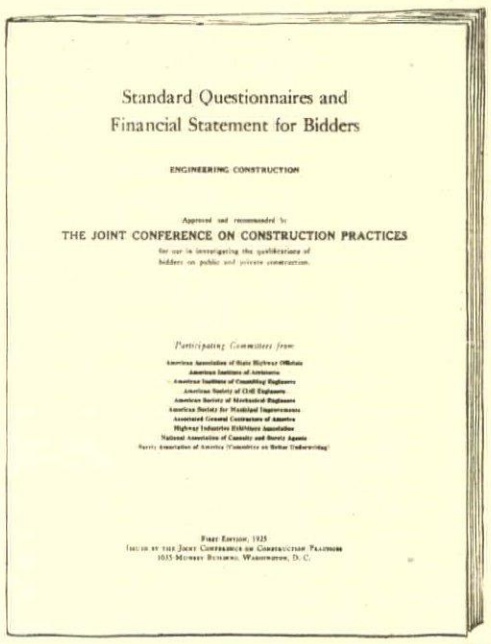
What we must do is clarify the function of the architect as a professional man, and then see that that function is so well and so efficiently performed in its every detail that the public will recognize that the architect is not only another kind of contractor. They will see that he is a man who renders a professional service that no contractor can render; that he places the perfecting of his particular art superior to any monetary question. That is what makes him a professional man. The architect must stand solidly on that ground. In no other direction is there any hope for him.

(CONTACTS—*Continued*)

What Is the "Responsible Bidder"?

Selecting Him by Means of Standard Questionnaires—Saving Time and Expense for the Architect

THOUGH the laws governing public contracts provide, with few exceptions, that such contracts shall be awarded to the lowest responsible bidder, there has been no generally recognized legal interpretation of the term "responsible bidder" and it is commonly accepted as meaning any bidder who can supply a surety bond. That the furnishing of a bond does not necessarily indicate responsibility is generally known. The surety company has not presumed to guarantee that the bidders whom it bonds are responsible but merely that their contract obligations will by some means


Standard Questionnaires and
Financial Statement for Bidders

ENGINEERING CONSTRUCTION

Approved and recommended by
THE JOINT CONFERENCE ON CONSTRUCTION PRACTICES
for use in investigating the qualifications of
bidders on public and private construction.

Participating Committees from

American Association of State Highway Officials
American Institute of Architects
American Institute of Consulting Engineers
American Society of Civil Engineers
American Society of Mechanical Engineers
American Society for Municipal Improvements
Associated General Contractors of America
Highway Industries Exhibitors Association
National Association of Casualty and Surety Agents
Surety Association of America (Committee on Bidder Underwriting)

First Edition, 1925
Issued by the Joint Conference on Construction Practices
1033 Munsey Building, Washington, D. C.

be fulfilled. Consequently the ability of a bidder to execute his obligations has in general received insufficient attention and each year public construction has been subject to loss and delays from thousands of defaulted contracts.

In response to the needs generally voiced by engineers, architects, and public officials, for some means whereby they may gauge the responsibility of bidders, this subject has been extensively investigated by the Joint Conference on Construction Practices, representing practically all of the elements concerned with the design, management, supervision, and financing of construction. It obtained information from practically every State with respect to the methods in use for ascertaining a bidder's character, experience, organization, and financial condition. Upon the basis of this information, which shows that various public construction agencies, especially state highway departments, are successfully using sworn questionnaires and financial statements, the conference has developed two sets of forms, one for building and one for engineering construction.

The forms consist of a financial statement, which indicates the bidder's financial standing, an experience questionnaire designed to reveal his past record, and a plan and equipment questionnaire giving certain information with respect to his qualifications for undertaking a specific project. Each of these forms is accompanied by an affidavit, so that information presented in them is given under oath. The material in the questionnaires and financial statement has been drawn largely from forms already in use and has been subjected to careful criticism by engineers, architects, contractors, surety officials, manufacturers, and bankers.

Some division of opinion exists with respect to the practice of using such forms, as for example, whether the financial statement should be required from every bidder with his proposal or from the three low bidders only, but the conference is unanimous in the belief that the complete forms should accompany the instructions to bidders with definite notice of the procedure to be followed.

Among the significant benefits to be derived from the standard forms are: the ease with which reliable information can be exchanged by public officials; and the saving of time and expense to construction companies who bid on the work of many different departments.

A copy of these Standard Questionnaires will be sent to readers of ARCHITECTURE upon request.

Questions That Confront the Architect

WHEN an owner wishes to invest his capital through construction of a building, particularly if it involves an expenditure of considerable magnitude, his investigation very quickly acquaints him with the necessity and the function of an architect. Questions such as the following were found by Robert E. Blodget, of Ludlow & Peabody, to confront him when he talks to the client:

Is the size of the plot suitable for the construction of the type of building proposed, or should more property be acquired in order to make it an economic success?

How high can the building be constructed, and what form must it take under the law?

What proportion of the plot can be occupied by the building under the law?

Must the building be fireproof under the law, or can it be non-fireproof?

How can he be assured that the building proposed will be safe in all its parts, suitable for its purposes, and meet the requirements of all the State and local laws?

How can he be assured that the appearance of the building will be something of which he can be proud, and as beautiful as the money available will allow?

How can he be assured that the cost of the building will be within the limits of the sum available for the purpose?

What form of contract would be most advantageous to his interest?

After letting a contract, how can he be assured of getting what he has contracted for?

(CONTACTS—*Continued*)

The Value of Standard Specifications to the Architect

The Initiative of the Producer—Are the Specifications Tied Up with the Product?—The Scope of the Specification—Why Standards Are Adopted

By F. S. Laurence

THE tendency to standardization in all lines of commercial production has been very marked during the past decade. This tendency reflects not only the necessity for simplification and the elimination of waste due to needless complexities of production, but also the demand for standards of quality. Upon these the consumer can safely depend, without need of exhaustive inquiry to assure receipt of the dollar's value for a given expenditure.

The Producer Takes the Initiative

Trade associations have contributed greatly to the public interest in promoting the use of Standard Specifications covering the output of various industries, especially those which serve the building-construction industry in the United States. The fact that the preparation of such specifications is due in the main to the initiative of the producer rather than the consumer is deeply significant of the changing outlook of modern business toward its public relation and toward the commercial success which is the goal of all industry and enterprise.

Why Standards Are Adopted

For Standard Specifications are formulated and adopted by an industry not only from recognizing that business must be conducted in the spirit of service, but that uniform standards of quality and practice are vital to the continued life of the industry itself. Fair competition is obviously impossible if there is no standard of performance to which all competitors adhere. Without this the door is wide open for the less scrupulous to profit, temporarily, at the expense of the more conscientious producer who desires to give proper value for compensation received. The ultimate outcome of the unrestrained cutthroat competition, to which the absence of agreed standards leads, means eventually the discrediting and ruin of the industry afflicted with this condition.

That the major branches of building-material production in the United States have come to recognize this, and are setting their own house in order through the adoption of high standards of performance, is a fact which may be set down to the credit of the various trade associations representing these groups.

The Broad Scope of the Specifications

The adoption of such specifications has been attended with considerable difficulty. Industries whose plants are widely scattered necessarily encounter certain differences in consumer demand as well as differences in character of materials locally obtainable. A common standard which will acceptably meet the needs in these particulars must necessarily stop short of certain detail requirements which should be included in any specification for a given operation.

The recently adopted Standard Specifications of the terra-cotta industry are, for instance, a case in point which illustrates this. They provide a broad framework of basic requirements upon which the architect may build an effective specification for particular work in a given locality and assure that a common standard of excellence in these respects will be observed by manufacturers estimating.

Are the Specifications Tied Up with the Product?

The question may be asked whether specifications prepared by an interested industry afford as satisfactory a protection to the consumer as those emanating from a disinterested scientific body, government bureau, or other impartial authority. Theoretically they may not, but practically they do, and may be accepted with every confidence in this respect. The manufacturers of any product know better than any one else the maximum degree of satisfactory performance of which their material is capable. With the enlightened viewpoint which obtains to-day throughout the larger organized industries, the highest attainable standard of quality is recognized as a vital requirement to the success of the industry at large and of the individual producer.

Were this not the case, organized industry would not, as it is to-day, be spending large sums of money in co-operative research to admit attaining in manufacture the highest level of quality possible to their material. Modern industry devotes its dollars to purely altruistic betterment upon the conviction that its success depends upon its doing so. This recognition of purely commercial advantage operates as a guaranty that the standards of quality adopted by an industry are as high as they can be made for the maintenance of fair and universal competition.

The Assistance of the Department of Commerce

It is also the common practice in the ranks of organized industry to-day to conduct its research work with the assistance of various scientific bodies and technical departments of the government. Then the possibility in attainable standards shall not be limited by the introspection of purely industrial control, but reflect so far as possible the benefit of a detached and impartial scientific view-point. The research work conducted at the National Bureau of Standards of the Department of Commerce at Washington, through fellowships maintained by various producing industries, is with this view, and is also tending toward the adoption of more intelligent and practical requirements in the specifications of various government departments.

"The Standard Specification for the Manufacture, Furnishing, and Setting of Terra Cotta," that Mr. Laurence speaks about, will be sent to readers of ARCHITECTURE at their request.

(CONTACTS—*Continued*)

An Architect's Experience with His Catalogue Library

By Edwin H. Hewitt, F. A. I. A.

Of Hewitt & Brown, Architects

I WANT to point out the experience of an architect's office that is trying to be practical and to meet the situation that confronts it. Personally, I made up my mind that I would examine this steady torrential flood of advertising over my desk long enough to, at least, see what it was. Had I realized what I was going to get into, the task would have never been undertaken. In order to meet the situation, we set up a filing system in our office, and at date twenty feet of steel lockers are completely filled with advertising matter and data regarding building materials. While it has reached its maximum growth, the material must be constantly worked over to keep it up to date.

Edwin H. Hewitt

It is out of the question to say that the architect ought to know all the merits and all the particular features of every one of these thousand and one objects and materials manufactured for consumption in the building industry. In the specifications of the architects they may reach into the thousands of items. In the past the architect has picked out, here and there, those things that he knew about from his own experience and that of the profession in general, as well as through the reports of the Structural Service Committee of the American Institute of Architects and other creditable agencies.

Now, we must have more and better information. As architects we may be slow and behind the times in the matter of filing information, but I think we are waking up. What we need above all things is to obtain a bird's-eye view of what the country's production is in the matter of building materials. The information that does come to us arrives in all sorts of forms, bulky, wasteful, difficult, or impossible to file, nor does it in most cases give the detailed information that the architect finds necessary in order to save his time and to learn whether or not it is practicable to apply in any particular problem he may have in hand.

The busy architect wants to give all the attention possible to advertising, but the only way it can be done, as the industry is now organized, is to have such files as will eliminate trouble and enable us to so keep the matter for reference that we can get at it quickly. This means that we must keep an efficient filing system in our offices.

Most important of all, the material to be filed must be of such a nature as to be informative, correct in size, economical in bulk, and of a nature to tell the story to the architect, the engineer, and the draftsman.

Should the Conscientious Specification-Writer Use "Or Equal"?

How "Or Equal" May Safely Be Written in the Specification—Avoiding Controversies with Contractor and Manufacturer—Does It Promote Competition?

By Arno Kolbe, Architect

THE term "or equal" is a "thorn in the flesh" to all conscientious specification-writers. If the term is not used it devolves upon the specification-writer to determine in advance the merits or demerits of an article or material he wishes to use; he must make certain that the articles or materials are equal in quality and nearly equal in price; otherwise the bids received are not strictly comparable. In the opinion of the writer it seldom works out that articles submitted under the "or equal" phrase are equal in quality and price.

If the "or equal" is used, it causes a hardship on the builder and manufacturer in that, the architect will invariably insist upon the article specified by name, thus causing a loss to the builder who availed himself of the "or equal" clause and bid on a cheaper article. The manufacturer will be asked by the builder to cut his price to meet the competition of the "or equal" article. In the end the owner is liable to lose out in this bargaining unless the architect does what he should have done in the beginning, specify straight what he believes best suited to the requirement of the building operation.

