

ARCHITECTURE

NOVEMBER, 1934



Window Panes of Translucent Stone

BY EUGENE CLUTE

NATIONAL CITY CHRISTIAN CHURCH—JOHN RUSSELL POPE

MUNICIPAL
BUILDING

GARDEN TERMINALS
WOOD GRILLES OF SANTIAGO

ATLANTA
HOUSING

SOME RECENT SMALL HOUSES BY HERMAN BROOKMAN

Portfolio: Roof Trusses

CHARLES SCRIBNER'S SONS, NEW YORK

FIFTY CENTS A COPY

Wrought Iron

specified for certain Corrosive Services

GRAHAM, ANDERSON, PROBST & WHITE

AMONG the leading architects who have done much to put pipe selection on a sound engineering basis are Graham, Anderson, Probst & White of Chicago. In their offices pipe selection is based on experience backed by service rec-

ords. Hence in a service where a pipe material has given a long and satisfactory account of itself there it is again used.

Thus wrought iron is specified for those corrosive services where its records prove it best. Blanket specifications are eliminated and no other material is substituted for the job that wrought iron has done so well for years.

This method of pipe selection, based on experience and service records, which we call "Pipe Prescription," is standard practice in the offices of many leading architects and engineers.

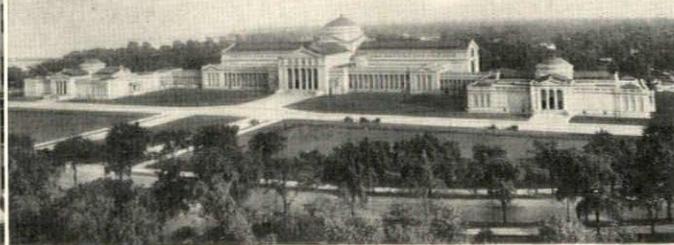
We will be glad to aid in analyzing pipe conditions, in reviewing service records, collected through the friendly cooperation of leading architects and engineers, and in further assisting in "Pipe Prescription."

Ask a Byers Engineer or write our Engineering Service Department.

A. M. Byers Company, Established 1864. Pittsburgh, Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Los Angeles.



● Pittsfield Building, Chicago, Genuine Wrought Iron pipe specified for hot water and heating return lines.



● Rosenwald Museum of Science and Industry, Chicago, Genuine Wrought Iron pipe specified for hot and cold water, gas and all heating lines; also for downspouts, vents, soil and waste lines.



● Starks Building, Louisville, Genuine Wrought Iron pipe specified for soil, waste, vents, downspouts and standpipes in the plumbing lines; also steam supply and return lines.

BYERS GENUINE WROUGHT IRON PRODUCTS

PIPE - WELDING FITTINGS - RIVETS - SPECIAL BENDING PIPE - BAR IRON
PLATES - SHEETS - CULVERTS - FORGING BILLETS - STRUCTURALS

STANDARD of QUALITY for 70 YEARS



TODAY BETTER THAN EVER

ARCHITECTURE

REG. U. S. PAT. OFFICE

THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXX, NO. 5

CONTENTS

NOVEMBER, 1934

Frontispiece: The Port of Calvi, Corsica <i>From the dry-point etching by Philip H. Giddens</i>		Wood Grilles of Santiago de Cuba <i>Photographs and drawings by F. Newton Mayall, recording the diversity of detail in an architectural feature that is finding numerous adaptations today</i>	PAGE 261
Window Panes of Translucent Stone <i>Eugene Clute sketches a bit of the background and rather more of the present technique in the skillful utilization of onyx, alabaster, and marble</i>	PAGE 241	Better Practice <i>W. F. Bartels continues his series of articles telling how to make better drawings and specifications, going this month into the matter of heating</i>	269
Valley Municipal Building, Van Nuys, California <i>The Department of Public Works, City of Los Angeles, P. K. Schabarum, architect, develops a structure housing a multitude of diverse community services</i>	247	Some Recent Houses by Herman Brookman <i>A group of houses, most of which are quite small and inexpensive, but which show the touches of individuality</i>	273
National City Christian Church, Washington, D. C. <i>The Office of John Russell Pope designs a church in the National Capital with several unusual functional details</i>	251	The Editor's Diary	281
The Architect in the Body Social <i>B. Charney Vladeck, a member of New York City's Housing Authority, tells the architect very frankly what he thinks of him and his past works</i>	257	University Housing Project, Atlanta, Georgia <i>One of the first projects of the Public Works Administration to get under way—a fireproof type of building replacing Negro slums</i>	283
Garden Terminals <i>A collection of photographs from the office files of William Pitkin, Jr., and Seward H. Mott, landscape architects</i>	259	ARCHITECTURE'S Portfolio of Roof Trusses <i>A collection of sixty photographs, the trusses all of wood and assisting as decoration</i>	285

WHEN CHANGING ADDRESSES, SUBSCRIBERS MUST GIVE FOUR WEEKS' ADVANCE NOTICE AND BOTH THEIR OLD AND NEW ADDRESSES

ARCHITECTURE is published monthly, appearing on the 28th of the month preceding date of issue. Price mailed flat to members of the architectural and allied professions, to any address in the United States, \$3 per year in advance; to all others, \$6; add \$1 for Canadian postage and \$2 for foreign postage. Single copies, \$50. Advertising rates upon request. Entered as second-class matter, March 30, 1900, at the Post-Office at New York, N. Y., under the Act of March 2, 1879.
Copyright, 1934, by CHARLES SCRIBNER'S SONS. All rights reserved.

CHARLES SCRIBNER'S SONS, PUBLISHERS

CHARLES SCRIBNER, *President*
EDWARD T. S. LORD, WHITNEY DARROW, MAXWELL E. PERKINS, *Vice-Presidents*
GEORGE R. D. SCHIEFFELIN, *Treasurer* JOHN HALL WHEELLOCK, *Secretary*

NEW YORK: 597 FIFTH AVENUE AT 48TH STREET



Colour in Everyday Rooms



BY BASIL IONIDES



“**N**O ONE agrees with his neighbour about decoration, though he may admire the efforts of others, and so it is impossible to lay down rules about what is good taste and what is bad, but there is a great deal that is really common sense, and not taste, and that is the theme that I have tried to work on in this book.”

So says the author in his foreword. In the text he treats his subject under the following chapter heads:

Colour Outside the House
The Decorative Treatment of Very Light Rooms
Colours for Dark Rooms
Concerning Blinds and Shades
Lighting Rooms
Surfaces and Suitable Materials
Colour in Odd Places
Things Out of Place and Badly Mixed
Good Things that Are Gone and Might be Revived
Pictures: Their Frames and Their Colour Effect in a Room
Commercial Decoration
Continuity in Decoration

The book is profusely illustrated with photographs of distinguished examples — including a frontispiece in color.

NEVER be funny in public—especially on the outside of the house, as this will need more living down than is easy.

NEVER put a white house on top of a hill unless you wish to annoy those who see it.

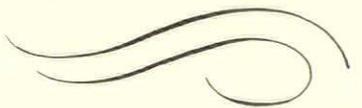
FEW objects — or people, for that matter — look their best in a strong light.

PALE colours cannot be seen without light.

BRILLIANT colour is never gaudy in a dark room.

IT is possible to enhance or to dull any object by its adjacent colouring.

A SHABBY frame will ruin a good picture, and a too smart one may do so also.



Price, \$3.75

CHARLES SCRIBNER'S SONS, New York
ARCHITECTURE AND ARCHITECTURAL BOOKS

**Brunswick
INSTALLATION
MEANS . . .**

SATISFIED CLIENTS



The architect's first problem is to satisfy his client.

In designing a taproom, you not only must create a distinctive room having a congenial and inviting atmosphere, but also . . .

Its service arrangements must assure maximum serving speed with minimum waste motion . . .

And its beer and liquors must be served at exactly the right temperatures at which they taste best.

Brunswick offers you unsurpassed service on these vital taproom features.

The Sapphire Room (above) and the Ionian Grille (below) just installed for the Deshler-Wallick Hotel of Columbus, Ohio, are examples of what this Brunswick Service really is.

Read the letter from Mr. R. G. Hanford, the architect who created these distinguished rooms. Then read the letter from Mr. L. C. Wallick, president of the Deshler-Wallick Hotel.

These letters tell you, more convincingly than we can, what you may expect in Brunswick Service.

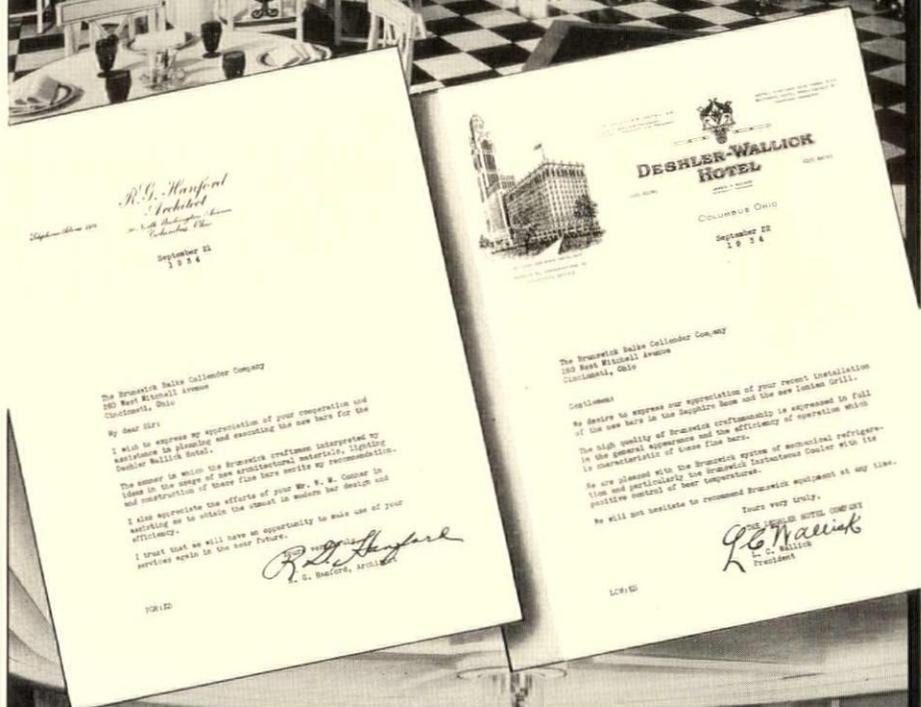
Write today for latest information on Brunswick Service Fixtures, Billiard Tables, Bowling Alleys, Lawn Bowls, Toilet Seats and Squash Courts.

* * *

In the Sapphire Room the bar is 34 feet long with a Verdi antique marble base and step. The front is a deep sapphire blue lumerith with gold polished bronze connecting panels and gold finished metal nosing.

The bar in the Ionian Room is 44 feet long, composed of one main circle with two reverse circles forming one continuous swing of curved bar.

Both bars are equipped with an under-counter Brunswick Instantaneous Beer Cooler.



THE BRUNSWICK · BALKE · COLLENDER CO.

623-33 S. Wabash Ave., Chicago, Illinois • Established 1845

Branches and Distributors in Principal Cities of the United States

THE BULLETIN - BOARD

FOR A PERMANENT HOUSING DIVISION

THE National Public Housing Conference of which Mrs. Mary K. Simkhovitch is president, and Miss Helen Alfred, secretary, recently forwarded a memorandum to President Roosevelt requesting the formation of a permanent housing division of the federal government in the Department of the Interior.

The memorandum directs the attention of the President to the necessity for governmental subsidy if the families of the wage workers of the United States are to be adequately housed. Further suggestions of the Conference include: (1) the formulation of a long-range housing program, to continue regardless of changes in administration, or economic fluctuations; and (2) encouragement of the creation of municipal housing authorities by the federal government.

The memorandum points out that responsibility for local slum clearance programs should rest with the municipality in which such problems exist, and that the cities of the nation should be able to borrow, at low interest rates and for long amortization periods, from the federal government the sums needed for such construction. Such loans, or grants, however, would be subject to approval by the federal housing board, which would exercise a supervisory control over slum reconstruction projects, to insure their conforming to standards deemed advisable by the federal board. It was further recommended by the Conference that funds be set aside for study and research into housing problems by both local and national housing authorities.

THE BUILDING INDUSTRY

DUN & BRADSTREET reports indicate that in sharp contrast to the encouraging progress which has been made by most other branches of commercial activity since March, 1933, improvement of any real consequence is yet to be recorded for the building industry, which is now well on toward the end of its fourth year of dullness. From an annual pre-depression level of eleven billion dollars, general construction has dropped to a present level of around three billion. In home construction the decrease has been even more marked. It is estimated that the slump in the building

industry accounts for more than five million of the present unemployed. Lack of adequate financing is cited as one of the principal causes of this declining volume in construction work. The program sponsored by the Federal Housing Administration, when effectively under way, doubtless will prove an important factor in achieving recovery.

The building supply trades have been given their strongest impetus for expansion in some years by the benefits to be derived by the National Housing Act. The outlook for fall business in this group is the best for years.

Prices of most building materials are dragging along at the low levels of the last few years, the increases in a few divisions being counterbalanced by a mark-down in others. While the general average in lumber prices increased less than ten dollars a thousand board feet during 1933, the average still is around 8 per cent under the 1929 level. Some prices were lowered in July to conform with code provisions, but no further changes are anticipated until after the turn of the year.

Wages remain stationary, being largely regulatory, although in many instances the union scales are not being observed with much care. As a whole, the cost of building a "small-sized house" is about the same as it was in 1930, and nearly 50 per cent lower than in 1920.

A. I. S. C. CONVENTION

THE Twelfth Annual Convention of the American Institute of Steel Construction, Inc., was held at the Edgewater Beach Hotel, Chicago, October 24 to 26, 1934. Details of the work accomplished and matters discussed are not yet available as we go to press.

RESULTS IN THE CHICAGO STOCK-YARDS FIRE

J. E. KALINKA, chief structural engineer of Roberts & Schaefer Company, in a letter to the Editor objects to certain statements made in the report of the Chicago Stock Yards fire by the engineers representing the American Institute of Steel Construction. An excerpt of this report was printed in the September Bulletin Board. Mr. Kalinka feels that these engineers have possibly viewed the results to the steel construction in this fire rather too favorably, and the results to

concrete and reinforced concrete buildings too unfavorably. A report on this extremely severe fire by the Chicago Board of Underwriters, in collaboration with the National Board of Fire Underwriters, might well be read in conjunction with the reports prepared by the various industrial associations.

A. A. R. COMPETITIONS

THE Association of the Alumni of the American Academy in Rome will hold their ninth annual collaborative competition for architects, landscape architects, painters, and sculptors during the period of nine weeks from November 17, 1934, to January 18, 1935. Copies of the program will be distributed among the schools early in November.

Through the generosity of the American Pencil Company, makers of Venus drawing pencils, the Association is fortunately able to announce the "Venus Pencil Awards," or prizes of \$300, \$150, and \$75, respectively, to be awarded to the three teams whose designs are rated highest by the jury.

The Association's offices are at 101 Park Avenue, New York City, from which the announcement is made by Roscoe Gurnsey for the committee.

SYRACUSE UNIVERSITY

SYRACUSE UNIVERSITY, College of Fine Arts, Department of Architecture, announces two additions to its faculty beginning with the present school year. Professor L. C. Dillenback is appointed Professor of Architectural Design. He received his Master's degree in Architecture from Carnegie Institute of Technology in 1914. He taught first at Illinois University, where he became Professor of Design in 1926. It was in 1930 that he became Professor of Design at Columbia, resigning this position to come to Syracuse. He has had the benefit also of professional experience as an architect in association with Henry Hornbostel and Carlton Strong in Pittsburgh.

The second appointment is that of Erwin O. Christensen as Carnegie Lecturer on the History of Architecture and Art. Mr. Christensen received his Master of Fine Arts degree from Harvard in 1916. From 1919 to 1926 he headed the Art De-

(Continued on page 8)

Obeying



SANITARY CODE REQUIREMENTS

"No plumbing fixture, device or construction shall be installed which will provide a cross-connection between a distributing system of water for drinking and domestic purposes and a drainage system, soil or waste pipe so as to permit or make possible the back flow of sewage or waste into the water supply system."

from "Recommended Minimum Requirements for Plumbing" — published and issued by the Bureau of Standards, United States Department of Commerce.

THE SPIRIT AND THE LETTER OF THE LAW

SIPHON-PROOF is the one and only toilet bowl which actually complies with sanitary code requirements.

No sanitary code is too exacting for SIPHON-PROOF bowl design. No minimum requirement precludes it.

SIPHON-PROOF meets *maximum* code requirements...obeys them to the letter... complies with the spirit of their principles for protecting health.

Sanitary codes written to protect health, forbid health-endangering cross-connections. SIPHON-PROOF eliminates this danger in the toilet bowl itself, without recourse to mechanical aid.

SIPHON-PROOF is a natural guarantee to safe water and good health. Non-me-

chanical, permanent, beyond human interference, SIPHON-PROOF is the one positive protection against pollution of the pure water supply.

* * *

ARCHITECTS: *Tragedy marked the Chicago World's Fair and made the front pages of newspapers. Front page news it has continued as that outbreak of amebic dysentery spread to 206 other American cities affecting an estimated 8% to 10% of the population. There was a cause. There is a prevention. Write for your copy of "Civilization's Greatest Menace" to get the plain facts treated tersely, comprehensively, interestingly. Just use the coupon—without obligation.*

THE SYMBOL



OF SAFETY

WRITE TODAY FOR YOUR COPY



The JOHN DOUGLAS Company

Manufacturers of Plumbing Fixtures

CINCINNATI, OHIO

THE JOHN DOUGLAS Co.,
Cincinnati, Ohio, Dept. A4-11

Please forward at once copy of "Civilization's Greatest Menace," explaining in detail how the Siphon-Proof Bowl Design eliminates cross connections.

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

Siphon-Proof is open specification . . available under license from any manufacturer of toilet bowls

THE BULLETIN - BOARD *Continued*

(Continued from page 6)

partment at the University of North Dakota. In 1926 he was a Carnegie scholar and tutor in the fine arts at Harvard; from 1927 to 1931, Assistant Director of the Gardner Museum in Boston; and since then, Educational Director of the American Federation of Arts and Associate Editor of the *American Magazine of Art*. Mr. Christensen's engagement by the college was made possible by a grant of six thousand dollars a year for five years by the Carnegie Corporation of New York.

UNIVERSITY OF PENNSYLVANIA

THE School of Fine Arts, University of Pennsylvania, announces the appointment to its faculty in the Department of Architecture, of M. Georges Dengler as Professor of Design. M. Dengler has the distinction and honor of having won the Grand Prix de Rome in 1931.

MILWAUKEE AND MODERNIZATION

THE Milwaukee District of the State Association of Wisconsin Architects is playing a major part in a practical demonstration of home renovation now being conducted by *The Milwaukee Journal*. The demonstration is part of an educational campaign, aimed at home-owners, to illustrate how remodelling can be financed through the Federal Housing Act.

Three outmoded houses, one in each of the city's oldest sections, have been selected by these architects for complete modernization. Plans for renovation and remodeling are now being drawn up and submitted by certain members selected by the Architects' Association.

A feature of the demonstration are the frequent news stories explaining the details of consulting the proper authorities. The campaign as a whole covers the entire process of remodelling, beginning, of course, with consultation of the architect. Although no individuals are singled out in the publicity given the project, home-owners are impressed with the necessity of getting proper guidance in remodelling plans.

Other leading civic organizations co-operating with *The Journal's* demonstration are the Wisconsin Builders' Congress, which is supply-

ing the labor for the remodelling, the Milwaukee Real Estate board handling the eventual sale of the three houses, and the Building and Loan Association which is financing the purchase and renovation cost.

The homes are open for inspection at all times while remodelling work is going on.

CHARLES L. HILLMAN, 1858-1934

CHARLES L. HILLMAN, architect, died September 9, at his home in Germantown, Pa., after a month's illness. Mr. Hillman, who practised under the name of Charles L. Hillman & Sons, after public school training, became connected with the firm of Addison Hutton, and in 1890 was made a member of the firm.

Mr. Hillman is said to have assisted in designing Philadelphia's first steel-frame office building. He also helped design the Girard Trust Building, the home of the Pennsylvania Company, the Fairview State Hospital, and several other hospital buildings. He was a member of the American Institute of Architects.

THOMAS R. KIMBALL, 1862-1934

THOMAS ROGERS KIMBALL, a past president of the American Institute of Architects, died at his home in Omaha on September 7, after a long illness. Mr. Kimball was born in Cincinnati, but his parents moved to Omaha while he was still a boy. His education was secured in the public schools, the University of Nebraska, Massachusetts Institute of Technology, and the Cowles Art School in Boston, after which he went abroad and studied in Paris under various tutors, among them the great painter, Harpignies.

Mr. Kimball returned and associated himself with the publishing firm of Bates & Guild, Boston, publishers of architectural and art works. In this work he prepared a special edition of Vignola. While in Boston his friendship with C. Howard Walker brought about the establishment of the architectural firm of Walker, Kimball & Best, with Mr. Kimball in charge of an Omaha office. As Walker & Kimball the firm continued until 1899. Among the important works that it developed was the Trans-Mississippi Exposition in 1898, of which Mr.

Kimball was architect-in-chief. After 1899 Mr. Kimball practised alone until 1928, when the firm of Kimball, Steele & Sandham was organized.

It was in 1900 that Mr. Kimball joined The American Institute of Architects. He was elected a Fellow in 1901, and served as its president during the years 1918 to 1920. To the Institute he devoted many of the best years of his life, and gave to his fellow practitioners, as he gave to his intimate friends, most freely of his mature thought, keen judgment, and unselfish leadership.

HOWARD ROGERS, 1874-1934

HOWARD ROGERS, architect, died August 12, at his home in Albany. Mr. Rogers had been ill for more than two years. He designed the Municipal Building in Albany, and the Albany County Jail. Even during his last illness he continued to work on plans for a large addition to one of Albany's schools. During the war he served as a captain in aviation.

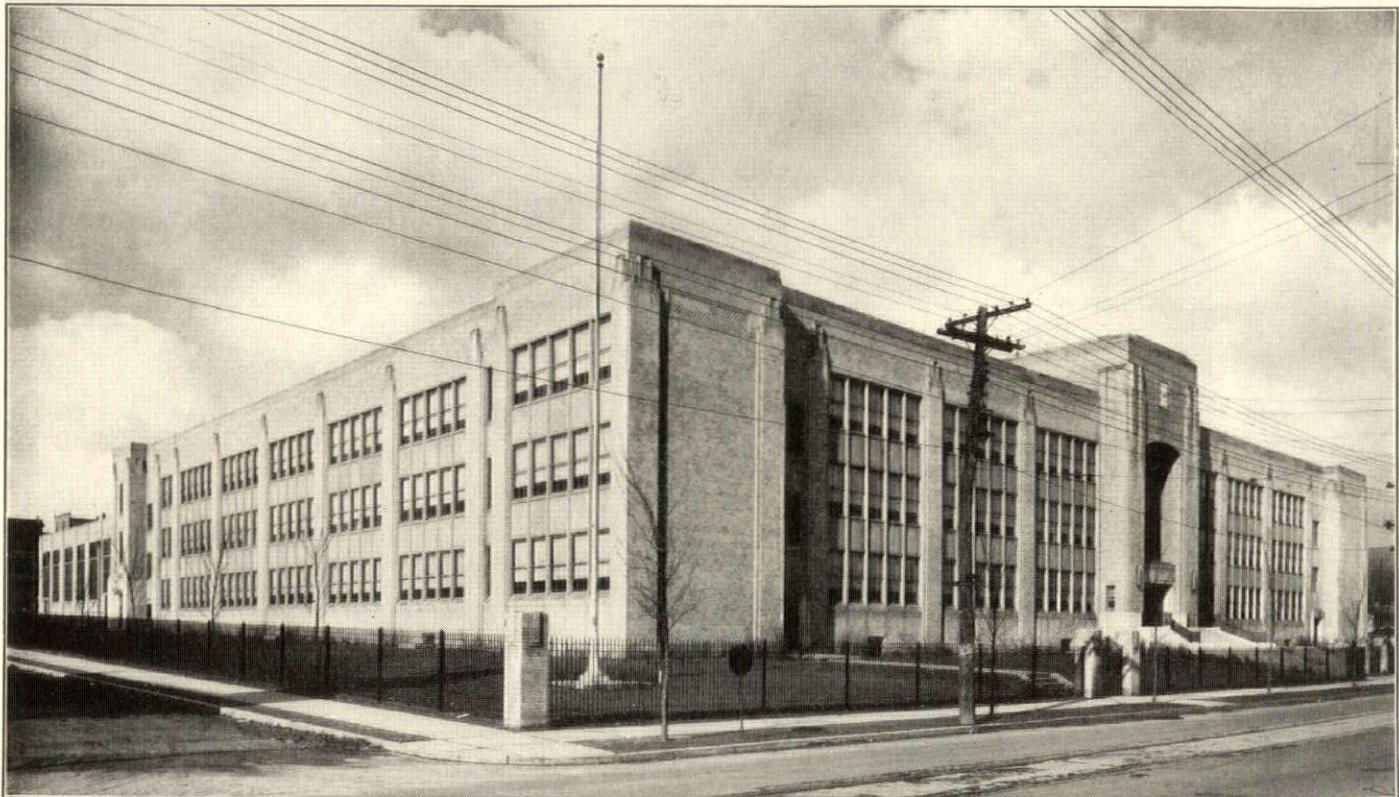
STEVENSON CONSTABLE, 1853-1934

STEVENSON CONSTABLE, retired architect, died October 10, at his home in New Milford, Conn. Mr. Constable was Superintendent of Buildings in New York City from 1895 to 1899. He was formerly associated with his brother, Howard Constable, in the architectural firm of Constable Brothers, practising in New York City.

Mr. Constable was a native of Philadelphia, and did some important engineering and construction work there before he moved to New York. In his earlier days he was assistant to Henry Pettit, chief architect and engineer of the main buildings of the Philadelphia Centennial Exhibition of 1876. Somewhat later he had charge of much of the construction of buildings and bridges for the Philadelphia & Atlantic Railway.

After moving to New York he supervised the erection of about eighty buildings in that city in 1886. With his brother he designed several hundred stores, office buildings, residences, tenements, stables, and factories. Mr. Constable was a member of the American Institute of Architects, and the Society of Civil Engineers of Philadelphia.

ECONOMICAL, BALANCED DESIGNS EASILY WORKED OUT WITH BETHLEHEM LIGHT SECTIONS



A substantial tonnage of Bethlehem Light Sections was used in the construction of the West Scranton Junior High School, Scranton, Pa. Tudor Williams, Architect and Engineer; Wm. Steele & Sons Company, General Contractors; Bethlehem Fabricators, Inc., Fabricators.

BETHLEHEM LIGHT SECTIONS, including beams, columns, joists and stanchions, round out Bethlehem's line of structural shapes and provide engineers with a far greater range of sections from which to choose. They greatly simplify the problem of working out floor designs with a well-balanced combination of load-carrying capacity, rigidity and thickness of floor-slab that require a minimum of steel.

It's in the field of buildings to carry relatively lighter live floor-loads that these light sections are most useful. Designers of apartment houses, school buildings, hospitals, hotels and similar structures find in Bethlehem Light Sections a broad opportunity for selection that gives them great latitude in meeting the conditions with economical designs.

Floor construction is only one of the important applications of Bethlehem Light Sections. They can

be used to advantage wherever rigidity and relatively close spacing of the structural members are desired, with loadings that do not justify the use of heavier shapes—as purlins, as columns in upper stories where loads are lighter, and as struts between columns.

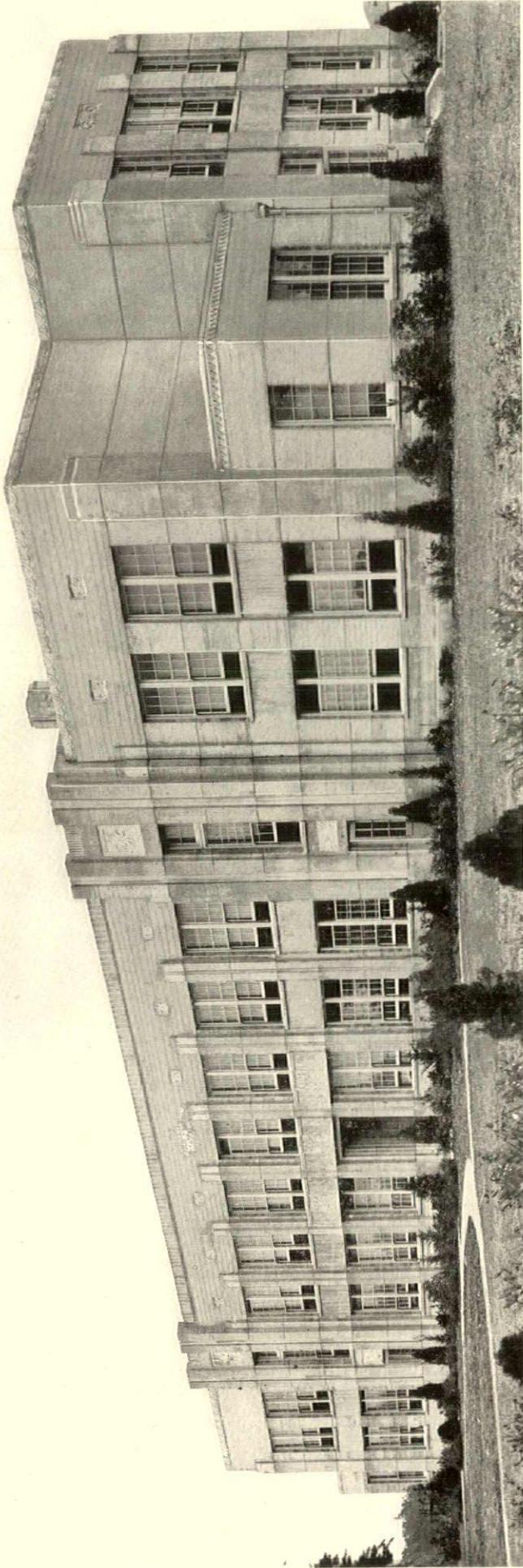
An increasingly important use for Bethlehem Light Sections is in floors for dwellings where fireproof construction is desired.

Keep Bethlehem Light Sections in mind when figuring on your next job. The chances are that they will enable you to realize substantial savings.

BETHLEHEM STEEL COMPANY GENERAL OFFICES: BETHLEHEM, PA.

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





Architects—DeWitt and Washburn, Dallas

Contractors—Eckert Burton Construction Company, Inc., Dallas

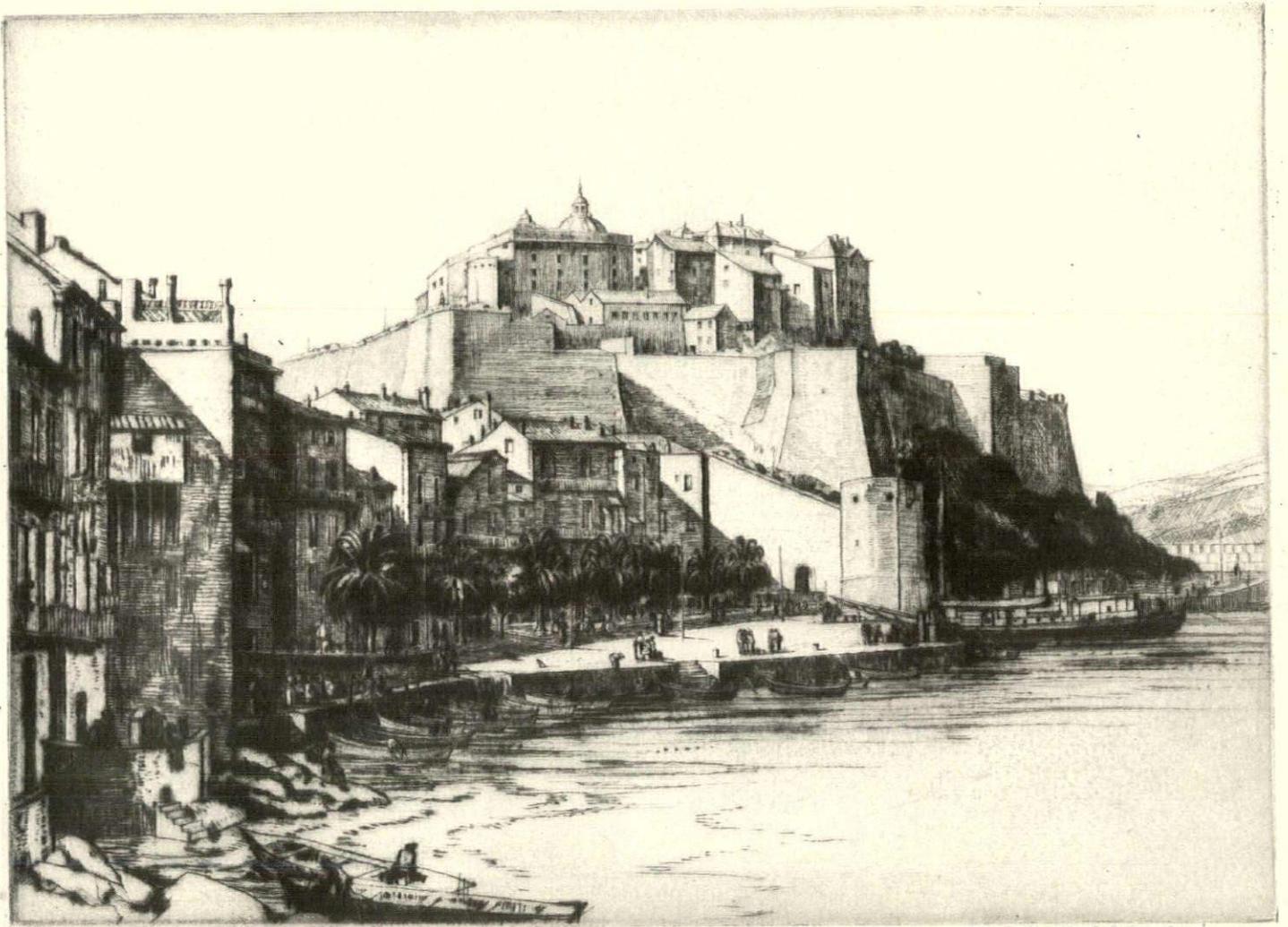
THE SAFETY

OF CONCRETE IS A PLUS VALUE THAT COSTS NOTHING



ONCRETE is shock-proof, storm-proof, fire-proof. It is moderate in first cost and reduces maintenance almost to zero. It helps you create the ideal design and assures beauty that will remain through the years. For safety, for economy, for long life—build your schools

with concrete. . . Concrete is adaptable to any style of architecture. The Robert E. Lee School at Dallas, Texas is one example of simplicity. . . Write the Portland Cement Association, Room 4111, 33 W. Grand Ave., Chicago, Ill., for information on the use of concrete in any type of building.



1858 - 1860

Calvi - Port of Corsica - 1858
Philip H. Giddens

« ARCHITECTURE »
NOVEMBER, 1934

THE PORT OF CALVI, CORSICA
From the dry-point etching by
PHILIP H. GIDDENS

ARCHITECTURE

❖ VOLUME LXX

NOVEMBER 1934

NUMBER 5 ❖

Window Panes of Translucent Stone

By Eugene Clute

N the Monastery of St. Luke of Stiris, in the province of Phocis on the Gulf of Corinth, which is one of the finest monuments in Byzantine architecture of the eleventh century, there are many window openings filled with slabs of a material that the Greeks call phengites, "the gleaming stone." This is probably the oldest remaining example of the early use of translucent stone windows. The slabs are carved with designs composed of symbols, geometric motives, and grillage of foliage. Some are carved on both sides and some on only one side. The material is not over $1\frac{3}{4}$ in. thick and it is reduced to $\frac{1}{2}$ in. in the deepest portions of the carving. The light comes through in a soft effulgence.



Of the many very beautiful windows of translucent onyx, marble, or alabaster in Italy, those in the Church of San Miniato, Florence; those in the Cathedral of Orvieto; and those in the Church of St. Paul Without-the-walls in Rome are especially noteworthy. In San Miniato there are five large rectangular embrasures in the upper part of the apse which are filled with a mottled translucent stone. The windows present a marvellous play of changing tints of gray and rose that ties in perfectly with the white, gray, and black of the marble walls, and provides a foil for the colorful marble, frescoes, and the Cosmati mosaic ornamentation with which the apse is enriched. The many windows of translucent stone in the Cathedral of Orvieto are rich in ever-changing color, ranging through various soft yellows and orange browns. Though the stone windows in the Church of St. Paul Without-the-walls are of recent origin, they are very beautiful and admit a soft glow of golden light that contributes much to the beauty and charm of the interior. These slabs were installed to replace glass shattered by an explosion during the World War.

But we do not need to go so far afield, for there are windows of gleaming stone right in our own country, though they are few. In St. Bartholomew's Church in New York City, of which Bertram Grosvenor Goodhue was the architect and to which Mayers, Murray & Phillip have made additions, there are some of the finest examples to be found anywhere.

At the ends of the narthex of St. Bartholomew's there are semicircular pierced grilles of amber onyx of geometric design. The one at the south end is particularly interesting. The afternoon sunlight causes it to glow with an inner fire like a ruddy sunset. It is as though the stone itself were a source of light. Passing under this grille, one enters the chapel, where the clerestory windows are filled with onyx slabs with superimposed geometric grille work of the same material. But most marvellous of all are the tall round-arched windows in the upper part of the apse of the church itself. There are five of them, about twenty-one feet in height and nearly four feet in width, filled with amber onyx. They are given design character by geometric grilles of onyx backed by thin slabs of this material. The light is diffused in a mysterious radiance of varied tones. In the late afternoon the grilles are silhouetted in black against the golden amber light in the semi-darkness of the apse.

These windows have dignity, beauty, and richness, in keeping with the colored marbles of the columns in the sides of the embrasures and with the magnificent coloring of the gold-and-polychrome enamel mosaic ceiling of the half dome above and of the sanctuary arch. But they do not compete with these features as stained glass, itself rich in color, might.



Probably this special suitability of windows of translucent stone for close association with rich marbles and mosaics was a strong reason for their frequent use in the old Byzantine

churches; another reason was the relatively undeveloped state of the art of stained glass at the time. The former is an excellent reason for employing windows of gleaming stone today in such a relationship to marbles and mosaics as in St. Bartholomew's. The grilles are built as shown in a detail herewith. Recesses in the stone jambs and a pocket at the top permit the installation of the upper sections of onyx by raising them above their final position and then letting them down into place. There are five saddle bars of bronze extending across each window to support the weight of the stone and to give rigidity. These bars are concealed in recesses cut in the edges of the sections of onyx and are invisible because the material diffuses the light around them. Their ends are built three or four inches into the masonry at the sides of the windows. Each panel of the design, containing a complete circular motif, is composed of four sections of onyx. There are five of these in each window and a bottom panel made up of two sections. The slabs were cut across the grain of

the stone, at right angles to its natural bed. This cutting brings out veins instead of the clouds that appear when such a stone is cut with the grain. The thin slabs between the grilles were sawn about $\frac{5}{8}$ in. thick, then rubbed down to $\frac{3}{8}$ in. and polished. The parts are firmly joined together with a transparent cement.

Seen from the outside, the outer grilles are highly effective features of the exterior, contributing to its architectural dignity and beauty; their creamy color tones in well with the warm yellows of the brick walls and the buff of the stone.

