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THE ARCHITECTURAL RECORD

AN ILLUSTRATED MONTHLY MAGAZINE OF ARCHITECTURE
AND THE ALLIED ARTS AND CRAFTS.

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THE ARCHITECTURAL RECORD

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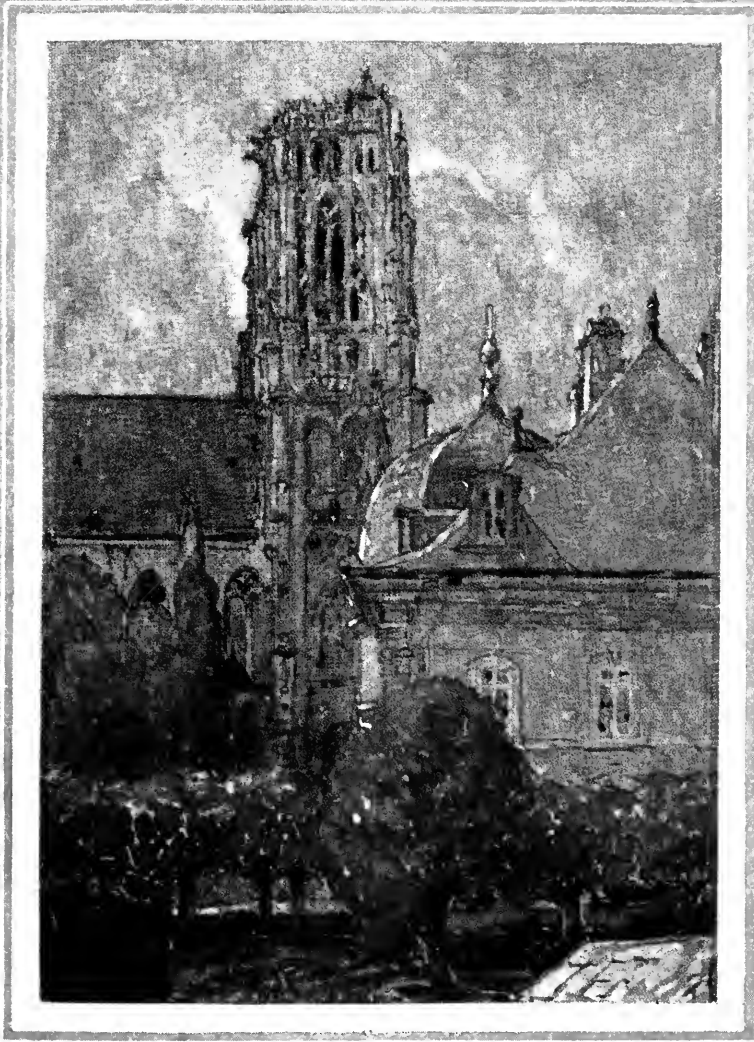
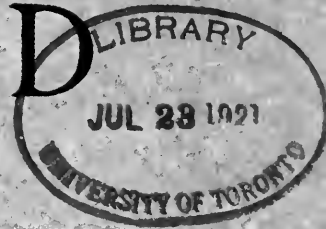
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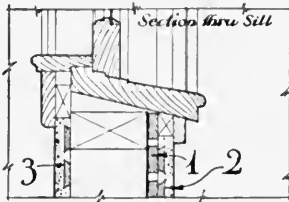
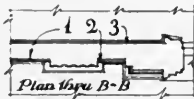
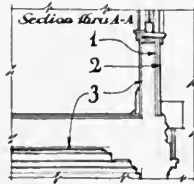


