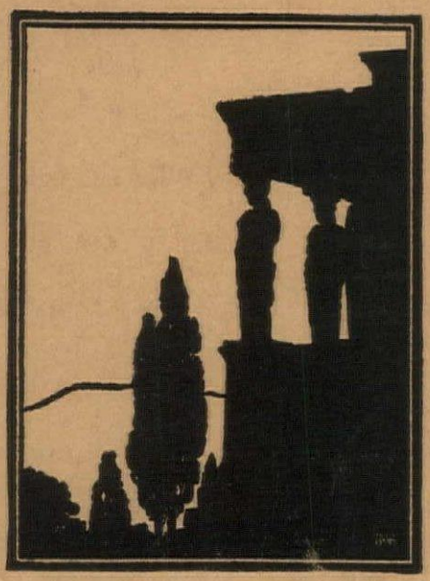
ARCHITECTURE

November 1930



The Liturgical Requirements of Churches

F. R. WEBBER

Blackstone Shop, Chicago—Philip B. Maher

The Jones Library, Amherst—Putnam & Cox

EARLY AMERICAN WINDOWS

A GRADE SCHOOL BY SCHELL LEWIS A GARAGE GROUP

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Wall Units of Atlantic Terra Cotta

Particularly adapted for Interiors

Catalog on Request

An entirely new development—Atlantic Wall Units have every advantage of handmade Terra Cotta.

Great economy is due to the fact that Wall Units are made mechanically to standard size, with every saving attending on quantity production. Quick and easy to erect, there is great saving in labor costs.

The standard size is 8″ x 16″. The bond is 2, 4, 6 or 8 inches. Cove base pieces, inside and exterior mitres, and bull nose, plain or modeled cap pieces, are made as required.

The entire line of Atlantic colors, hundreds in number, is open for selection.

Atlantic Wall Units are particularly useful for lining lobbies and corridors in office buildings, schools and hospitals, replacing less durable materials or materials that are far more expensive. Atlantic Wall Units complete the walls structurally and give a permanently enduring surface, clean and sanitary, that can be completely renovated at any time by washing with soap and water.

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Atlantic Wall Units are manufactured in an entirely new way. The development is one of the greatest importance to architects, owners and builders.

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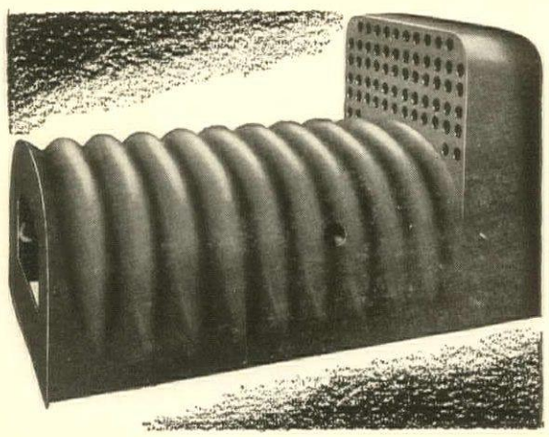
ARCHITECTURE, published by CHARLES SCRIBNER'S SONS, 597 Fifth Avenue, New York, N. Y. November, 1930. Volume LXII, No. 5. Published monthly on the 28th of the month preceding date of issue. Entered as second-class matter, March 30, 1900, at the Post-Office at New York, N. Y., under the Act of March 2, 1879. Yearly subscription rate to members of the architectural and allied professions, $5; to all others, $10.

KEWANEE

Type "C" Electric-Weld STEEL BOILER

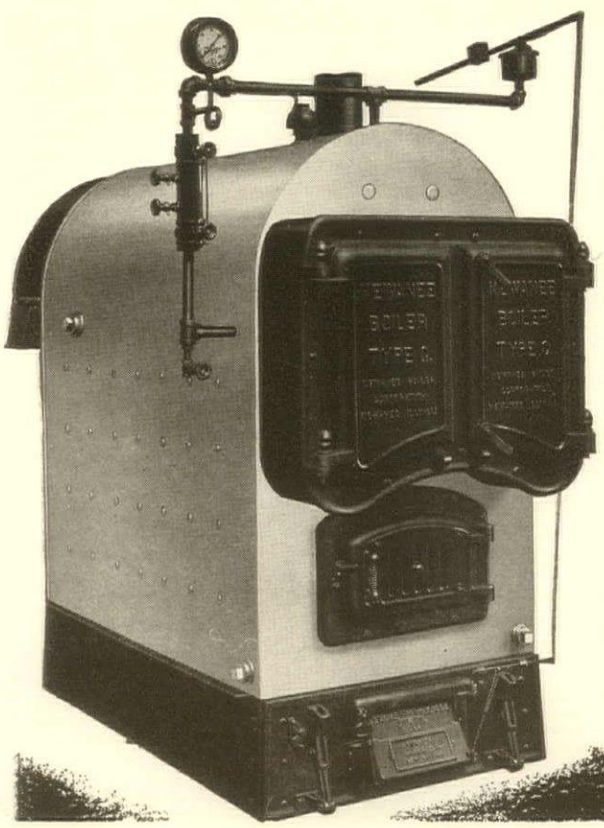


With sixty years experience building steel heating boilers Kewanee has developed the most complete line; to carry every size radiation load; in any kind of building operation.

The Kewanee Type "C" helps to round out that line. There is a clearly defined demand it fits to perfection.

For Coal (Hand or Stoker fired), Oil or Gas. A change from one fuel to another presents no complications.

The Crown Sheet is Corrugated and "Right-Side-Up"



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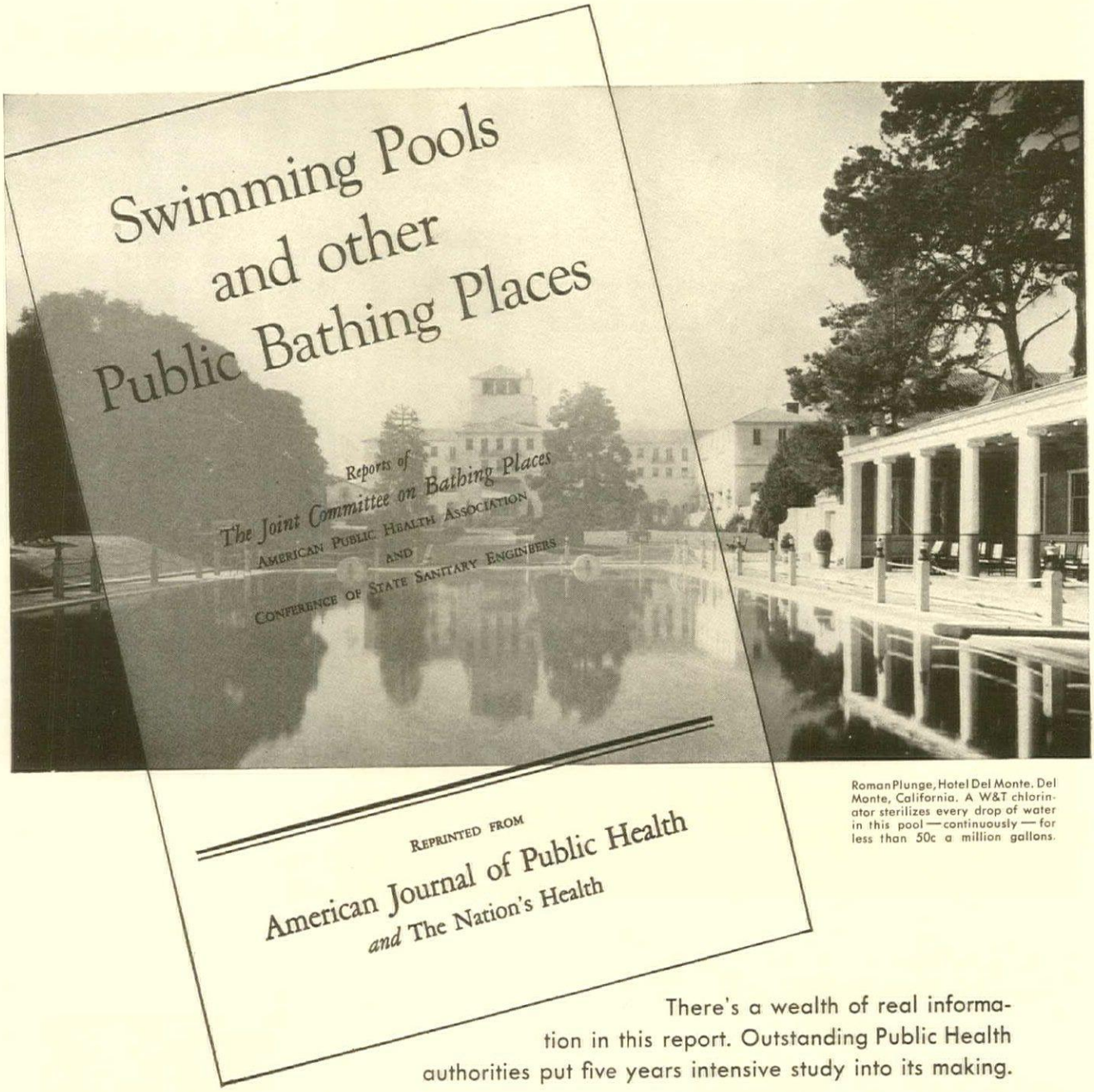

Roman Plunge, Hotel Del Monte. Del Monte, California. A W&T chlorinator sterilizes every drop of water in this pool — continuously — for less than 50c a million gallons.

There's a wealth of real information in this report. Outstanding Public Health authorities put five years intensive study into its making.

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THE FOLDER illustrated describes a service which will prove of value to every architect who is asked—as architects so frequently are, these days—for advice on the subject of decorating interiors.

Good Taste and Sound Economy specified Oak Flooring here

WHICH MATERIAL can take the year-in, year-out beating that faces all apartment-hotel floors? . . . Which will come within a reasonable figure for the original installation cost? . . . Which will call for a minimum of trouble and expense for future up-keep? . . . Which will satisfy the style preferences of hundreds of tenants' wives, each with her own opinions on interior decoration?

OAK was the answer in each case when these problems faced the architect in specifying flooring for the Walnut Park Plaza. And it was the soundest choice from every point of view.

For Oak Flooring has proved itself the most congenial background for any style of furniture, whether it be in the Colonial, English, French, or any other manner. Centuries of building experience have rightly made Oak Flooring a symbol for sound construction, and it has proved itself most economical both in original cost and up-keep. In fact, if faithfully waxed, when necessary, oak floors need never be refinished. Waxing is the simplest and the most effective care that can be given them and their beauty will become greater with the years.

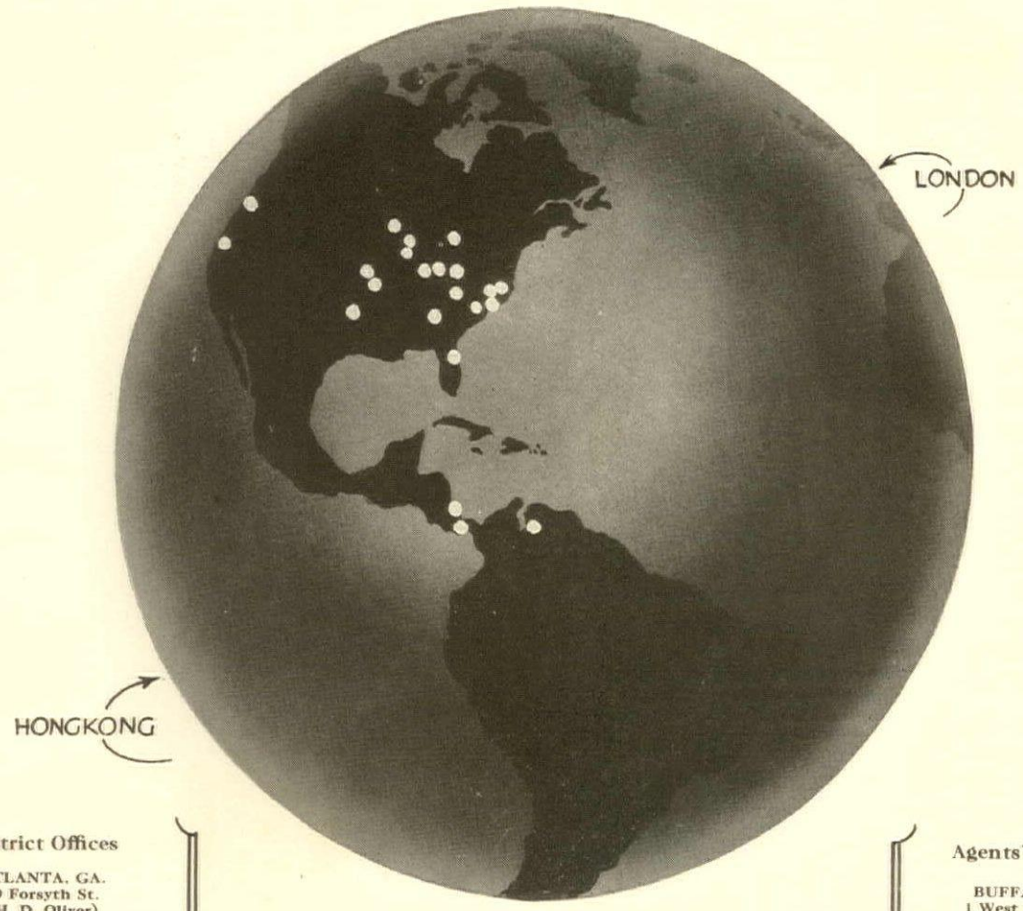
Doubtless you are often meeting such specification problems as those of the architects for the Walnut Park Plaza. If our engineering staff can be of any service we shall be pleased to co-operate with you in every way. . . . Oak Flooring Manufacturers Association of the United States, 1840 Sterick Building, Memphis, Tennessee.

An interesting corner of a breakfast room in one of the apartments

In this fine new Philadelphia apartment-hotel the suites are decorated in almost every period and style. And yet Oak Flooring has proved congenial with them all.
Photographs by courtesy of Walnut Park Plaza, Philadelphia.

THIS MASTER TRADE-MARK *is stamped on the under side of all Oak Flooring produced by members of the Oak Flooring Manufacturers Association of the United States. It is complete protection for you. Every piece is air-seasoned and kiln-dried, then milled, and thoroughly inspected and accurately graded, insuring high quality.*

OAK FLOORING advertising is being continued on an increased scale during 1930. Look for our advertisements in *House & Garden, House Beautiful, Good Housekeeping, Better Homes and Gardens, The Literary Digest, Ladies' Home Journal* and *Small Home.*



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For example: In one case—a department store—where steam consumption stated in "lbs. per sq. ft." seemed phenomenally low, investigation disclosed a "scotch" engineer who was using the air exhausted from a crowded basement to heat the entrance vestibules! After allowing for this *uncounted factor,* the system was found to be *below* average.

Altogether, 45 variable factors may affect the steam consumption of *any* heating system. We have prepared a "check-list" of these 45 variables to help you check your steam consumption figures and estimates. We will be glad to send you a copy of this check-list.

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Heating requirements vary so widely that no one type of heating system can be expected to provide the greatest return on the dollar invested in the heating equipment for all types and sizes of buildings. Realizing this, Warren Webster & Company have consistently developed an entire group of Webster Systems of steam heating to provide *a heating system for every need and every purpose.*

Webster MODERATOR System provides "Controlled by the Weather" heating and makes possible new methods of operation and new standards of economy. Can be applied to any existing steam heating system of sufficient size.

IMPROVED Webster Vacuum System provides distribution balanced from the start—the supply of steam to each radiator is so equalized that all radiators get steam at the same time and in substantially the same proportion, regardless of distance from the boiler. May be supplemented by HYLO Vacuum Variator, permitting manual control by building operator. Applicable to new or existing installations.

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Warren Webster & Company, Camden, N.J.
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This is one of a series of advertisements discussing the factors affecting heating steam consumption. The purpose of the series is to call attention to the methods of heating steam consumption analysis, estimate and heating cost accounting developed by Warren Webster & Company to provide a reliable basis for comparing heating system efficiency. Actual detailed facts and figures of steam consumption of a number of Webster Systems of Steam Heating, prepared in accordance with these methods, are available for your examination.

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We Guarantee Every Sonneborn Job

If our inspection shows a floor is not so greatly deteriorated that a good hardening job is still possible—If Lapidolith, the original concrete floor hardener, is used—If a Sonneborn Service Crew applies Lapidolith—We guarantee such floors to remain wearproof and dustproof for a period of years, dependent on specific conditions of use.

IN your client's behalf you are interested in getting a concrete floor hardening job that will give long and satisfactory service. A Sonneborn job will give you such service.

But unless you insist on Sonneborn doing the hardening the chances are that low price will win the order, and at the prices that concrete floor hardening material can now be bought, there can only be one result—quick and lasting dissatisfaction.

Architects who are interested in jobs that will stand up, will realize the ultimate economy and service of intrusting hardening work to Sonneborn, who guarantee every job, and stand behind their guarantee, and always make good.

The Sonneborn Method calls for the use of Lapidolith, the original concrete floor hardener, and for the correct application of Lapidolith by a Sonneborn Service Crew trained to apply Lapidolith in the right way and in the proper amount.

We are prepared to quote a price in advance direct to the architect so there can be no misunderstanding between architect and contractor about the cost of the work. We can compete on price but do so reluctantly, because we cannot give at a low price as fine a job as that which is possible to supply at a fair price.

To get a job that will reflect credit on the architect and contractor by lasting for years, specify Lapidolith to be applied by Sonneborn under guarantee.

Some Other SONNEBORN PRODUCTS

Hydrocide No. 633
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For preserving and wearproofing wood floors.

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Please send me, without cost or obligation, demonstration samples and literature on:
Lignophol....; Lapidolith....; Hydrocide Colorless....; Fermo....; Hydrocide No. 633....; Hydrocide No. 648....; Hydrocide Integral....; (Check products that interest you.)

Name.....

Address.....

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Position.....

THE MODERNISTIC MOVEMENT

Plate 3

In the Hudson Store, Newcomb-Endicott Building, Detroit, is a children's barber shop known as Circus Land. The design, as created by the architects, Smith, Hinchman & Grylls, is unmistakably modern in character. Only the entrance is shown on this page, but that perhaps is the most unique feature of the interior. This entrance of Roman Travertine is but one part of a very large installation of marble, all of which was finished in our shops.

VERMONT MARBLE COMPANY—PROCTOR, VERMONT

Branches in the larger cities

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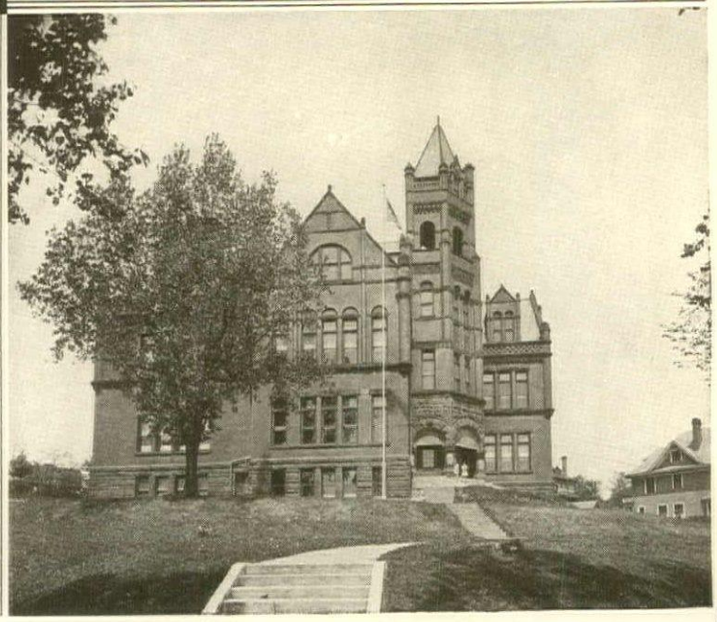
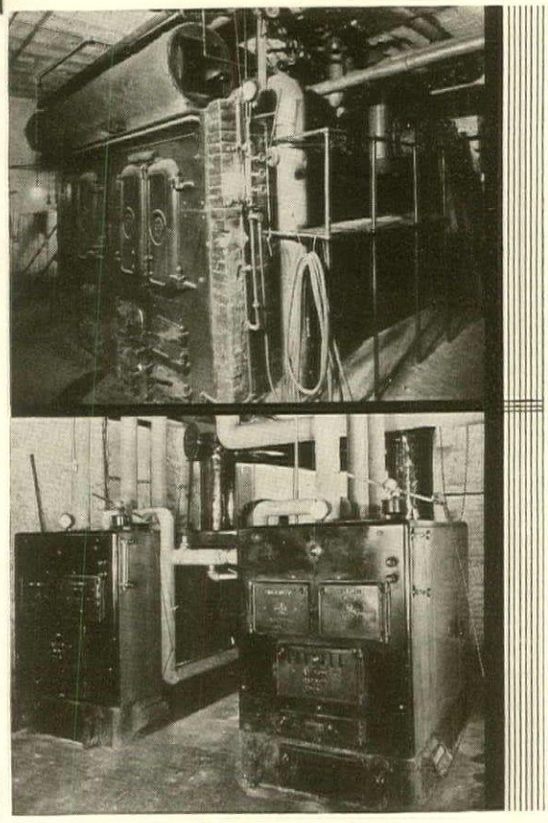


ENDION SCHOOL
DULUTH, MINN.

In July 1929 the Board of Education in Duluth decided to improve the heating system in this school. Two Ideal Redflash Smokeless Boilers were installed. During the previous season 207 tons of coal were consumed. Last season only 102 tons were used. The saving in fuel amounted to $630 with the same janitor firing the boilers that had done the work previously.

And though the temperature in that northern city is extremely severe the students were warm and comfortable—always.

This is just another example of the way Ideal Boilers are saving money and bringing healthful warmth to buildings of every size in every part of the country.



(*Above*) The old inefficient heating plant.

(*Below*) The new money-saving Ideal Boilers.

Our Time Payment Plan makes it possible for owners to modernize now and pay later. A little down and a little each month.

AMERICAN RADIATOR COMPANY
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CITY HALL . . Duluth, Minn.

Thomas J. Shefchik, *Architect* . . Duluth, Minn.
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VACUUM steam heating, with five ventilating units serving various separate departments are in this building. Johnson Dual Control with 120 thermostats and complete control on all ventilating units is installed.

Under this arrangement the departments that are used only during office hours are heated to seventy degrees during such periods of occupancy and are set back to fifty degrees during the time which they are not in use. The police department and signal departments are used twenty-four hours a day and are carried at normal temperatures at all times. In this particular case the steam is purchased and considerable saving results from the use of dual control apparatus.

The ventilating units for the court rooms, council rooms, jury rooms and general office are arranged in accordance with the best ventilation engineering practices, so that air will be supplied at a constant temperature and humidity.

A unique feature of this installation is the heating of the main entrance vestibules by fan units and an arrangement of control by which these vestibules are maintained at a constant temperature, and there is never a draft of cold air due to opening of outside doors, which is a prevalent condition in the ordinary building in Duluth where very severe climatic conditions occur.

"CHARMING ROOM"

A modern floor designed for modern interiors, Armstrong's Embossed Inlaid No. 3220. (Embossed Linoleum is exclusively Armstrong's.)

—and notice how much of its beauty depends on its color-rich floor

DECORATIVE units, charming in themselves, do not always combine pleasingly. When you see a room that immediately appeals to you, the chances are that one unit has taken a firm hand in the situation and made the others behave. And frequently that unit is the floor—the largest decorative area in any interior.

That's why the architect should specify the floor. Selecting floors for clients is a part of that "follow through" that insures satisfaction no matter how the client chooses to decorate. Specify an appropriate color-rich floor of Armstrong's Linoleum—a design in harmony with the spirit of the room or the house—and the probability of client-satisfaction will be high.

Not only will a floor of Armstrong's Linoleum do an effective decorative job today—but it will stay on the job for years. Armstrong Floors are quiet and comfortable under foot because they are resilient. The Accolac-Processed surface is spot-proof and stain-proof. That is why light waxing and polishing keep the surface gleaning. Installation costs are moderate, upkeep costs are reasonable.

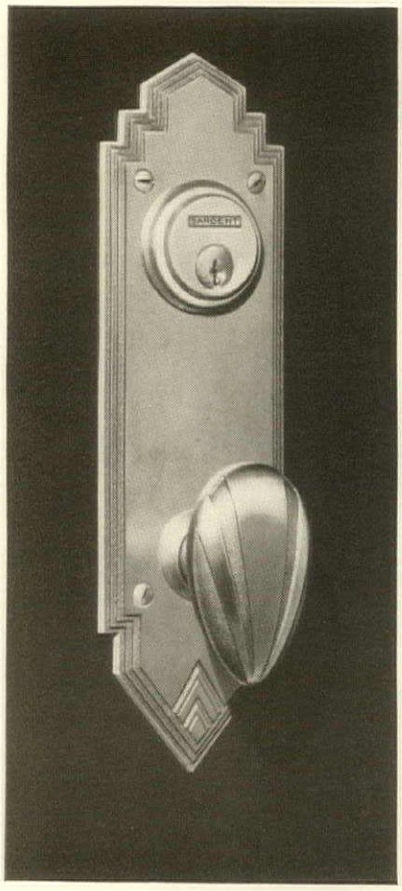
Complete information about these modern floors should be part of your files. We have included the information you want in our current file-size specification book. Colorplates and samples, too, if you wish. Just write to the Armstrong Cork Company, Floor Division, Lancaster, Pa. (Also listed in Sweet's Catalog.)

Armstrong's (A) Product

Armstrong's Linoleum Floors
for every room in the house

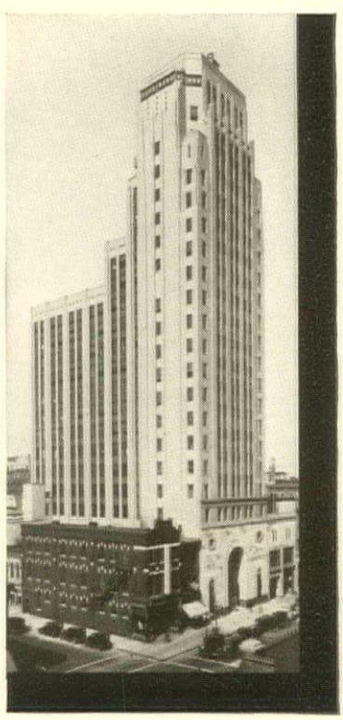
PLAIN · INLAID · EMBOSSED · JASPÉ · PRINTED · LINOTILE *and* ARMSTRONG'S CORK TILE

A MODERN DESIGN IN PERFECT HARMONY



SARGENT'S latest designs are particularly appropriate for the outstanding commercial structures being erected in all sections of the country. They are bold in line and angle, modern in materials, and modern in their mechanical perfection. • Architects find Sargent designs that harmonize with their decorative plans. Engineers and builders recognize the expertness of Sargent workmanship. Owners and constant users receive a smooth and lasting service that is unexcelled by any other hardware equipment. • Sargent Hardware adds to the permanent worth of any structure—office building, hotel, apartment, hospital, school, small Spanish bungalow or stately Colonial residence. For each there are Sargent designs, of solid brass or bronze, that may be considered a definite promise of perfect and enduring operation. All Sargent Hardware is of the quality to maintain Sargent's long-established reputation for excellence. Sargent & Co., New Haven, Conn. In New York City — Builders' Hardware Division and Showroom, 295 Madison Avenue; Warehouse, 94 Centre Street. In Chicago — 150 North Wacker Drive (at Randolph).

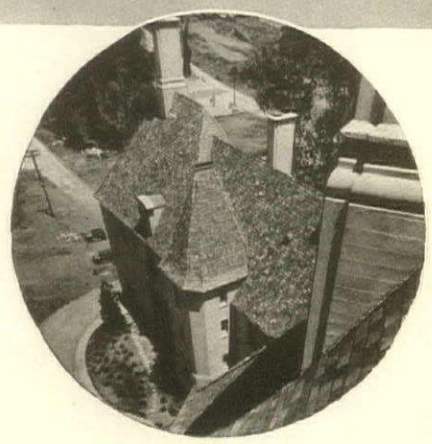
● *The Central National Bank Building, Richmond, Virginia. John Eberson, New York, Carneal, Johnston & Wright, Richmond, architects—fully equipped with Sargent Hardware. These photographs show plainly how perfectly the Sargent design blends with exterior and interior decorations.*



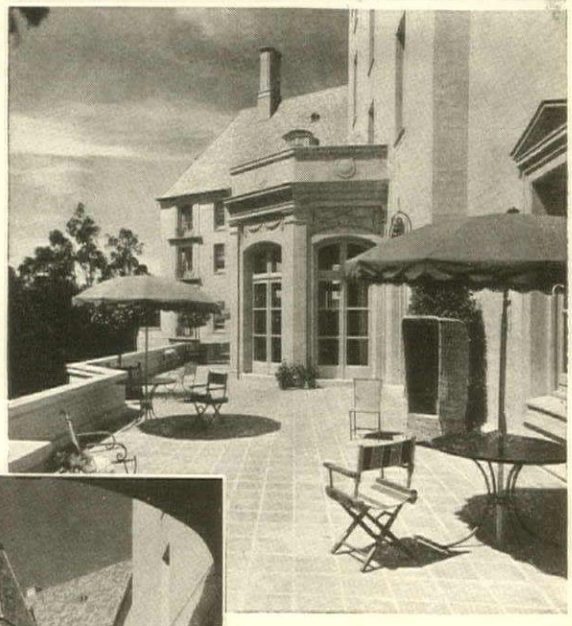
SARGENT

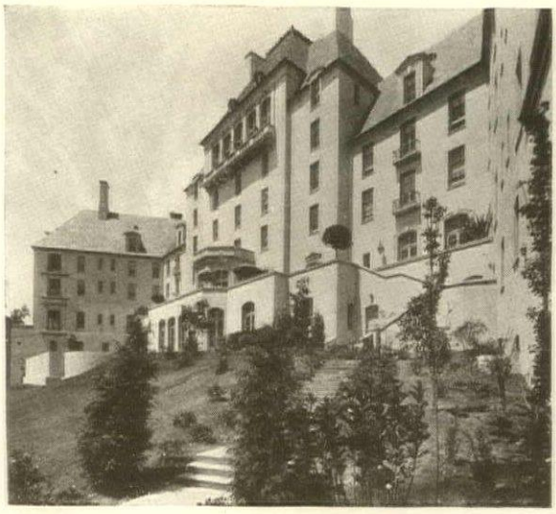
LOCKS AND HARDWARE

MONOLITHIC CONCRETE

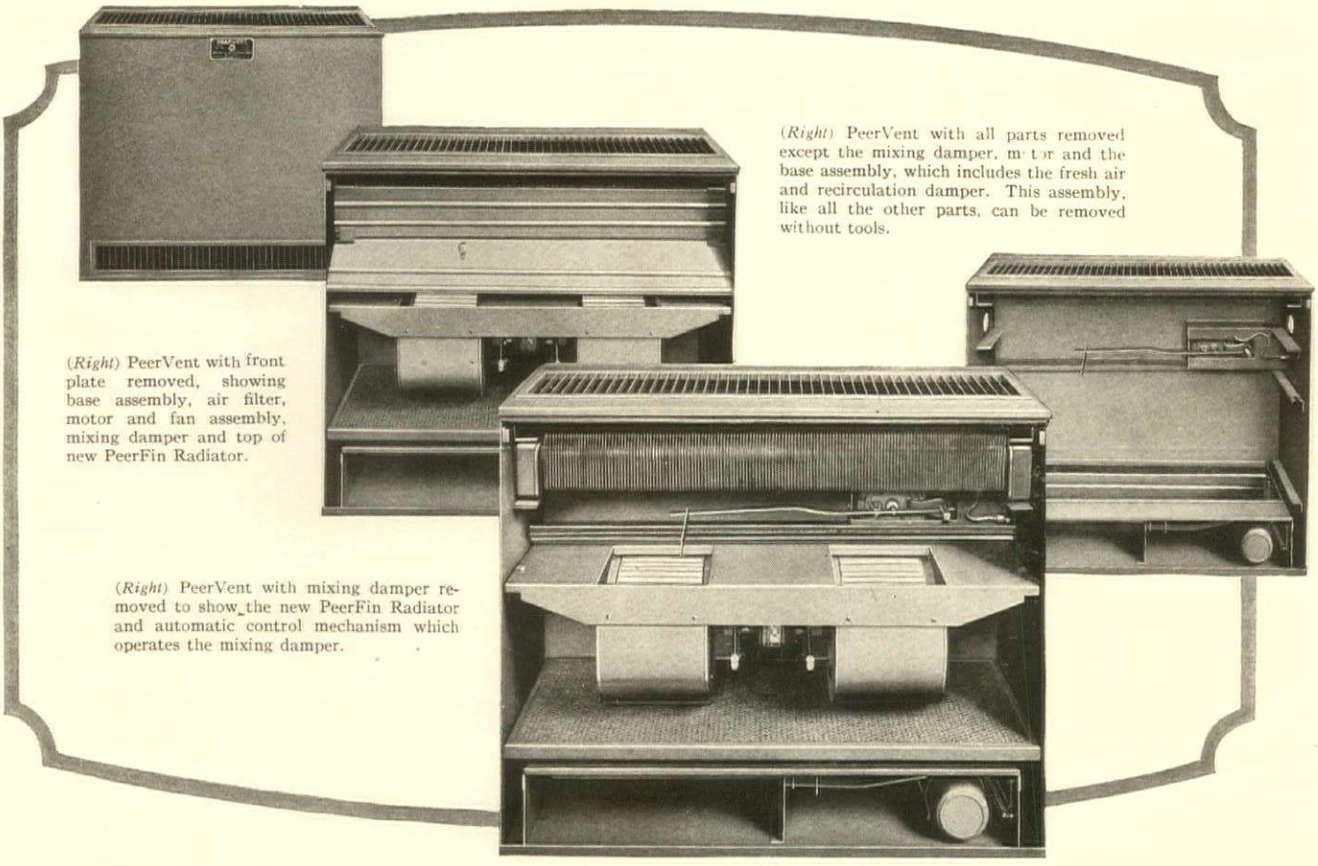


IN this structure, the floors and walls —interior and exterior—are of reinforced monolithic concrete. The exterior has no finishing coat—the concrete was purposely left just as it came from the forms. Structural frame is of steel. Exterior ornamentation was *cast in place*. So built, this edifice offers positive assurance of firesafety and long life, with little if any structural maintenance through the years.





Views are of Building for Christian Science Benevolent Association for Pacific Coast in San Francisco, California. HenryH. Gutterson, Architect; Walter L. Huber, Structural Engineer; George Wagner, Contractor—all of San Francisco, California

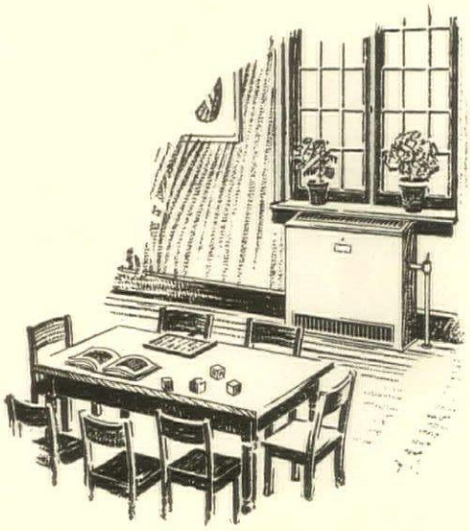


(*Right*) PeerVent with front plate removed, showing base assembly, air filter, motor and fan assembly, mixing damper and top of new PeerFin Radiator.

(*Right*) PeerVent with all parts removed except the mixing damper, motor and the base assembly, which includes the fresh air and recirculation damper. This assembly, like all the other parts, can be removed without tools.

(*Right*) PeerVent with mixing damper removed to show the new PeerFin Radiator and automatic control mechanism which operates the mixing damper.

Advantages of the Improved PeerVent Unit System of Heating and Ventilating



THE PeerVent Unit System permits independent service for each room with ample flexibility for changing weather conditions. Due to the exposure, window area and other factors, some rooms are harder to heat than others in the same building. It is here that independent heat control is provided by the use of PeerVents.

It is impossible to determine exactly the amount of heat necessary on any given day due to changes in direction and velocity of the wind. With PeerVents you have absolute control over these factors and the heat can be regulated by either the hand-operated or the thermostat-operated control on the PeerVent.

Only rooms in use need be operated. Therefore, all expense for ventilating unoccupied rooms is eliminated.

PeerVents offer thorough ventilation without drafts. The heated fresh air is so diffused upon entering the room that it is possible to stand or sit close to the PeerVent without discomfort.

PeerVents are absolutely quiet in operation. They are also easy to install in old buildings. Write for the Peerless illustrated catalog.

PEERVENT

PEERLESS UNIT VENTILATION CO., Inc.
BRIDGEPORT, CONNECTICUT
Pioneers in Unit Ventilation
Resident Engineers in Principal Cities from Coast to Coast

New Ventilating revolutionizes school

millions of dollars will be saved in fuel, maintenance and lowered building costs

OUT of many years of study, research, and practical experience in the field of school ventilation a new science has evolved which is the basis of a new ventilation art.

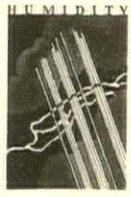
This art in many ways is contrary to past practice.

Most present and past practice has been based on the assumption that harmful and injurious effects resulted from the inhalation of respirated air. Therefore the object of most ventilation systems was to continuously flood the room with outdoor air in order to dissipate the so-called "crowd poison."

Scientists of today however, as a result of observation and practical experimentation, assert that the theory of outdoor air being the vital requirement of ventilation is unsound. They maintain that the indoor conditions essential to health, comfort and alertness are: 1. Atmospheric activity. 2. Relative humidity. 3. Control of room temperature.

The acceptance of these facts provides a basis for the new Herman Nelson System of Ventilation. This system provides to a nicety the requirements that science now prescribes. With this system instead of introducing a fixed amount of outdoor air into a room, out-of-door air is admitted only when required to control temperature and dissipate odors.

With the Herman Nelson System, proper indoor atmospheric conditions may be maintained automatically through proper



air motion, humidity limitations, and temperature control. Such outdoor air as may be required for the removal of excess body heat and odors is tempered to

The HERMAN NELSON

BELFAST, ME. PORTLAND, ME. BOSTON SPRINGFIELD, MASS. PROVIDENCE, R. I. NEW YORK CITY SYRACUSE ALBANY ROCHESTER

BUFFALO PHILADELPHIA SCRANTON WILKES-BARRE HARRISBURG PITTSBURGH JOHNSTOWN, PA. WHEELING, W. VA. WASHINGTON, D. C.

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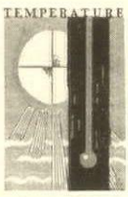
LOS ANGELES VANCOUVER TORONTO WINNIPEG, MAN. CALGARY LONDON OSLO MELBOURNE TOKIO, OSAKA

System— ventilation practice!

just the right degree through inner-mixture with room air—but is not preheated.

It is estimated that the Herman Nelson System of Ventilation will save approximately half the fuel bill, for it is no longer necessary to heat the large volume of cold outside air, that in the past was admitted into the schoolroom during the winter months.

Further economies result in building construction through the use of smaller boilers, reduced pipe size, and through the elimination of vent flues.



The Her-Nel-Co Ventilator is the principal equipment used in the Herman Nelson System of Ventilation. This machine together with the required amount of direct radiation will amply serve the schoolroom.

The cabinet is finished in beautiful morocco enamel with bronzed fittings. The cabinet contains the Herman Nelson Wedge Core radiator for heating the room air which circulates through it—a fan motor for quietly forcing air circulation, a filter for cleansing air of dust and dirt, a steam jet humidifier and dampers either automatically or hand controlled for regulating the admission and intermixture of indoor and outdoor air.

While the Herman Nelson System of Ventilation is a new and radical departure from all previous schoolroom ventilation practices, it is based on fundamental scientific facts long recognized by leading hygienists and engineers. It is welcomed as the most practical solution of the school ventilating problem, for it is the most positive application of the laws which modern research has discovered.

Univent System of Ventilation

The Herman Nelson System of Ventilation is the logical development of the Univent System which has won universal recognition for its outstanding results. The Univent System meets in the simplest, most practical way, those conditions where a continuous supply of outdoor air is desired or specified by state code.

In a like manner the Herman Nelson System of Ventilation fulfills modern ventilation standards with added savings in heating installation and operation costs.

For further information, check coupon and send to The Herman Nelson Corporation, Moline, Illinois

CORPORATION MOLINE ILLINOIS

Makers of the *Herman Nelson System of Ventilation*, the *Univent System of Ventilation*, the *Herman Nelson Invisible Radiator*, the *Herman Nelson HiJet Heater*, and other heating and ventilating equipment.

THE HERMAN NELSON CORPORATION A-4
Moline, Illinois
Please send me without obligation, the book "School Ventilation Practice—Yesterday, Today and Tomorrow"

Name.....

Address.....

City..... *State*.....
Position (Architect, School Superintendent, etc.)
.....

"SHADOW LAWN"
Residence Hubert T. Parsons
West End, New Jersey

Horace L. Trumbauer, Philadelphia, *Architect*
Thompson-Starrett Company
General Contractors

Woolworth Head Uses Sliding Doors

In "Shadow Lawn," the new home of Mr. Hubert T. Parsons, President of The Woolworth Co., sliding doors have been largely used, and they have been equipped with McCabe Hangers.

Sliding Doors Were Used Because

1. They add to useable space.
2. They add to the light.
3. Can be closed without shifting furniture.
4. Rugs and carpet can be placed close to wall.
5. Insure privacy when wanted—unseen when not wanted.
6. Better permit the use of portieres.

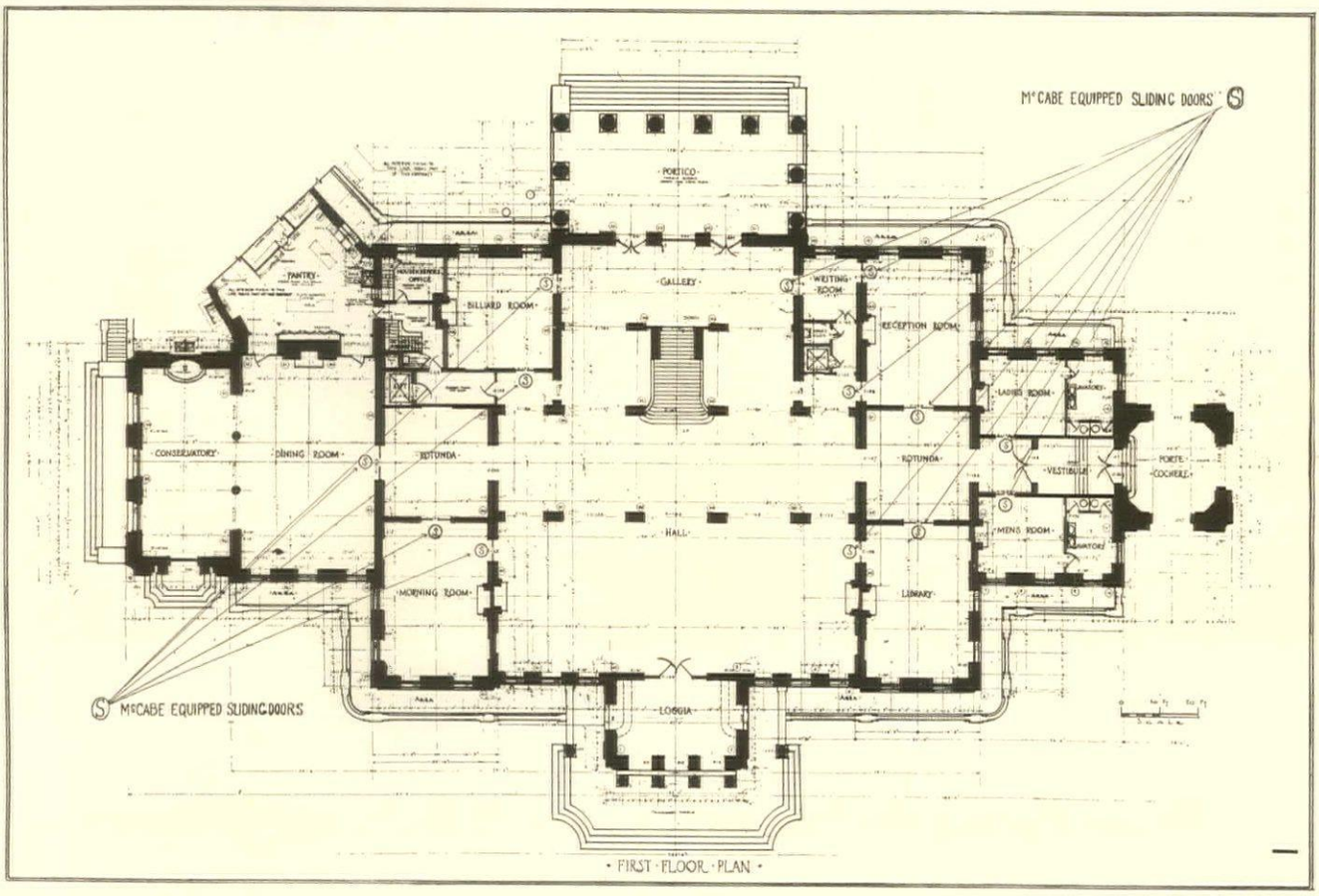
McCabe Hangers Were Specified Because

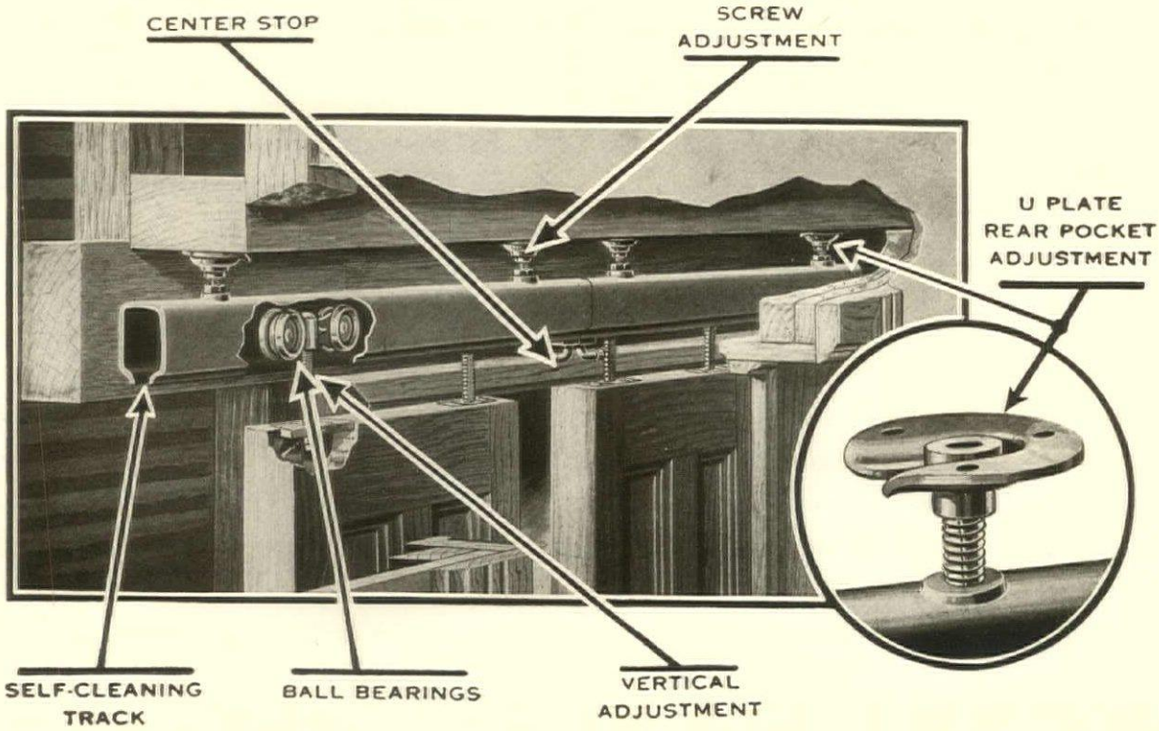
1. Of self-cleaning track.
2. Of Ball-Bearing carriages.
3. Of adjustment accessibility.
4. Of quiet and ease of operation.