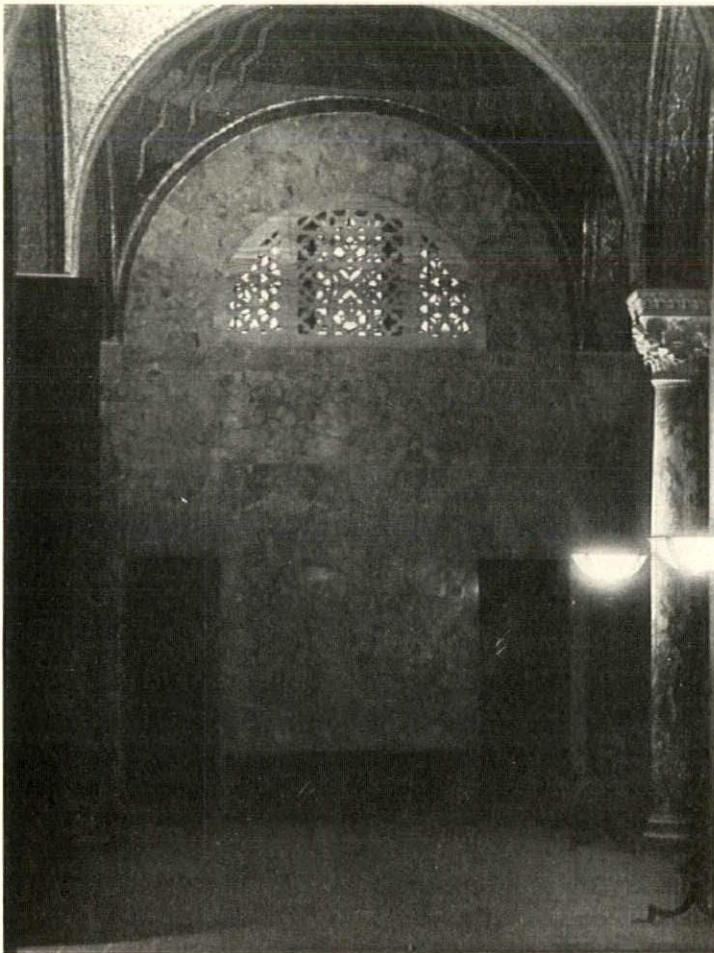


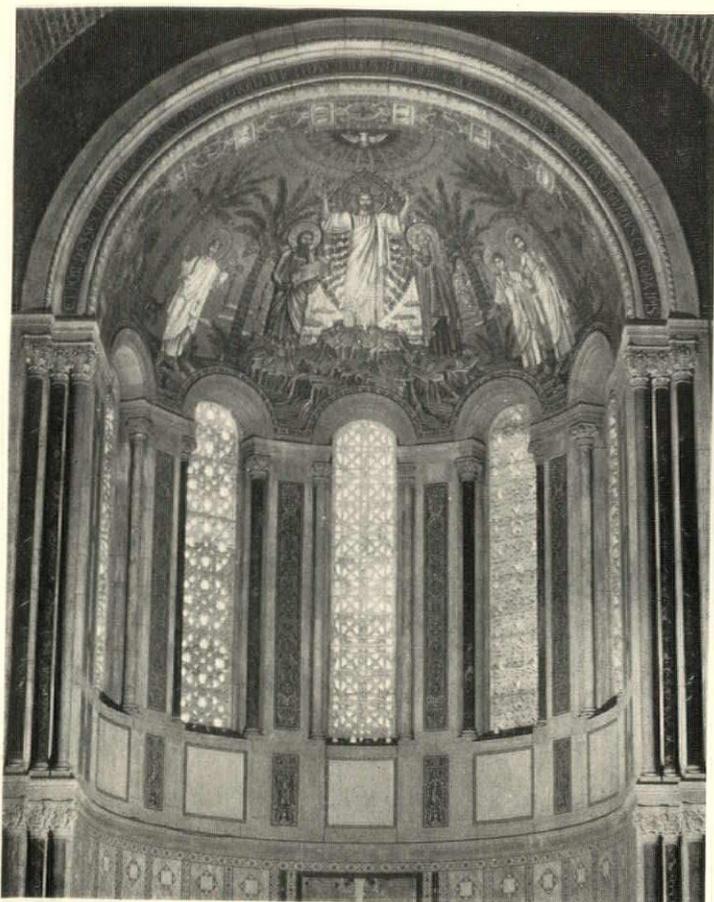
Among the most unusual and beautiful features of the Nebraska State Capitol, the crowning work of Bertram Grosvenor Goodhue's life, are the windows of translucent onyx set in tracery of creamy white marble.

Henry Bacon has made use of a translucent marble ceiling light of great size in the main hall

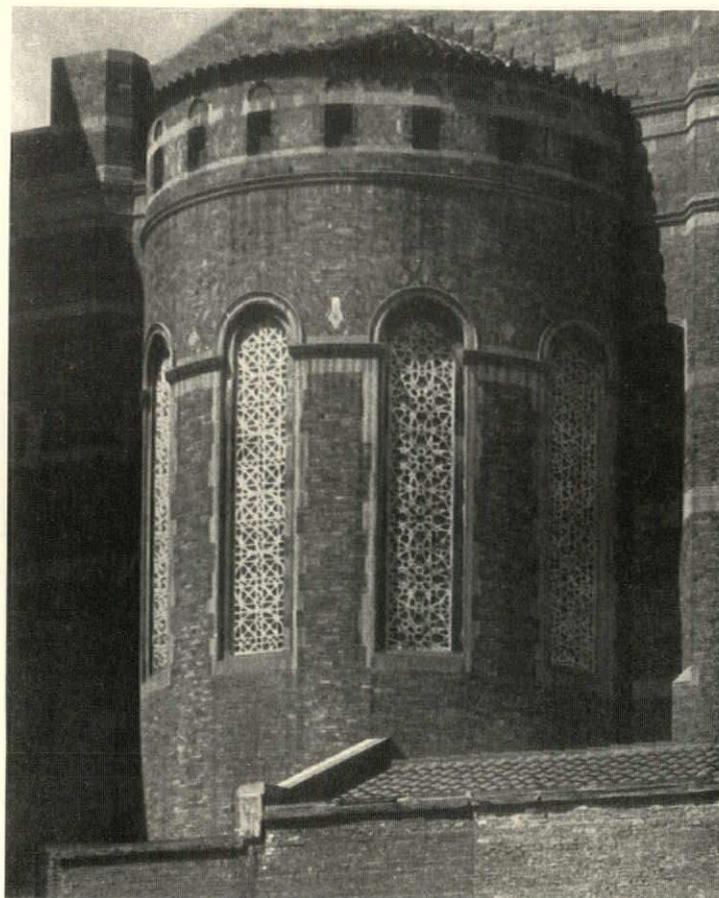
Onyx slabs with superimposed grilles of the same material in St. Bartholomew's Church. Mayers, Murray & Phillip, architects Samuel H. Gottscho

Ceiling panel of translucent Alabama marble in the Waldorf-Astoria, artificially lighted from above. F. M. Demarest Schultze & Weaver, architects





Paul J. Weber



Samuel H. Gottschow

In the upper part of the apse of St. Bartholomew's there are five windows, twenty-one feet in height, filled with amber onyx from Norie, Mexico. Details of the construction are shown on page 244. Mayers, Murray & Phillip, architects. Craftsmanship by George Brown & Company

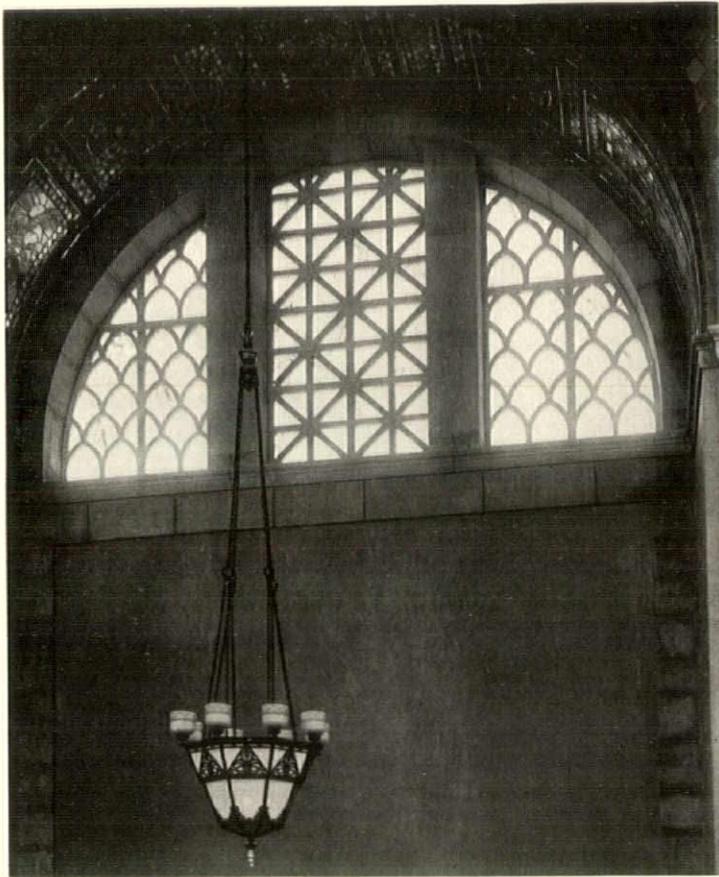
of the Lincoln Memorial, Washington, D. C. The soft radiance that comes down upon Daniel Chester French's great bronze figure of Lincoln, and upon Jules Guerin's allegorical murals around the walls, is produced by light filtered through slabs of Alabama cream marble set in the heavy bronze framework of the panelled ceiling. There is a glass skylight above. These slabs of marble are 4 ft. 6 in. square and $\frac{3}{4}$ in. thick. It is said that they were immersed for twenty-four hours in a tank of oil, kept hot by means of steam pipes, to produce the requisite translucency.

S

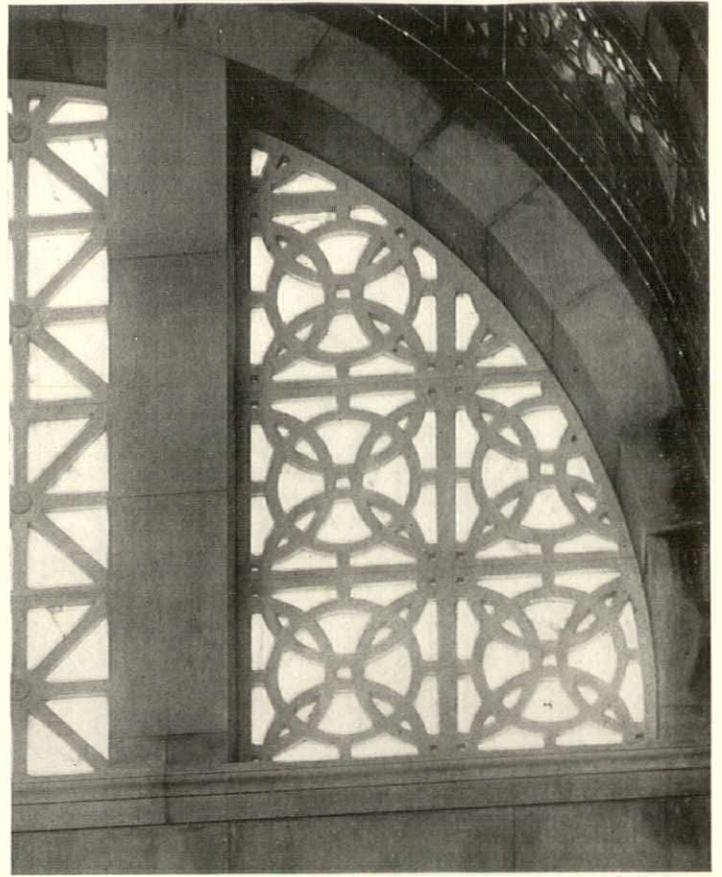
In the grand foyer of the Waldorf-Astoria Hotel, New York City, there is a large ceiling light composed of translucent stone slabs set in the panelled ceiling. This ceiling panel is of an Alabama marble that is of a cool white, owing perhaps to minute veins of blue; it is very even in color and highly translucent. Here Schultze & Weaver have employed several rectangles, one

within the other, stepped up to an oblong central panel. Frames of ornamented nickel-silver, suspended by hangers, support the marble slabs. Electric lamps—blue, amber, red, and white—are installed above so that varied color effects may be produced if desired.

Windows of translucent stone are spoken of in many descriptions of buildings as windows of alabaster, even when they are of marble or onyx. Though marble is a form of calcium carbonate, onyx is siliceous stone and alabaster is a hydrite of calcium sulphate. While this indiscriminate use of the term alabaster is contrary to the present narrow meaning of the word, there seems to be some justification for it, for this word seems to have been derived from a Greek word, *alabastron*, meaning "without a handle," a term applied to the little handleless amphora-shaped vases that were used to hold perfumes and the like. These vases were commonly fashioned from some translucent stone, perhaps not always alabaster in the present-day sense. Then the name of the object is thought to have been transferred to the material.



J. B. Franco Studio

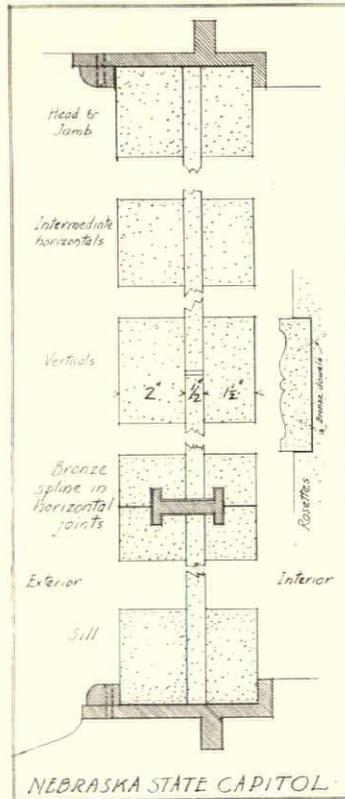
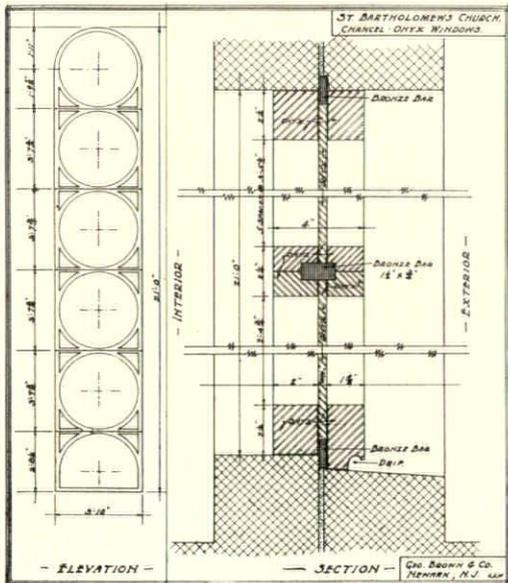


J. B. Franco Studio

Nebraska State Capitol windows, in which White Utah onyx is set in a tracery of White Colorado Yule marble stained a light amber. (See detail below.) Bertram G. Goodhue; Bertram G. Goodhue Associates, architects. Craftsmanship by Sunderland Brothers Company

It seems strange that windows of translucent stone are not more often used in fine buildings, for the alabaster from Volterra in Italy is well suited to this purpose, is readily obtainable at a cost within reason, and is very easily worked. It is this material

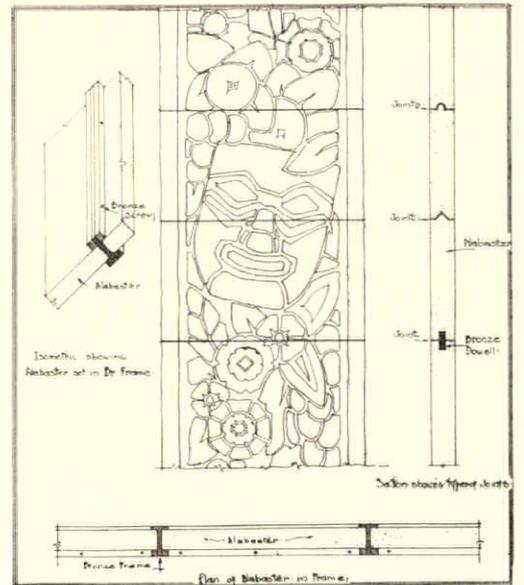
Below is a detail showing the construction of the apse window in St. Bartholomew's.

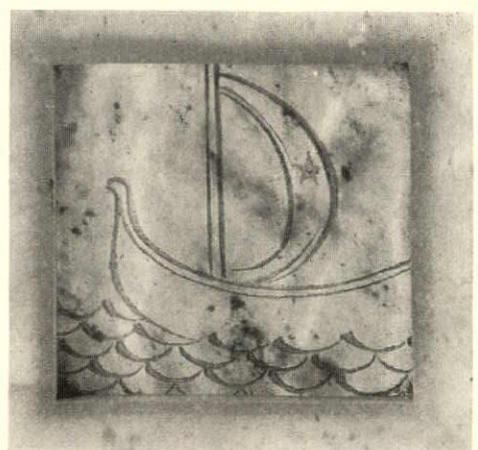
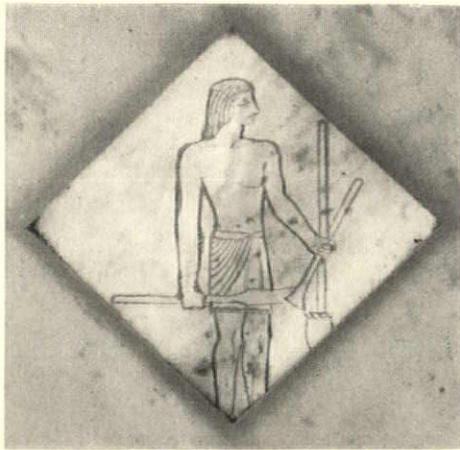


« ARCHITECTURE »
NOVEMBER, 1934

from which are made the beautiful windows in the Chapel of the Sacred Heart, Convent of St. Joseph, at Brentwood, Long Island. There is a detail photograph herewith, and other photographs of these windows were published in the issue of this magazine for Oc-

Below, typical details of the construction of the alabaster window in the Convent of St. Joseph





Examples of the possibilities in colored inserts in white alabaster, the inserts bearing designs in incised lines. Designed by E. F. Schmitt. At left, amber alabaster in white; centre, rose-colored alabaster in white; right, green alabaster in white

tober, 1931. There are twelve windows, each 3 ft. 8 in. by 8 ft. 8 $\frac{3}{4}$ in. These windows and other alabasters on and under the balconies of the apse are carved with ornamental and symbolic motives of great richness. As the interior of the chapel was inspired by the Early Christian and Byzantine monuments of Italy, principally

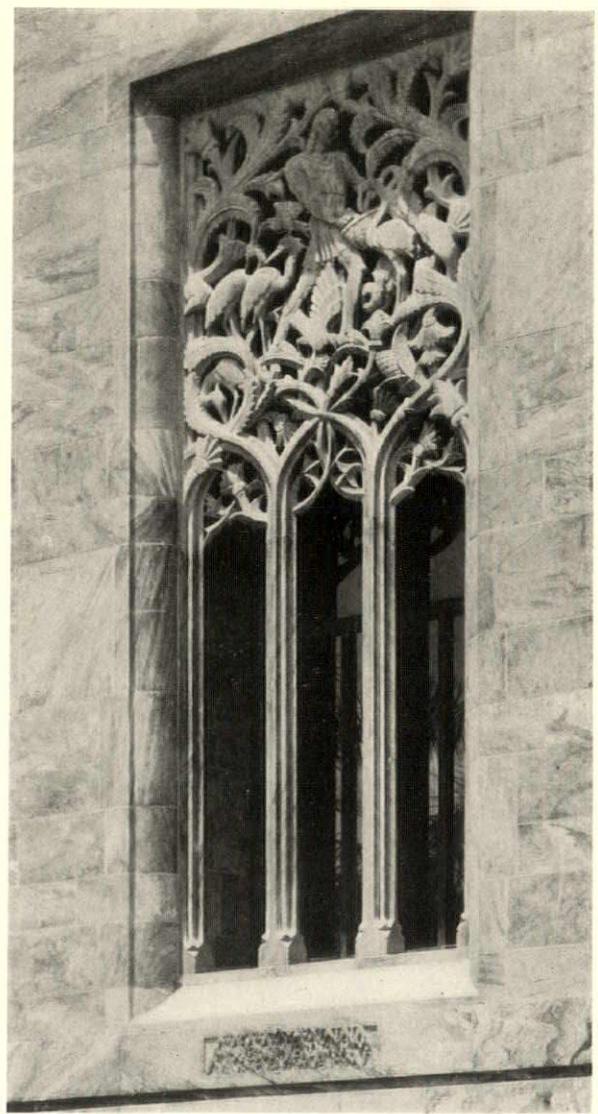
those of Ravenna and Florence, rich marbles, murals, and mosaics play an important part in it, and it was felt that filling the window opening with translucent slabs of alabaster would produce the soft light needed and avoid the introduction of conflicting colors in the windows. To prevent any possibility of monotony these were



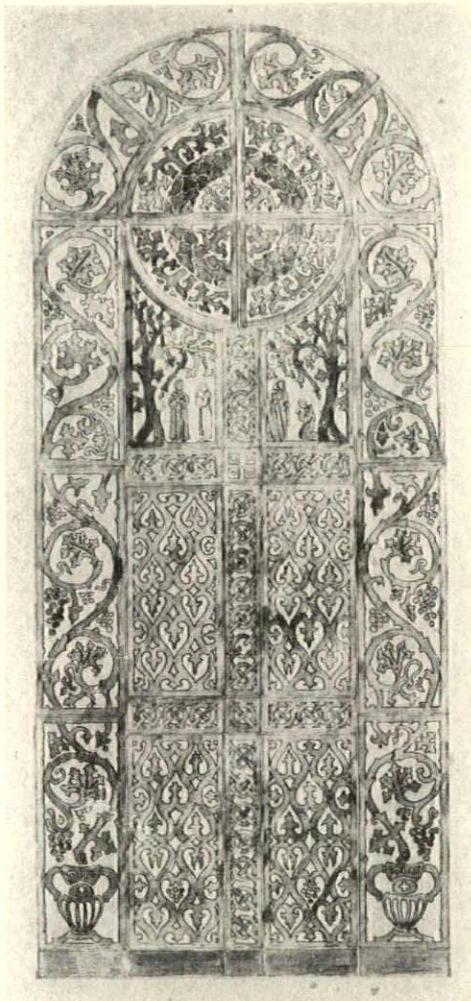
© 1920.
Vannatta,
Lake Wales, Fla.

© 1920.
Vannatta,
Lake Wales, Fla.

Interior and exterior effect of a window in the Bok Singing Tower, Lake Wales, Fla. Milton B. Medary, architect. A variation of translucence is secured through Lee Lawrie's sculptured tracery. The white Georgia marble is six inches thick at the maximum



◀ ARCHITECTURE ▶
NOVEMBER, 1934



Portion of a window of ivory toned Volterra alabaster, Convent of St. Joseph, Brentwood, Long Island. Murphy & Olmsted, architects. Craftsmanship by Conrad Schmitt Studios

Cartoon for one of the windows of alabaster in the Chapel, Convent of St. Joseph, Brentwood, Long Island. Designed by Paul A. Goettelmann; Murphy & Olmsted, architects

Detail of "Christ the King," part of a window in the Convent of St. Joseph, Brentwood, Long Island. Designed by Paul A. Goettelmann. Craftsmanship by Conrad Schmitt Studios



carved. They are rich in color, being of varied ivory and amber tints with a suggestion of rose; the alabaster, naturally white, has been impregnated with the desired coloring.

The chief beauty of this material is the soft glow of light by day or night. When viewed from within at night it appears akin to the mysterious will-o'-the-wisp or the St. Anthony's lights that appeared upon the rigging of old sailing-ships at sea. In the daytime these windows present a never-ending succession of changes in tone and tint.

These windows are composed of slabs $\frac{5}{8}$ in. thick, and as the carving, which is on the inside only, is about $\frac{1}{4}$ in. deep, the thickness is reduced to about $\frac{3}{8}$ in. in the background. The design is in three planes; the face of the slab, which is the face of the raised ornament; the background; and the minor detail, which is incised less than $\frac{1}{8}$ in. As the detail section shows, these windows are divided into panels by the bronze muntins of the frames, and some are hinged to swing open for ventilation. Windows of moderate size can be formed of a single slab

each. Larger windows can be formed without muntins, if these are not desired, by joining the sections, either by means of bronze dowels or of a tongue-and-groove joint. This tongue and groove are easy to carve and, cemented together, make a joint that is not obtrusive.

Volterra alabaster of the natural translucent milky white color is very beautiful, but the possibilities of the material are greatly increased by the fact that it can be colored through and through, not only in tones of amber or ivory but like rose quartz or jade or in almost any desired color. This makes it possible to enrich windows of the white or tinted alabaster with inserts of different colors. Furthermore the inserts may be engraved with designs in incised lines.

Though windows of translucent stone have been used almost exclusively in churches, there is no need to limit them to ecclesiastical architecture. Windows of Volterra alabaster, particularly, are within the range of possibility for very many buildings other than the most monumental; for banks, theatres, hotels, and fine residences.



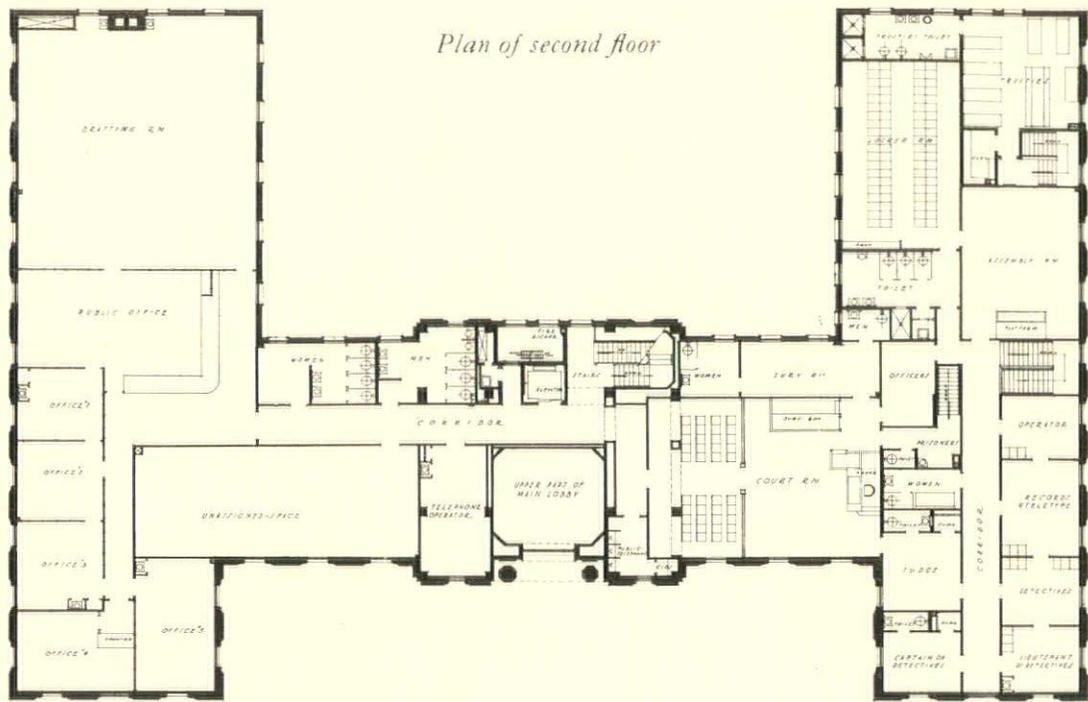
Photographs by
Dick Whittington

*A structure of reinforced concrete in which particular care has been
taken in the delicacy and precision of the exterior molds*

DEPARTMENT OF PUBLIC WORKS, CITY OF LOS ANGELES;
P. K. SCHABARUM, ARCHITECT

Valley Municipal Building, Van Nuys, Calif.

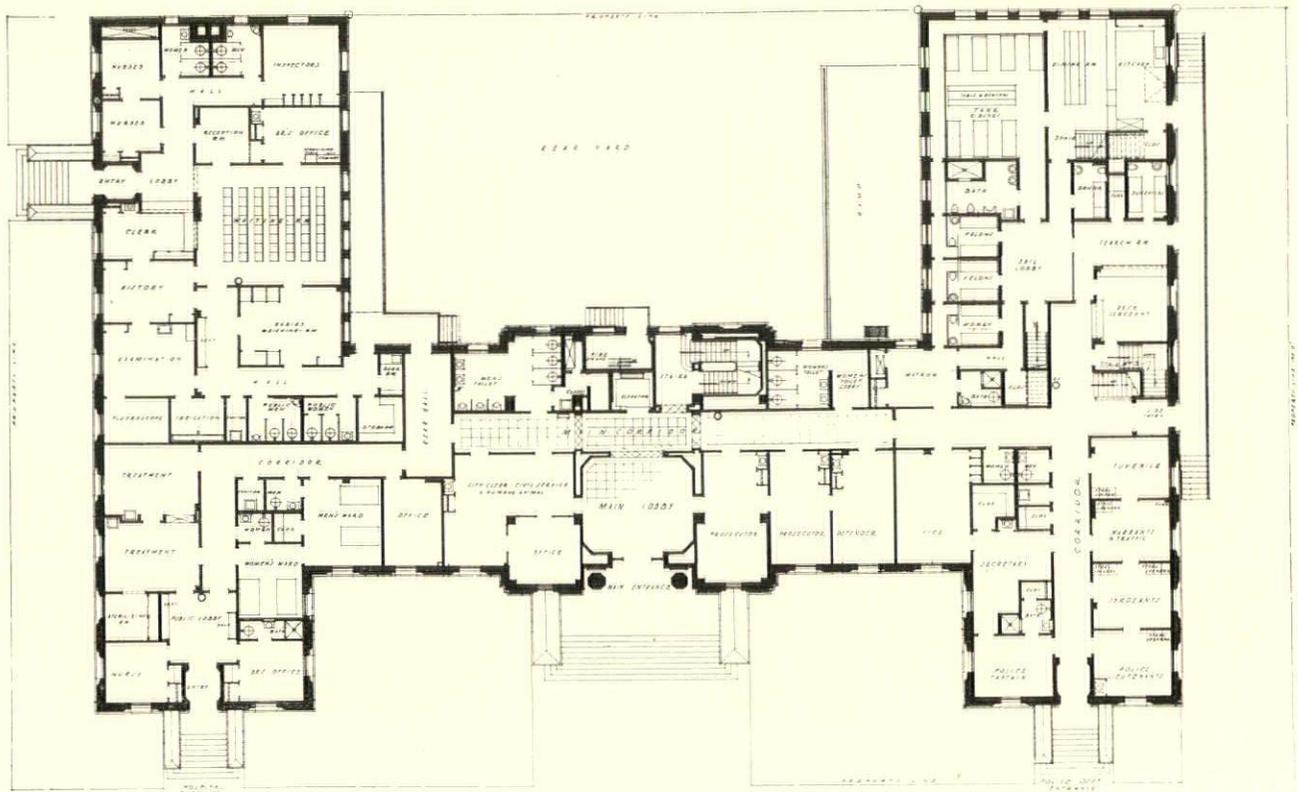
« ARCHITECTURE »
NOVEMBER, 1934



Plan of second floor

A multitude of widely varying civic needs has brought about a plan that is striking chiefly in its lack of the monumental, grand-manner flavor we usually associate with our public buildings.

In the plan of the first floor, below, the left wing is given over to a Department of Health, the right wing to the Police Department. A ramp leads down from the rear yard to automobile parking space in the basement





Detail of the tower top, where the cast ornament reaches its greatest florescence

« ARCHITECTURE »
NOVEMBER, 1934



Detail of the main entrance. The sculpture panel here and others over the wing entrances are by Harold F. Wilson, sculptor. An inscription on the back-

ground of the panel above reads: THE PUBLIC OFFICERS ARE THE SERVANTS AND AGENTS OF THE PEOPLE TO EXECUTE THE LAWS THAT THE PEOPLE HAVE MADE



Entrance detail of the

Police Department



The church is located on Thomas Circle at the intersection of Massachusetts Avenue and Fourteenth Street, N.W. It is built throughout of limestone, the roof of the little dome being of bronze, the weather-vane gilded

Photographs by Drix Duryea

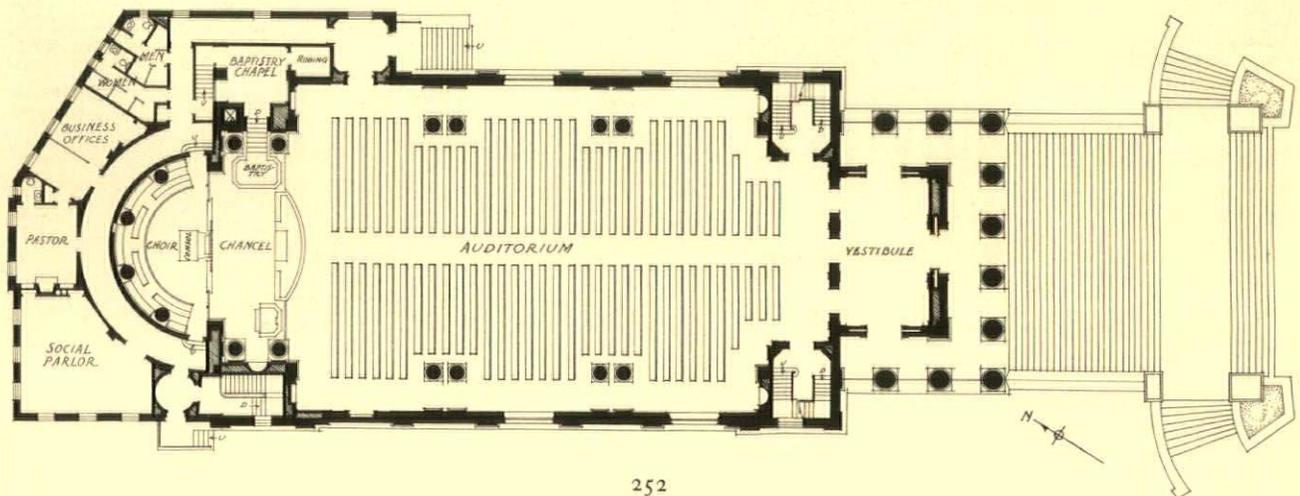
OFFICE OF JOHN RUSSELL POPE, ARCHITECT
National City Christian Church, Washington, D. C.