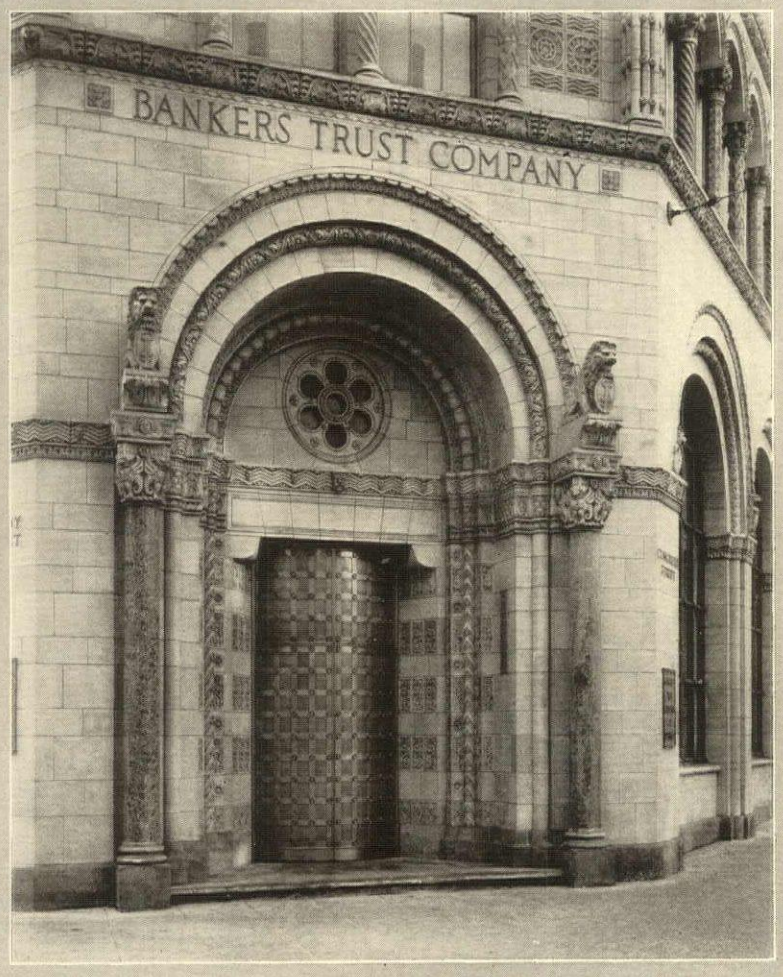
The "or equal" phrase can be safely used if there is included in the specifications the following clause:

"Whenever or wherever an article or any class of materials is specified by name of any particular patentee, manufacturer, or dealer, it shall be taken as indicating the standard of quality, finish, and durability desired. Other makes of equal quality, finish, and durability may be quoted upon, but the bidder must state in his proposal what will be the difference in price if another make than the one specified is selected.

"After the award of the contract, should the contractor desire to use some material other than that specified, he shall first make application in writing, naming the difference in cost in each case; otherwise he will be held to that which is specified by name. No change shall be made without the written consent of the architects."

It is believed that, in using the "or equal" phrase, as above outlined, the owner is sufficiently safeguarded, and the contractor has a freedom of choice of materials which will permit him to estimate his cost more intelligently, thus avoiding the usual controversy which arises with the architect as to quality and cost of the material to be substituted for the material specified.

The ideal solution, of course, is to specify directly what one wants; but this, as a rule, entails such a prolonged study of the subject that the specification-writer side-steps this duty when writing specifications, in the hope that in some mysterious way he will get a satisfactory solution without the required amount of experience or work.



Entrance Detail, Bankers Trust Co., Detroit, Mich., Smith, Hinchman & Grylls, Architects. Faced entirely with Terra Cotta (column shafts marble).

A DEPARTURE

THE austere formality of classic design has been the dominant note in bank architecture for many decades.

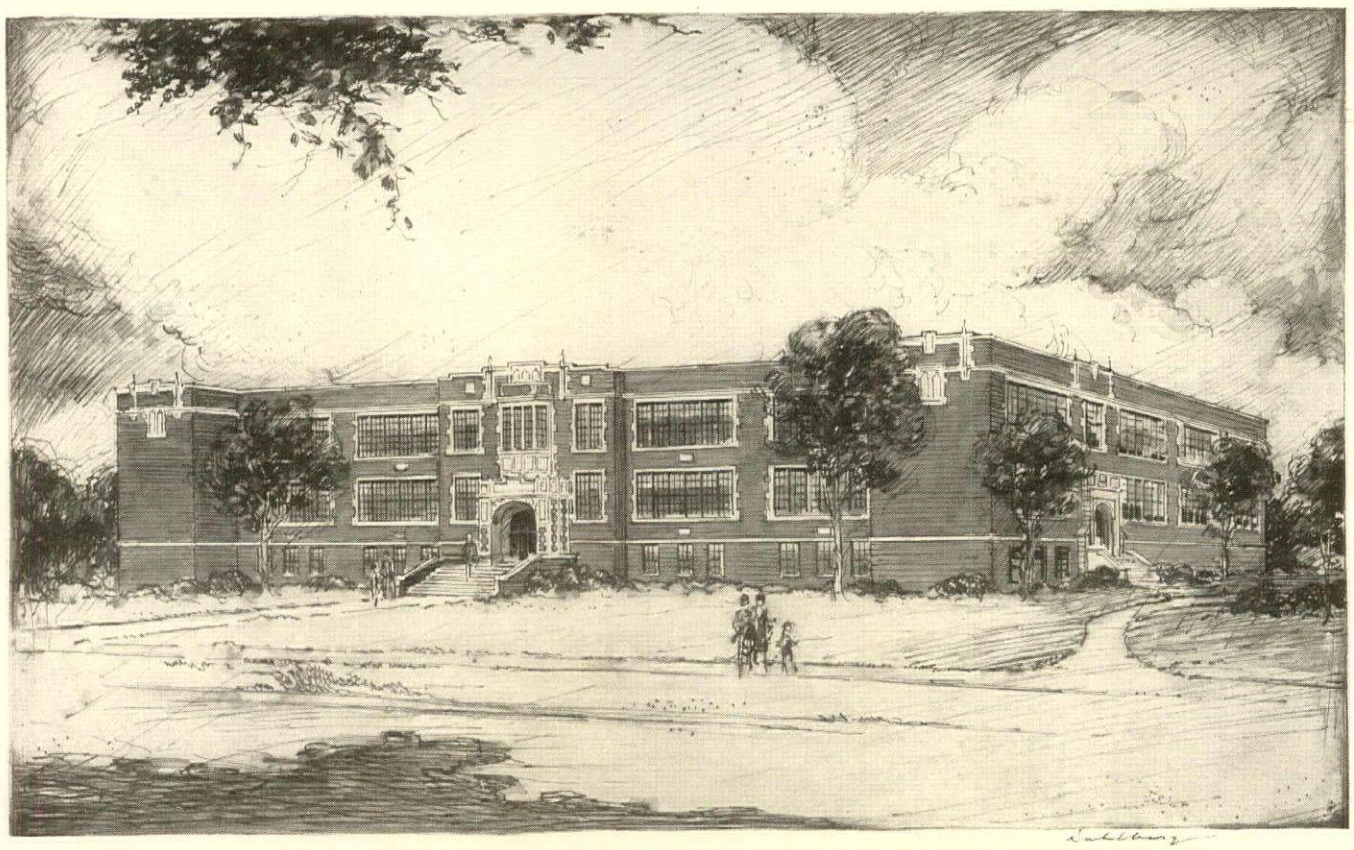
The implications of this style have run well with popular conceptions of the cold disposition of financial interests and unapproachable attitude of banking executives.

The contrary policy prevailing in progressive banking circles today calls for less coldly formal design to properly interpret the bank's public relation.

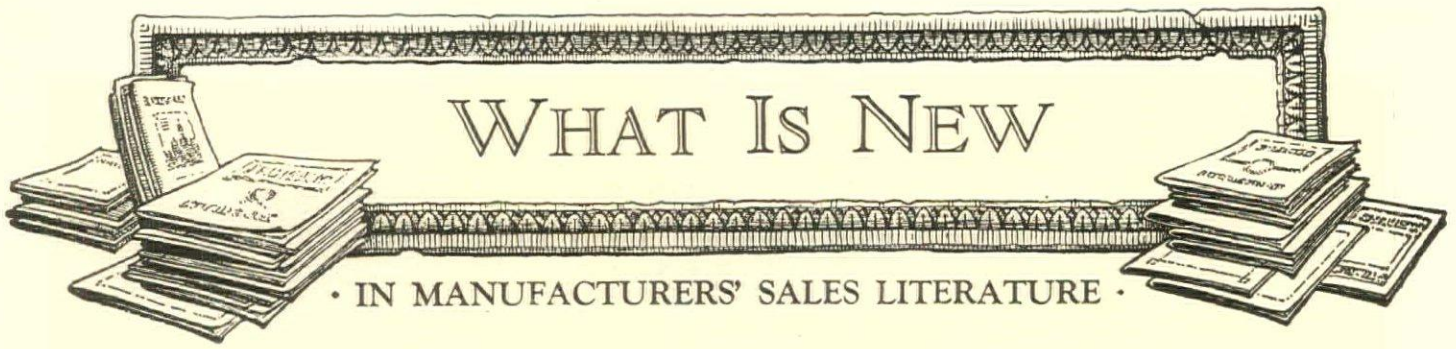
"Terra Cotta of the Italian Renaissance" published by this Society ($3. per copy) contains many engaging motifs well adapted to this purpose.

NATIONAL TERRA COTTA SOCIETY

19 West 44th Street New York, N. Y.



Elementary Grade School, Decatur, Illinois. Brooks-Bramhall & Dague, Decatur, Illinois, *Architects*



WHAT IS NEW

· IN MANUFACTURERS' SALES LITERATURE ·

Architects and every one interested will find here the latest and most up-to-date information on building equipment and activities in the industry. These publications may be had by addressing SERVICE DEPARTMENT, ARCHITECTURE, 597 Fifth Avenue, New York, or by addressing the companies listed below, in which case please mention ARCHITECTURE

PERMEABILITY OF STONE

The Department of Commerce discusses the applicability of permeability tests to certain problems arising from the use of stone under various conditions.

FINISH ON OAK FLOORS

"Paste fillers should always be used on oak floors. Liquid fillers should never be used as a substitute." The E. L. Bruce House-Organ for May also claims that a little color mixed with the filler makes a more attractive finish.

HOME OF A HUNDRED COMFORTS

A built-in electric home will be one of the most interesting features of the General Electric permanent exhibit at Atlantic City.

McKINNEY FORGED IRON HARDWARE

The illustrations in this little brochure give an excellent idea of the decorative possibilities to be found in forged-iron hardware. These pieces claim to be true reproductions and to reflect the spirit of a much earlier day.

ELEVATOR HEADQUARTERS

The Elevator Supplies Company plans to maintain headquarters at the Sesquicentennial Exposition at Philadelphia, to assist architects, engineers, building owners, and all users of elevator equipment, and to help make their visit pleasant.

INVISIBLE RADIATORS

How many housewives wish the beauty of their rooms was not marred by unsightly radiators! A new Herman Nelson booklet with colored illustrations offers a happy solution of this problem. "Architecture," the booklet says, "is the art of clothing structural utility with grace."

THE NATION'S BUILDING STONE

The Indiana Limestone Quarrymen's Association maintains a service bureau for the use of architects and contractors, to answer questions, furnish samples, and assist in locating special stone for special uses.

WALLPAPER ROOM BY ROOM

This is the title of one of the many booklets prepared by the Wallpaper Manufacturers Association for the profession.

DIRECT-ACTION SASH CONTROL

The Callahan Company has a loose-leaf catalogue suitable for filing, which gives specifications and diagrams of various types of sash operators.

NATIONAL LIME ASSOCIATION

The Eighth Annual Convention will be held at French Lick Springs, Indiana, June 8 to 11. The addresses will be on distribution and on the more extensive use of lime in construction.

ROLLING WOOD DOORS

For garages, warehouses, factories, and so forth, where fireproof construction is not required, but where protection against the weather is essential. J. G. Wilson Corporation.

CONSTRUCTION PROJECTS ABROAD

Digests are issued of world-wide construction reports, received in the Machinery Division of the Department of Commerce.

PYROBAR ROOF TILE

Special architectural and engineering data gives you the benefit of the training of seasoned engineers. U. S. Gypsum Co.

STORE FRONTS OF SOLID BRONZE

This new construction is achieved by means of the Davis Extruded Sash. Actual samples and full details are now available.

IF IT IS CLEAN WATER YOU WANT

You can remove dirt from your city water. See the catalogue and price-list of C-N-R Water Softeners, Filters, and Chardalite Softening Minerals. Shiloh Mfg. Co.