In fine homes and buildings everywhere in the United States and abroad, McCabe Hangers are silently and efficiently performing their duties. Authoritative information may be had from our Engineering Department.

McCABE HANGER MFG. CO.

425-427 West 25th Street, New York City

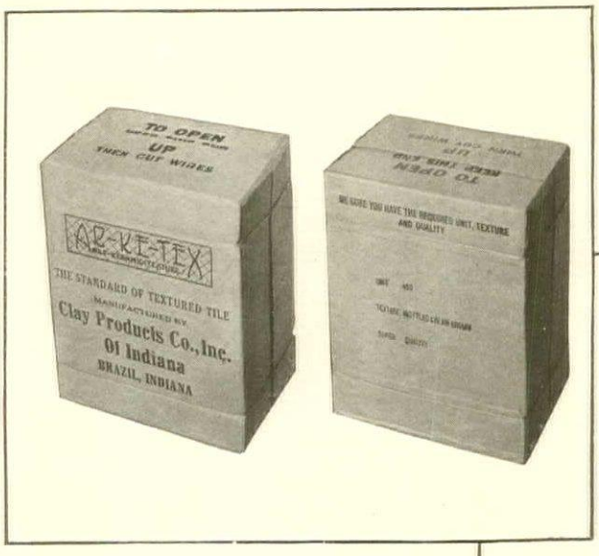




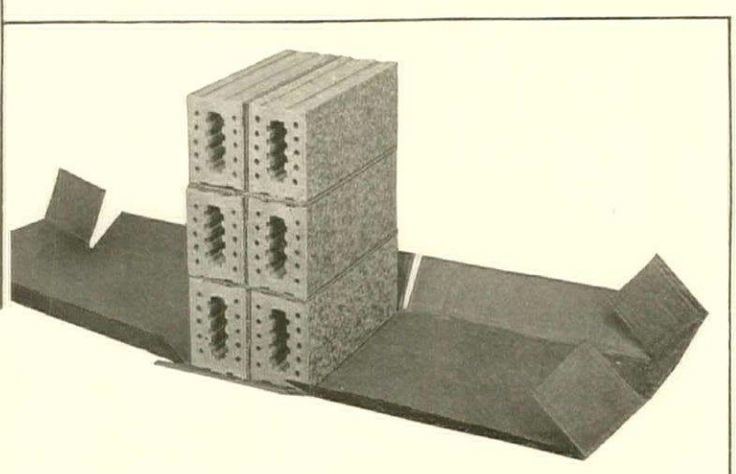
McCABE SLIDING DOOR HANGER

Typical of the 112 sets used at "Shadow Lawn"

AR-KE-TEX Tile in Cartons



• Protection From Kiln to Wall . . .



Now Mr. Architect . . .

Here's assurance, Mr. Architect, that the beautiful AR-KE-TEX Tile you specify will be delivered on the job and on the scaffold as fresh and clean as when it left the kilns. All standard units of super-quality AR-KE-TEX Tile are packed in heavy fiber cartons with thick fiber board between each unit. Each carton is automatically sealed.

This is another forward step of Clay Products Co., Inc., of Indiana, which has always made the finest textured tile and now by the most modern packing method known, makes certain that it gets into the finished wall as specified. A step in keeping with the constant effort we are making to improve our product and service, as well as to develop new textures and create new wall effects.

Here Mr. Contractor . . .

Clay Products Company's new carton packing gives faster and easier handling in trucking from car to job; more economical moving on the job and to the scaffold to say nothing of the satisfaction in having textured tile ready to go in the wall, fresh, clean and free from any damage which might occur in handling anywhere along the line.

With these tough, durable cartons, there is no searching for sizes and shapes. Each carton containing from three to six standard units is plainly marked with the quality, texture and size. The cartons are securely bound with two bands of wire. When these wires are cut on the scaffold, the cartons fall open of themselves exposing the tile ready for the mason to place it in the wall.

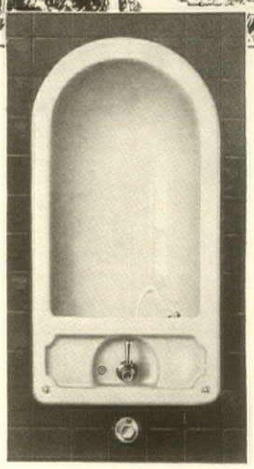
CLAY PRODUCTS CO., Inc.
OF INDIANA

AR-KE-TEX
ART-CERAMIC-TEXTURE

FACTORIES AT
BRAZIL, INDIANA

THE STANDARD OF TEXTURED TILE

Doctor's Hospital, New York
Crow, Lewis & Wick, Arch'ts—T. J. Byrne Co., Inc., Plbg. Contractors



No. 626

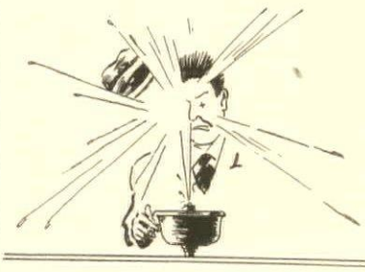
An attractive recessed Vitreous China Wall Type Fountain used in the building shown. Practical automatic stream control, two-stream projector —water always uniform in height regardless of pressure, no lips need touch or contaminate source of supply!

This NEW YORK HOSPITAL

. . . takes its place among the most modernly equipped in the country. It is only logical that, in line with the completeness of its appointments and conveniences, the architects should choose Halsey Taylor Drinking Fountains for installation throughout. • See Sweet's, or write for details of our line—plain or colored! • The Halsey W. Taylor Company, Warren, Ohio.

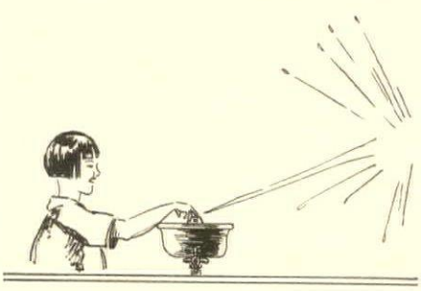
HALSEY TAYLOR
DRINKING FOUNTAINS

Did This Ever Happen to You
...or your clients?



Hey! What's the idea of hitting him in the eye—he wanted a drink, not a shower.

Well, well, where's the water? Oh, there it is, so low his lips will have to touch the jet—and that's serious—it's unsanitary.

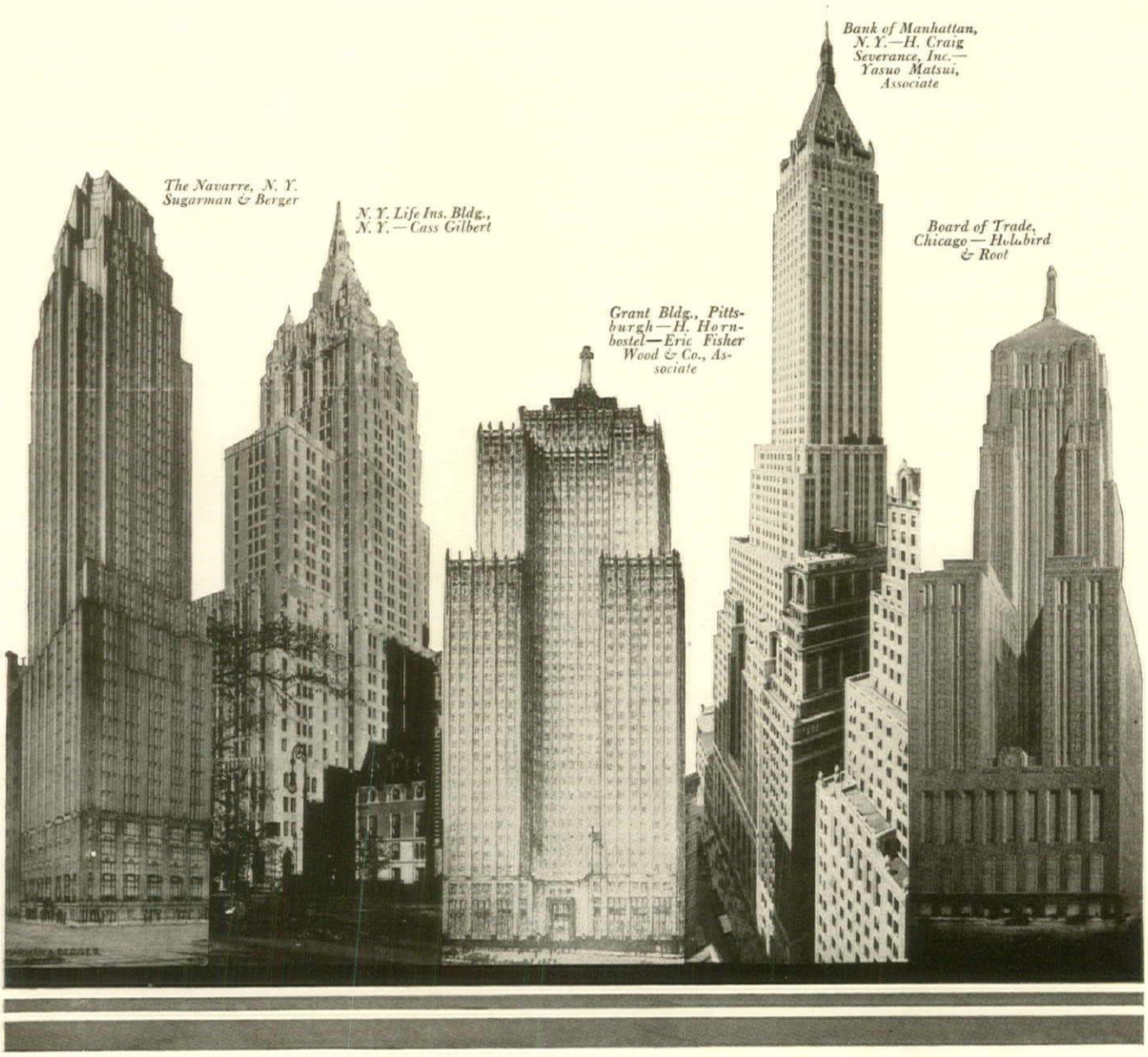


The child, bless her heart. She likes to mess things up. You did, too, when you were her age. There goes the water squirting on the walls and the floor.

BUT—when Halsey Taylor Drinking Fountains are installed, there are none of these annoyances to you or your client,—because of practical, patented

AUTOMATIC STREAM CONTROL AND TWO STREAM PROJECTOR

▼



ON THE NATION'S SKYLINE

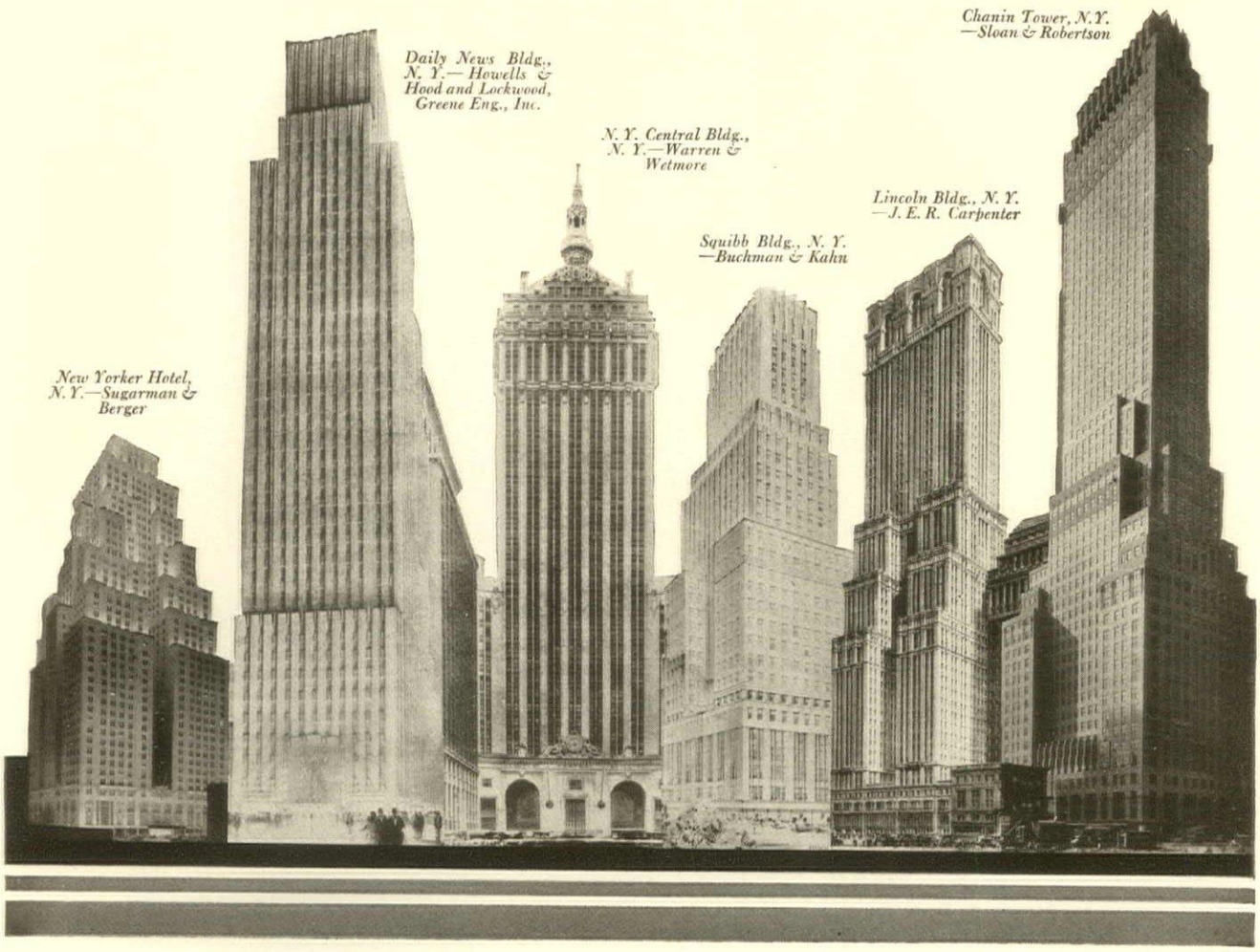
The finest examples of modern building design and construction use

CARRARA GLASS

IN lobbies and corridors—in washrooms and toilets of the country's notable buildings—you'll find partitions and walls of Carrara, the modern structural glass. Some walls will be mirror-like black . . . others will shine with a highly polished, gleaming white surface . . . still others will be white with a slightly rippled surface.

Carrara has the sturdy strength needed for walls and partitions. But it is a decorative as well as a structural material. Carrara's brilliant *beauty* is ideal in carrying out modern decorative effects. In addition, this glass has *hardness,* which makes it impervious to water, chemicals, oils and pencil marks. And *density,* too. It never absorbs dampness—or odors. Its surface is easily kept clean and sanitary.

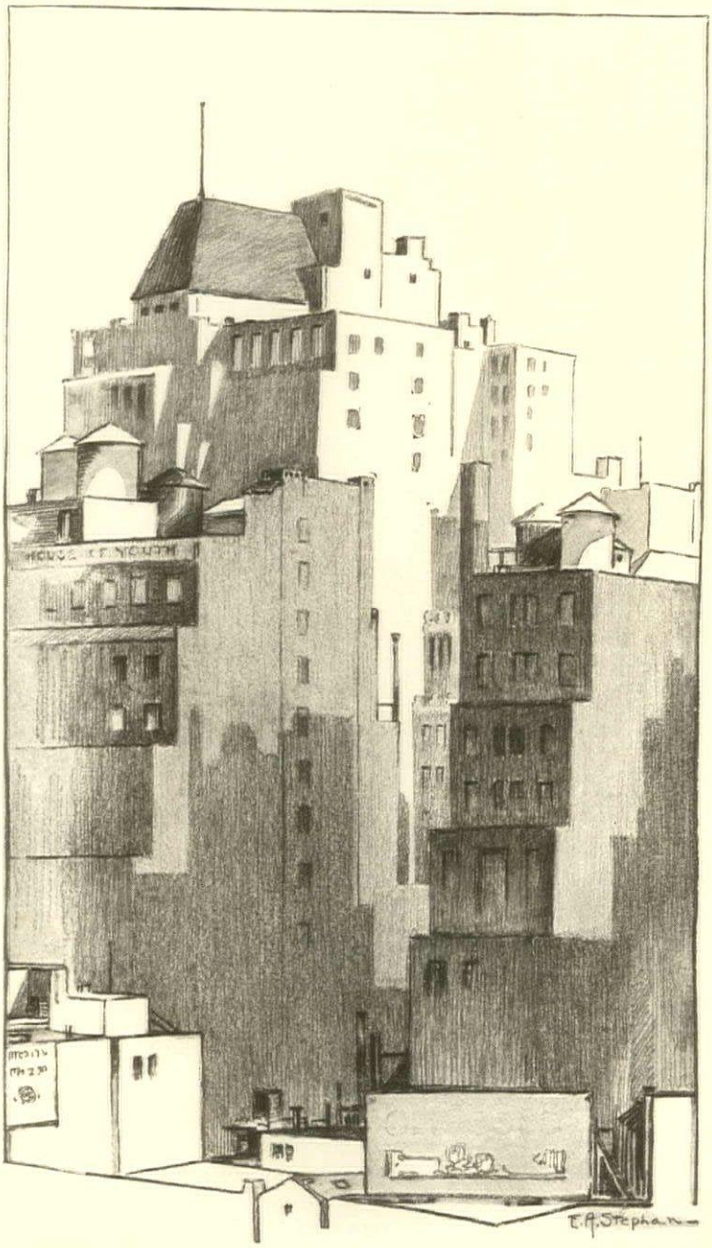
Carrara can be handled and installed like marble. It comes in slabs of practical sizes. There are three types—Polished Black, Polished White, and Frostex, which is the white glass with a rippled surface. For full information on Carrara Glass and its uses, write to the Pittsburgh Plate Glass Company, Carrara Dept., Grant Building, Pittsburgh, Pa.



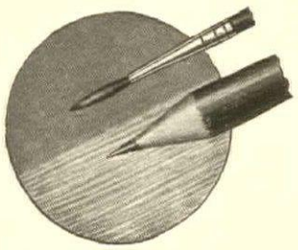
A few more notable Carrara Installations

CITY	BUILDING	ARCHITECT
Boston, Mass.	John Hancock Building	*Parker, Thomas & Rice*
Brooklyn, N.Y.	Albee Theatre	*Thomas W. Lamb*
Buffalo, N.Y.	N.Y. Central Passenger Station	*Fellheimer & Wagner*
Chicago, Ill.	State Washington	*W. W. Ahlschlager*
Chicago, Ill.	Tribune Tower	*Howells & Hood*
Cincinnati, O.	Dixie Terminal	*Garber & Woodward*
Detroit, Mich.	S. S. Kresge Administration Building	*Albert Kahn, Inc.*
Harrisburg, Pa.	State Office Building	*Gehron & Ross*
Kansas City, Mo.	Children's Nursery Hospital	*Wight & Wight*
Kansas City, Mo.	Kansas City Club	*Holabird & Roche*
New York City	Bowery Bank	*York & Sawyer*
New York City	1 Cedar Street	*Clinton & Russell*
New York City	Butterick Building	*Russell G. Cory*
New York City	Consolidated Gas Building	*T. E. Murray, Inc.* / *Warren & Wetmore*
Philadelphia, Pa.	Penn. Mutual Building	*J. T. Windrim*
Philadelphia, Pa.	Widener Building	*Horace Trumbauer*
Pittsburgh, Pa.	Kaufmann's Store (New Interior)	*Janssen & Cocken*
Pittsburgh, Pa.	Mellon Bank	*Trowbridge & Livingston—E. P. Mellon*
Pittsburgh, Pa.	City-County Building	*Edward B. Lee*

A complete line of entirely NEW PENCILS for sketching

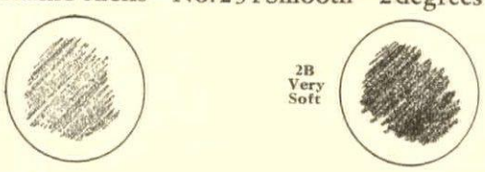


Eberhard Faber Black Chalk and Sanguin Pencils are perfect for sketchers and designers. The above sketch was done by Elmer A. Stephan, Director of Art, Pittsburgh (Pa.) Public Schools

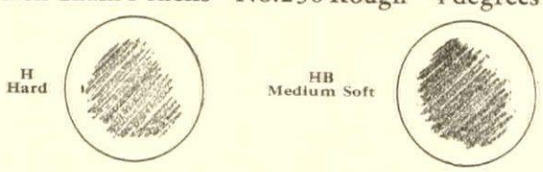


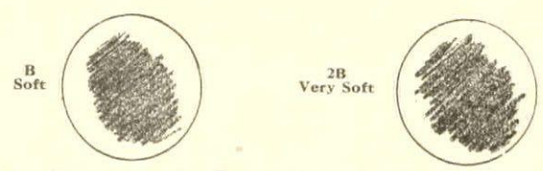
With water and brush, these pencils give smooth wash effects

Black Chalk Pencils—No. 231 Smooth—2 degrees



Black Chalk Pencils—No. 230 Rough—4 degrees





Also Sanguin—the Terra Cotta Colored Pencil

★

EBERHARD FABER

EBERHARD FABER PENCIL COMPANY
Dept. A11, 37 Greenpoint Avenue, Brooklyn, New York

Gentlemen: Enclosed is $1.00 for which please send me your special offer of,

2 Black Chalk Crayons No. 2822, Soft—Med. Soft.
1 Sanguin Pencil No. 2826
3 Black Chalk Pencils No. 230, Rough, H—HB—2B
2 Black Chalk Pencils No. 231, Smooth, HB—2B

Name_____

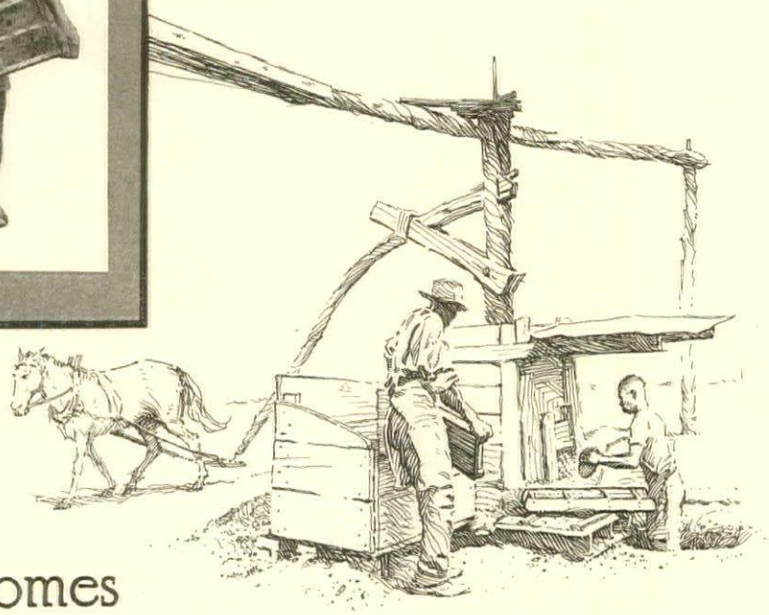
Address_____

City_____ State_____

Dealer's Name_____

(PLEASE PRINT PLAINLY)

This is 90 year old Sam. His daddy and great grandaddy before him made brick. He was born in a brick yard cabin. Lives all by himself in one now. A great old character who certainly does know hand brick making.



Now Comes Real Honest-To-Goodness Hand Made Brick From Old Virginy

OF course as you know, we always have made mould-made brick. Ones that have many of the ear marks of hand-mades, in their softened edges and natural off-shapeness.

Interesting as these mould-mades surely are, still if you want a brick giving a true reflection of those fine old structures of Jefferson's days, you just plain must have the real hand-made ones. Not the usual hand-mades that are speed moulded and smooth. But the real-honest-to-goodness ones made slowly with care. Made in the same way as they made them way back there. Back there, when a mule driven pug mill, a moulder in a pit, and two take-off boys were *the* factory.

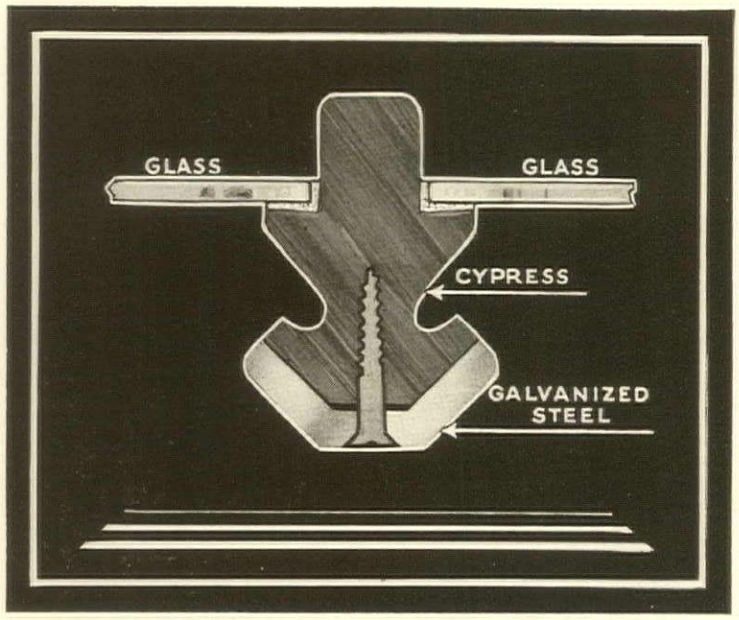
Such brick made in the unhurried way of those long ago yester years, had natural sand seams and crazes. Likewise off-shape edges. All of which in such interesting variance and naturalness, as to give an effect just plain impossible to secure in any other way.

We have searched all over Virginia for old-time darkies who were literally "born in a brick yard." These are the old-timers who are now making our honest-to-goodness hand-mades. We are calling them Jefferson Hand-Mades because they are so truly like those with which he built Monticello.

We are moulding them in both the standard and Jefferson over-size. Glad to send you a panel of either. Or a nest of five or six of the bricks themselves. Their colors are soft as any age old brick made a couple of hundred years ago. That's just one of the ways in which our brick are unlike any other made in old Virginia.

OLD VIRGINIA BRICK

Old Virginia Brick Company
Salem, Virginia



Offering 250 Dollars For A Name

YEARS ago we started using a combination metal and cypress roof bar for supporting the glass in greenhouses and conservatories. For the last three years we have been perfecting it from a structural side, while at the same time making possible many refinements to the framing, giving an added lightness and attractiveness.

Now that the series of tests have abundantly proven the superiority of the bar, we are seeking a suitable name. One that will mean something structurally to architects, while at the same time be short and easy for others to remember.

For such a name we offer outright, 250 dollars. All architects and any draftsmen now in employ of an architect are eligible.

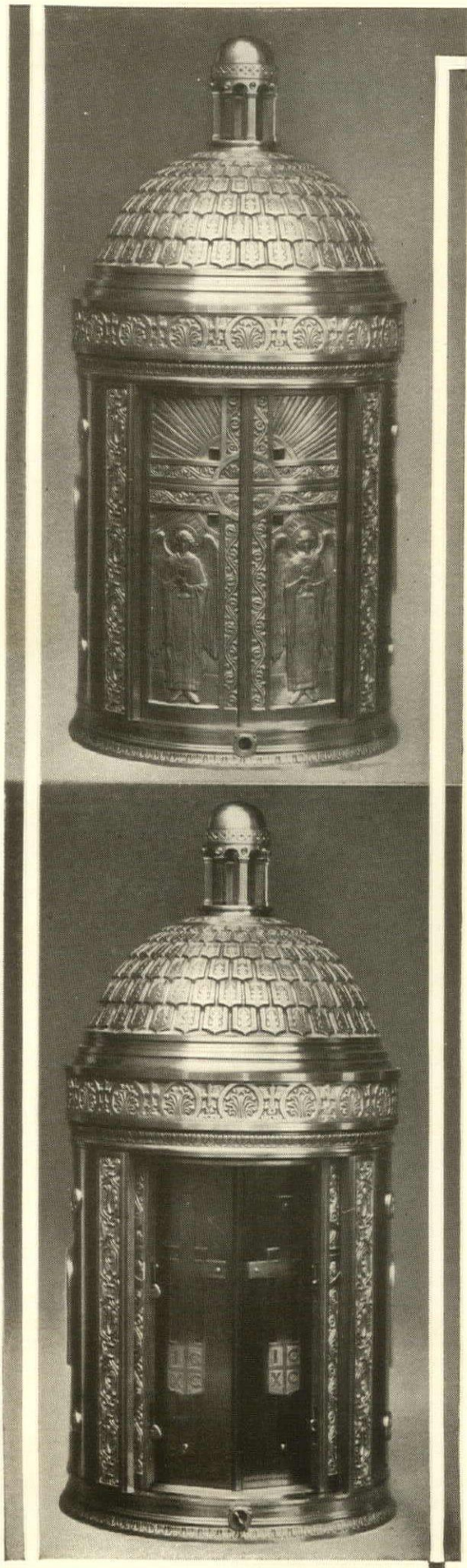
Write at once for full particulars. Offer expires December first. Award made December tenth, in ample time for Christmas use.

Lord & Burnham Co.

IRVINGTON, N. Y.

Chicago, Illinois — Offices in Many Other Principal Cities — Toronto, Canada

FOR FOUR GENERATIONS BUILDERS OF GREENHOUSES



The Ecclesiastical Department of **THE GORHAM COMPANY** *is unrivaled for its distinguished execution of authentic designs*

●

THE BRONZE TABERNACLE illustrated is an example of the beauty of execution which distinguishes church accessories by The Gorham Company.

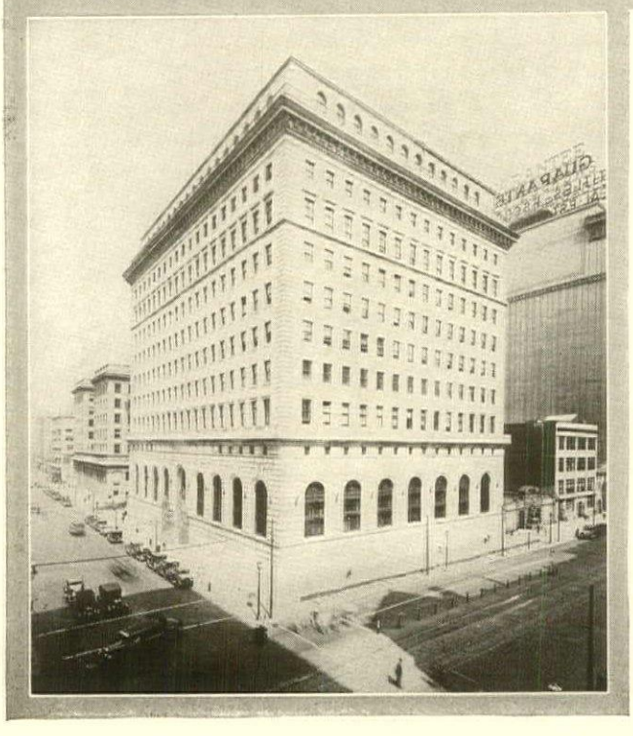
The tabernacle was designed by Murphy & Olmsted, architects of Washington, D. C., for the Convent of St. Joseph at Brentwood, Long Island.

The intricately beautiful motif is carved in bronze—and the entire outer surface of the tabernacle is richly gold plated . . . This work of art is indeed an accessory to grace the main altar of the beautiful new chapel.

●

THE ECCLESIASTICAL DEPARTMENT of The Gorham Company works with architects all over the country in faithfully executing their designs and authentically reproducing master works and creating distinctive church accessories and equipment. The Ecclesiastical Department, The Gorham Company, 2 West 47th Street, New York City.

GEORGIA MARBLE



EASY TO CLEAN

This building, completed in 1922, has just been cleaned for the first time, with satisfactory results, as shown by these illustrations . . . Of all the building stones, we believe that Georgia Marble is the easiest to clean because, due to its non-absorptive character, dirt rests on the surface rather than permeating the stone . . . Even in urban centers scrubbing with a stiff brush every few years keeps Georgia Marble bright. When dirt has been allowed to collect over a longer period of years until the marble is completely masked sand-blasting is usually resorted to as the most economical method of cleaning. But this method of cleaning so harmful to many of the commoner stones hardly "touches" Georgia Marble,—the dirt is removed, but all mouldings and carvings remain sharp and unpitted.

Federal Reserve Bank, Cleveland, Ohio, Walker & Weeks, *Architects*. Henry Herring, *Sculptor*. The exterior and the colossal statues are of Etowah Pink Georgia Marble.

THE GEORGIA MARBLE CO. • TATE • GEORGIA

NEW YORK ATLANTA CHICAGO DALLAS CLEVELAND

THE BULLETIN-BOARD

ARCHITECTURAL LEAGUE 1931 SHOW

THE fiftieth anniversary of the founding of the Architectural League of New York will be formally celebrated by the Fourth Biennial Exposition of Architecture and its Allied Arts to be held April 18 to 25, inclusive, 1931, in the Grand Central Palace, 46th Street and Lexington Avenue, New York City.

The exposition will be held under the auspices of the American Institute of Architects and of the Architectural League of New York and with the endorsement of the Society of Beaux Arts Architects and the New York Building Congress.

As the past fifty years has witnessed the greatest development of American architecture, the committees in charge of the forthcoming exhibition are laying their plans far ahead to assemble the finest exhibition of contemporary architecture and its kindred arts of sculpture, mural painting, landscape architecture, and products of the crafts yet brought together in America, in cooperation with a representative exhibition of the industries which contribute to the construction, equipment, and adornment of modern homes and buildings. Foreign architectural exhibits will be shown in special sections.

The exhibition will be the fourth of the large architectural expositions to be held in New York. The first was opened in 1925 under the auspices of the American Institute of Architects and the Architectural League of New York.

Foreign exhibits will be in charge of the following committee: Julian Clarence Levi, chairman; Jacques Carlu, Ernest Peixotto, Raymond M. Hood, Ely J. Kahn, and Ferruccio Vitale. Architectural societies of France, England, Germany, Sweden, Italy, which co-operated in the prior expositions, will again be asked to contribute some of their most representative works. Aviation architecture is expected to occupy a prominent place in the forthcoming exposition.

The committees in charge of the League exhibits are as follows:

Committee on Architecture: Ely J. Kahn, chairman, and Archibald M. Brown, Roger H. Bullard, Jacques Carlu, Thomas H. Ellett, Hugh Ferriss, Julius Gregory, A. L. Harmon, W. K. Harrison, Burnham Hoyt, Wm. F. Lamb, Hardie Phillip, L. Andrew Reinhard, W. Sidney Wagner, and Ralph Thomas Walker.

Committee on Decorative Painting: J. Scott Williams, chairman, D. Putnam Brinley, John P. Coman, Arthur Covey, Austin Purves, Jr., Frank H. Schwarz, Lee Simonson, and Ezra Winter.

Committee on Sculpture: Ulric H. Ellerhusen, chairman, Ernest Wise Keyser, Lee Lawrie, Leo Lentelli, Edward McCartan, Berthold Nebel, Albert T. Stewart, and A. A. Weinman.

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Committee on Crafts: Harold Wm. Rambusch, chairman, G. Owen Bonawit, Walter W. Kantack, Horace Moran, Winold Reiss, Eugene Schoen, Joseph Urban, and Giles Whiting.

The executive offices of the forthcoming exposition are located at 105 West 40th Street, New York City.

THE BUSINESS SITUATION

JULIUS H. BARNES, chairman of the National Business Survey Conference, summarizes reports from all sections of the country in part as follows:

Short-Term Credit.—The decrease in money rates has continued during the summer months and into September. Short-term funds are now available in the open market at lower rates than have prevailed in several years.

Long-Term Credit.—Total capital issues, aside from refunding issues, totaled $5,600,000,000 in the first eight months of 1930. This total was about 35 per cent less than the figure for the corresponding period of 1929. Bond issues, however, exceeded those in the first eight months of last year by 50 per cent, while new stock issues were materially less.

Savings.—Available reports indicate that the gradual upward tendency in savings deposits, which has been apparent in recent months for the country as a whole, still continues.

Building and Loan Associations.—Reports from building and loan associations in twenty-four States through their national association indicate uneven but improved conditions. There are communities with a surplus of funds, little demand for loans, and normal withdrawals. In other sections there are some withdrawals, slow collections, and reports of some foreclosures. Generally, reports suggest a conservative attitude on the part of associations with respect to new commitments and a desire to care for all legitimate demands for the higher types of loans.

Constructive Industries.—For the period ended with September 19, construction of public works and utilities exceeded the volume in the same part of last year by $147,000,000, non-residential building this year was less in volume by $341,000,000, and residential building was less by $698,000,000. Total building contracts for all classes this year through September 19 were $3,574,000,000, to be compared with $4,467,000,000 in the corresponding part of 1929 and $5,126,000,000 in this part of 1928. The greatest decrease has been in residential building; in this form of construction there have been indications of a moderate revival, within the last few weeks, particularly in construction of detached one and two family houses.

August permits for additions, alterations, and repairs in 297 cities showed a decrease in value of approximately 24 per cent of the value in July. The value in July was 5 per cent over the value in June.

During August the cement industry operated at 81 per cent of capacity, including two new plants and extensions and improvements at old plants this year. As usual, August production and shipments of cement reached the high point of the year.

In structural steel, business has been reported as fairly brisk in New York and vicinity, and in the Middle West appears to have been over last year. A decided improvement in September is reported, with a good volume of new orders reported as in prospect.

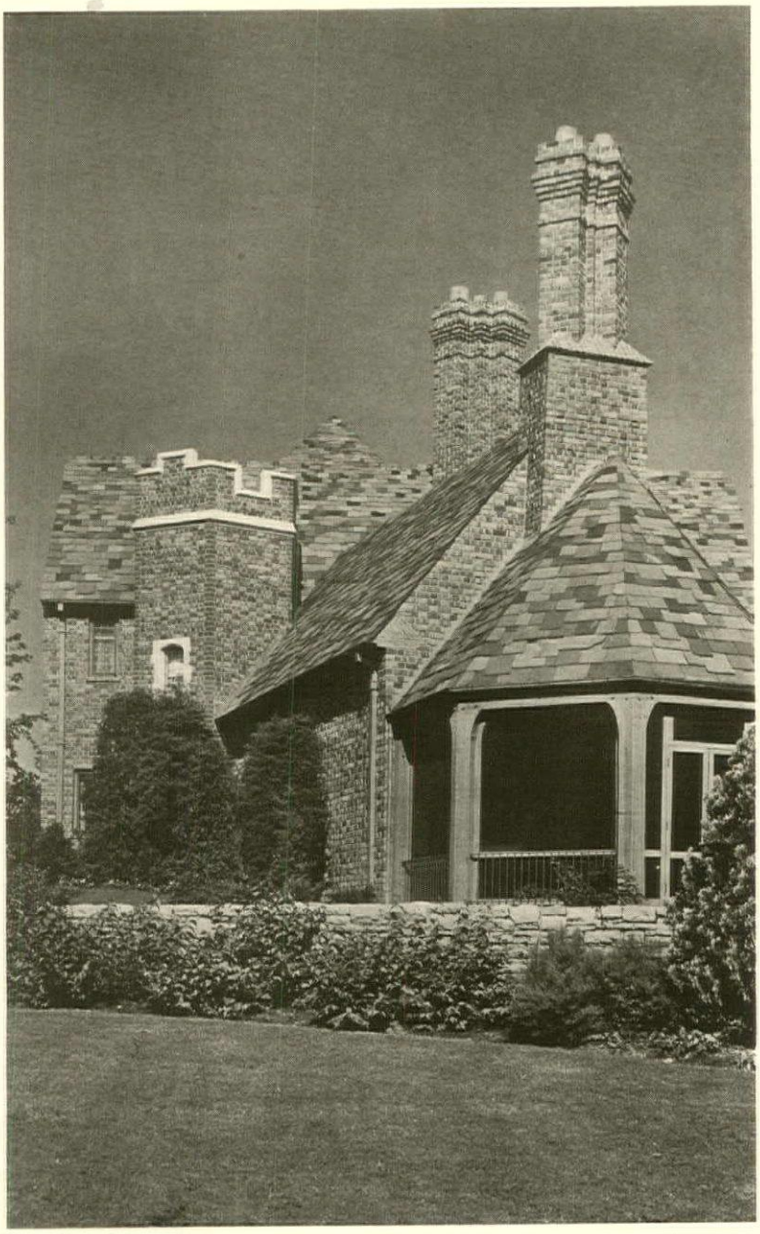
A survey covering the United States indicated that the steel construction business to September 18 has this year practically kept up to the tonnage in the comparable part of 1929. Returns to date for this survey indicate shipments of structural steel this year have at least been equal to shipments in the same part of last year, and that new orders booked have been from 25 to 40 per cent below the booking of 1929.

The common brick industry reports that the seasonal improvement of August is continuing in September. In face brick production and

(*Continued on page 41*)

On the Quarry Banks

IN THE UNFADING SLATE DISTRICT OF VERMONT may be seen endless piles of Colored Roofing Slate, stored out in the open, day and night, winter and summer, in all kinds of weather without the least fear of disintegration or loss of color. They need no protection—for, their duty is to do the protecting themselve. And, furthermore this exposure is a thorough test of their ability to resist color change, so when unfading material is desired, your specifications will be assured of being properly fulfilled.



RESIDENCE OF J. H. REVELER, KANSAS CITY
E. W. TANNER, *Architect*

THIS ASSOCIATION ISSUES A QUALITY CERTIFICATE WITH EACH SHIPMENT COMING FROM ITS COMPOSING MEMBERS. THE SLATES ARE ALSO PROPERLY LABELLED

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stocks have shown little change during the summer; operation was at less than 40 per cent of capacity, and stocks were 12 per cent below the low point of 1929.

In plumbing and heating supplies the volume of business to date this year is 60 per cent under the volume in the corresponding part of 1929, and 20 per cent under the volume in 1928, the business being affected by the decrease in residential construction. Inventories of distributors are reported as small.

Increasing curtailment in the lumber industry occurred during the summer, with production about 35 per cent under the level of 1929, but production and shipments in August were practically in balance. August sales to retail distributors showed no change from July. Stocks of retail dealers and industrial stocks showed further decreases in July.

Prices for building material held almost unchanged in September as compared with prices in August. There was a slight gain in the price of crushed stone, lumber, and hollow tile, but for all other materials were unchanged. Lumber was the only building material showing an increase in price for September this year over the price for September, 1929.

GOLD MEDALS FOR SMALL HOUSES

TO aid in eliminating faulty design and inefficient planning, Better Homes in America, of which Dr. Ray Lyman Wilbur, Secretary of the Interior, is president, will each year award three gold medals to the architects who have designed the best small houses erected anywhere in the country during the preceding year.

The medals are the gift of Mrs. William Brown Meloney, of New York, who with the co-operation of President Hoover founded Better Homes in 1922, and still serves as its vice-president. The awards will be made by a committee of five architects appointed by the president of the American Institute of Architects.

It is hoped that the awards will stimulate greater interest among architects in the practical and urgent problem of improving the architectural design and planning of homes of families of moderate means. The medals are therefore limited to houses one story, a story and a half, or two stories in height, and with a cubage of not more than 24,000 cubic feet above the level of the first floor. This virtually restricts the competition to houses of from four to six rooms, but leaves complete latitude in the design and planning of these houses.

CLINTON M. HILL, 1873–1930

CLINTON MURDOCK HILL, a member of the firm of Jardine, Hill & Murdock, of New York City, died September 21, at Los Angeles. Mr. Hill had been ill for several months.

Born in Massachusetts, Mr. Hill received his training in architecture at the Lowell School of Practical Design of the Massachusetts Institute of Technology. He practised architecture in Boston as a member of the firm of Bacon & Hill, and later of Hill & James. At one time he was associated with the late H. Langford Warren, former head of the Harvard School of Architecture. Coming to New York in 1910, Mr. Hill joined Messrs. Jardine and Murdock. He was a member of the Boston Society of Architects, and the New York Chapter, A. I. A. Most of his architectural work was in connection with the design of office buildings in New York.

UKRAINIAN STATE THEATRE

THE Soviet Union Information Bureau has addressed a letter to the American Institute of Architects, transmitting a copy of the prospectus for the International Competition for the Ukrainian State Theatre.

The prospectus, which is on file at The Octagon, is an extensive document, which states that drawings for the project, with all explanatory notes, should be mailed not later than December 25, 1930, to the Construction Committee, Town Council, Tevelyev Square, Khrakov, Union of Soviet Socialist Republics. The postal receipt should be sent under separate cover to the same address, and the date of the mailing of the drawings should be confirmed by cable.

As requested, this competition is called to the attention of the members of the Institute, who are advised that copies of the prospectus, and other information concerning procedure, may be obtained direct from the Soviet Union Information Bureau, at 1637 Massachusetts Avenue, Washington, D. C.

LAKE FOREST FOUNDATION AWARDS

TWO European travelling fellowships established by bequest of the late Edward L. Ryerson and two American fellowships, the gift of Condé Nast of New York, have been awarded by the Foundation for Architecture and Landscape Architecture, at Lake Forest, Illinois. The Ryerson fellowships went to Clifford W. MacCoy, architect, Toledo, Ohio, of Ohio State University; and Donald B. Partridge, landscape architect, Marshalltown, Iowa, of the University of Illinois.