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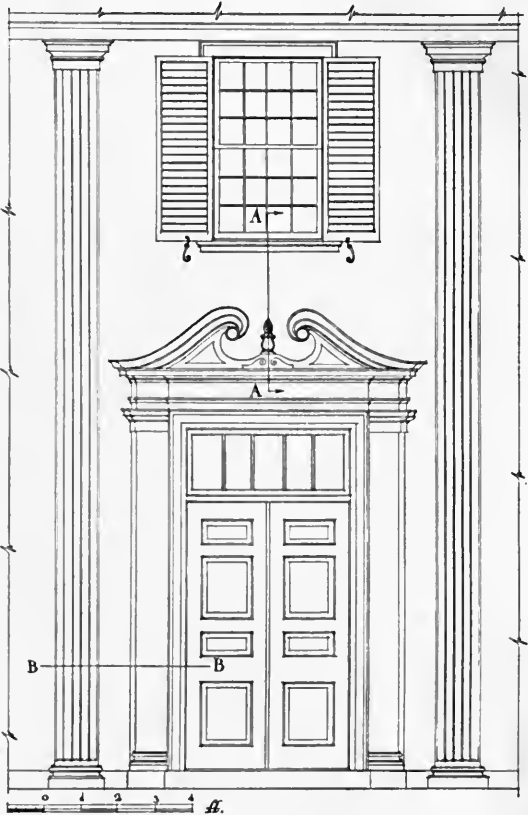
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MOTHER GOOSE PANEL IN GABLE OF CORNFLOWER COTTAGE, MODELED IN CEMENT, IN PLACE—THE CARSON COLLEGE FOR ORPHAN GIRLS, NEAR PHILADELPHIA. ALBERT W. KELSEY, ARCHITECT.

THE ARCHITECTURAL RECORD

VOLUME L



NUMBER I

JULY, 1921

The
CARSON COLLEGE *for* ORPHAN GIRLS
AT FLOURTOWN NEAR PHILADELPHIA
ALBERT W. KELSEY, ARCHITECT



By ARTHUR WILLIS COLTON

THE peculiarity of Carson College begins with the will of Mr. Carson, who left several millions to found a home for orphan girls, stipulating that no two children should be dressed alike. The stipulation would not have been important if it had not been taken as the germ of an idea that goes far if logically followed. It leads to the question: What is wrong with institutional handling of humanity, especially of children? Why are orphan asylums so dreadfully unfit for childhood?

It is not only that the dress is uniform. In fact, the great objection to orphans in uniform is not this superficial likeness to

each other, but that the uniform marks them as apart from other children. It keeps the facts always before their eyes, and the eyes of other children, and serves to make a stigma of misfortune.

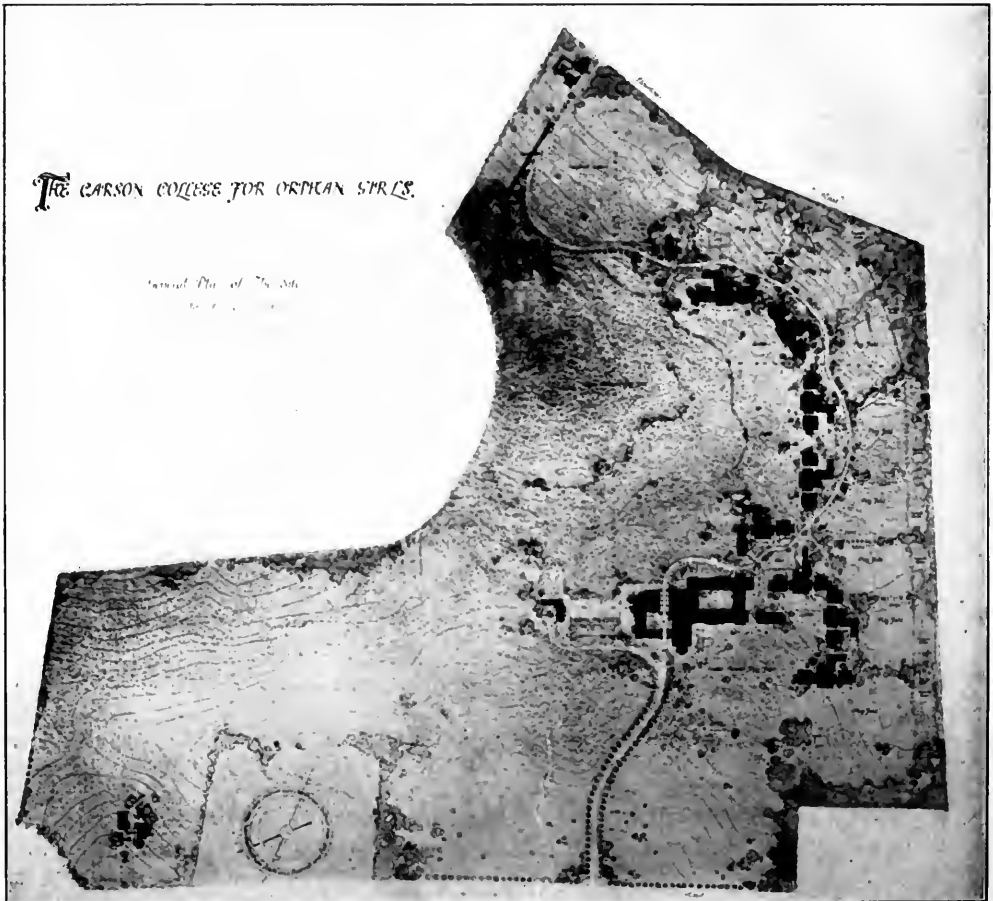
The next important step was taken when it was decided between the trustees and the architect that this large endowment should be directed to a qualitative instead of a quantitative purpose, which means that instead of trying to take care of as many orphans as possible they would try to give to a limited number the best advantages possible. It was the logical step. For all systems, bureaucracies, machine processes and routines grow out