PIPES AS "THE ARTERIES OF INDUSTRY"

The National Tube Company has a motion-picture film on this subject. It is described in a folder, generously animated and diagrammed to make every important step clear and understandable.

RADIATOR ENCLOSURES

Radiator enclosures and shields are made to order by the R. C. Heather Company. They will be glad to send their detailed price-list or to give quotations on special sizes.

BOILER ENGINEERING CO.

The Beco Baffle Wall has flexible joints to allow expansion and contraction, but it is at the same time gas-tight. It can be installed at any angle.

ORNAMENTAL WROUGHT IRON

The Flour City Ornamental Iron Company will be glad to send on request a pamphlet illustrating wrought-iron work in a polychrome finish.

PEERVENT HEATING AND VENTILATING

A circular shows the inside of a heating and ventilating unit. There is also a special heating unit for industrial buildings.

GARAGE DESIGN DATA

This is a service to architects published by the Ramp Building Corporation.

SWANFELDT AWNINGS

A booklet shows the various patterns appropriate for every type of home.

IMPERIAL ROOFING TILES

The Ludovici-Celadon Company will be glad to co-operate with architects in developing distinctive roofs for dwellings or larger buildings.

DIXON THIN-EX PENCILS

A new process thin colored lead of great strength and brilliancy, which can be sharpened in a pencil sharpener. Write for samples.

SCREENS AND WEATHERSTRIPS

There is a Higgin service man in practically every city with specialized data and experience on screens.

ELECTRIC SIGNALS

For the assistance of architects, building boards, and bank directors, the Holtzer-Cabot Company has prepared a brochure "Bank Signaling and Protective Systems for Banks."

ROOF INSULATION

From a chart drawn up by the Insulite Company it is easy to determine when roof insulation is advisable and how much can profitably be used.

WINDOW PROBLEMS

Reprints of Lord and Burnham's series of problems will be mailed on request—also a special A. I. A. folder to contain them.

BAKELITE SWITCH PLATES

The Connecticut Electric Manufacturing Company has a four-color pamphlet with the slogan, "There's a unit for every possible need."

BOILERS AND RADIATORS

"The Truth About Boiler Ratings" and "Guaranteed Heating Satisfaction at Minimum Cost" are two booklets offered by the H. B. Smith Company.

FOR THE DRAFTING-ROOM

Architects are invited to write for the complete full-size set of twenty Josam drafting-room standard detail sheets.

FIR FOR BUILDING

An illustrated treatise on Douglas Fir, written by a forester, tells why this is the wood of to-morrow as well as to-day, and how to use it.

MASON'S CEMENT

Data and tests prove Brixment Mortar to be excellent for moisture resistance. Louisville Cement Co.

SAW-TOOTH ROOFS

The Philip Carey Company has solved the gutter problem for this important type of factory roof.

DRINKING FOUNTAINS

Detailed information is available on the Halsey Taylor Company's special patented features—automatic stream control and two-stream projector.

LUTTON GREENHOUSES

"Greenhouses of Quality" is a 52-page illustrated book full of information on all types and sizes of greenhouses.

FIRE PREVENTION

This and other important matters on the subject of plastering are treated in "Metal Lath News," published by the National Council for Better Plastering.

ELEVATOR DOOR EFFICIENCY

The Richards-Wilcox Company will furnish complete data on Ideal Elevator Door Hardware.

BATHROOM BRACKET

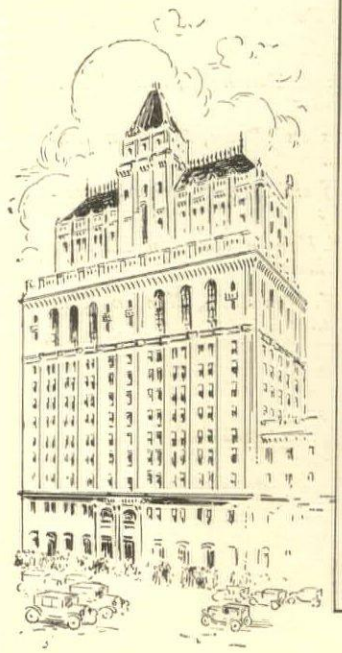
The Wirt Company's Dim-a-Lite Porcelain Bathroom Bracket allows four stages of light for the bathroom. It has also a convenience outlet for other electrical appliances.

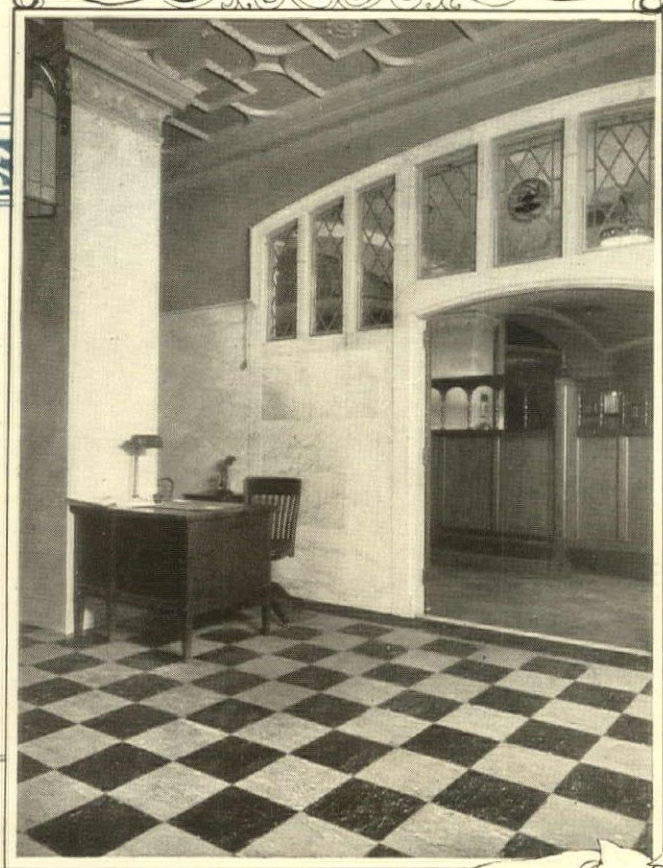
SANITAS WALL COVERING

The effect of wall-paper—yet a surface that can be wiped clean with a damp cloth. It is made in plain and pastel flat finish, decorative flat finish, brocade and metallic finishes, and enamel finish. Full information and samples from the Standard Textile Products Company.

PARR METAL PRODUCTS CORPORATION

A catalogue describes a complete line of steel cabinets.





Over 7,000 feet of "U.S." Tile are installed in the New York Times Annex, New York City.

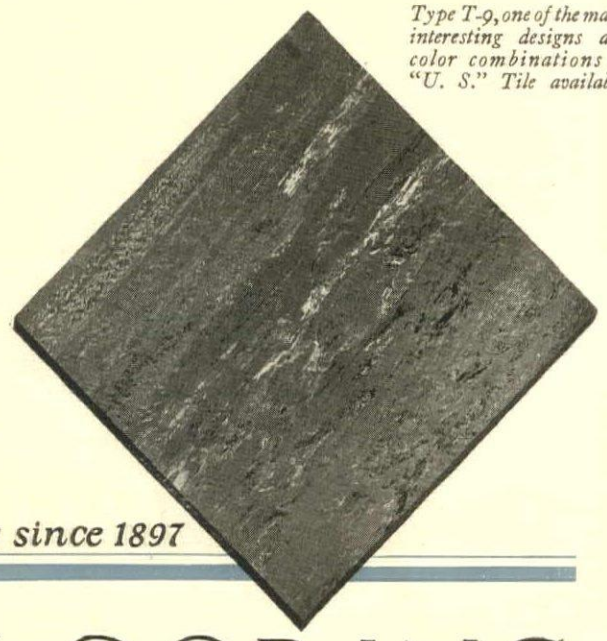
The skilled craftsmanship of our own corps of master floor layers insures perfect satisfaction in every mechanical detail.

"U. S." Tile—master product of the world's largest rubber manufacturer

Floors of rubber — quiet, beautiful, exceptionally durable, comfortable, sanitary and easy to clean — have earned a place in innumerable architectural specifications. Rubber floors, properly made and installed, are satisfactorily solving many heretofore perplexing floor problems.

When you are considering rubber floors, remember that "U.S." Tile is the perfected result of over twenty-five years' experience in building fine floors of rubber by the world's largest grower and maker of rubber and its products.

Behind each finished floor of "U. S." Tile stands the United States Rubber Company — assuring perfect workmanship, maximum quality and skilled installation.



Type T-9, one of the many interesting designs and color combinations of "U. S." Tile available.

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Manufacturers of US Trade Mark *Rubber Flooring since 1897*

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Mott B. Schmidt, Architect

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Jaros and Baum, Consulting Engineers (Steam)

Wolff and Munier, Steam Contractors

A. E. Hanson, Consulting Engineer (Plumbing)

W. J. Cornell Co., Plumbing Contractor

Jenkins at 1088 Park Ave.

Jenkins Valves are very much at home in the quality atmosphere of Park Avenue, New York City. Over a thousand of them are installed in the apartment house at number 1088 Park Avenue, corner 89th Street. They are used in both heating and plumbing work, and range in size from half-inch bronze globe valves to ten-inch iron body gate valves.

The Jenkins "Diamond" is a mark which is an unfailing sign of a valve made to quality standards.

Architects, engineers and contractors have found that standardizing on Jenkins means long-term, low-cost valve service.

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SINCE 1864

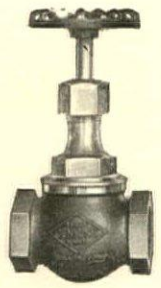


Fig. 106
Screwed, Jenkins Standard Bronze Globe Valve.

Fig. 294
Screwed, Jenkins Standard Iron Body Swing Check Valve.

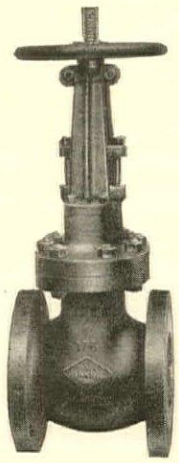
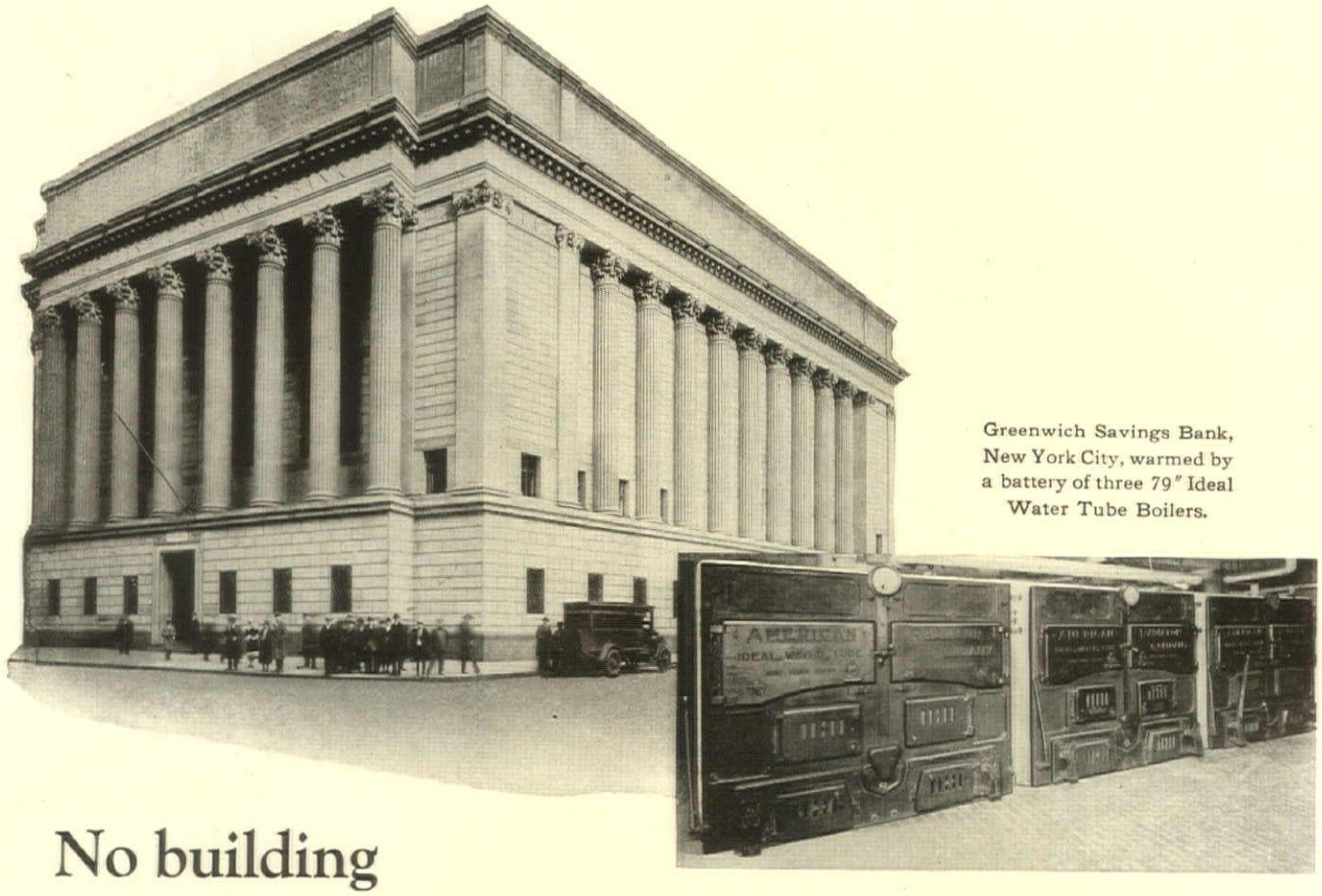


Fig. 651
Flanged, Jenkins Standard Iron Body Gate Valve, with bronze spindle.