The Condé Nast fellowships were awarded to Marvin R. Dobberman, architect, Chicago, of Armour Institute; and J. Martin Frizzell, landscape architect, Muskegon, Michigan, of the University of Michigan. Honorable mention was given to Russell T. Smith, architect, Concord, Massachusetts, of Harvard University; and Lawrence F. Murray, landscape architect, Wauseon, Ohio, of Ohio State University.

Each fellowship carries a stipend of $1,250 for the purpose of travel and study during the next ten or eleven months.

The members of the jury were: David Adler and William J. Smith, architects, both of Chicago; Arthur Shurtliff and Fletcher Steele, landscape architects, both of Boston; and A. A. Carpenter, who served as the lay member of the jury.

A CORRECTION

IN the advertisement of George A. Shedden Co., Builders (advertising page 17, October ARCHITECTURE), the address was incorrectly printed. The correct address is 62 West 45th Street, New York.

PERSONAL

Sam Biderman, architect, announces the removal of his office to 1107 Browder Street, Dallas, Texas.

Alexander B. Trowbridge, consulting architect, announces the removal of his offices to the Shoreham Building, corner H and 15th Streets, Washington, D. C.

Norman Hatton, architect and engineer, announces the removal of his offices to 829 Higley Building, Cedar Rapids, Iowa.

ARCHITECTURE

REG. U. S. PAT. OFFICE

THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. LXII, NO. 5 — NOVEMBER, 1930

CONTENTS

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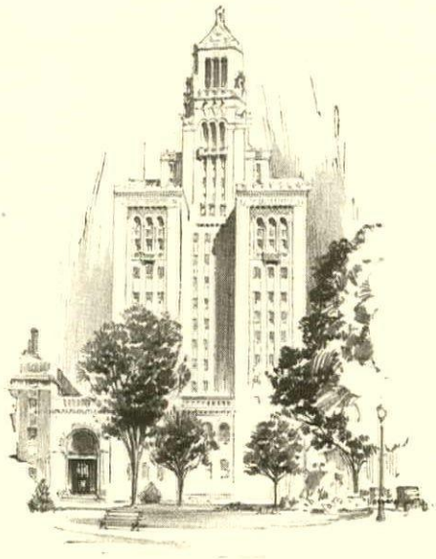
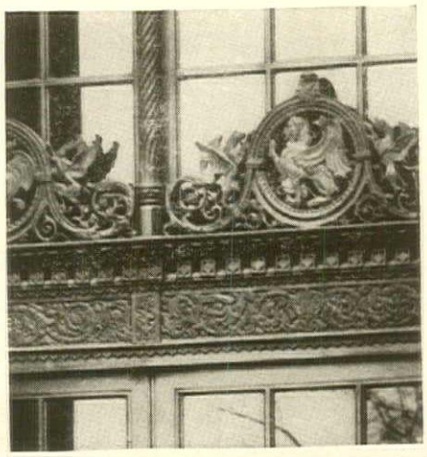
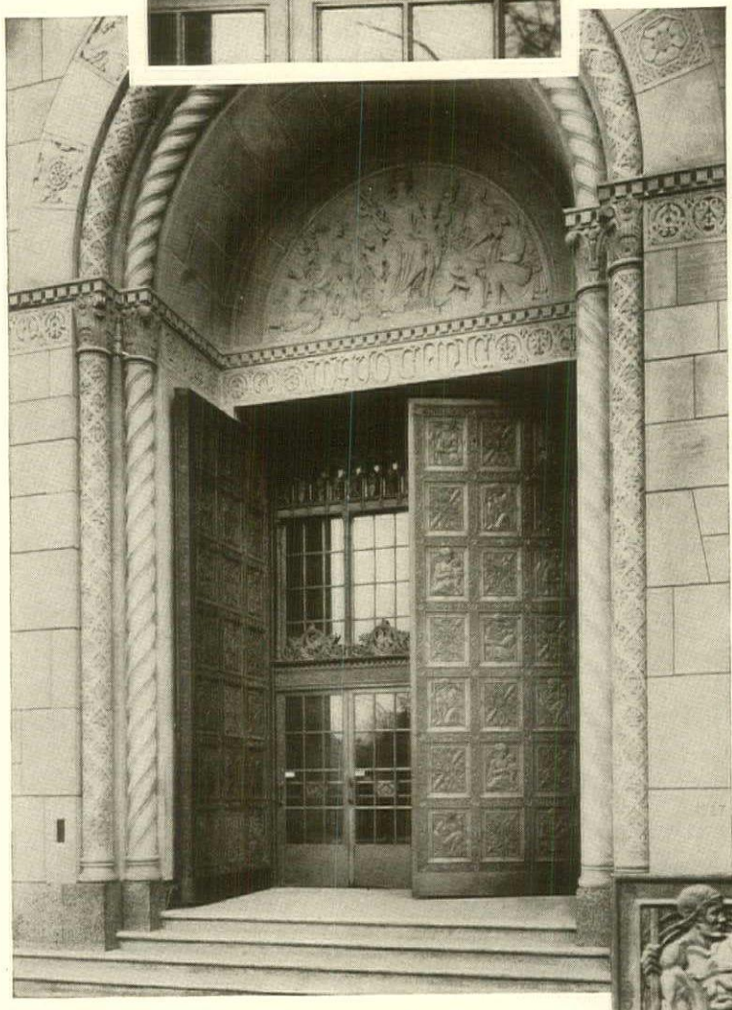
MAYO CLINIC

ROCHESTER MINNESOTA







This photograph of the Mayo Building entrance shows its outer bronze doors and vestibule screen of glass and bronze. . . . A detail from the ornament of this screen is shown in the inset above. . . . At the right is reproduced one of the panels from the outer door

A Doorway of Remarkable Beauty

THE doorway of the Mayo Building is a symbol of hope to sufferers. None are turned away. ✓ ✓ ✓ Under an impressive archway of Mankato stone stand the huge doors enhanced and beautified by cast bronze. ✓ ✓ ✓ The outer doors weigh nearly three tons. Closed or open they show a paneled design decorated by symbolic ornament. Each leaf is 16 x 6 feet in size. . . . The doors are electrically operated and swing with remarkable ease. ✓ ✓ ✓ Behind the doors is a bronze and glass vestibule screen finished in brown patine on a green background. ✓ ✓ ✓ Bronze ornamentation gives the entrance an effect of thoroughness, completeness and sincerity which must inspire confidence.

•

Architects . . . . ELLERBE & CO.
Builders . . . G. SCHWARTZ & CO.
Modeler, LOUIS RICHARD KIRCHNER

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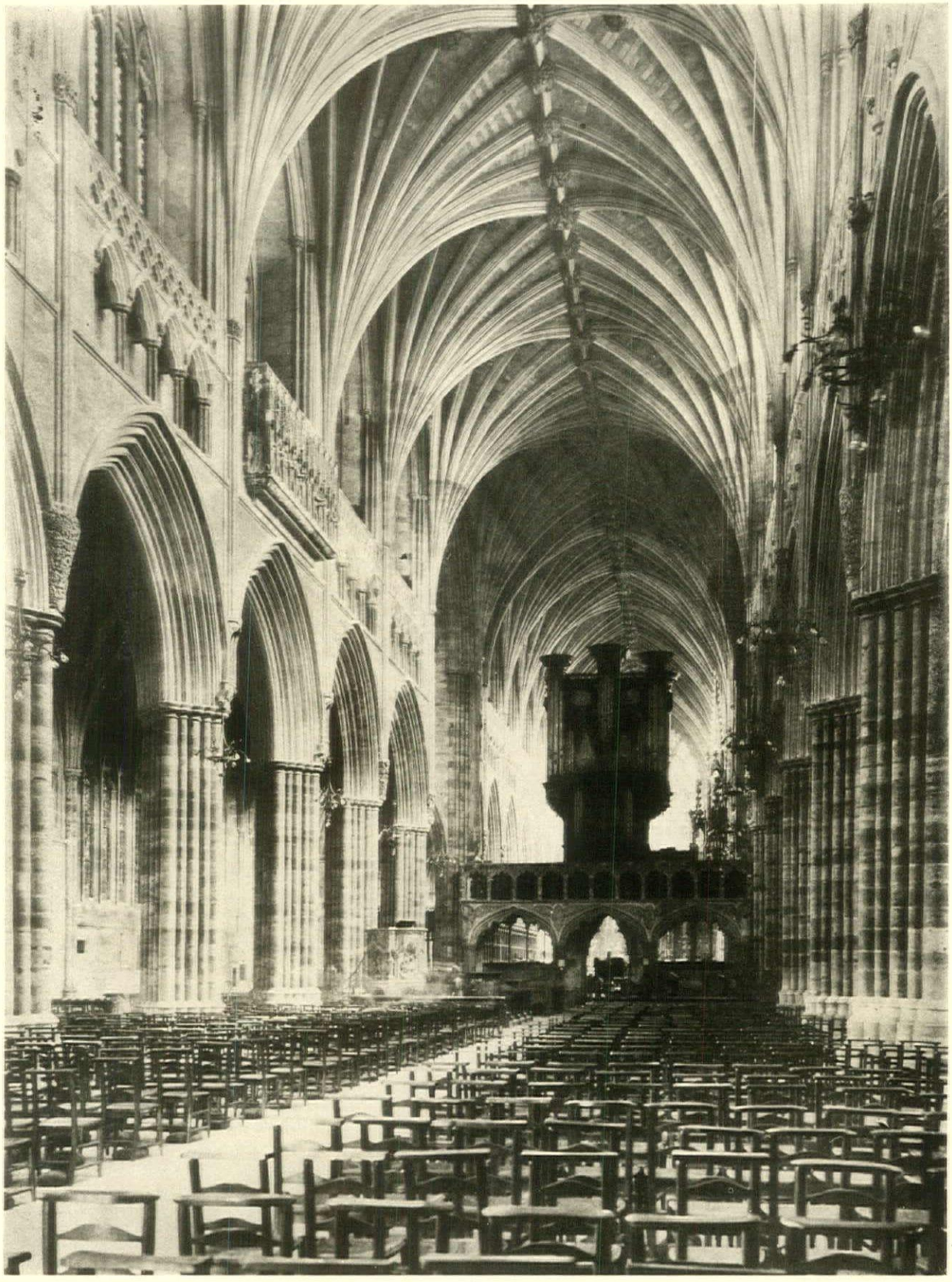


EXETER CATHEDRAL, THE NAVE

The old Gothic churches exhibit the three-fold division in every part: nave, crossing, and chancel; north aisle, nave, and south aisle; north transept, crossing, and south transept; nave arcade, triforium, and clerestory; choir, presbytery, and sanctuary

ARCHITECTURE

VOLUME XLII NOVEMBER 1930 NUMBER 5

The Liturgical Requirements of Churches

I. THEIR ORIENTATION AND GENERAL LAY-OUT

By F. R. Webber

WHEN we build a church we try to put the altar in the east. This is a fundamental liturgical principle of most ancient origin. They do it almost universally overseas. Roman Catholics, Episcopalians and Lutherans observe it quite generally in this country. Other church bodies have begun to fall into line.

When an architect plans a church he assumes that it is to be built in this manner. He always refers to the façade as the west front. Kipling may have believed that east is east and west is west, but any architect is able to cause east to become west, and vice versa. Thus it is that we speak of the west front of St. Thomas's and of St. Patrick's, although these churches stand on opposite sides of the avenue.

The practice of orientation, or of placing a building so that its main axis runs from east to west, goes back to Old Testament times. Exodus 26 seems to say that the Tabernacle stood in just this position.

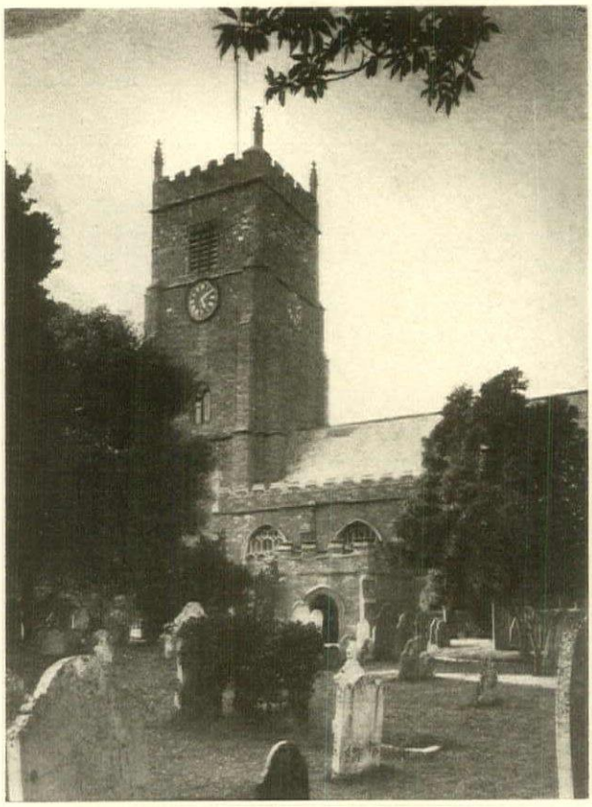
This practice, although very old, was never entirely universal. In the Eastern Church the altar was generally in the east. St. Sophia at Constantinople and St. Apollinare Nuovo at Ravenna are examples. In the Western Church the altar was often in the west end. Old St. Peter's, St. Paul's-without-the-Walls, St. Clement and St. John Lateran all had western apses. As late as the days of Wilfrid's Ripon we find builders placing their chancels in the west. However, most of the great English churches were properly orientated. Riveaulx Abbey is an exception, but here there is a hill on one side and a river on the other, and it was necessary to turn the church from north to south. The peculiarity of the building site caused the same thing to be done in the case of the modern Liverpool Cathedral.

Church officers in this country often overlook the fact that there are advantages, not only from a traditional, but from a practical, standpoint, in proper orientation. The architect ought to point out these advantages. It is not always necessary to place a church with its façade toward the street. In fact, it is often decidedly better to place the church with a side elevation to the street, and to place it in such a position that there may be a broad stretch of green lawn, effective massing of shrubbery, walks of shale or gravel winding up to the main entrance, and great trees to complete the setting. Cement walks that meet the street at right angles, and that run straight up to a flight of cement steps, are never beautiful. By taking advantage of the eastward position of the altar, the architect may often persuade the people to build a church in the way just described.

There is plenty of precedent in Europe. The churches of the Old World may face the street squarely if the street happens to run directly north and south. But European streets have a habit of meandering picturesquely in almost every direction; hence it is that one often sees churches placed broadside to the street, or at an angle to it, or even with the chancel toward the street. Much is gained in the way of picturesqueness where this is the case.

Occasionally one sees churches with an apse in the east end and another in the west. St. Gall and the Anglo-Saxon Canterbury were built in this manner. Bonn, Fulda, Hildesheim, Laach, Trèves, and Worms are examples.

As time went on, the eastward position of the altar became the rule, and hence it is that all liturgical directions take it for granted that the altar stands in the east and that the main entrance is in the west, at the end of the church's main axis. Churchmen defended this on the basis of Ezekiel 43:4, "And the glory of the Lord came into the house by way of the gate whose prospect is toward the east." From this they argued that the east is symbolically the position



CHURCH OF ST. JOHN THE BAPTIST, PAIGNTON, DEVONSHIRE

The churches of the Old World are usually set well back from the street, with broad stretches of lawn, trees and shrubbery. Gravel walks wind through the trees to the church door

of greatest honor. In mediæval days, at the early morning service, the faithful churchman would first face westward where darkness was thought to be receding, and pray to the Lord to deliver him from the darkness of sin. Then he would face eastward toward the rising sun and pray that the glory of the Sun of Righteousness might be made known to him.

Even though one may disregard tradition and liturgical directions as well, yet there are practical reasons for placing the altar in the east. One instinctively turns his face toward the light. Since our chief church service is held in the morning, what is more natural than to face eastward as we worship? The light streams in through the windows high in the chancel wall and falls into the sanctuary. Symbolically and emotionally this suggests the glory of God. What can be more natural than to worship with our faces toward the light? Then if one considers carefully the practical arguments of lighting, of natural ventilation in summer and heating in winter, the odds will all be in favor of the proper orientation of the church, with its main entrance in the west end and its sanctuary in the east.

There is a certain symbolism connected with a church that is arranged according to liturgical traditions. Even the smallest church has a threefold division of its ground plan: nave, choir, and sanctuary. A larger church is usually cruciform in plan, the nave and chancel representing the upright member of the Cross, and the transepts the cross-arm. It will be seen that there is a threefold division in every direction. There is the division from east to west of nave, choir, and chancel. Across the transepts there is the division of north transept, crossing, and south transept. The nave has its north aisle, its clerestoried central portion, and its south aisle. Considered vertically there are the aisle arcade, the triforium, and the clerestory. Even the separate parts of the church often have a threefold division. The nave may have a narthex, a nave proper, and a crossing. The chancel has its choir, presbytery, and sanctuary. The sacred number three is found wherever we go. An ideal church will be about three steps above grade. The clerestory and altar windows are generally divided into three openings. In a church of moderate size there are three steps at the entrance of the chancel, one at the communicants' step, and three at the altar, carrying out the symbolical numbers three and seven. The great west window and the transept windows often have a sevenfold division.

A question which has caused much dispute among authorities is whether or not there is a liturgical reason for the deviation of axis so often found in ancient churches. It is well known that many an old chancel is not in line with the nave. Often there is a very slight inclination toward the north, occasionally toward the south. Some authorities argue that this was done intentionally to symbolize the inclination of Our Lord's head upon the Cross at the hour of His death. Others are equally sure that it happened only where a new chancel was added to an older church, or vice versa. Without accurate instruments of precision it was not easy to get the new chancel in exact alignment.

Liturgically speaking, there is a striking similarity between Solomon's Temple and the mediæval and modern church. The Temple had a fourfold division. First there was the Court of the Gentiles, then the Court of the Israelites, then the Holy Place which only the priests could enter, and finally the Holy of Holies, which none

but the High Priest dared enter. In earliest times a Christian place of worship included four parts. There was the narthex, into which both believer and unbeliever might go. Then there was the nave, set apart only for believers in good standing. Then came the choir, which might be entered only by the priest and his assistants. Finally there was the sanctuary, which only the priest himself might enter. Gradually the narthex lost its importance and became a minor division of the nave.

The architect of to-day may find something fascinating about a church that is properly orientated and liturgically planned. However, he may encounter difficulties in carrying out his ideas. There are building committees and parish meetings to be considered, and every member of the parish with a right to vote will feel himself competent to sit in judgment or to offer suggestions. Often these ideas will run contrary to the architect's intentions. Even the clergy are not always properly informed in regard to matters architectural and liturgical. But if the architect understands symbolism, and knows something of the liturgical customs of the church, it is often easy to win his point.

In acting in an advisory capacity toward some eight hundred or more church building projects, the writer has found that most building committees have a wholesome respect for symbolism. As a rule, they are very ready to accept a plan that includes the divisions of three, five, and seven, if told that three represents the Holy Trinity, five Our Lord and the Four Evangelists, and seven the Seven Churches of Asia Minor, or any other of the numerous sevens in the Bible. The danger sometimes is that they are tempted to carry sacred numbers to an absurd extreme. The chairman of a building committee is said to have pointed out with much satisfaction that the ten windows in the kitchen of the new church represented the five wise and five foolish virgins, that the twelve tracery bars in the rose window symbolized the Twelve Apostles, and that the twenty-seven steps leading from the boiler pit upward represented the twenty-seven books of the New Testament.

Before a church is designed, it is well for both

PARISH CHURCH AT ADISHAM, KENT

European churches are almost always orientated with the altar in the east, even though it may mean placing them broad-side to the street, or at an angle

architect and building committee to become thoroughly familiar with the liturgical requirements of the church. In other words, what sort of an order of service is to be used? It is absurd to design a chancel thirty-four feet deep if it is to be occupied by the clergyman only. It is absurd to place a dozen clergy seats in the chancel of a church whose pastor is expected to remain in the sacristy except when he is actually officiating at the altar or standing in the pulpit.

Some years ago a beautiful church was designed for one of our large cities. Everybody concerned overlooked the fact that in the case of that particular denomination the pastor must stand before the altar throughout a large part of the service. The altar was planned so as to stand at the top of a flight of seven steps, with no platform whatever for the pastor. The mistake was discovered at the last minute, but the whole east end of the building had to be revamped in order to get sufficient room for a foot-pace thirty-six inches wide. Had the architect, pastor, and building committee taken into consideration the liturgical or service requirements, much time and expense could have been saved.

Before a line is drawn, there ought to be a clear understanding as to liturgical customs. Does the altar stand against the wall, or is it removed somewhat from the wall? Does the clergyman stand at the altar during a considerable part of the service? Does he turn toward the altar during prayer? Is there a daily, a weekly or a monthly celebration of the Eucharist? Are the sacramental vessels prepared for use at the altar, or does a server do this in the sacristy? Is the altar to be elevated three steps above the floor of the sanctuary proper, or is there to be merely a foot-pace? Do the communicants follow the curious Central-European custom of kneeling on the foot-pace proper, and then walking around the altar after receiving? Are the lessons read from the steps of the altar, or from the lectern? Is the rail provided with a gate, and is this left open when there is no celebration of the Eucharist?

All of these things govern the layout of the chancel. If the communicants encircle the altar after receiving, then the altar must stand three to five feet from the wall, and this means a deeper chancel. If they leave the rail directly upon receiving, then two side exits, with ambulatories, must be provided. If the clergyman stands at the altar, faces it during prayer, and prepares the sacramental vessels upon the altar proper, then there must be a broad foot-pace, not less than thirty-six inches deep, at the altar. If he has servers, then the steps upon which they stand must be sufficiently broad. If the Sacrament is celebrated monthly there will be a greater number of communicants at each celebration than in parishes with a weekly or even a daily celebration. Hence there must be a longer altar rail, and this means a wider chancel.

There are liturgical customs that will govern the arrangement of the nave. Do the people stand, sit or kneel for prayer? Do they rise frequently during the service? Is the service such that every communicant must be able to see the altar in order to take part intelligently?

These things are important. In Roman Catholic and Episcopal churches, the worshippers kneel for prayer. In the Lutheran church they stand for certain prayers and kneel for others. In many other churches the people merely bow their heads. This governs not only the spacing of the benches, but their very design as well. Most Lutheran and a great many Episcopal churches are badly arranged in that the benches or pews are too close together, so that kneeling is difficult. In the Lutheran church the Order of Common Service calls for frequent rising. The same is true to a certain extent in the Anglican communion. Hence, in such churches the pews generally have less inclination than in churches in which the people sit throughout the service. In Episcopal and Roman Catholic churches the congregation kneels facing the altar. Therefore the backs of the pews dare not be too high. In Lutheran churches the people often kneel for Confessional Service with their backs to the altar. In such a case a pew with a low back is not imperative, but there must be ample space between the rows of pews.

If the order of service calls for a processional and recessional, then the passage aisles must be more than the regulation fifty-four inches. In our day, when nearly all city churches have processionals, this point is worthy of serious consideration.

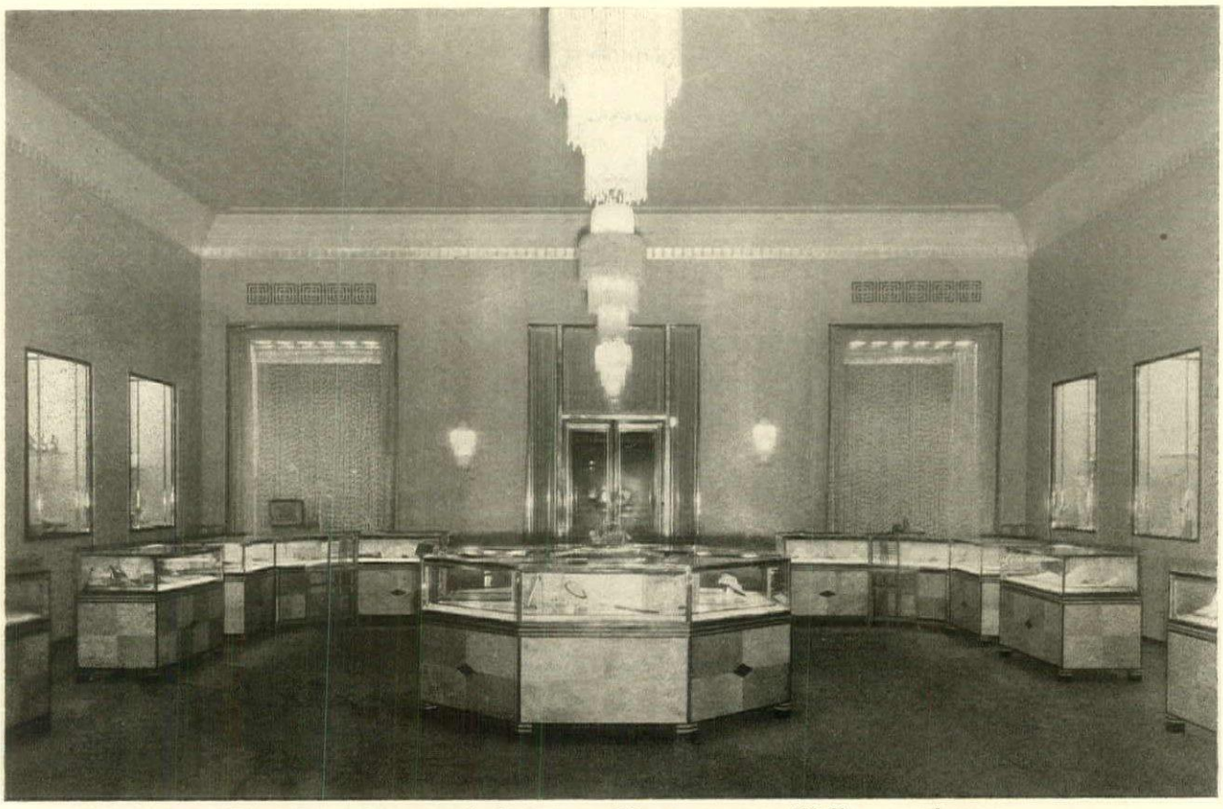
In the churches which originated in Continental Europe, the singers and organ are commonly in the west gallery. Hence there must be a large west gallery and the chancel need not be more than twenty-five or thirty feet deep. But in the case of the churches originating in the British Isles, the choir is generally in the chancel, and a chancel from thirty to forty feet deep is necessary.

In the following papers of this series we will discuss these requirements in greater detail.

Photographs by Hedrich-Blessing Studio

The base, window grilles, and spandrels are of gray Vermont marble; the sub-base of black granite; the main walls are of buff Bedford stone

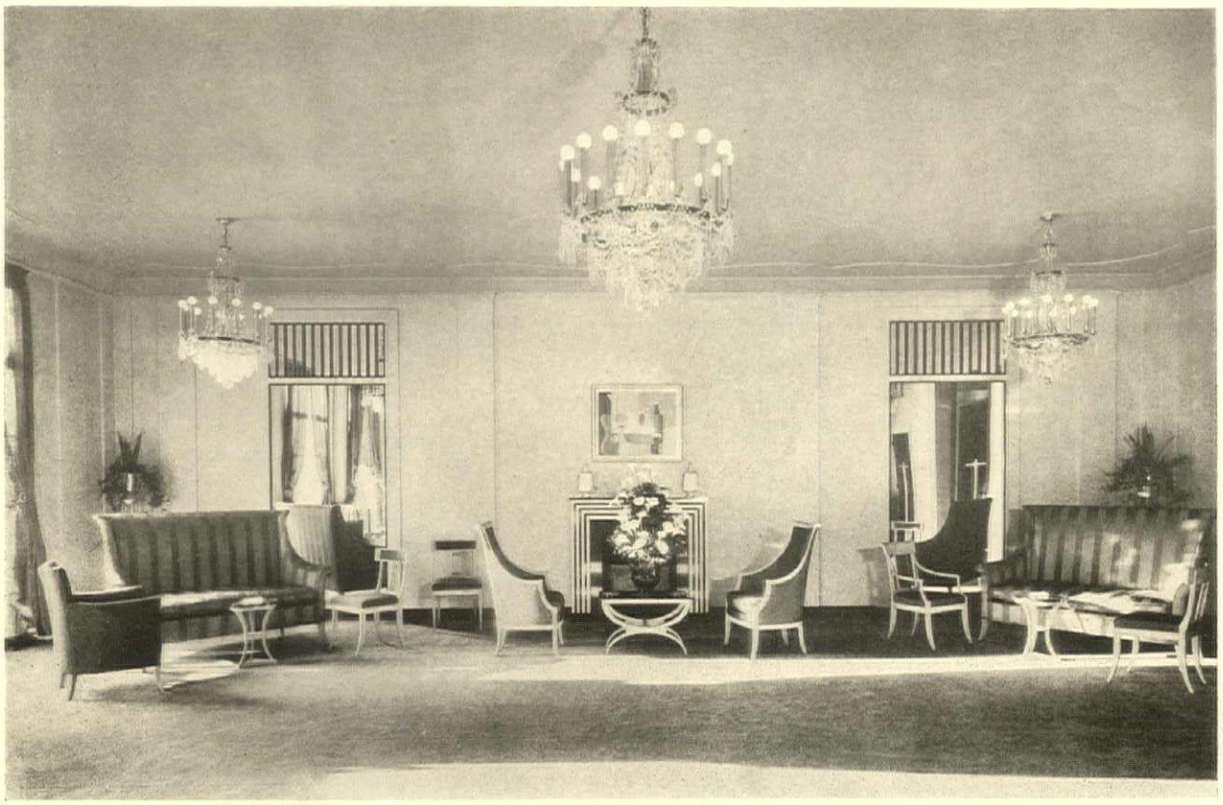
BLACKSTONE SHOP, CHICAGO. PHILIP B. MAHER, ARCHITECT



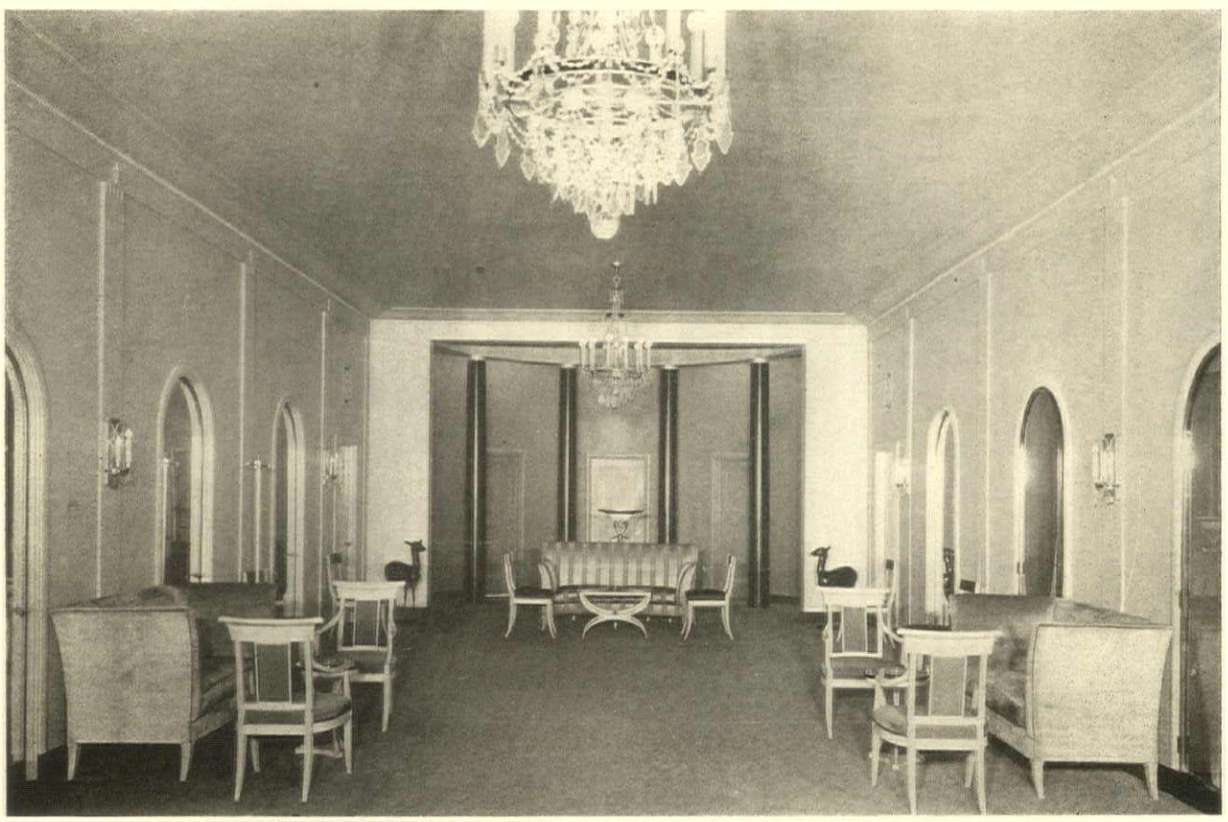
First-floor sales-room, looking toward front entrance. Walls, gray plaster; ceiling, light yellow; showcases of harewood with black wood inlays

The oval Millinery Room, in dark blue, silver gray, and black. The arched openings lead to dressing-rooms

BLACKSTONE SHOP, CHICAGO. PHILIP B. MAHER, ARCHITECT

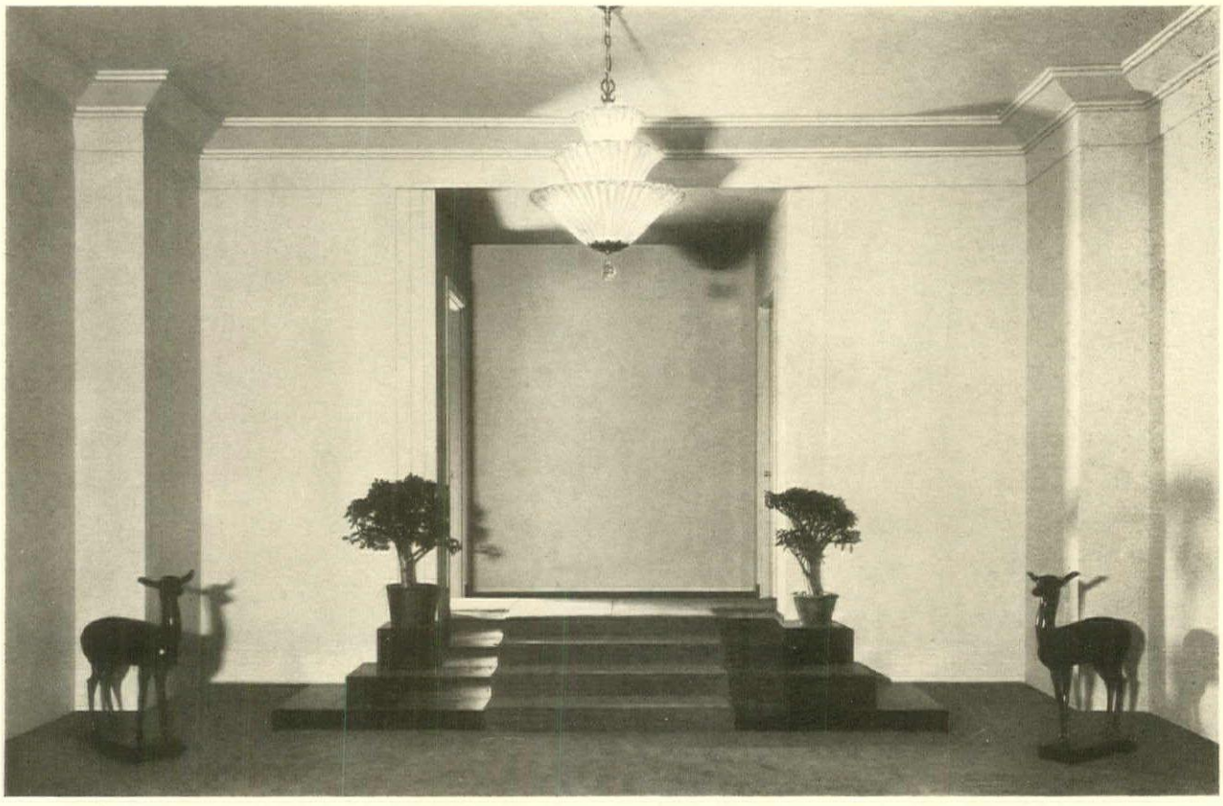


Second-floor front sales-room, in green, yellow, and black. In the design a Directoire root has been modernized by simplification. Ventilating grilles over the doorways are of strips of mirror

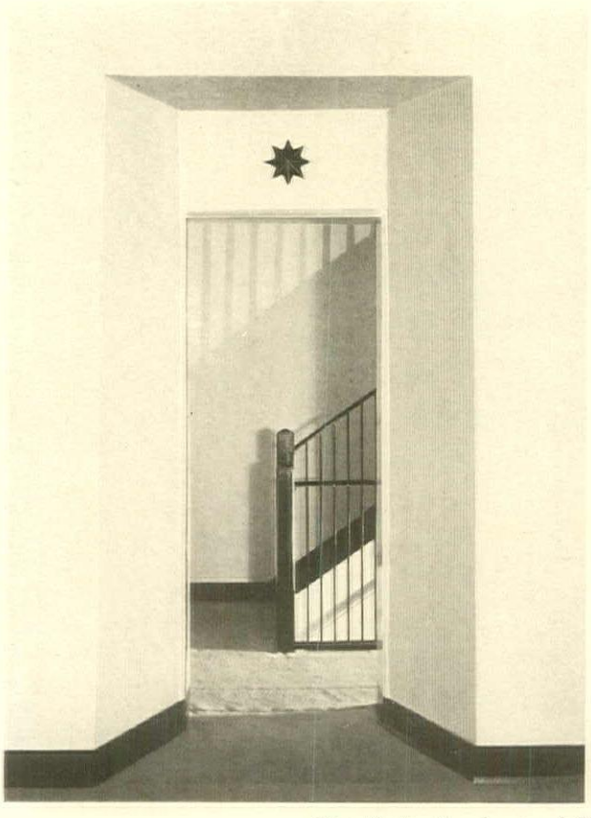


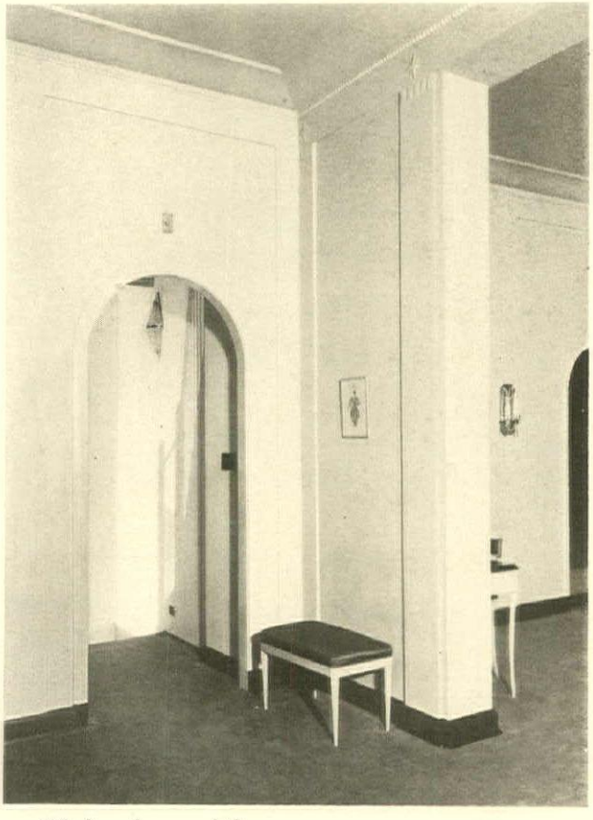
A sales-room in the rear of the one shown above. The black-column treatment terminates the long axis

BLACKSTONE SHOP, CHICAGO. PHILIP B. MAHER, ARCHITECT



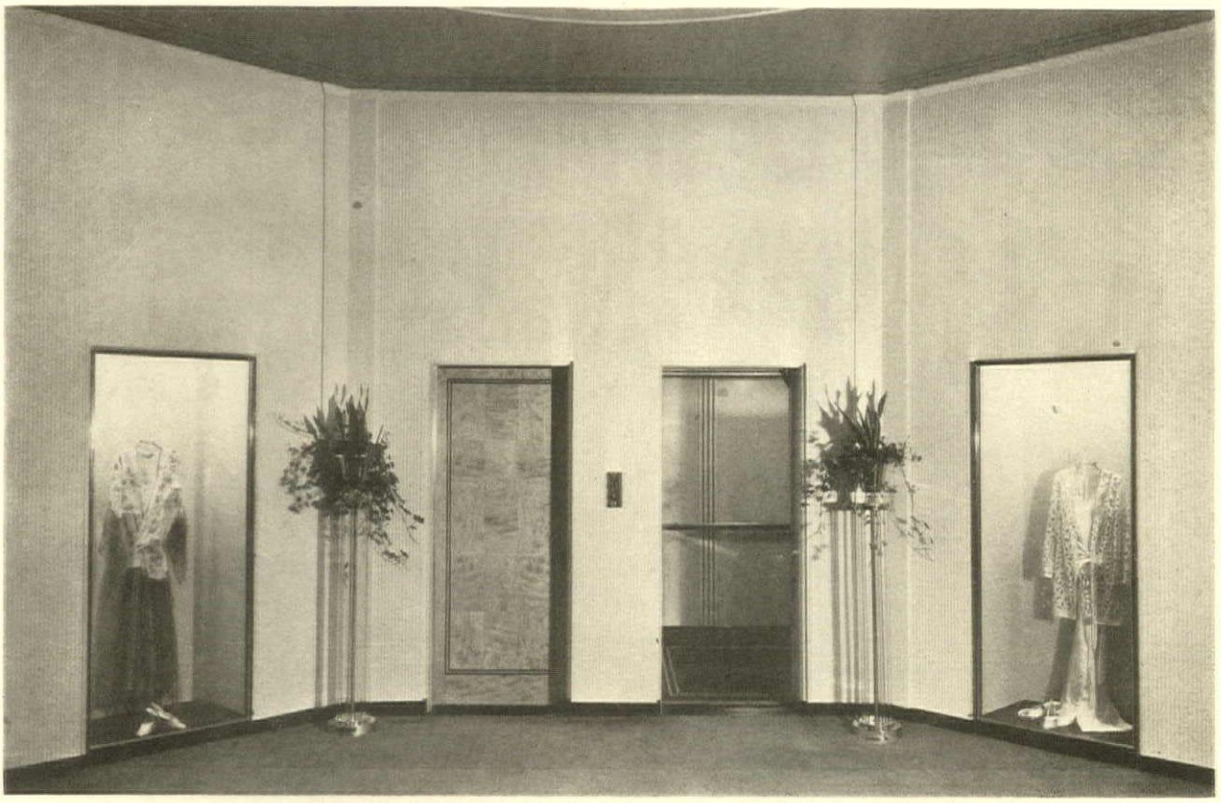
The axial termination on the third floor, with its platform designed for fashion shows





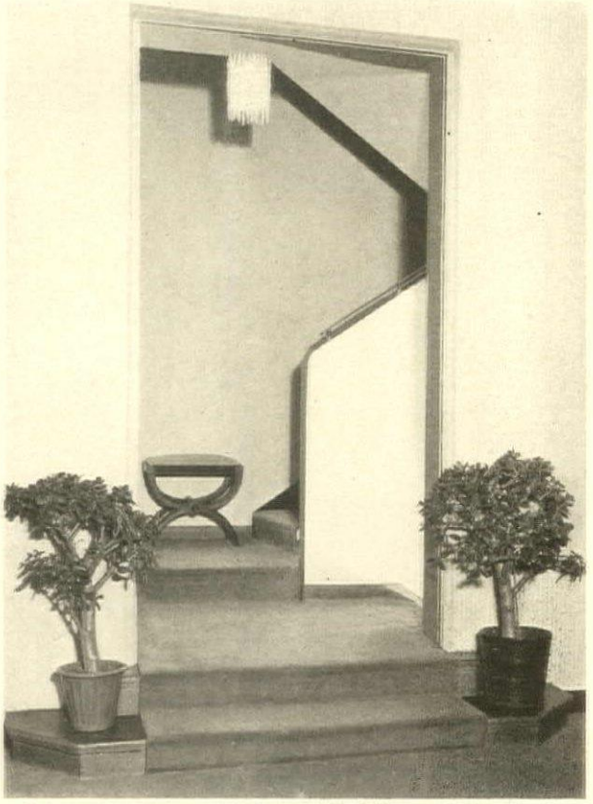
Details in the elevator lobbies on third and second floors

BLACKSTONE SHOP, CHICAGO. PHILIP B. MAHER, ARCHITECT



Octagonal elevator lobby on the first floor with fluted plaster walls of yellow, and a dark gray ceiling. Elevator doors of harewood with black inlay

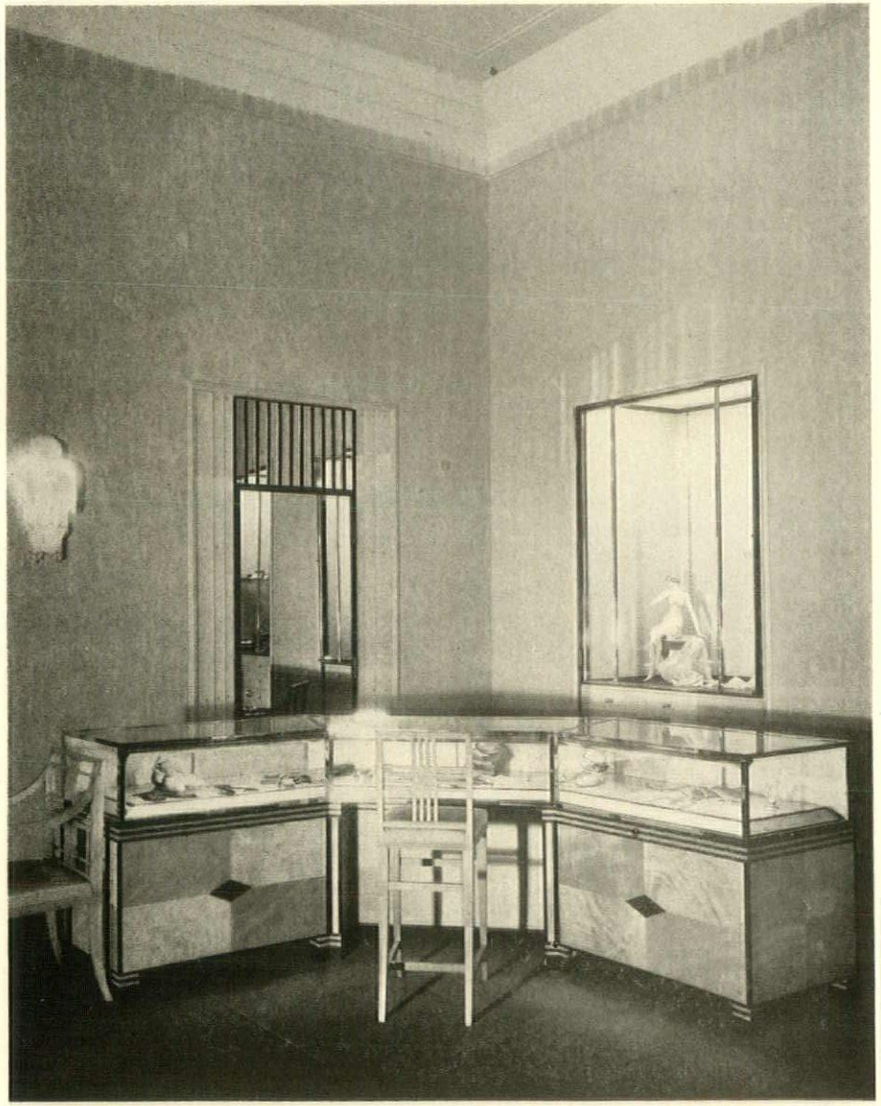
A detail of the oval Millinery Room, its curtains of dark blue satin against the grayish white walls