of the attempt to handle facts or materials or people, of which the amount or number or multitude is too great, with the time and means at disposal, for a separate and peculiar attention to be given to each item. Uniformity or "one model" is the only road to quantity production at minimum cost, in an orphanage as in a Ford factory.

This then is the primary trouble. An institution naturally runs to mechanism, and this is a worse characteristic in an orphanage than in a school because a school is a supplement to, not a substitute for, a "home." The family group grows its own atmosphere around the individuals who compose it. It may not be a very good atmosphere, but it is always

human and peculiar. The best family life is the best background for childhood, and the institution which wishes to give the best atmosphere to the children in its care goes to the best family life for its models; there it finds something as varied and "queer" as humanity itself; but all interfused with sympathy and probably with humor on the side of the elders, and on the side of the children lit up with most unexpected imaginations.

Charles Dickens preached a sufficient sermon on the point in his "Hard Times." The dogmatic inspector in that notable Chapter I thought that carpets ought not to have roses woven in them, because roses do not grow on carpets and children should be shown only facts; whereas



THE CARSON COLLEGE FOR ORPHAN GIRLS, FLOURTOWN, NEAR PHILADELPHIA.
Albert W. Kelsey, Architect.

Cissy Jupe, or Girl No. 20, thought they should, because roses were pretty and she liked them. That we may not ourselves care for rose-garlanded carpets need not prevent our sympathizing with Cissy Jupe. That she was artistically early Victorian is unimportant. It is unimportant both to art and to childhood whether roses do or do not grow on carpets. The important thing is that a thing should be beautiful and that we should like it. Essentially, Cissy Jupe was right and the inspector wrong not only about childhood but about art. Above all, no girl should be called "Girl No. 20" or told that she must not say "I fancy."

At Carson College each building is named for a flower, and decorated with flower motifs. The architect calls it an "architectural anthology." It is an institutional revolt against Mr. Gradgrind and all his ways. Fancies, it wishes to imply, are as important for children as facts. It is probably better for a child to be imaginative than to be well-informed.

The Carson College estate comprises 116 acres. The long low hill to the south and the rolling country to the west give distant views. On the north, however, a rising hill limits the view, hides the village of Flourtown, and serves as a wind-shield in winter. Many young trees have



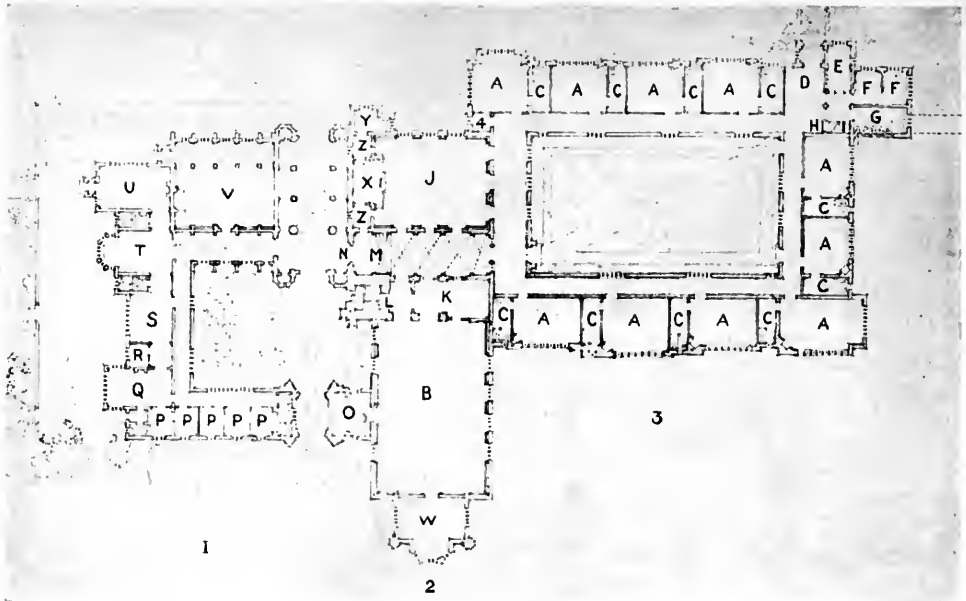
BIRD'S-EYE VIEW.