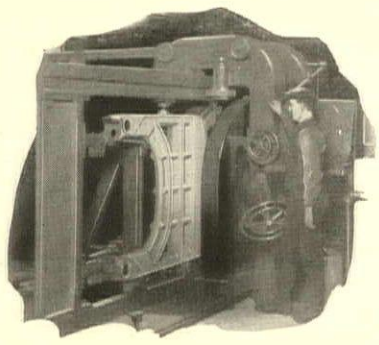
Greenwich Savings Bank, New York City, warmed by a battery of three 79" Ideal Water Tube Boilers.

No building is too large for IDEAL BOILERS

Not only is there an Ideal Boiler installation to fit every kind of building from the smallest cottage to the largest skyscraper, but architects and engineers have proven that a battery of Ideal Boilers is the most economical heating system they can install in a big building.

And the reason for this is very simple. A heating plant is seldom called upon to operate at its full capacity. During mild weather only one or more boilers of the battery need be operated.

Every architect and engineer should have a copy of the booklet which describes in detail the Ideal Boilers that are heating many of the largest buildings in the world. The coupon below will bring you your copy.



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THE idea, that a home should only be beautiful inside, is passe! With the recent innovation in awning designs a new art of *exterior* decoration has been created.

SWANFELDT AWNINGS bring about a delightful transformation in the home's outward appearance—similar in effect to the addition of new window drapes inside. And the soft color tones are so blended in their elusive scrolled pattern, that these awnings become a harmonious part of the architecture and never attract undue attention to themselves. Therein lies their distinctive artistry.

SWANFELDT AWNINGS are available in several beautiful patterns appropriate for every type of home architecture. They can be installed without end pieces if desired. The graceful bronzed scroll supports add a finish to the whole installation.

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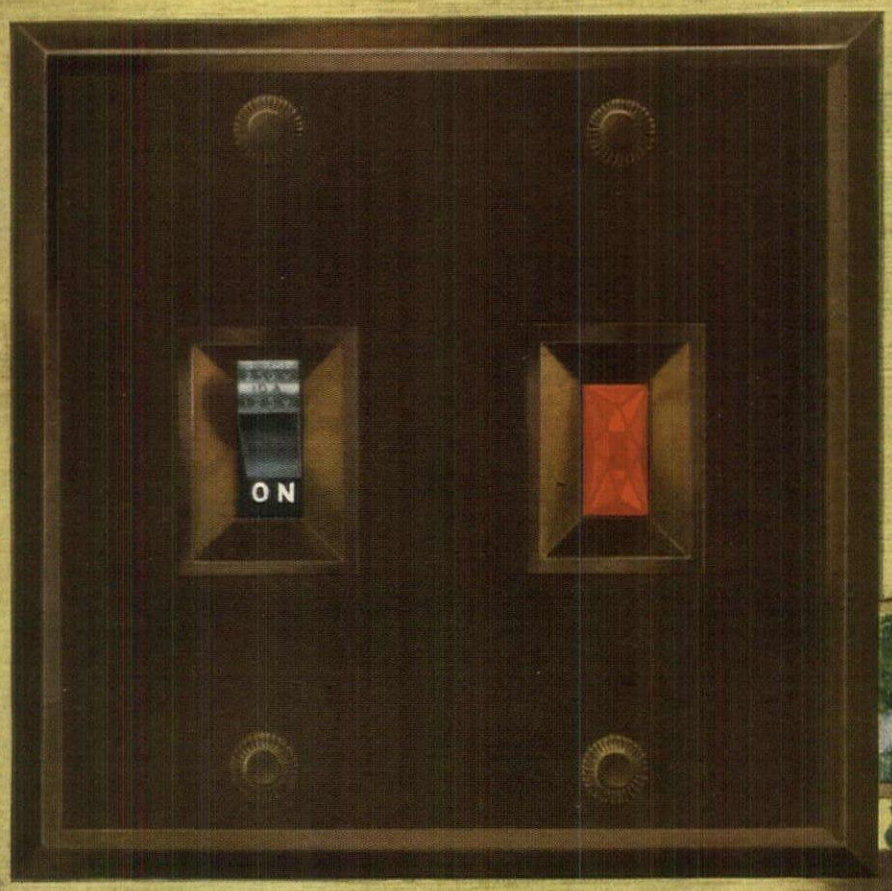

This combination of toggle switch and pilot light works in conjunction with lights which are out of vision from the point of control, and otherwise easily forgotten.

A positive reminder for the absent-minded Hubby returning home late at night, to turn off the switch and avoid the neighbor's gossip, also preserve domestic tranquillity.

Each device bears our trademark ⓒ *and is stamped "GENUINE BAKELITE"—a definite indication of quality.*

Arrange now with your electrician to replace your metallic plates with Connecticut plates of genuine Bakelite.

A four-color pamphlet will be sent on application.

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For twenty years, **THE CONNECTICUT ELECTRIC MANUFACTURING COMPANY** has been specializing in the manufacture of electric wiring devices which lead the industry. By this same token of leadership, **CONNECTICUT** craftsmen, with true Yankee ingenuity, developed the Bakelite line which conveys individuality and distinction. Skillfully moulded of genuine **BAKELITE,** the design and workmanship **have not been equalled.** Their rich brown color and egg-shell finished surface with a border of smooth beveled edges are original with **CONNECTICUT.**

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So gracefully and scientifically perfected, they gained instant recognition among architects, decorators and electrical inspectors.

Chemically inert, they are unaffected by fumes, moisture or climatic conditions. The finish is **permanent** and **lasting.**

Connecticut can furnish practically any combination to suit individual requirements—like the above illustration, for instance. *Little Betty's keen eyes have caught the signal and traffic is temporarily halted until Daddy switches off the light.*

There's a little Bakelite in every Bakelite plate, but Connecticut plates are ***all*** *Bakelite. By actual comparison you can note the difference. That's why they cost more.*

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"Oh, Mother! Daddy forgot the cellar light"

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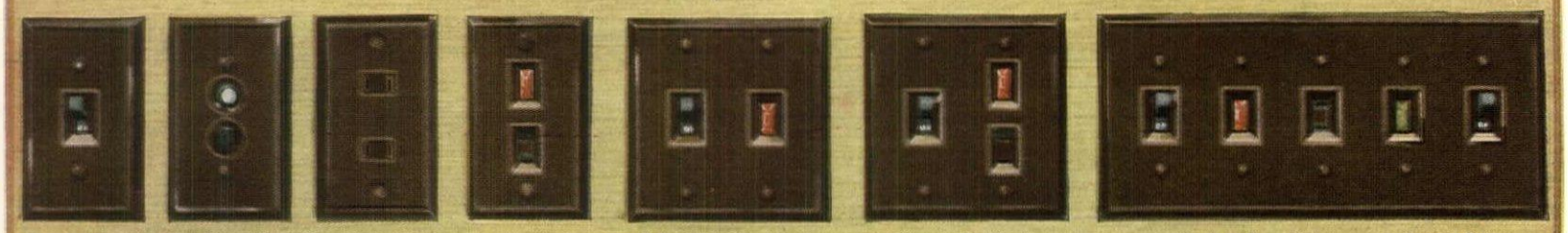

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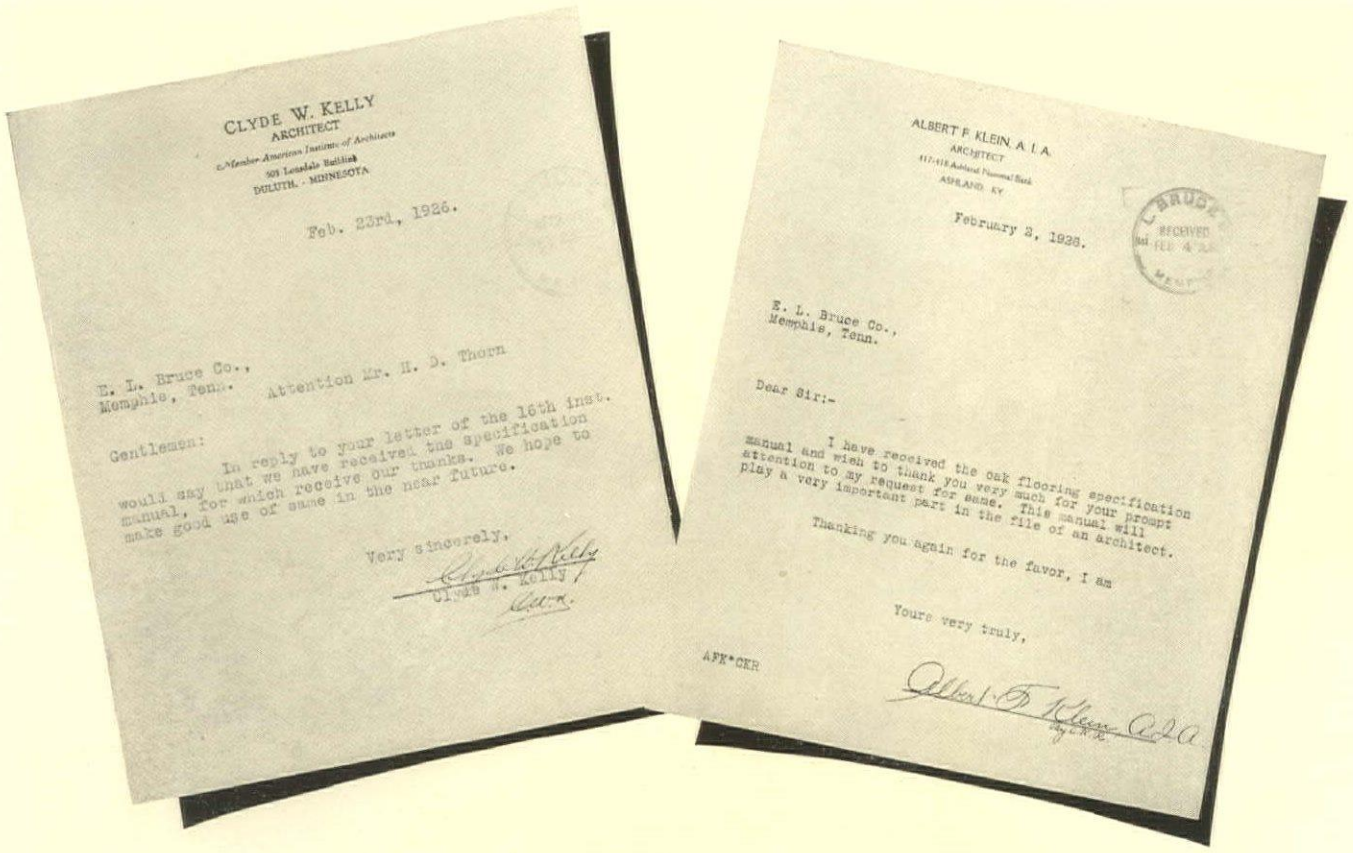
Any desired combination can be furnished up to 12 gangs

An executive office of the Cunard Steamship Company, Cunard Bldg., New York, with Pyrono's walnut veneered surface providing a friendly and dignified background to a well chosen arrangement of furnishings. Both doors and trim are Pyrono, a burled walnut veneer being used in the panels.