Entrance to the stairway, which is opposite the elevator doors shown above

BLACKSTONE SHOP, CHICAGO. PHILIP B. MAHER, ARCHITECT

Fur sales-room on the third floor; the color scheme of the room, Beidermier red with touches of gray, blue, and black



A detail of the showcase on the first floor, of harewood inlaid with black. The lighting fixtures are of frosted white crystal beads

BLACKSTONE SHOP, CHICAGO. PHILIP B. MAHER, ARCHITECT

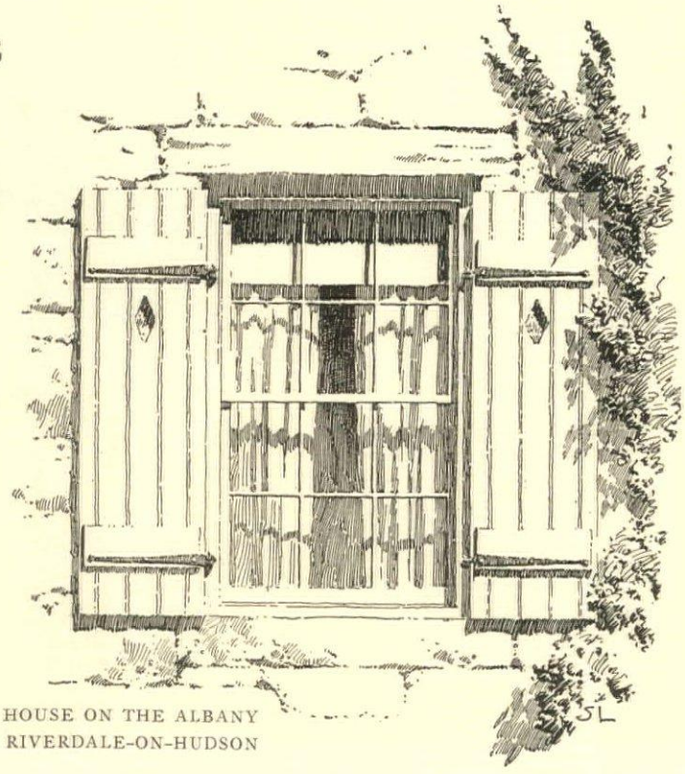
EARLY AMERICAN WINDOWS

A SERIES OF
PEN DRAWINGS

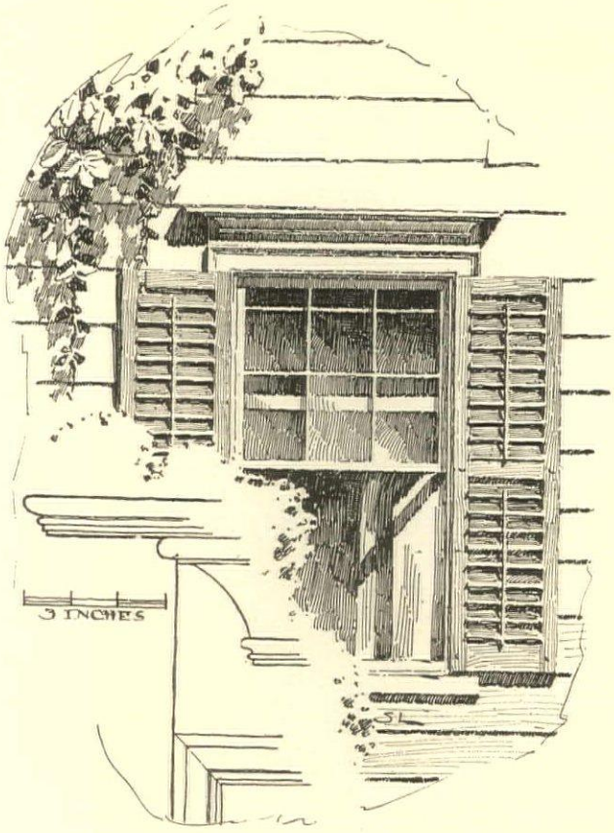
By Schell Lewis

PART II

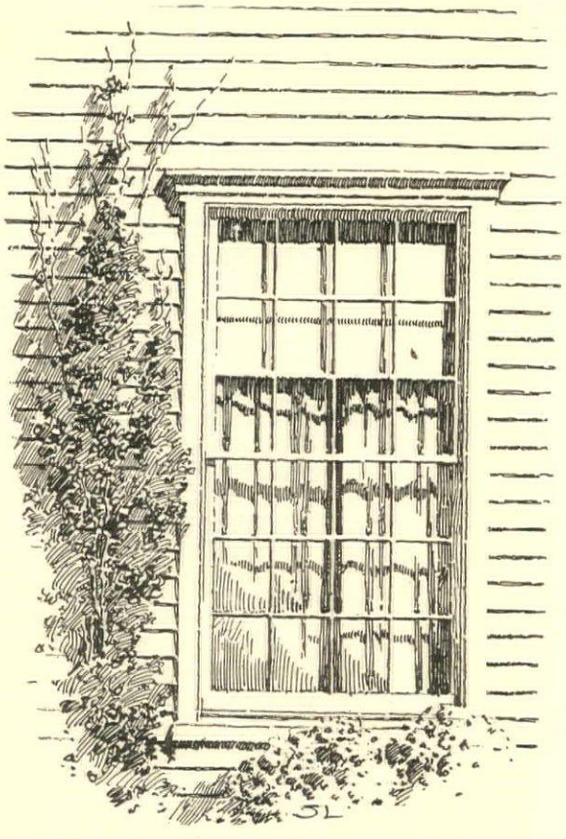
Part I appeared in the September Issue



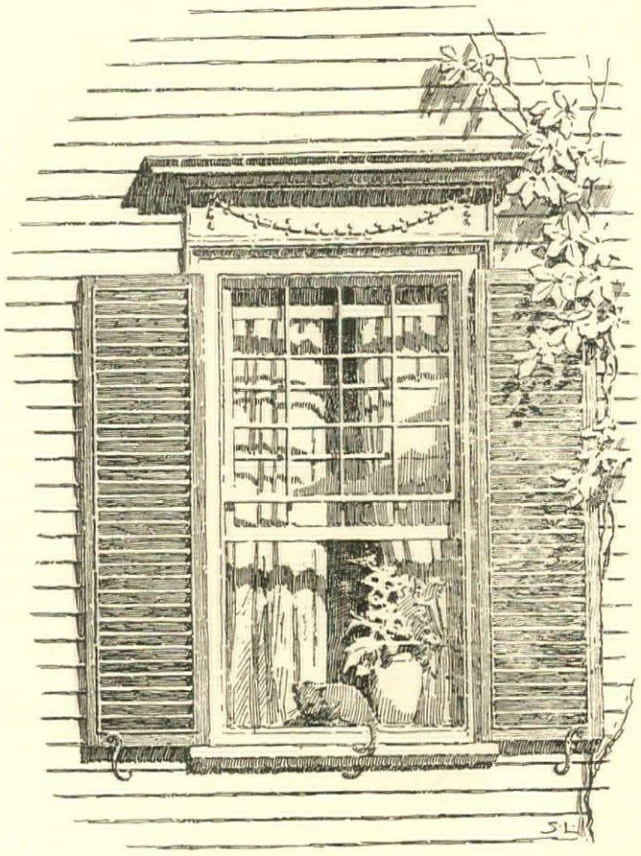
AN OLD HOUSE ON THE ALBANY
POST ROAD NEAR RIVERDALE-ON-HUDSON



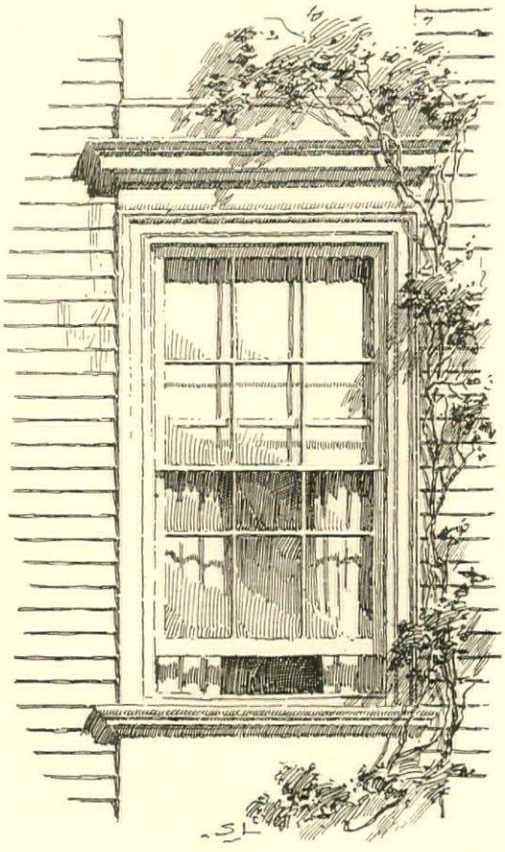
A RUINED HOUSE IN COLD SPRING, N. Y.



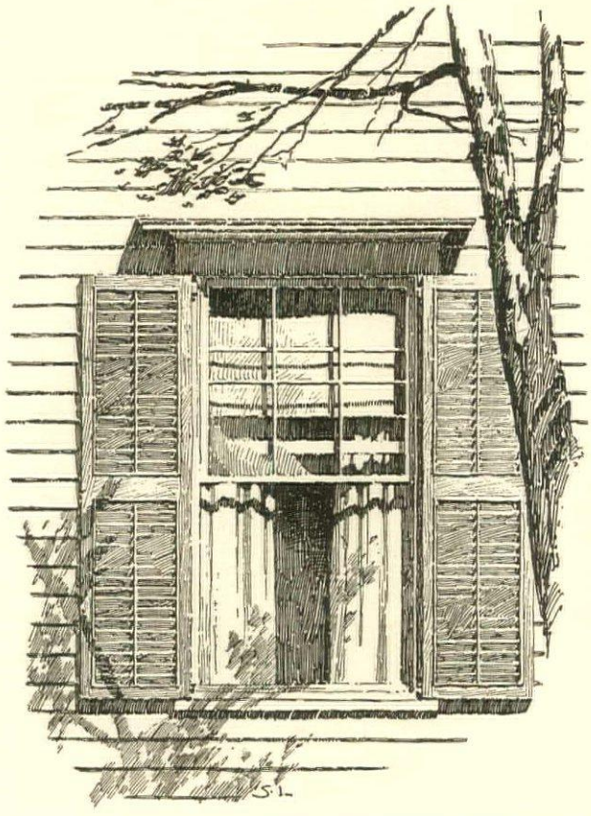
THE MIXTER HOUSE, ACADEMY HILL, NANTUCKET



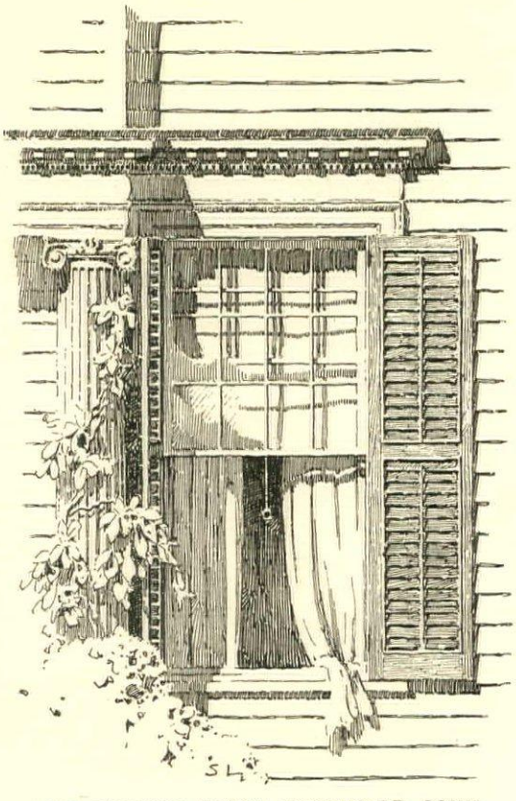
SHERMAN EVARTS HOUSE, MADISON, VT.



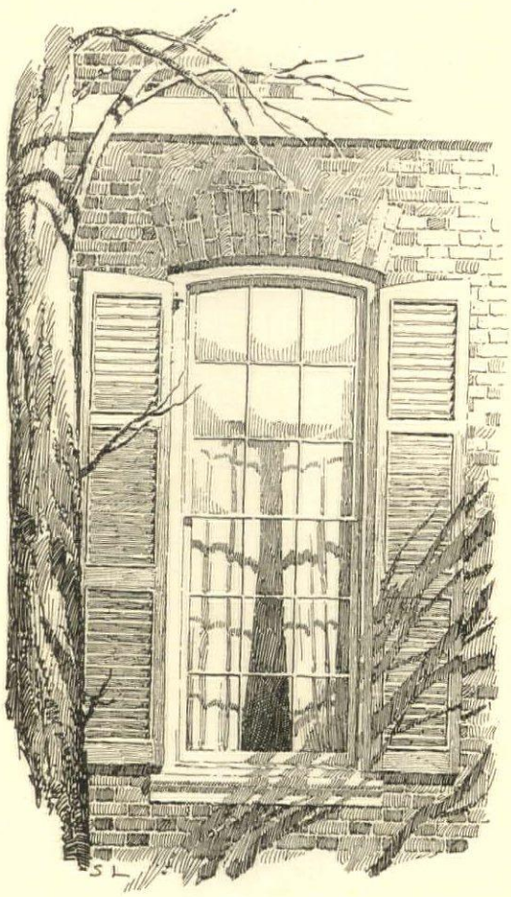
THE ROYALL HOUSE, MEDFORD, MASS.



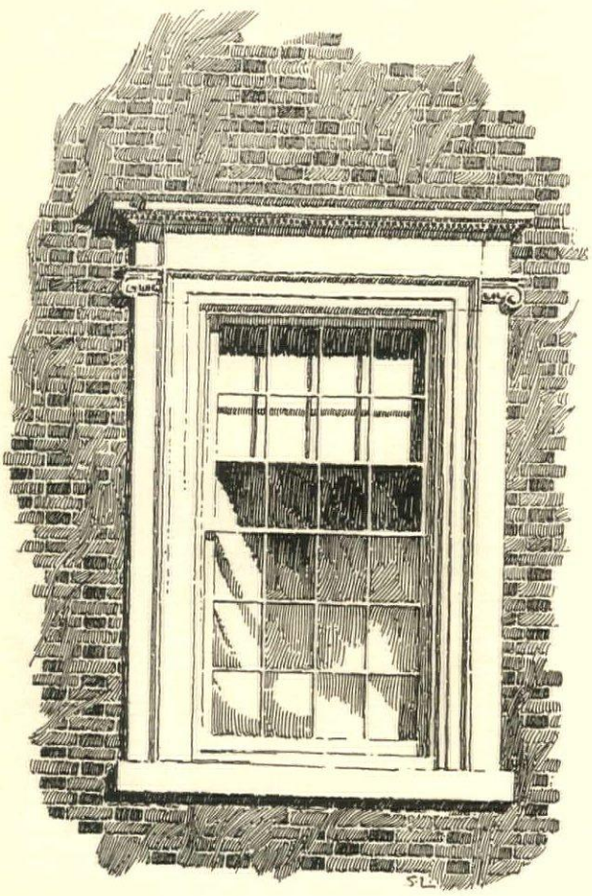
THE HUBBARD HOUSE, LITCHFIELD, CONN.



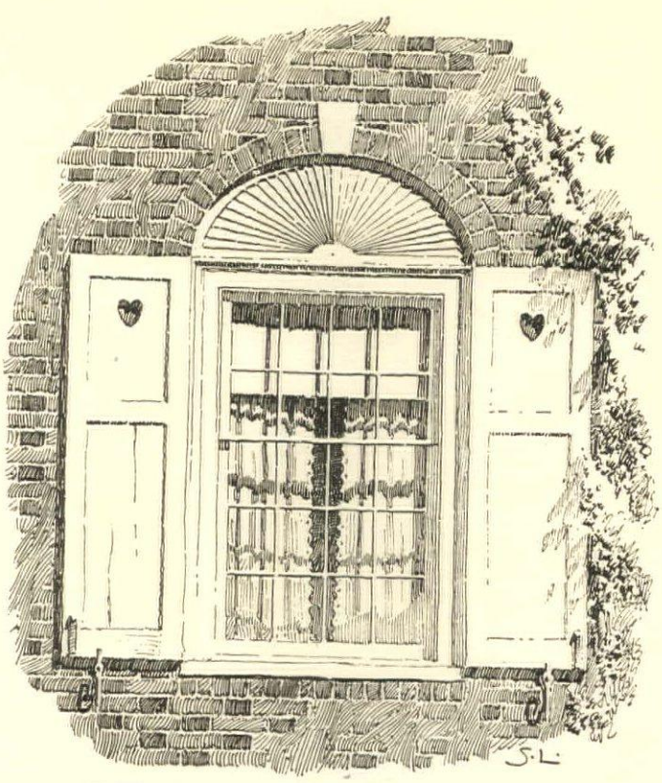
THE SHELDON HOUSE, LITCHFIELD, CONN.



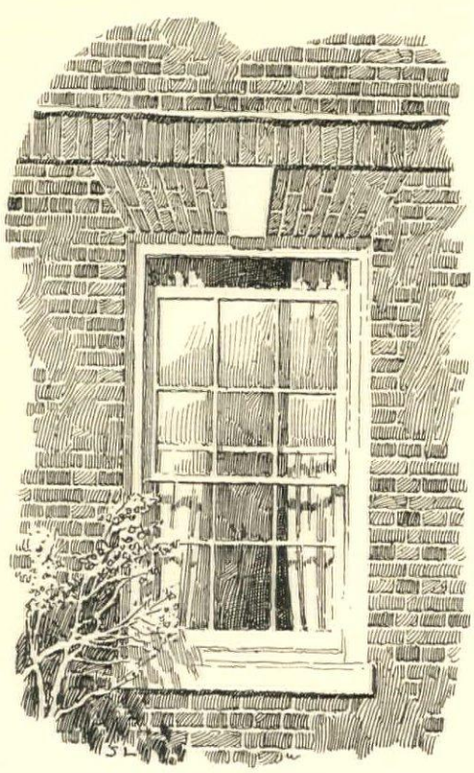
WESTOVER ON THE JAMES RIVER, VA.



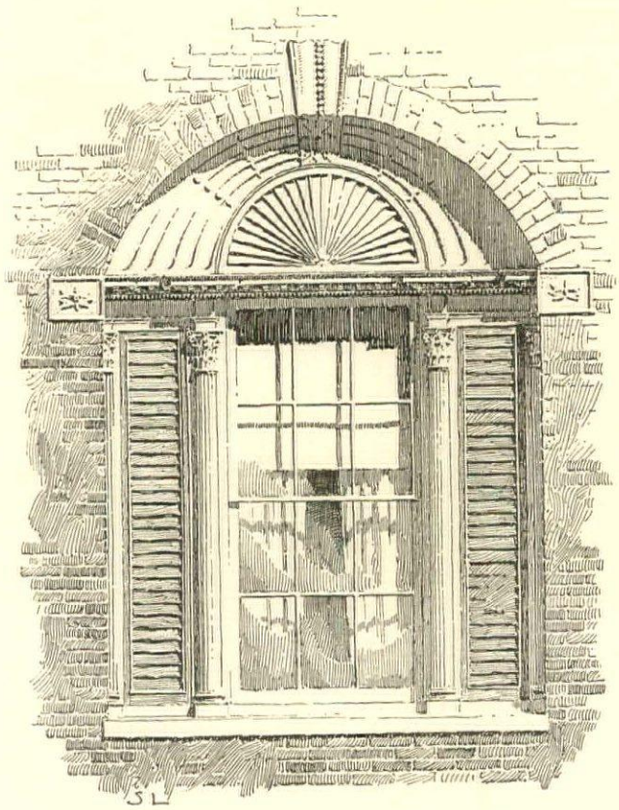
THE PENNSYLVANIA HOSPITAL, PHILADELPHIA



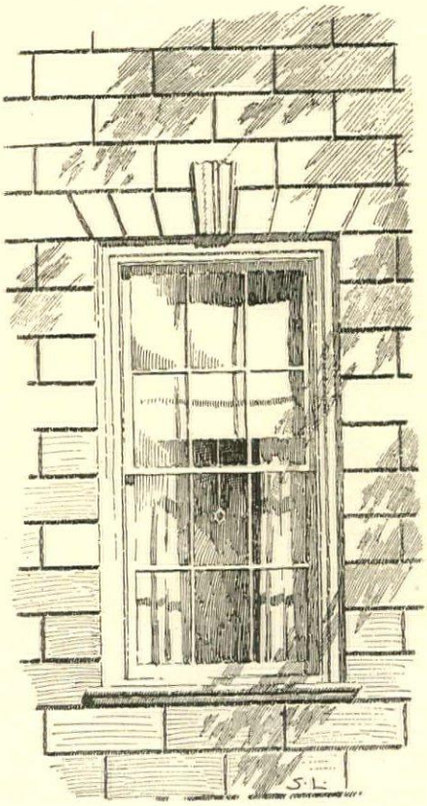
FROM A PHOTOGRAPH. LOCATION UNKNOWN



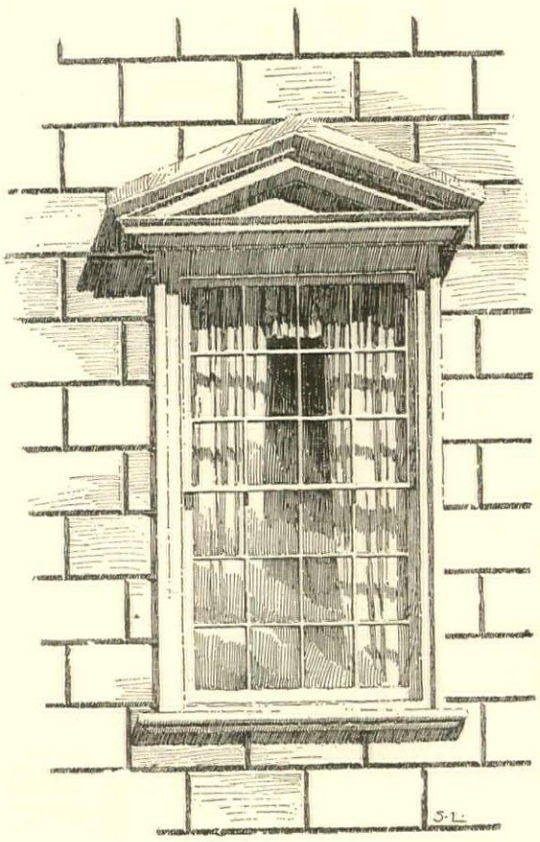
AN OLD HOUSE IN WESTCHESTER COUNTY, N. Y.



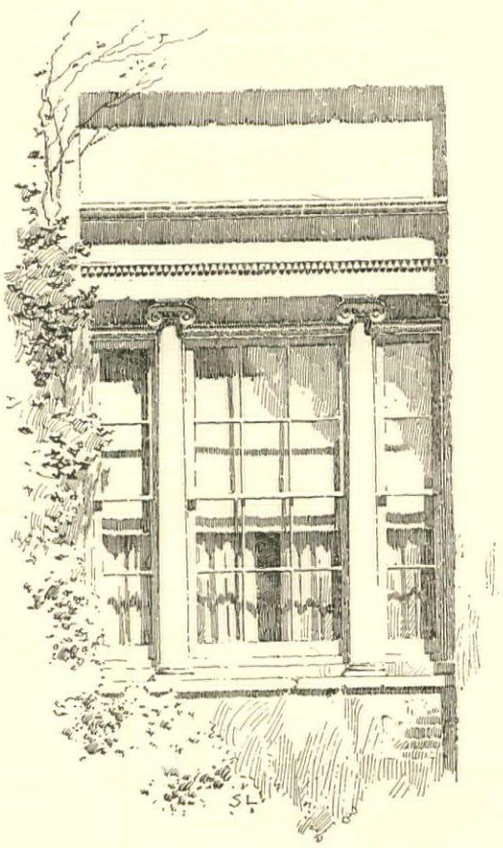
THE PHILLIPS HOUSE, SALEM, MASS.



THE LEE MANSION, MARBLEHEAD, MASS.



THE ROYALL HOUSE, MEDFORD, MASS.

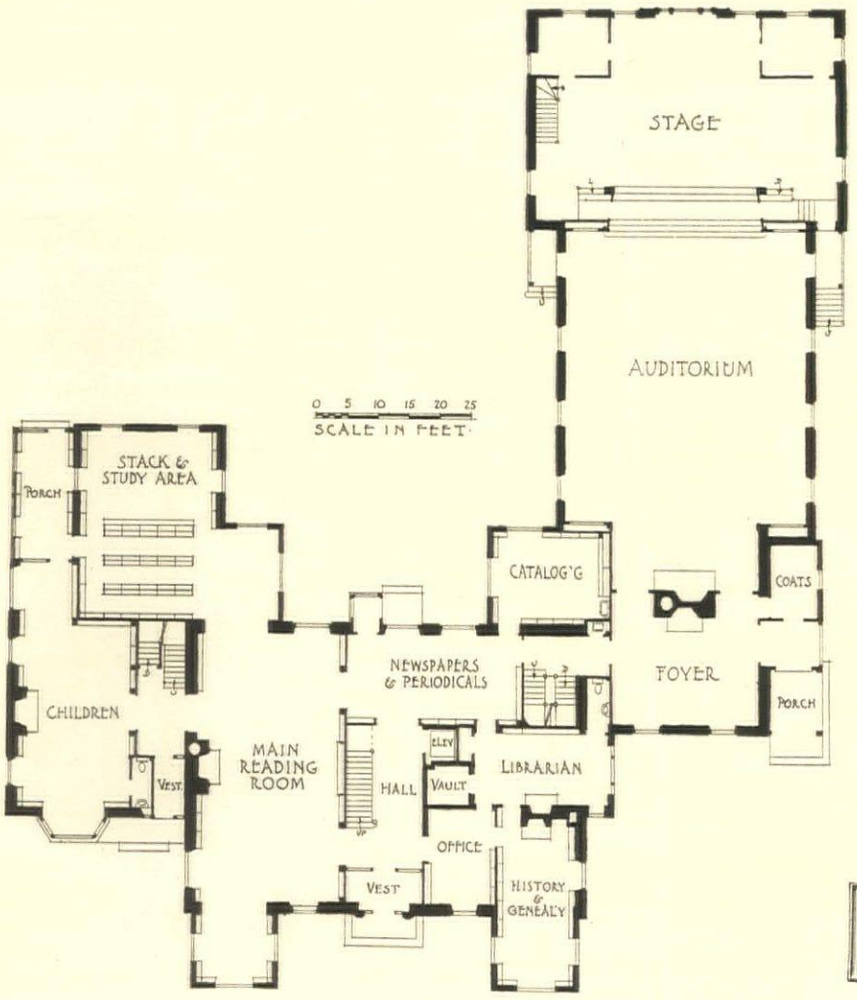


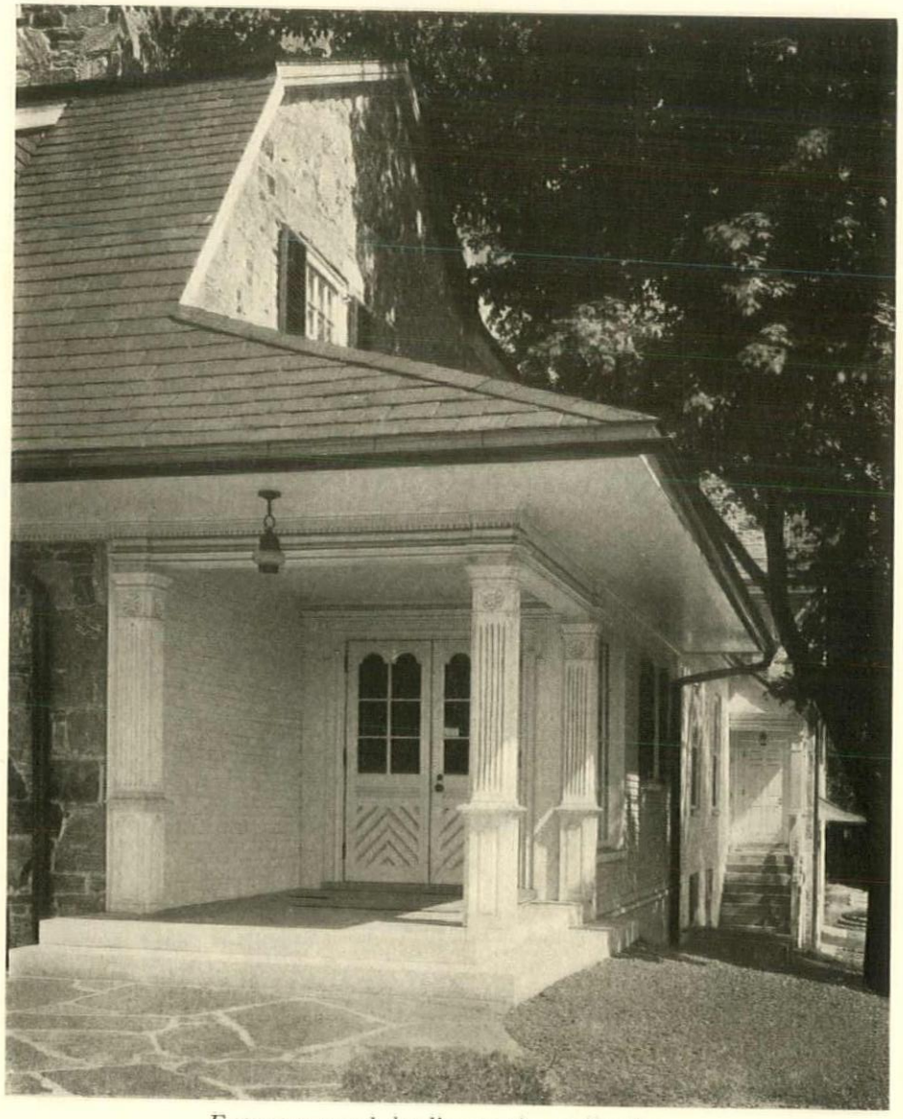
THE HABERSHORN HOUSE, SAVANNAH, GA.

Photographs by Paul J. Weber

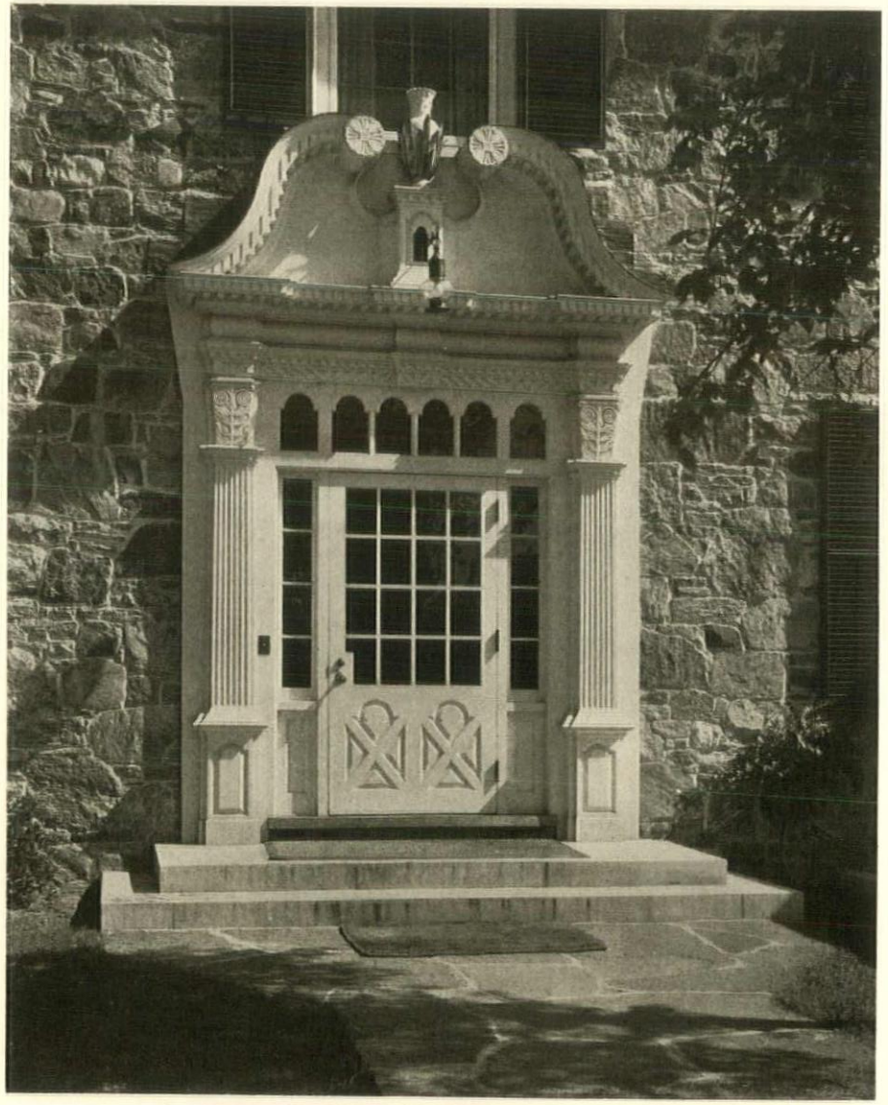
The Jones Library, Amherst, Mass.

PUTNAM & COX, ARCHITECTS





Entrance porch leading to the auditorium



Detail of the main entrance

THE JONES LIBRARY, AMHERST, MASS. PUTNAM & COX, ARCHITECTS

The children's room with the children's porch beyond

THE JONES LIBRARY, AMHERST, MASS. PUTNAM & COX, ARCHITECTS

Entrance to the stage; ground drops from front to rear

Detail of auditorium wing, back of stage

THE JONES LIBRARY, AMHERST, MASS. PUTNAM & COX, ARCHITECTS

A lecture hall over the children's room

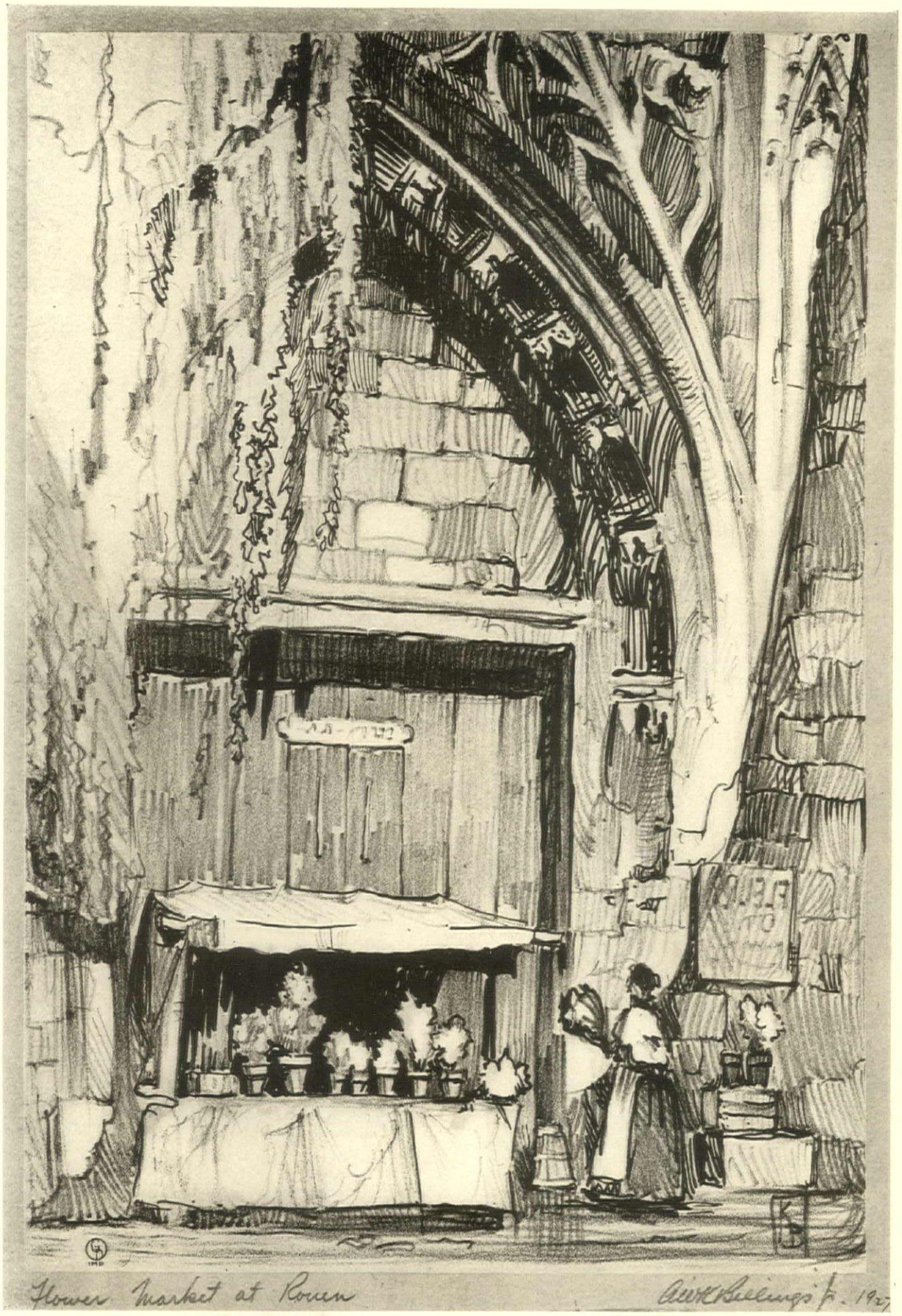
Main entrance hall, periodicals beyond

THE JONES LIBRARY, AMHERST, MASS. PUTNAM & COX, ARCHITECTS

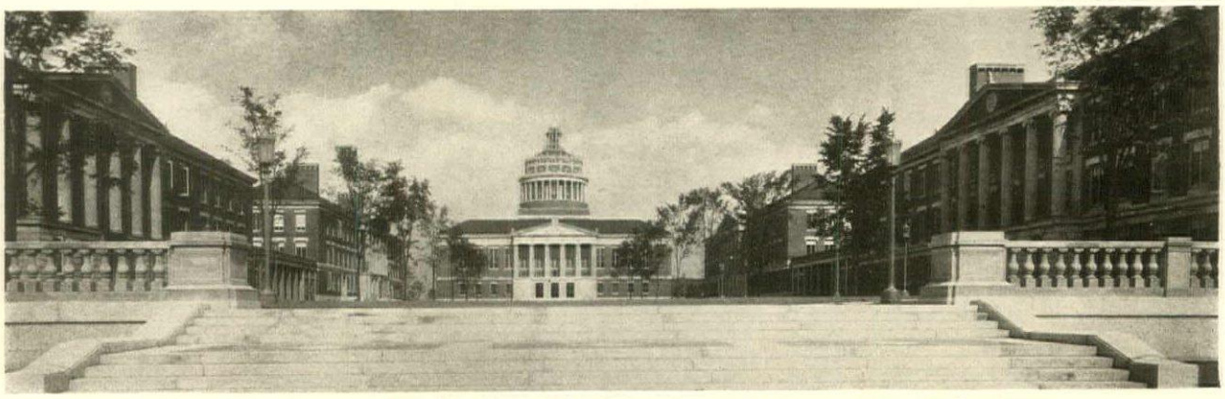
The main reading room, with study area and stack room beyond

The auditorium, looking toward the stage

THE JONES LIBRARY, AMHERST, MASS. PUTNAM & COX, ARCHITECTS



Flower Market at Rouen, from the pencil drawing by A. W. K. Billings, Jr.



The main quadrangle of the new University of Rochester, with the Rush Rhees Library in the centre. Gordon & Kaelber, architects; Charles A. Platt, consulting architect; Olmsted Brothers, landscape architects

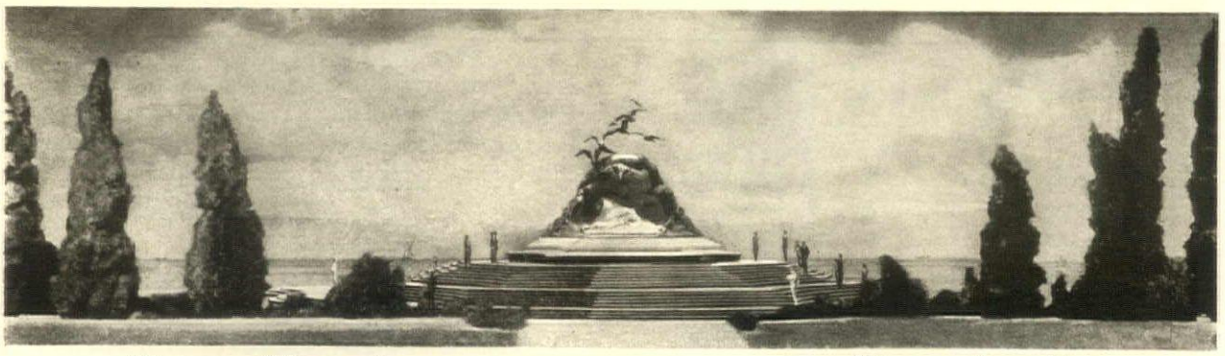
Architectural News in Photographs

The recently opened Riverside Church, New York, in which Dr. Fosdick preaches to multitudes. Henry C. Pelton and Allen & Collens, associated architects

Bertram Goodhue's St. Bartholomew's Church on Park Avenue, New York, now has a new dome over the crossing. Mayers, Murray & Phillip, architects

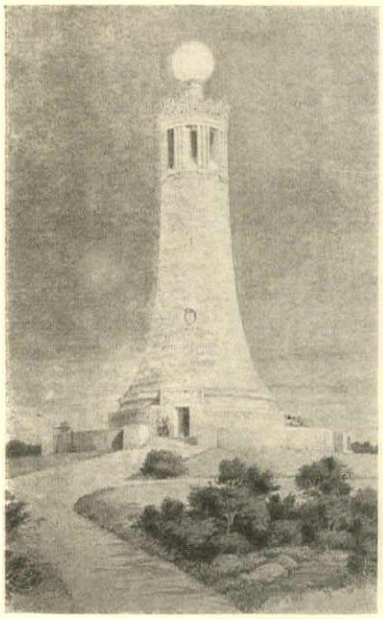
New York State's new office building, recently completed in lower New York City. William E. Haugaard, State Department of Architecture

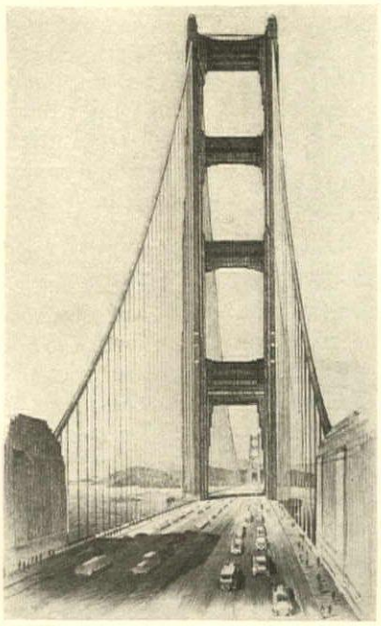
Ohio's proposed State office building in Columbus. Harry Hake, architect; Frank W. Bail, Alfred A. Hahn, consulting architects



The proposed Navy and Marine Memorial for Washington. Begni del Piatta, sculptor; Harvey Wiley Corbett, architect

The design by Maginnis & Walsh for the Massachusetts War Memorial, to be erected on Mt. Greylock





The proposed bridge between San Francisco and Marin County, with a centre span of 4,230 feet and a total length of 8,943 feet. Joseph B. Strauss, engineer

A memorial to New York City's sons in the late war, presented by Colonel Friedsam for the American Legion Memorial in Paris. Designed by Robert J. Hill, executed by Gorham

Airplane shelters at the Curtiss-Wright Airport, Valley Stream, Long Island. Kenneth Franzheim, architect

BOOK REVIEWS

PERSPECTIVE PROJECTION. A Simple and Exact Method of Making Perspective Drawings. By Ernest Irving Freese. 43 pages and 10 plates, 8½ by 11½ inches. Illustrations from the author's diagrams and drawings. New York: 1930: The Pencil Points Press, Inc. $1.50.

It seems almost incredible that the long and labored procedure which we all learned as first-year students was largely unnecessary. Yet Mr. Freese has developed a shortcut general method of perspective projection that seems simplicity itself. He supplements this basic process with further short-cuts showing how to project curved-line figures, how to achieve perspective division, and how to make enlargements or reductions in perspective.

FUNDAMENTALS OF ARCHITECTURAL DESIGN. By William Wirt Turner. 175 pages, 11 by 15 inches. Illustrations from drawings and diagrams. New York: 1930: McGraw-Hill Book Co., Inc. $6.

A textbook for beginners in architectural courses, briefly covering shades and shadows, perspective, the orders, elementary principles of rendering, and architectural lettering.

ESTIMATING CONSTRUCTION COSTS. By G. Underwood. 620 pages, 6 by 9 inches. Illustrations from diagrams and photographs. New York: 1930: McGraw-Hill Book Co., Inc. $6.

A particularly comprehensive work for the estimator, with which the author has supplied, in profusion, graphic charts which facilitate the labor of combining quantities and rates.

THE PERMANENT PALETTE. By Martin Fischer. 134 pages, 6 by 9½ inches. Illustrations in color. Mountain Lake Park, Md.: 1930: National Publishing Society. $4.