« ARCHITECTURE »
NOVEMBER, 1934



The general color scheme of the interior is a combination of the stone gray with light tones of blue and gold in the coffer. The lighting fixtures were designed especially to give the effect of a visible light through low-power candle bulbs with an added stronger light cast directly down. Pews are of walnut with blue cushions. There are several memorial windows in place, one of them to the wife of R. A. Long, who took an active part on the building committee. Nicola d'Ascenzo executed these windows, which have a large proportion of clear glass, with border and medallions in color

Plan of the main floor as built. There is an unusual feature here in the baptistry and the adjoining baptistry chapel. The photograph on page 254 shows that the height of the marble enclosure of the baptistry is such that very little more than the heads of those descending for immersion is visible from the auditorium





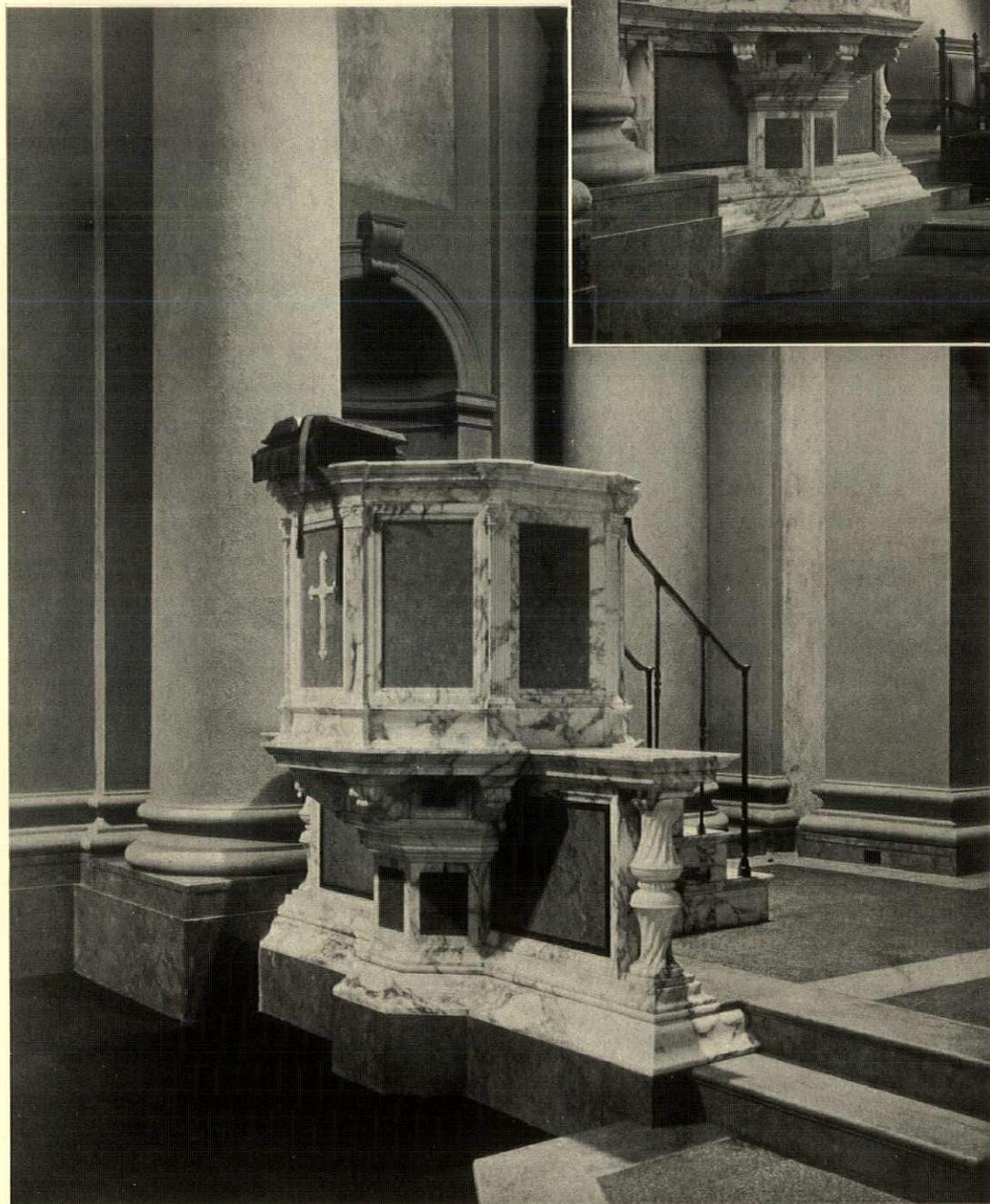
Axial view of the auditorium, looking toward the apse, the columns in which are of St. Genevieve marble—a warm gray with yellow veining. Between these the hangings are of blue

« ARCHITECTURE »
NOVEMBER, 1934

A view across the front of the chancel, showing at the far side the marble enclosure of the baptistry. The floor of the auditorium is carpeted in blue



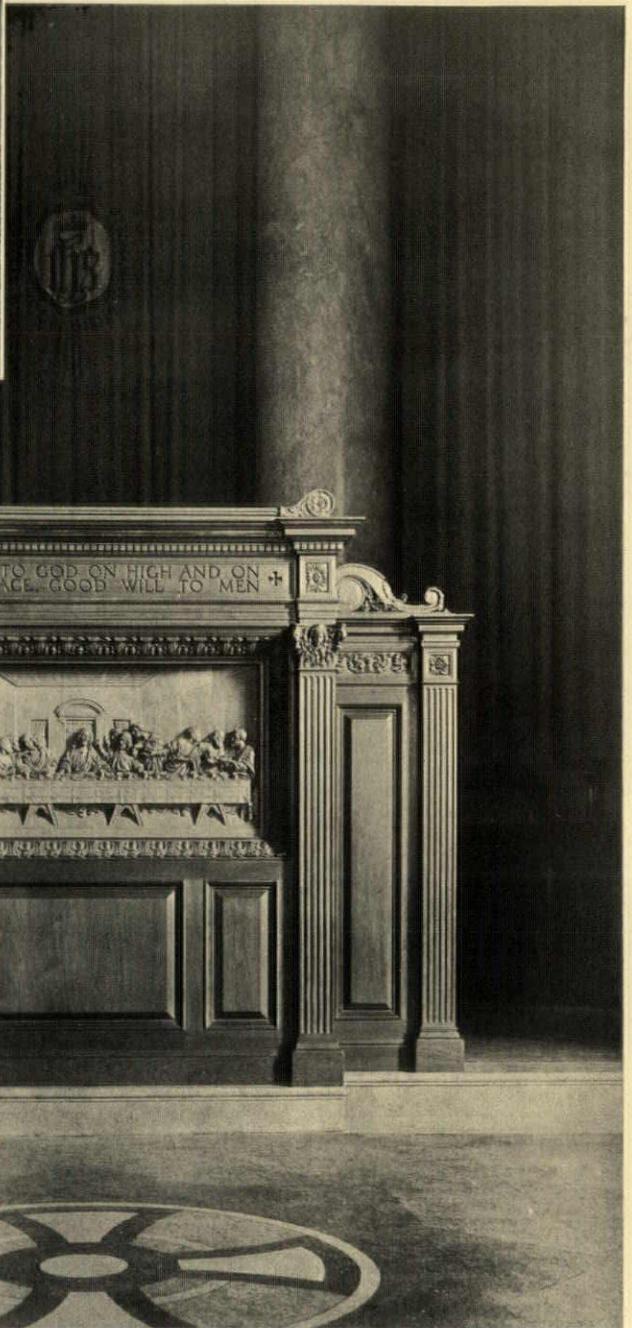
For the pulpit a creamy white marble with gray veining has been used, with panels of St. Geneviève marble

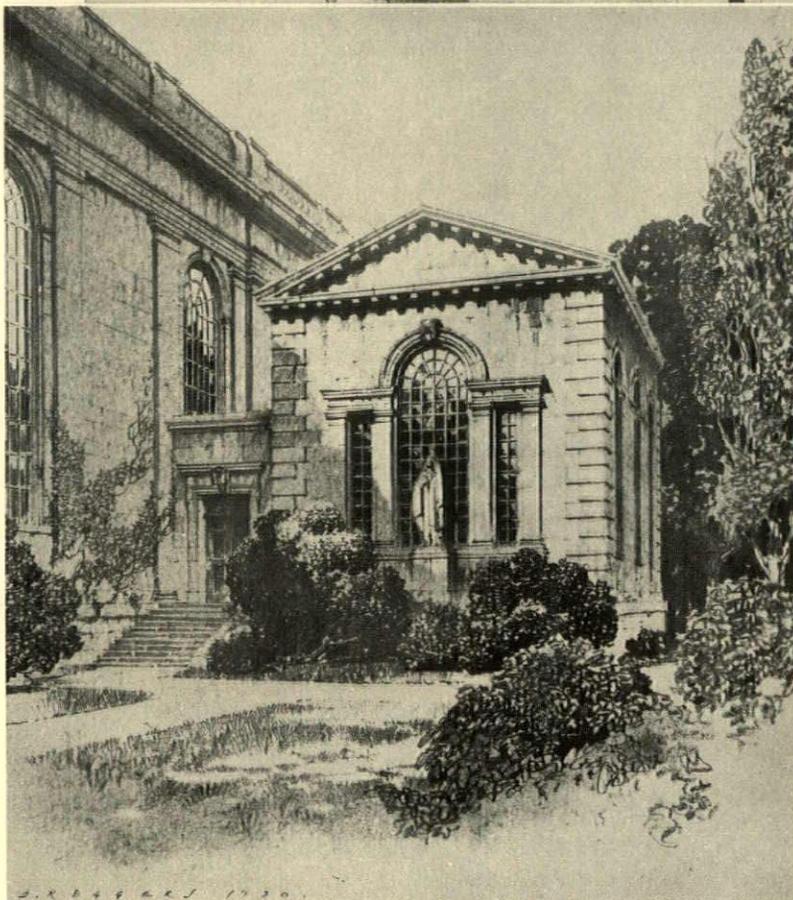
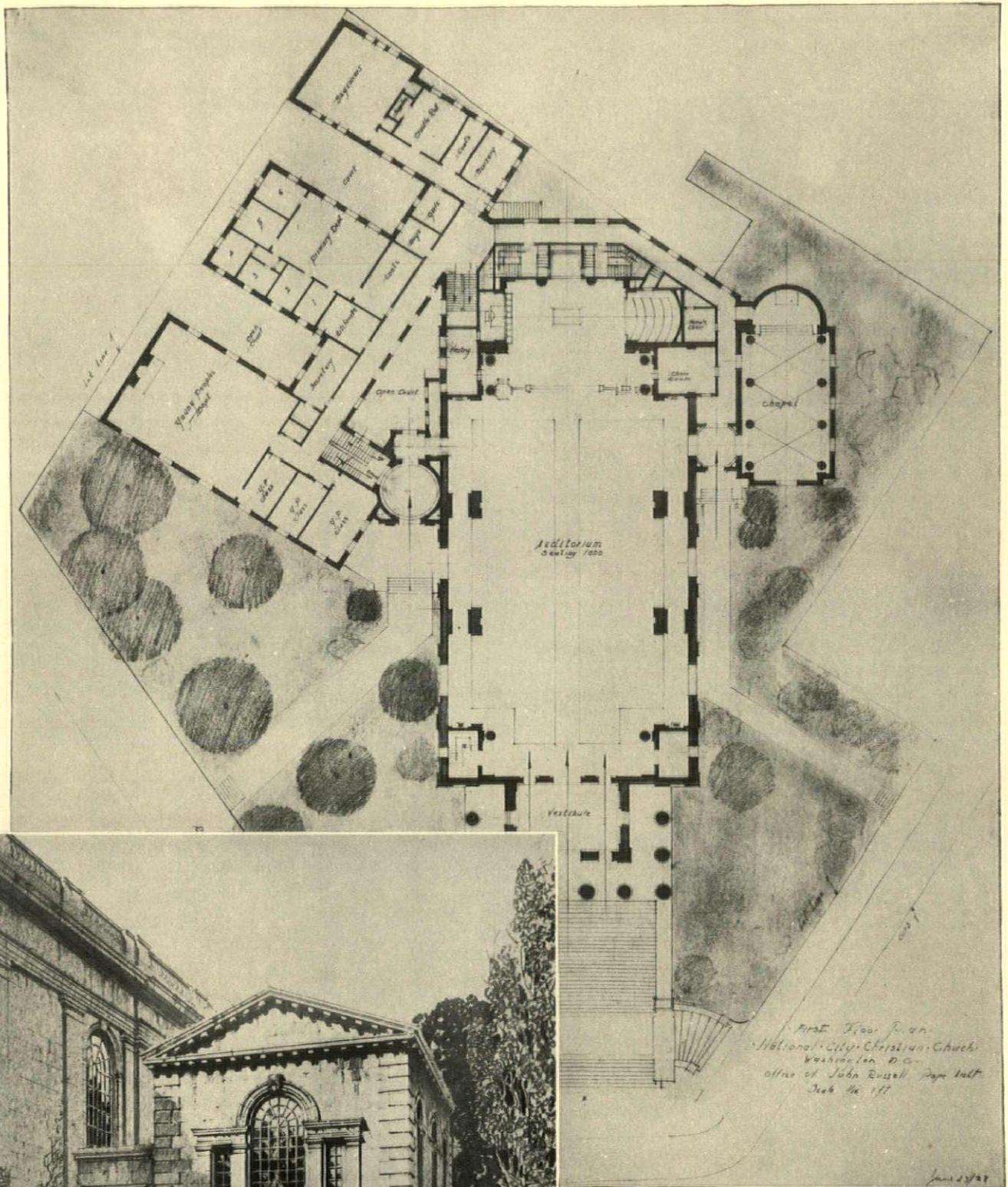




The main entrance as seen from inside the vestibule. Doors are of walnut, floor of terrazzo with a marble border

The console as seen from the front. It is of walnut, framing the panel of "The Last Supper" carved by Alois Lang in lime wood





Plan of the church and its supplementary buildings as originally projected. The parish house has not yet been built, nor the chapel, and the church itself was changed in accordance with the plan on page 252

Mr. Eggers's pencil drawing of the proposed chapel

The Architect in the Body Social

By *B. Charney Vladeck*

MEMBER NEW YORK CITY HOUSING AUTHORITY



Mr. Vladeck spoke at a recent meeting of the architects selected by competition to design New York City's projected low-rental housing. His opinion of the architect seemed to us to be a sharp spur—it hurt, but it may induce action. We asked Mr. Vladeck to write it for a wider audience in the profession, and here it is.—EDITOR.



BEHIND each building monstrosity, behind each tenement, behind each get-rich-quick building project, there are the brains of an architect. As I walk along the lower East Side or Harlem, or, for that matter, any slum in the city, I see in my imagination some member of the architectural profession burning midnight oil in an effort to make a maximum of people uncomfortable and unhealthy, at a minimum infringement of the law.

No modern profession has become as completely a tool of greed, selfishness, and speculation as the profession of architecture. The landowner, the builder, and the usurer tell the architect:

"Here is a small parcel of land whose inherent worth is zero; if you manage to erect on it a building that would yield a healthy income, the land will become more valuable than gold and all of us will be rich."

So the architect proceeds to cover as much of the plot as possible. He burrows into the earth and into the sky, to make a building that will earn money, no matter how crowded and inconvenient it may be, so that the landowner, the builder, and the money man may become rich. And when they do become rich, they "influence" local, state, and federal legislation for the protection of their interests and for the perpetuation of all their crimes and follies.

Today the only solution for the terrific unemployment in architectural ranks is an extensive public-housing program on a national scale—a program for the reconstruction of our cancerous cities along modern lines. They have been doing it on the Continent since the War, and it can be done more easily and with less

sacrifice on the part of the public treasury here than on the other side. Nevertheless the same interests whom the architectural profession served so blindly and so loyally are piously opposed to all such utopias because it would show the American people the extent to which it has been robbed of the comforts and amenities of life by the organized greed of real-estate and money interests. Public low-cost housing, of course, needs public assistance. Also cheap money and cheap land. But public assistance, when not given to the rich and powerful, is "Socialism"; cheap land and cheap money, "Bolshevism." It is this organized opposition that very efficiently keeps housing in a state of confusion. It is this opposition that keeps housing in the United States, after so many years of study and education, in a state of helplessness and disorganization. A thousand nostrums and panaceas are being offered as housing which do not contain the simplest essence of housing—and that is extensive low-cost projects and radical slum clearance.

There is still another drawback, which may seem purely technical but is important just the same. The American architect, like the average American layman, still thinks of housing in terms of houses and not in terms of homes. In the recent competition for the qualification of architects, held by the New York City Housing Authority, 278 designs were submitted by registered architects. All designs were based on a plot of twelve city blocks and were to deal with 100, 150, and 250 densities. But the overwhelming majority of the architects saw nothing but that many lots to be covered by structures. They didn't stop to say to themselves: Here I am supposed to house so many thousands of human beings. How can it be done with the

least crowding, with a maximum of privacy, with an abundance of air and sunshine, with ample provision for community recreation and park space? In one particular case the architect was puzzled over the requirement of a two-block park, and since he couldn't understand what a park is needed for in a low-cost housing project, he stuck it in a corner.

And yet a small number of competitors did display some housing intelligence, and twenty-two designs were qualified. Not that they were all entirely perfect. Some of them are somewhat hazy and illogical, but at least these men display an attitude to housing that is new: an attitude that proclaims that building for a community is something not entirely identical with building for an individual as for profit.

With our architectural background, this is very encouraging. There was a time when

architecture was the highest expression of a nation's culture. The brains of the architect were the focal centre of everything the nation had achieved in thought, in beauty, and in its standard of living. It was understood and accepted that the most important building is for the national collective, and that the spirit of architecture can be best expressed in public enterprises. It is time the profession reverts to its original function and natural destiny. By encouraging public enterprise in housing and construction, by studying the problems of community planning and community building, by giving thought to the necessity of giving all the people the benefits of modern science and achievements in construction, architecture will again become a living profession and a great force in the cultural development of our city and our nation.



H. H. S.

Cliff dwellings at Rio de los Frijoles, near Santa Fé, N. M.

« ARCHITECTURE »
NOVEMBER, 1934



Sculpture at the end of narrow garden path in Italy

Garden Terminals

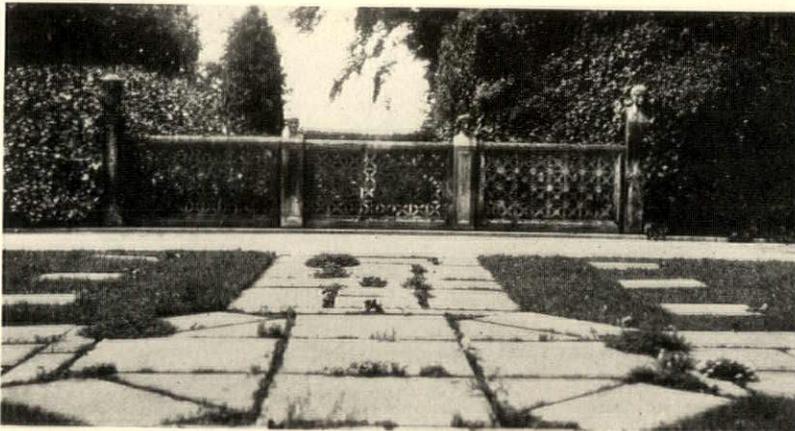


FROM A COLLECTION
OF PHOTOGRAPHS IN
THE OFFICES OF
WILLIAM PITKIN, JR.
AND
SEWARD H. MOTT
LANDSCAPE
ARCHITECTS



A more elaborate terminal for a larger garden walk at Ilford, England

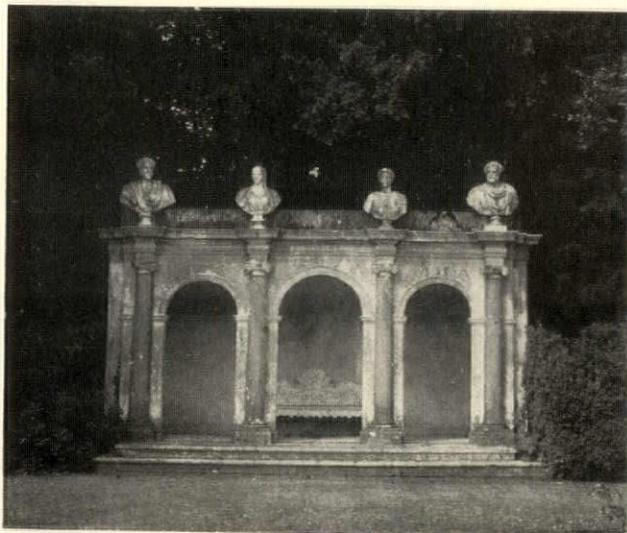
Balustrade stopping a vista at a transverse axis,



A more elaborate architectural feature as the terminal, Wilton House, England

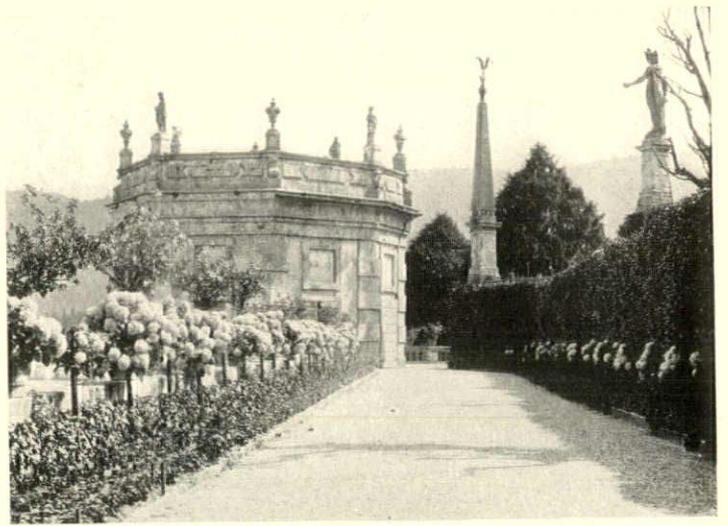
Lady Astor's Italian memorial garden, Cliveden, England

An elaboration of the niche motive, Dropmore, England

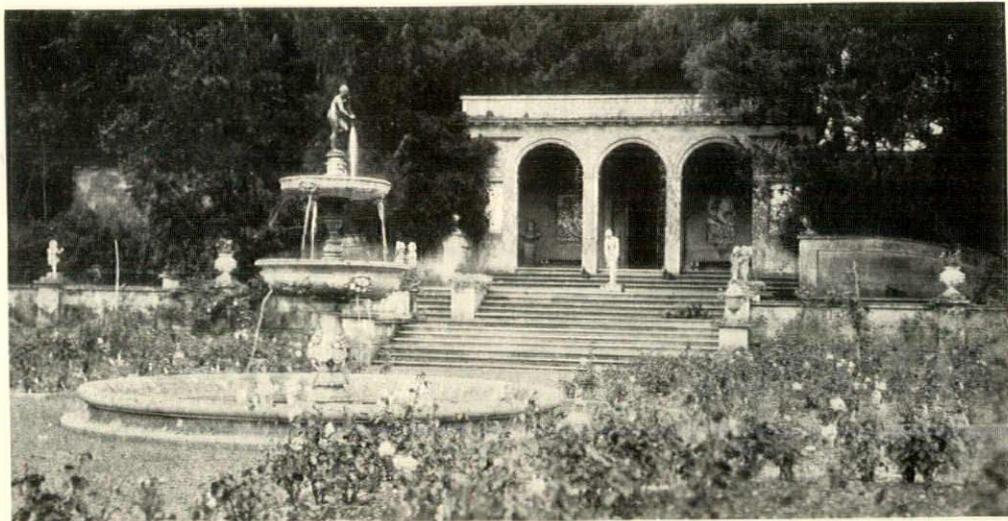




Cimbrone, Ravello. The terminal is not necessarily en axe



Isola Bella, Italy—another instance of the terminal off axis

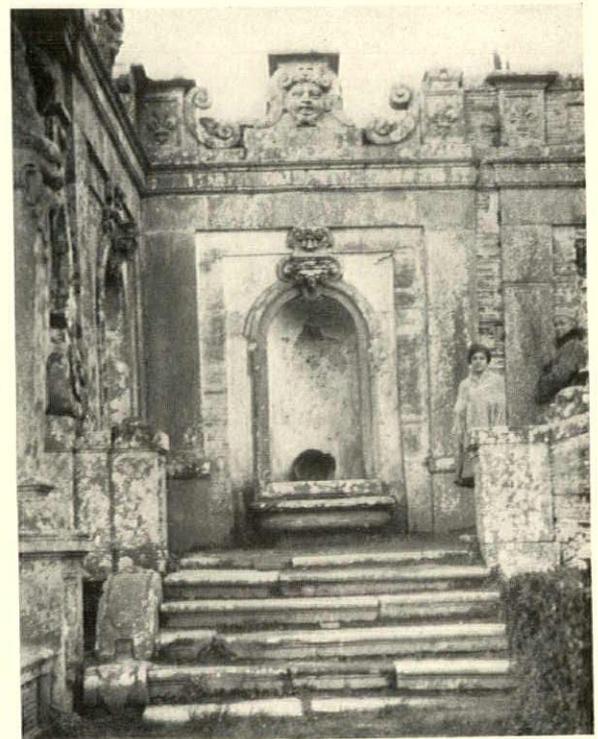


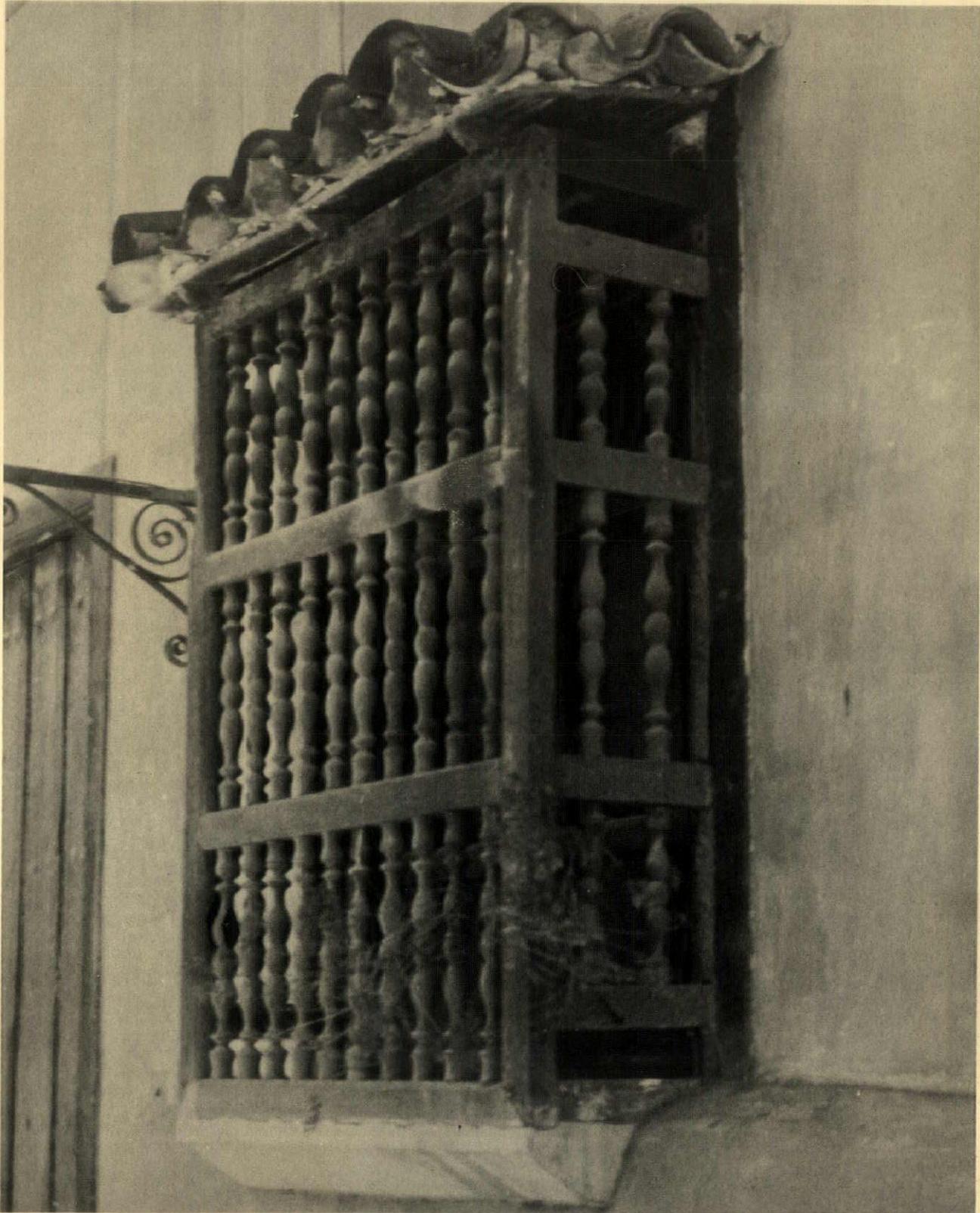
The added value of steps for an elaborate architectural terminal, Wilton House, England



Villa Falconieri, Frascati, Italy

A minor terminal on the Farnese Palace, Caprarola, Italy



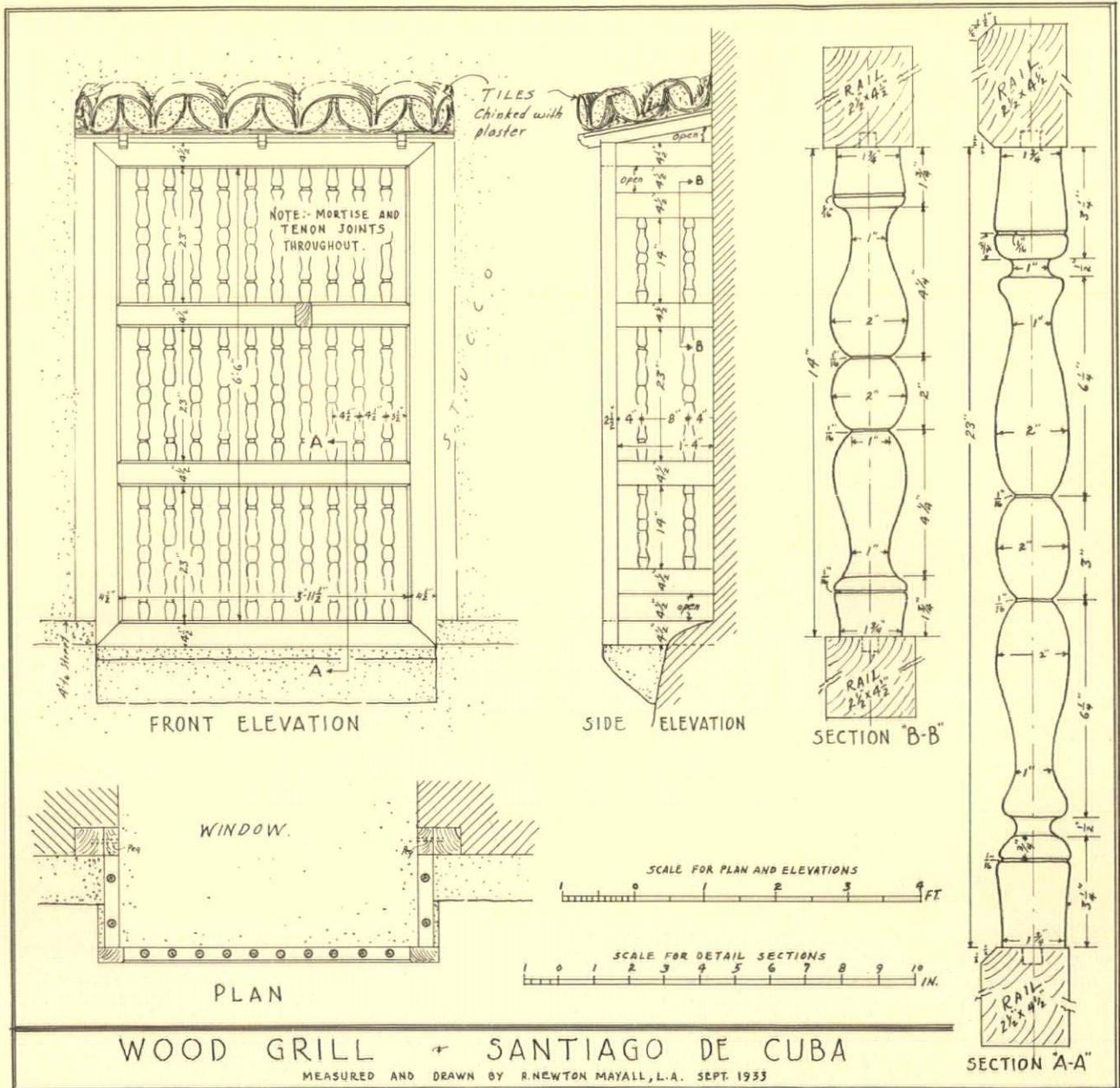


Measured drawing of this window will be found overleaf

MEASURED AND DRAWN BY R. NEWTON MAYALL

Wood Grilles of Santiago de Cuba

« ARCHITECTURE »
NOVEMBER, 1934



Photograph of this window will be found overleaf

ARCHITECTS and students travel far afield and dig into the past with a passion akin to that of the archaeologist, in their search for source material. All too often they follow the beaten paths made famous by illustrious predecessors. Mallorca, Madrid, Florence, Paris, Munich, and many other places have been kept under close observation for years.

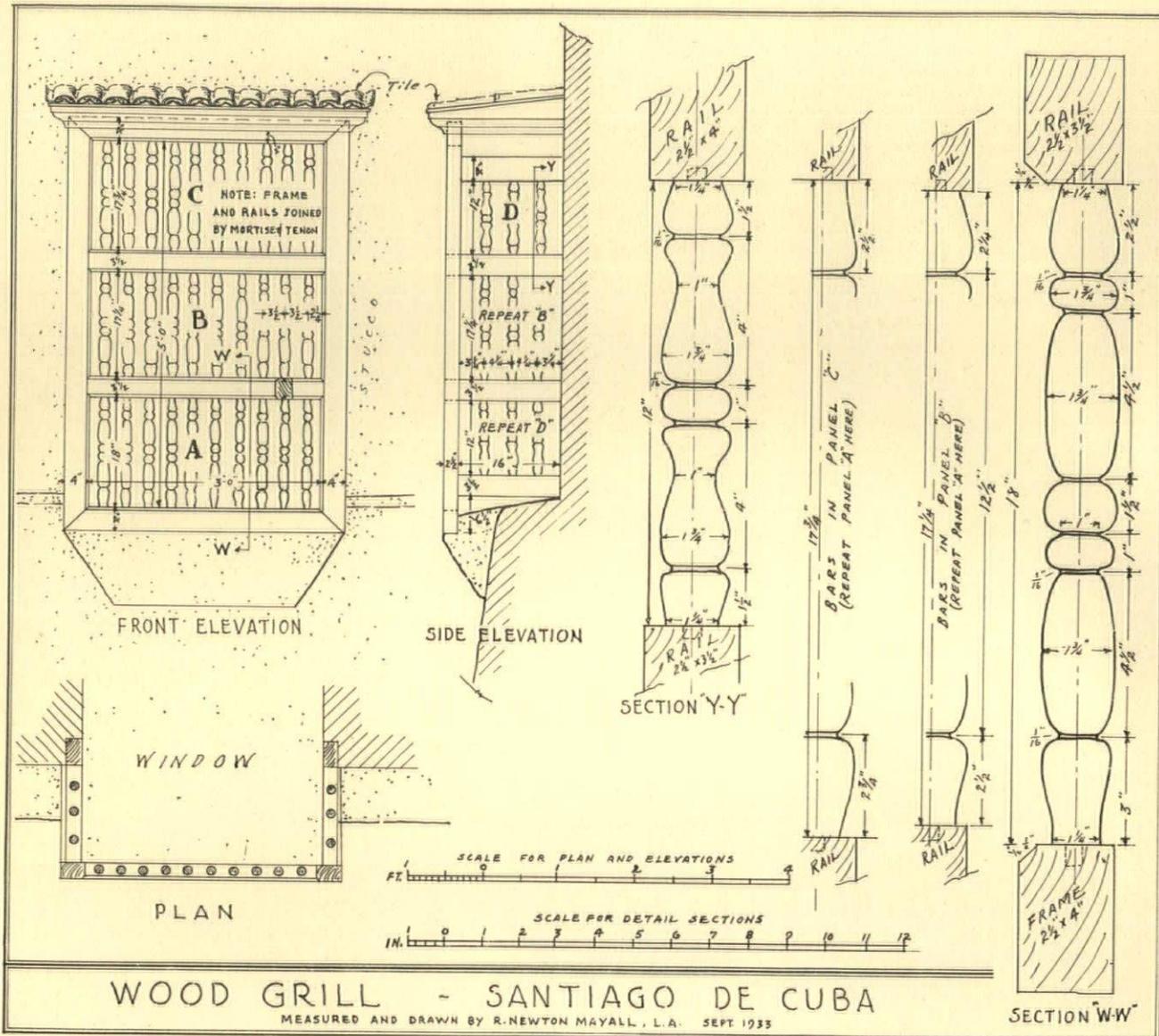
The New World holds much that is as yet uncharted; much that is of great age, when compared with our own young portion; much to rival the charm of the Old World. It is a fertile field for those who wish to partake of its riches.

Perhaps we have forgotten that more than

one hundred years before the founding of the Jamestown and Plymouth colonies, the first permanent settlement in the New World was made at Santo Domingo, in 1493.

Next door to us lies the Island of Cuba, at the western end of which is situated Habana, "The Paris of the West," and the tourist's paradise; at the eastern end is located the city of Santiago—a little bit of Spain transplanted in the New World.

Santiago might almost be termed the "Forgotten City." Founded by Velasquez in 1514, it was the capital of Cuba from that time until 1551, when the government was moved to Habana. During this brief period it was the



Photograph of this window will be found overleaf

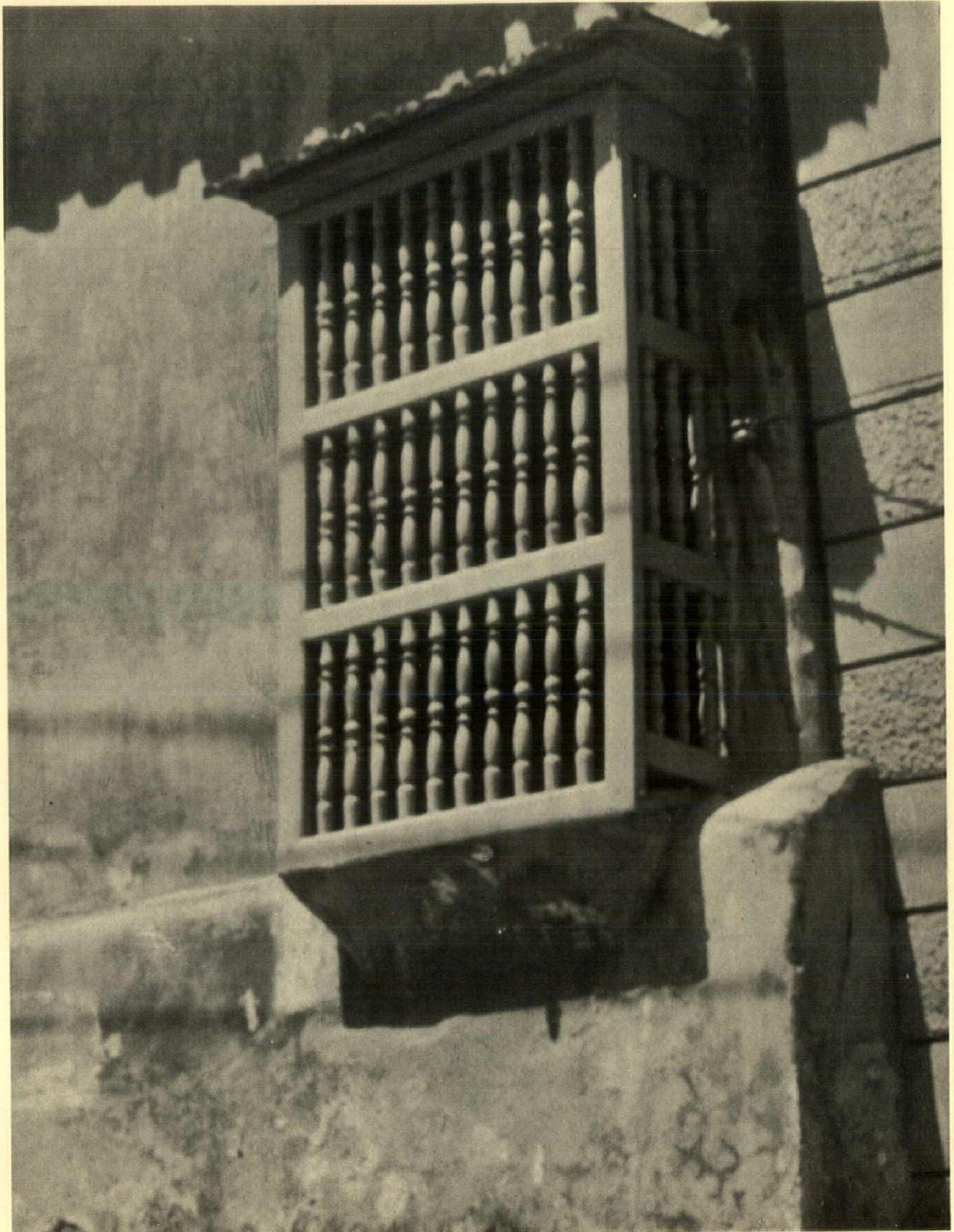
centre of social, commercial, and political life in the New World, which was responsible for its extremely rapid growth. Its subsequent decline was a natural result, and today we find it sprawled over the side of a hill, about seven miles inland from the south coast, at the head of a landlocked bay.

The bay and city are surrounded by high hills and mountains, the whole resembling a gigantic bowl. The scenic beauty of this portion of the island far exceeds that of the comparative lowlands to the west, with which we are all so familiar.

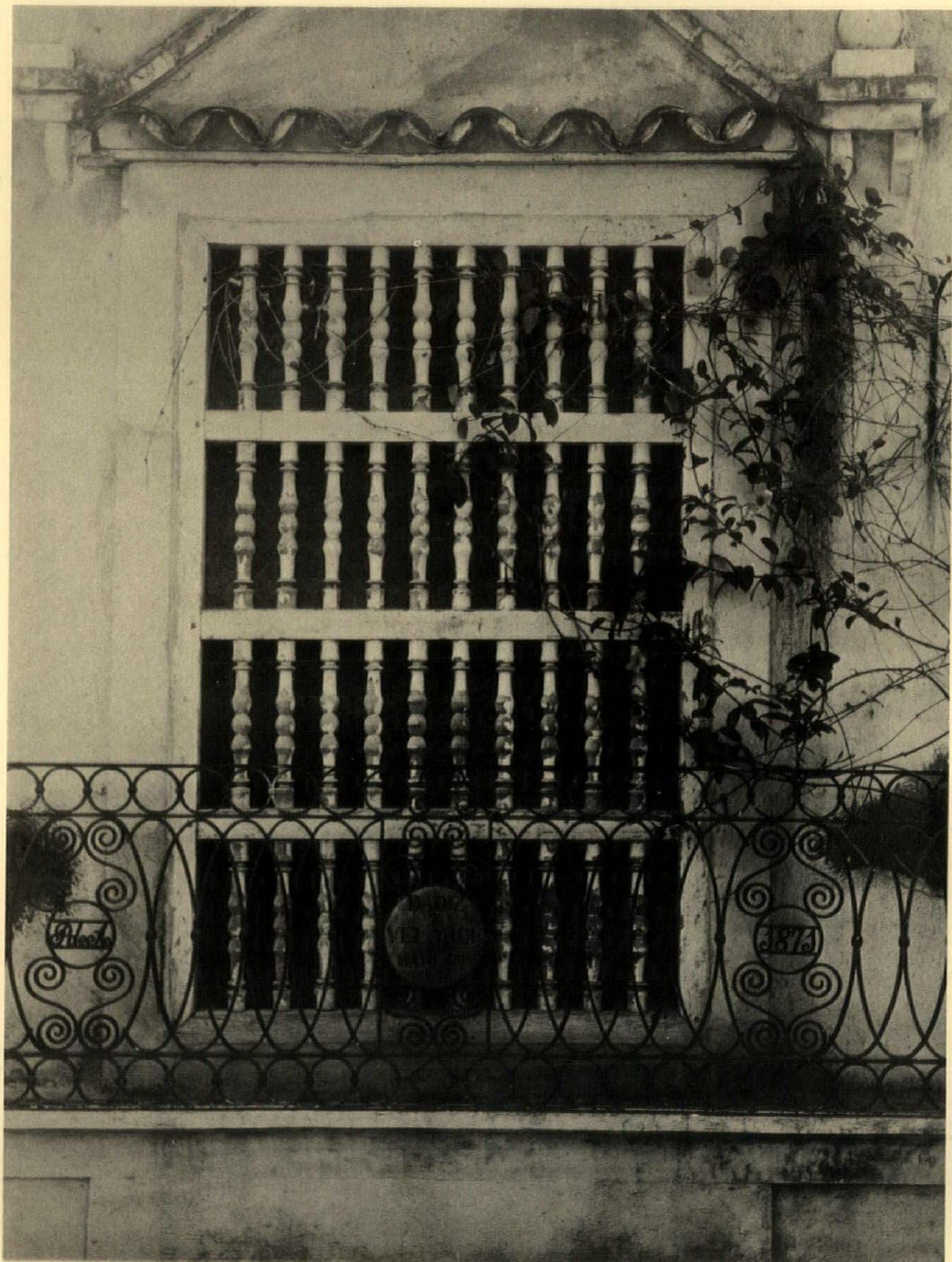
The quaint narrow streets, lined with low one-story houses, typically Spanish in character, whose irregularities add charm and interest to the city, in part attest to its antiquity. When

looked up to from the harbor or down upon from the surrounding heights, the polychromatic walls and roofs glistening in the sunlight resemble a mammoth kaleidoscope. Balconied casement windows above one's head take one quickly back into the romantic past and remind one of the not too unromantic present. The city abounds in fine examples of early iron work, and wood grilles are found protecting many street-level casement windows.