Interior and exterior view of Winged Foot Golf Club at Mamaroneck, N. Y. Clifford C. Wendeback, architect; Smith & Leo, contractors.



A valuable addition to an architect's working file

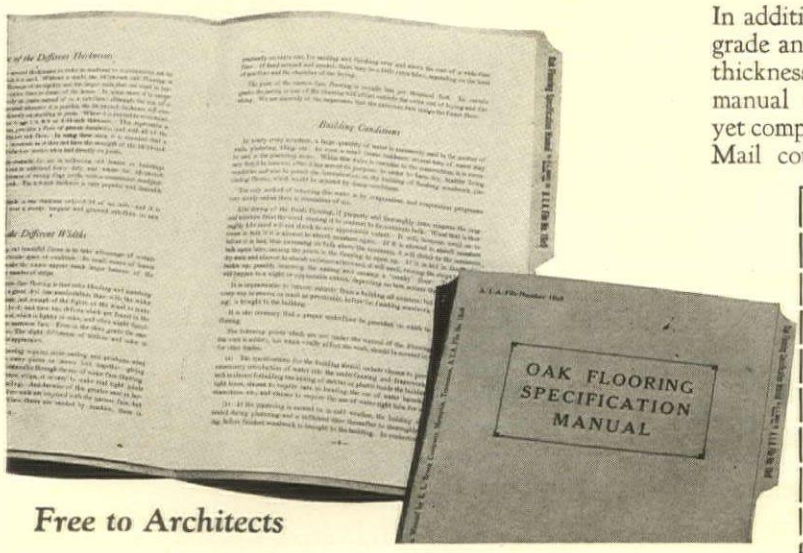
THIS manual explains the "why" as well as the "how." Architects are finding it invaluable in avoiding confusion when specifying oak flooring.

For example: there are various "grades" of oak flooring, and the question of money available as well as the effect desired, govern the selection of the "grade." The expression "grade" should not be confused with the expression "quality." Regardless of the "grade" selected, the quality should be first class of the "grade" selected.

Oak flooring is now quite generally given a standardized grading, by the larger manufacturers, and the grading rules published by them leave no room for misunderstanding, providing these rules are used in specifying the flooring material desired. The "Grading Rules" should always be used in specifying the flooring desired, and no attempt made to define a "grade" of oak flooring by expression such as "First quality quartered oak" or "Best quality quartered oak" as technically such expressions could be construed to relate to the seasoning, milling, and condition of the wood, and not as a definition of the "grade."

Outline specification form

In addition to specification data which covers quality, grade and condition of wood, use of different grades, thicknesses, and widths, building conditions, etc., this manual contains a blank specification form, simple, yet comprehensive. Architects will find it very useful. Mail coupon for copy, sent with our compliments.



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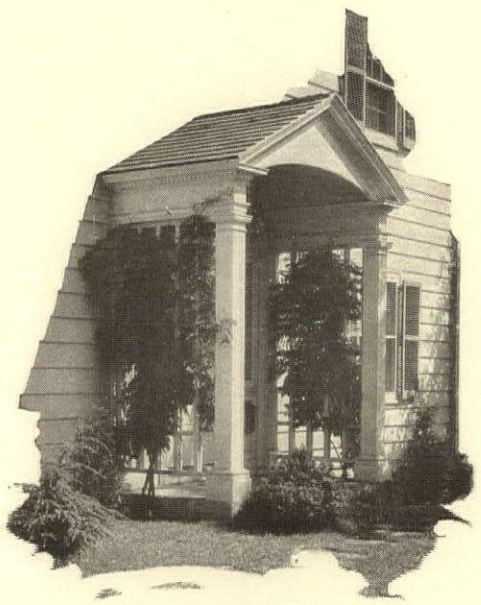

The increased use of Douglas Fir in home building is because of its adaptability to the Architect's individual designs.

3400% Increase

SEVEN YEARS AGO, Douglas Fir was hardly known on the Atlantic Seaboard except in ships and by engineers who used it in docks, wharfs and buildings where structural strength was the first requirement. In 1919 it began to appear there in quantity for home building and general use.

The total shipment from the West Coast mills to the Atlantic Seaboard in 1920 were slightly in excess of 50 million board feet. Without any concentrated effort toward sales or advertising, this demand climbed to 1700 million board feet in 1925—*an increase in this territory alone of more than 3400 per cent in five years!* Practically all of this lumber is shipped to the East Coast by water—in many cases direct from docks at the mills through the Panama Canal to Philadelphia, Baltimore, Newark, New York and Boston.

Douglas Fir has a greater variety of uses than any other wood

DOUGLAS FIR is supreme as framing lumber —it is light, stiff, strong and durable, yet easy to saw. There is little or no tendency to twist or warp and because of its close texture holds nails well, even when driven in the green lumber.

For exterior exposures such as sleeping porches, porch floors, window frames, sash and doors, pergolas, garden furniture, steps, runways, fencing, etc., Douglas Fir is unusually serviceable and durable.

Its large percentage of all-heart wood and practically no sap renders it resistant to weather in exposed places and in contact with soil.

The exacting demands of beauty, texture, color and strength justify the variety of uses for which Douglas Fir is specified for interiors.

Douglas Fir in the clear grades (always furnished for interior finish) is uniform in color and texture and of great beauty of grain. When cut for molding, casing and base the mitred corners fit snug and stay put.

Douglas Fir, kiln dried, is an excellent base for paint and enamel—it takes it and holds it.

Douglas Fir panel wood (plywood) always made slash grain has a natural satin-figured pattern—very beautiful, finished in the new gray tones with rubbed wax finish.

Well manufactured Douglas Fir has wide distribution and is available to the builder. Practically every important lumber market in the United States handles it.

[An illustrated treatise on Douglas Fir, written by a forester, telling why this is the wood of tomorrow as well as today, and how to use it, sent on request]

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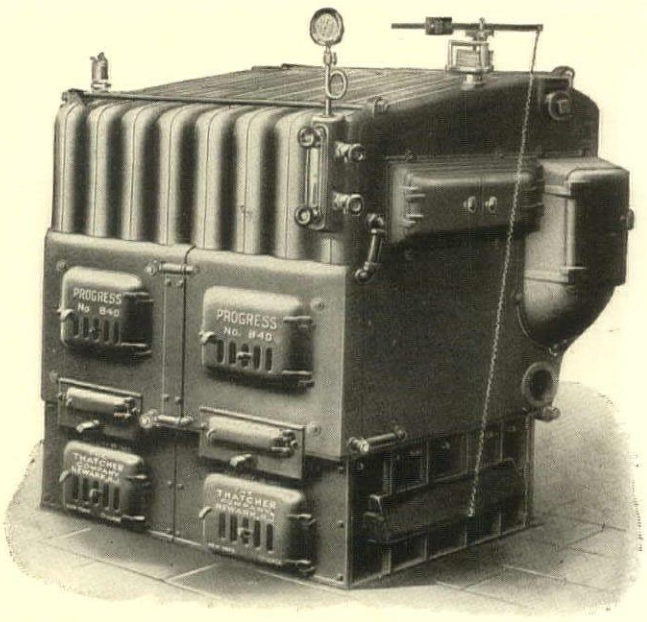
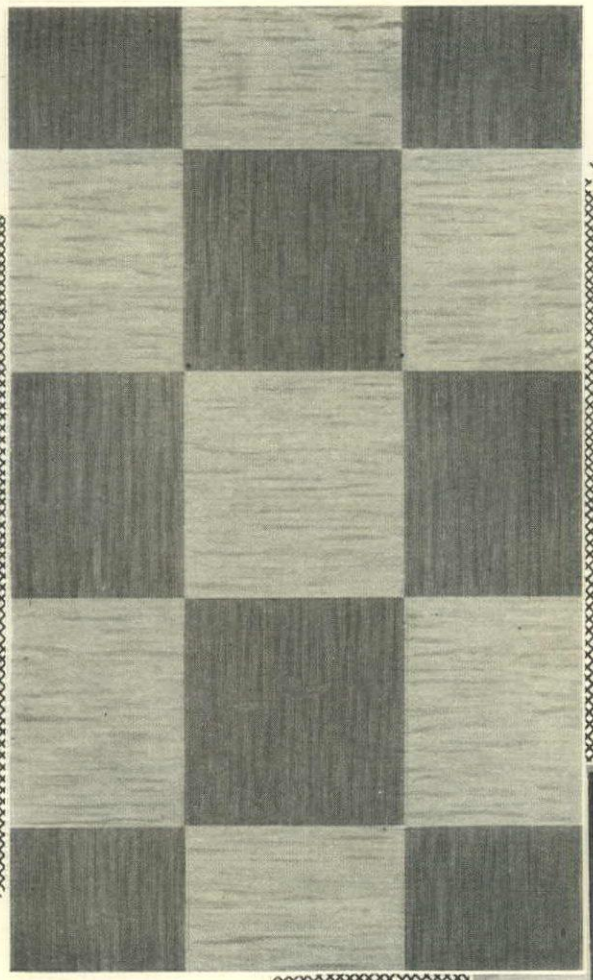


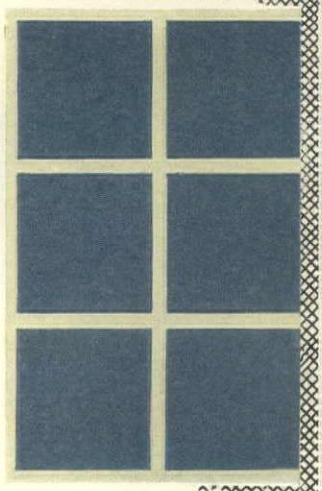
Thatcher "Progress" Boiler

Armstrong's Linoleum *for every floor in the house*

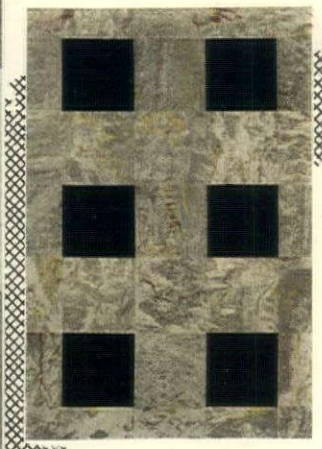
Armstrong's Marble Inlaid No. 78
Blocks are 9 inches square



Inset Tile Inlaid No. T40
Blocks are 5½ inches square



Marble Inlaid No. 71
Blocks are 6 inches square



This living-room floor is Armstrong's Marble Inlaid No. 76 with black border. Residence of J. L. Cox, Ferguson, Mo.

An Interior Decoration Service That Demonstrates the Use of Linoleum Floors

HUNDREDS OF WOMEN, every month, write for advice to our Bureau of Interior Decoration. They ask about linoleum floors for their living-rooms and dining-rooms, bedrooms and sun porches. They want to know how to make their floors harmonize with draperies, wall-coverings, and other furnishings.

To each of these home planners is sent a personal reply from a member of the staff of our Bureau of Interior Decoration. One hour, or two, or ten—as many as need be—are given to each individual problem.

Every letter that goes out carries a careful selection from the fine new designs in Armstrong's Linoleum, with small swatches of drapery material and wall paper which can be used harmoniously with the patterns. And the result of this specialized service is that modern, decorative floors of Armstrong's Linoleum are being used in homes, new and old, throughout the country.

We believe you will be interested in studying the decorative uses of the new linoleum designs for floors in residences and places of business you may be planning. So that you may get better acquainted with the recent developments in Armstrong's Linoleum, why not let us send you a set of selected linoleum floor color schemes? Just address our Bureau of Interior Decoration on your letterhead.

Look for the CIRCLE A *trade-mark on the burlap back*

Armstrong Cork Company, Linoleum Division, Lancaster, Pennsylvania

New England Telephone Building, of Providence, R. I., equipped throughout with Te-pe-co Fixtures.

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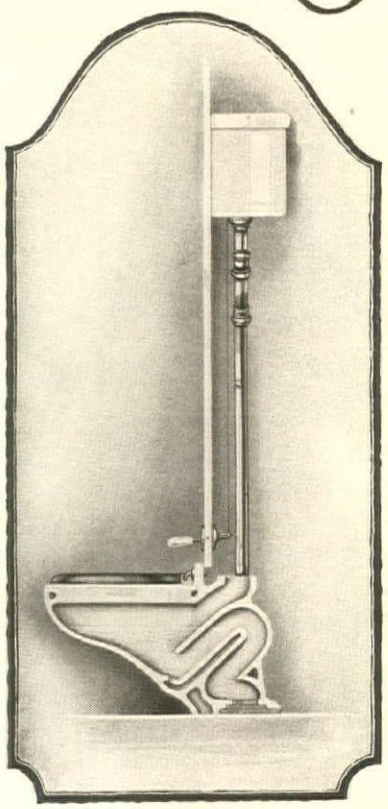

The "Donovan" Safety Flange is employed on the Universal Closet as a means of connecting to the soil pipe—guaranteeing a perfect joint.