The author, who is a member of the Duveneck Society of Painters, and Professor in the University of Cincinnati, is a chemist who has turned painter. His knowledge of pigments and their endurance must be of inestimable value to those who would paint for future generations.

EGYPTIAN SCULPTURE. By Margaret Alice Murray. Preface by Prof. Ernest A. Gardner. 207 pages, 5½ by 8½ inches. Illustrations from photographs. New York: 1930: Charles Scribner's Sons. $5.

The author, who is assistant professor of Egyptology in the University of London, presents a concise account of Egyptian sculpture as divided into its various styles and periods. Since Egyptian art must be measured by millennia rather than by mere centuries, these differences between periods and schools are wide, and give one a new conception of the unique splendor of Egyptian sculpture.

EARLY AMERICAN FURNITURE MAKERS. A Social and Biographical Study. By Thomas Hamilton Ormsebee. 182 pages, 6 by 9½ inches. Illustrations from photographs. New York: 1930: Thomas Y. Crowell Co. $3.50.

An intimate account of our early American furniture in the making, going behind the technicalities of changing types to the men who produced them: William Savery, Jonathan Gostelowe, Thomas Tufts, Benjamin Randolph, John Goddard and his kin, Major Benjamin Frothingham, Colonel Marinus Willett, Andrew Gautier, Aaron Chapin, Webb & Scott of Providence, Duncan Phyfe, Samuel McIntire, the Willard clockmakers, and a host of others.

TERMITES AND TERMITE DAMAGE. With Preliminary Recommendations for Prevention and Control. By S. F. Light, Merle Randall, Frank G. White. 64 pages, 6 by 9 inches. Illustrations from photographs and diagrams. Pamphlet binding, Circular 318, August, 1930. Berkeley, Calif.: 1930: College of Agriculture, Agricultural Experiment Station, University of California.

A comprehensive survey of the three groups—damp-wood, dry-wood, and subterranean termites—telling of their habitats, depredations, and how to prevent attack.

SHADES AND SHADOWS FOR ARCHITECTS. By Richard S. Buck, Jr., assisted by Wilbert C. Ronan and Galen F. Oman. Edited by Thomas E. French. 134 pages, 9 by 12 inches. Illustrations from drawings. New York: 1930: McGraw-Hill Book Co., Inc. $3.

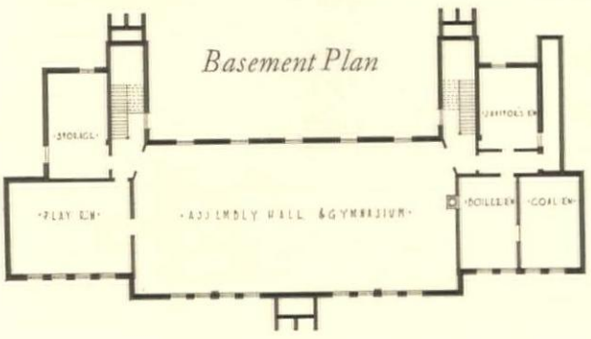
A text-book for the student, prepared by members of the faculty at the Ohio State University. In its arrangement as to typographical format and illustrations, the book is well adapted for class use.

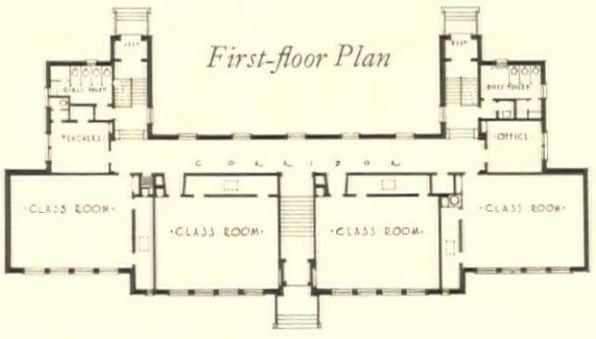
HISTORY OF THE GROWTH AND DEVELOPMENT OF THE CAMPUS OF THE UNIVERSITY OF ILLINOIS. By Leon Deming Tilton and Thomas Edward O'Donnell. 245 pages, 7 by 10 inches. Illustrations from drawings and photographs. Urbana, Ill.: 1930: The University of Illinois Press. $5.

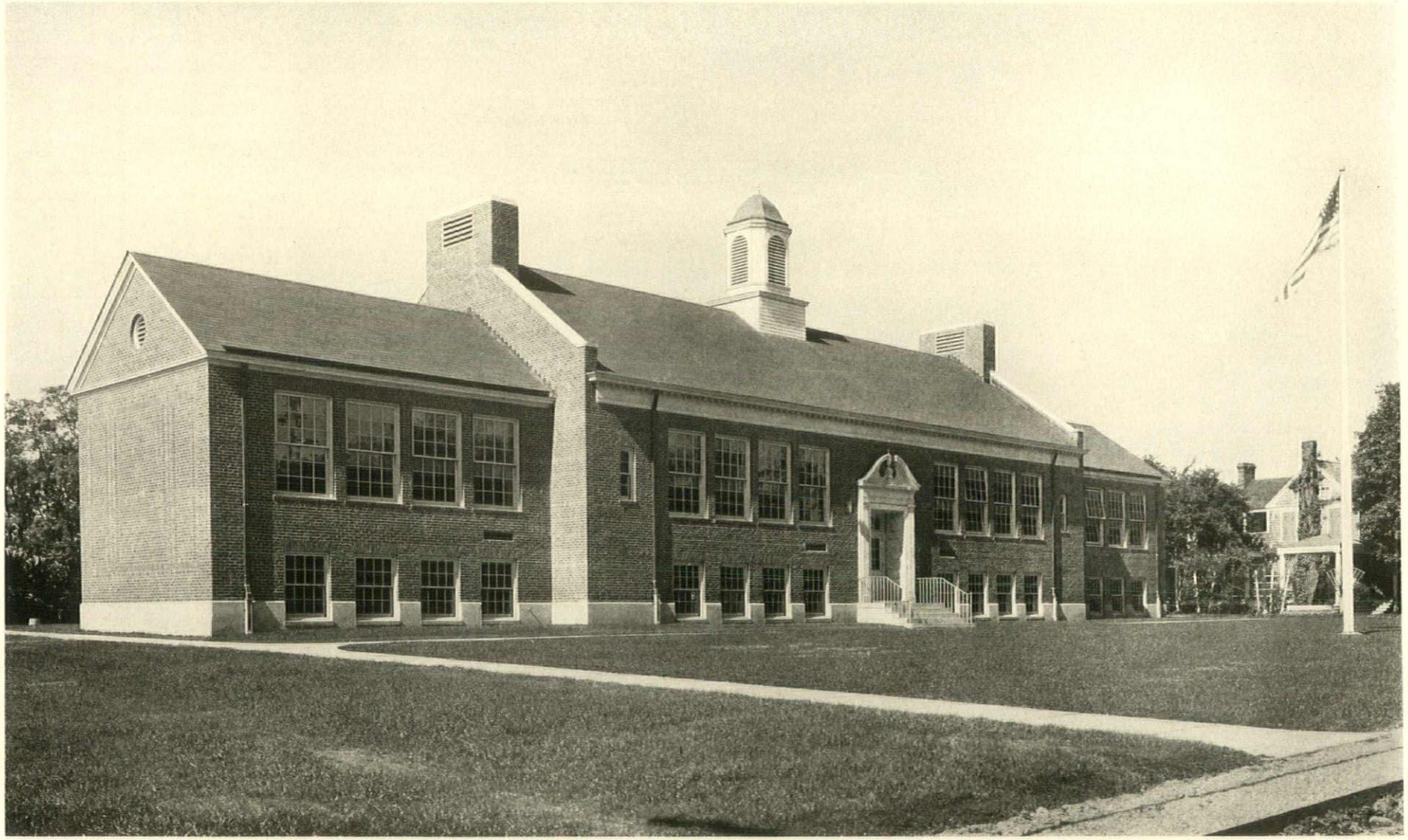
The early history and gradual development of the University plan as it stands to-day. The book should be of interest and help to those concerned with the educational group, either as architect or as building committee.

HALESITE GRADE SCHOOL, HUNTINGTON, LONG ISLAND

A. B. SAMMIS, FRANK T. CORNELL, ASSOCIATED ARCHITECTS







HALESITE GRADE SCHOOL, HUNTINGTON, LONG ISLAND — A. B. SAMMIS, FRANK T. CORNELL, ASSOCIATED ARCHITECTS

One of the interesting bypaths of architectural achievement is an understanding of the effect of distance upon architectural detail. As an example, compare the apparent delicacy of the lantern top upon the Bank of the Manhattan Company Building with a close-up view of the same shown on the next page

BANK OF THE MANHATTAN COMPANY BUILDING, 40 WALL STREET, NEW YORK CITY

H. CRAIG SEVERANCE, ARCHITECT; YASUO MATSUI, ASSOCIATE ARCHITECT

Photograph by Irving Underhill

A close-up view of the pinnacle above the lantern, sheathed in lead-coated copper

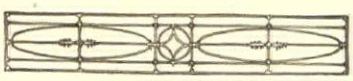
BANK OF THE MANHATTAN COMPANY BUILDING, 40 WALL STREET, NEW YORK CITY

H. CRAIG SEVERANCE, ARCHITECT; YASUO MATSUI, ASSOCIATE ARCHITECT

NUMBER VI
IN A SERIES
OF
WORKING DRAWINGS

By Jack G. Stewart

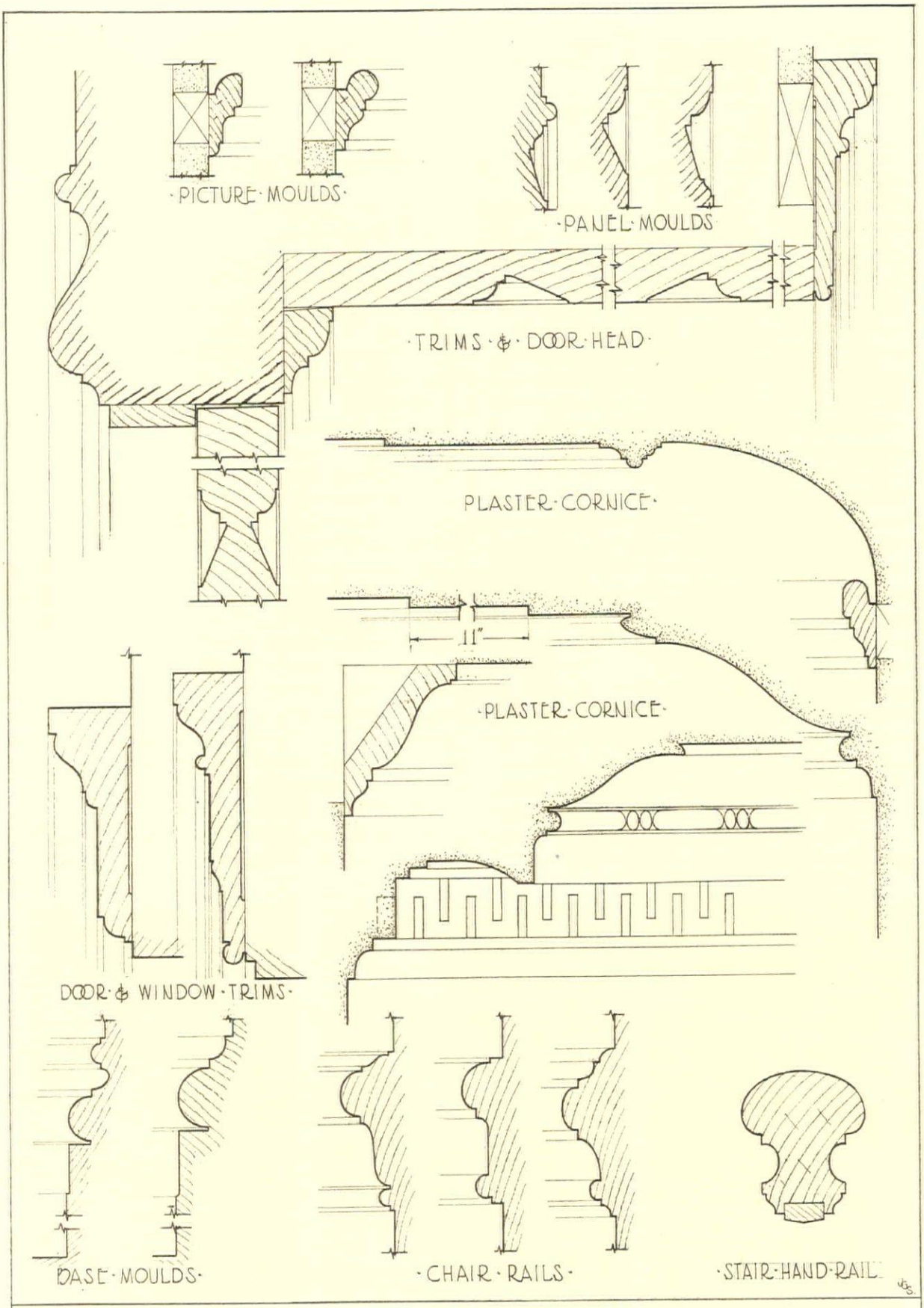
This series, in which one drawing will appear each month, is designed to cover the smaller practical problems that confront the architect in his day's work. The subjects chosen are those which, while not uncommon, call for some experience and knowledge of approved solutions. Next month the subject is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



ARCHITECTURE
CHARLES SCRIBNER'S SONS

PREVIOUS SUBJECTS IN THIS SERIES

I. Flagpole Holder on an Exterior Wall
II. Radiator Enclosures
III. Cigar Sales Counter
IV. Woodwork in a Library
V. Built-in Kitchen Cupboard



DETAILS OF VARIOUS TRIMS & MOULDINGS

SCALE 1" 0 1"

PLATE Nº 6

Some Pitfalls in Supervision

By W. F. Bartels

IV. CINDER CONCRETE FLOOR ARCHES

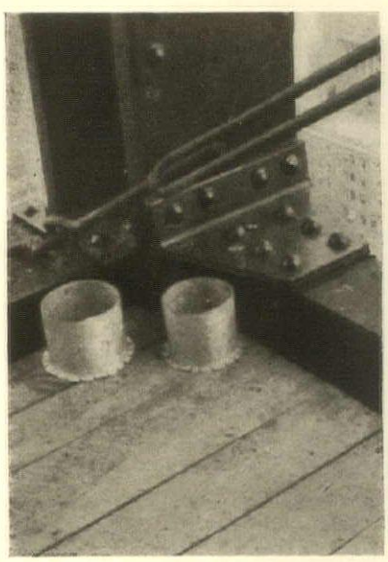
THE architect often specifies cinder concrete floor arches and thinks he gets them. In nine cases out of ten he does not. If arches were to be made of well burned cinders, free from sulphides, there would be scarcely any arches poured. Often what passes for cinders actually is a mixture of ashes. As one New York superintendent says: "You can't fool my arch foreman; when he wants cinders he frankly calls for ashes." It is a situation not to be lightly dismissed.

The ash content of cinders for concrete should be minimized and, of course, any loads containing coke or soot should be summarily thrown out. Cinders are stored in the open and this is to their advantage. The rains leech them and the air oxidizes to some extent any sulphides that are exposed. Hot cinders should never be tolerated on any job. The proper amount of cement—generally 1 : 2 : 5—in the mixture should be strictly adhered to and the strength of the arch not left entirely dependent on the wire mesh and the reputation of the builder.

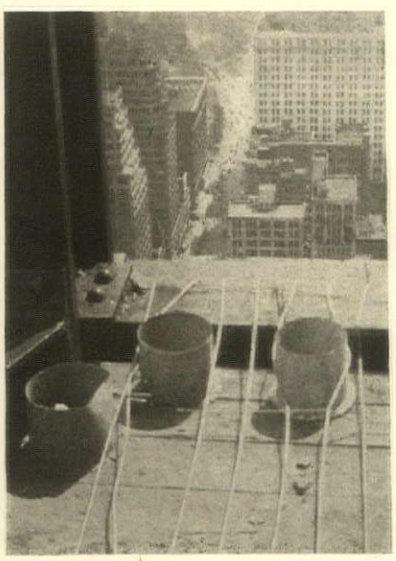
The superintendent should not be fooled by the number of empty bags on a job, because in some cases they are brought on the job as "props," when a laborer seems never to tire of waving the same empty sack. Another trick used when it is desired to cheat a little is to pile some bags of cement in one pile over the machines and untie all the bags. Then if an inspector approaches the bags are obviously all ready to dump in the mix.

A wetter mixture may be allowed around the beams than is used for the main slab, and it should be well puddled to insure its flowing around the beam and its clips. The fireproofing of beams, however, should not be poured too far ahead of the slab proper, in point of time, as is sometimes the temptation when a thin and thick mixture is being run by the only machine, as this may interfere with the bonding. Only a minimum amount of paper stuffing should be allowed, and this only where the forms do not quite meet, and never so that the mixture is stopped from going where it should. If the forms are carefully made, there will be little necessity of putting much paper in the small holes between the steel frame work and the wooden forms. Needless to say, the practice of throwing in cement bags, old clothes, etc., to stop up the holes should not be tolerated.

Before the arch is poured, all sleeves for pipes should be in place. This not only makes a neater job, but reduces the expense of cutting



Galvanized iron sleeves placed on the floor arch form boards before the reinforcement is laid



Reinforcing mesh wires spread around sleeves, with adjoining cross wires cut

A lather pulls up the wire mesh so as to allow the concrete to cover its under side

and patching. The lather should spread the wire mesh around these sleeves by cutting only the lateral wires and spreading the longitudinal ones as shown. It is well to see that when the cinder concrete is poured some one lifts the wire mesh in the arch so that it may be embedded in the concrete and to a depth called for in the arch diagram. The Lathers Union in New York City requires the employment of a lather to perform this work.

Besides checking the concrete mixture to see that it is properly mixed and the correct amount of cement is used, it is also well to check the depth of the arches being poured. Properly mixed cinder concrete needs little tamping, but the contractor using little cement does not care to lose that little through forms which are generally poor; consequently he may put in a drier mixture, requiring much tamping to form a solid body.

When the cinder arch is properly finished, it is easily distinguished by its clear ring, its tendency to whiteness, and the irritation of the mechanics who must drill through it.

BRICKWORK

BRICKLAYING and stone-setting are indeed two of the most ancient arts. To-day they are as jealously guarded by their respective guilds or unions as they were in ancient times. The workmen take pride in their craft and the architectural superintendent, insisting on good work, is usually certain of their co-operation. However, in the contractor's desire to get the maximum work from the men, the latter are often forced to take short cuts, against their better judgment. It is against this that the superintendent must be on his guard.

While the good common bricks in general use to-day may vary slightly, the difference is small and scarcely noticeable. There is, however, a vast difference between good and bad bricks. A good brick should always be insisted on for every job, however small. It should be of even texture, hard, well burned, and give a clear ringing sound when struck. It should have a minimum amount of absorption and be free from foreign salts.

Face brick may vary in color, composition, and method of manufacture, but it should have the same general characteristics as those given for common brick. Before using the white sand-lime brick, its absorptive qualities should be carefully considered. Several brands of sand-lime bricks are now in the market which seem to be satisfactory in this latter respect.

So seldom does a bricklayer use tools other than his trowel and level that an experienced superintendent may well wonder whether he has any other tools. He has others, but makes his trowel do most of the work. Care should be taken to see that a line is carried across the work and the plumb level frequently used.

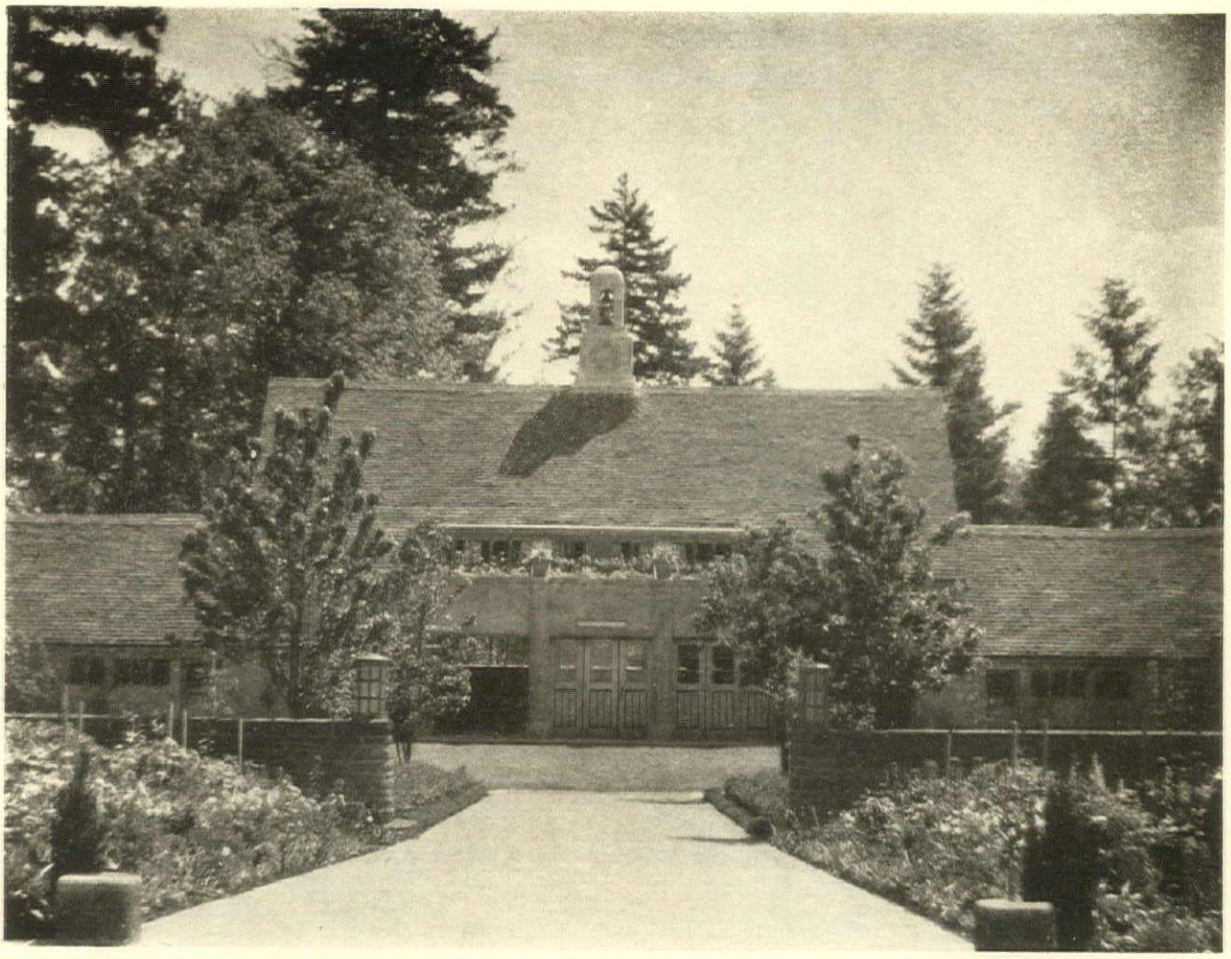
Naturally, it will be insisted that the mortar used in laying brick should be of the proportions and materials specified. Care should be taken, however, to see that it is uniformly followed over an entire job—nearly every one can recall brick walls having joints which dried out in patches of different colors. The contractor will usually claim that sand and lime without cement make a satisfactory mortar, but if the architect had not considered cement necessary he would have left it out of the specifications. A coarse sand, free from clay and loam, is generally better than a fine sand because of the latter's tendency to pack.

Once the mortar is in the bricklayer's tub the superintendent will be able to tell the caliber of the workman. If he keeps his mortar well mixed and concentrated in one spot his work will probably be good. Beware of the bricklayer who has his mortar scattered all over and who does not mix it thoroughly at intervals; his work will be below par.

When laying bricks it should be insisted that they be thoroughly wet except in freezing weather. The joints should be well filled on all outside walls. Failure to do so will result in dampness and leaks. A foreman tells the story of a large wall that he had built and which was condemned by the architect because of the various shades of color in the joints. The architect felt it was due to varying mortar mixes. This the foreman denied. Finally the architect agreed that if mortar mixed in his presence was used in a sample wall and did not turn out uniform he would accept the large wall. This the foreman was only too glad to do, knowing that the various shades were due to partly filled joints; and of course when the architect again arrived the sample wall had the same fault.

The next instalment will complete Mr. Bartels's notes on Brickwork and continue with Stonework.

—Editor.

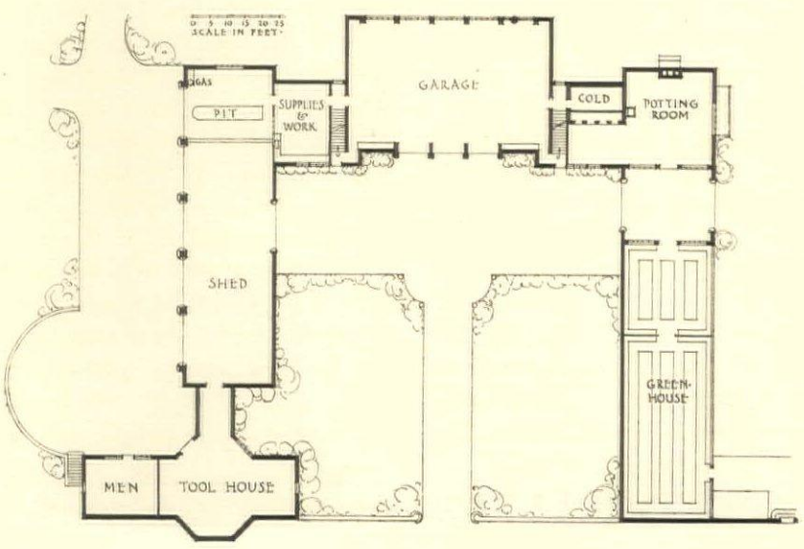


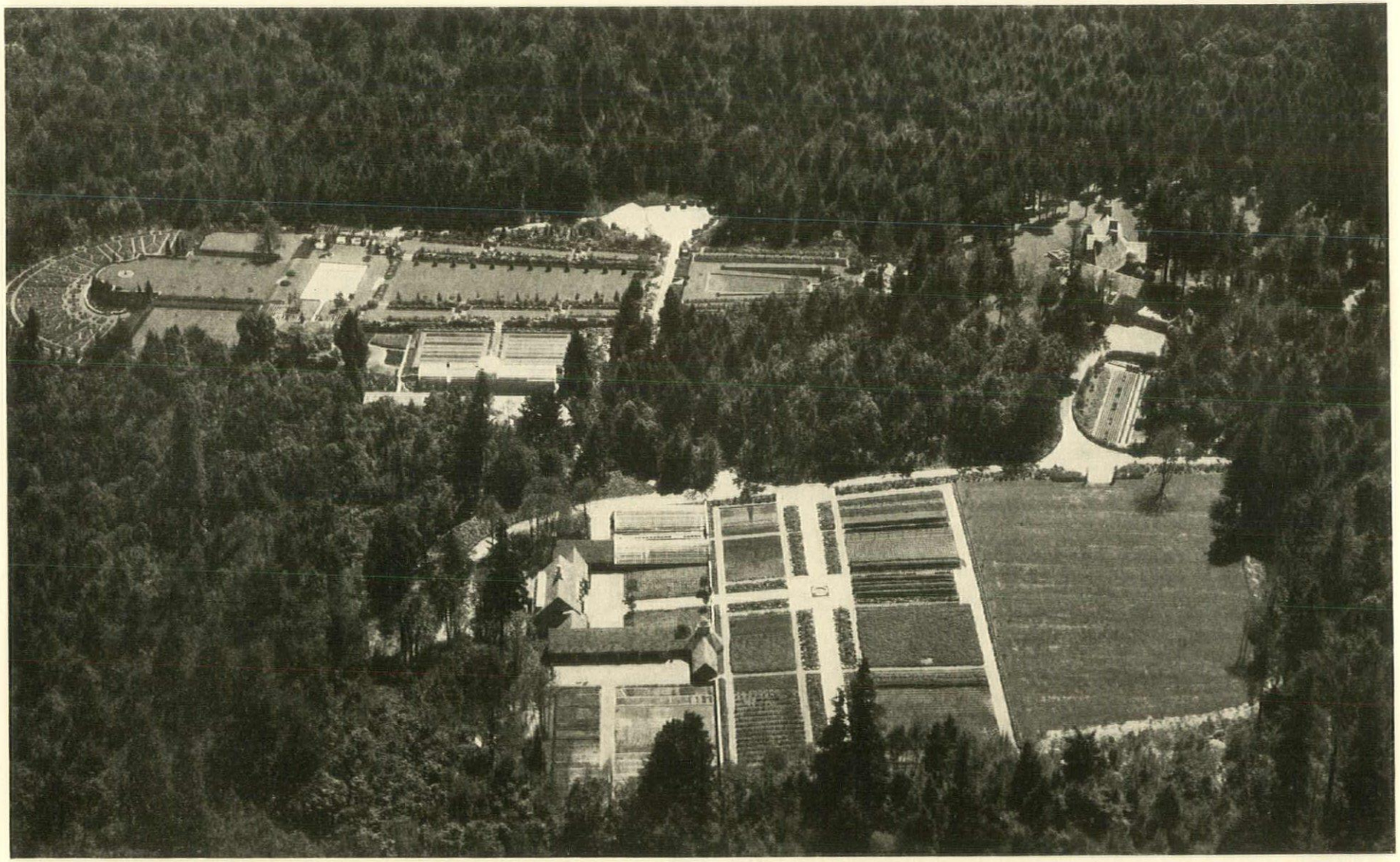
The garage on its main axis

Garage Group, Estate of M. Lloyd Frank
Portland, Oregon

HERMAN BROOKMAN, ARCHITECT

The main house was illustrated in the issue of January, 1928; the gardens, in the issue of August, 1929

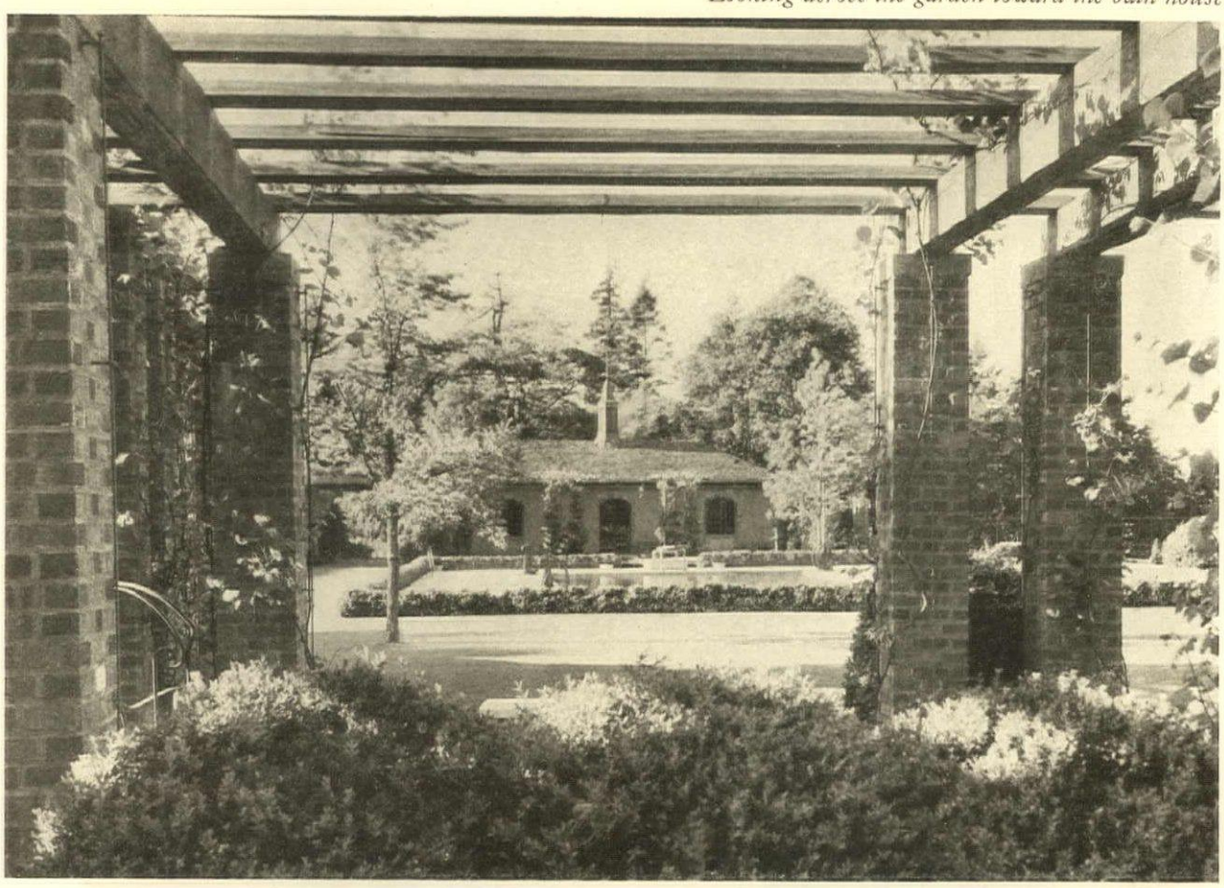




Aerial view of the estate. The house is in a great group of Douglas firs above at the right, the garden stretching before it at the left with its main axis pointing to the snow-capped Mt. Hood, one hundred miles away

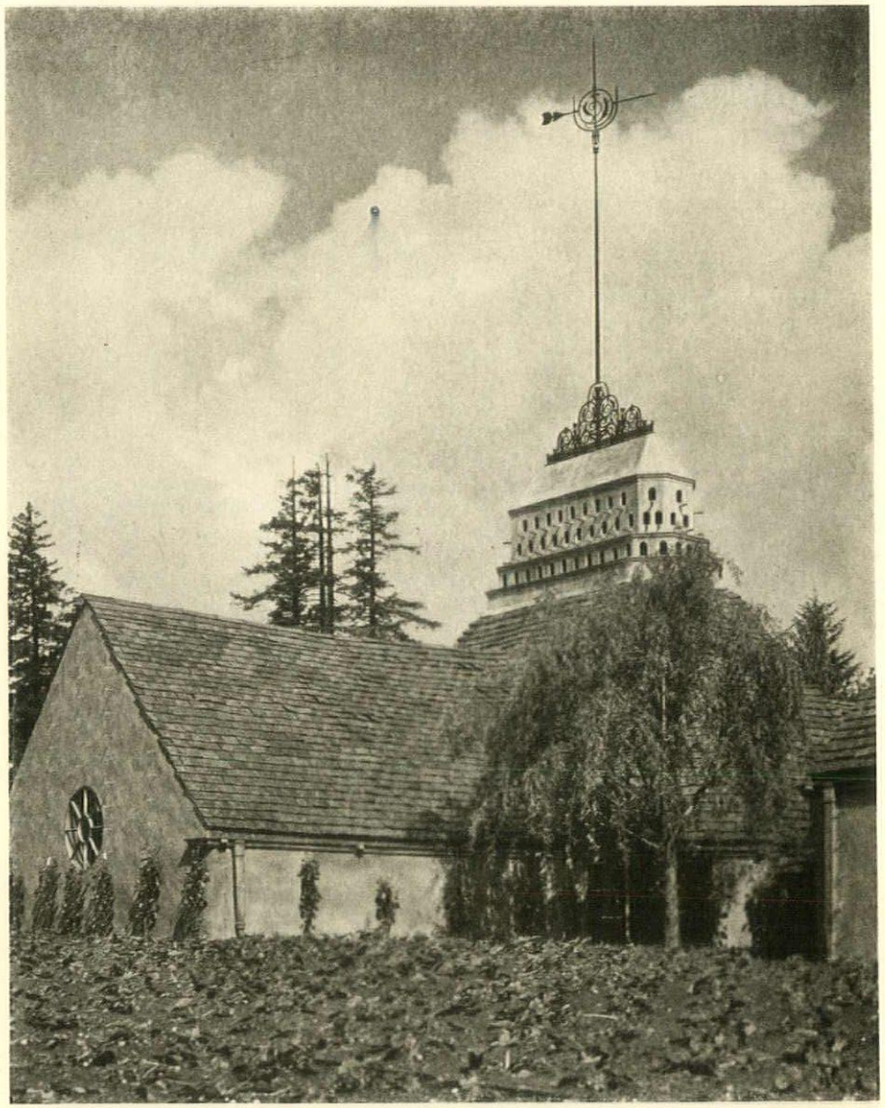
The garage group with the end of the greenhouse at the right

Looking across the garden toward the bath house



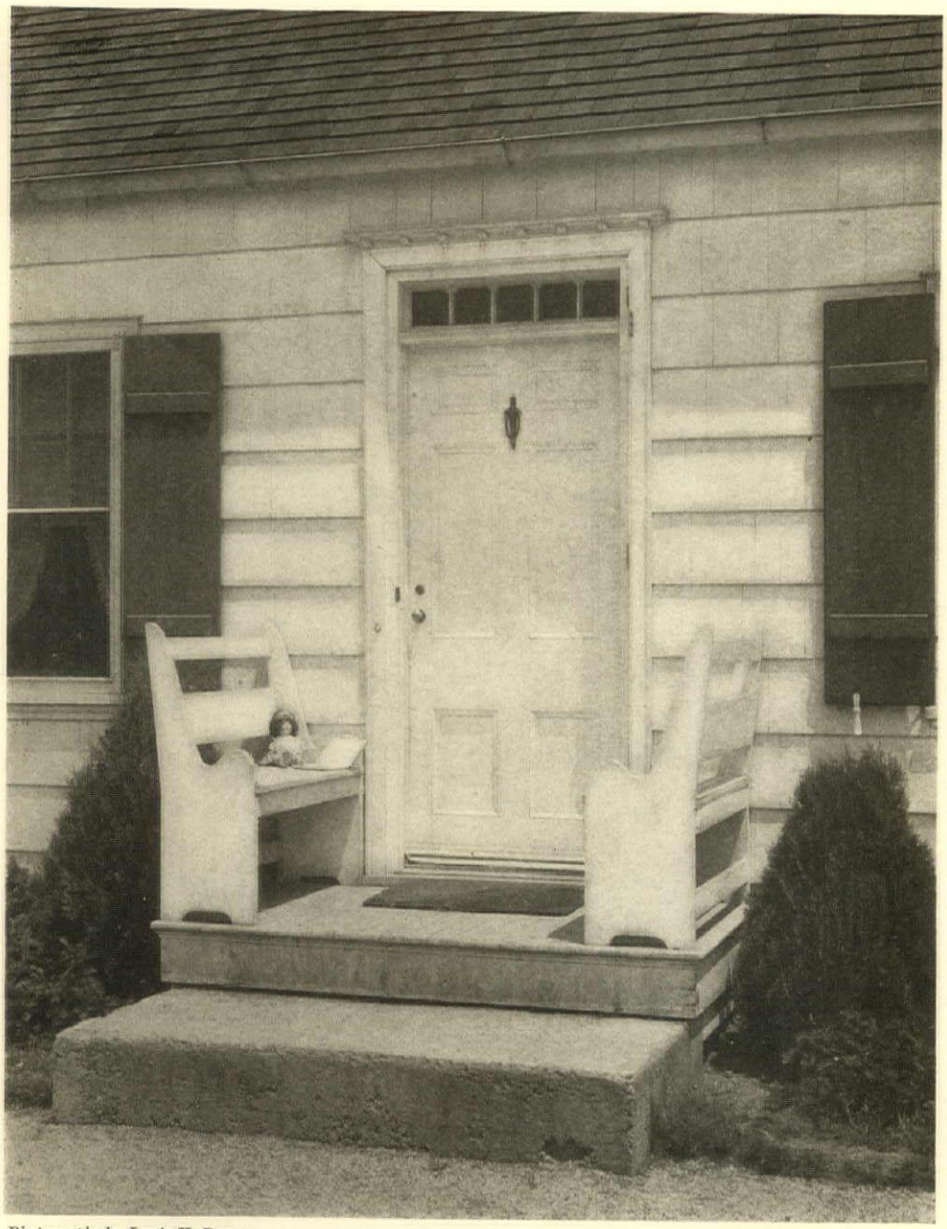
GARAGE GROUP, ESTATE OF M. LLOYD FRANK, PORTLAND ORE. HERMAN BROOKMAN, ARCHITECT

Looking across the front of the garage



Tool house—the weather-vane executed by Oscar Bach

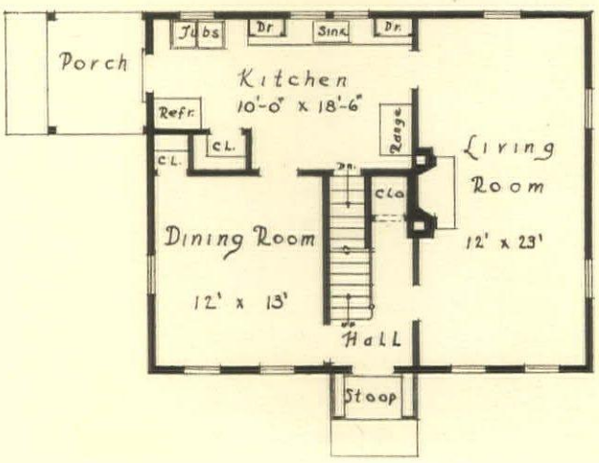
GARAGE GROUP, ESTATE OF M. LLOYD FRANK, PORTLAND, ORE. HERMAN BROOKMAN, ARCHITECT

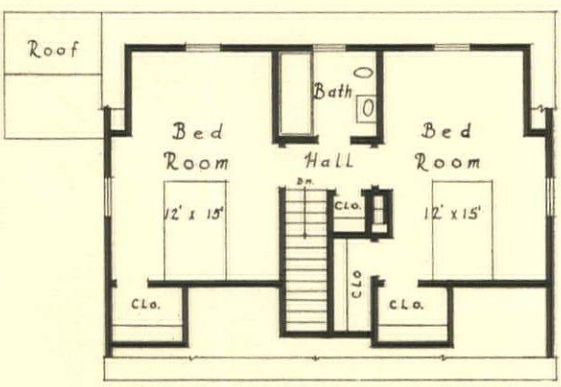


Photographs by Louis H. Dreyer

GARDENER'S COTTAGE, ESTATE OF JOHN J. FARRELL, DARIEN, CONN.

CHARLES S. KEEFE, ARCHITECT





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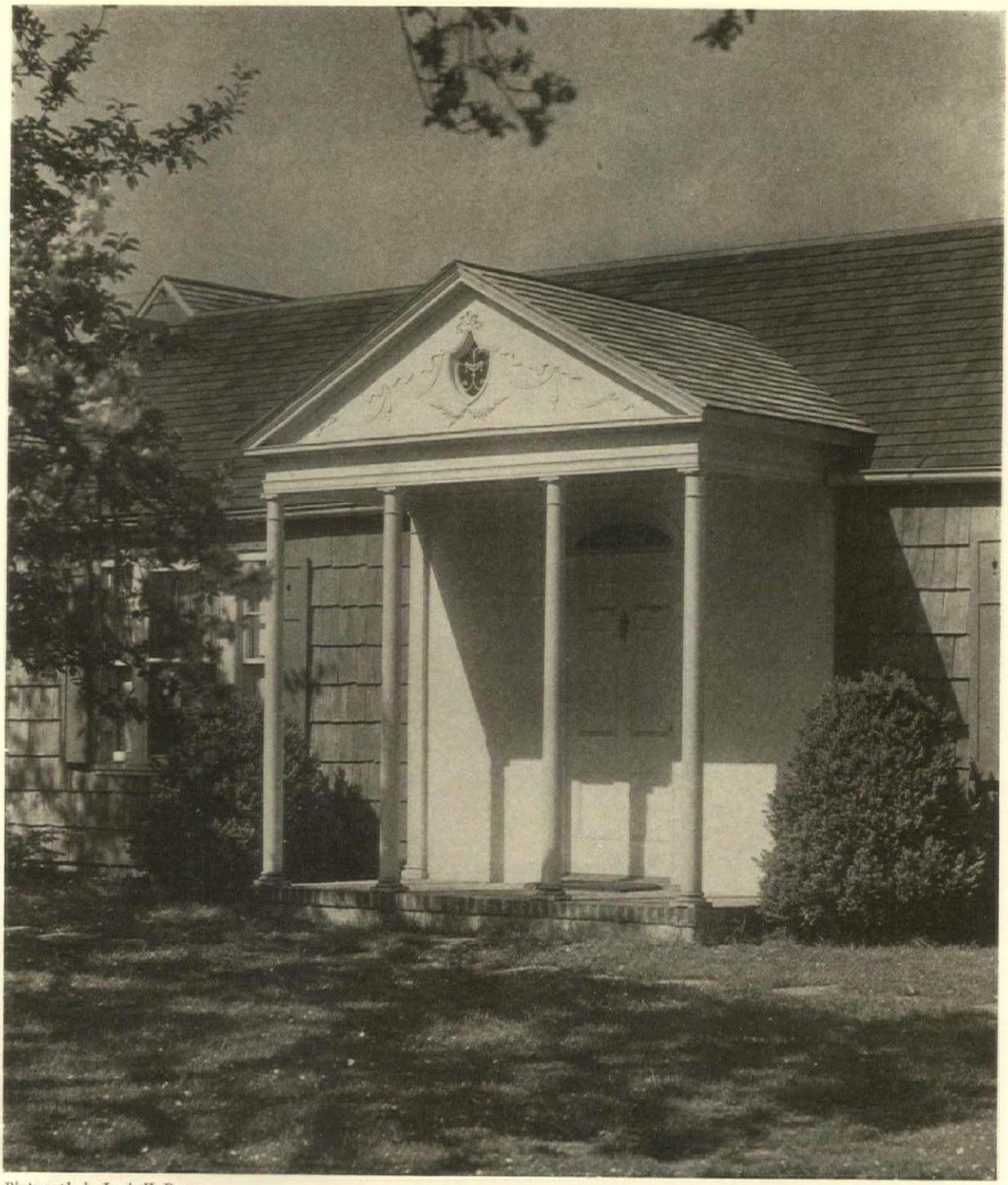
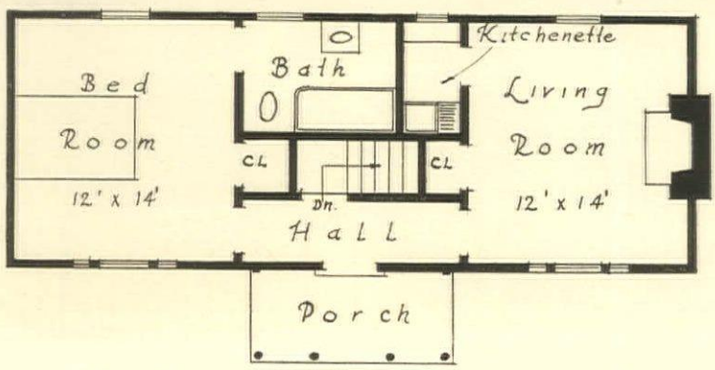


Photographs by Louis H. Dreyer



ESTATE OF
E. HOPE NORTON,
DARIEN, CONN.