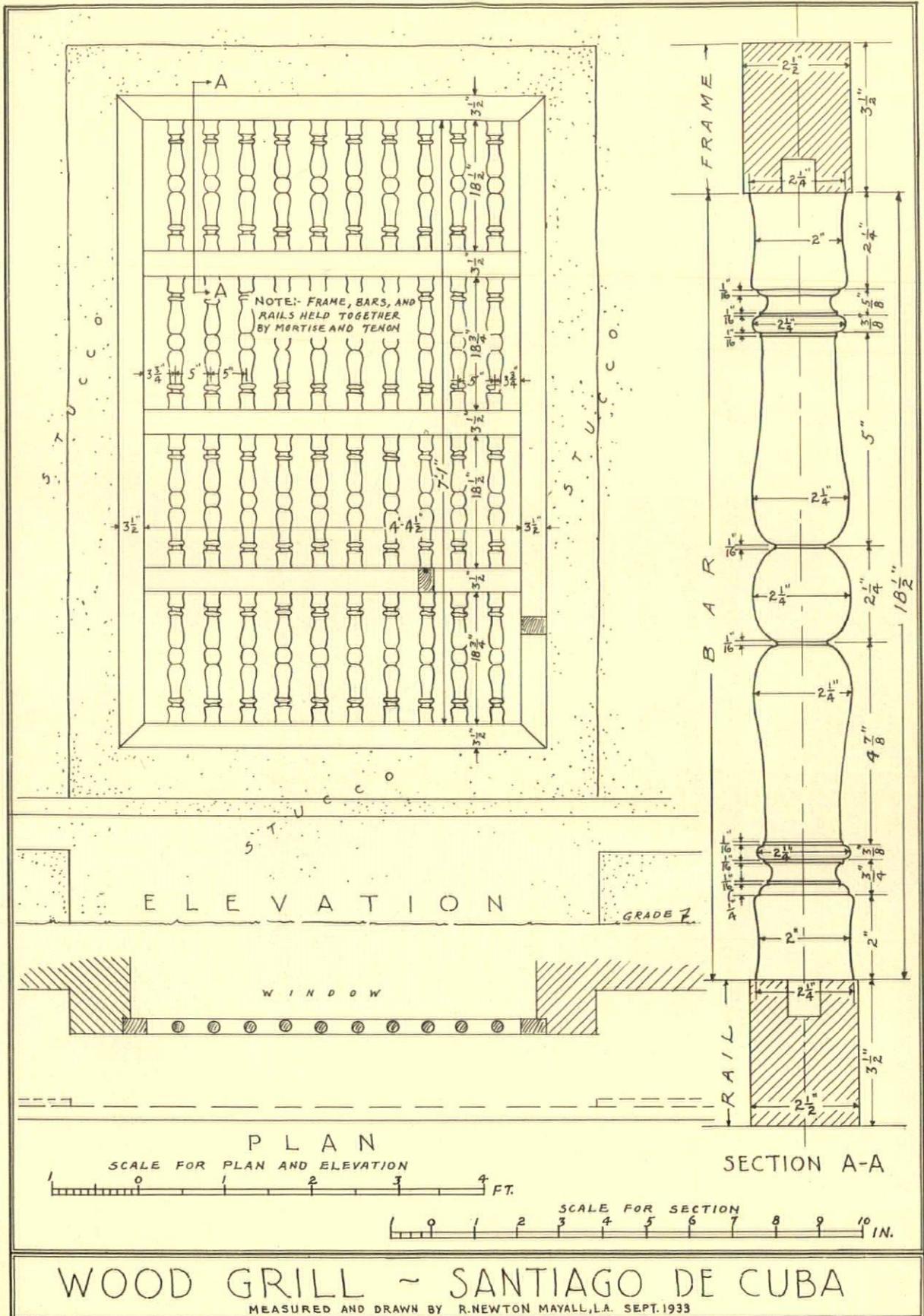
The wood grilles are fascinating; no two are alike. Many of them are over 300 years old, and in an excellent state of preservation. They are met with in Turkey, Spain, and Mexico, to some extent; but in and about Santiago they are common. The architect and landscape architect will doubtless find them of great interest.



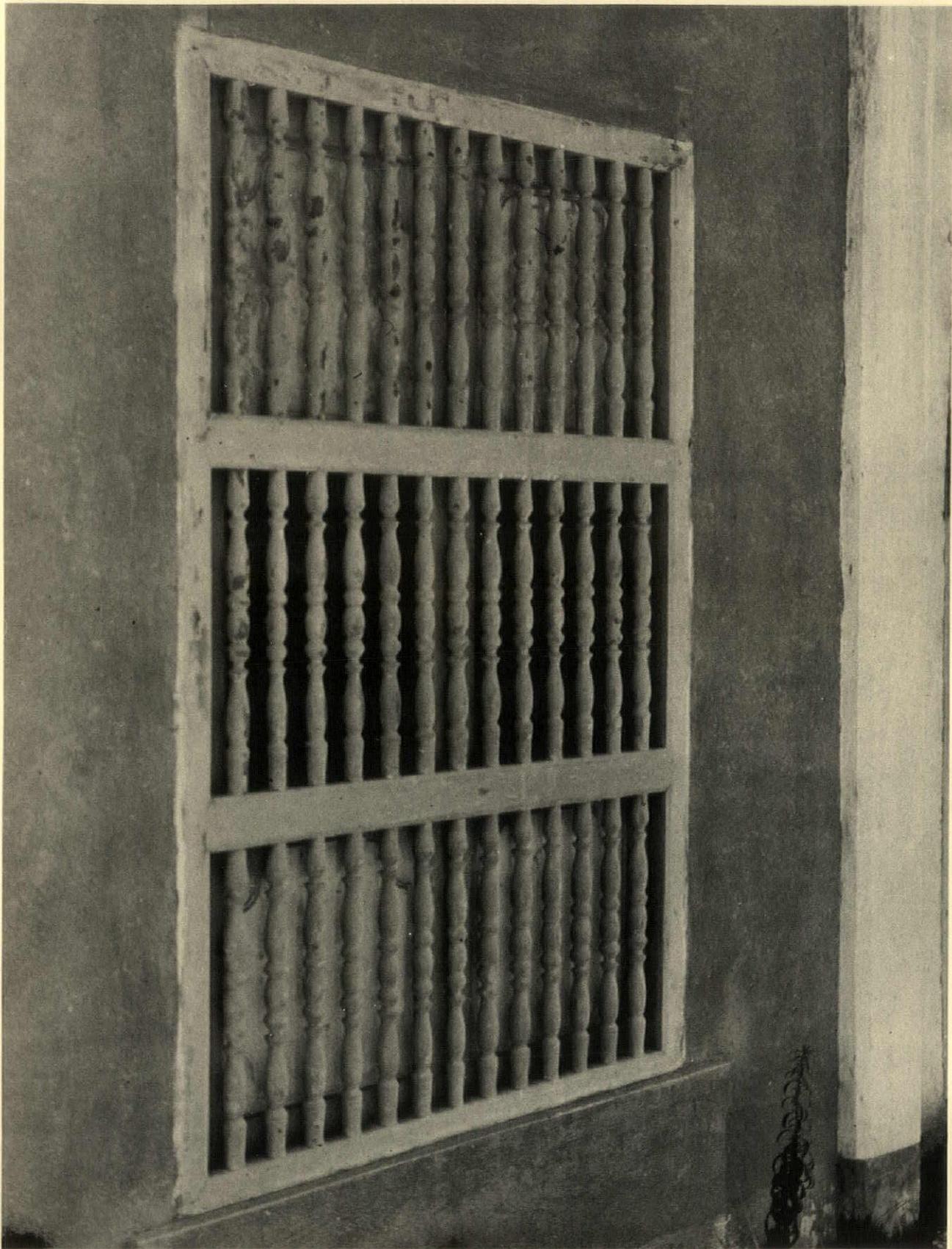
Measured drawing of this window will be found overleaf



Measured drawing of this window will be found overleaf



Photograph of this window will be found overleaf



Measured drawing of this window will be found overleaf

Better Practice

By *W. F. Bartels*

1—LOCATION OF BOILER

IT is usually advisable to place the heating plant as centrally as possible, to aid in the even distribution of heat. However, in conjunction with location some thought must be given to the supply of fuel that is to be used. With gas it means only some additional piping from outer wall to centre of basement; with oil the run of the pipe should not be too long, while with coal there is the question of where it can be delivered on the outside and how much additional labor is necessary to get it to centrally located bins. It is well to locate the boiler a sufficient distance away from all walls, so that all parts of it, including the smoke breeching, may be easily cleaned. This is particularly important where there are tubes to be cleaned, so that there is room to draw the cleaning brush through them. Then, too, it is better to locate the boiler in a part of the cellar where there will be no necessity to make a pit for it in order to obtain sufficient headroom for the proper piping. Of course if it is necessary to do this the pit must be large enough so that there will be sufficient room for firing and drawing the ashes. If the ground is not dry there must be proper provisions for water-proofing and draining it. A pit under the boiler, however, has its merits, as it allows more air under the grates with less likelihood of their burning due to ashes piled up under them (Fig. 1A). One thing often overlooked is the air supply for the boiler. To enclose a boiler in a closed room is poor practice. A window or an air duct should be provided so that the fuel may be completely burned. Lack of fresh air will result in a waste of fuel.

HEATING

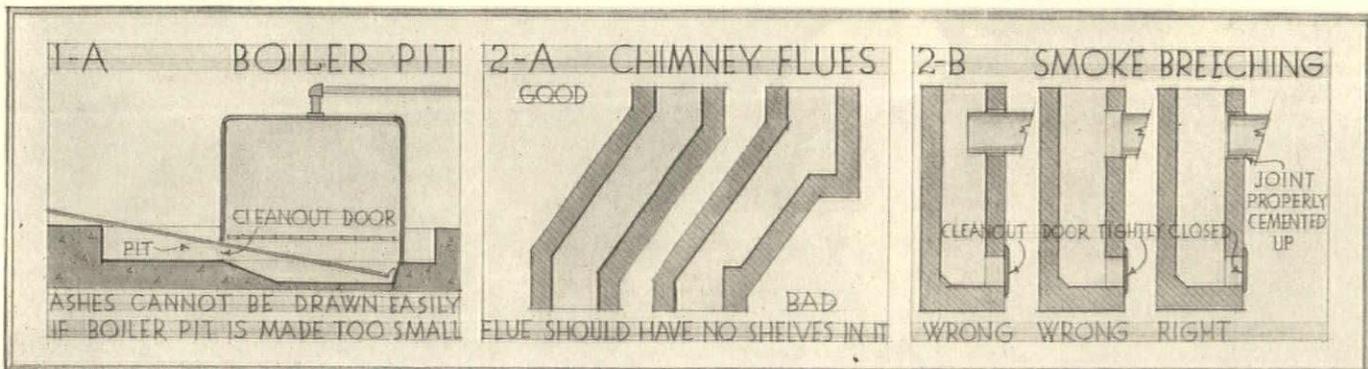
2—CHIMNEY

From the standpoint of the tenant the chimney must be located so that it does not run through any part of the building where its heat may be a disadvantage; this is a sound reason for its complete insulation. If not properly erected a faulty chimney becomes a great fuel waster; it may be a source of danger if the flue linings (these should never be omitted) are not tight. There should be no cracks in the lining. The area of the flue should be the same all the way up the chimney, with no shelves or offsets to catch any soot (Fig. 2A). The size of the chimney should be governed by the boiler's requirements, and the boiler manufacturer's directions as to size should be implicitly followed. Do not economize—or rather, it might be said, do not be wasteful—by making the flue size too small. It is best to have a chimney so located that there are no long ducts in the cellar, and it is better to have long sweeping turns than to have sharp bends which will slow down the flow of the escaping gases. If more than one boiler is used, it is advisable when possible to have a separate flue for each boiler. All smoke breeching must be tight, and it is economy in the long run to have it made of a sufficiently heavy gauge so that renewal is not necessary each season. All cleanouts must be tight. Where the breeching enters the chimney, it is better to have it slightly behind the edge of the flue lining rather than projecting into the chimney. Nor should the breeching

be so near the outside face of the chimney that there may be danger of gas leakage due to the movement of the breeching (Fig. 2B). The height of the chimney is very important. It must be of sufficient height so that neither adjoining buildings nor peculiar air currents due to them can cause a down draft (Fig. 2C). A dependable draft will usually be the natural result of a properly designed chimney.

3—BOILER TYPES

In general, boilers are cast iron or steel. Some steel boilers come in narrow sizes, but in general it is necessary to have a considerable wall opening through which they can be delivered to the cellar. Cast-iron boilers made in sections have the advantage that they may be carried through the average hallway into the cellar. This is an advantage in a building already erected. The claim, however, concerning the ease by which damaged sections may be renewed is slightly overestimated. The time necessary to install a new section will be worth almost as much as it would cost to install an entirely new boiler, and then one has the satisfaction of an entirely new product. The cast-iron type of boiler resists corrosion but cracks easily upon lack of water. The steel boiler resists cracking and has for its further protection a fusible plug in case of absence of water. Some cast-iron boilers now are supplied with fusible plugs. There are now on the market two steel boilers which can be installed wherever a cast-iron boiler can be located. The one is a steel boiler which is bolted together, while the other one is welded together on the job. Thus, if a steel



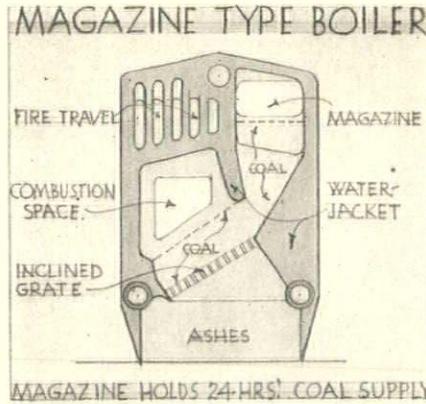
boiler is desired for a building already erected, it can now be obtained.

4—LOSSES OF HEAT

The heat loss in flues due to unburned gases may run as high as 50 to 75 per cent, while a loss of 30 to 40 per cent of the heat units generated is not uncommon. This loss will be reflected in the coal bill and is generally due to poor firing, low-grade coal, inefficient damper and draft regulators, or, in some cases, to poor boiler design. The only legitimate heat loss is that through the radiators themselves. Therefore the architect should see to it that there is as little loss as possible by piping (although some to warm the cellar is excusable), and that not too much escapes from the boiler itself. Proper insulation will reduce the piping loss, as well as that of the boiler. The designers of boilers strive to have as little exposed surface on the outside of the boiler as possible and all the exposed surface that is possible on the inside, so that every unit of heat generated may come in contact with a surface and be transferred to the water. The boiler should be so insulated that it will be possible to touch any of its sides with one's hand. However, this does not mean that the doors or gadgets attached to the boiler, such as pet cocks, etc., will be that cool.

5—PROPER SIZE FOR BOILER

The great amount of heat lost from a building is not generally realized. The building itself gives off a great deal of heat. All one has to do to see this is to look down the side of a large building on a cold day. The heat waves can be seen shooting out from it for a distance of one to two feet. When the architect realizes this he will be more careful in selecting a boiler and give the proper amount of thought to its

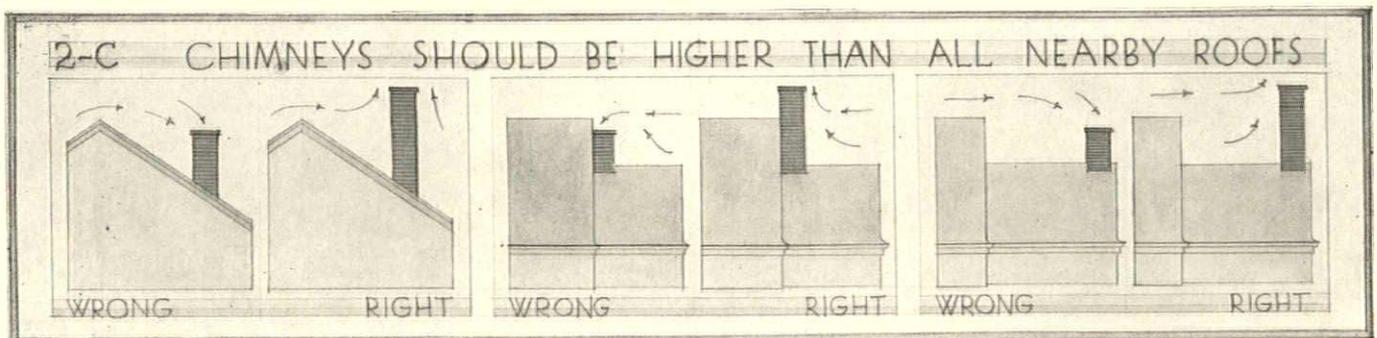


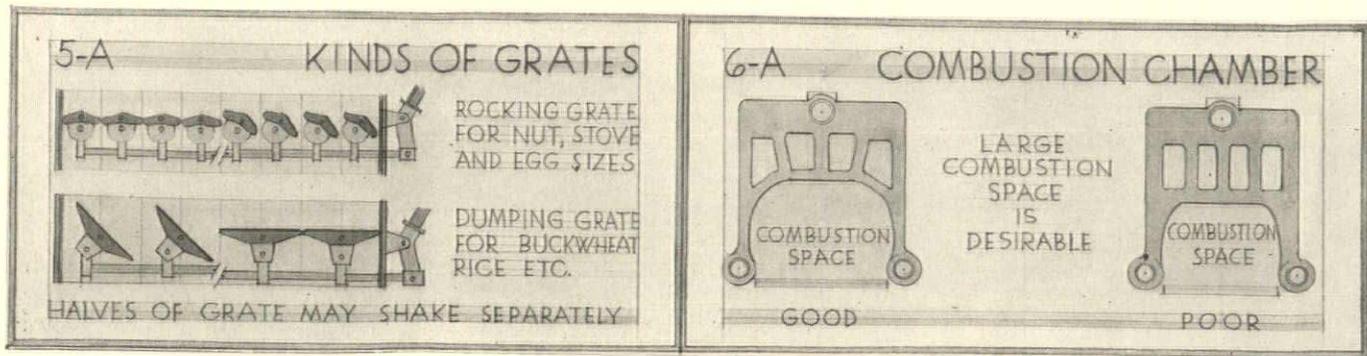
rating. It must be remembered that boilers are rated in many different ways, and not always on the same basis. Then, too, they are rated under ideal conditions. Nothing is deducted for the soot that is bound to accumulate. The surfaces are rated as if they were clean and not full of scale and dirt. It is presumed that there is an ideal draft and that the boiler is efficiently fired. Dirty or rusty water may make steaming more difficult. All these may be factors that will upset the architect's calculations, but nevertheless the client will blame only him if the heater does not deliver enough heat. Therefore the architect should always get a boiler that will do the duty to which it is assigned. As was previously mentioned, not all boilers are rated in the same way. To make sure that he is getting the proper amount of heating the architect is advised to consult a booklet put out by the Heating, Piping and Air Conditioning Contractors' National Association. This will give the real rating of the boiler, upon which he may depend. Then if the necessary radiation is accurately figured, the architect may rest assured that the building will be properly heated insofar as he can control the situation. A boiler is really a mechanism for converting the coal into heat and transferring the heat

to the water. Too often the architect selects one too small in size to do the work properly.

The measure of the value of the performance of a boiler is the amount of the useful heat which is obtained from the coal used. The fuel used over a period of one year may cost as much as the boiler, in some cases even more. Therefore it is evident that the real cost of the heating of a building is not the comparatively small amount spent for a boiler, but the price of the fuel. Hence 10 per cent more spent for a boiler of adequate size to economically convert the coal into heat is not an extravagance but eventually a saving. Objections to a heating system are generally traceable to one of the following causes: incorrect piping, not enough radiation, poor chimney, and small boiler. Heating systems too often suffer from being too small. Fuel costs are excessive because a small boiler is driven too hard in an effort to get enough steam from it for the radiation. The result is that coal is burned faster than it is possible for the water to absorb the heat units, and hence most of them go up the chimney and are wasted.

The grate of a boiler and its care are important factors in the heating system. The grate should be rugged enough to withstand hard usage. Some boilers have their grates divided so that they may be shaken separately (Fig. 5A). This has an advantage in that one part of the fire may be allowed to lie dormant and the other part used to keep up the heat, as might be desirable in mild weather. It is better to keep sufficient air space under the grates so that they will be cool. The minimum distance between the bottom of the ash pit and the grates should be 18 inches, and it is preferable to have it 24 inches. Good quality grates wear out very slowly in the average boiler. Replacement becomes necessary only when they are burned out. The architect should





make sure that he specifies a large enough grate area. An oversized grate area allows a slower burning of gases and a consequently longer time for the heat units to be transferred to the water.



6—BOILER INTERIOR—TUBES AND SECTIONS

One of the first things the architect should look for in the boiler he would specify is whether or not it is easy to keep clean. If not, he can rest assured that the person who attends the boiler will not make an effort to keep the boiler clean from soot, and consequently it will lose much of its efficacy. Then it is important to see to what tests the boiler is subjected, so that he will be sure that it is going to stand up under severe demands. It is well to specify a boiler having a large combustion space so that the gases will have a place in which to burn and will not dissipate their heat in the chimney (Fig. 6A). A flat surface over the combustion chamber would not offer as much area for heat transference as a corrugated one, hence many manufacturers have taken advantage of this principle and have corrugations in the crown sheets of their boilers. These help in still another way. If the air were allowed to flow along without any interfer-

ence it would stratify, but because of these corrugations it is stirred up and more heat units are removed from it (Fig. 6B). The next thing for the architect to require is a long fire travel. The longer this is the more chance there is for the boilers to absorb the heat units from the gases (Fig. 6C). Also, the more tube and other interior surface area there is exposed, the less heat will go up the chimney. There must be space inside the boiler for the water to circulate. The more this is possible the more heat can be absorbed from the hot gases. In large plants it is often advantageous to put mechanical circulators on the boilers to increase their efficiency. The better boilers have a large steaming space, so that only dry steam is sent up through the pipes. To send wet steam through the lines only overloads them.

Steel boilers often have small tubes. This is permissible within limits, and is good practice if the architect makes sure that they are not so small that they will easily clog up and be difficult to keep clean (Fig. 6D). Also, the tubes will very often be long so that in the long travel more of the heat may be transferred to the tubes and thence to the water. However, it is important that the tubes be easily cleaned of soot or their efficiency will be radically reduced by its insulation.

Some boilers come with especially

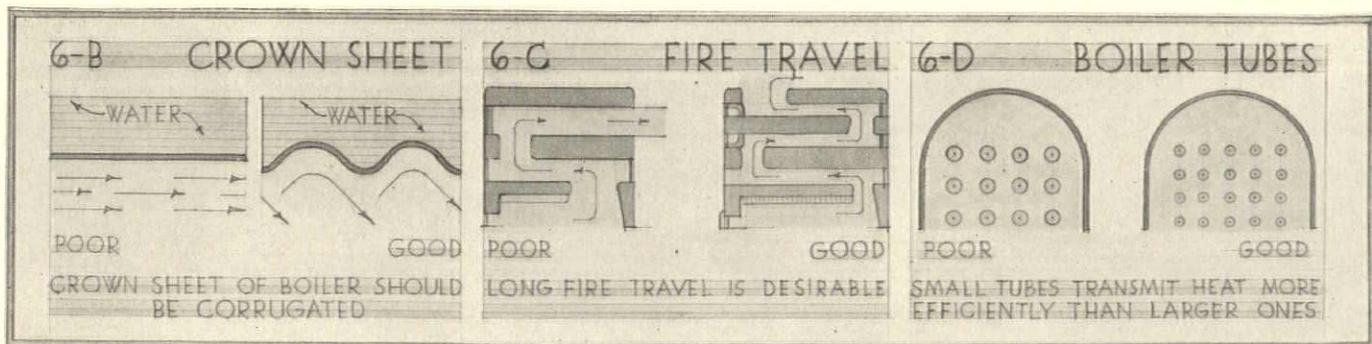
low water lines so that they may be installed in shallow cellars without the necessity of building pits for them.

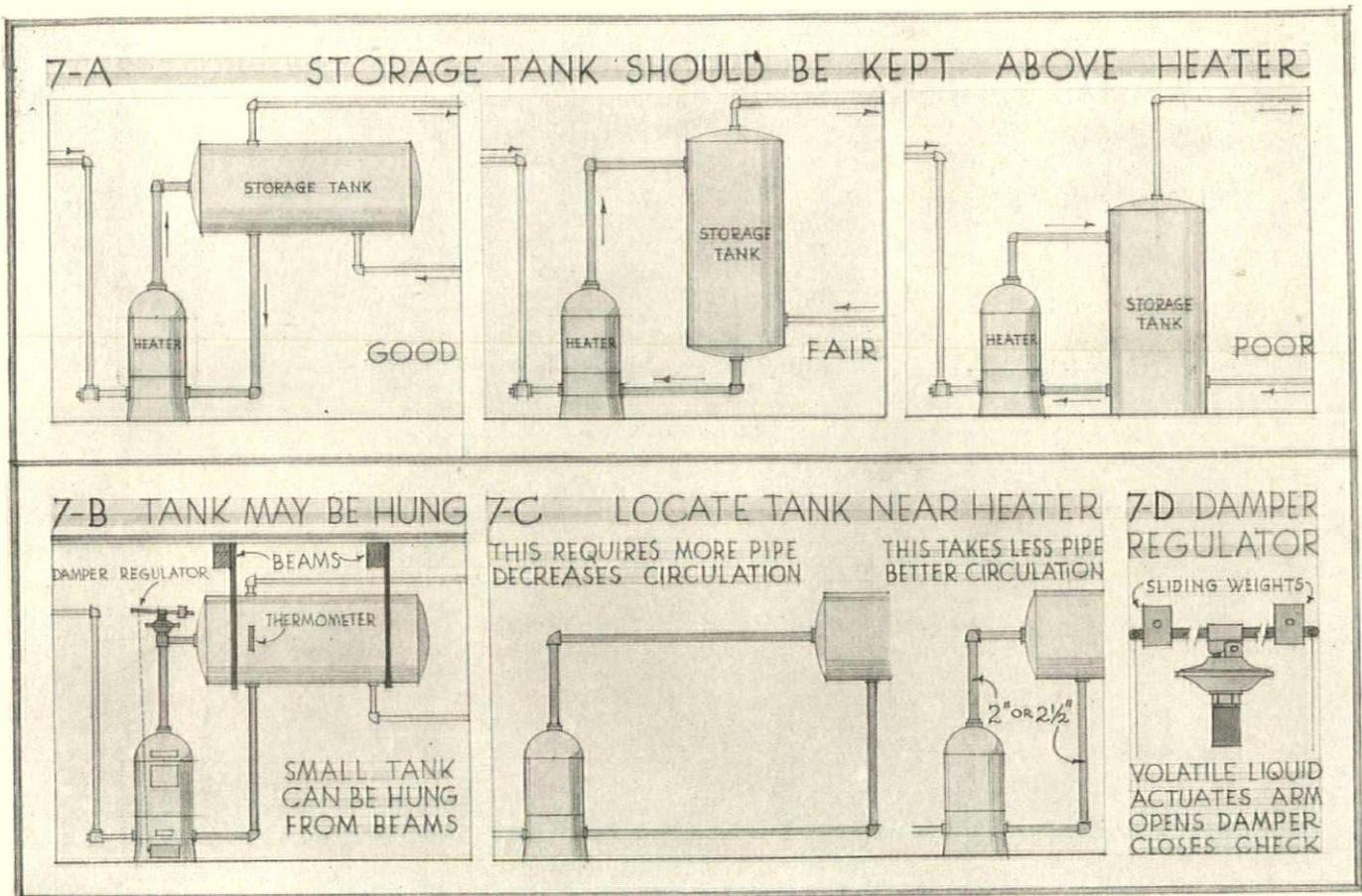
Water-tube boilers are generally not used where there is hard water, because of the difficulty of cleaning them.



7—DOMESTIC HOT WATER

All the general requirements that hold good for steam and hot-water heating boilers will also be true with several additions for boilers supplying domestic hot water. While steam boilers are generally tested for a hydrostatic pressure of 60 to 100 lbs., hot-water tank heaters must stand much higher pressures, due to the fact that the water is under pressure before it is heated. Therefore some tank heaters are tested for as high as 300 lbs. hydrostatic pressure, which of course adds to the ease of mind of the owner of such a heater. The architect should investigate the heater's rating. Most catalogues give the number of gallons the heater will heat. They often fail to mention the number of hours it takes to do this. In other words, a heater which is labelled 600 gallons may be on a six-hour basis, which means it is capable of heating 100 gallons of water 100 degrees per hour, or 600 gallons of water 100





degrees in six hours. Sometimes the tests are based on a different number of hours, and it is important to know this.

It is best practice to put the bottom of the tank above the top of the heater and in a horizontal position rather than in an upright one as is too often done (Fig. 7A). If it is a small tank for a one or two family house the tank may be hung to the beams in order to achieve this position (Fig. 7B). It is advisable to have the circulating lines between the heater and the tank as short as possible, as well as to have them the same size as the outlets on the heater or the tank (Fig. 7C). This makes for a freer flow of the water through these lines, and is the most efficient way to do the job, because it transfers the heat to the water most quickly. There should be a washout plug at the bottom of the heater so that it may be flushed out when necessary. It is well to have a relief valve on the system in order that the heater as well as the tank and the lines may be protected. This valve will discharge water when the pressure exceeds the amount for which the valve is set. The amount for which the valve is set depends upon

the water pressure and the pressure that the tank will stand. A line should lead from the relief valve back to a wall or other place where a discharge of hot water will not injure any one.



The tank question is an important one. In the smaller building it is desirable to have one that will not rust. These are now produced in several metals and are very satisfactory. In the larger buildings, however, the costs of such tanks would be too great at the present time, so either black iron ones or galvanized ones are used. Here the architect must be very careful in his selection. The tanks are divided into two classes, standard and extra heavy. The standard tank is tested



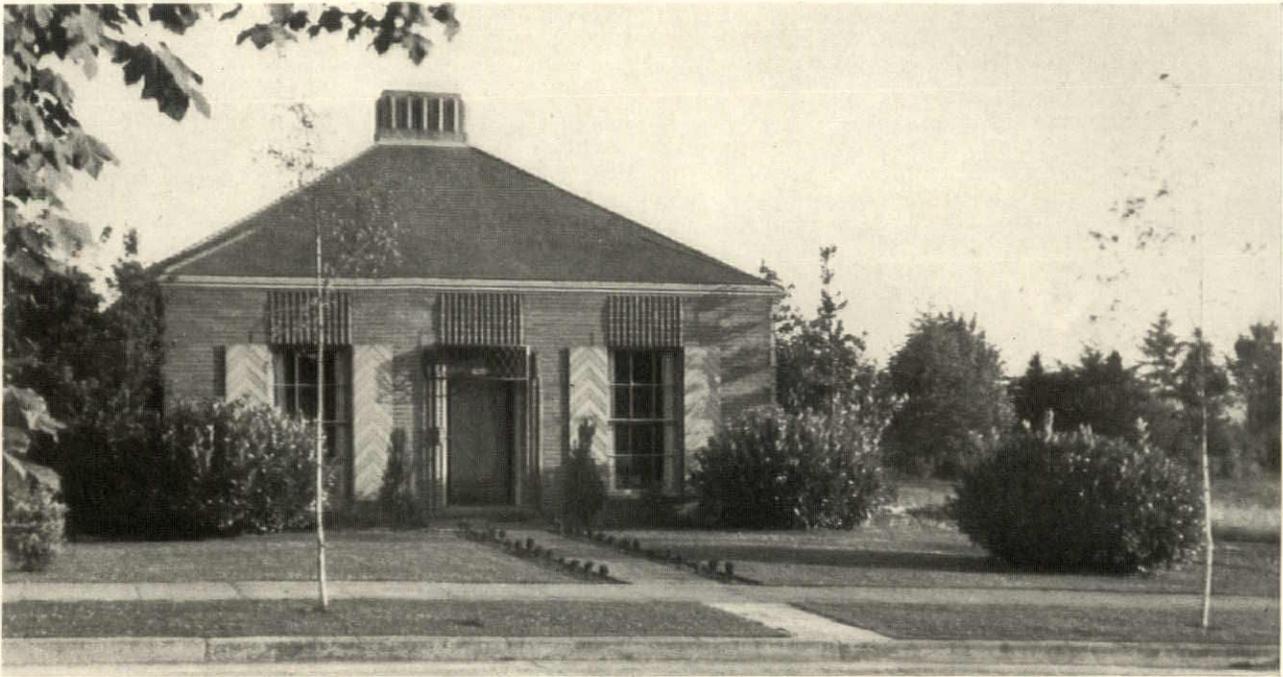
Next month Mr. Bartels will deal with further elements of Better Practice in Heating

« ARCHITECTURE »
NOVEMBER, 1934

for 75 lbs., while the extra heavy is tested for 100 lbs. But the difference does not stop at that point. It must be realized that more rusting will take place in a black iron tank than in a galvanized one. Therefore the better tanks are made of thicker sheets either at the ends or throughout. However, unless there is a specific demand for these better tanks an inferior one may be foisted upon the architect. The heating contractor or the plumber can evade the demand for the better tank by proving that his tank will stand a pressure of 100 lbs., and although the better tanks are made of heavier plates, there is no definite standard that the architect can refer to as regards thickness.

A check valve on the hot-water return line is an important adjunct to prevent any interference in the circulation of the hot water. A thermometer on the hot-water tank gives the person operating the system something to go by other than a guess. A damper regulator that is operated by means of an apparatus put on the hot-water circulating line not only will result in coal saved but in a more uniform temperature being maintained (Fig. 7D).

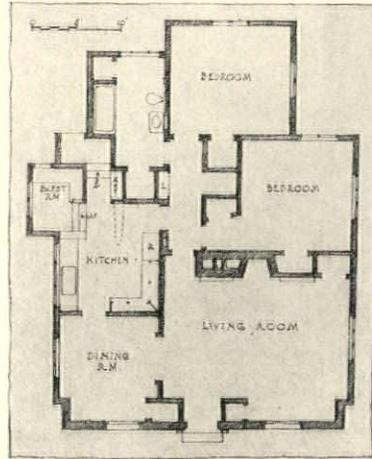
Some Recent Houses by Herman Brookman



The front of the house is of twelve-inch salmon-colored brick. Above the windows the decorated panels are of brick set with the corners projecting.