IF your plans require a floor-free closet and a pipe chamber is possible, you can't afford to overlook the Te-pe-co "Universal." It has all the sanitary features of the wall-hung closet plus a simplified installation that requires no carrier.

Of full syphon jet construction, the design of this beautiful sanitary fixture includes the extended lip feature and a large vent passage from the bowl, opening vertically into the pipe chamber.

Any distributor will be glad to point out all of the "Universal's" advantages. He will also tell you that Te-pe-co makes only one quality—the finest—and does not market "culls."

THE TRENTON POTTERIES COMPANY

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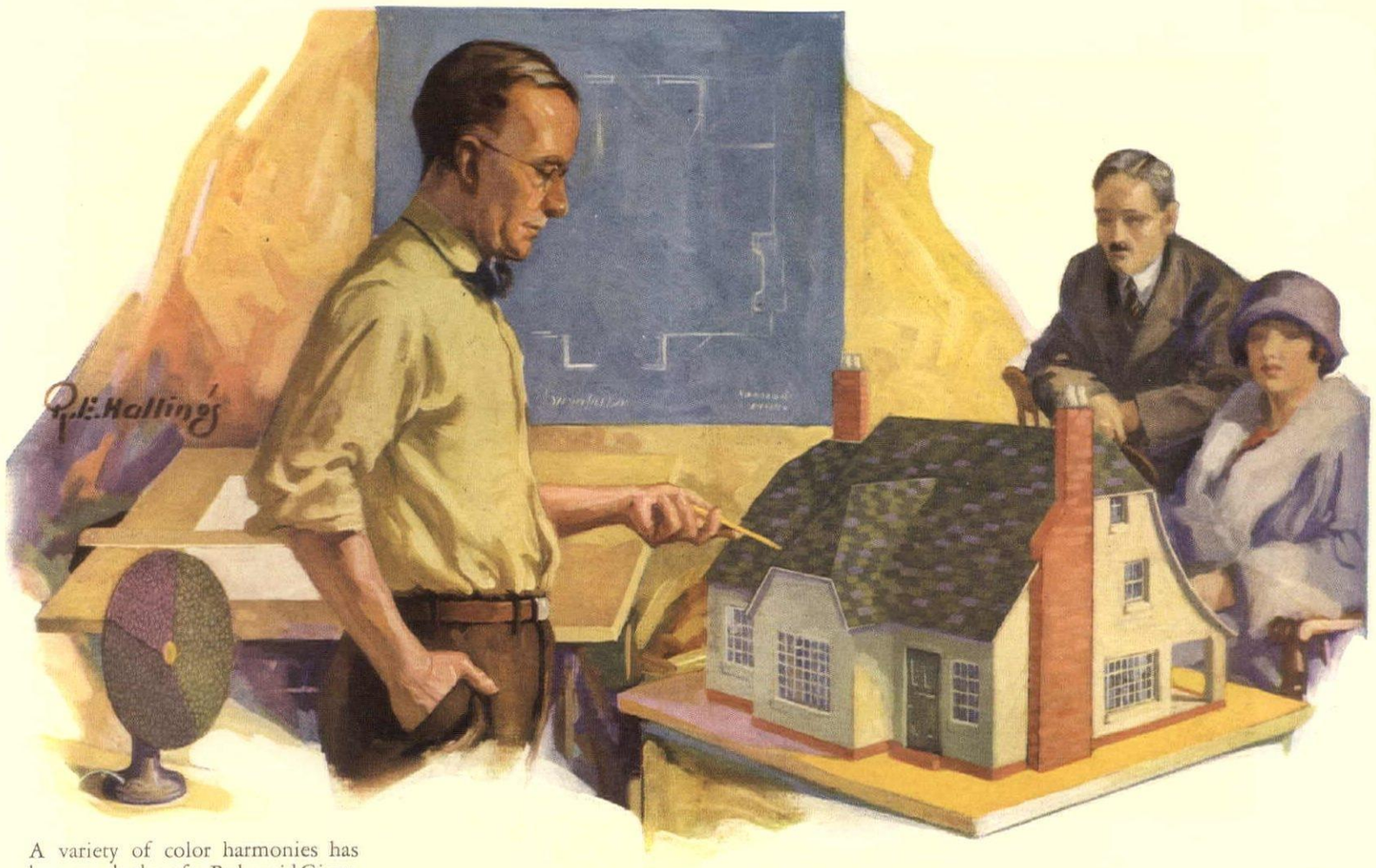

A variety of color harmonies has been worked out for Ruberoid Giant-shingles by means of the Munsell System of Color Notation. The Munsell color wheel has made it possible to obtain combinations of colors which are perfect in balance and tonal value. The basic colors are derived from the surface coatings of natural crushed slate in rich shades of sage-green, tile-red, steel-blue and purple. A few of the blends possible with these basic colors are as follows:

A		D	
Purple	40%	Steel-blue	70%
Green	40%	Green	20%
Steel-blue	20%	Purple	10%

B		E	
Steel-blue	50%	Green	70%
Green	40%	Purple	20%
Purple	10%	Steel-blue	10%

C		F	
Green	50%	Purple	50%
Steel-blue	30%	Green	40%
Purple	20%	Steel-blue	10%

IN RUBEROID Giant-shingles you have a medium which makes possible that perfect blending of different colors so desired by many home owners and builders. By their use you can obtain a roof which, not only in color values but also in all round quality, is worthy of your standing as an architect.

Ruberoid Giants give extra size, extra weight, extra rigidity, extra large headlap *and a closed channel* which afford absolute protection against leakage in a driving storm.

Due to their size, self-spacing and self-aligning features, Ruberoid Giant-shingles can be laid at less than half the cost of ordinary individual shingles There is a great saving in shingles, nails and labor.

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of ARCHITECTURE, published monthly at New York, N. Y., April 1st, 1926.

State of NEW YORK, County of NEW YORK

Before me, a NOTARY PUBLIC in and for the State and county aforesaid, personally appeared CARROLL B. MERRITT, who, having been duly sworn according to law, deposes and says that he is the BUSINESS MANAGER of ARCHITECTURE, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, to wit:

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EDITOR: JAMES B. CARRINGTON . . . . 597 Fifth Ave., New York, N. Y.
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BUSINESS MANAGER: Carroll B. Merritt . 597 Fifth Ave., New York, N. Y.

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Sworn to and subscribed before me this 23d day of March, 1926.

JOSEPH H. POLI,
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[Seal.] Queens County Clerk's No. 3532.
Certificate filed with New York Co. Clerk No. 67.
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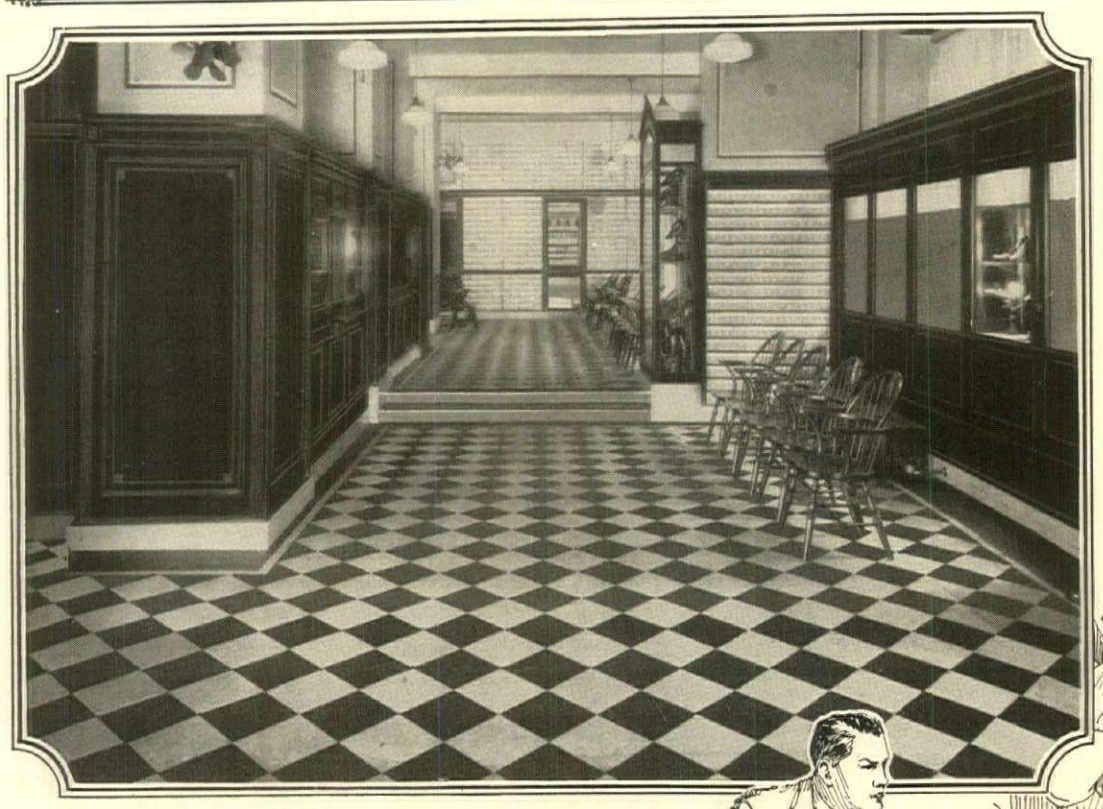
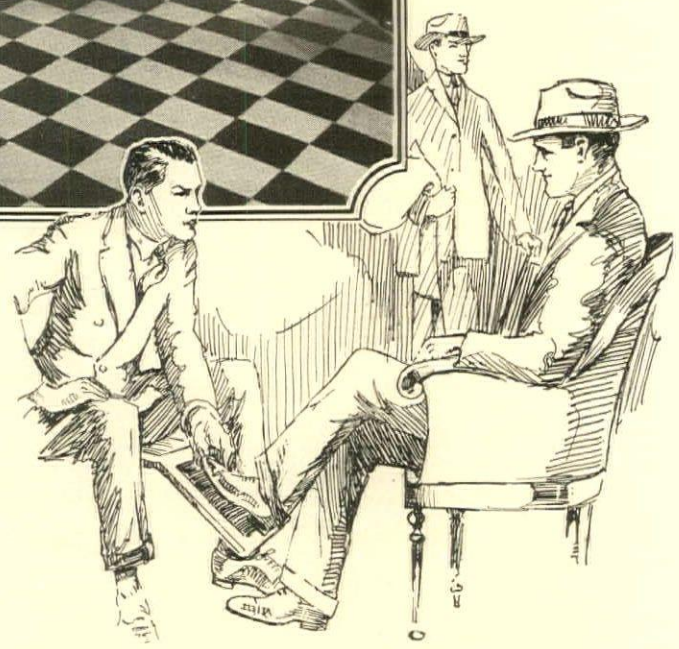
Commission expires March 30, 1927.



The Stetson Shops, Inc., in the Hotel Hollenden at Cleveland, is floored with Linotile, 2,500 sq. ft. of 10" x 10" Linotile, light gray and black. This handsome floor helps carry out the Stetson idea of quality in every detail.



For Store Floors— Use Linotile

ARCHITECTS whose work includes store interiors find that Linotile not only makes an excellent floor from the standpoint of utility, but affords unusual possibilities for the effective use of color.

Linotile is a *tile* floor with all the distinctiveness of hand-laid design. It is supplied in twelve colors, and these, with the many shapes and sizes, afford a range of design adaptable to any room or decorative scheme.

Linotile is a *resilient* tile—a cork composition—easy underfoot and comfortable to stand or walk on, non-slippery, and practically noiseless.

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Linotile is *remarkably durable.* It withstands even the heavy traffic at doorways and counters with surprisingly little evidence of wear. It is a floor for years of service.