GUEST HOUSE
AT "HOMEWOOD"
CHARLES S. KEEFE,
ARCHITECT

GUEST HOUSE AT "HOMEWOOD," ESTATE OF E. HOPE NORTON, DARIEN, CONN. CHARLES S. KEEFE, ARCHITECT

The Editor's Diary

Thursday, August 21.—Russell Colean took me into the York & Sawyer drafting-room to-day to show me the working drawings for the Department of Commerce Building in Washington, which should possibly be nominated as requiring the largest job of architectural drafting in the history of civilization. The building covers three city blocks, arching the intermediate streets. Even at sixteenth-inch scale, the long elevation was made in four sections. With the inner courts added to the perimeter, the elevations themselves comprised a pack of tracings almost as extensive as a whole set of drawings for an ordinary building. When the innumerable sections and the plans for plumbing, wiring, heating, etc., were added, together with the details at quarter scale, three-quarter scale and full-size, the total amount of draftsmanship required—the drawings being in ink on linen—was stupendous.

Friday, August 22.—Lunched with French Strother, Administrative Assistant to the President, who told me among other things of what seems a brilliant idea. This country has depended for its prosperity in recent years largely upon the activities of new industries such as the automobile, radio, electric refrigeration machines, and the like. Some new industry ministering to the multitude will probably spring up in good time. Is it not possible, however, to induce the lift that such a birth would bring to American business? For example, the time is coming—why should it not be brought near?—when the American home as well as small stores and offices will be cooled in summer as well as heated in winter. As a matter of fact, an industry which would bring this within the reach of most people would be producing not a luxury, but an economic necessity. Where air treatment has been introduced, as for example in the White House offices, the increased efficiency of the staff and its ability to work for longer hours under far more comfortable conditions, have been unmistakably shown. If the American people could dwell and work in an equable temperature, summer as well as winter, the national efficiency would unquestionably be raised by an amount far above that which would be necessary to pay for bringing this about. Here is a chance for a new national industry in America.

Monday, August 25.—Volume I, No. 1, of any publication is interesting, but the initial issue of *The Federal Architect* is particularly so. It emphasizes incidentally, the fact that there are many architects employed in the Treasury Department, the War and Navy Departments, the Veterans Bureau, and the National Capital Park and Planning Commission. In fact, there are so many men thus engaged that they have formed the Association of Federal Architects, and are bringing out their magazine with the aim of acquainting federal officials and their own numbers with the official architectural efforts. Among many stimulating facts in the first issue there are editorial comments upon the recent Convention of the A. I. A., and its symposium on Traditional and Modern architecture. The editor says that the difference between the two schools is that the traditionalist is preoccupied with his vocabulary rather than with his thought, while the extreme modernist has made a new dictionary containing about nine words with which he tries to talk intelligently and picturesquely. Had Henry James been an architect, he would have been an Ultra-Traditionalist. Had Ring Lardner been an architect, he would have been a Modernist.

Tuesday, August 26.—With all the ingenuity and technical knowledge available these days, we seem to have found no thoroughly satisfactory way to restore the surface of marble and stone from which bronze lettering has been removed. Fifth Avenue itself, theoretically the last word in fastidious externals, shows more and more instances, in these days of change, where the dowel holes for bronze letters have been filled in a rather unsatisfactory attempt to match the original surface texture and color. If any one knows how this may be done, he will confer a great blessing upon the profession by letting the facts be known.

Thursday, August 28.—Herbert C. Wise dropped in to see about additions and revisions to "College Architecture in America" in the new edition which will be needed shortly. He tells me that in building Boldt Hall at Cornell, he and Mr. Klauder secured several of the stones from the old Waldorf, now demolished, and incorporated them in the structure which came to Cornell largely through Mr. Boldt's generosity.

Monday, September 1.—The filing of plans for a dwelling to be built in the Borough of Manhattan is a rare event—people no longer build houses in Manhattan. However, Mrs. Graham Fair Vanderbilt is to build one at 60 to 64 East 93d Street, from drawings by the Office of John Russell Pope.

Wednesday, September 3.—The architectural editors, bringing their respective advertising managers as guests, discussed at luncheon to-day the large subject of the building industry. Here is the largest industry of the nation, with the exception of agriculture, involving an expenditure yearly of some four to six billions of dollars, a large part of which is spent under the architect's direction.

Frank C. Baldwin makes the point in an address in Budapest that although the membership of the A. I. A. consists of less than a third of the practising architects in the country, nevertheless, some seventy per cent of the building that is done is from the drawings of members.

Friday, September 5.—Willis H. Church, co-author with E. Warren Hoak, of "Masterpieces of Architecture in America," dropped in to-day on the completion of his trip around the world. He has been gone just about thirteen months, and comes home laden with many color photographs and eleven thousand black-and-white negatives. Incidentally, he says that the Taj Mahal is unquestionably the most beautiful building in the world. He spent days photographing and measuring it, particularly its multitude of pierced marble grilles, and secured one magnificent view of it by moonlight with an exposure of two and a half hours.

Saturday, September 6.—I see that in the proposed hundred-story office building which Harvey Corbett and Dan Everett Waid are working on for the Metropolitan Life Insurance Company, New York, the handling of the vertical transportation has taken a new trend. The first thirteen floors are to have moving stairways, thus freeing the several batteries of elevators for better service to the upper floors.

Tuesday, September 9.—As I passed the Kane house on Fifth Avenue at 49th Street, illustrated on the "Lest We Forget" page in the September issue, the wreckers were swarming over it, demolishing what has long been considered one of the outstanding examples of domestic architecture in Manhattan. So this is progress.

Wednesday, September 10.—Kenneth Murchison is the only architect I saw to-day at the International Polo Match. We columnists have to get around.

Thursday, September 11.—The subject of travelling scholarships for architectural students is one on which some new thought seems to be due. We keep on founding scholarships which send men to Europe, and unquestionably there are not too many of these available for the thousands of applicants. Why not, however, a scholarship or two for America? Travelling for six months in America

would be an architectural education in itself.

Willis Church comes back from his travels around the world with the conviction that we should have some travelling scholarships that will permit architectural students to see the world instead of merely Europe. We are spending all of our time on Europe and shutting our eyes to marvellous things in India, Africa, and the Far East.

Monday, September 15.—Lunched with Griffith Bailey Coale and Carl Beck. The former has taken the top floor of the old Astor Library for a temporary studio in which he is painting a mural for the New York Trust Company banking-room, now being finished at 57th Street and Fifth Avenue. The mural shows the water front of Manhattan under the Dutch, English, and finally to-day—a fascinating panorama in which there is much real documentary material upon the early Dutch and English ships. Since Mr. Coale is secretary of the Ship Model Society, he paints spars that have real functional significance, and sheets that lead very definitely from grommet to cleat. Six months time in which to complete a mural two hundred feet long by thirteen feet high seems like crowding, even in these days, but Coale's system of making a scale drawing in pencil, photographing it and projecting it on the canvas at night, makes it possible to transfer this outline to the canvas in very short time. He has a group of fourteen young men, many of them from the Yale Art School, putting on the paint, all in flats, in two shifts. It is possible to work at night since the colors are definitely fixed and mixed in large quantities beforehand.

Tuesday, September 16.—Attended a luncheon of the American Institute of Steel Construction at the Engineers' Club, where Herr Otto von Halem was the guest of honor. Herr von Halem is director of the Beratungsstelle für Stahlverwendung, which corresponds to our A. I. S. C. I was particularly interested in his report of finding increasing use for steel in the construction of dwellings. Herr von Halem expressed his surprise that we in America continue to use brick and terra-cotta as protection for our steel frames, without apparently investigating the possibilities of other means of insulation which might prove more economical. With all of our vaunted leadership in steel, which other countries admit, we are not carrying on the research necessary to find further and better ways of using steel, such as prevails in Germany.

G. E. J. Pistor, treasurer of the A. I. S. C., told us of his recently completed tour of foreign countries, pledging their co-operation in the establishment of similar organizations.

Thursday, September 18.—The September 1st Strauss national building survey, covering five hundred eighty-five leading cities and towns throughout the country, shows for August a decrease of 15 per cent from the total of the preceding month, and from the corresponding month of last year, a drop of 37 per cent. There seems to be little change in prices of building materials, officially at least, though manufacturers generally are working on a reduced time schedule. For example, 33 per cent of the plants reporting to the Common Brick Manufacturers' Association are not operating. There is evidence that although there have been no reductions in published wage scales, contractors are able to employ building workers at rates considerably below the union scale. Looked at in the large, however, building has been on the downward trend since 1926. Many of the factors bringing this about have now altered. It would seem to indicate that an up-swing is due.

Friday, September 19.—In connection with the large question of how we are going to build around the steel frame, there is a significant article in the September 9th issue of *Brick and Clay Record*. The clay products manufacturers are very much alive in spots to the desirability for a light, economical, durable, and beautiful material which will form curtain walls and protect the steel frame. Some of the attempts to supply this need consist in making a light-weight unit which may also be cut, carved, and turned; another light-weight unit which is glazed in ceramic color; still another, in terra-cotta, is a large slab put into the wall with mortar; sprayed metals protect and distinguish the surface of another light-weight slab; then there are various systems utilizing bricks of varying size to secure an ashlar surface and through bonding; salt-glazed and slip-glazed tile is rather well known. No single discovery is going to revolutionize building over night. Possibly out of the growing field of contenders one or more may emerge after several years of experiment and trial by use.

Saturday, September 20.—It is interesting to find that in Manhattan, which Mark Barr calls "the city of Babbitt warrens," and which is always regarded as possessing more commercial buildings to the square mile than any other locality, there are residential buildings in this same area valued at 25 per cent more than the business and industrial structures. Office buildings in New York City represent only 6.3 per cent of the total value of building as against 25.3 per cent represented by one- and two-family dwellings. Even in Manhattan, values of purely residential buildings are about equal to that of all other buildings.

Monday, September 22.—Edward Buehler Delk stopped in from a motoring circuit from Kansas City through New England and back. Like most observing architects, he was marvelling at the high plane of design in the New England work left to us from a century and a half ago. Considering the few and rather inadequate books of details in existence at that time, it would be surprising enough if a few outstanding designers achieved great results. Still more surprising is it, therefore, when all of the work that is left to us is so uniformly good in its proportions, detail, and scale.

Tuesday, September 23.—Lunched with Edwin H. Anderson, librarian of the New York Library, who is distressed over the fact that the great plant at 42d Street and Fifth Avenue is already inadequate. The main reading-room seats nearly eight hundred people, yet on Sundays and holidays there are sometimes as many as two hundred waiting for seats. The great stack, which is the feature of the Bryant Park elevation, is severely taxed to accommodate two million volumes. Enlargement of the present library would be a difficult matter, due to lack of land. Any encroachment on Bryant Park would probably be met by the usual vociferous objection to decreasing our park area. Probably the difficulty may be solved through the growing tendency toward branch libraries instead of increasing centralization. It would seem that libraries, like everything else in this generation, may become specialized, leaving to the branch libraries the task of supplying ordinary needs, and to special-subject libraries the satisfying of students and investigators along special lines.

Wednesday, September 24.—Exponents of the less-noise movement will be glad to learn that one of the features of this year's building trades exhibition in London is a "silent house." Trystan Edwards has designed a series of rooms using soundproof materials, with floorings of rubber and cork, non-rattling windows, and non-slammable doors.

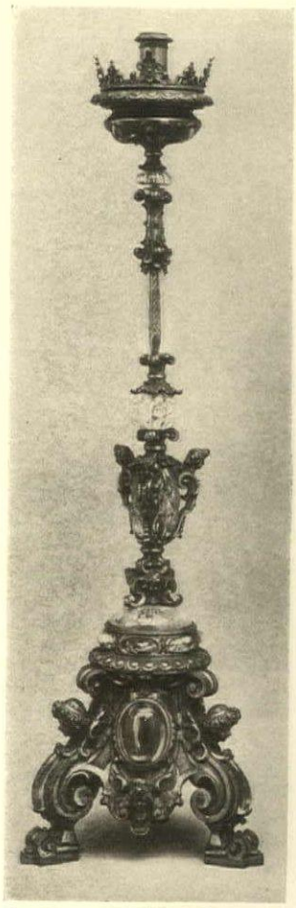
Thursday, September 25.—There is some encouragement in the building reports for the New York Metropolitan area, which show a gain of 11 per cent over July of this year, and 1 per cent over August of last year. Residential building still continues to hold the average down. New residential work contracted for during August was 63 per cent below the average for August of the years 1925 through 1928. It seems likely that we are at the low point of the cycle, and that the next few years will show a prosperity that is based on sound business procedure rather than on speculative manipulation such as brought the inflation of recent years.

Yesterday and To-Day

A GLANCE AT SOME OF THE LIGHTING FIXTURES OF PAST ERAS COMPARED WITH SOME OF THE PRESENT-DAY ACHIEVEMENTS IN THE MINOR ARTS—OUR EFFORTS RECOGNIZED THIS MONTH,

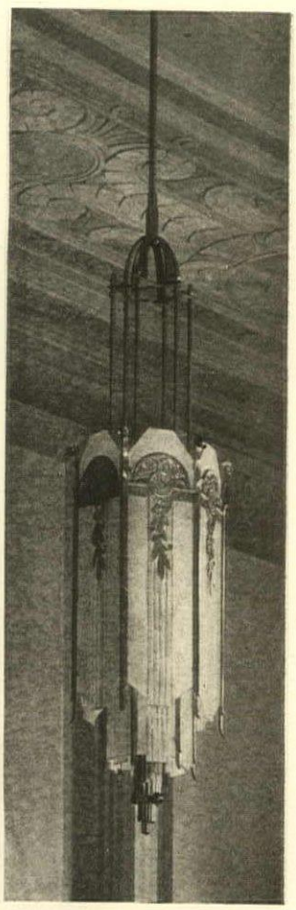
The photographs of old examples are used by courtesy of The Metropolitan Museum of Art, New York City

Early Christian lamp of bronze with stand; fourth or fifth century

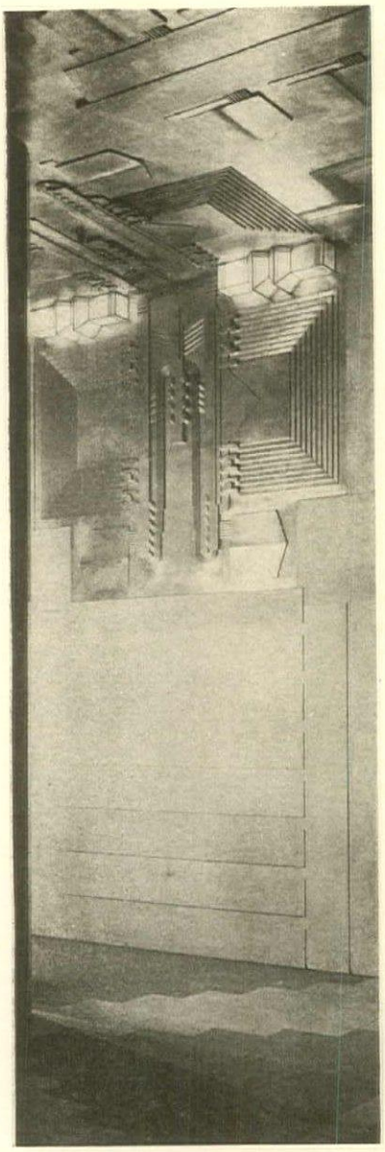


Italian candlestick of the early eighteenth century, in gilt bronze and crystal

Fixtures in the living-room of Robert Mallet-Stevens, architect, in Paris

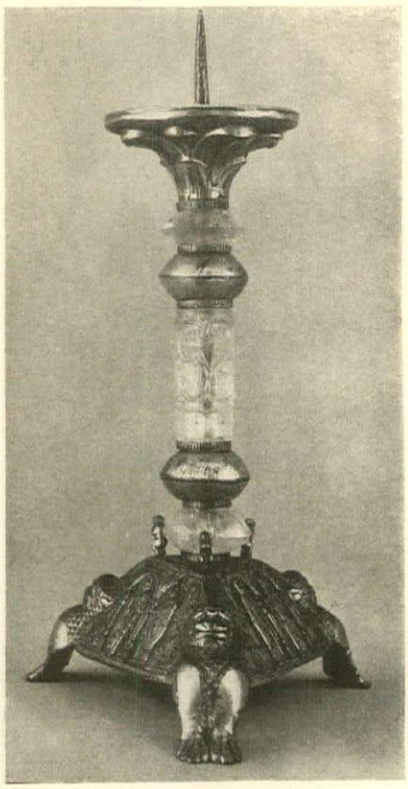


Banking-room fixture. Dennison & Hirons, architects; executed by Sterling Bronze Co.



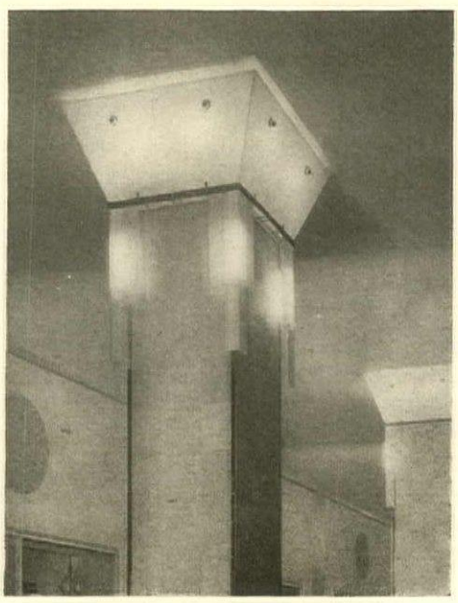
Integral lighting unit in an office-building lobby. The Firm of Ely Jacques Kahn, architects

One of a pair of candelabra, Empire Period, in bronze and marble



Pricket candlestick in copper gilt and rock crystal; French, thirteenth century

Brass chandelier from the Adam Period, 1750–1775



Integral lighting about a column in a department-store. Holabird & Root, architects

CONTACTS

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

What Is the Structural Service Department, A. I. A.?

IN spite of the fact that ten years have passed since the Institute became active in structural service work, there still remains a lack of knowledge among the architects as to the purpose and manner of functioning of this organization. The last annual report clears up both of these points, and its own words serve to answer the question of the above title.

In 1918 it became evident that the Institute should co-ordinate and expand its activities as to structural considerations, and the Fifty-first Annual Convention passed a resolution creating a Committee on Structural Service whose duties were, "to co-ordinate and correlate structural phases of the Institute's activities, and to co-operate with departments of the Federal Government, states and municipalities, and with affiliated organizations in matters where the Institute may properly render service toward improvement in structural materials, their safe and efficient application, and toward higher ideals in providing for the health, safety, and comfort of the occupants of all buildings."

The duties, as outlined, have never been changed or modified.

A Structural Service Committee was at once organized, and in 1919 was made a standing committee, and was charged with the additional task of advising and co-operating with *The Journal* in the continuation of its structural service work. Various changes in other committees were made in order to better co-ordinate the work.

The first activity of the Structural Service Committee was the undertaking of a survey to determine the scope and ramifications of the proposed work, and at the Fifty-second Annual Convention (1919) the chairman reported that there were at least eighty Government departments and bureaus, professional and technical societies, and trade associations directly and actively interested in subjects relating to the structural phases of architectural design, and that the task imposed upon the committee was one of gigantic proportions, so that it might be impossible to perform the duties with any degree of completeness through purely voluntary service.

In 1920 the committee asked for an annual appropriation of $8,000; the nominal appropriation of $203 was increased to $575, with instructions that the committee should co-operate in the preparation of standard specifications; revise the Symbols for Wiring; prepare Standard Indications for Materials; and prepare a Standard Construction Classification for Filing.

During the year 1920 contacts were established with a number of Governmental departments and bureaus, with independent and university laboratories, with associations of producers, and with committees of technical societies. The committee actively co-operated with other interested groups in establishing standard sizes and grading of lumber; in standardizing nomenclature for wrought-iron pipe; in preparing standard specifications for architectural terra-cotta, and in the formation of a safety code for elevators. The Symbols for Wiring Plans were revised and the Standard Construction Classification for Filing was prepared.

These activities were made possible through the active co-operation of the members of the committee, and through an arrangement with *The Journal* whereby the technical editor was permitted to devote approximately one-half of his time to the work of the committee. This arrangement was continued through 1921; new contacts were made, and membership on other technical committees was accepted.

The contacts that had been established between the architect and the producer seemed to have been beneficial to both groups. Joint conferences were held, and the board reported to the Fifty-fifth Annual Convention (1922) that these conferences demonstrated the great desirability of a better understanding among architects and producers as to their common interests, and a resolution was adopted, creating a Producers' Section of the Structural Service Committee as a sustaining body to collaborate with the committee in the following duties:

(*a*) To advise and counsel with manufacturers, who may so desire, on the character of their advertising as to size, form and content,

(*b*) To assist in furthering the use, by architects and producers, of the Standard Construction Classification adopted by the American Institute of Architects,

(*c*) To promote sincerity and reliability of statement in advertising.

A number of the more professionally minded producers identified themselves with the movement and enthusiastically supported it. The rank and file of producers did not, however, show the interest that was expected. Sufficient funds were not available to adequately finance the joint activity, and sundry objections were raised by both individuals and groups. Conferences seemed to indicate the desirability of an intimate contact between the producer and the architect. They seemed, also, to indicate that a different kind of set-up would be necessary in order to obtain the results desired.

The Executive Committee at its

July, 1923, meeting considered the reports of the joint meetings and passed a resolution requesting the president to appoint a committee of three to arrange for co-operation between producers and the Institute. This committee was appointed, and its report to the Board of Directors at its November, 1923, meeting was approved and adopted, forming the basis upon which both the Producers' Council and the Structural Service Department have since been operating. It expresses the opinion that because of the rapidly developing scientific nature of the art of building it seems highly desirable that a technical organization be established within the Institute not only to meet present relationships, but also to keep abreast with all new developments and relationships that may be desirable, and to keep the members of the Institute intelligently informed as to these new developments.

The organization that was set up was briefly as follows, and is substantially the same to-day:

The producers were to perfect an organization of their own members to be known as "The Producers' Council, affiliated with the American Institute of Architects."

The A. I. A. was to establish a Scientific Research Department with a paid technical secretary, whose duty it would be to furnish the Producers' Council with such technical service as they might require; obtain group criticisms of their advertising, and group opinions on other matters, and in addition act as secretary of the Structural Service Committee.

The Scientific Research Department was to be at the disposal of standing and special committees of the Institute, and to make such technical investigations as any of these committees might require in the proper carrying on of their particular work. Since the Scientific Research Department was to serve both the producers and the architects, its activities were to be jointly financed.

In its report to the Fifty-seventh Annual Convention (1924), the board reported that the newly created Scientific Research Department was functioning smoothly and gave promise of becoming a most important Institute activity.

The convention also approved a resolution that the board appoint a committee of three architects to act as Advisory Council to the department.

As the activities of the Scientific Research Department became more widely known, so many requests for Institute co-operation were received that the November, 1924, meeting of the Board of Directors passed a resolution to the effect that the established policy should be not to enter into investigations or committee work of any kind where the presence of an Institute representative would be merely complimentary, or where the experience and training of the architect did not particularly fit him to be of value in such deliberations.

Requests were also beginning to be received for Institute approval of codes or standards in the preparation of which the Institute had not been officially represented. The matter was brought to the attention of the board, and at its May, 1926, meeting a resolution was adopted to the effect that as a general rule the official approval of the American Institute of Architects would not be given to specifications, codes, or standards in the preparation of which the Institute was not officially represented.

Gradually the functions and activities of the Structural Service Committee had been absorbed by the Scientific Research Department, and at the Sixtieth Annual Convention (1927) the name of the Scientific Research Department was changed to the Structural Service Department, the Structural Service Committee was removed from the list of standing committees, and a representative of the Structural Service Department was to be appointed in each Chapter of the Institute.

In its report to the Sixty-first Annual Convention (1928) the board stated that:

"The Institute, through the Structural Service Department, has been represented at many meetings dealing with problems relating to building construction. . . .

"The Board considers these contacts of great value to the profession and to the Institute. The results obtained are full justification and ample return for the annual appropriation of $5,000 which the Institute makes to the Structural Service Department.

"The Department has continued the work of rendering service to individual architects in their technical problems, and members are urged to use this service, for which there is no charge unless extensive research is involved."

In order to centralize the activities of the Institute, the board brought about the removal of the Structural Service Department from New York to The Octagon on April 30, 1929.

The Institute was the first group of consumers systematically to study and analyze the advertising that they were receiving, to the end that as trustees of the building public the cost of building should not be increased through wasteful sales promotional efforts, but should be decreased through the employment of methods that would increase the efficiency of the architect and his prestige. To-day the principles for helpful and effective advertising to architects, as first promulgated by the Institute, are very generally regarded as basic, and have been adopted by many other groups exerting an influence over the character of advertising. The results are apparent even to the casual observer. Advertising to architects to-day is not only more reliable than formerly, not only contains more information of value to the architect, and not only is this information arranged more conveniently so as to conserve the time of the architect, but also in its presentation it indicates a rapidly growing appreciation of good taste.

The Producers' Council, representing some thirty-two billion dollars of invested capital, frankly admits that it has a selfish interest in doing what it can to maintain the architectural profession in a position of leadership in the building industry. The most cordial relations exist between this Department and the Council, which, in co-operation with the Institute, is promoting the ideals for which the Institute stands.

ARCHITECTURE'S PORTFOLIO OF

FENCES OF WOOD

THE FORTY-NINTH IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

Forthcoming Portfolios will be devoted to the following subjects: Gothic Doorways (December), Banking-room Check Desks (January), Second-Story Porches (February), Clock Towers (March), Altars (April), and Garage Doors (May). Photographs showing interesting examples under any of these headings will be welcomed by the Editor, though it should be noted that these respective issues are made up a month in advance of publication dates.

Subjects of Previous Portfolios

1926–27

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

1928

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

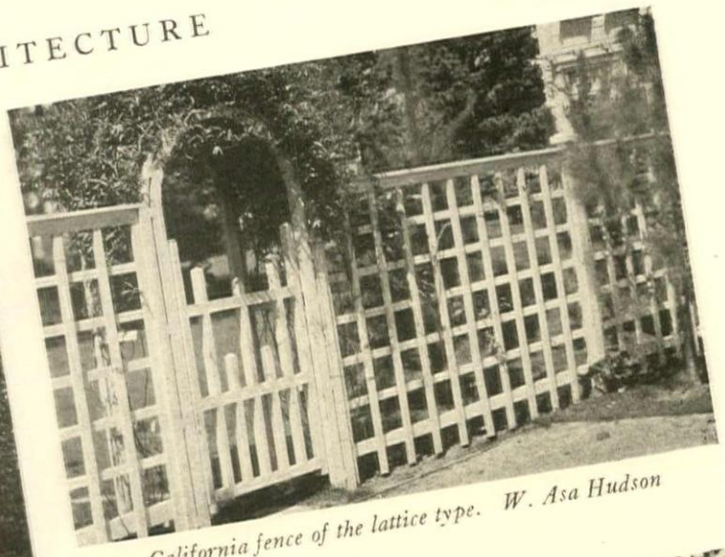
1929

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

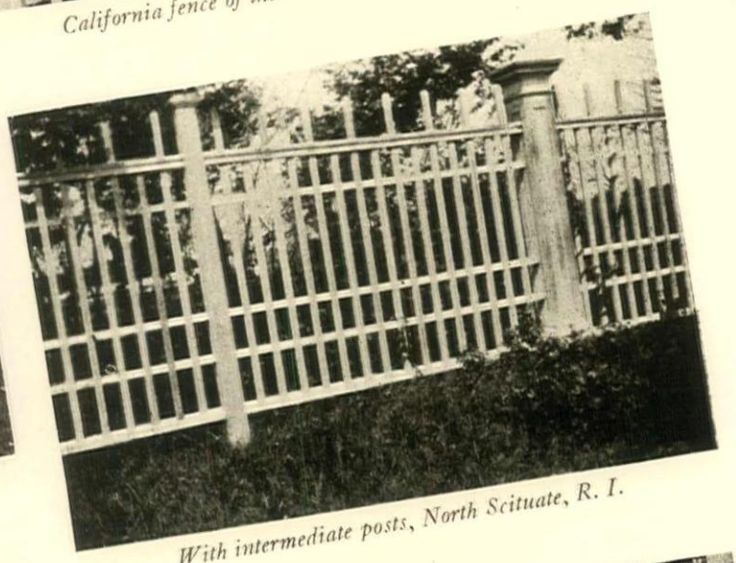
1930

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

Stained lattice fence on a stone wall. Oswald C. Hering

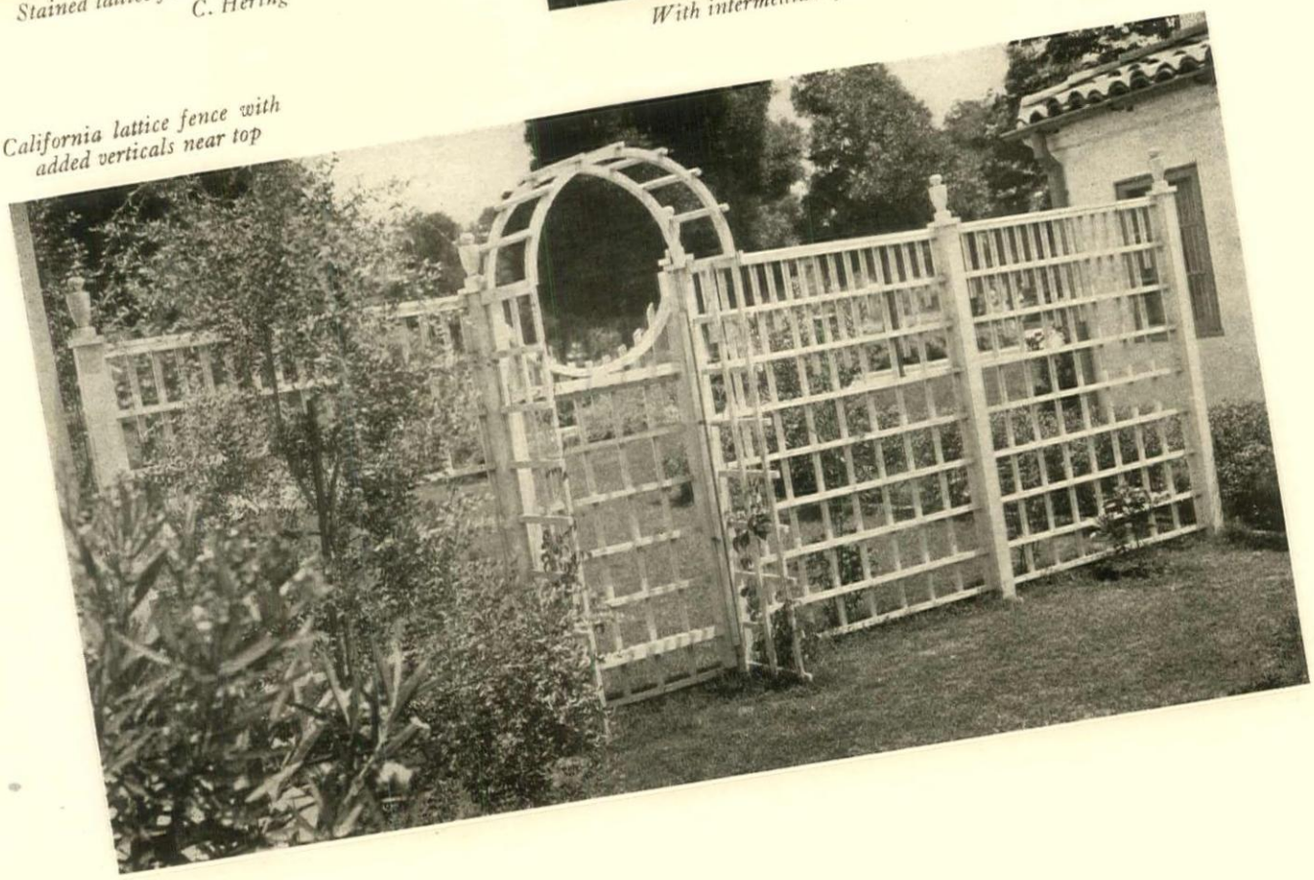


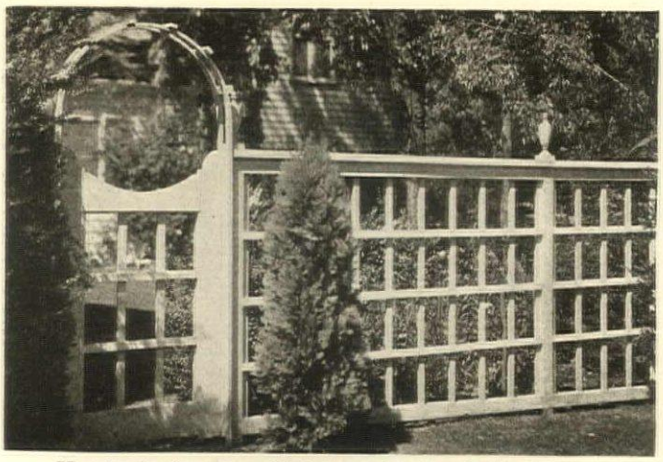
California fence of the lattice type. W. Asa Hudson



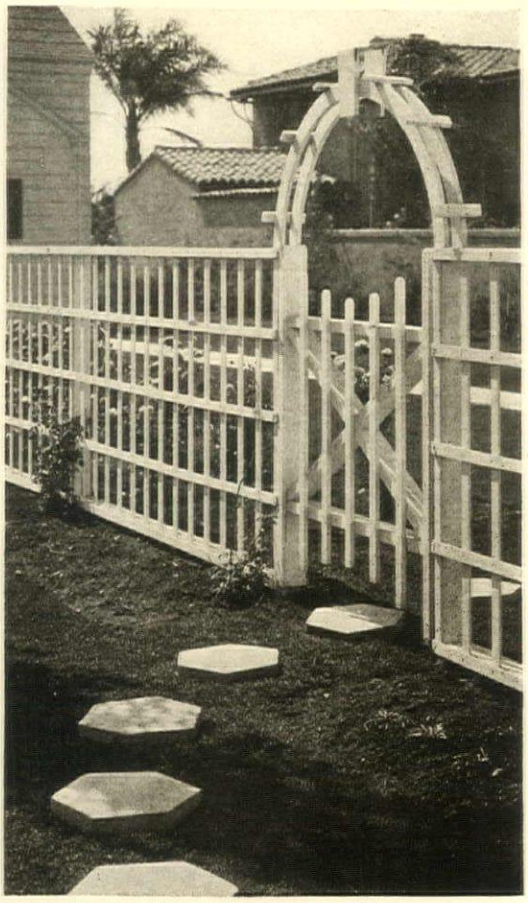
With intermediate posts, North Scituate, R. I.

California lattice fence with added verticals near top

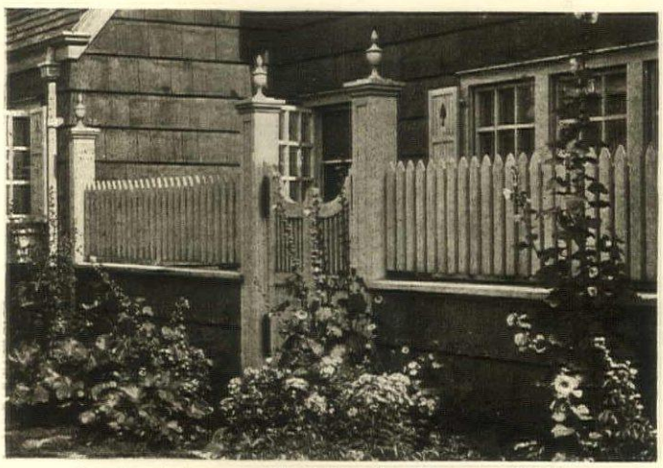




Heavier lattice type with bottom sloped. Gable & Wyant

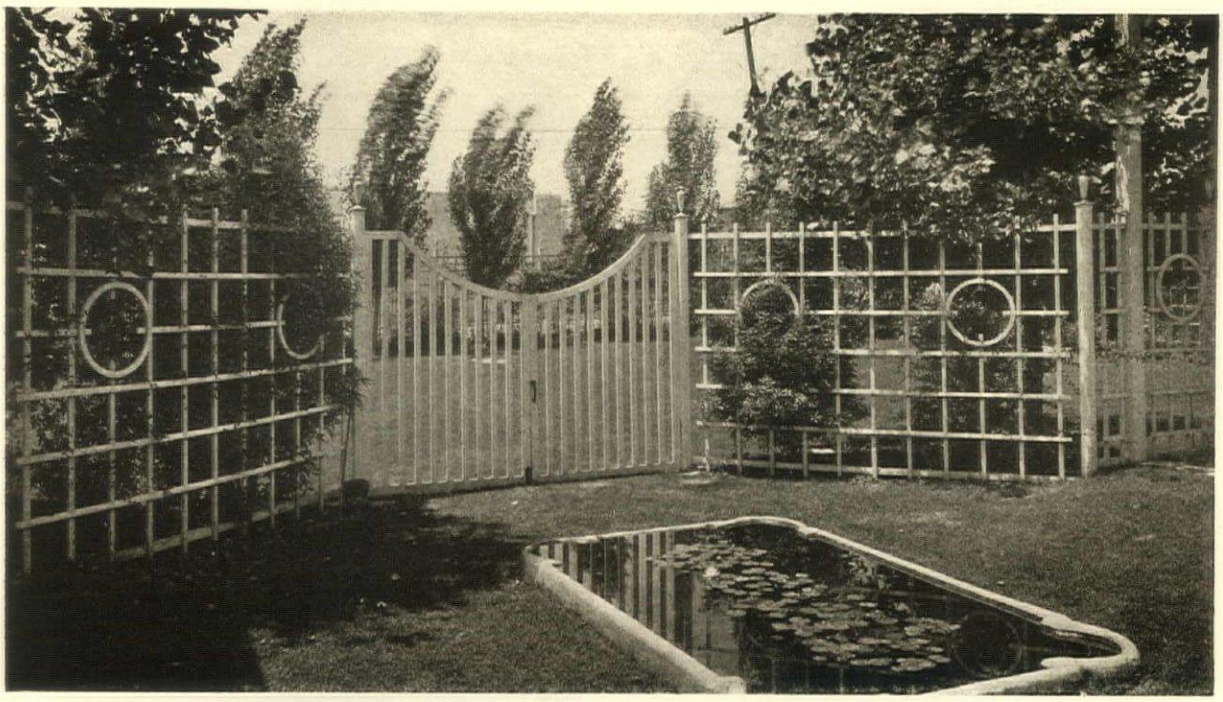


Continuous light lattice in a California setting

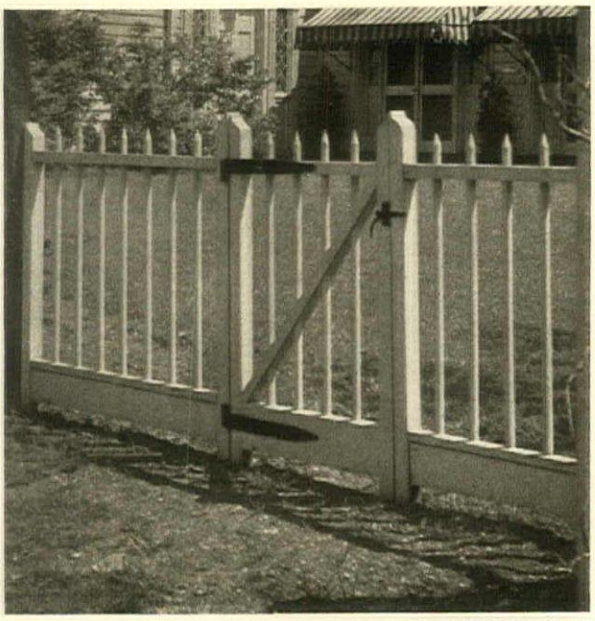


Short pickets on a shingled wall. Patterson & King

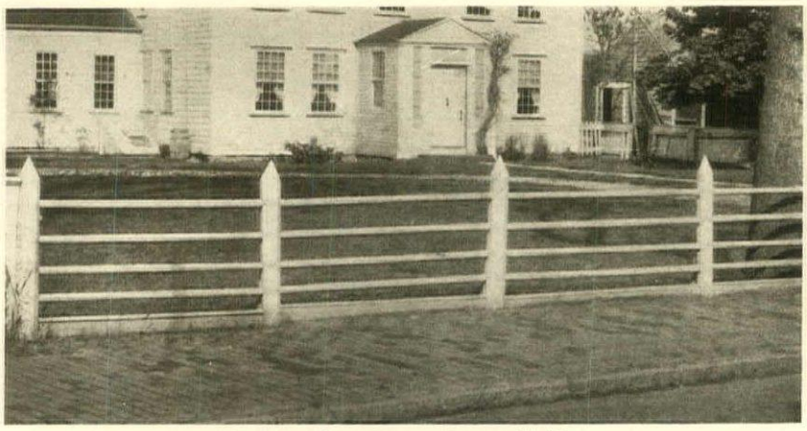
Light lattice relieved by circles, in California



Two colors around a Los Angeles miniature golf course

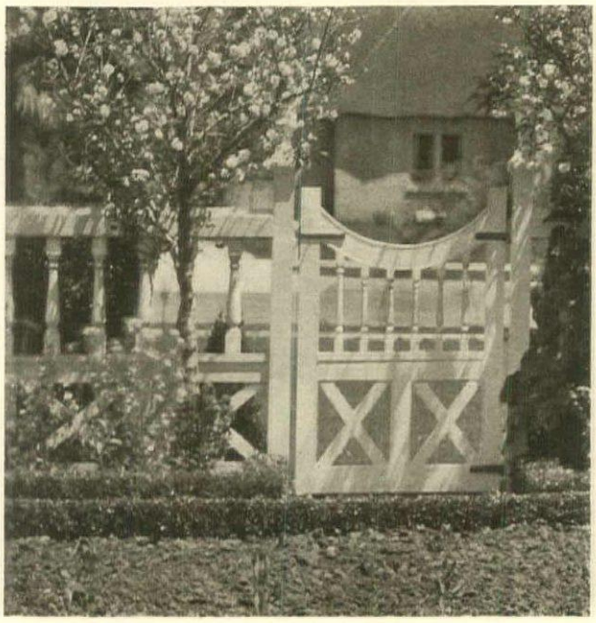


Round pickets half engaged in rails. D. D. Merrill

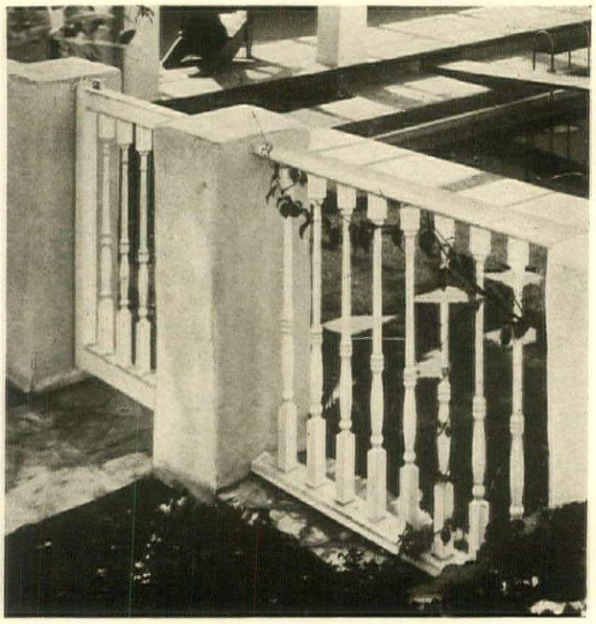


Round rails and posts in an old Nantucket fence

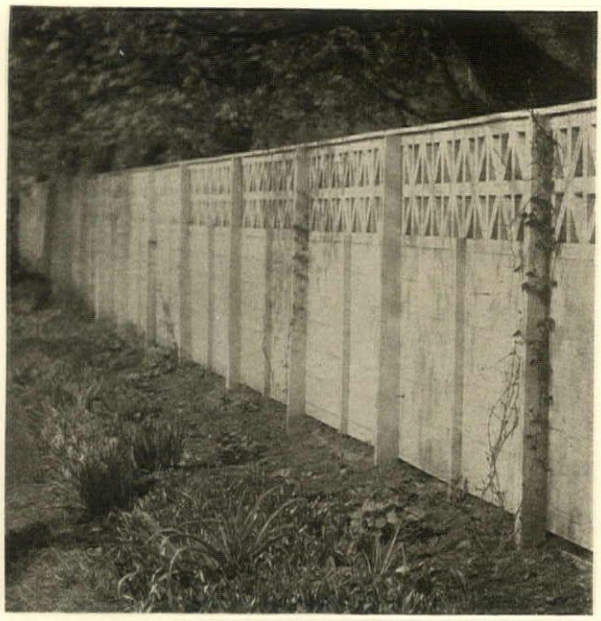
Short, thick balusters over flat squares, in California



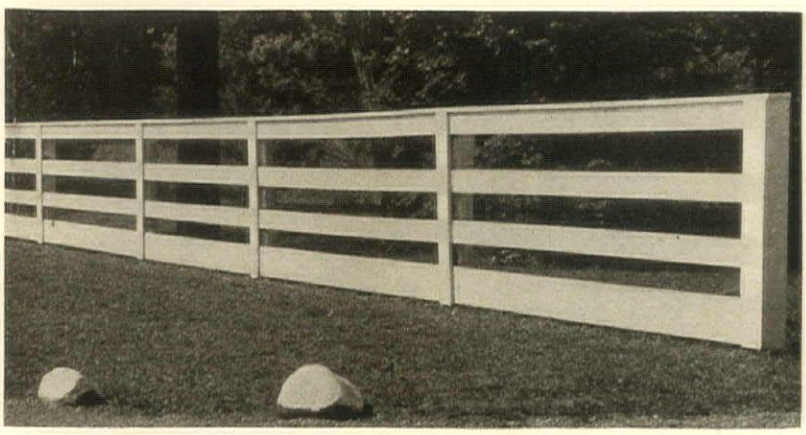
Slender balusters between concrete posts. Roy Seldon Price



Post-and-rail in a hunting country



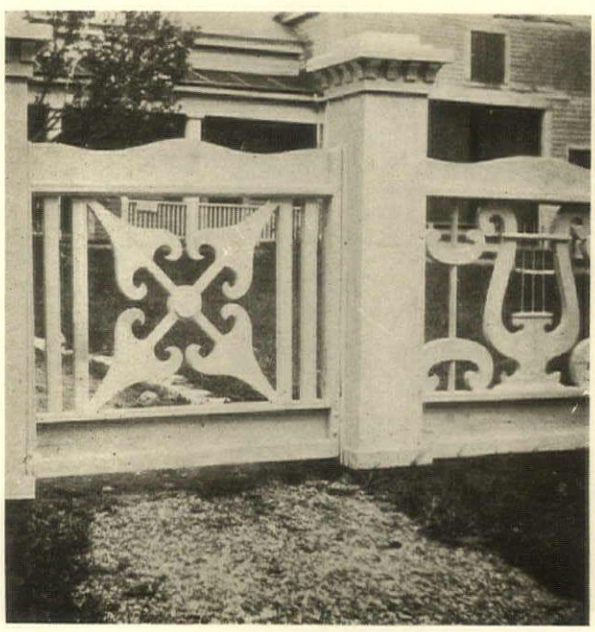
Decorative high board fence in Connecticut

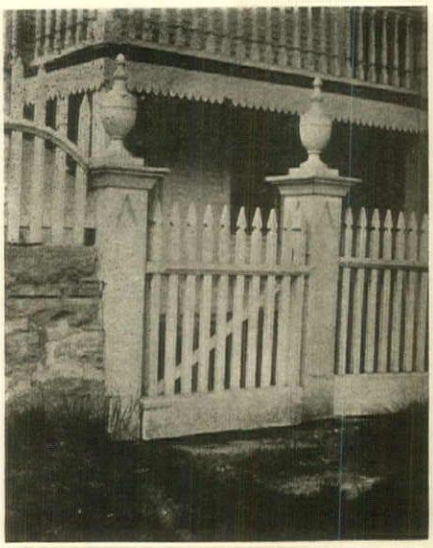


A curious mid-nineteenth century fence in East Taunton, Mass.