On the shutters the herringbone strips are of a light apple green on the same silver gray as the roof. Sash is green

Below, a detail of a front corner, from which it will be seen that the side walls are of shakes with a window course of cedar and horizontal battens



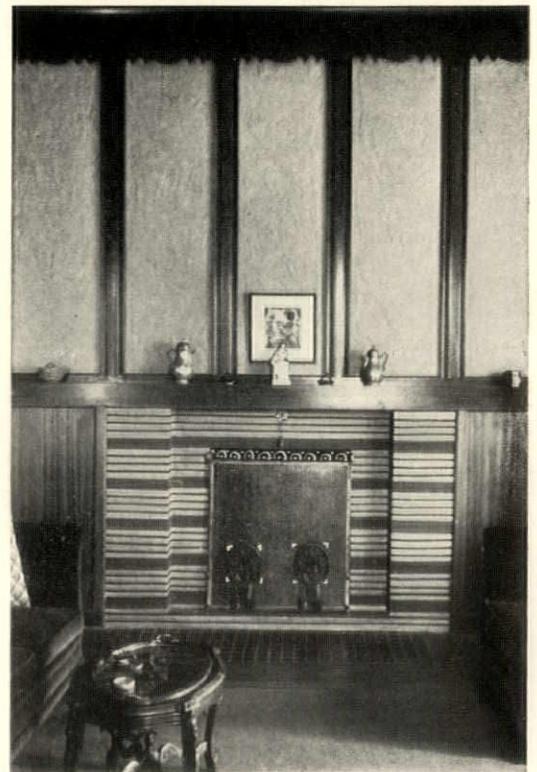
The floor plan is of the compact one-story type so widely used on the West Coast

In the living-room the architect has emphasized the fireplace with brick of two colors, the horizontal lines contrasting with the vertical battens of the woodwork around the room



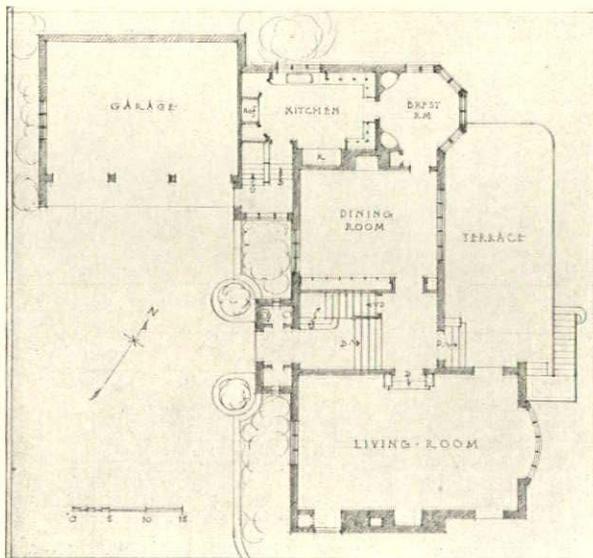
HOUSE
FOR
TOM GREENE, JR.
PORTLAND,
OREGON

« ARCHITECTURE »
NOVEMBER, 1934



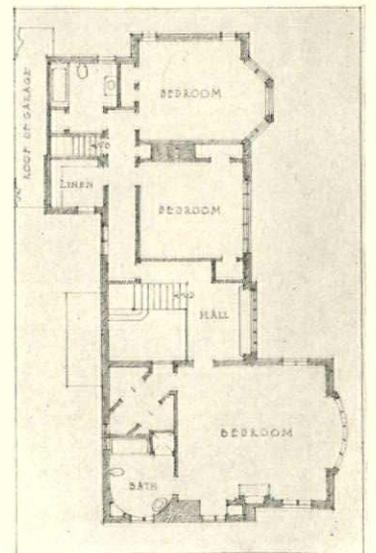


Portland's unusual topography explains the hillside house with its view to the east over the city, the river, and the snow-capped peaks of the Cascades. Every important room in the house has this eastern exposure. Brick is salmon-color, roof of hand-split cedar shakes stained silver gray. The bay and woodwork trim is cedar siding stained like the roof. The entrance motive is trimmed with cast stone



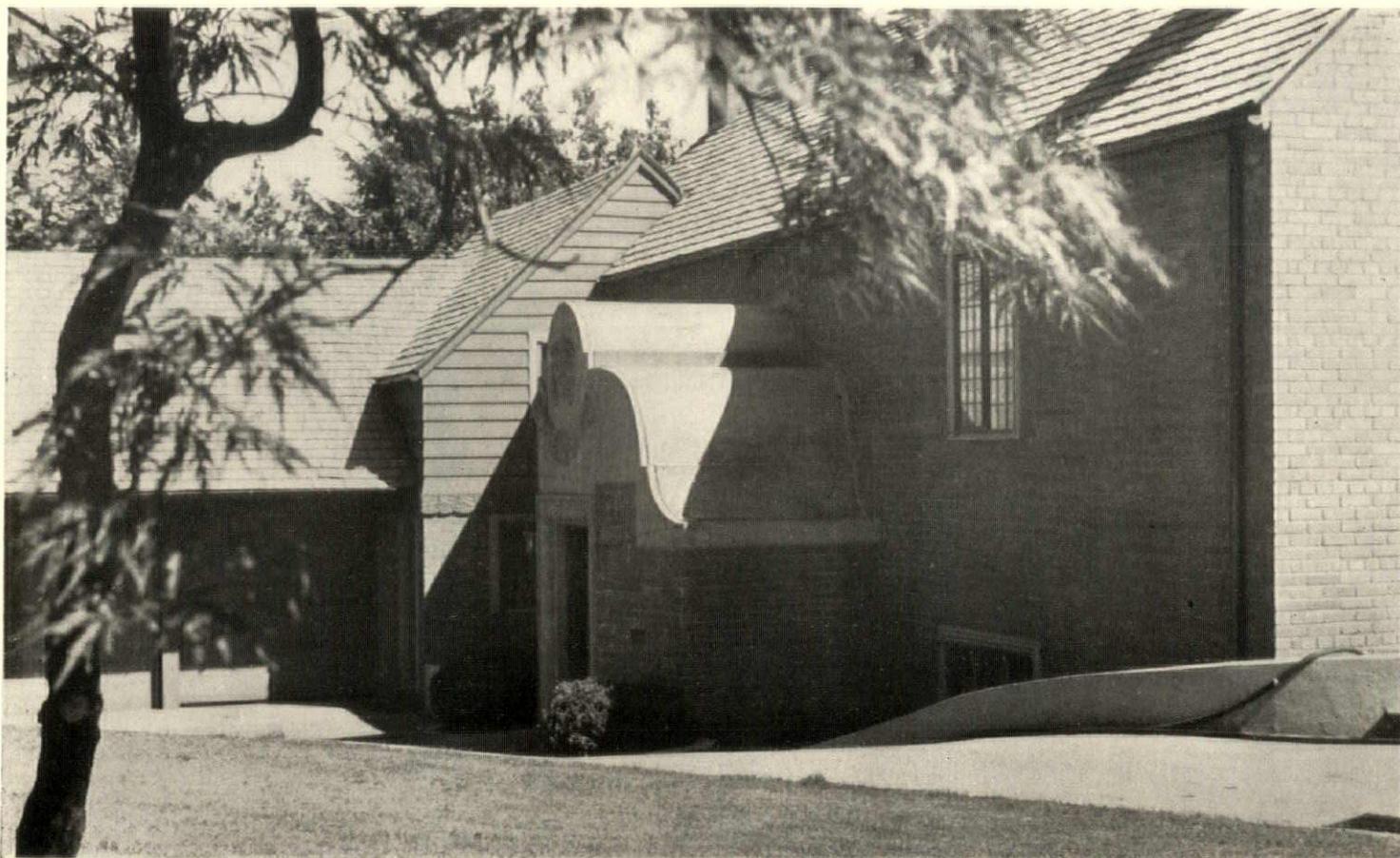
At left, first-floor plan. It will be noticed that one enters upon a landing midway between first and second floors

At right, plan of second floor. There is in the basement a large playroom with fireplace, two maids' rooms and a bath, laundry, and boiler room



HOUSE FOR LEE S. ELLIOT
 PORTLAND, OREGON
 HERMAN BROOKMAN, ARCHITECT

« ARCHITECTURE »
 NOVEMBER, 1934



The west front, to which the entrance drive dips. The garage is at left, and there is an adequate court space for turn-around

In the hall near the main entrance door



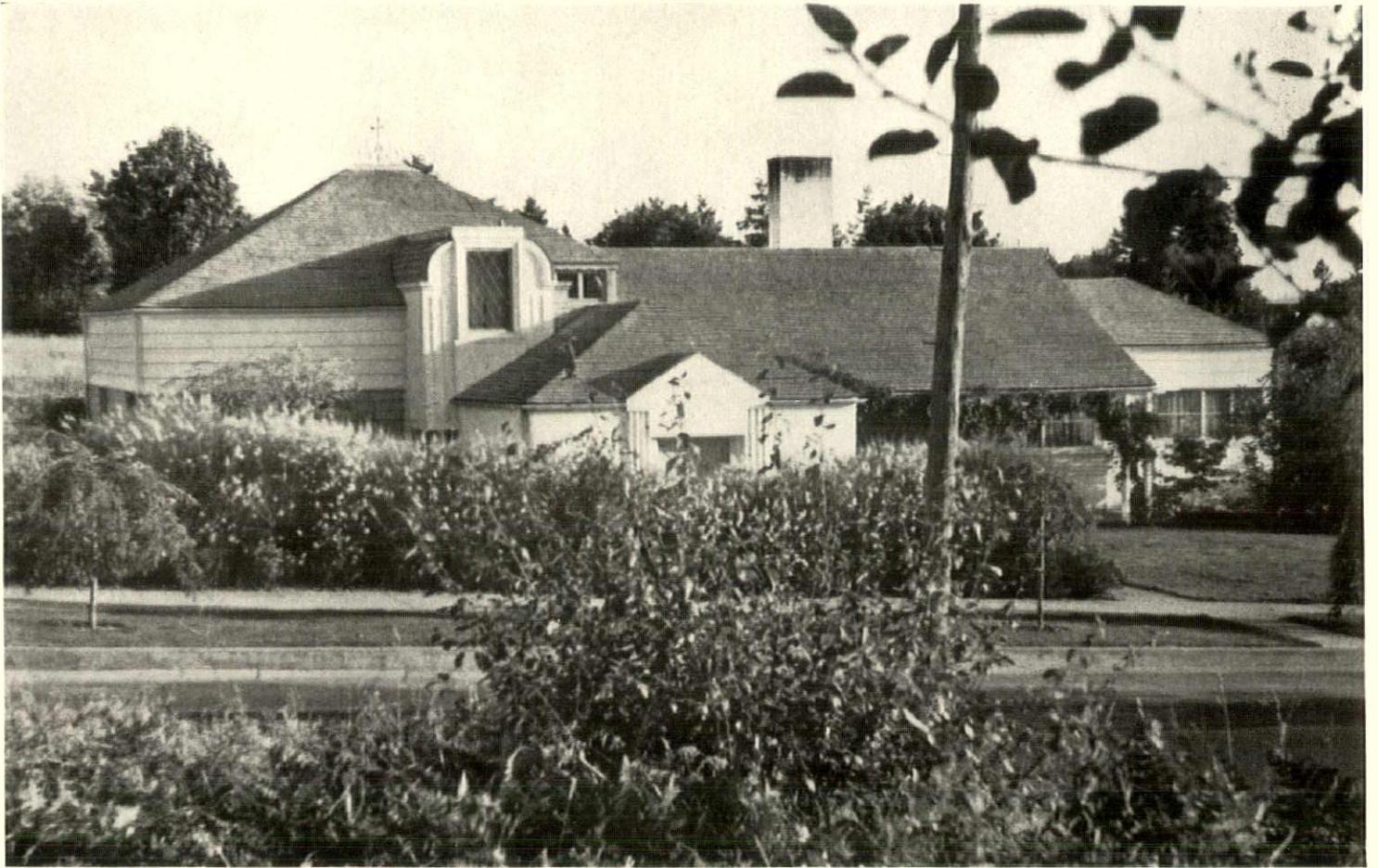
The stair rail is of wrought iron

A corner of the hexagonal breakfast room. Half of its wall surface consists of windows commanding the view

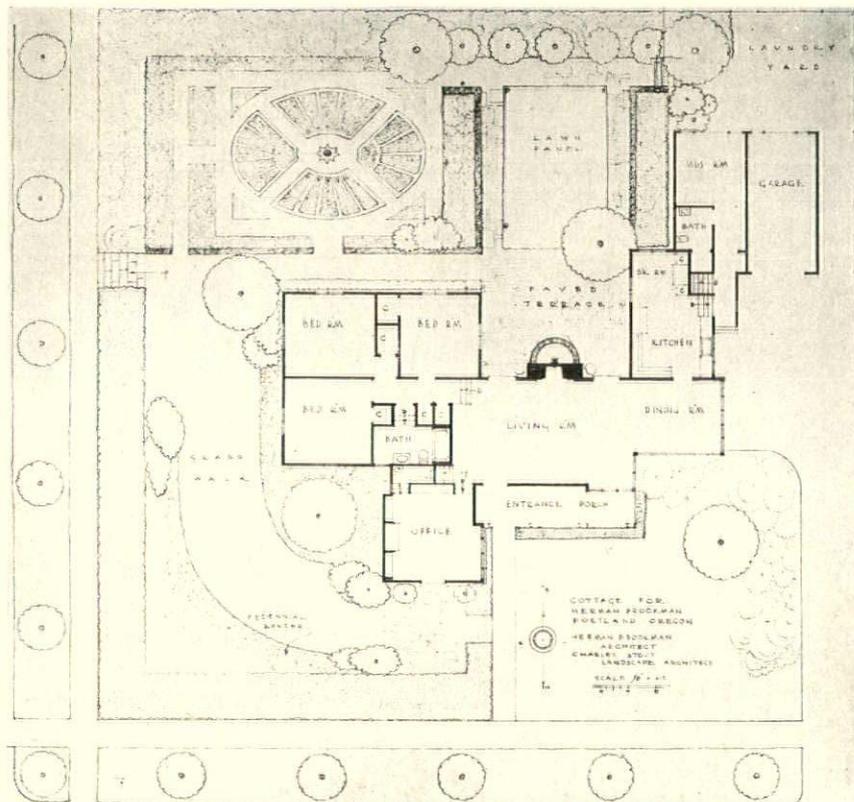


A glimpse of the dining-room from the hall. Here the woodwork is of La Juan mahogany finished in its natural color



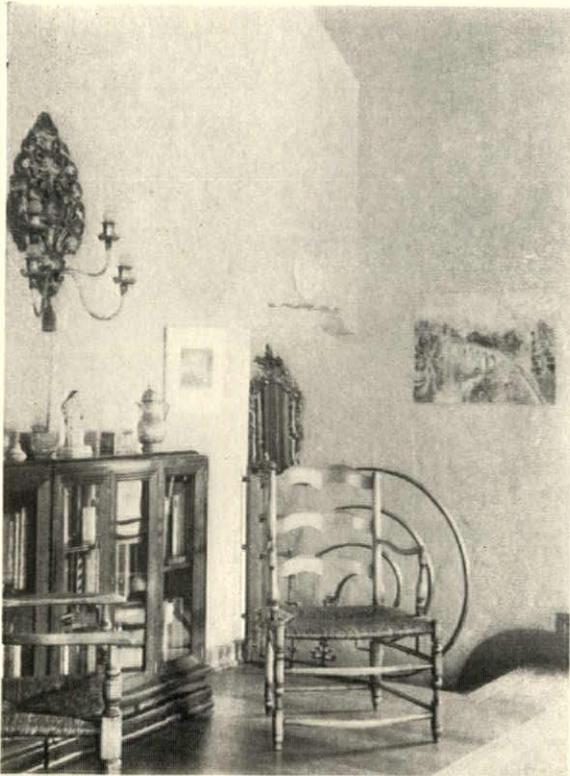


Mr. Brookman's own house is built largely of wood, but has a base course of brick. Siding and brick are painted white, excepting the window course, which has a gray-pink cast. The doors are of this same color. Silver gray cedar shingles are used for the roof



The plan shows an ingenious combination of living quarters and office, the latter at a level three steps below the living-room and opening upon what is in effect a garden of its own

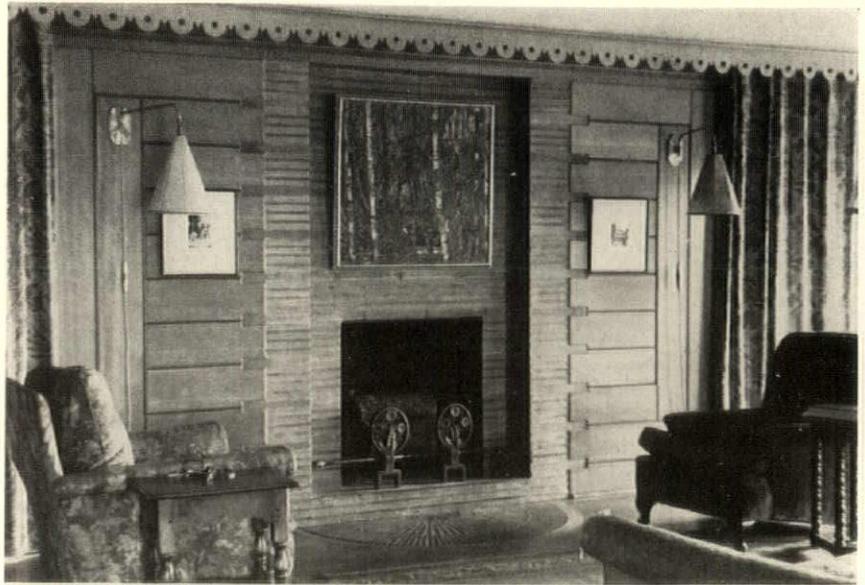
HOUSE OF
HERMAN
BROOKMAN
ARCHITECT
PORTLAND, OREGON



A corner of the living-room, showing the stairway leading down to the bedrooms

The dining-room is an extension of the living-room, as may be seen from the plan, with a continuous band of windows on two sides

Below, entrance to the office. The decorative pediment is of carved wood painted white. The door has the same gray-pink color as the window course



The fireplace side of the living-room, with an unusual combination of brick and woodwork keyed together. Portieres cover the doors leading out upon the terrace



Below, a glimpse of the house from the upper slope to the southeast





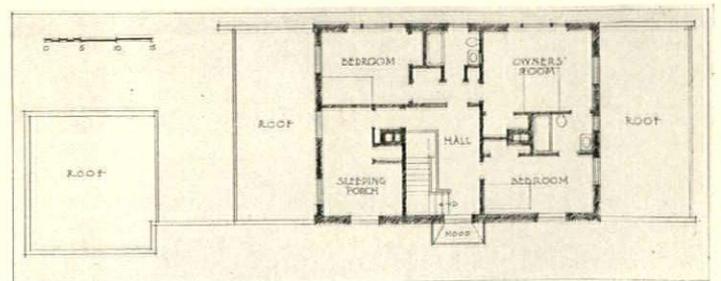
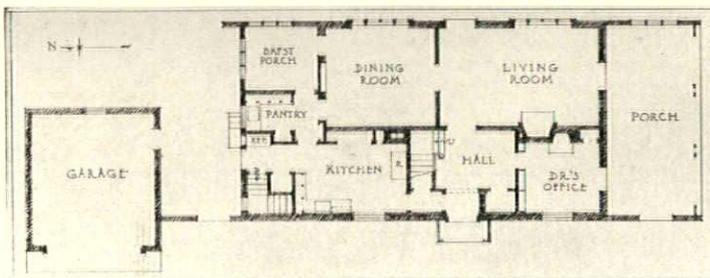
A common red brick has been used for the walls of the Palmer house. The roof is of cedar shingles stained silver gray. All of the trim is white, and the shutters a light blue-green



Main entrance. The delicacy of scale in the trellis and supports is due to the fact that the material is wrought iron, painted white

HOUSE FOR
DR. DORWIN L. PALMER
PORTLAND,
OREGON
HERMAN BROOKMAN,
ARCHITECT

There is a workable combination of house and doctor's office here, with the possibility of entering the doctor's office either through the porch, or, if that is occupied, through the main entrance





Another hillside house with the entrance front on the upper side. The combination of stucco, carved wood lintel, and wrought iron lighting fixture is an interesting one

The McHolland house is of stucco on masonry. Trim and stucco are a cream color, with shutters of blue-green, and silver-gray cedar shingle roof



HOUSE OF V. H. JORGENSEN, PORTLAND, OREGON

HERMAN BROOKMAN, ARCHITECT

HOUSE OF J. MCHOLLAND, PORTLAND, OREGON

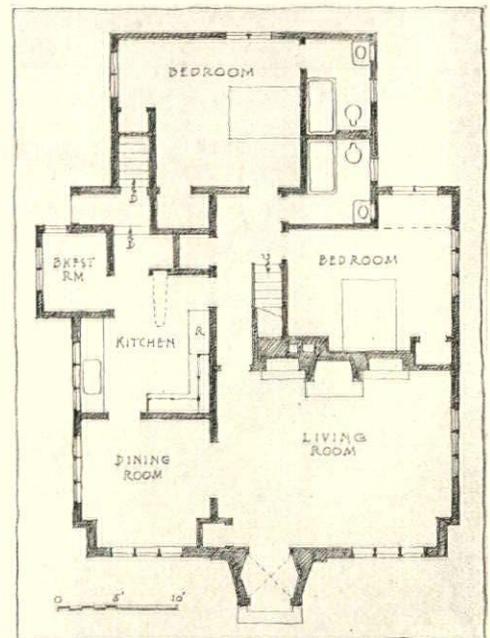




There is a similarity of plan in the house shown on this page and the Green house on page 273. Each of these cost \$4,500 a little over two years ago. Here again the architect has emphasized in color and material a horizontal course for the windows. Considering the size of the house with its two bedrooms, the supply of bathrooms is unusual



HOUSE OF
MRS. EMMA STEIN
PORTLAND, OREGON
HERMAN BROOKMAN,
ARCHITECT



Saturday, September 1.—Talbot F. Hamlin, who is librarian of the Avery Library of Columbia University, has some interesting ideas as to what an architectural library of today should be. In the first place, since the Avery Library is an American library, it should be particularly strong in material devoted to the architecture of this region. But the library must also be a place where the architectural student can find a record of the great achievements of architecture and the allied arts of both past and present. Additions to the shelves cannot be made on the basis of any dogmatic theory of style desirability or any personal prejudices. By far the greatest number of recent acquisitions are books concerning directly or indirectly the so-called modern movement in architecture and the allied arts.

Monday, September 3.—The Portland Cement Association deserves the commendation of the profession as a whole. Unlike some of the other trade associations which have been none too careful in activities that trespass upon the architect's field of action, the Portland Cement Association has adopted the policy of answering the technical questions of prospective builders by putting them in touch with architects. It has steadfastly refused to enter upon any program of stock plan selling. Our hats are off to you, Sirs!

Wednesday, September 5.—The problem of extending architectural services to include the small house—the great bulk of building in this country—continues to receive an increasing amount of thought and study. Wilbur R. Hanawalt, of Cleveland, has a program which is worthy of notice. "Any effort at the solution of the small-house problem must be two-fold: It must reach the public in terms that the public can understand; and it must place the public's needs before the profession. . . . The needs are mainly two: Making possible the handling of the smaller contract by architects and decorators on a profitable basis; and getting authoritative and unbiased information into the hands of the small home builder when he needs it. . . . The A. I. A. should invite the co-operation of organized interior decorators and landscape architects in forming a national home information council. This council would carry on a continuous program to integrate the work of present and added sources in information for the public. . . . It would direct the appropriate agencies where unbiased information could be secured. . . . The prospective home builder's needs and desires would be summarized and codified, then referred to a committee of the professional group. This committee would determine whether members of the professions would care to handle the case, and if so, refer it to a member on some rotating basis. . . . If, on the



The Editor's Diary

other hand, the job was too small for professional handling, it would be returned to the information centre for execution through the use of student architects, decorators, and landscape men, being finally approved by the professional board before execution. . . . Thus the public could benefit by trained skill; students would profit by actual experience in small house work with professional supervision while earning some small remuneration."

The chief difficulty on the face of this scheme is the elaboration of organization required, though this organization might be achieved gradually and improved as experience dictated.

Thursday, September 6.—After months of jockeying for position the New York Housing Authority and the Public Works Administration in Washington seem at the moment to have reached an understanding. At least Mr. Ickes has announced that he is ready to go ahead on a basis which he outlines in detail. The PWA is to buy the land, to give the Housing Authority a 30 per cent grant and a loan, the city's equity being mainly in the form of public services and in land gained by the closing of certain streets that would no longer be necessary. The project is to be amortized in a longer period than usual, forty-five years, and is to be supervised jointly by the Housing Authority and the Federal PWA. It should seem that some such logical arrangement as this might have been arrived at months ago.

Saturday, September 8.—While the contributors to the Guest Editor's section in the last issue took a stand almost unanimously against competitions, nevertheless, I hear more and more enthusiasm for certain kinds of competitions as being well adapted to present needs. For instance, the design of state and city works if handed over to an architect or a group on the basis of someone's judgment alone is almost sure to provoke criticism. A properly conducted competition for such work gives the small men a chance to prove their worth and, in these days, is no great hardship in requiring the duplication of

effort—since if the competitors are not doing that they are probably reading the newspapers. Lorimer Rich makes the assertion that every one of the satisfactory public buildings in New York was designed as a result of a competition; moreover, that those which were not the result of competitions are less notable architecturally. Herbert G. Wenzell, in *The Weekly Bulletin*, of the Michigan Society of Architects, makes the point that Raymond Hood's career illustrates the value of competitions. Without such means of attaining recognition Hood might still have been unknown at his death. That, of course, is a very debatable question, for Hood's power grew apace in the last twelve years, and might very easily have done so even without his spectacular leap into fame with the Tribune Tower competition.

Monday, September 10.—It is a matter of serious concern to us that we have no really adequate means of gathering promptly the news of architects throughout the United States. We did not know until long after his death, on August 23, that Charles Kotting, of the old well-known firm of Chittenden & Kotting, had passed on. We do read a number of newspapers from all over the country, but by no means all of the important ones. I wish there were some way in which organizations in the profession or individual members of the profession could be induced to keep us informed about important events in their respective communities.

Tuesday, September 11.—Tonight Sigmund Spaeth is giving a dinner to nearly two hundred men and women interested in the possibilities of a new form of art expression adapted to the radio. On my left as I take my seat at the table is Miss Elstner, one of the cast of "The Gibson Family"; on my right, Mrs. Courtney Ryley Cooper, whose husband has written the book for this new musical comedy, designed particularly for broadcasting. The prospect of a pleasant evening between two such interesting table neighbors has suddenly lost its significance, for on my left-hand neighbor's left is Lawrence Tibbet—so I shall see no more of her. Turning to my right, on the far side of Mrs. Cooper, Rudy Vallee has just taken his seat. The prospect, therefore, would indicate that I had better busy myself with writing diary.

Thursday, September 13.—James H. Blauvelt tells me that Mrs. Edward Palmer York, widow of the late partner in the firm of York & Sawyer, has joined him in the practice of interior decoration.

Friday, September 14.—Commissioner Robert Moses, John H. Finley, and I. N. Phelps Stokes rededicated Bryant Park in the rear of the New York Public Li-

brary today. This two-thirds of a city block has passed through a picturesque life in which it finally came to be one of the most disreputable parks in the city of New York. Robert Moses, with the aid of the unemployed, has ended this, and has produced a magnificent open space as a setting for the William Cullen Bryant bronze. The scheme is one developed by the Park Department from Lusby Simpson's winning design in a competition held in the fall of 1933 by the Architects' Emergency Committee. Here is a great central plot of lawn surrounded by a double border of trees, with a memorial fountain to Mrs. Josephine Shaw Lowell near the west end. A memorial to Robert Shaw, Mrs. Lowell's brother, stands at the head of the Boston Common. The thing I liked most about the new park is that it has a central open greensward which, incidentally, is likely to be kept so in spite of city dust and midsummer droughts, for it has an underground sprinkling system.

Saturday, September 15.—Mrs. Simkhovitch, who is president of the National Public Housing Conference and vice-chairman of the New York City Housing Authority, has come back from England deeply impressed by the progress that is being made in housing throughout England. England's present attitude toward housing as a public duty is reflected in an address by the Earl of Listowel before the House of Lords:

"The basis for the uneconomic housing of the poorest paid section of the working class . . . is founded on the belief that individuals have the same right to decent homes and decent housing accommodations as they have to a minimum of education or to the protection of the law. . . . Private enterprise has been unable to furnish these houses at a low rent for the working class [and now] the State and local authorities have to step in and do what the business man has been unable to perform."

Monday, September 17.—The Engineering Foundation believes there is considerable more activity of late in the study of building foundations than in all history before our time. Foundation planning is still primarily a matter of judgment. Nevertheless, we are rapidly learning something about soil mechanics and the widely differing conditions that may be found even in local foundations. In designing a column footing ten feet square, the engineer used to assume that the pressure on the soil under each square foot of the footing will be, say, two tons. Actually this is not the case, the pressure on the soil being greatest at the centre and least at the edges. Many engineers and research bodies are adding to our knowledge concerning the mysteries of underground supports.

Tuesday, September 18.—Lunched with Philip Giddens, recently back from

Spain with a portfolio full of beautiful drawings. Some of these we are to have the pleasure of reproducing in an early issue. Like most of his fellow etchers, Mr. Giddens reports that the dealers are selling comparatively few etchings these days.

Wednesday, September 19.—There is a significant straw in the wind perhaps, in the fact that this morning's *Times* tells of two more Manhattan loft buildings, one of four stories and one of five, which are being cut down to two stories each. There is a superabundance of loft space in New York, but ground floor space, being limited by the size of the island, is in better demand.

Thursday, September 20.—R. A. Fisher, Assistant Professor of Architecture at Carnegie Tech., showed me the work that unemployed architects and draftsmen of Pittsburgh have been doing this summer in low-cost housing research. About nineteen of these men were employed for a period of about sixteen weeks studying the possibilities both in city housing and in subsistence housing, working out details of engineering, heating, and the like. The results of this work, under Professor Fisher's direction, consisted of a large number of uniformly rendered drawings together with working drawings of the structural and mechanical details—a particularly interesting showing, embodying many fresh ideas in the technician's work. With the main emphasis having been placed upon the social and economical phases in our general study of housing by various bodies and individuals during the past two years, this examination of some possibilities from the technician's viewpoint is particularly constructive.



Friday, September 21.—Motored up across Connecticut and Massachusetts into New Hampshire and Vermont, following the Connecticut Valley toward the river's source. There ought to be a custom established providing for an annual visit into this northern country when the foliage is assuming its autumnal dress. It is just as important for the eyes to be rested and benefited by the tapestry of these northeastern hillsides as it is to benefit the body by annual visits to the baths of Baden Baden, or to Vichy or Saratoga Springs for the waters.

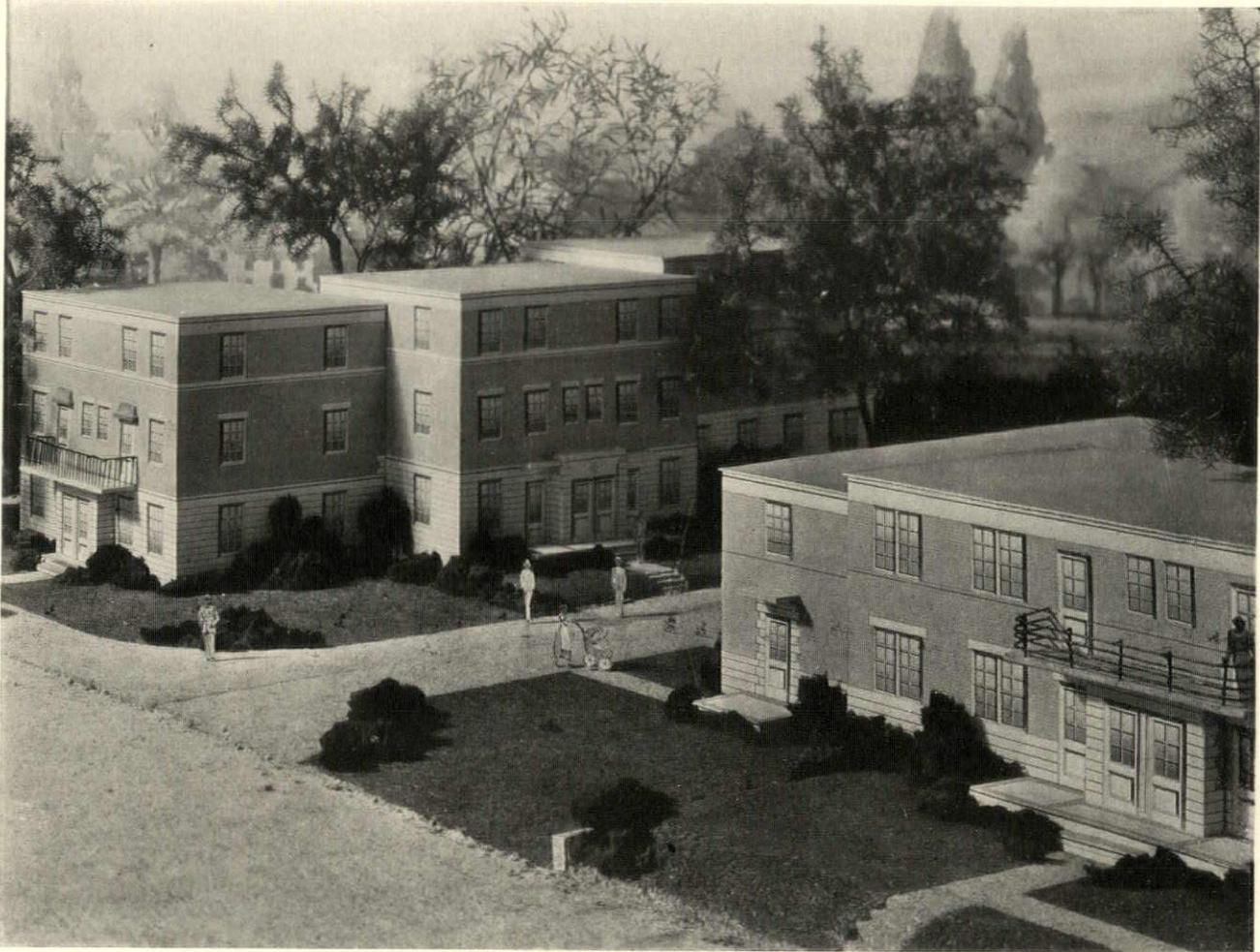
Sunday, September 23.—Motored through the tight little valley sheltering Plymouth and the Coolidge homestead, and, in contrast to this primitive simplicity, had a look at the Orozco murals in the Baker Library of Dartmouth at Hanover. The murals are even worse than I had judged them from the photo-

graphic reproductions. Once again it was impressed upon me that the place for Mexican painters, if any, is in Mexico.

Monday, September 24.—Visited the memorial to Augustus Saint-Gaudens at Cornish. His home, which was an old inn remodeled, together with a lovely garden and the studios he has added, are maintained by trustees as a memorial to the man and his work. In the larger studio are to be found the full-size plaster model of the Chicago "Lincoln," and smaller models of the Adams memorial in Washington, Robert Shaw at the head of the Boston Common, the Diana that once perched on top of the Madison Square Tower, the Stevenson bas-reliefs, and many other reminders of the wealth of beauty in form that Saint-Gaudens left us.

Wednesday, September 26.—Having motored down the Connecticut Valley yesterday, I spent the night with Lewis Welsh in his two-hundred-year-old farmhouse at Fairfield, then to see and photograph the new house which Louis Rosenberg, architect and etcher, has built for himself in Greens Farms. Rosenberg, like most of those who have freed themselves from the fetters of literal style copying, is frequently amused by the bewilderment of visitors who refuse to believe that no style label can be attached to his house. It is reminiscent of work in England, France, and in the country of his own forefathers, Sweden, the whole welded into an unusually charming environment for life today.

Friday, September 28.—Frederick Woodbridge, Jr., was telling me at luncheon today of the reconstruction of Columbia University's School of Architecture. While the problem method as developed by the Ecole is being retained as the basic principle of instruction, group competitions are eliminated. Dean Hudnut feels that the competitive system has developed so many conventions and so many arbitrary standards of judgment as to have become widely separated from reality. There are to be three studios in the School of Architecture, for the work of design. Each of these will be under a master and an assistant. The three masters are Jan Ruhtenberg, the Swedish architect, Dean Hudnut, and Russell M. Krob. In the evening studios for special students, Henry S. Churchill and Frederick Woodbridge, Jr., will be the masters. The student will set his own problem, and will work it out in considerably further degree than in the past, under the master's direction. It is possible in this way for a student to specialize much more easily in the particular field which interests him—whether it be decoration or large-scale housing or individual residential work. It will be the master's province to guide him in setting up the problem and in solving it in line with regular office practice.



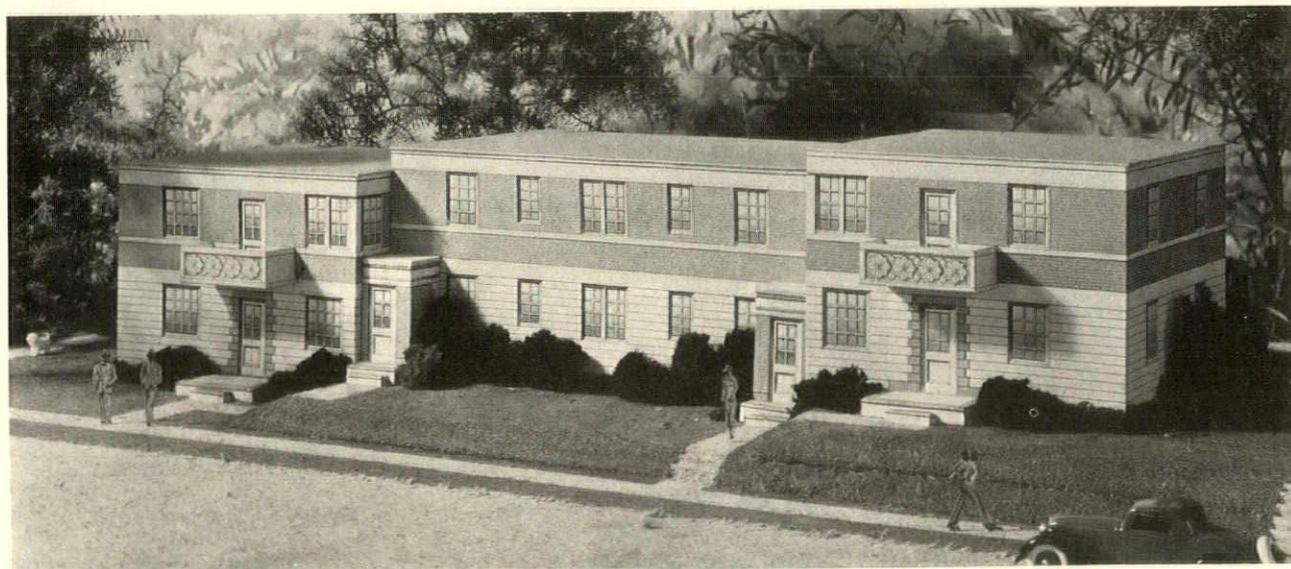
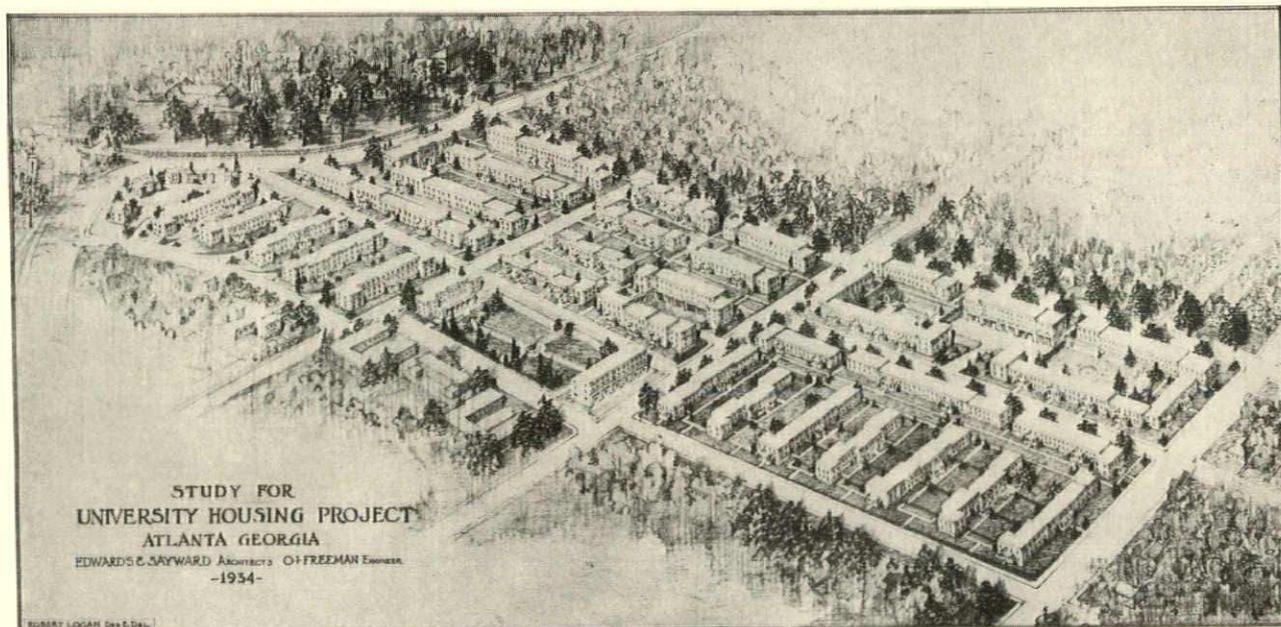
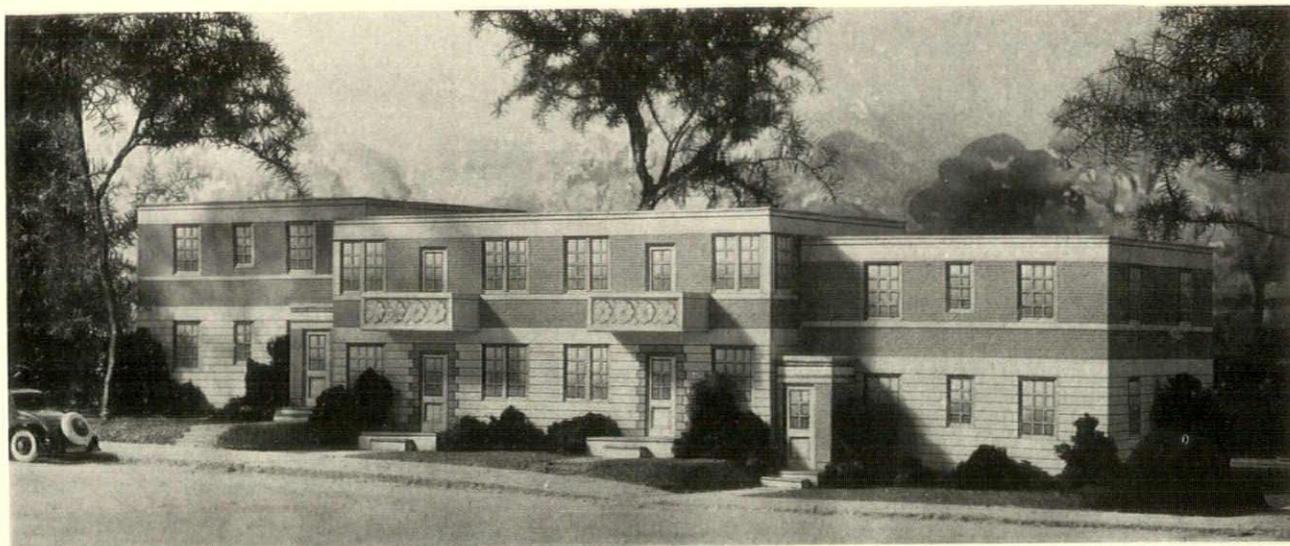
In a typical slum section of Atlanta, Ga., demolition has been started in preparation for the erection of a housing project under the Federal Emergency Administration of Public Works. The allocation of public funds is \$2,100,000. The plot of seventeen and one-half acres, that cost the government 39 cents per square foot, is near three institutions for the higher education of Negroes, and the housing is exclusively for that race.