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Aquila Cort Tea Room, Omaha, Neb.
Milwaukee, High School, Milwaukee, Wisc.
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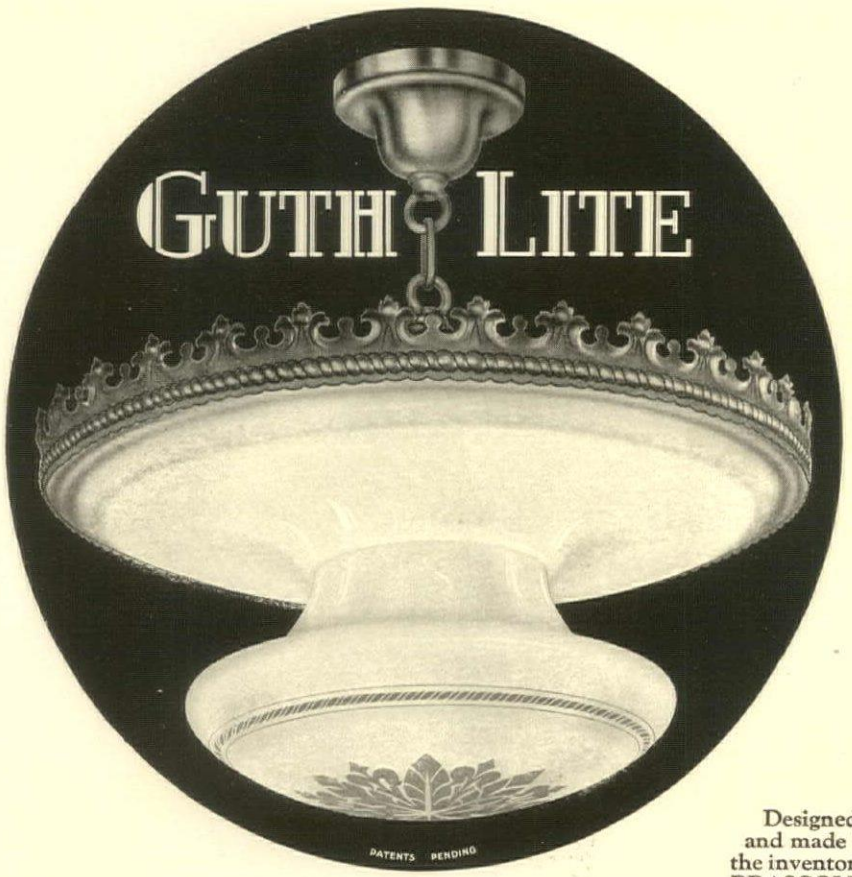
Henry Ford Hospital, Detroit, Mich.
Whittaker & Co., 4th and Olive Sts., St. Louis, Mo.
Hallahan's Shoe Store, Philadelphia, Pa.
Breakers Hotel, Atlantic City, N. J.
L. Bamberger & Co., Newark, N. J.
Drakes Restaurant, New York City.
Lincolnshire Hotel, Boston, Mass.
St. Mary's Church, New London, Conn.

Linotile Floors



Designed and made by the inventors of BRASCOLITE

A New and Better Illuminator that Controls and Directs Light!

Here's a wonderful New Illuminator that solves the problem of actually controlling and directing light.

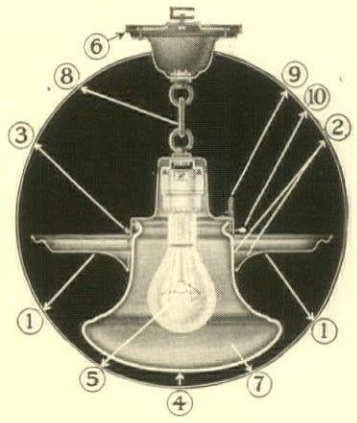
A totally enclosed commercial lighting unit of high efficiency—combining features never before obtained.

Canopy, hanger and ornamental band finished in Antique Bronze. Reflector of white porcelain enamel with Ivory band.

Made in plain and ornamental styles. Packed in individual cartons. Complete, ready for installation.

Write for GuthLite Folder

An attractive folder illustrating the various types of GuthLite will be sent you upon request. It is regulation size and bears A. I. A. file number.



(1) Adjustable white porcelain enameled reflector controls direction of light vertically and horizontally. Wide light distribution. Uniform intensity on the working plane.

(2) Adequate, shadowless illumination of the ceiling by portion of globe which extends above the reflector. Light reflected to the ceiling as well as to the useful plane.

(3) Ceiling light increased or diminished by raising or lowering reflector.

(4) Low brightness at the source. No spots of high intensity. No glare.

(5) Lamp filament positioned so that most of the light rays are diffused through neck of globe toward reflector, which directs them to the working plane over a wide area.

(6) Adaptable for installation to any type of electric outlet or ceiling construction.

(7) Glass globe scientifically designed to produce efficient total output and low brightness at the visible part of the globe.

(8) Easily and quickly installed. Open-link hanger—additional chain can be added if desired.

(9) Self-adjusting spring globe holder permits expansion and contraction of glass, preventing rattling or breakage.

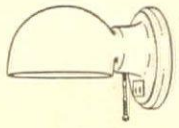
(10) Globe quickly applied or released for cleaning or re-lamping. Cleaned in a minute with a damp cloth.

Prices and Sizes:

Watts	Skt.	Dia. Ref.	Glass Size	Plain Ref. Plain Glass No.	Plain Ref. Plain Glass Price	Plain Ref. Dec. Glass No.	Plain Ref. Dec. Glass Price	Orn. Band Dec. Glass No.	Orn. Band Dec. Glass Price	Orn. Band Plain Glass No.	Orn. Band Plain Glass Price
75 to 150	Med.	12½″	8⅜″ x 4″	B2820	$ 5.90	B2823	$ 6.45	B2826	$ 8.10	B2829	$ 7.55
200	Med.	17″	11⅜″ x 5″	B2821	8.35	B2824	8.90	B2827	11.10	B2830	10.55
300 to 500	Mog.	21″	14⅛″ x 6″	B2822	11.65	B2825	12.80	B2828	15.55	B2831	14.45

Brascolite

Aglite



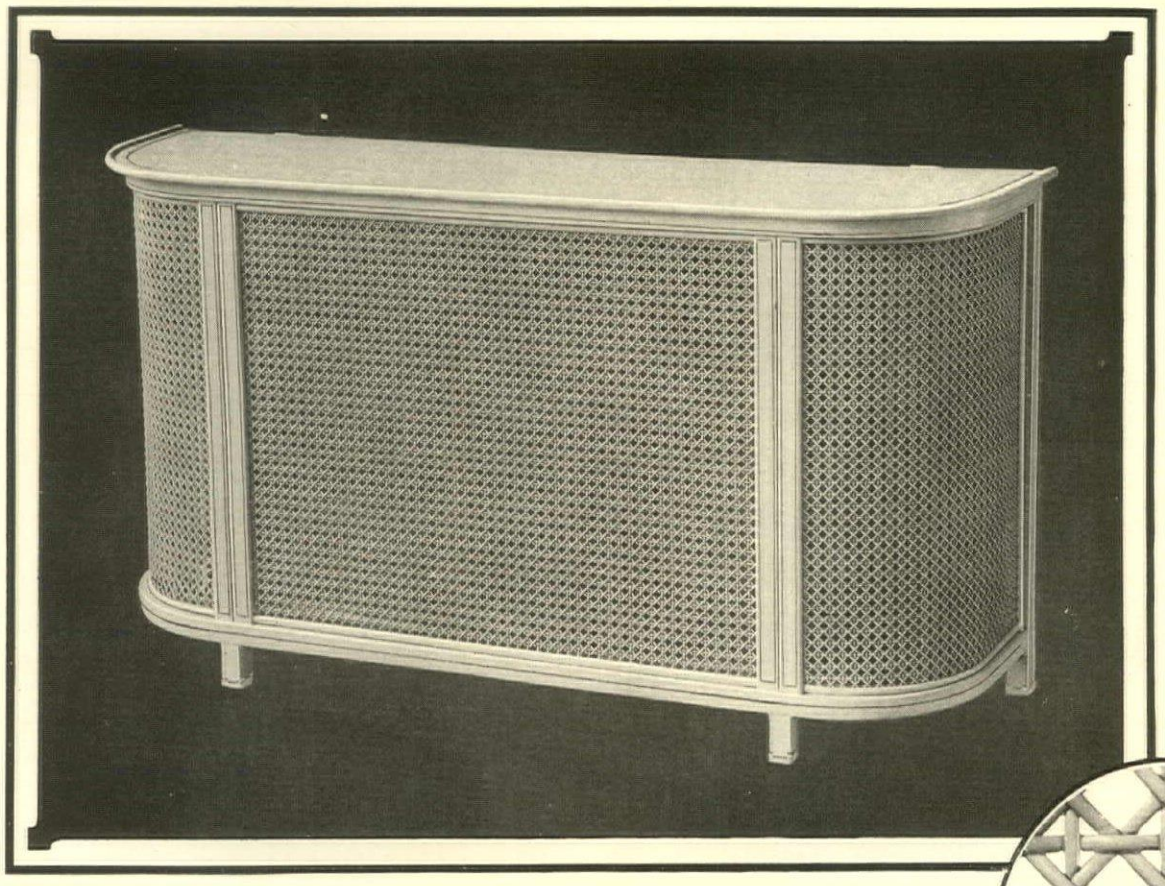
The EDWIN F. GUTH COMPANY

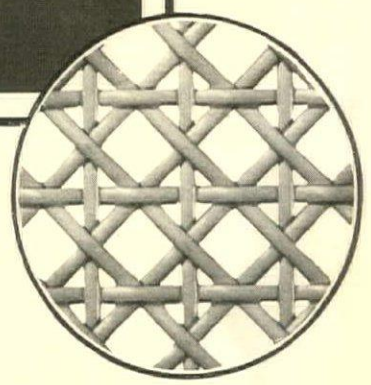
DESIGNERS - ENGINEERS - MANUFACTURERS

Lighting Equipment

ST. LOUIS, U.S.A.

MORE LIGHT WHERE MOST NEEDED





The insert above illustrates, in actual size, Steelcane Grille. It is a pleasing combination of the simple beauty of cane and the stiffness and the long life of steel. Only the closest scrutiny will reveal it is metal rather than rattan.

TUTTLE & BAILEY Radiator Cabinets are distinguished not only by their natural grace and beauty but also by the fact that our Steelcane Grille is used to panel several of the various styles. The Raleigh, illustrated above, is a typical example.

From the standpoint of heating efficiency Tuttle & Bailey Radiator Cabinets leave nothing to be desired. They are designed to give a maximum of air circulation, and therefore the maximum of heat.

These cabinets are of all-steel construction. They are finished in ivory and other enamels, and to match various natural woods. Deliveries of cabinets to fit any size and style of radiator can be made promptly.

Photographs and specifications of the various styles will be sent on request.

TUTTLE & BAILEY MFG CO.

Established 1846

441 LEXINGTON AVENUE NEW YORK CITY

MAKERS OF REGISTERS AND GRILLES FOR EIGHTY YEARS

NO industry in the past decade has grown so rapidly as that of electrical refrigeration. About no product that is marketed today is there more confusion, uncertainty and doubt. It is refreshing to us to have the privilege of introducing to the architects—Rymotator, a system of electrical refrigeration, so simple in design and construction as to be almost phenomenal. It is based on the soundest engineering principles and architects throughout the country are welcoming it as the solution of this disturbing problem of refrigeration.

We make no extravagant claims for this unit; its performance has been proven and we wish only to submit an explanation of its construction.

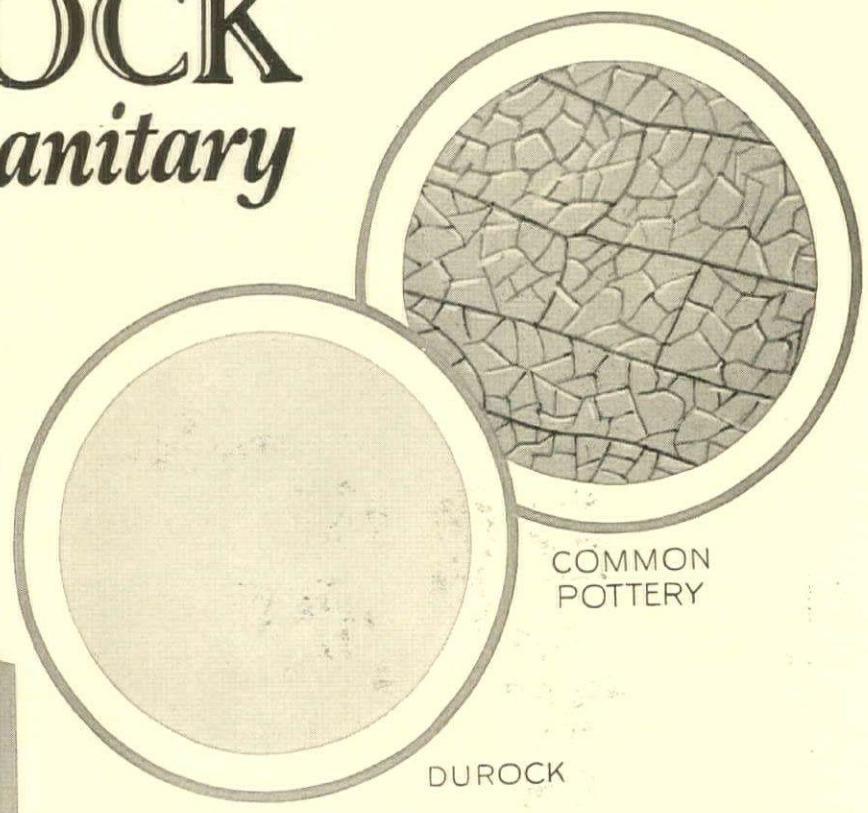
The folder illustrated on the opposite page will do this partially. If you desire, one of our salesmen will explain more in detail the merits of this machine.