been planted on this hill, and here in the young forest are the Moon Well and the Star Well, two circular polished slabs, which, when the trees are grown, will lie sunken at the bottom of a dark forest circle. At present they are used as open air theatres and eventually they will be quite druidical sort of places. For the imaginative life of children, there is a promising subtlety and oddity in the idea.

In the little village composed of the Carson College buildings, it is noticeable that the roads are all so laid in curves that one building hides the next from view until the corner has been turned. Also, the



THE STEEL TOWER, A TEMPORARY OBSERVATION PLATFORM, MARKS THE SITE OF THE FUTURE CARSON MEMORIAL TOWER.



(1) ADMINISTRATION.

(2) GROUND FLOOR PLAN.

(3) SCHOOL.

- | | |
|---|---|
| <p>A. Class Room.
 B. Gymnasium.
 C. Coat Room.
 D. Regular Entrance for Children.
 E. Office for Teachers.
 F. Two Rest Rooms.
 G. Children's Toilet.
 H. Up to Play Room.
 I. Down Passage.
 J. Auditorium.
 K. Control and Examination Room.
 L. Up to Lockers, etc.
 M. Down S.</p> | <p>N. Visitor's Entrance.
 O. Apparatus Room.
 P. Office.
 Q. Superintendent's Private Office.
 R. Stenographer.
 S. Superintendent's Public Office.
 T. Visitor's Waiting Room.
 U. Teacher's Social Room.
 V. Carson Memorial Room.
 W. Special Exercises.
 X. Platform.
 Y. Toilet.
 Z. Ante-Room.</p> |
|---|---|