Building coverage, 26 per cent. There are to be forty-two groups of two- and three-story family housing units, containing approximately 2450 rooms. The apartments are of four types, ranging from two to five rooms. There is to be a building for stores and offices. The plan calls for no back yards, and no common halls, entrances being on both sides of the buildings. Construction provides fire-proof, reinforced concrete floors. Walls are faced with cinder blocks (painted) and brick, backed up with load-bearing tile. Roofs are of tar and gravel, insulated. Heating and cooking by gas. A plot plan appears overleaf, and the character of the work is shown by the accompanying photographs of models

EDWARDS & SAYWARD, ARCHITECTS

University Housing Project, Atlanta, Ga.

« ARCHITECTURE »
NOVEMBER, 1934



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

ARCHITECTURE'S PORTFOLIO OF ROOF TRUSSES

*Subjects of previous portfolios are listed below
at left and right of page*



*Below are the subjects of
forthcoming Portfolios*

Modern Lighting Fixtures
DECEMBER

Circular Gothic Windows
JANUARY

Tile Roofs
FEBRUARY

Molded Brick
MARCH

Dormer Windows
APRIL

Entrance Seats
MAY

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

❖ 1926
DORMER WINDOWS
SHUTTERS AND BLINDS

❖ 1927
ENGLISH PANELLING
GEORGIAN STAIRWAYS
STONE MASONRY TEXTURES
ENGLISH CHIMNEYS
FANLIGHTS AND OVERDOORS
TEXTURES OF BRICKWORK
IRON RAILINGS
DOOR HARDWARE
PALLADIAN MOTIVES
GABLE ENDS
COLONIAL TOP-RAILINGS
CIRCULAR AND OVAL WINDOWS

❖ 1928
BUILT-IN BOOKCASES
CHIMNEY TOPS
DOOR HOODS
BAY WINDOWS
CUPOLAS
GARDEN GATES
STAIR ENDS
BALCONIES
GARDEN WALLS
ARCADES
PLASTER CEILINGS
CORNICES OF WOOD

❖ 1929
DOORWAY LIGHTING
ENGLISH FIREPLACES
GATE-POST TOPS
GARDEN STEPS
RAIN LEADER HEADS
GARDEN POOLS
QUOINS
INTERIOR PAVING
BELT COURSES
KEYSTONES
AIDS TO FENESTRATION
BALUSTRADES

❖ 1930
SPANDRELS
CHANCEL FURNITURE
BUSINESS BUILDING ENTRANCES
GARDEN SHELTERS
ELEVATOR DOORS
ENTRANCE PORCHES
PATIOS
TREILLAGE
FLAGPOLE HOLDERS

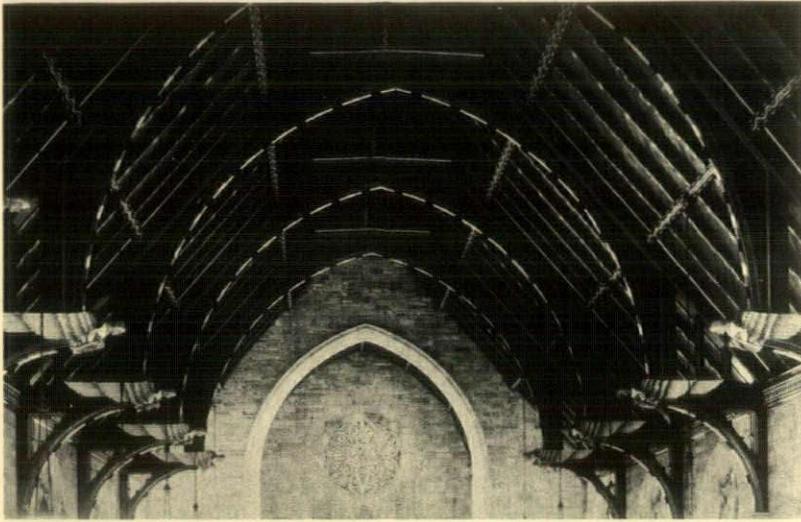
1930 ❖
CASEMENT WINDOWS
FENCES OF WOOD
GOTHIC DOORWAYS

1931 ❖
BANKING-ROOM CHECK DESKS
SECOND-STORY PORCHES
TOWER CLOCKS
ALTARS
GARAGE DOORS
MAIL-CHUTE BOXES
WEATHER-VANES
BANK ENTRANCES
URNS
WINDOW GRILLES
CHINA CUPBOARDS
PARAPETS

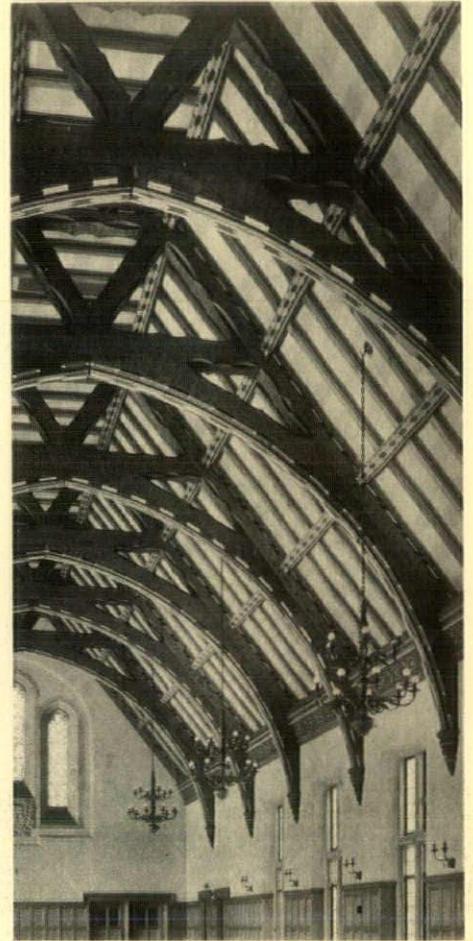
1932 ❖
RADIATOR ENCLOSURES
INTERIOR CLOCKS
OUTSIDE STAIRWAYS
LEADED GLASS MEDALLIONS
EXTERIOR DOORS OF WOOD
METAL FENCES
HANGING SIGNS
WOOD CEILINGS
MARQUISES
WALL SHEATHING
FRENCH STONEMWORK
OVER-MANTEL TREATMENTS

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

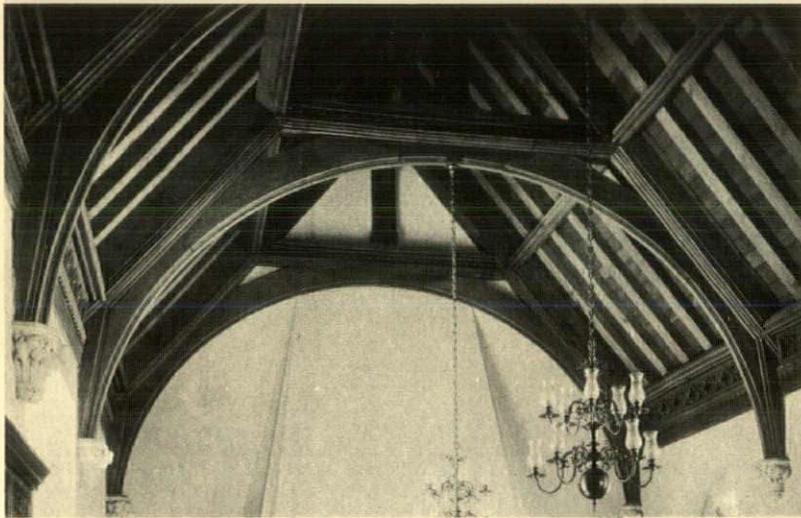
1934 ❖
EXTERIOR PLASTERWORK
CHURCH DOORS
FOUNTAINS
MODERN ORNAMENT
RUSTICATION
ORGAN CASES
GARDEN FURNITURE
WINDOW HEADS, EXTERIOR
SPIRES
BUSINESS BUILDING LOBBIES



*Church of SS. Simon and Jude, Bethlehem, Pa.
Henry D. Dagit & Sons*



*University of Chicago Dining-hall,
Chicago, Ill.
Zantzinger, Borie & Medary*



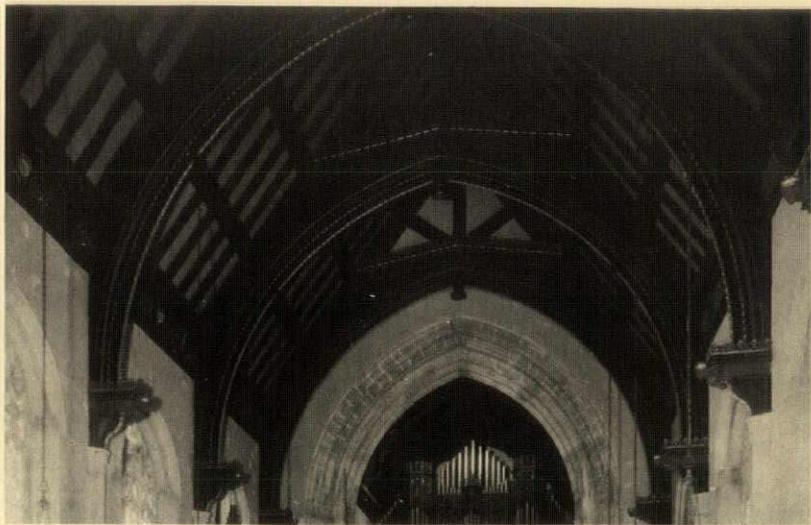
*Graduate College Extension,
Princeton University, Princeton, N. J.
Cram & Ferguson*



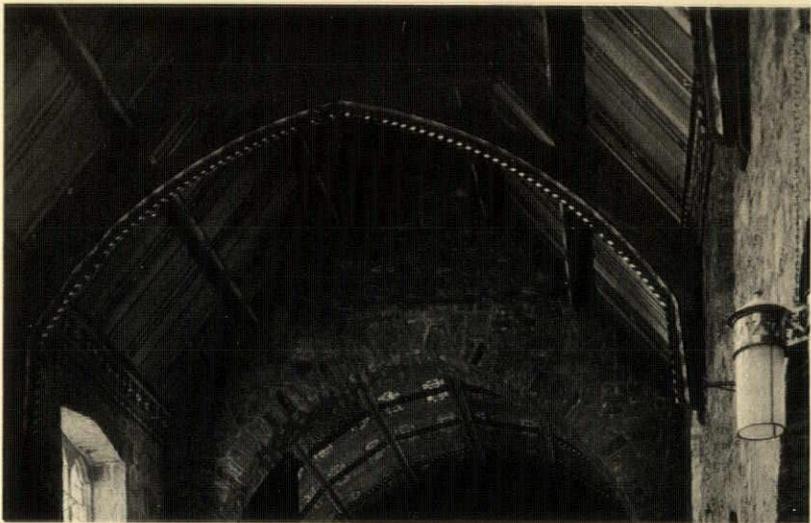
*Larchmont Avenue
Presbyterian
Church,
Larchmont, N. Y.
Office of
John Russell Pope*



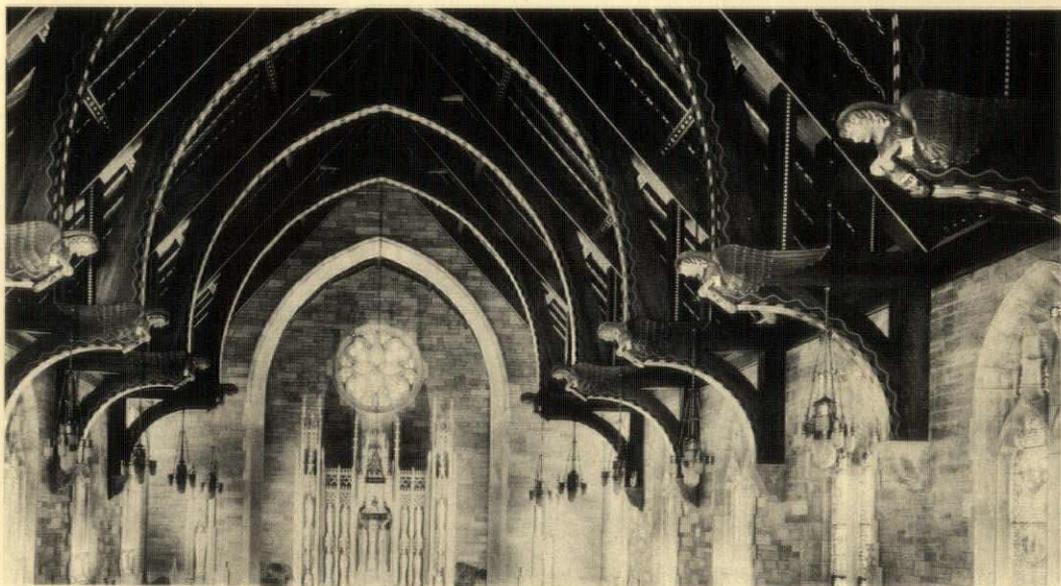
*Fourth Presbyterian Church,
Chicago, Ill.
Cram, Goodhue & Ferguson;
Howard Shaw*



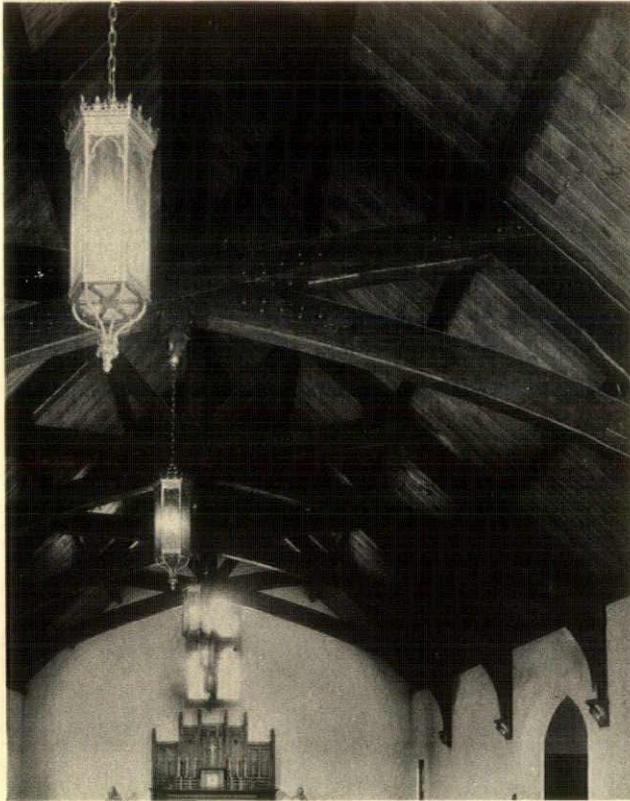
*Jefferson Avenue Presbyterian Church, Detroit, Mich.
Smith, Hinchman & Grylls*



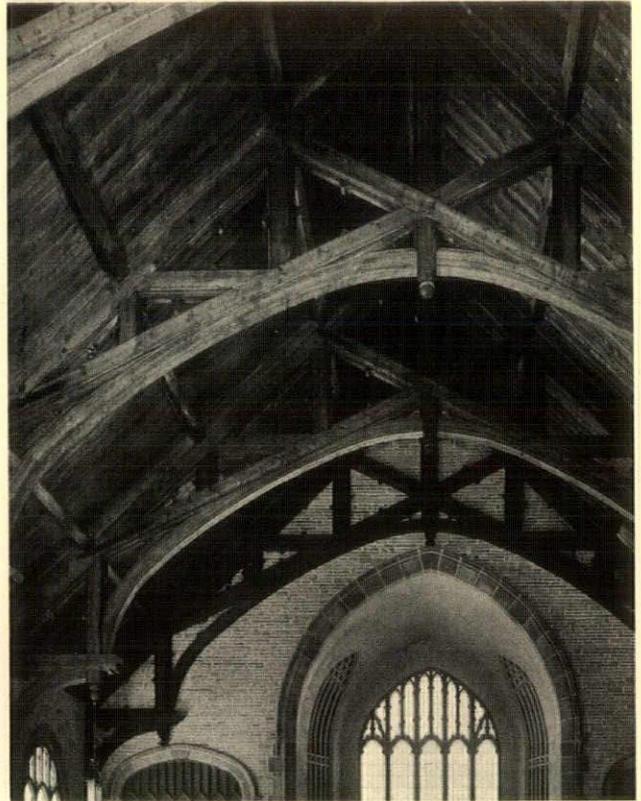
*Christ Church, Bronxville, N. Y.
Mayers, Murray & Phillip*



*Holy Cross Church,
Germantown, Pa.
Henry D. Dagit
& Sons*



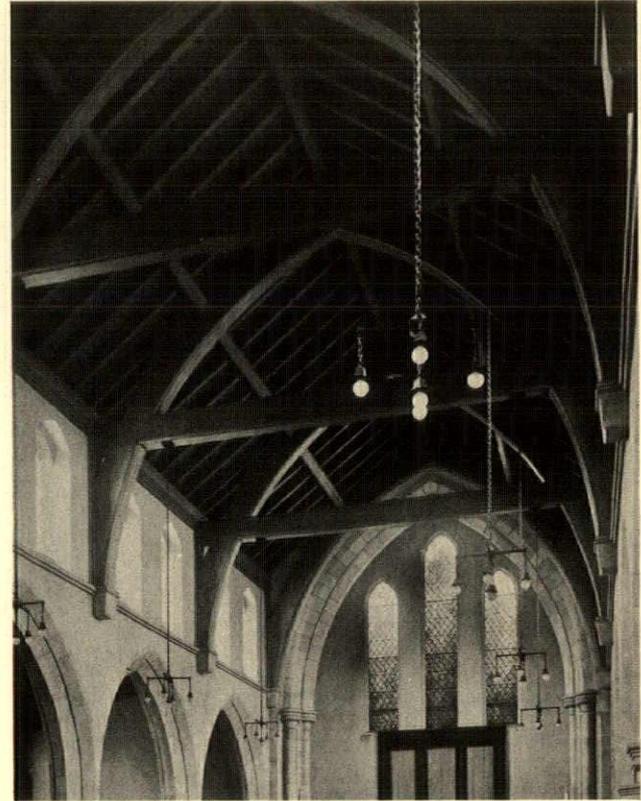
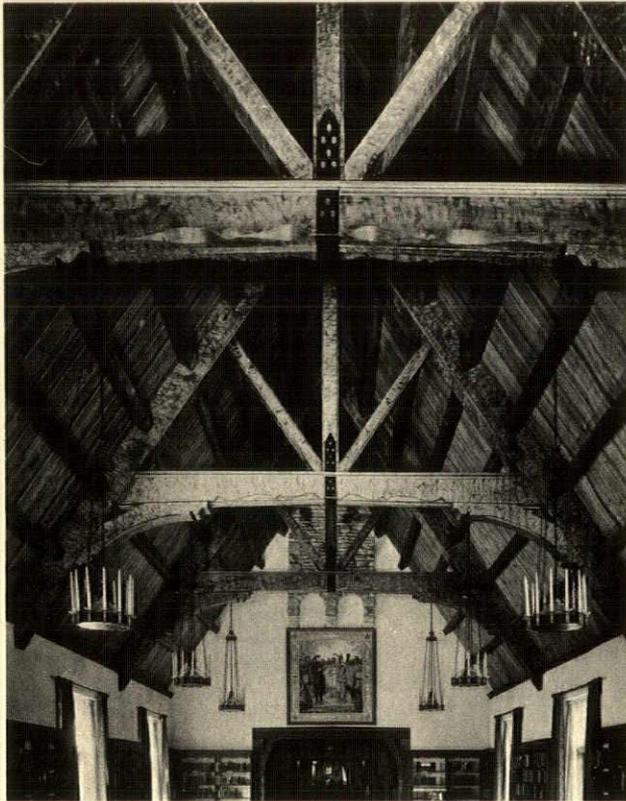
*Chapel, St. Thomas's Boys High School, Rockford, Ill.
W. J. Van der Meer*



*St. Luke's Evangelical Lutheran Church,
Chicago, Ill.
Edward A. Nitsche*

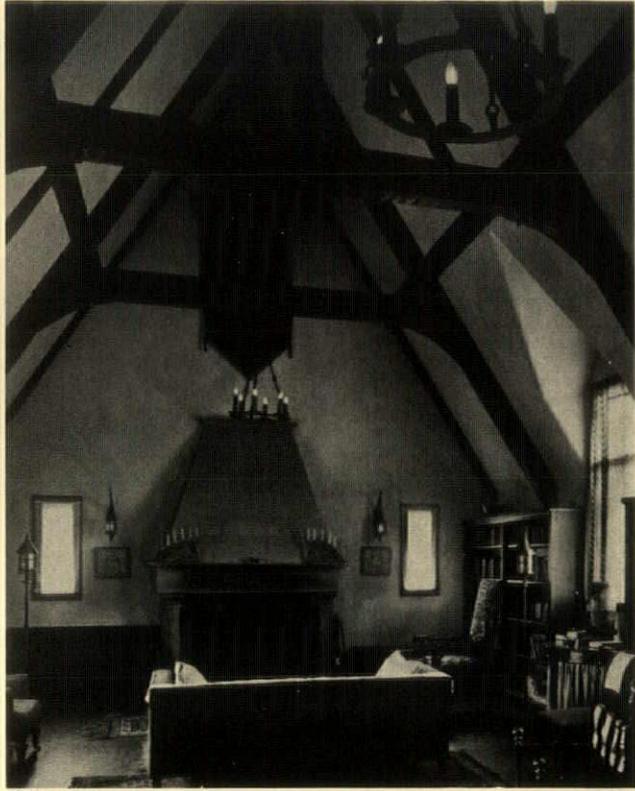
*Public Library, Riverside, Ill.
Conner & O'Conner*

*St. Paul's Church, Malden, Mass.
Cram & Ferguson*





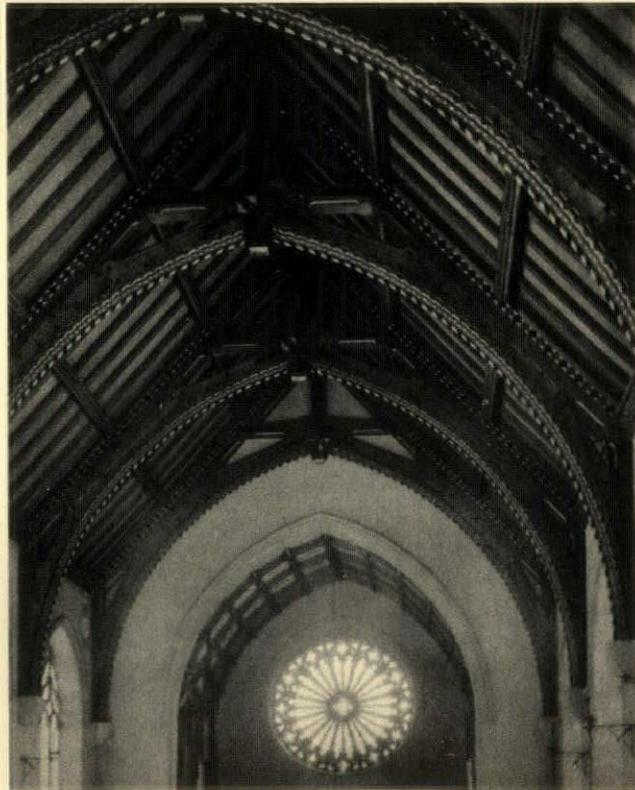
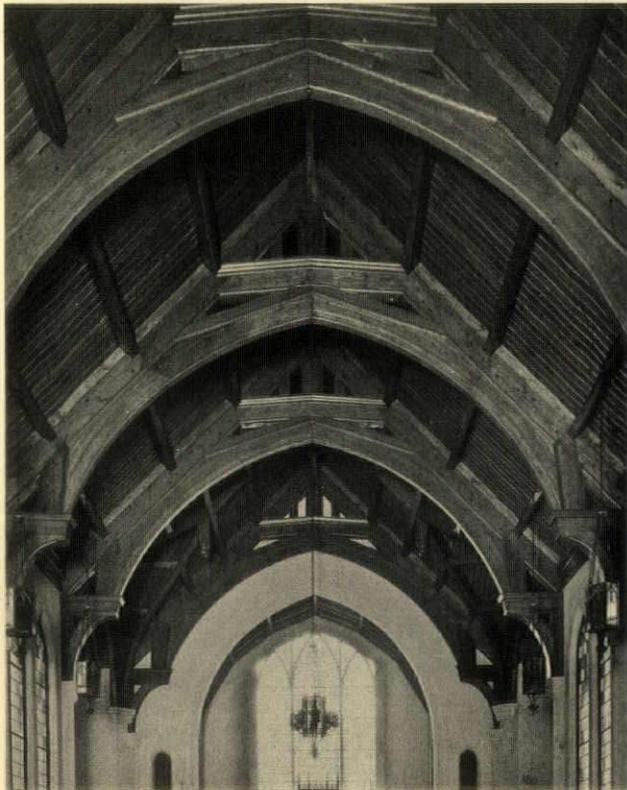
*House of Schofield Andrews, North East Harbor, Me.
Tilden, Register & Pepper*



© Amemya
*House of Hampton Anderson, Bedford Hills, N. Y.
Harold Pindar Zoller*

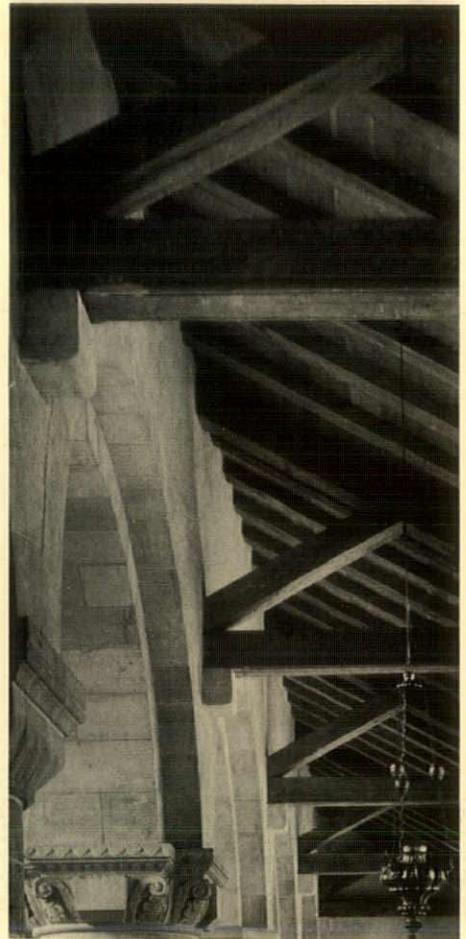
*Grace Lutheran Church, La Grange, Ill.
Culver & Eden*

*First Presbyterian Church, Wilmington, N. C.
Hobart Upjohn*





© Amemys
Church of St. William the Abbot, Seaford, Long Island
James W. O'Connor

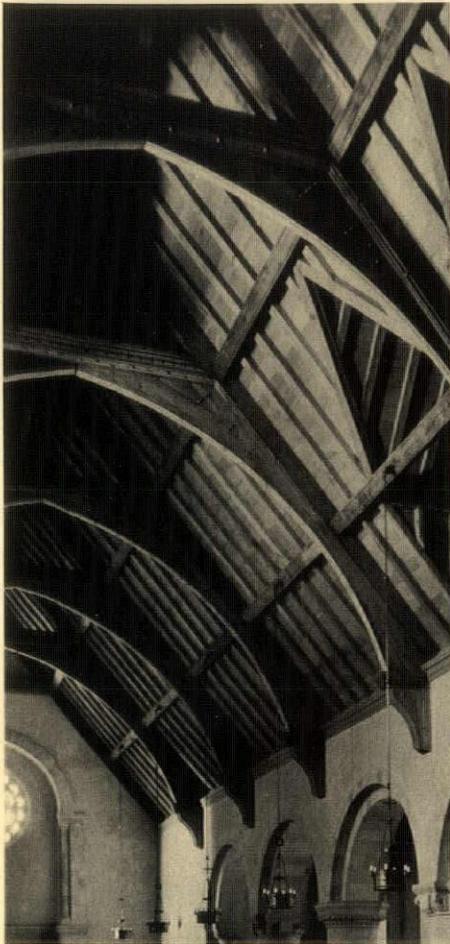


Kent School Chapel, Kent, Conn.
Roger H. Bullard;
Arthur Loomis Harmon

Camp Aladdin, Andover, N. J.
Clarence S. Stein



Swimming-pool,
Lido Beach Hotel,
Long Beach, N. Y.
W. A. Sawsey



*Kent School Chapel, Kent, Conn.
Roger H. Bullard;
Arthur Loomis Harmon*



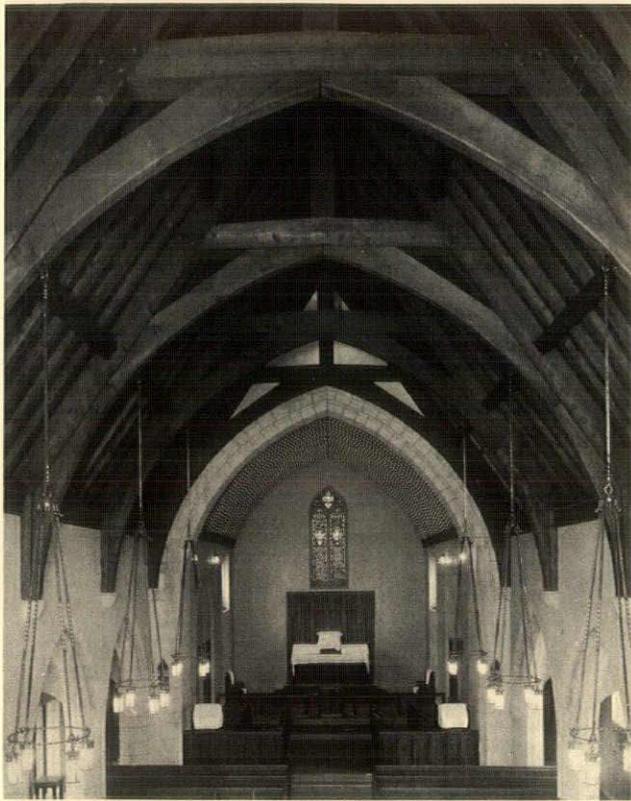
*Epworth Euclid Church, Cleveland, Ohio
Bertram G. Goodhue; B. G. Goodhue Associates; Walker & Weeks*



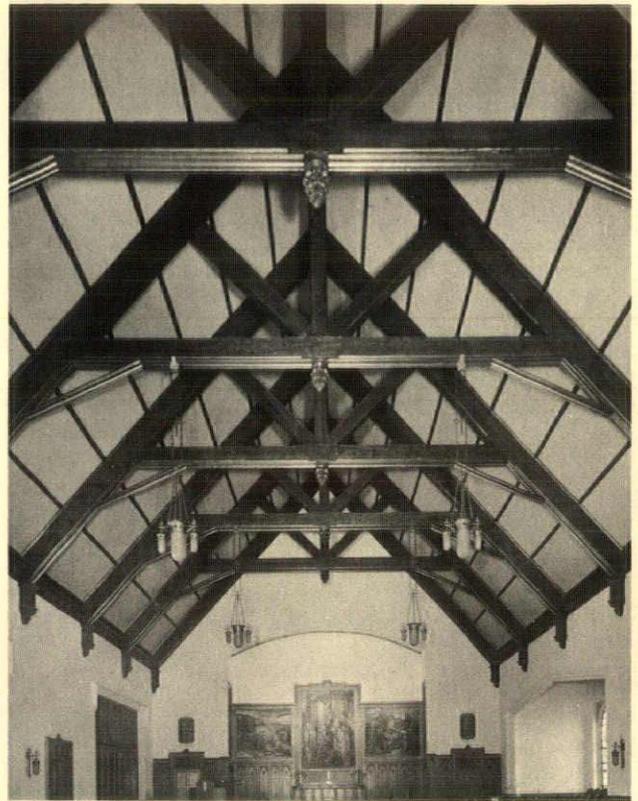
*House of J. H. Perkins,
Greenwich, Conn.
William F. Dominick*



*Hudson Guild Farm,
Andover, N. J.
Clarence S. Stein*



*Church of New Jerusalem, Pittsburgh, Pa.
Harold T. Carswell*



*Albany Park Lutheran Church, Chicago, Ill.
Robert C. Ostergren*

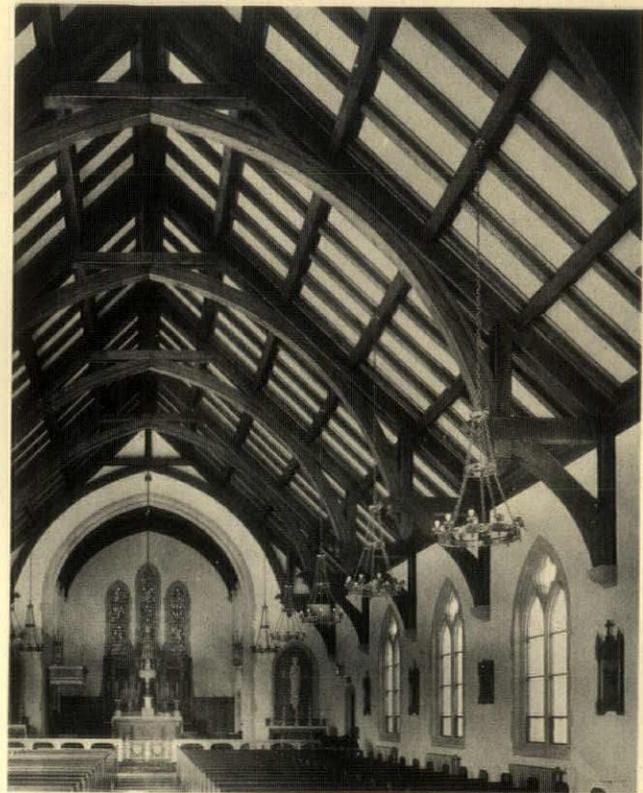
*Christ Church Parish House, Fitchburg, Mass.
Hobart Udjohn*

*Trinity Protestant Episcopal Church,
Moorestown, N. J.
Walter T. Karcher & Livingston Smith*





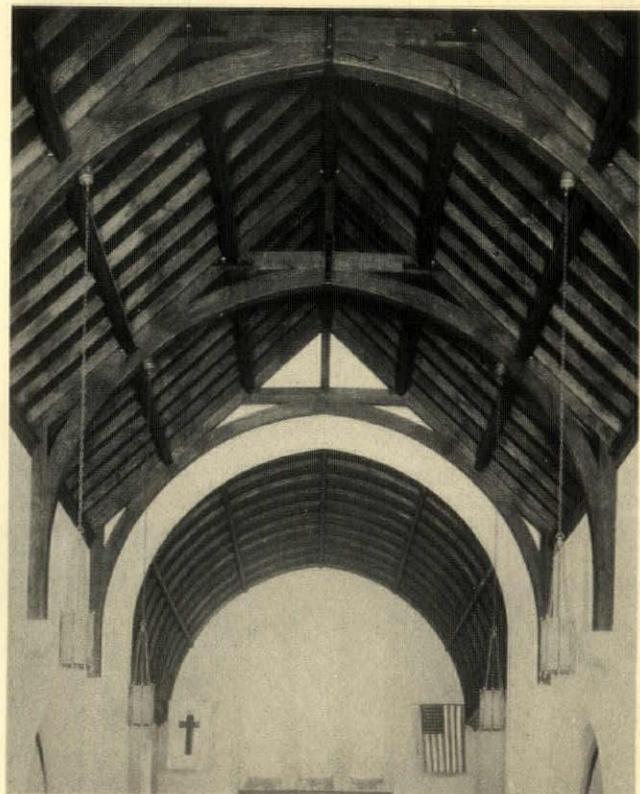
*Mission Covenant Church of Austin, Chicago, Ill.
J. E. O. Pridmore*



*St. Peter's Church, Antioch, Ill.
Leo Strelka*

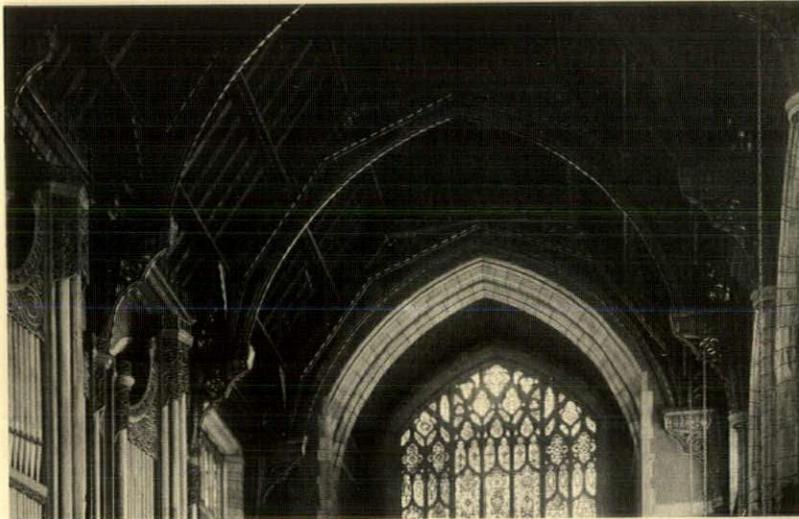
*Chinese Y. W. C. A., San Francisco, Calif.
Julia Morgan*