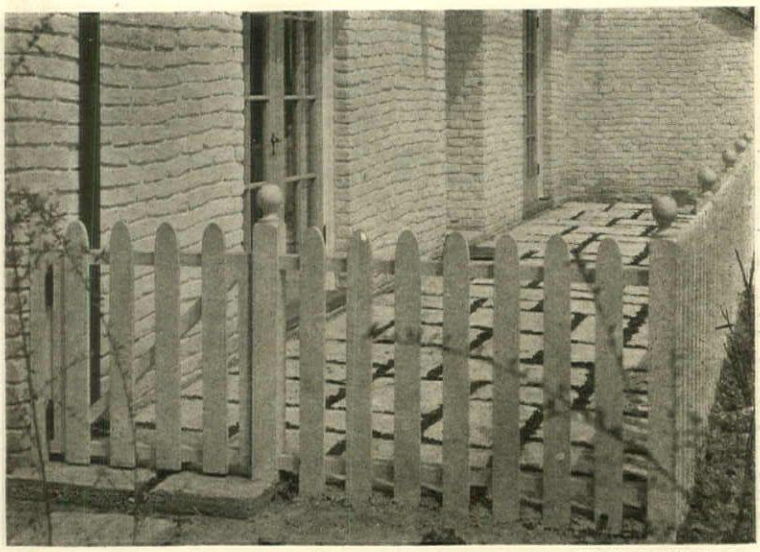
A simple type of rail fence on Long Island

From the sawn-work era in Chester, Conn.

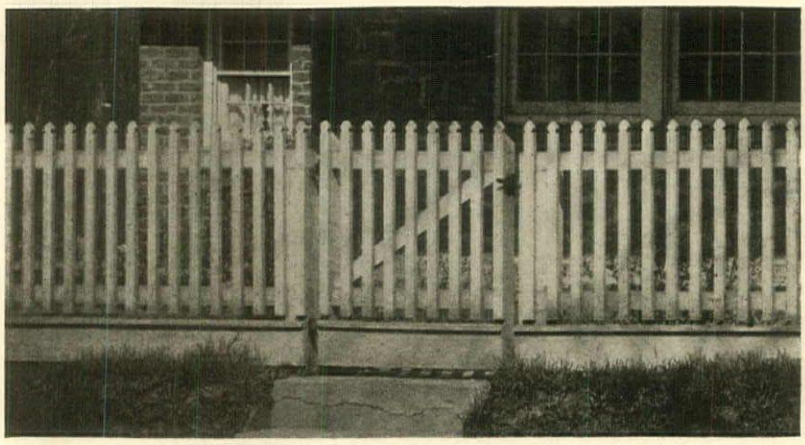




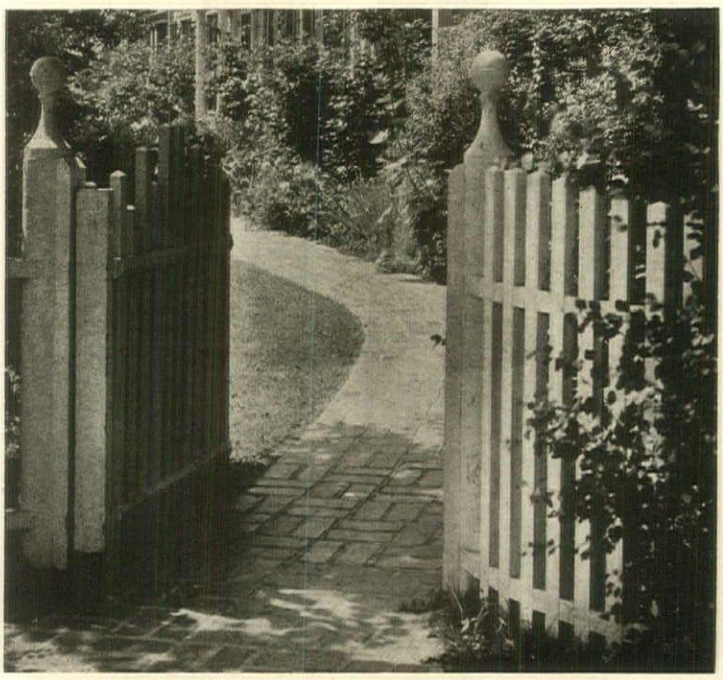
Picket type from Essex, Conn., partly on a stone wall



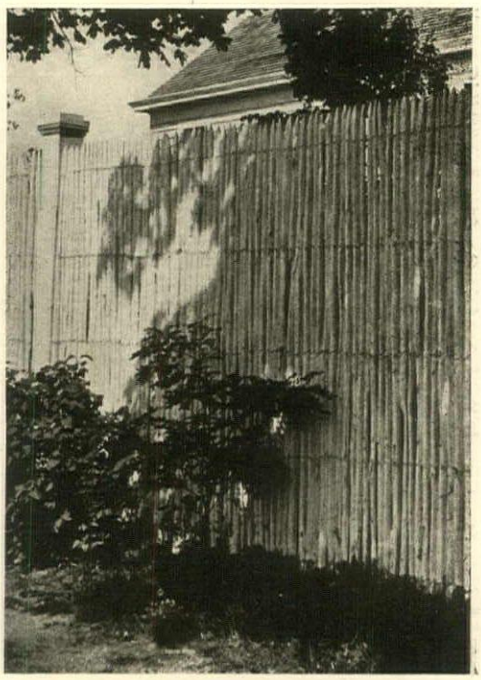
Well-detailed low pickets and posts. Frederick H. Reimers



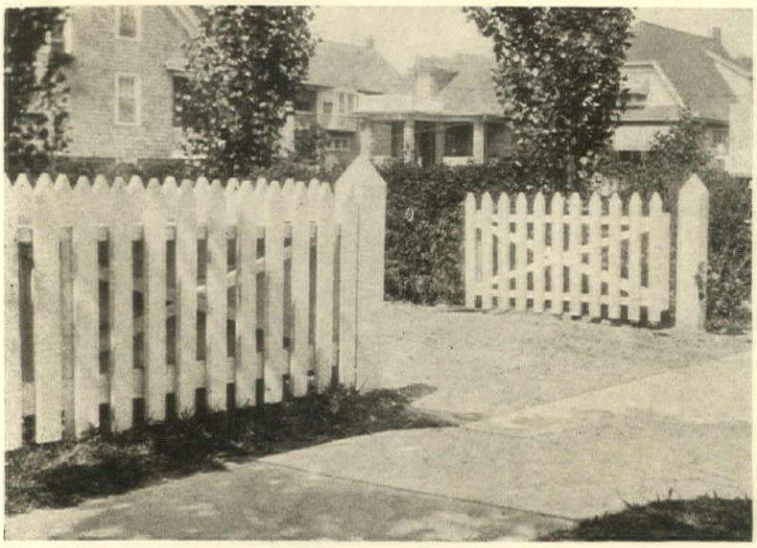
Continuous paling in northern New Jersey. Frederick T. Warner



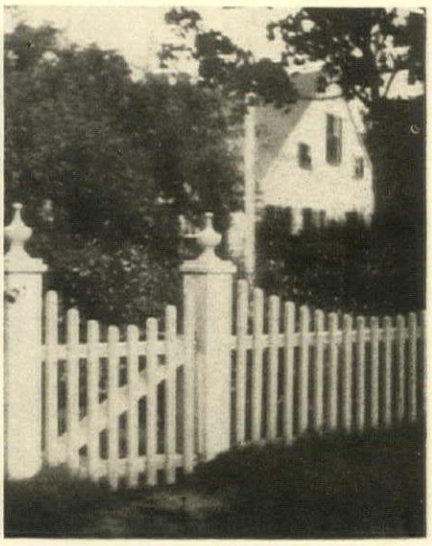
Square pickets, one side flush with rails. Pitkin & Mott



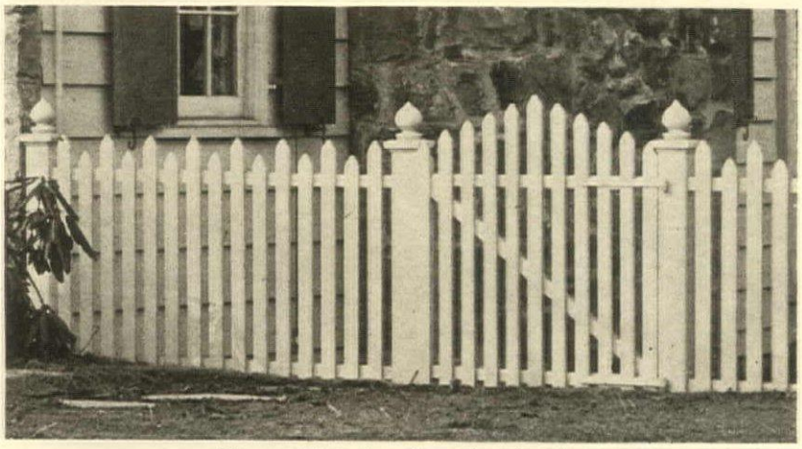
Chestnut saplings bound with copper wire, here whitewashed



Simple broad pickets in Cape May, N. J. A. Gregory Ogden

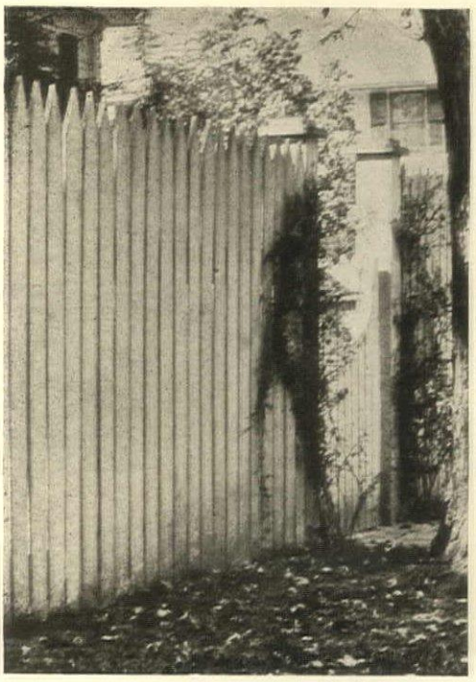


Round-top palings with curved top line, Plymouth, Mass.

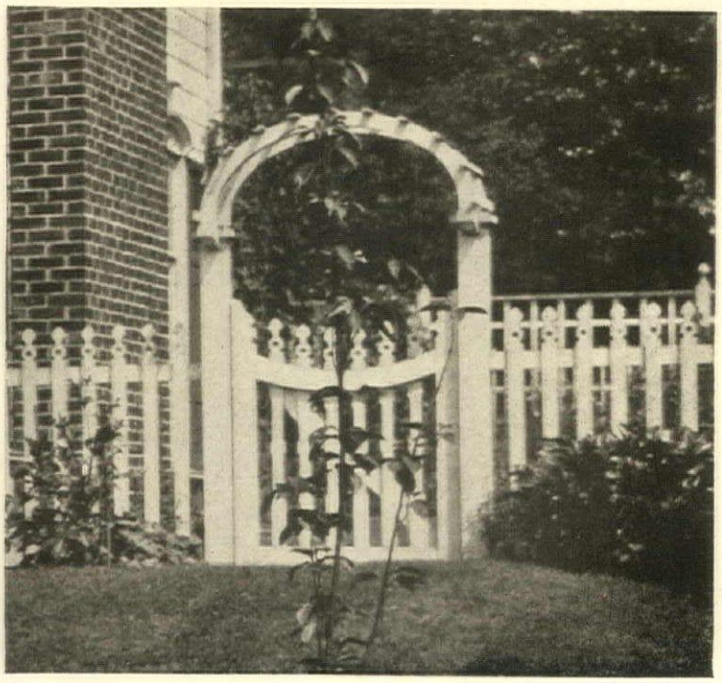


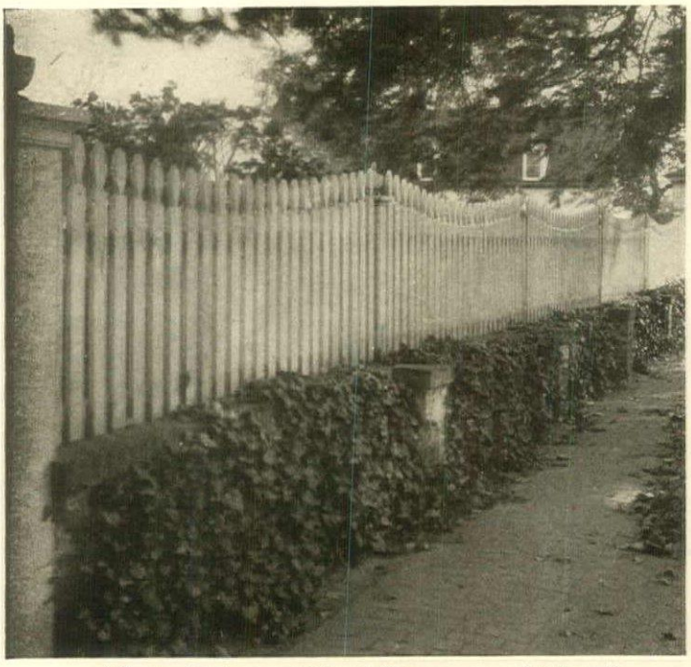
Blunt pickets in alternating lengths. Arthur G. Nelson

Tall, closely set picket fence used as a screen



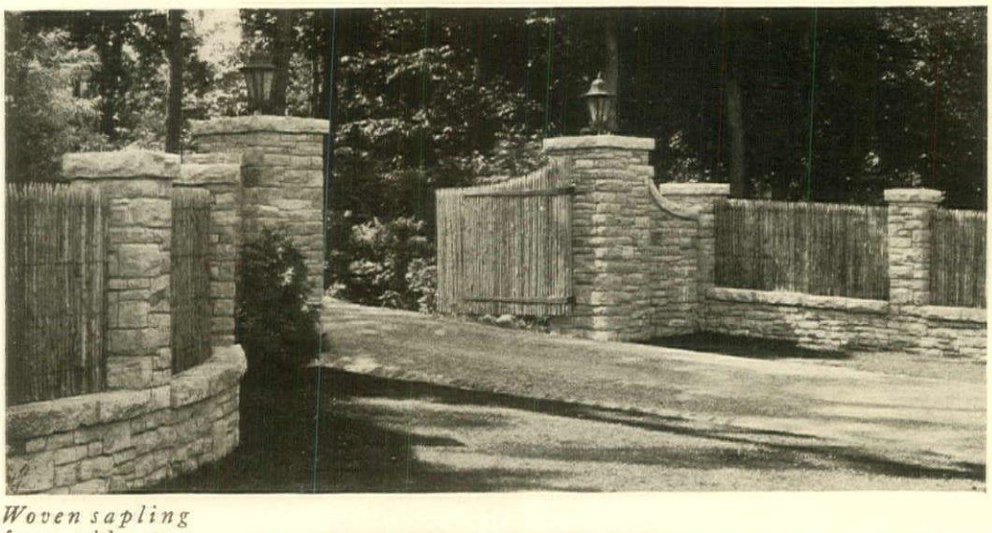
Perforated and sawn picket tops. J. S. Cote



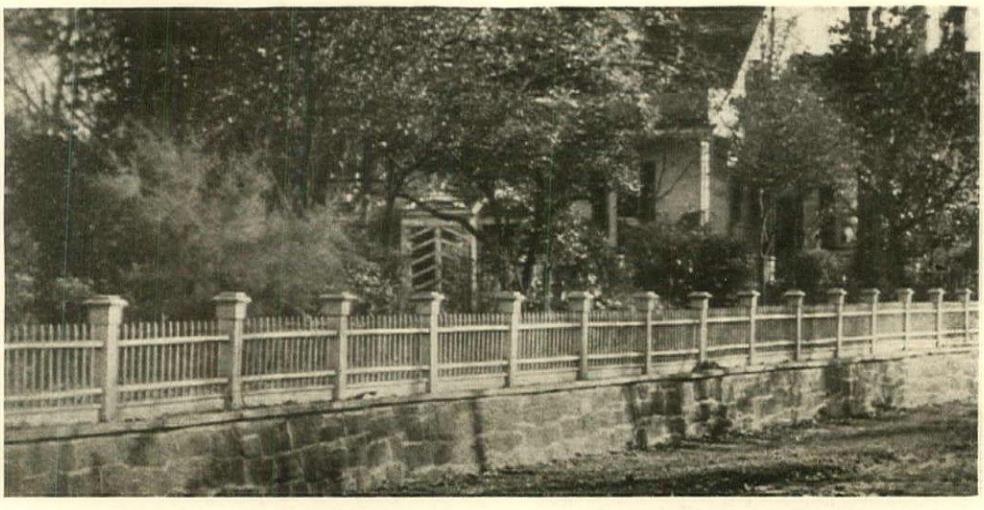


The garden fence at Mount Vernon, on a brick wall

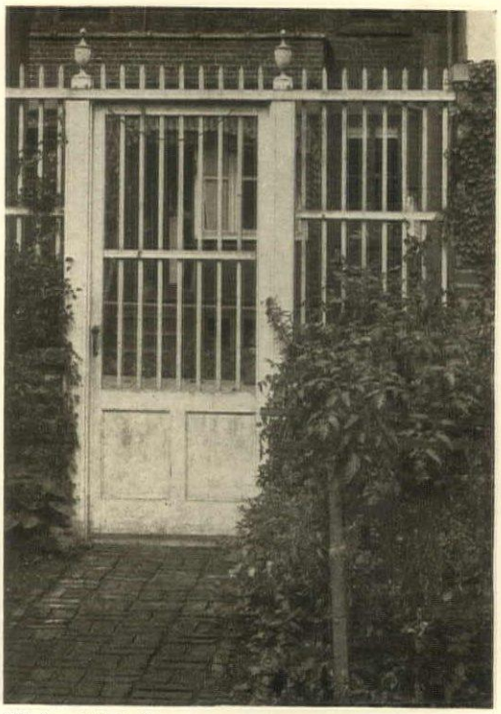
A fence and gate in Ampthill, Bedfordshire. Henry Holland



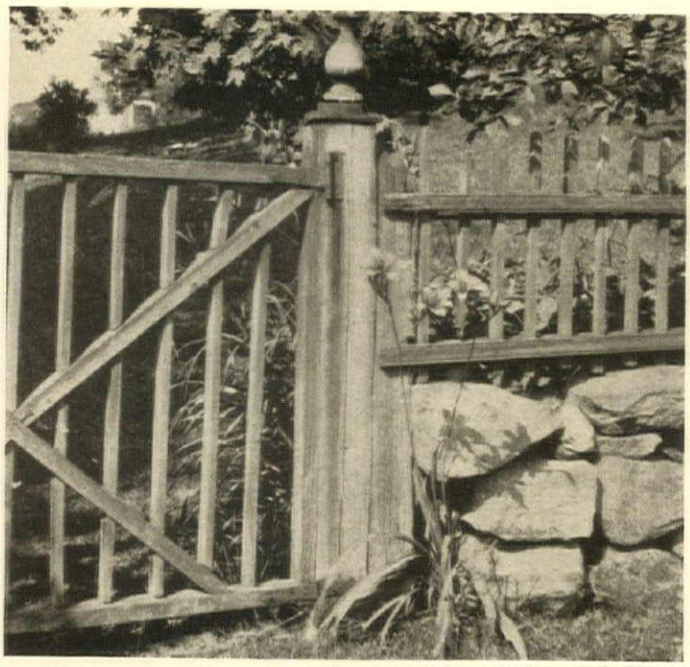
Woven sapling fence with stone wall and posts



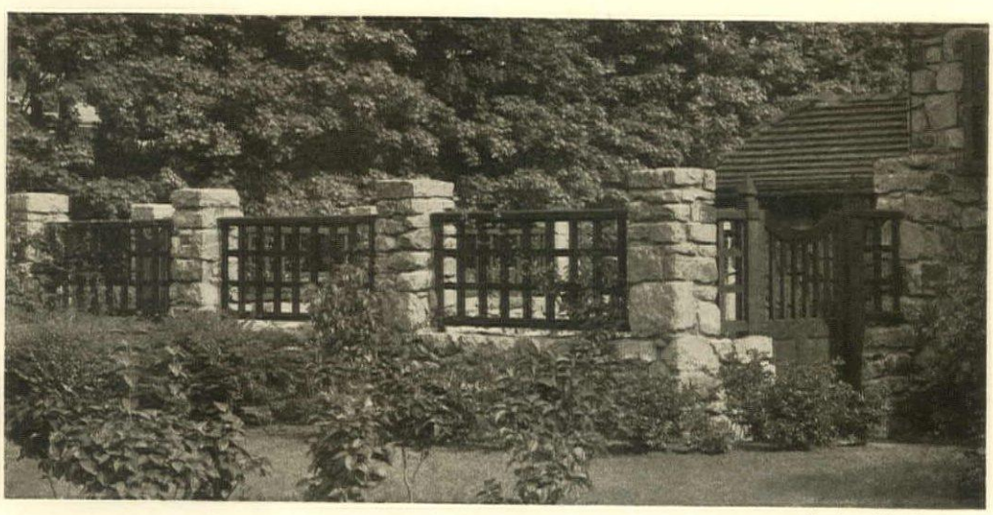
Roadside fence on wall, old Board House, Hackensack, N. J.



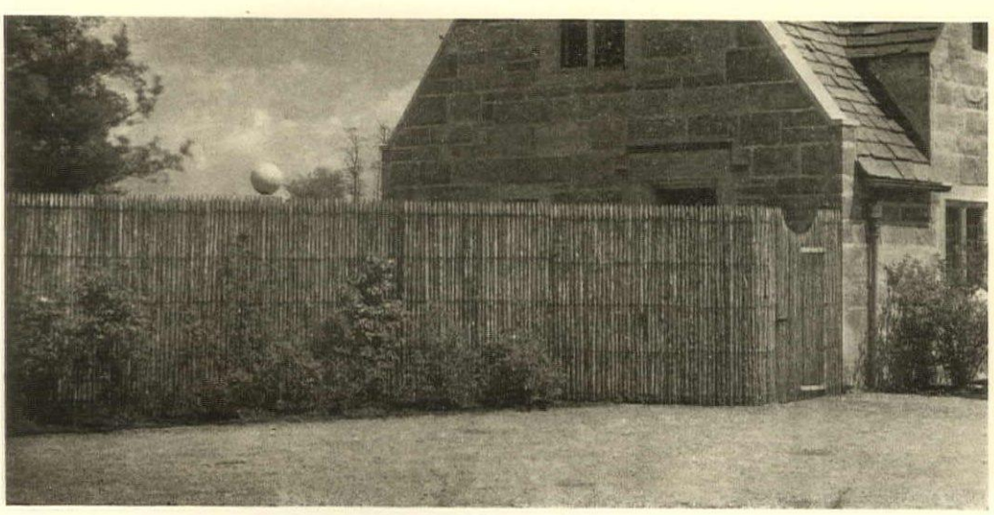
High picket fence in brick wall. Dwight James Baum



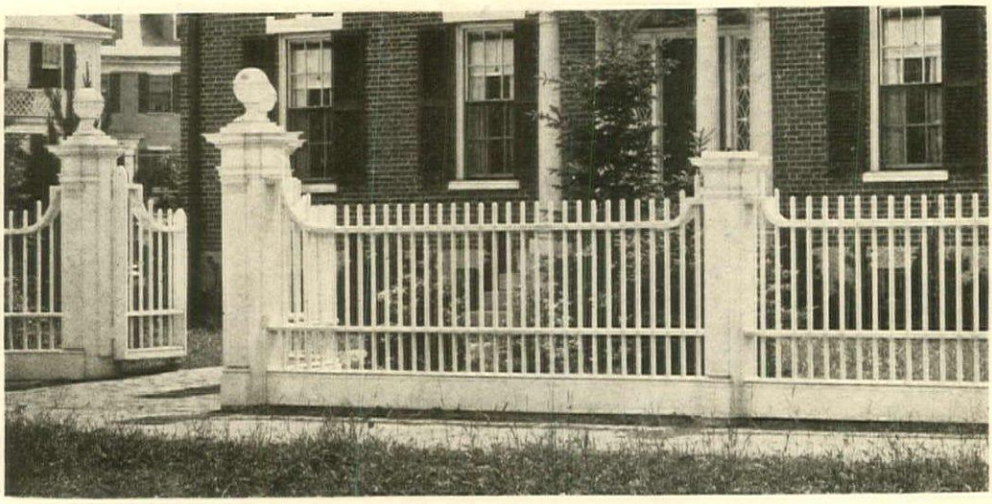
Short, square pickets mortised through rails, Old Lyme, Conn.



Stained lattice panels in stone wall. J. Williams Beal

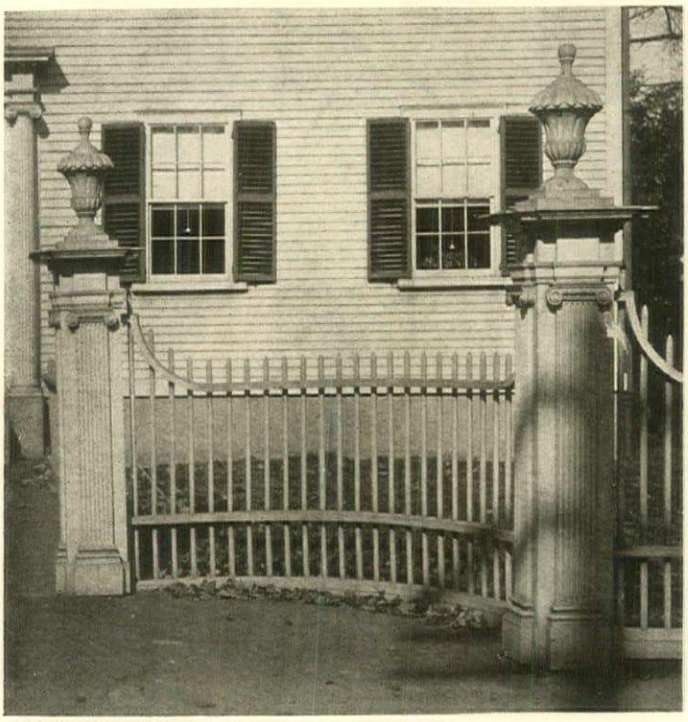


Woven saplings as a screen about a stable group. Roger H. Bullard

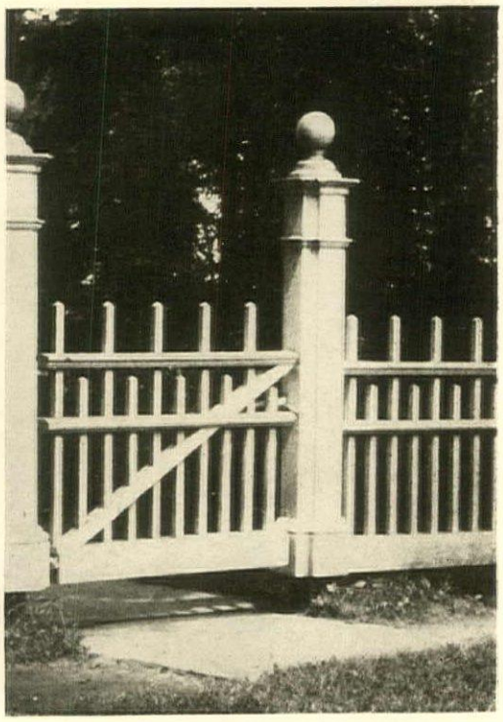


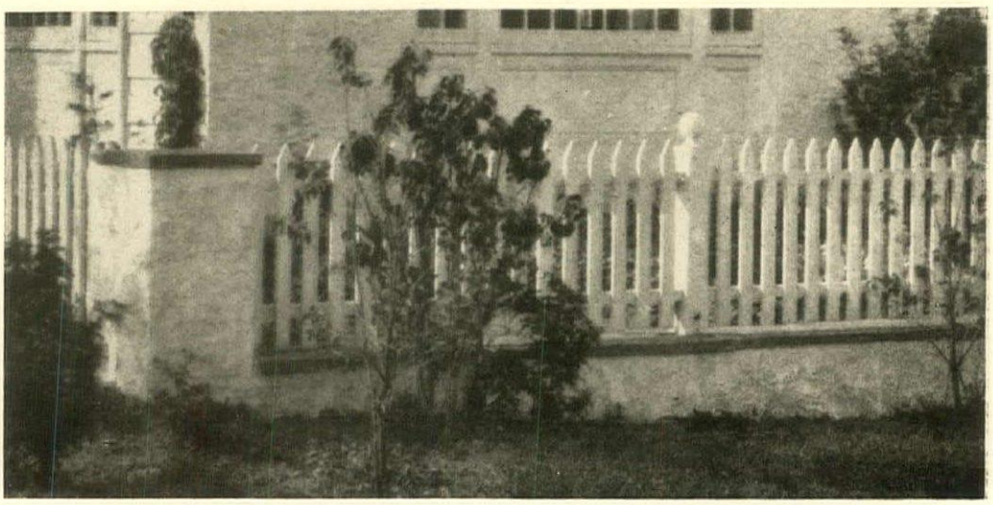
A type for which Salem is famous. A. G. Richardson

Square pickets in alternating lengths. Old Lyme, Conn.

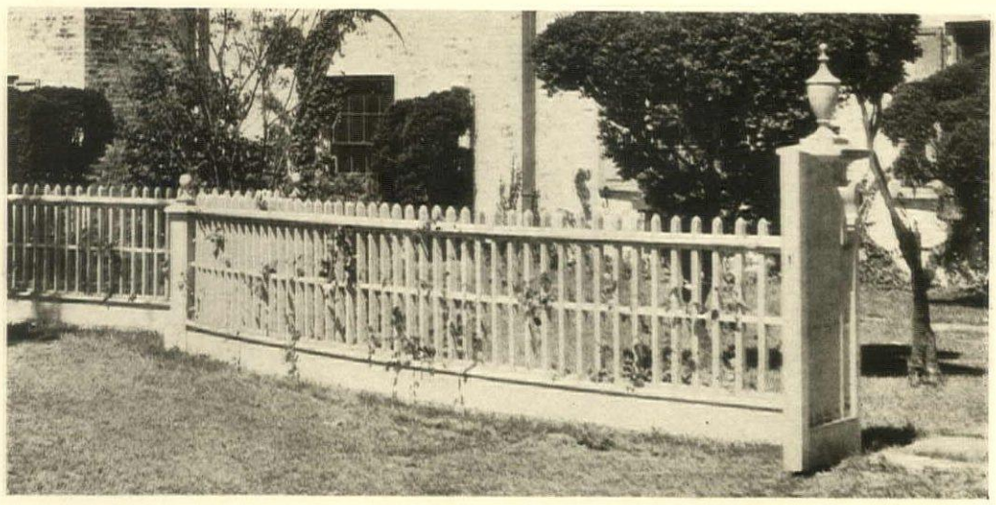


A Salem fence from 1719, by an unknown builder



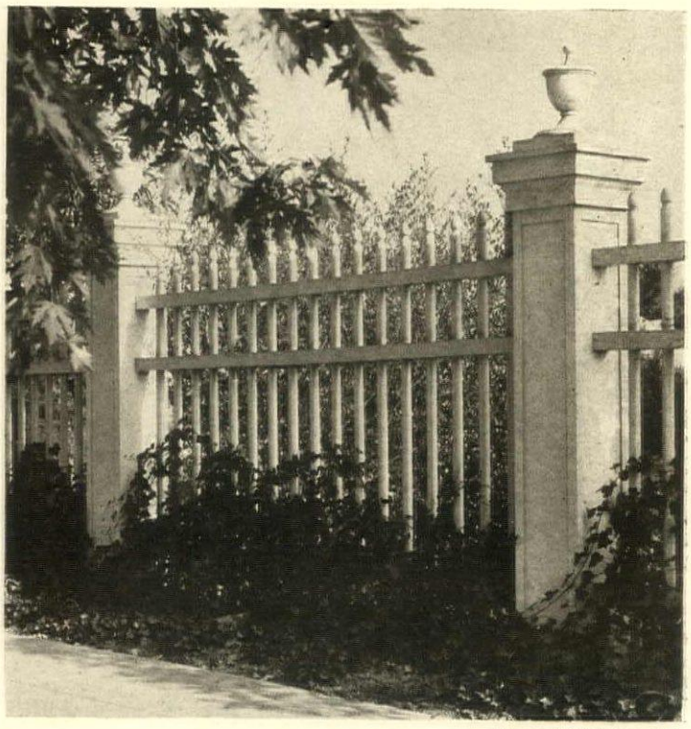


On a whitewashed retaining wall. Bagg & Newkirk

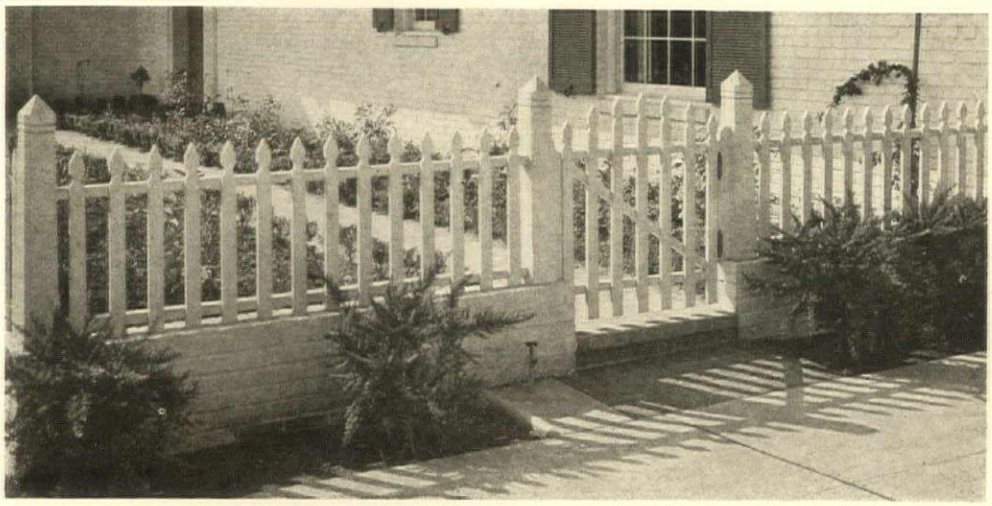


Square pickets with a midway brace of like section. James W. O'Connor

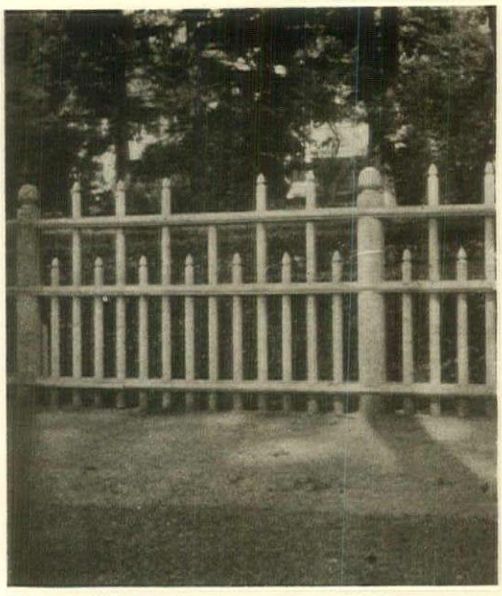
From the Berkshires, early nineteenth century



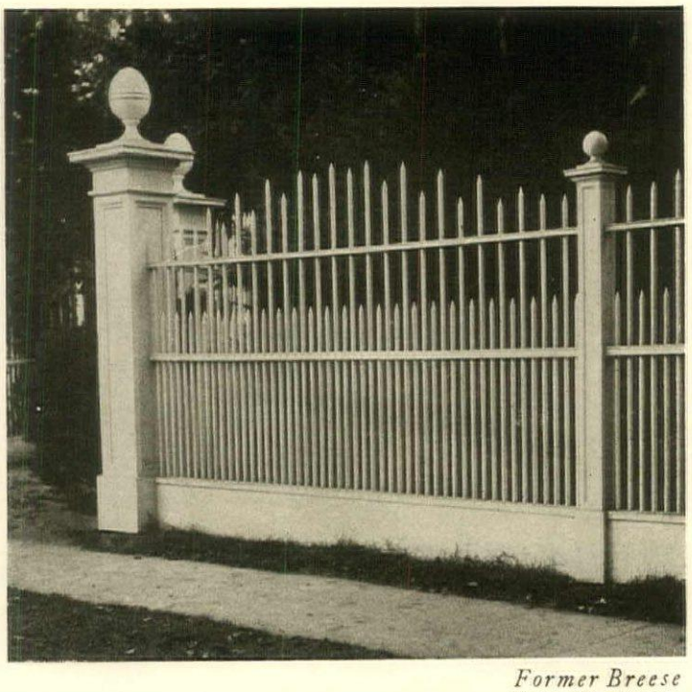
Round pickets with heavy rails and heavy posts



Widely spaced pickets on low brick wall. Paul R. Williams



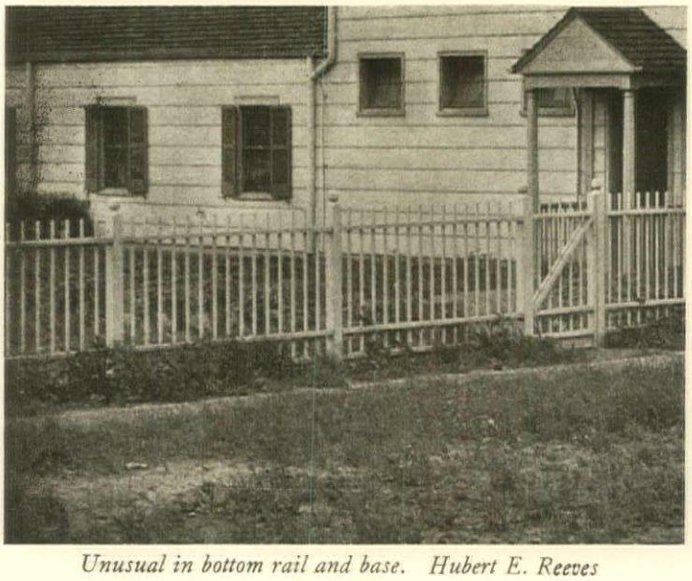
Round pickets and round posts in Old Lyme, Conn.



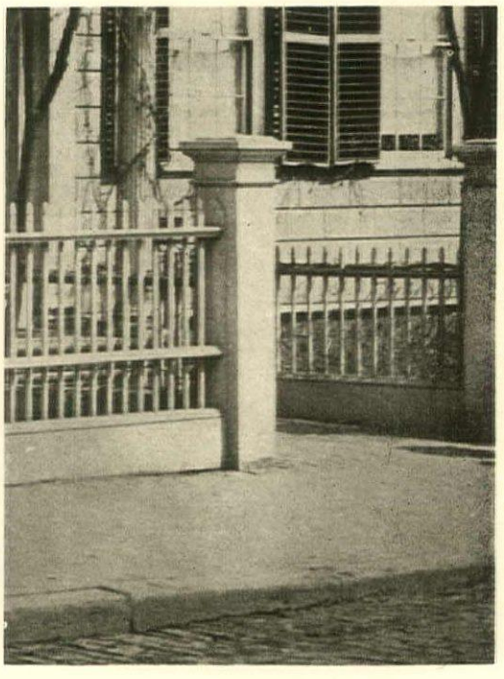
Former Breese house, Southampton. McKim, Mead & White

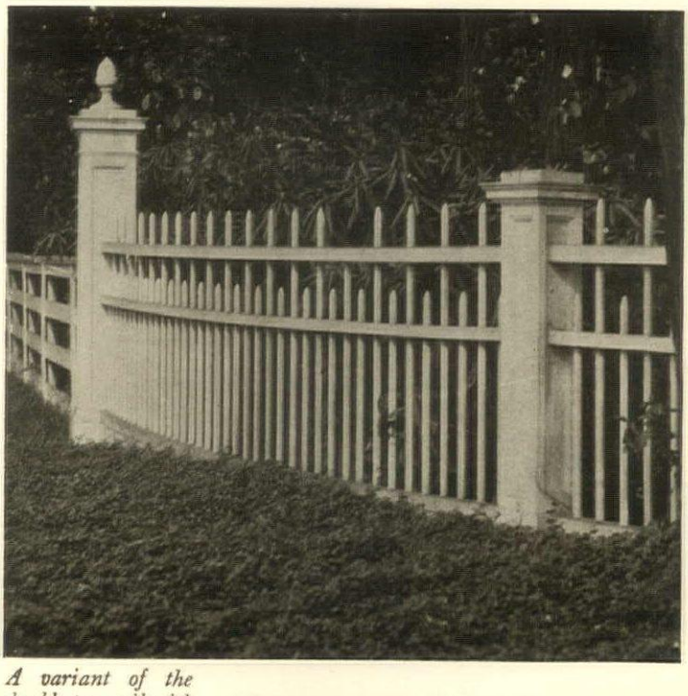
Modelled upon a fence formerly around the Common of Westport, Conn. Electus D. Litchfield

Two types as joined at a Salem gateway

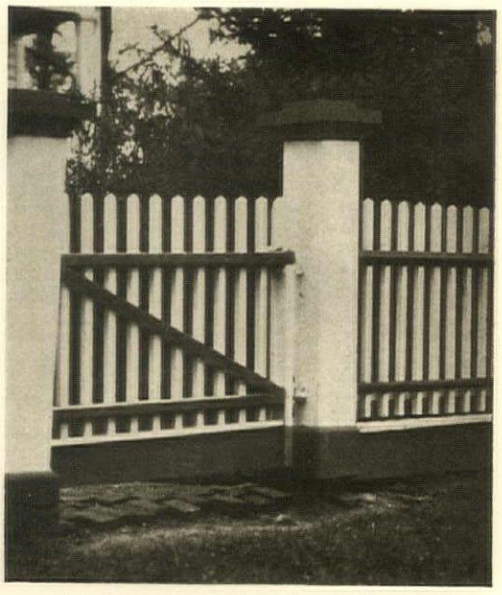


Unusual in bottom rail and base. Hubert E. Reeves

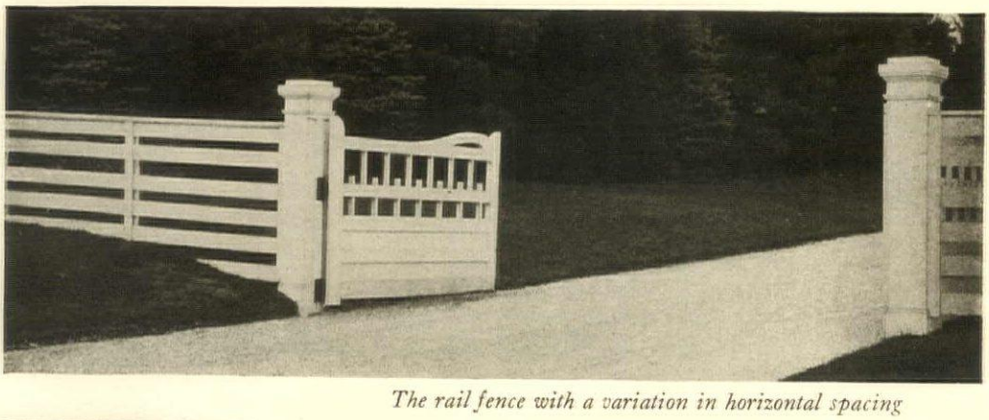




A variant of the double top rail with alternating picket heights

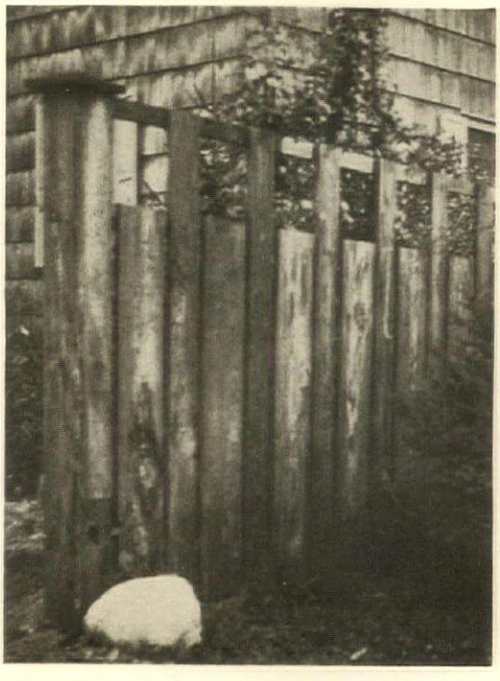


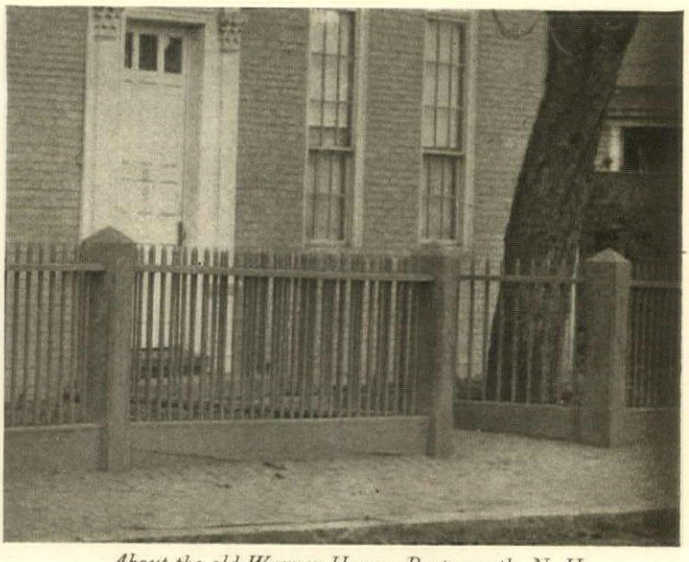
A common type of early Long Island fence



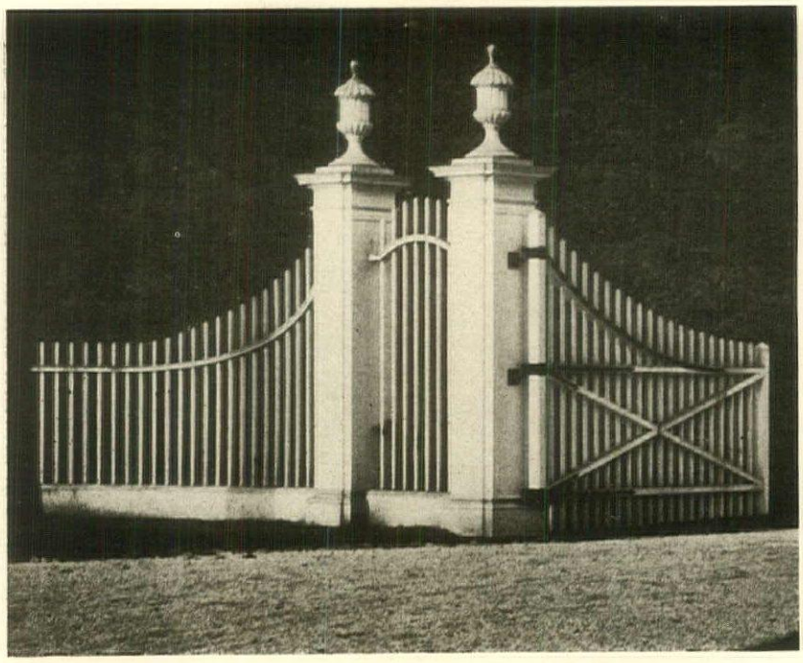
Unpainted cypress boards of alternating heights

The rail fence with a variation in horizontal spacing

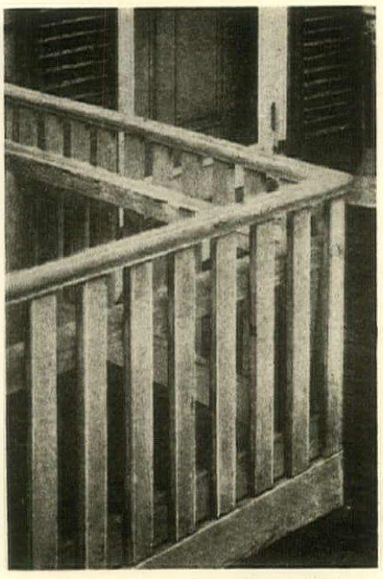




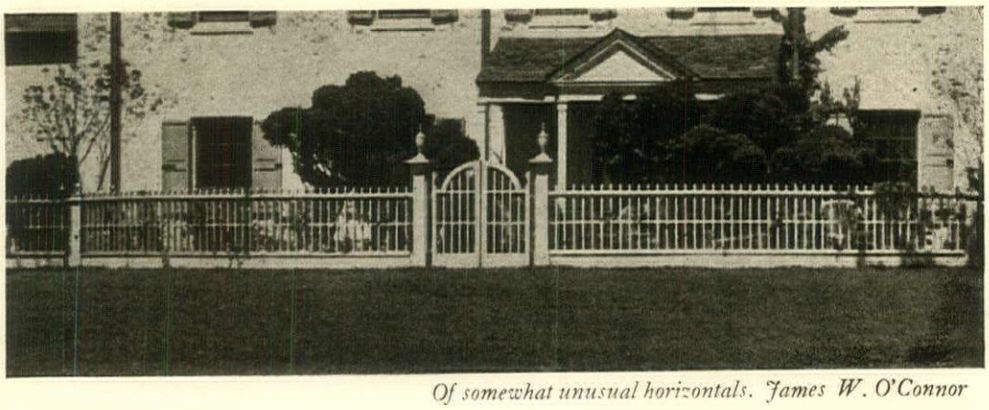
About the old Warner House, Portsmouth, N. H.