UNIT REFRIGERATING COMPANY
First National Bank Building
PITTSBURGH, PA.

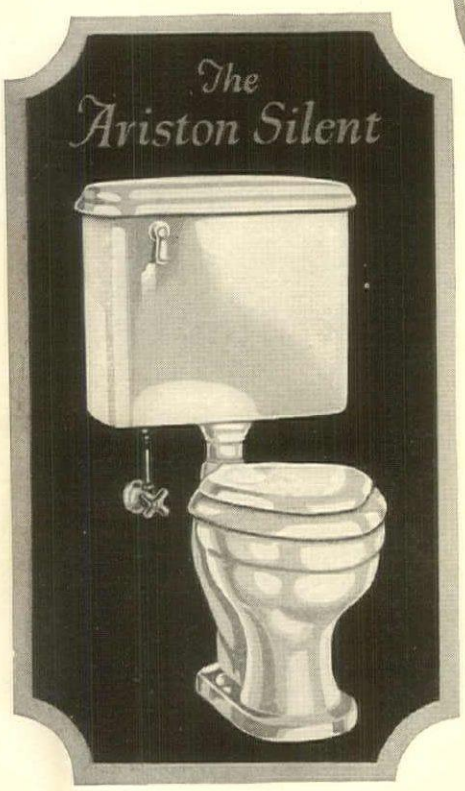
ELECTRICAL RYMOTATOR REFRIGERATION

The microscope proves that DUROCK is truly *sanitary*

This ware is not sanitary



This ware is sanitary



K—2904

A DE LUXE toilet for the fine residence. Noiseless in operation. Tank and bowl of Durock, with white celluloid-surfaced seat and cover. Top of tank held securely in place by two hidden spring-clips. Concealed twin jets, giving accelerated flushing.

Extra large water surface in the elongated bowl. Continuous oval-shaped seat, with opening four inches longer than the ordinary; this is an improvement that eliminates discomfort and prevents soiling. Measurements: water surface, 14 in. x 10 in.; opening of bowl, 16 in. long; seat opening, 13 in. long. (Compare these measurements with those of ordinary toilets.)

YOU have noticed so-called porcelain ware in which the surface had become criss-crossed with fine web-like cracks, such as are shown in the illustration above. This is called "crazing," and results from the use of a glaze that does not expand and contract equally with the underbody.

Under the microscope, each of these hairline markings is seen to be a crevice quite deep and wide enough to harbor a myriad of germs. Therefore, a "crazed" washbowl or toilet cannot be truly sanitary.

Durock does not "craze," crack, nor chip. Heat and cold expand and contract the entire piece to an equal degree because glaze and body are of the same nature and are inseparably fused together. The surface remains forever glassy-smooth, unbroken and undivided. Surgical lavatories are made of Durock because of its perfectly aseptible properties.

When bathroom equipment is of Durock the owner has the cleanest, brightest, and most highly sanitary fixtures that it is possible to obtain.

Write us for as many copies as you can use of our booklet, "Maddock Bathrooms". They will help you "sell" clients on quality fixtures, and make them more appreciative of such fixtures when recommended. There will be no charge for the booklets.

THOMAS MADDOCK'S SONS COMPANY
Oldest Sanitary Potters in America
Trenton, N. J.

THOS. MADDOCK'S SONS CO. TRENTON, N.J.

MADDOCK

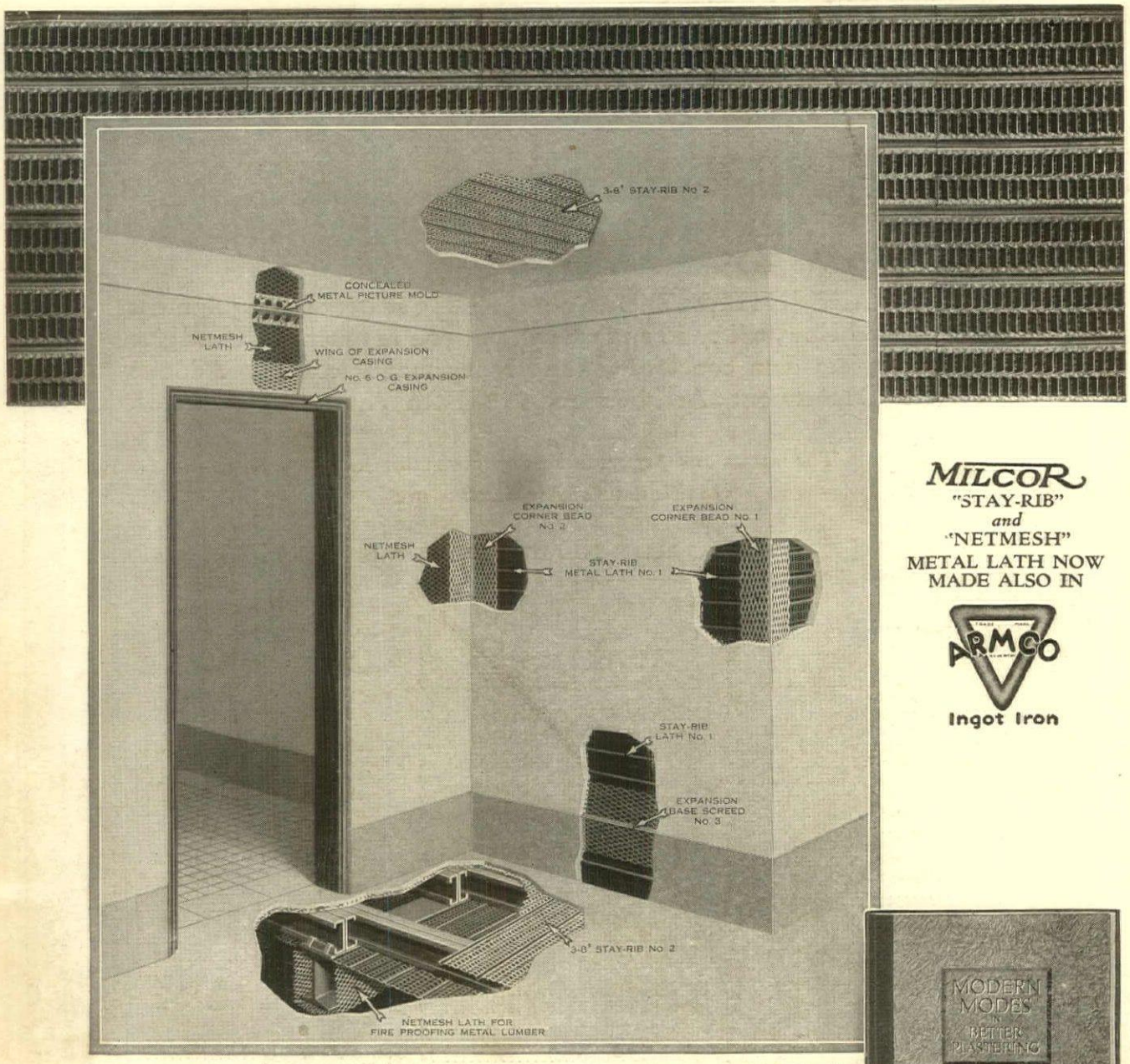
DUROCK *Bathroom Equipment*

WHAT TO SPECIFY *and* WHERE TO BUY IT

IF YOU ARE INTERESTED in any building material or equipment not found below, tell us so and we will put you in touch with and give you complete data concerning the proper manufacturers. Address Service Department, Architecture, 597 Fifth Avenue, New York

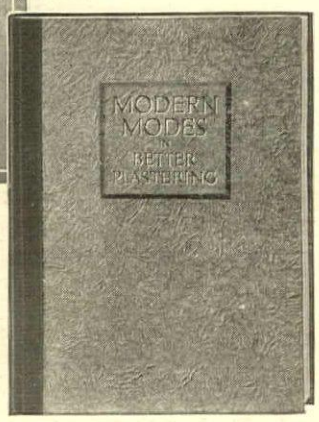
The names and page numbers of those manufacturers in this issue of Architecture are

[THE NUMBERS REFER TO ADVERTISING PAGES ONLY]



MILCOR
"STAY-RIB"
and
"NETMESH"
METAL LATH NOW MADE ALSO IN

ARMCO
Ingot Iron



Our Book on "Modern Modes in Better Plastering" has become justly famous as an aid to promoting better construction. We have a copy for you. Write for it and ask for samples and complete technical data. Interiors of many of the finest homes in America are shown in this Book and suggestions of great value for anyone contemplating building are embodied in its pages. Thousands of Architects, Engineers and Contractors are now using this book whenever discussing plastering with their clients.

MILCOR Products Insure!

THE insurance which is built into any building in the form of quality construction, is the safest and most economical insurance available. If you would insure your reputation for safe, permanent, true value buildings of all types — from homes to skyscrapers — insist on the genuine Milcor Products shown above, as a base for Better Plastering.

Milcor Products insure firesafeness, freedom from cracks, permanent beauty, sanitary interiors, faultless exterior stucco work, general safety and genuine economy.

MILWAUKEE CORRUGATING CO., MILWAUKEE, WIS.
CHICAGO, ILL. KANSAS CITY, MO. LA CROSSE, WIS.

MILCOR
PRODUCTS ESSENTIAL TO BETTER PLASTERING

Member of National Council for Better Plastering

BETTER PLASTERING ON METAL LATH

For the Modern Bath Room or Wash Room— Chromium Plated Fixtures

Wherever metal work is to be kept bright, chromium plating provides the most beautiful and economical finish.

Lasting, absolutely tarnish-proof and retaining its luster without any polishing after installation, it is brilliant in appearance. Requiring no maintenance, it makes possible great savings, especially in hotels and office buildings, where the daily polishing required to keep nickel bright is expensive.

Chromium plated faucets, traps, pipes and plumbing fixtures of all descriptions have been tested in actual service under severe conditions, and under accelerated spray tests, and their brilliant surface is still unaffected.

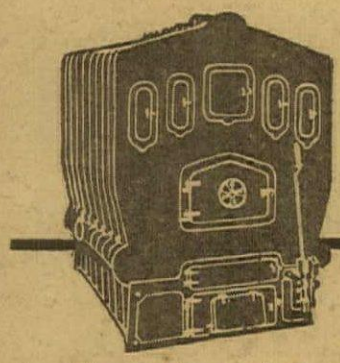
We shall be glad to discuss your particular requirements, and furnish you full information and quotations.

Specify CR-Plate!

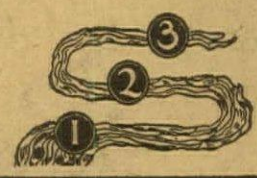
Chromium Products Corporation

120 Broadway **New York**

THE SCRIBNER PRESS



There are nine members of the Burnham Family, in round and square boilers, each adapted to its particular place and purpose.



The One, Two, Three of Oil Burning Economy

AS you know there is a wide variance of comparative costs in oil burning. At best, it seems seldom to result in much better than an even break for residence heating.

This is largely due to most boilers having too short a fire travel. This means that the necessary air pressure under which oil burning must be conducted, carries the hot gases too quickly to the chimney, causing an excess of heat losses.

These boilers having a long fire travel, not only baffle down the speed of the gases; but also muffle the noise.

The Burnham Square Sectionals, with their three times back and forth fire travel, give the highest of efficiency with oil fuels.

Burnham Boiler Corporation

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NEW YORK OFFICE: 30 East 42nd Street

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