*Church of the Epiphany, Brooklyn, N. Y.
Latenser, Bastow & Way*

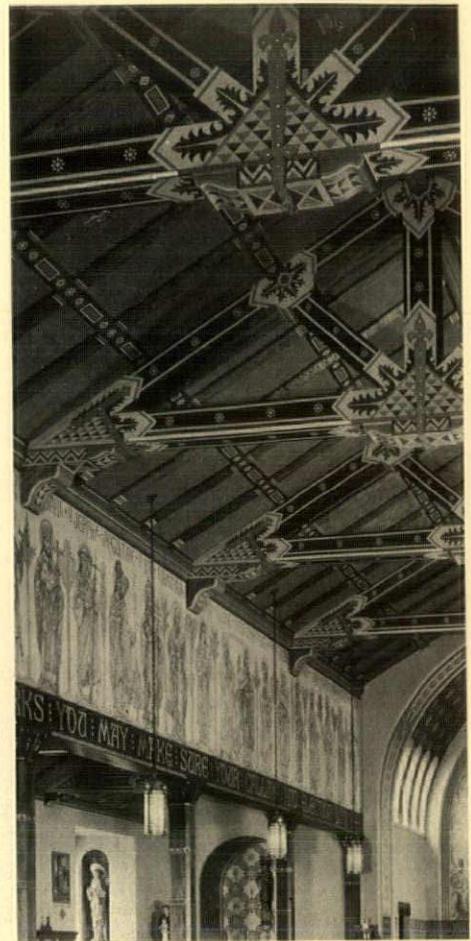




*Trinity Lutheran Church, Detroit, Mich.
W. E. N. Hunter Company*



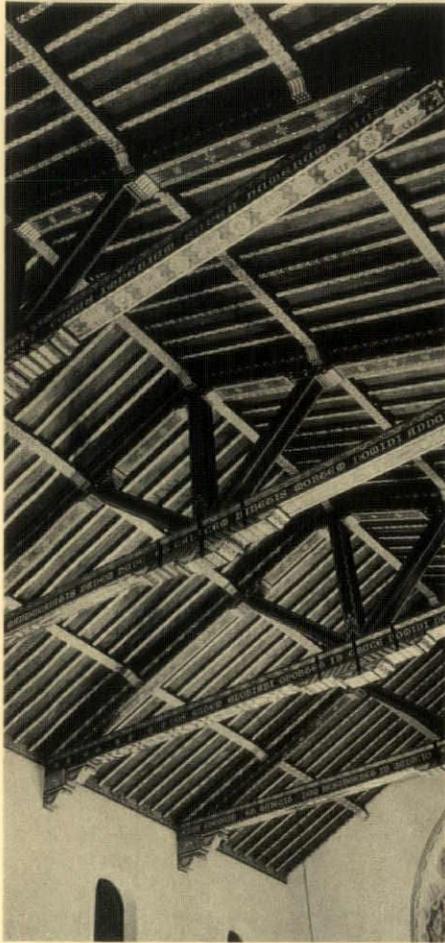
*Chapel of the Intercession,
New York City
Bertram G. Goodhue;
Cram, Goodhue & Ferguson*



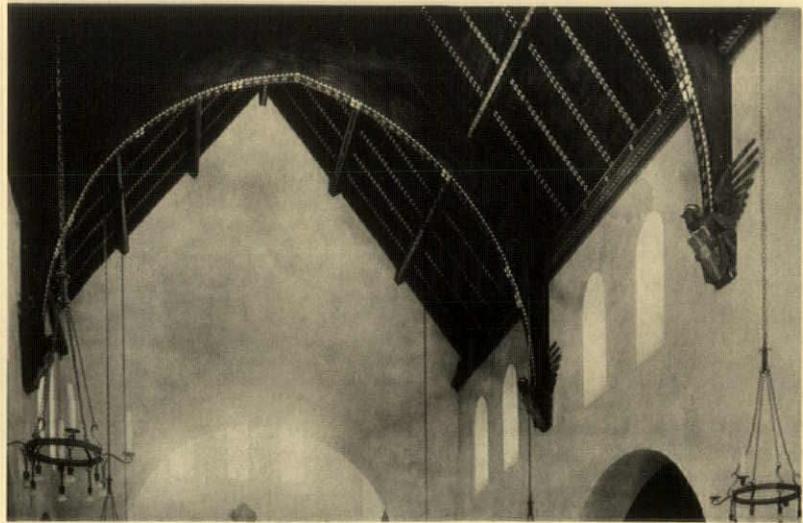
*St. Clement's Church, Lakewood, Ohio
William Koehl*



*Hotel Rolyat,
St. Petersburg, Fla.
Kiehnel & Elliott*



*Church of St. John the Evangelist,
Buffalo, N. Y.
Karl G. Schmill*

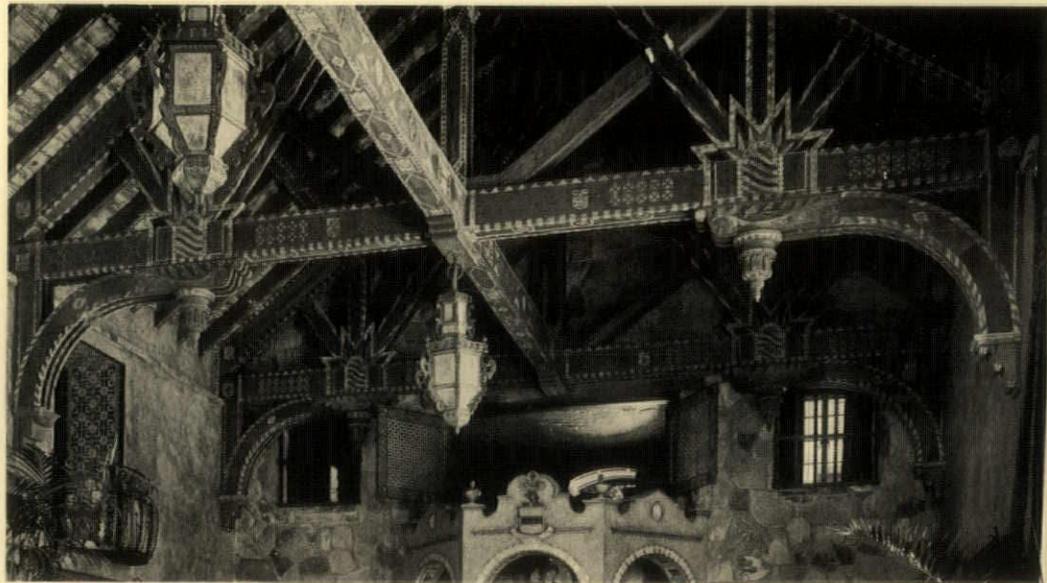


*St. Brigid's Church, Westbury, Long Island
F. Burrall Hoffman*



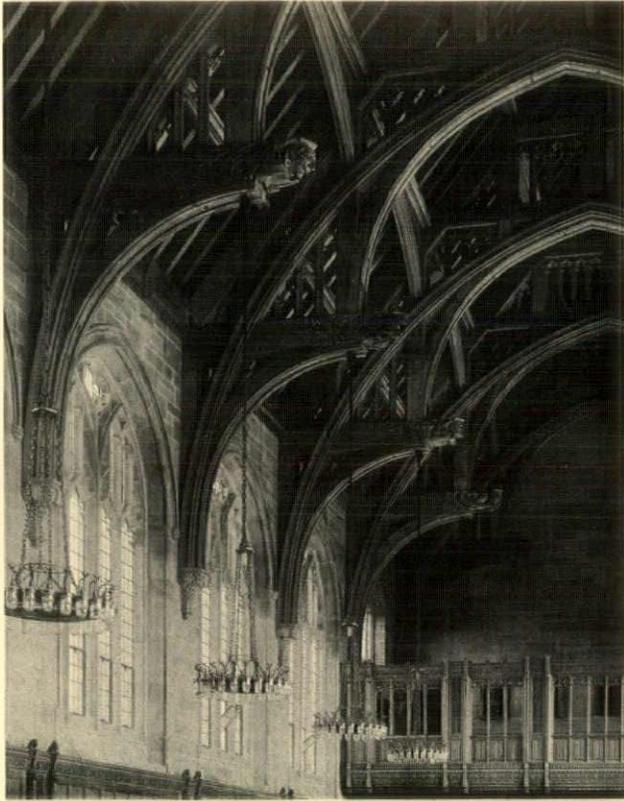
*Chapel, St. Lawrence University,
Canton, N. Y.
Mayers, Murray & Phillip*

© Premo

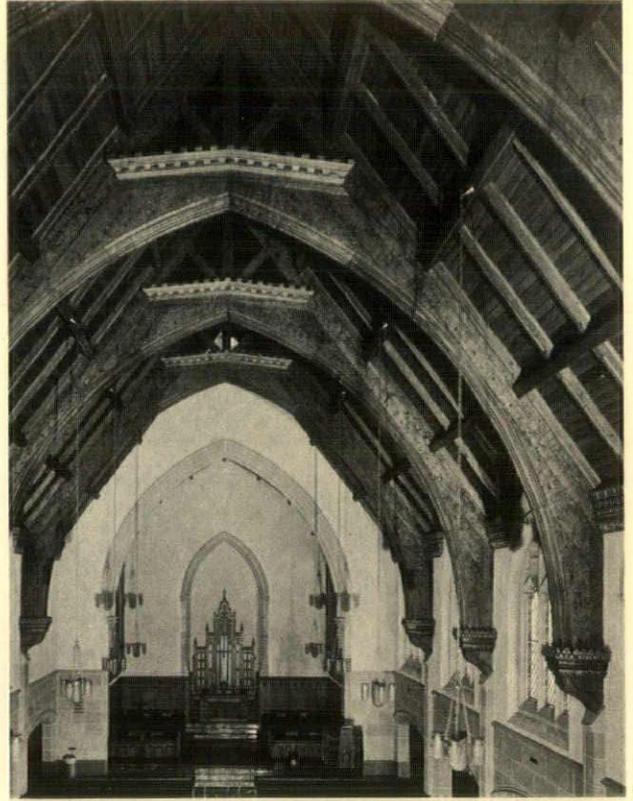


*House of
Jefferson Penn,
Reidsville, N. C.
Harry Creighton
Ingalls*

© Amemya



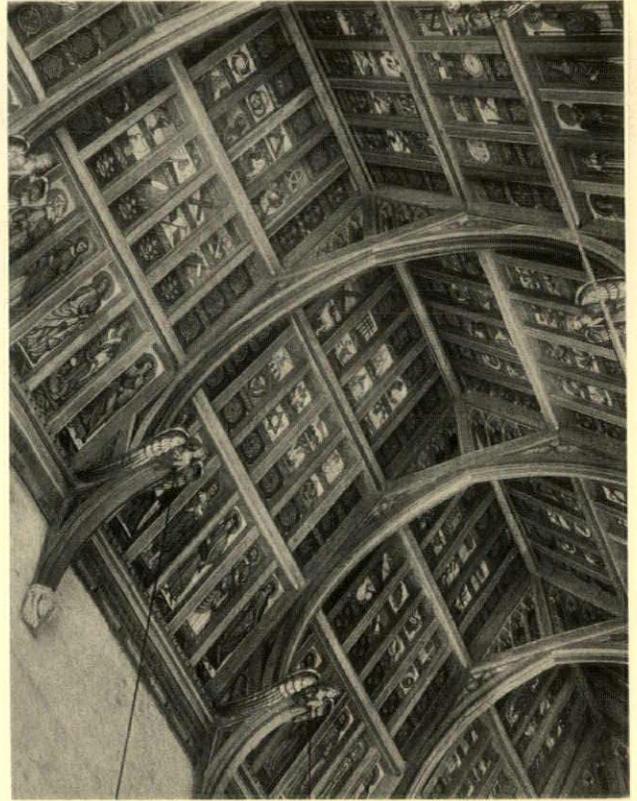
© Wurts Brothers
Refectory, Princeton Graduate College, Princeton, N. J.
Cram & Ferguson

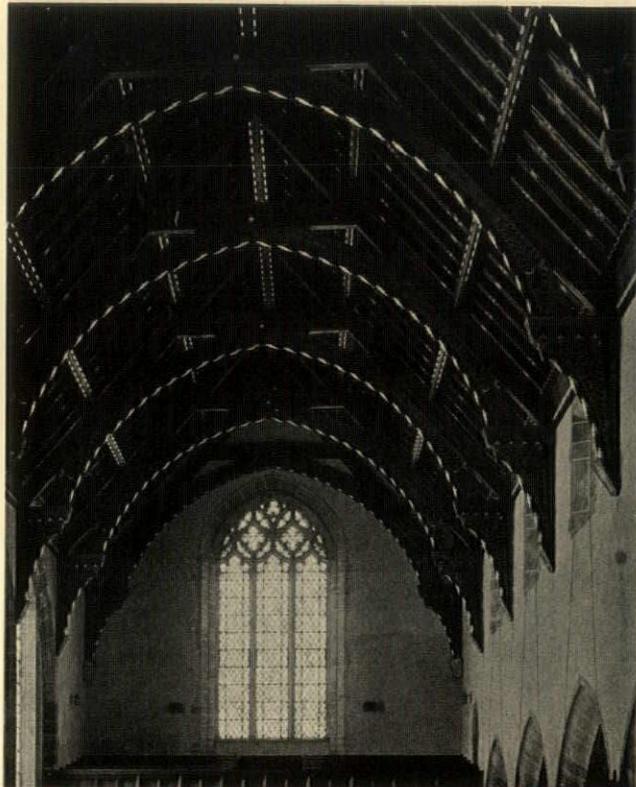


Bethany Evangelical Lutheran Church, Chicago, Ill.
Benjamin Franklin Olson

Irving Presbyterian Church, Indianapolis, Ind.
Harrison & Turnock

Collegiate Chapel of St. Andrew's, Philadelphia, Pa.
Zantzinger, Borie & Medary



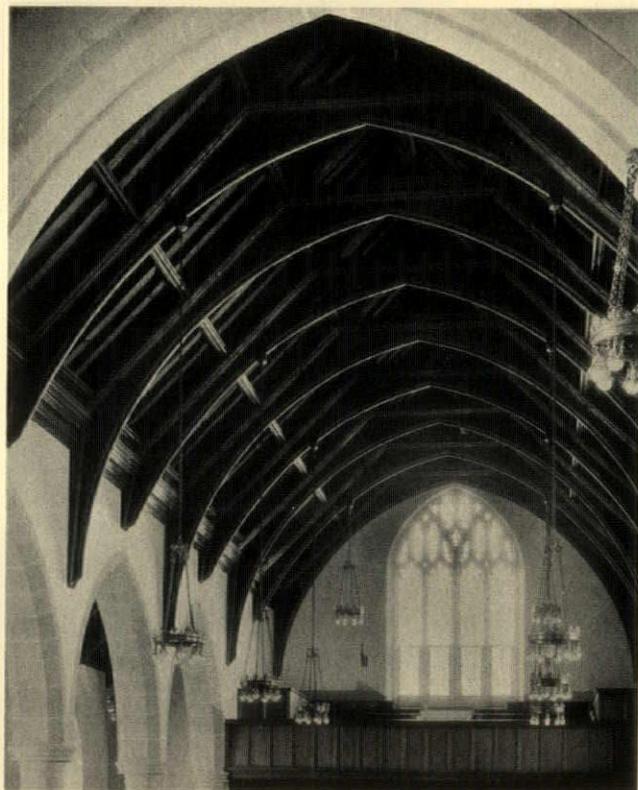
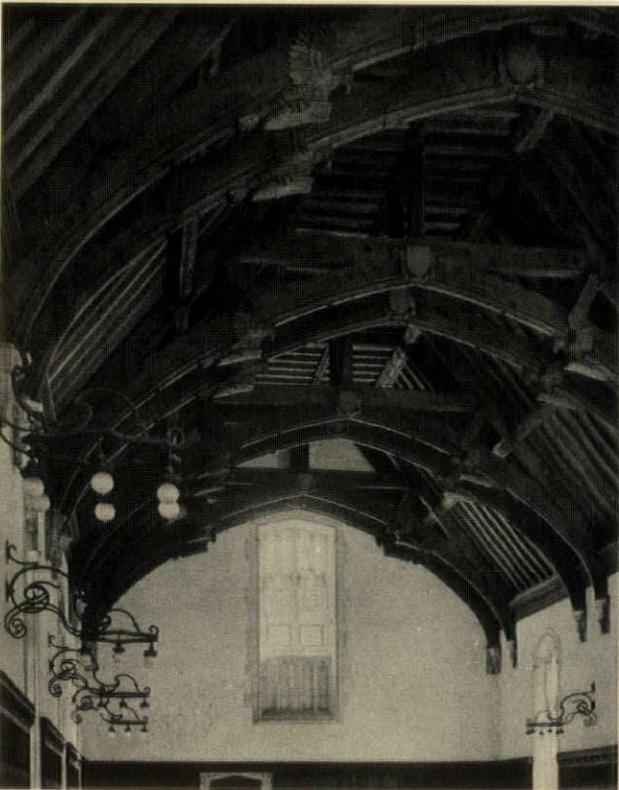


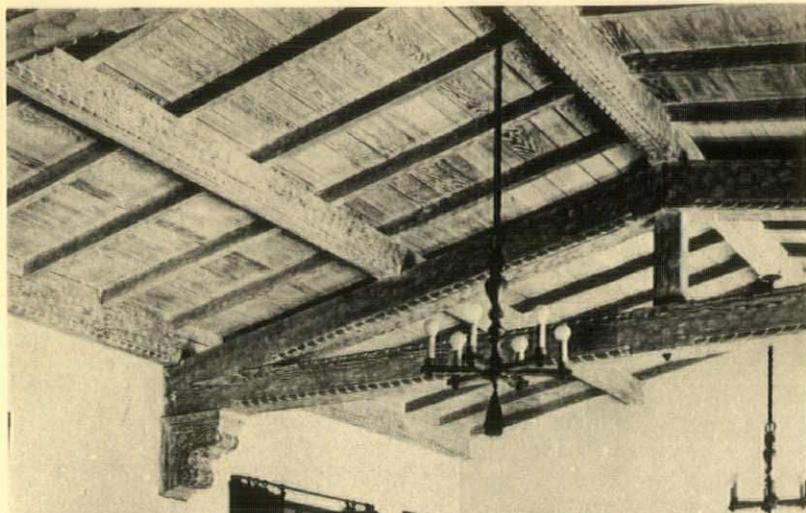
*First M. E. Church, Hanover, Pa.
Sundi & Wenner*

*St. John's Episcopal Church, Buffalo, N. Y.
Mayers, Murray & Phillip*

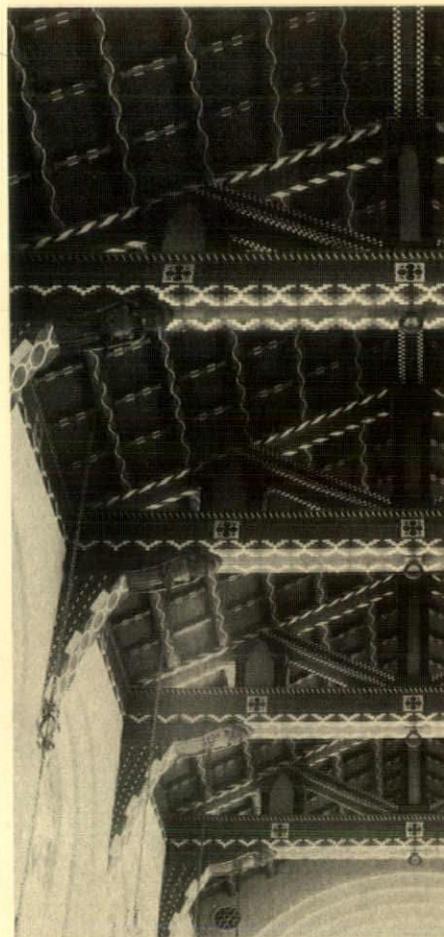
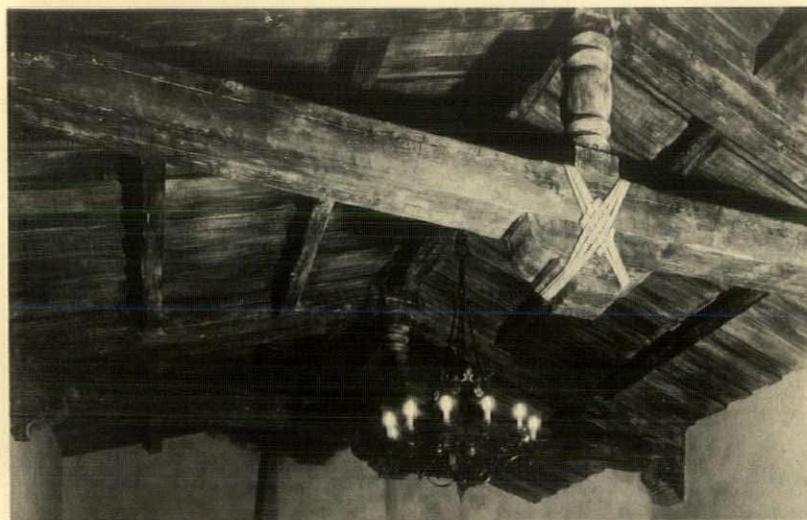
*South Madison Dining-hall,
Princeton University, Princeton, N. J.
Day & Klauder*

*St. Paul's Episcopal Church, Yonkers, N. Y.
Cram & Ferguson*



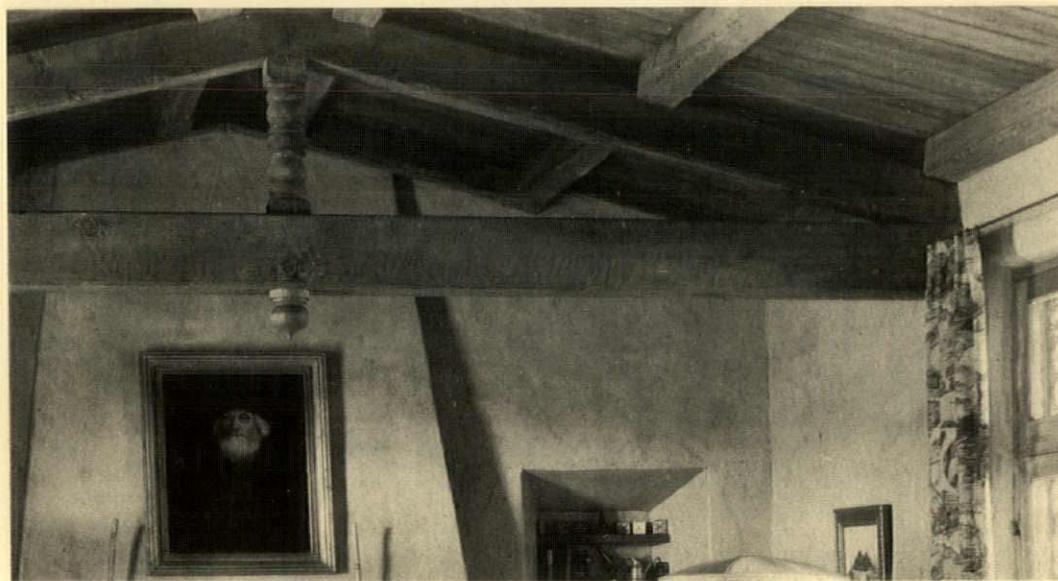


*Scripps College, Claremont, Calif.
Gordon B. Kaufmann*

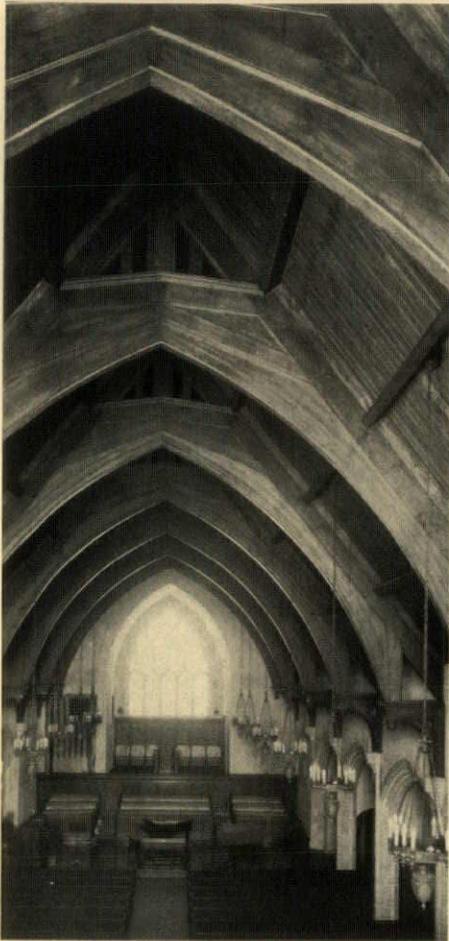


*First Presbyterian Church
Greensboro, N.C.
Hobart Upjohn; Harry Bortolotto*

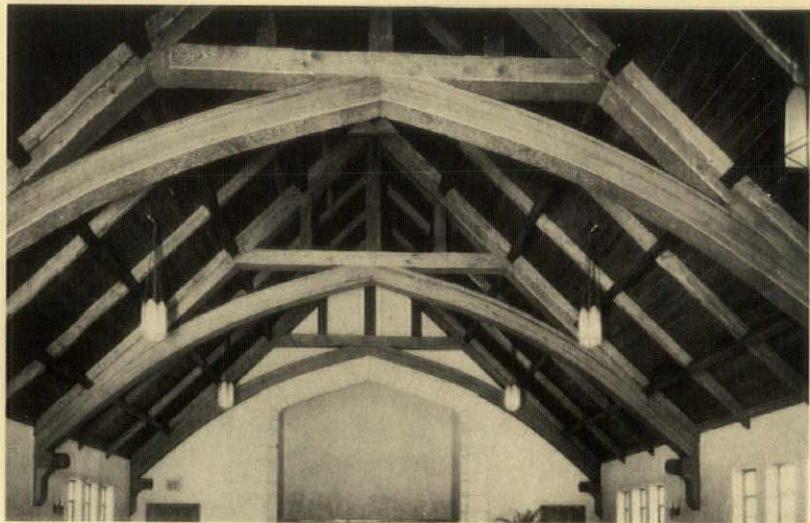
*House of Henry de Roulet,
Los Angeles, Calif.
Morgan, Walls & Clements*



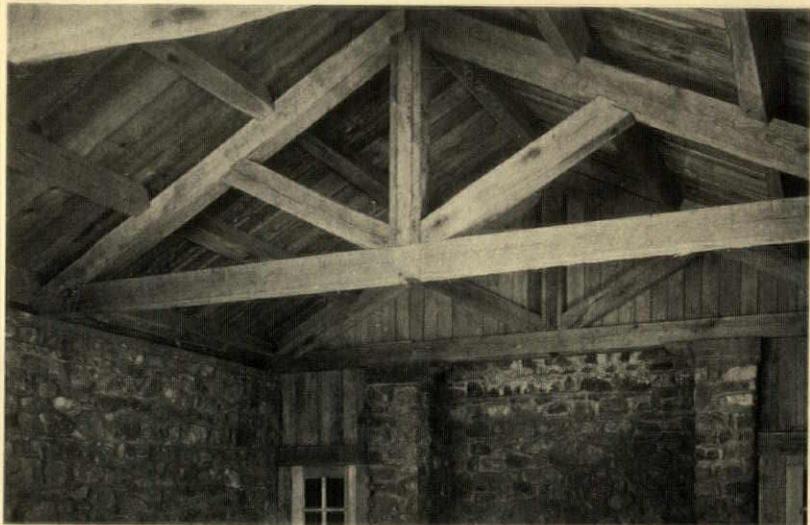
*Living-room in a
California House
John Byers*



*Church of Latter Day Saints,
Chicago, Ill.
H. B. Bernard*



*St. James Evangelical Parish Hall, Chicago, Ill.
Benjamin Franklin Olson*



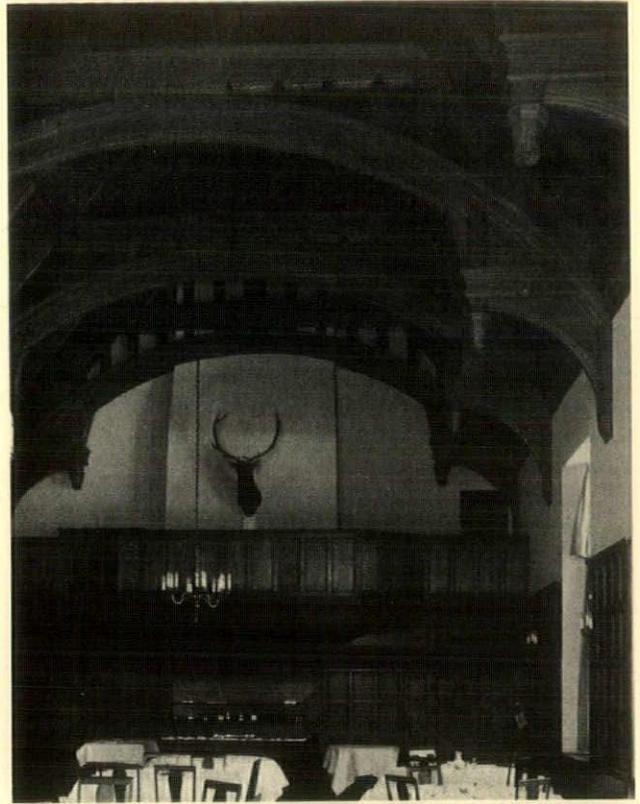
*Hudson Guild Farm, Andover, N. J.
Clarence S. Stein*



*House of
H. H. Rogers,
Southampton,
Long Island,
Office of
John Russell Pope*



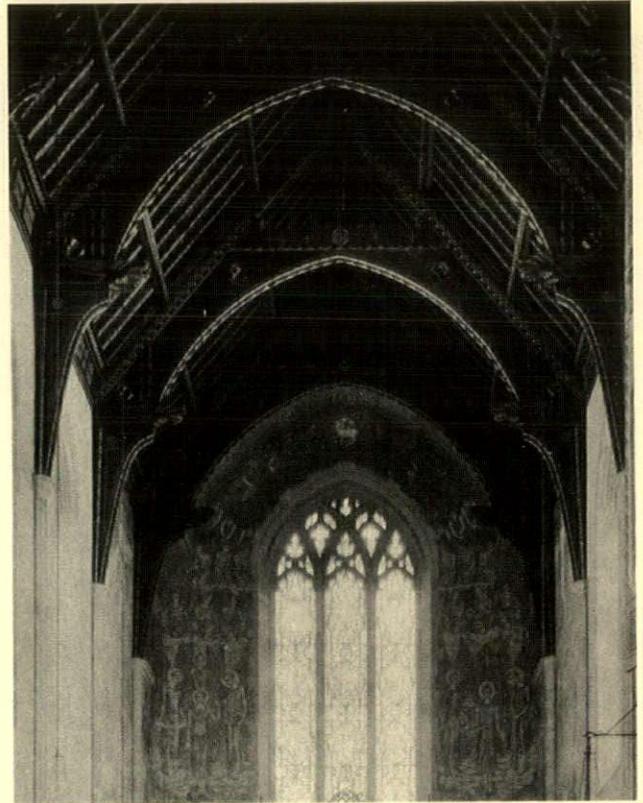
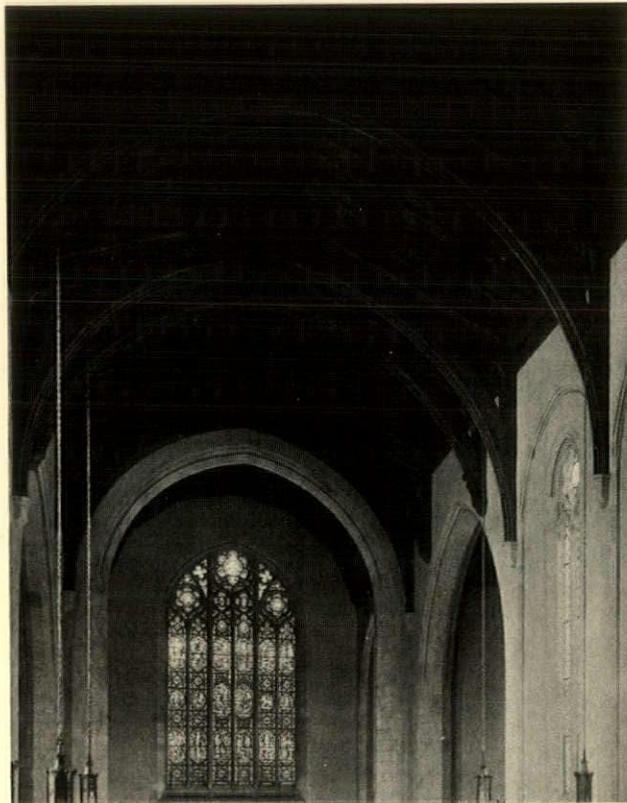
*House of George E. Hardy, Fishers Island, N. Y.
Van Pelt, Hardy & Goubert*



*Kitchi-Gammi Club, Duluth, Minn.
Bertram G. Goodhue*

*First Congregational Church, Columbus, Ohio
Office of John Russell Pope*

*Christ Church, Crambrook, Mich.
Mayers, Murray & Phillip*



NEWS OF THE NEWEST PRODUCTS

Members of the architectural profession may secure without cost any or all of the literature reviewed on this and the following page.

Fill in the file numbers of items desired on the prepaid mailing card below and mail. ARCHITECTURE will see to it that you have full information.

WHY SEAMLOG?

F. 348. The L. C. Chase Company has a most interesting booklet, fully illustrated, showing how problems of installation have been overcome in Chase Seamloc. They will be glad to send this on request.



PRESSURE REGULATORS AND REGULATION PROBLEMS

F. 349. A booklet has been prepared by the Air Reduction Sales Company of New York which will prove of great interest to all industries requiring accurate, uniform pressure control and the close regulation of oxygen, acetylene and other gas pressures. It is profusely illustrated with pertinent diagrams and charts which are so arranged as to permit the reader to quickly grasp the salient facts about pressure regulators and methods of solving regulation problems. You will certainly want one of these.



CIVILIZATION'S GREATEST MENACE

F. 350. A booklet, under the above title, published by The John Douglas Company of Cincinnati, thoroughly discusses the dangers of water pollution, amœbic dysentery and other water-borne diseases as caused by cross connections and back-siphonage in plumbing fixtures. Excellently printed in two colors, it thoroughly explains, through numerous graphic illustrations, conditions under which cross-connections and water pollution can and do occur. It presents a simple, non-mechanical fool-proof solution of the problem. Your copy may be had, *without obligation*, on request.



LEVELITE

F. 351. You know that an uneven base on which a floor is laid is sure to result in shortened life if not more serious damage to the finished floor. Therefore after several years of experimentation a compound known as Levelite was invented and perfected by Selby, Battersby & Company, of Philadelphia. The properties, methods of application and advantages of this unique floor compound, which is used to receive either rubber, linoleum, asphalt, tile, cork, cellized wood block or carpet, and which adheres to steel, wood, glazed tile, etc., will be gone into in detail if you will check this item on the enclosed card.



BAKELITE LAMINATED

F. 352. In the last quarter century the Bakelite Corporation has contributed much to the production of fireproofing materials especially suited for use as flooring, trim, walls, furniture, etc., in public buildings, stores, hotels, hospitals and factories. May they send you detailed information on the uses of Bakelite Laminated for sturdy, decorative fireproofing?



TAKAPART PRECAST FIREPROOF WALL

F. 353. Architects, building owners and managers have been demanding a fireproof wall that eliminates all wet trades, can be

painted immediately, shows no joints or cracks, provides runways for wiring, lends itself to puttyless glazing, has almost complete salvage value, is insulated against sound transmission, at a cost no higher than an ordinary wall. The Takapart Products Company, 114 East 32d Street, New York City, have the answer in their Precast Fireproof Wall, and pictures of the wall being installed are shown in a most instructive leaflet containing specifications.



WEATHER-RESISTING COLD WATER PAINT

F. 354. The story of Aquacote is a simple one . . . a cold water paint, scientifically and especially compounded for exterior use. When mixed with cold water and applied in accordance with the directions of the Blue Diamond Service Corporation, it resists all kinds of weather for a reasonable and satisfactory length of time. Aquacote should prove of great use in carrying out the work planned by the Federal Housing Administration as it is particularly suitable for use in the renovation of small houses, track and stable equipment, and farm buildings, and is remarkably long-lasting on light shafts, areas, air-shafts, and courtyards of apartments, where frequent painting is now required to maintain attractive, light-giving surfaces. Further information about this unusual paint will be furnished gladly.



SPECIAL SHAPES

F. 355. The Tuttle Brick Company of Middletown, Conn., have a folder showing sizes, weights and colors of their Common Brick, Ancient Size Puritans, Arawana, Rain-washed, and Whitewash Brick, Lammies, Old Style Commons, and Waterstruck Type. It also shows diagrams of some of the shapes they keep in stock, with their Angles and intersections.



ONE OF MAN'S CHOICEST POSSESSIONS

F. 356. Has always been a panelled room. Now this may be had in a few days, at small cost, by the use of Timbertone, a prefabricated material possessing all the rich mellowness of century old wood. Ideal for installation in executive offices, private libraries, recreation rooms, hotels, churches, taverns, and any place where the loveliness and durability of wood panelling is desired. The Timbertone-Stonetone Products Corporation of New York manufacture Timbertone, and we will be glad to send you their illustrated booklet fully outlining the uses of this material.



BALANCED DOORS

F. 357. In a black and silver booklet the Ellison Bronze Company, of Jamestown, N. Y., tell you why these balanced doors, built of bronze, aluminum, or steel, overcome wind pressure and wind suction. Their door engineers are at your service and will send you full particulars.

— NOTE —

For your convenience ARCHITECTURE will see that at your request any data or literature pertaining to any advertised product presented in this issue is sent you. Use request card below.

ALUMINUM SKYLIGHTS

F. 358. The Milcor Steel Company of Milwaukee, Wis., have sent us diagrams, cross sections and specifications of their new Super Extruded Aluminum Skylights. These are a far cry from the antiquated and dangerous "roof windows" with their rusting bars and bolts, and are a signal advance in the building industry. You may have these diagrams and cross sections by checking your card.



"ELECTRO-SHEET"

F. 359. A long-recognized need for wide, thin copper sheets in long lengths . . . at moderate cost per pound . . . has only recently been met with the perfection of Electro-Deposition by the chemical staff of Anaconda Copper Mining Company. This process makes available a product designated as "Electro-Sheet" which is furnished in weights of from one ounce to eight ounces per square foot; in widths of thirty inches; and unlimited length. A booklet has been prepared which goes into the advantages of this new product for built-up roofing, with diagrams, pictures, and comments.



DUROMIT FLOORS

F. 360. Are ideal for breweries, bottling plants, dairies, bakeries, depots and any place where a floor must be specified which will re-

FIRST CLASS
PERMIT No. 708
Sec. 510 P. L. & R.
NEW YORK, N. Y.

BUSINESS REPLY CARD

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

2c. POSTAGE WILL BE PAID BY

ARCHITECTURE

Charles Scribner's Sons, Publishers
Scribner Building — 597 Fifth Avenue
New York, N. Y.

Cards mailed outside the United States must bear postage →

sist acid action, will not mar nor disintegrate under the wearing action of rolling cans, steel truck wheels, or constant steaming and scrubbing. A Duromit floor will outlast an ordinary concrete floor five to one, say the makers, the Washington Concrete Corporation, New York, developing a compressive strength of 15,000 to 20,000 pounds per square inch and a tensile strength of 1,000 to 1,500 pounds per square inch. List of installations and complete architectural and engineering data on request.



THUMBS DOWN ON RUST

F. 361. This is the title of a new folder, referred to as Bulletin No. ADV 132 by the makers of Toncan Iron, the Republic Steel Corporation. The bulletin goes into the problem of rusting and corrosion and how it has been met by this modern alloy of refined open hearth iron, copper and molybdenum. It has been used with great success for interior sheet metal work, as indirect heating ducts, for ventilators, culverts, bridge work, water mains, carbon black furnaces, and roofing on elevated trains. You will want further information about the durability of Toncan Iron. Write us for the bulletin.



HEAT-PROOF YOUR HOME

F. 362. A new principle in house insulation is described in a folder entitled "Alfol Insulation for Modern Homes," published by the Alfol Insulation Company. This new process of heat reflection involves a very low initial investment with a high return in the way of reduced fuel costs, elimination of waste space, and healthful indoor conditions. You will want the heat-saving table contained in the booklet as well as the samples of Alfol which the manufacturer will send on request.