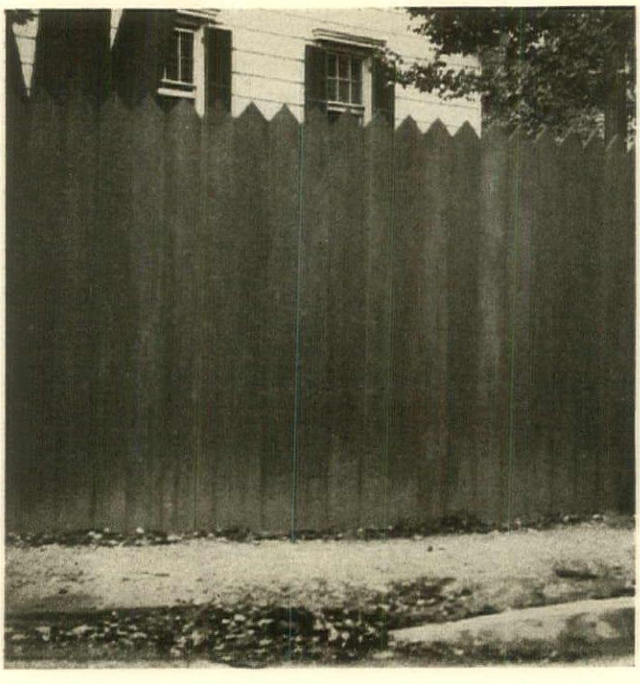
A free employment of curved lines



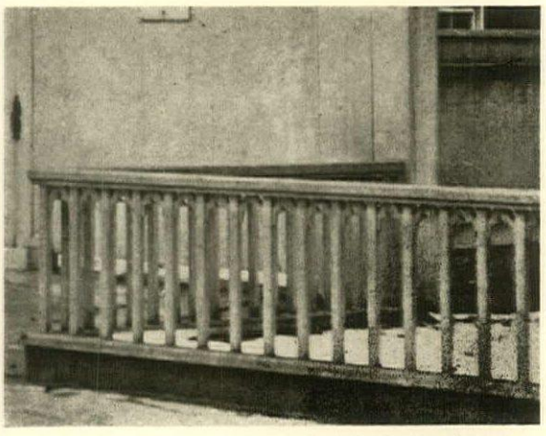
Flanking the entrance of an old house in Nantucket, Mass.



Of somewhat unusual horizontals. James W. O'Connor

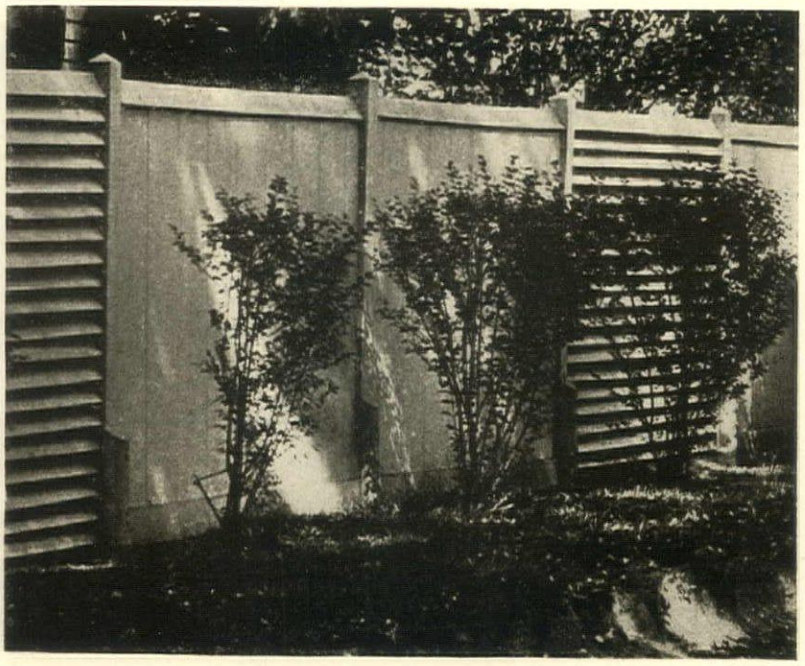


The high board fence as a screen

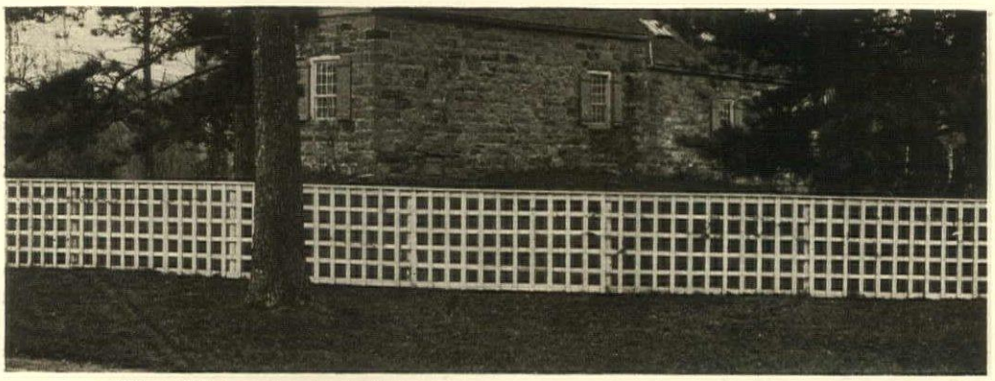


A mid-nineteenth century example from Massachusetts

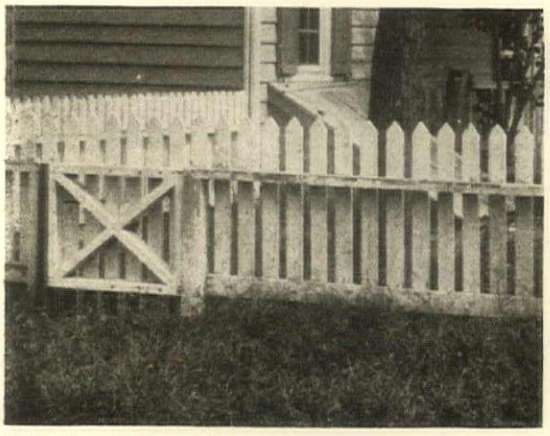
Tall posts with low pickets. Godwin, Thompson & Patterson



A screen fence that permits air passage through louvres

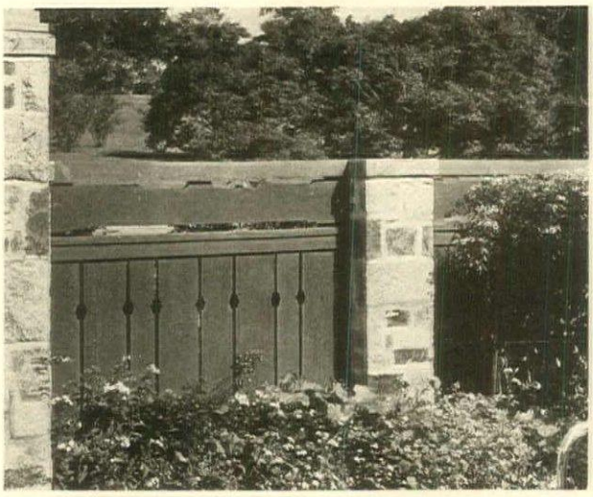


The trellis type in unusual length

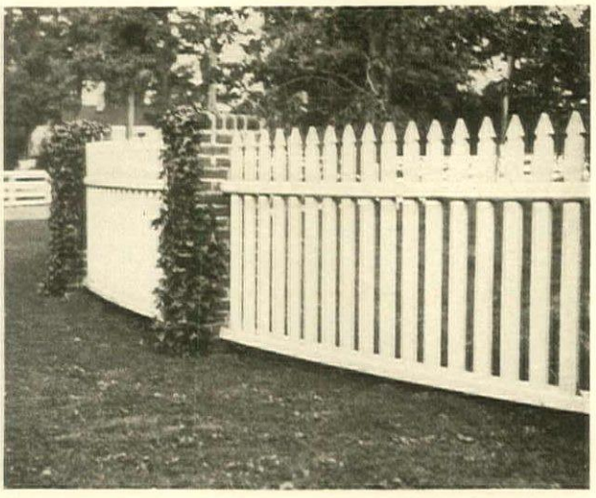


Wide low pickets with spaces half the picket width, in Virginia

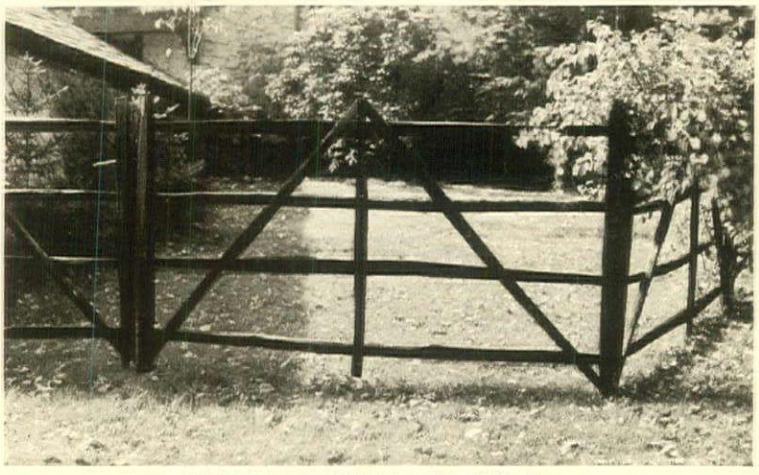
Unpainted square-top board fence relieved by its painted gate



Dark-stained rough-sawn boards between stone piers. Jackson, Robertson & Adams

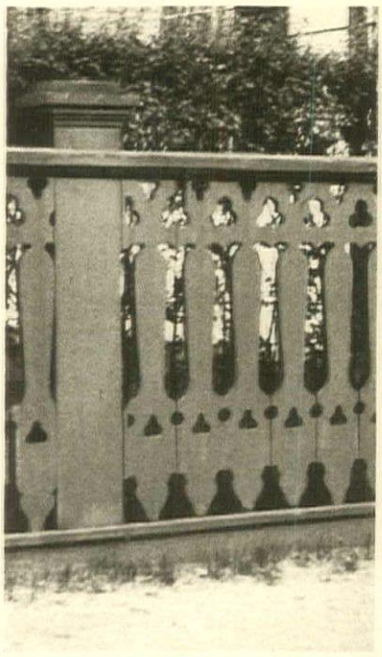


A simple variant in picket tops between vine-clad brick piers, little over two feet high

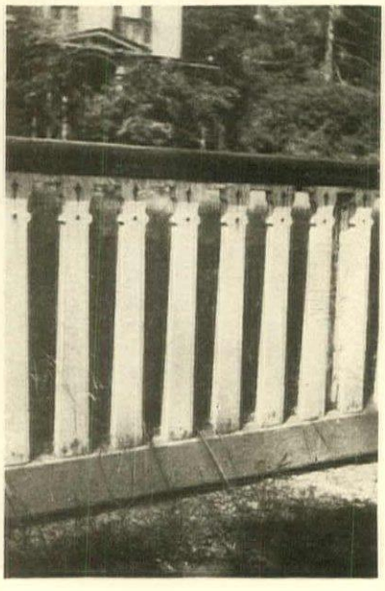


The so-called "sheep hurdle" fence common in the Long Island hunting country. The sections are easily removable units, the pointed posts lightly driven into the ground

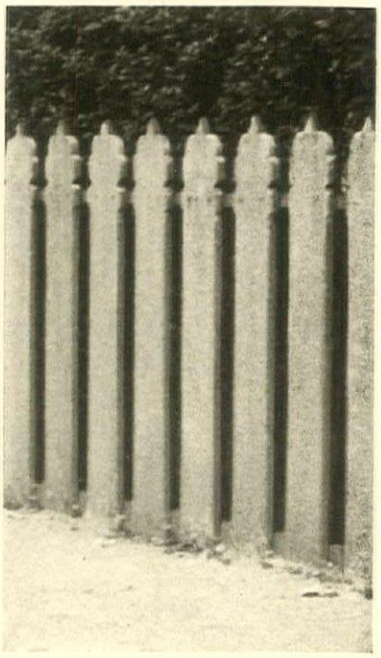
Jig-sawn pattern rom the late nineteenth century

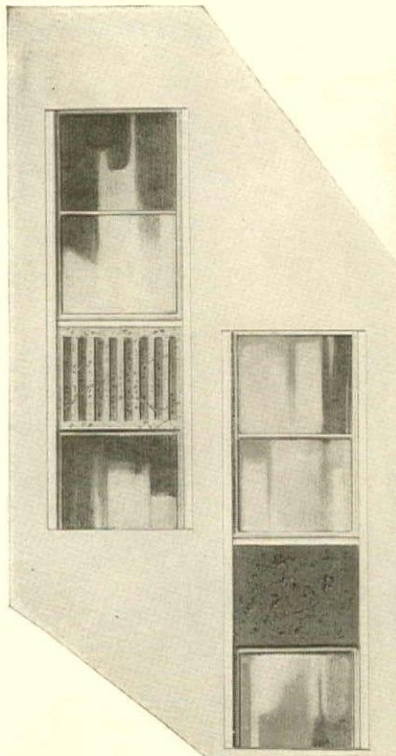


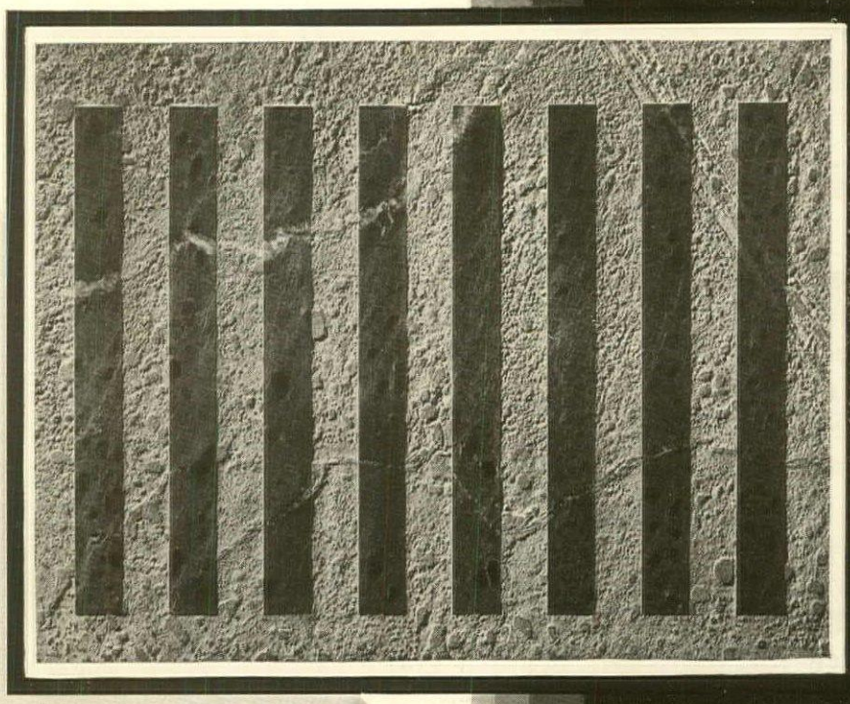
Jig-sawn palings with capping, from Saybrook, Conn.



A variant in wide pickets, from Oyster Bay, Long Island







Shadow Effects by sand-blasting instead of deep reveals

SAND-BLASTING of one and a half or two inch thick Alberene Stone Spandrels, makes possible shadow effects equal to those obtained with deep reveals which run up costs.

This means that without sacrificing shadows, which are an important part of good composition, the spandrel sections can be of the thinness required for economic reasons in present monumental buildings.

Full details and samples of Alberene will be gladly submitted, or perhaps you would like to receive the brochure "Architectural Alberene," showing the stone in actual color combinations with other natural stones.

Small illustrations show sand-blasted and plain spandrels for comparison.

Alberene Stone Company, 153 West 23rd Street, New York.
Branches: Boston; Chicago; Newark, N. J.; Washington, D. C.; Cleveland; Pittsburgh; Richmond; Philadelphia; Rochester. Quarries and Mills at Schuyler, Va.

ALBERENE STONE

SPANDRELS—THIN—BEAUTIFUL—ENDURING

WHY WE

Bought over 1000

GENERAL ELECTRIC REFRIGERATORS

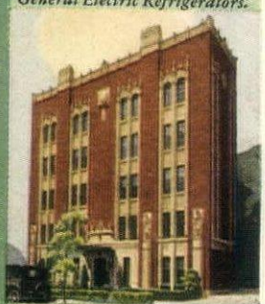
By
HARRY S. O'NEAL
President,
Apartment Selection
Service, Inc.
180 West Washington St.
Chicago

"In the past two years we have practically standardized on General Electric Refrigerators. We believe the General Electric more perfectly combines efficient refrigeration, economical operation and no maintenance cost. It is an electric refrigerator that satisfies every requirement of the tenant, and is an added attraction to any apartment. General Electric Refrigerators are unquestionably one of the many added features that have kept the buildings under our operation rented with better than 95% occupancy. Up to the present time we have installed over 1,000 of these refrigerators in Chicago."

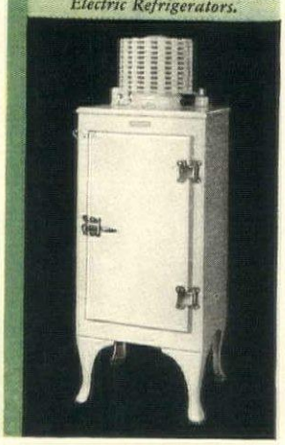
Harry S. O'Neal

Goethe Shore Apartments, Chicago, where every tenant enjoys General Electric Refrigeration.

Every apartment of the Stoneleigh Court is equipped with General Electric Refrigerators.



Avadon Apartments—completely equipped with General Electric Refrigerators.



These are the words of a man who studies costs—who must be *certain,* before he buys equipment, that he will realize a satisfactory return on his investment. Mr. O'Neal bought 1000 General Electric Refrigerators because, through actual experience, he found they paid him well in cash returns. The dependability, quietness, compactness, attractive appearance, durability, efficiency of General Electric Refrigerators mean as much to Mr. O'Neal—and to *you*—as their reliable, economical operation means to the apartment house tenants who enjoy their faithful service.

Write for a complimentary copy of "Today's Trend in Electric Refrigeration for Apartment House Home." Address Section U-11, Electric Refrigeration Dept., General Electric Co., Hanna Building, 1400 Euclid Avenue, Cleveland, Ohio.

Join us in the General Electric Program, broadcast every Saturday evening over a nation-wide N. B. C. network

GENERAL ELECTRIC

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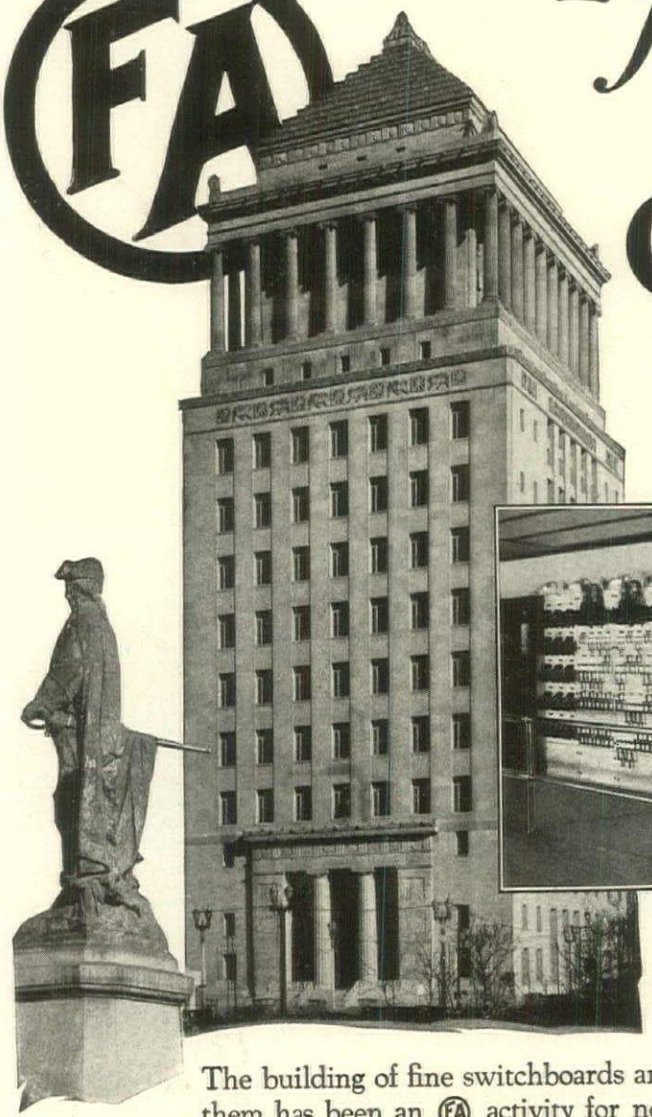
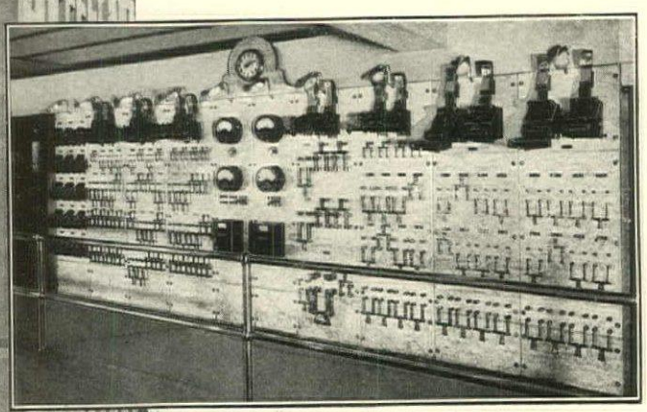
—for instance the Civil Courts Building





Civil Courts Building, St. Louis, Mo.
The Plaza Commission, Inc., Architects
E. A. Koeneman Electric Co., St. Louis Elect. Cont.

The building of fine switchboards and cooperating in the engineering of them has been an (FA) activity for nearly a half century, bringing to (FA) unquestioned leadership in this work.

For instance, a great many government buildings have selected (FA) equipment, a mark of approval important to commercial buildings in selecting theirs. Either live, deadface or remote control switchboards for all purposes are capably built by (FA).

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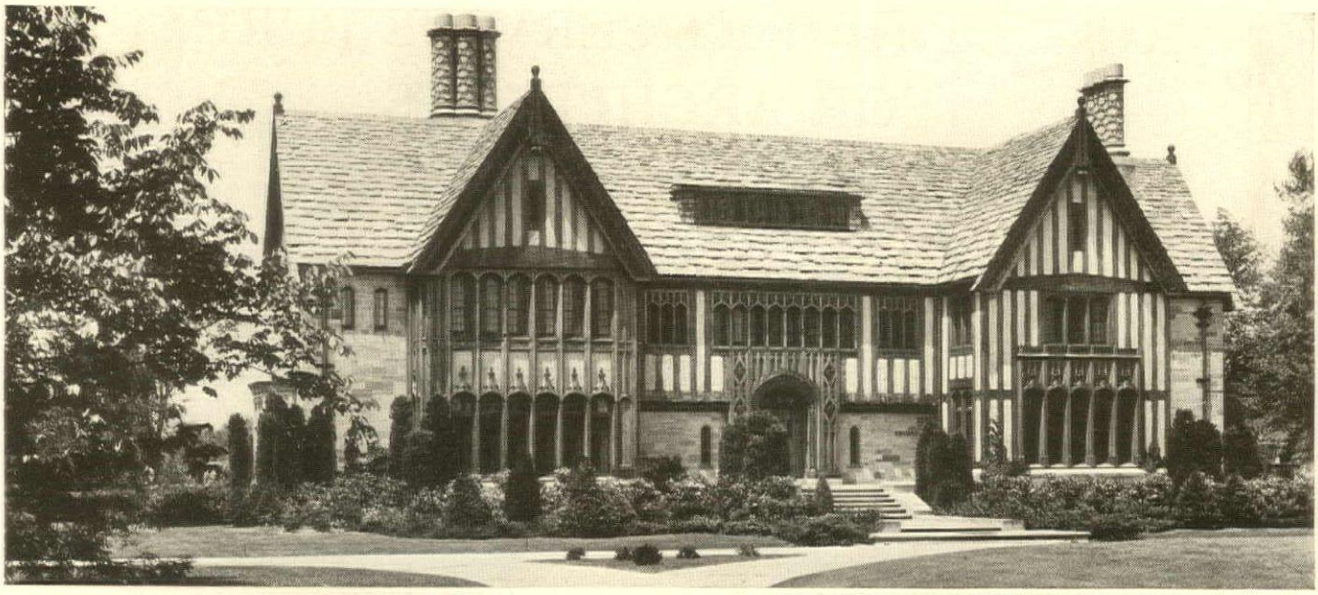


In the residence of Mr. Oscar Webber, 619 Lake Shore Drive, Detroit, Michigan, complete telephone convenience is provided by fourteen telephone outlets, including two in the garage and one on the third floor. Built-in conduit carries the wiring for the telephone system which includes intercommunicating features. LEONARD WILLEKE, Architect, *Detroit.*

Planning in advance for telephones

contributes to the greater convenience and efficiency of the modern home

ARCHITECTS today generally recognize the desirability of providing for telephone arrangements in their plans for new and remodeled residences. In this way the particular needs of each individual family can be fully met.

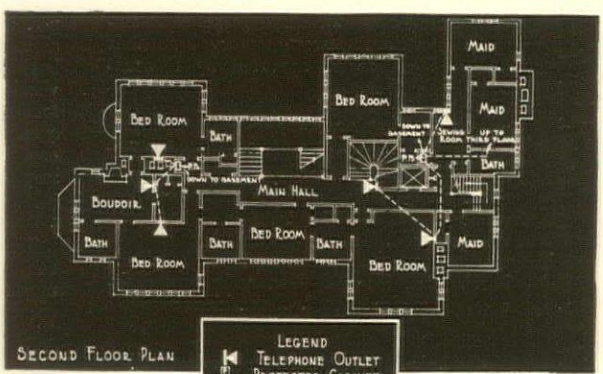
Telephone outlets are made available not only in all the important rooms, but also in particularly convenient locations in each room.

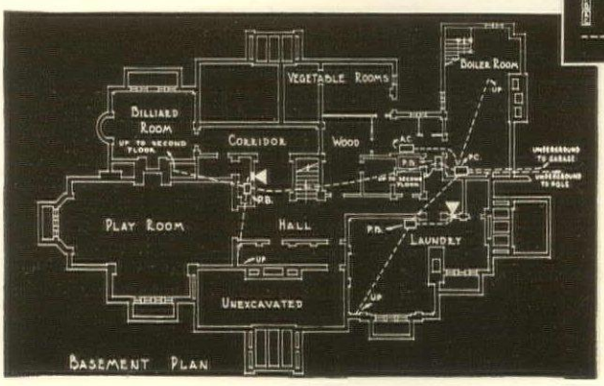
Conduit is specified within the walls and floors, furnishing telephone outlets at the locations selected. This results in improved appearance by concealing the telephone wiring, and guards against certain types of service interruptions.

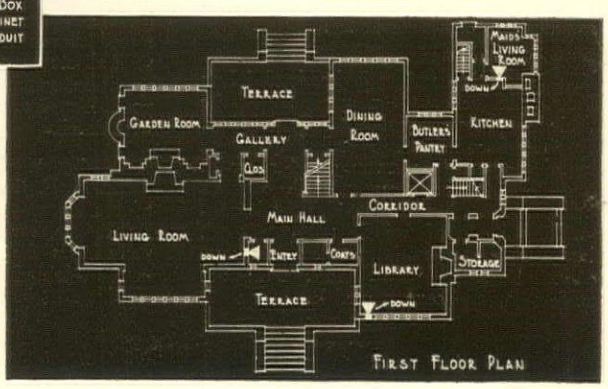
The position and number of these outlets need not necessarily be limited to immediate requirements, as it is often advisable to provide for possible rearrangement or expansion of the telephone service in the future.

Your local Bell Company will gladly place important data about household communication at your disposal, as well as arrange for conferences between its representatives, your clients and yourself.

There is no charge. Just call the Business Office.







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WHAT IS YOUR MARKET?

The U. S. Government makes readily and impartially available a veritable mine of priceless economic information called the Census of Manufacturers and Distribution. Facts for the constructive study of your distribution problem may be found in the 1930 Census, just out. These facts will serve as a basis for advertising and publicity campaigns.

BULLETIN 141

Write for the new bulletin describing Jenkins Standard Bronze Valves with the one-piece screw-over bonnet and the slip-on stay-on disc holder. The Jenkins Valves are always marked with a "Diamond" trade-mark.

FOR EMERGENCIES

The failure of regular current for power or light supply is a financial loss as well as an inconvenience. It disturbs the harmony of business, destroys schedules, and is dangerous to public welfare. Buildings should be equipped with independent and reliable emergency electric generating units. The Enslen Hydro-Electric System connects with the regular building water supply, starts automatically, and operates continuously—insuring safety of exits, etc.

INSULMESH

The Genfire Steel Company has developed an expanded metal lath combined with a chemically treated insulated board. Insulmesh is furnished in 27-inch and 48-inch widths and is easily handled and erected. It provides finished walls and ceilings which are rigid, fire-safe, and sound-proof at the cost of plaster over wood lath.

POWER UNITS AND EQUIPMENT

The National Power Show at Grand Central Palace, New York, December 1–6, will endeavor to carry enough interest and influence to serve for the next two years—making it unnecessary to hold a show in 1931. Realizing that business has taken an upward trend, the exhibitors have decided to present a programme of somewhat larger units, shown under actual working conditions. Some of these will be in application to airplane and other modern industries. It is significant that many new concerns have signed for space in the forthcoming show.

ADVERTISING WITH VISION

R. Robbins and Staff announce the opening of offices at Robinson Avenue South, Pen Argyl, Pa. They offer facilities for developing, planning, and producing magazine and direct mail advertising, refreshing in individuality and high sales appeal.

TWO SPECIALTIES

The Seco Incinerator and the Hotel deLux Electro Kabinet are two products of the Welded Products Corporation, Kansas City, Mo. The Seco is easily installed in new or old buildings and comes in a full range of sizes. The plant is guaranteed to be odorless and noiseless. The Electro Kabinet is substantially made of welded 18-gauge steel, plate-glass mirror, and four electric outlets serviced by a single box. These bathroom cabinets come in several models.

AROUND THE FIREPLACE

"Grates, Franklin Stoves and Fire Frames" is the subject of Todhunter's latest booklet. The introduction and development of the coal-burning grate is told in interesting text amply illustrated. Authentic reproductions of antique originals bear the Todhunter stamp of character.

THE COMPLETE OIL BURNER

Most oil burners are efficient. Some have to operate under impossible conditions. It is not reasonable to expect the best results when the burner is handicapped with a boiler which was originally designed and fundamentally built for burning coal. Many failures can be ascribed to that cause. The Bryan Steam Corporation cast aside the tradition of coal-burning furnaces and designed a boiler to suit oil. In this, they have achieved the heat absorption capacity essential to the satisfactory operation of an oil burner. If you wish to know more about the construction of Bryan Copper Tube Boilers, send for full information.

WESTINGHOUSE PANEL-BOARDS

A book of typical specifications has been issued by Westinghouse Electric & Mfg. Co. It offers a standard panel-board for every possible application and these standards are kept ready in stock. Special panel-boards can be promptly supplied from the assembly shops.

NEW REPRESENTATION

The Bradley Washfountain Company, manufacturers of fixtures for group washing, announce the appointment of three new representatives, further strengthening their sales organization. Mr. H. J. Warren will push sales in the metropolitan area of Chicago. At Baltimore, Mr. John J. Taylor assumes charge of sales for the State of Maryland. The most important step is the establishment of a Southwestern factory branch at Dallas, Tex., to be operated by Hansen-MacGruder, Inc.

"KANVAS" WINDOW SHADES

The Kemitex process of water-proofing applied to specially woven window-shade material has produced a heavy duty window shade that is impervious to sunlight, moisture, and soil. It can be washed without removing from the roller. In schools, hospitals, hotels, etc., Kemitex Kanvas is very desirable. It is also suitable for residences.

A SPREAD

Majestic Skylight Products are specialists in daylighting. The most effective natural lighting comes from overhead and the perfected simplified Majestic Lead Skylight with absolutely water-tight lead glazing construction makes ideal lighting conditions possible and safe. Ask for the spread sheet with details.

PENNSYLVANIA-DIXIE BOSTON OFFICE

Mr. H. E. Bernt has been appointed district sales manager to succeed Mr. E. G. Brick, who, however, remains with the company in another capacity. Mr. R. M. Penman has joined the Boston office as assistant district sales manager.

A BIG CONTRACT

The Swedish wrought-iron work for the new twenty-seven-story Brooklyn building for the New York Telephone Company will be furnished by the General Bronze Corporation. The order calls for lobby and elevator entrances, decorative fittings, grilles, etc. The work will be executed in the company's Minneapolis plant.

INDEPENDENT TEMPERATURE CONTROL

A new device launched by the American Radiator Company makes possible an individual heat control for each room. This accessory is called Radiatherm. It is attached to the radiator and set at the desired degree, works automatically, and maintains a constant room temperature regardless of weather conditions and changes.

GARAGE DOORS

Air-Lec opens and closes the largest garage doors at the touch of a switch. It gives an instantaneous door service and can be applied to sliding, swinging, or folding doors. The Schoelkopf Mfg. Co. also have a Driveway Switch designed especially for garages in residence areas where the sounding of horns is objectionable. Doors open automatically as the car passes over the switch, set flush in the driveway.

A NEW CATALOGUE

The latest developments in modern heating have been published in a catalogue by James P. Marsh & Co. The edition includes a description of the Marsh Weather Compensating System of Heating. Specialties of advanced design, recently produced by Marsh, are illustrated and described.

NEWMAN BOOKLETS

Midwest genuine hand-wrought iron, copper, and bronze lighting fixtures and ornamental metal work are shown in a small booklet from the Midwest Metal Art Division. "Newmanco Store Fronts" names fourteen points of superiority and several exclusive features. Architects and builders are invited to use Newman's layout service in planning for new work or alterations.

MODERNIZE THE KITCHEN

The Parsons "Pureaire" Kitchen is built entirely of steel, sanitary and durable. It may be set against the wall, or recessed, and requires no partitions nor folding doors. This complete kitchen unit requires only 50 per cent of the floor area occupied by like conveniences in separate units. The Parsons Company will send you a leaflet with plans and specifications.

TEMPERATURE AND HUMIDITY

The U. S. Department of Agriculture states "There is little doubt that in most dwellings during the heating season the air is dryer than is best for health and comfort." The Wilcolator Company, of Newark, N. J., has perfected a simple, inexpensive humidifier for overcoming the dangers and discomforts of too dry air. It can be had in cabinet form or as a recessed wall installation. A file leaflet of Aqualator is available for architects' use.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

Of ARCHITECTURE, published monthly at New York, N. Y., for Oct. 1, 1930.

State of NEW YORK, County of NEW YORK.

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

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

PUBLISHER: Charles Scribner's Sons . . . 597 Fifth Ave., New York, N. Y.
EDITOR: Henry H. Saylor . . . . . 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.)

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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.

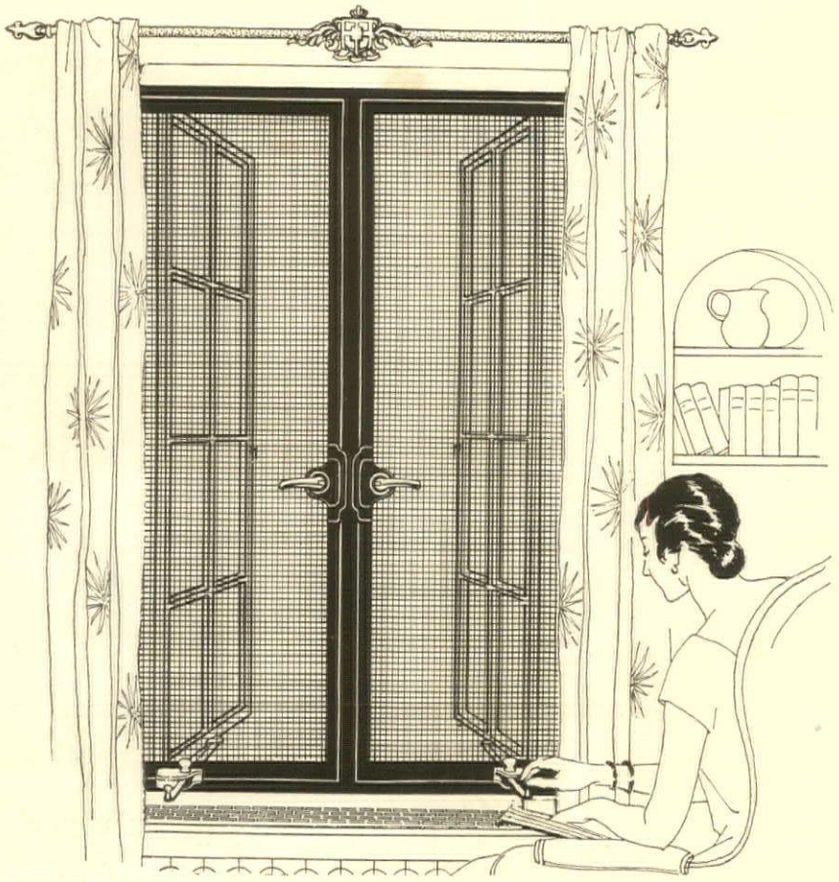
4. That the two paragraphs next above giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books 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.

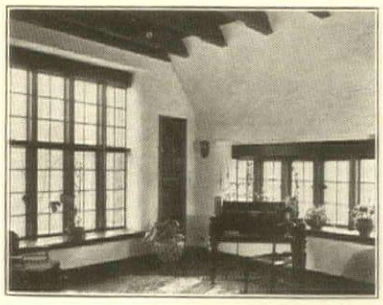
CARROLL B. MERRITT, *Business Manager.*

Sworn to and subscribed before me this 26th day of September, 1930.

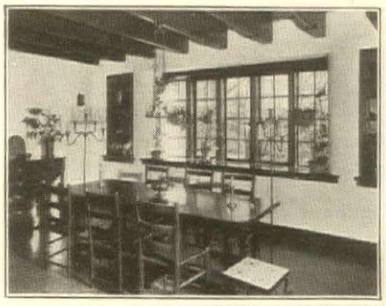
JOSEPH H. POLI,
[Seal.] Notary Public, Nassau County.

Certificate filed with New York Co. Clerk No. 622.
Register's No. 2P394.
Commission expires March 30, 1932.





Living room in the house of William B. Betts, Architect, Chicago



Dining room in the house of William B. Betts

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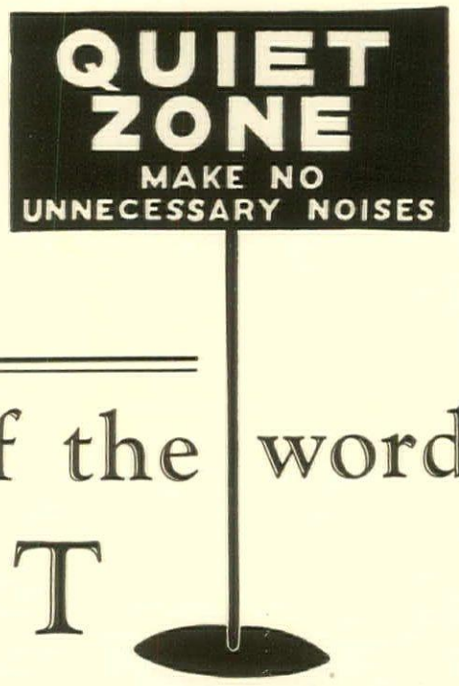

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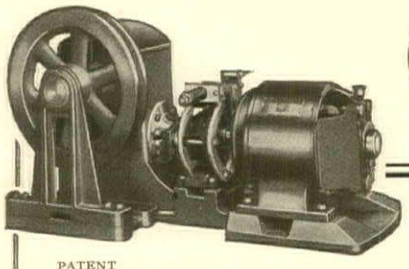

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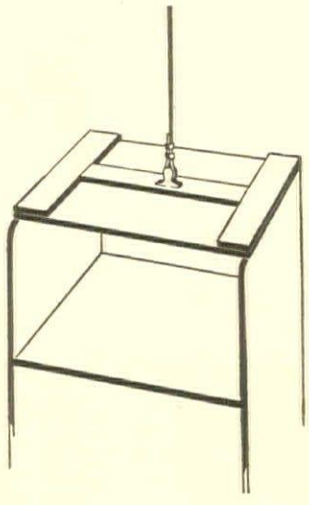

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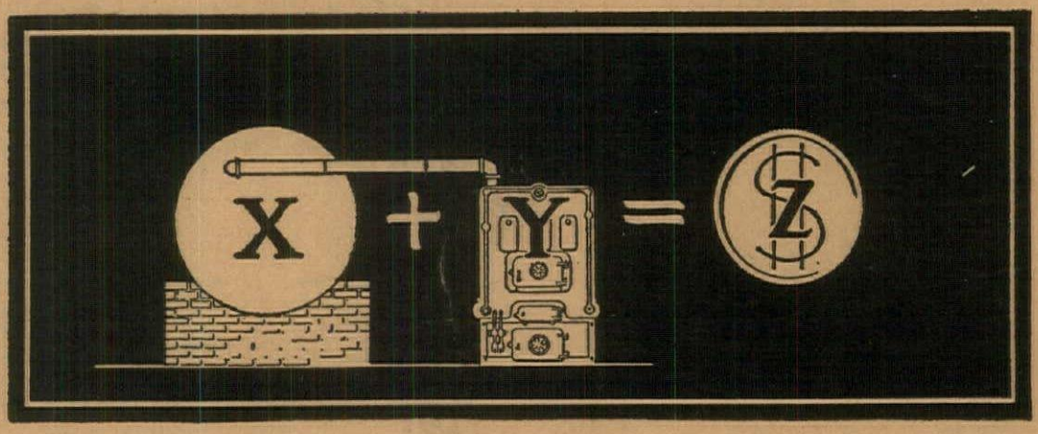

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