BUILDING MATERIALS

F. 363. A copy of the new 1934 Johns-Manville catalogue of Building Materials contains full information, photographs, color-plates and cross sections of the J-M asbestos and asphalt shingles, roofings, building accessories, insulation, wainscoting, wall sheets, coatings, putties, etcetera.



GATE VALVES WITH RISING STEM

F. 364. The Kennedy Valve Manufacturing Company of Elmira, N. Y., announces a new line of rising stem heavy standard bronze gate valves for 150 pounds working steam pressure, and 250 pounds working water, oil or gas. This valve, known as Fig. 45, is a companion type to the new Fig. 23 which was introduced earlier in the year, and is provided with a flexible connection between the disc and the stem so that the stem will not bind nor spring when the valve is closed.



HEATING EQUIPMENT

F. 365. The National Radiator Corporation of Johnstown, Pa., have a new booklet describing several of their modern heating units including the National Bonded Contento, National Bonded Jacketed Square Boiler, National-Premier Steel Boiler, Aero Cast Iron Convectors, and Aero Tube-Type Radiators.



COMPENSATED HUMIDITY CONTROL

F. 366. The Minneapolis-Honeywell Regulator Company is now prepared to supply a compensated humidity control system which will accurately govern relative humidity at any desired differential between inside relative humidity and outside temperature. This is accomplished by using the potentiometer humidity controller in conjunction with an outside temperature controller of remote bulb type.



SERVICE FOR DOORS

F. 367. The Robert Mitchell Manufacturing Company, of Cincinnati, have just taken over the products formerly made by the Compound & Pyrono Door Co., and will continue to manufacture the Compound Key Veneered Wood Doors, Pyrono Process Fire Proof Doors and Trim, and the Tri-Mount Sound Proof Doors. They will gladly send information on these products and on their service to architects.



FLOAT AND THERMOSTATIC DRIP VALVE

F. 368. Designed for removal of air and condensation from short steam mains, branches or risers, the operating characteristics of this new No. 17 Drip Trap make it especially desirable for installation on unit ventilators, small unit heaters, or other equipment which may be subjected to freezing temperatures during periods when the heating system is not in operation. This is a product of the James P. Marsh Co., who will send full descriptive details on request.



FOR VENTILATION AND DRYING JOBS

F. 369. ILG Electric Ventilating Co. are offering a new series of what they call Type "B" Volume Blowers in five sizes. These are available in different speeds, weights, air capacities, and pressure ranges, and because they are quiet, smooth running, and cover a wide capacity range in small steps with low-power consumption and higher efficiency, the blowers are suitable for ventilation and drying jobs of many kinds.

MOST ECONOMICAL IRON ALLOY

F. 370. The use of Molybdenum was little known up until about five years ago but now "Moly" irons are being used wherever exceedingly high temperatures are required. Wear and heat failures as well as susceptibility to cracking are reduced while the physical properties and uniformity are improved. Yet, strange as it may seem, the comparative alloy cost is reduced and the machinability remains constant. The Climax Molybdenum Company, New York, have a publication, *The Moly-Matrix*, which is most interesting and informative.



CHROMALOID

F. 371. If you will check your card, we will have the latest brochure of the American Nickeloid Company, of Peru, Ill., sent you. This is entitled "Chromium," and is filled with photographs of the various purposes, utilitarian as well as beautiful, to which chromaloid is being put by prominent architects throughout the country.

ADVERTISERS' LITERATURE

	PAGE
A. 169. American Telephone and Telegraph Co. Built-in Telephone Conduit	17
A. 170. Austral Sales Corp. Standard School Equipment	4th Cover
A. 171. Bethlehem Steel Co., Inc. Economical, Balanced Designs	9
A. 172. Bigelow-Sanford Carpet Co. Carpet Counsel for Architects	15
A. 173. Brunswick-Balke-Collender Co. Maximum Speed with Minimum Waste	5
A. 174. Byers Company, A. M. Difference Between Genuine Wrought Iron and Other Ferrous Metals	2d Cover
A. 175. Carnegie Steel Company Three Good Reasons for Light-Weight Sections	3d Cover
A. 176. Cutler Mail Chute Company Modernizing with Mail Chutes	20
A. 177. D'Ascenzo Studios, The Memorial Stained Glass Windows	20
A. 178. Douglas Company, The John Syphon-Proof Bowls	7
A. 179. Faber, Inc., A. W. Pencils to Withstand Punishment	18
A. 180. Libbey-Owens-Ford Glass Co. Uniform Quality Held at a Superior Standard	12
A. 181. McKeown Brothers Company Timber Roof Trusses	21
A. 182. Pecora Paint Co., Inc. The Permanent Calking Compound	19
A. 183. Portland Cement Association Safety of Concrete a Plus Value	10
A. 184. Powers Regulator Company Safety Water Mixing Valves	19
A. 185. Prometheus Electric Corp. Electric Plate Warmer and Towel Dryer	21
A. 186. Taylor Company, The Halsey W. Peak Period Efficiency	18
A. 187. Vonnegut Hardware Company Buying for Long Life	22
A. 188. Youngstown Sheet & Tube Company Safeguarding Beauty	11

November, 1934

ARCHITECTURE

Scribner Bldg., New York

Please see to it that our office is supplied with the manufacturers' literature as indicated by the following numbers.

Advertisers' Literature Nos. _____

Name _____

Firm Name _____

Street _____ City _____

Registered Arch. Eng. Draftsman Student or _____

CARPET COUNSEL

by

The Bigelow Weavers

A complete service . . . used and liked by
many leading architects



Through long experience in working with architects, we have built up a service which we believe you'll find helpful in solving carpeting problems.

Estimating from blue-prints . . . budgeting . . . creating designs or interpreting your ideas . . . suggesting the grades most suitable for specific spaces . . . weaving the fabrics . . . and supervising installation are all included. You may use all or any part of this service that you wish.

The Bigelow name has stood for highest quality for more than 100 years. Bigelow wearability assures lasting satisfaction of your clients. Next time you face a carpeting problem, may we have the pleasure of serving you as Carpet Counsel? Contract Department, Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York.

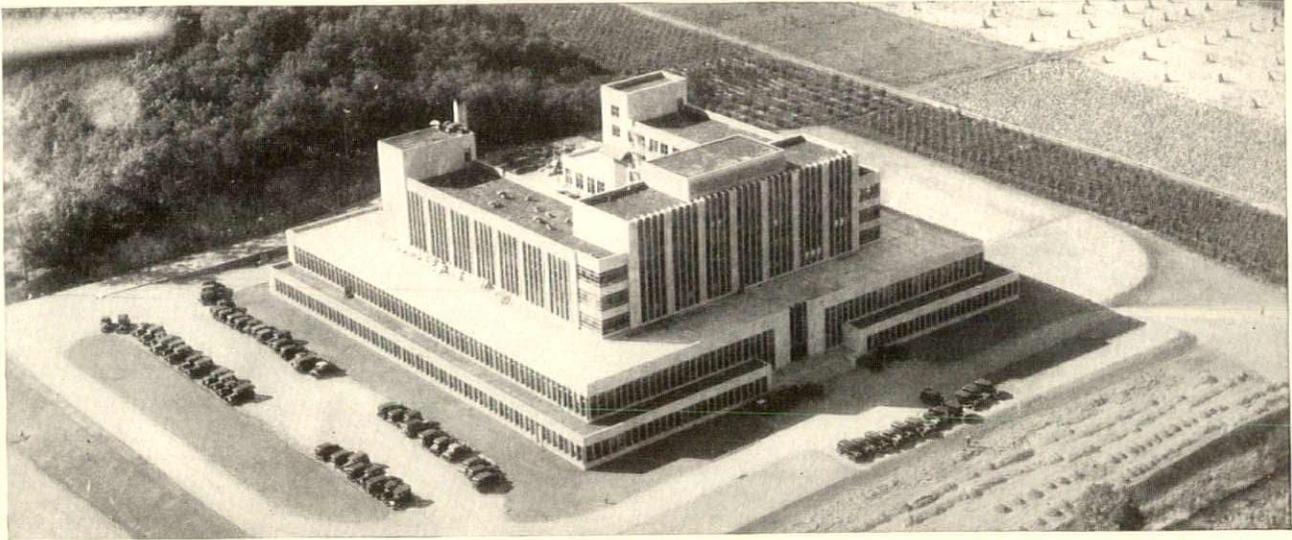
BRANCH OFFICES AND SHOWROOMS IN 25 CITIES



Bigelow Rugs dislodge hand-tufted importations

For the first time, American machine-made rugs hold the floor in the Copley Plaza lobby! Always before, this famous Boston hotel insisted on imported *hand-tufted* fabrics. But careful study and comparison recently convinced the management that Bigelow Austrian Loom Tufted . . . in luxurious "feel" and texture, in beauty of color and design . . . was the equal of the far more costly importations. As Carpet Counsel, we may help you to achieve similar savings in time and costs.

No. 5 of a Series



Forest Products Laboratory, University of Wisconsin, Madison, Wis.; Holabird & Root, architects. This building is one of the latest designed by the important architectural firm of Holabird & Root, of Chicago. The work of this office includes such well-known buildings as: Chicago Board of Trade, Palmolive Building, 333 North Michigan Avenue Building, Chrysler Building at the Century of Progress, Chicago Daily News Building, Stevens Hotel, the Russell Residence, and the International House of the University of Chicago, all in Chicago; also the Schroeder Hotel, Milwaukee; North Dakota State Capitol Building, Bismark, N. D.; Jefferson County Court House, Birmingham, Ala.; Racine County Court House, Racine, Wis.; and the Stadium at the University of Illinois, Urbana, Ill.

Editorial Usefulness

In the final analysis a publication is *valuable to the advertiser* in so far as it is *useful to the subscriber*, no more, no less. An advertiser buys editorial usefulness.

So ARCHITECTURE is useful to *architects*. The fifth prominent architectural office to attest to this usefulness of ARCHITECTURE is that of Holabird & Root, of Chicago. We believe this can be attributed to the fact that ARCHITECTURE encompasses the thing closest the architect's heart — design, whether it is design in buildings, design in interiors, or design in materials.

Architects make up 77 per cent of ARCHITECTURE'S entire circulation, the largest percentage of architects in this field.

ARCHITECTURE goes to 4777 architects, the largest number of architects of any monthly publication during the first six months of 1934.

63 out of every 100 subscribers renew their subscriptions to ARCHITECTURE.

Holabird & Root say in response to these questions:

NAME		DO YOU READ ARCHITECTURE ?	DO YOU READ ARCHITECTURE'S ADVERTISEMENTS ?
John A. Holabird	Partner	Illustrations	When well presented
John W. Root	Partner	Yes—generally illustrations	Yes
Gilbert P. Hall	Junior Partner	Illustrations—read rarely	As much as any part
R. McP. Cabeen	Junior Partner	Illustrations	No
Helmuth Bartsch	Designer	Occasionally	When attractive
Dave Carlson	Designer	Illustrations	Yes, when well illustrated
Frank B. Long	Liaison	Very often	Look through them
H. J. B. Hoskins	Specification Writer	Yes	Yes
J. C. Sherrick	Superintendent Drafting Room	Yes	Yes
V. O. McClurg	Structural Engineer	Occasionally	Yes
M. C. Larson	Mechanical Engineer	Very occasionally	Interested
F. A. Byrne	Electrical Engineer	Selections	Yes
J. H. Hopkins	Decorations and Furnishings	Look	Look
H. F. Reynolds	Furnishing Designer	No, but Portfolio is excellent	When credit is given architects
J. Z. Burgee	General Superintendent	Occasionally	Yes
John S. Cromelin	Draftsman	Yes	When attractive
Charles Bellas	Architect	Yes	Yes
A. D. Wills	Draftsman	Occasionally	Yes
C. J. Chambers	Mechanical Engineering Draftsman	Occasionally	Yes

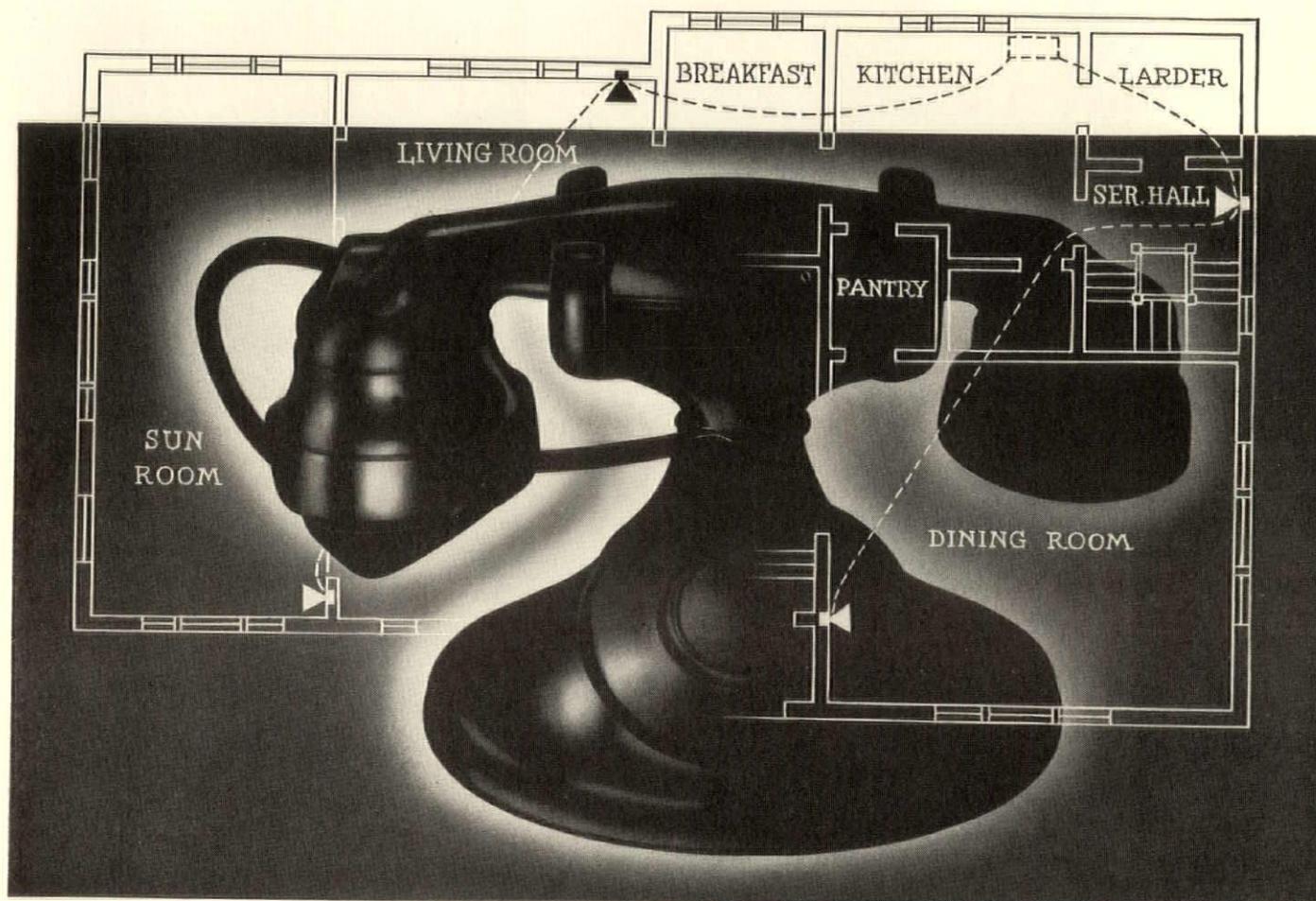
ARCHITECTURE

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

CHARLES SCRIBNER'S SONS, Publishers

NEW YORK CHICAGO CLEVELAND BOSTON PITTSBURGH LOS ANGELES SAN FRANCISCO

“Providing better homes for the people of the nation”



THE national drive to stimulate remodeling and new construction will provide “better homes for the people.”

Built-in telephone conduit contributes generously to the success of these residence projects. It permits telephone outlets to be located at convenient points throughout the house. It conceals wiring that otherwise would be exposed. It guards against certain types of service interruptions. And it costs very little.

Certain outlets can be equipped for immediate use and others tapped at any future time, as they are needed, without trouble. Through the years,

adequate telephone arrangements will save time and steps and add to the comfort and convenience of the household.

Your local telephone company is always glad to work with you in developing conduit layouts. There is no charge, of course. Just call the Business Office and ask for “Architects’ and Builders’ Service.”

IN REMODELING—

IN NEW CONSTRUCTION—

REMEMBER TELEPHONE CONDUIT



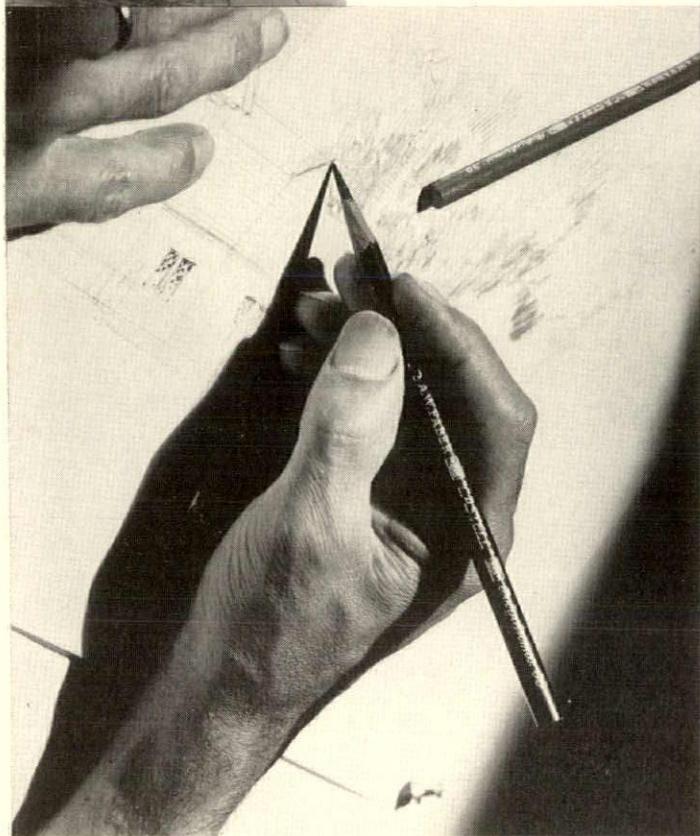
"Castell pencils withstand a lot of punishment."

Edgar Irving Williams

Mattie Edwards Hewitt



Mr. Williams, who is a Fellow of the American Academy in Rome, has interpreted in the residence of Mrs. C. R. Holmes at Sands Point, Long Island, the forms in nature that have engaged his pencil so often.



Mr. Williams uses exclusively the "Castell" Polychromos in his presentation sketches because "they come in such a wide range of fine colors and withstand a lot of punishment without breaking at the point."

The palette that Polychromos offers will satisfy the most exacting architect. 64 colors that span the spectrum.

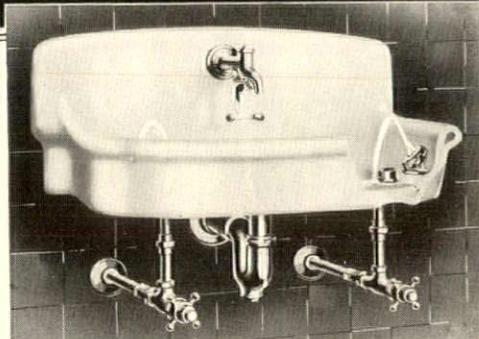
Castell

DRAWING PENCILS

USED BY THE WORLD'S FOREMOST ARCHITECTS

Made in Bavaria in 18 Degrees » A. W. Faber, Inc., Newark, N. J.

Takes care of PEAK PERIODS



No. 610

Especially efficient is this convenient Halsey Taylor unit, built to take care of peak periods. The sanitary two-stream projector can accommodate two at one time, offering in addition a glass filler attachment. And of course assuring the practical automatic stream control with its sanitary safeguards for which Halsey Taylor Drinking Fountains are famed. Write!

The Halsey W. Taylor Co., Warren, Ohio

HALSEY TAYLOR
DRINKING FOUNTAINS

STATEMENT OF THE OWNERSHIP, MANAGEMENT, ETC., REQUIRED BY THE ACT OF CONGRESS OF MARCH 3, 1933.

OF ARCHITECTURE, published monthly at New York, N. Y., for October 1, 1934. 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 March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:

PUBLISHER: Charles Scribner's Sons 507 Fifth Ave., New York, N. Y.
EDITOR: Henry H. Taylor 597 Fifth Ave., New York, N. Y.
MANAGING EDITOR: None
BUSINESS MANAGER: Carroll B. Merritt 597 Fifth Ave., New York, N. Y.

2. That the owners are: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Charles Scribner's Sons 507 Fifth Ave., New York, N. Y.
Charles Scribner 507 Fifth Ave., New York, N. Y.
E. T. S. Lord 597 Fifth Ave., New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: . . . None.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

CARROLL B. MERRITT, *Business Manager.*

Sworn to and subscribed before me this 26th day of September, 1934.

PERCIVAL A. BEDFORD
Notary Public, Queens County
Clerk's No. 99, Register's No. 4191
Certificate filed in New York County
New York County Clerk's No. 8, Register's No. 5B3
Commission expires March 30, 1935.

[real]

PECORA

CALKING
COMPOUND



National City Christian Church Sealed Weather-tight with Pecora

THE National City Christian Church, Washington, D. C. — John Russell Pope, Architect and the George A. Fuller Company, Builders — featured in this issue of ARCHITECTURE, adds another worthy name to the long roll call of buildings that are Pecora-protected.

If your office is not now specifying Pecora Calking Compound, we suggest that you investigate the merits of this exceptional product. Most convincing is the preference it is accorded by leading architects and builders who know by experience that Pecora Calking Compound will not dry out, crack or chip when properly applied.



For further details see Sweet's Catalogue or write direct to us.

Pecora Paint Company Inc.

Fourth Street and Glenwood Avenue
PHILADELPHIA, PA.

Established 1862 by Smith Bowen

ALSO MAKERS OF PECORA MORTAR STAINS

POWERS



Safety Water Mixing Valves

For Shower Baths—Powers mixers prevent scalding caused by failure of cold water supply, or by pressure changes due to use of nearby showers, faucets or flush valves. They keep the temperature of the shower where the bather wants it without any "shots" of cold or scalding hot water.

Group and Gang Showers—Powers mixing valves are also used for the control of water temperatures of showers in groups of from 2 to 20 showers. They may be used to establish a maximum temperature in the hot water supply so as to protect the entire group from danger of scalding or to place the entire group of showers under the control of an attendant.

Zone Showers—Where compulsory bathing is required before entering swimming pools, lane showers are divided into four zones, each controlled by a Powers valve. First zone is maintained at 105° F; second at 90° F; third at 75° F; and fourth at 60° F. Because of its efficiency and its hygienic and sanitary advantages, this type of shower is rapidly increasing in popularity.

Hospital Hydrotherapy—In infant baths, continuous flowing baths, control tables, douche baths, arm and leg baths, colonic irrigation apparatus, photographic baths, and hot water line control, Powers mixing valves are indispensable because of their safety features.

Write for bulletins: The Powers Regulator Co., 2720 Greenview Ave., Chicago or 231 E. 46th St., New York. Offices in 43 Cities—See your phone directory.

Quick Service
whenever required
by competent engineers in 43 cities

The D'Ascenzo Studios

1604 Summer St., Philadelphia, Pa.

Were pleased to collaborate with the donors and Mr. John Russell Pope, Architect, in the designing and building of the memorial stained glass windows in the National City Christian Church, Washington, D. C.

References

The National Cathedral, Washington, D. C. The Cathedral of St. John the Divine, New York City. Riverside Baptist Church, New York City. St. Paul's Episcopal Church, Chestnut Hill, Pa. St. John's Cathedral, Denver, Colorado. Church of the Holy Child, Philadelphia, Pa. East Liberty Presbyterian Church, Pittsburgh, Pa. Washington Memorial Chapel, Valley Forge, Pa.

MODERNIZE

with the



CUTLER MAIL CHUTE

Over fifty years of experience and improvement in Manufacturing Equipment, Product and Service have made the Cutler Mail Chute an outstanding *Hall-mark* of progressive management in office buildings, hotels and apartments.

It is an indispensable feature of the equipment of Public Buildings.

Information and details furnished on request.

CUTLER MAIL CHUTE CO.

General Offices and Factory, ROCHESTER, N.Y.

H. Van B. Magonigle

You surely know his

Architectural Rendering in Wash

—a standard manual for the draftsman, \$3,
but do you also know his

The Nature, Practice and History of Art

—a fascinating epitome of the history and
philosophy of the fine arts—with 128 illus-
trations, 5½ x 8¼ inches, \$2.50

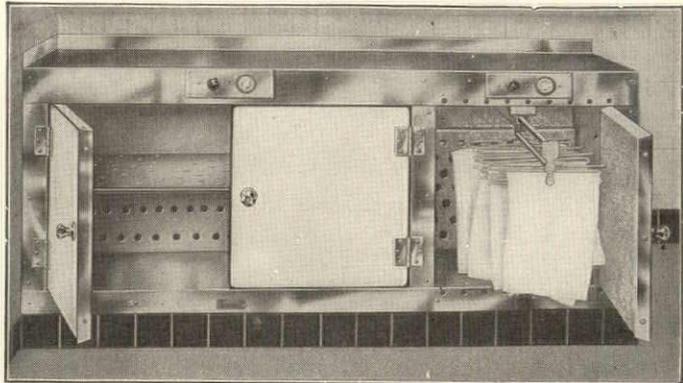
CHARLES SCRIBNER'S SONS, NEW YORK

ADVERTISERS' INDEX

	PAGE
American Telephone & Telegraph Co.	17
Austral Sales Corp.	4th Cover
Bethlehem Steel Co., Inc.	9
Bigelow-Sanford Carpet Company	15
Brunswick-Balke-Collender Company, The	5
Byers Company, A. M.	2d Cover
Carnegie Steel Company	3d Cover
Cutler Mail Chute Company	20
D'Ascenzo Studios, The	20
Douglas Company, The John	7
Faber, Inc., A. W.	18
Libbey-Owens-Ford Glass Company	12
McKeown Brothers Company	21
Pecora Paint Co., Inc.	19
Portland Cement Association	10
Powers Regulator Company	19
Prometheus Electric Corp.	21
Scribner's Sons, Charles	4, 20
Taylor Company, The Halsey W.	18
Vonnegut Hardware Company	22
Youngstown Sheet & Tube Company	11

REFER TO COLORED INSERT FOR REVIEWS OF THE LATEST LITERATURE ON BUILDING PRODUCTS

PROMETHEUS
ELECTRIC PLATE WARMER
and TOWEL DRYE



GIVES LONG, EFFICIENT SERVICE

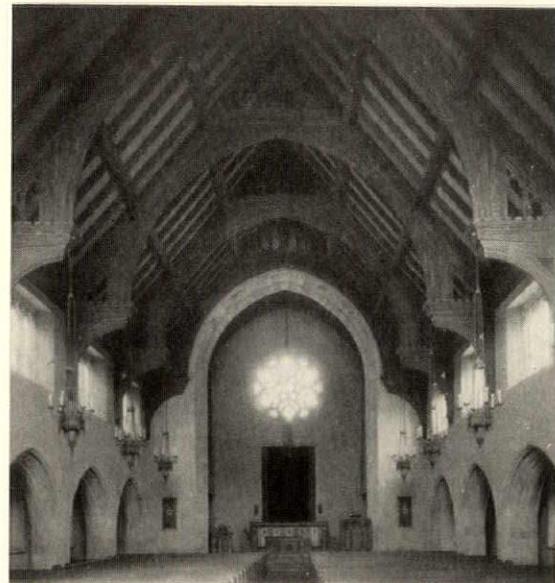
The Prometheus incorporates important features that have won its adoption by leading architects:

1. Provides even heat.
2. Thoroughly insulated.
3. Cannot overheat; a thermostatic cutoff can be furnished to disconnect current automatically.
4. Heating elements last indefinitely.
5. Vitreous porcelain door—won't crack or turn yellow.
6. Approved by National Board of Underwriters.
7. Fully guaranteed.

Write for complete catalog.

MAIL COUPON NOW! →

PROMETHEUS ELECTRIC CORP.
401 West 134th Street, New York
Please send me your new catalog.
Name _____
Address _____
City _____
State _____



Larchmont Avenue Church, Larchmont, N. Y.

OFFICE OF JOHN RUSSELL POPE, ARCHITECT

TIMBER ROOF TRUSSES

McKEOWN BROS. COMPANY

5235 SO. KEELER AVE.

CHICAGO

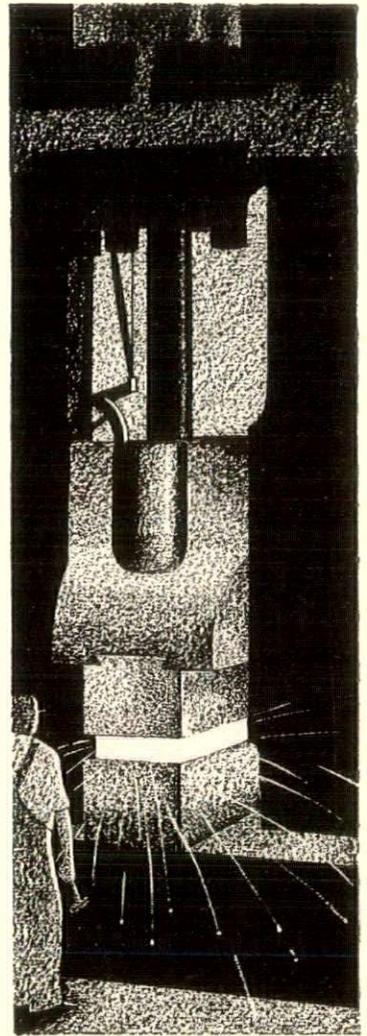
HOW QUALITY PAYS

During the past six months architects and building owners in many cities have awakened to a new appreciation of the real economy of buying for long life rather than low first cost.

While buildings were being modernized, Von Duprin devices which had been in use from twenty to twenty-five years were sent us for reconditioning — and were returned ready for another quarter-century of trouble-free service. The cost was very little because the devices were soundly built in the first place.

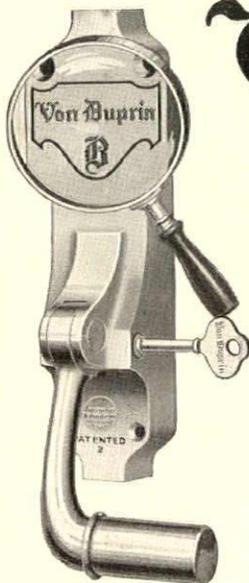
Yet these devices were early models, without the many wear resisting features designed in recent years. The present drop-forged Von Duprins will wear many times as long as those early devices, built shortly after the turn of the century, and will serve well beyond the life of even the best buildings being erected today.

Now, as always, fine workmanship and top-grade materials bring the buyer not only the satisfaction of long, carefree service — but also substantial money savings over the years of use.



VONNEGUT HARDWARE CO.

INDIANAPOLIS, IND.



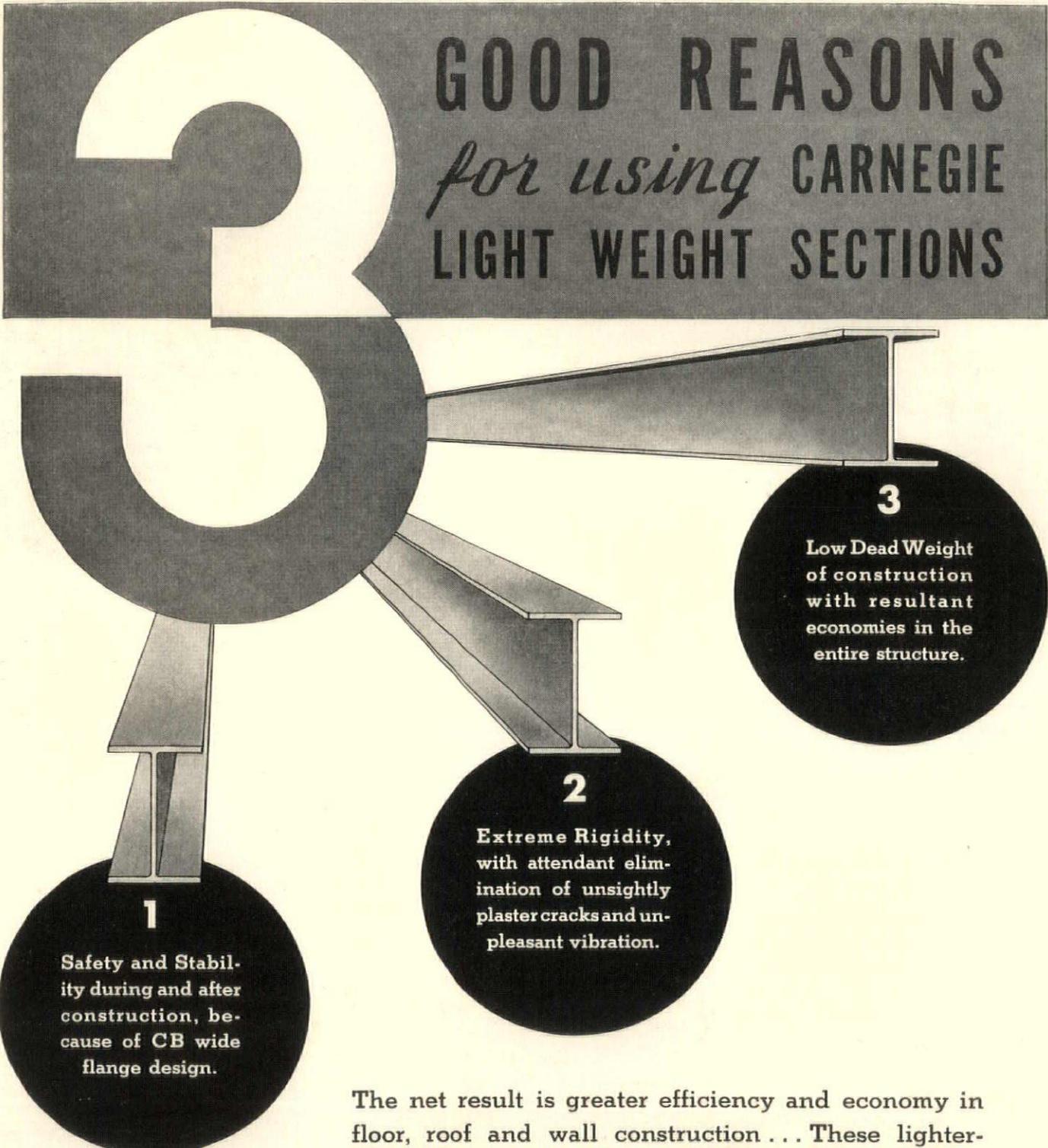
Von Duprin

LISTED AS STANDARD BY UNDERWRITERS' LABORATORIES

See Sweet's
Pages C366-C367

GOOD REASONS

for using **CARNEGIE
LIGHT WEIGHT SECTIONS**



3

Low Dead Weight
of construction
with resultant
economies in the
entire structure.

2

Extreme Rigidity,
with attendant elim-
ination of unsightly
plaster cracks and un-
pleasant vibration.

1

Safety and Stabil-
ity during and after
construction, be-
cause of CB wide
flange design.

The net result is greater efficiency and economy in floor, roof and wall construction... These lighter-weight CB sections are rolled in the form of beams, stanchions and joists. Carnegie engineers will gladly collaborate with you in your designing.

CARNEGIE STEEL COMPANY • PITTSBURGH

Subsidiary of United States Steel Corporation

290

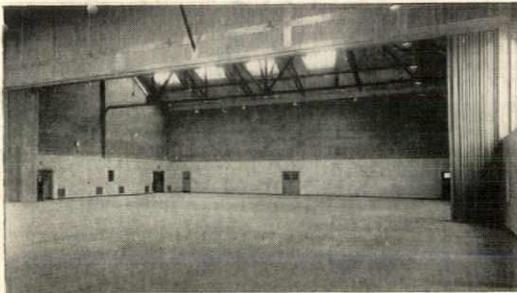


CARNEGIE *LIGHT WEIGHT* SECTIONS

STANDARD SCHOOL EQUIPMENT



Theodore Roosevelt High School, Washington, D. C., A. L. Harris, architect: The school is equipped throughout with AUSTRAL WINDOWS and one very large and one small AUSTRAL FOLDING PARTITION, which the architect pronounced as "masterpieces."



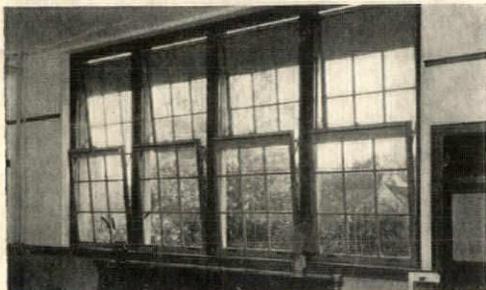
The AUSTRAL FOLDING PARTITION as installed in the Theodore Roosevelt High School; eighty-five feet wide by twenty-four feet high.

AUSTRAL Windows, Wardrobes and Folding Partitions have brought about close to ideal working conditions and have resulted in "architecturally correct" interiors for the classrooms.

Now AUSTRAL has developed another STANDARD for schools, the New AUSTRAL Multi-Use Blackboard Fixture, as illustrated below. It is perfected by Austral Engineers and incorporates the same fine qualities and service which are a part of all AUSTRAL products. The New AUSTRAL Multi-Use Blackboard Fixture is ultra-modern and is the first attempt to make blackboard space more flexible. It is the result of research and study in order to make the classroom more practical and convenient and to facilitate, improve and inspire instruction.

AUSTRAL PRODUCTS do not lessen their high type of workmanship or expertness of manufacture in order to equal other equipment . . . there is no substitute for *QUALITY* and *SERVICE*.

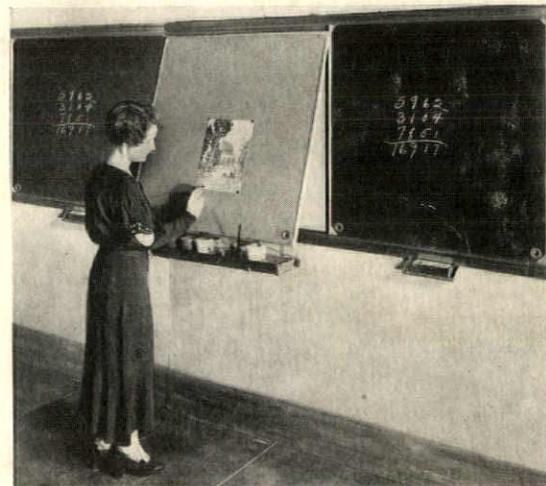
Send for the New AUSTRAL BOOK OF SCHOOLS, containing fine examples of over 400 modern school buildings—also a booklet giving the complete description of the AUSTRAL Blackboard Fixture.



A typical group of AUSTRAL WINDOWS as used in classrooms; ventilation at center without direct draft.



AUSTRAL WARDROBE; note the wide unobstructed opening within easy reach; teacher's closet at left



The New AUSTRAL Multi-Use Blackboard Fixture. Either Blackboard area or, when reversed, Corkboard area are available. Two metal brackets attached to the chalk rail strip permit the leaf to be brought forward into the easel position as shown above. The leaf may be removed entirely and serve as a display board

AUSTRAL SALES CORP.

101 PARK AVENUE

NEW YORK CITY