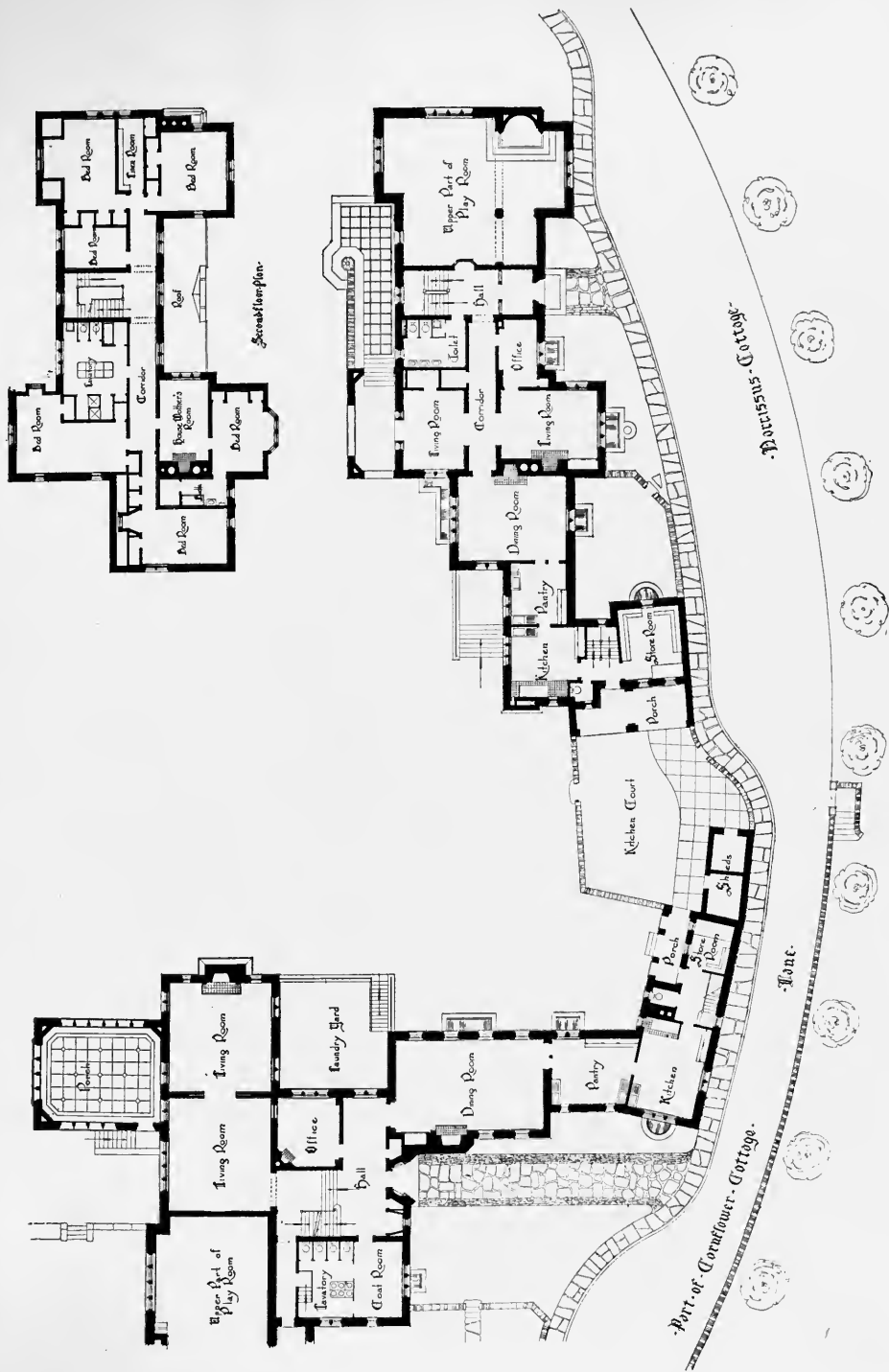


ADMINISTRATION.

SCHOOL.

MAIN BUILDING OF THE CARSON COLLEGE FOR ORPHAN GIRLS, NEAR PHILADELPHIA, PA.

Albert W. Kelsey, Architect.



THE COTTAGES AT THE CARSON COLLEGE FOR ORPHAN GIRLS ARE CONNECTED IN PAIRS, WITH A SINGLE KITCHEN ENCLOSURE. THERE IS A COURT IN FRONT OF EACH COTTAGE OUT OF SIGHT OF OTHER COTTAGES.



PRIMROSE COTTAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS.

rolling ground gives different levels to the houses. The Primrose Cottage is set so high that it is known to the children as Stork Hill, while the Cornflower Cottage is lower than the Narcissus House next it and is reached by a flight of steps. Many of the houses are connected by little paved paths, passing sometimes under stone archways, sometimes through woods. The small scale of the whole establishment is noticeable. It declares itself frankly a children's college. The carriage drives are narrow winding roadlets through which no automobile can speed. The place is full of little nooks and corners. The scale is not impractically small, but it is small enough to give the suggestion and the charm of childhood and its proportions. The road curves past a succession of irregular little buildings, with tiled roofs, of various colors. The roof of the Cornflower Cottage is blue, of the Narcissus House sand color. But these roof tiles vary in shade to get the effect of "broken color." Much of the woodwork is painted in strong reds and blues—on the Primrose Cottage in greens and

yellows. All this color is robust; and is foiled by panels of blank wall and by the unpainted wooden construction. The texture or graining of the wood, which is large and easily seen from a distance, seems to make the houses look even smaller than they are.

The houses are richly decorated, lavish not only of color but of carvings. The Mother Goose panel is under the eaves of the Cornflower Cottage, the Stork panels on the façade of the Primrose House, and the gilded Sunbaby is in the cloister of the Cornflower Cottage. Approaching from the east, the Cornflower, the Narcissus, the Primrose, the Thistle, each house has by its door, in stone or inlaid in terra cotta, the flower for which it is named, but varying in position and relation. Each of these flower insignia is used in decorative motif for the house to which it belongs—in running painted garlands under the eaves, and set like punctuation marks in carved panels.

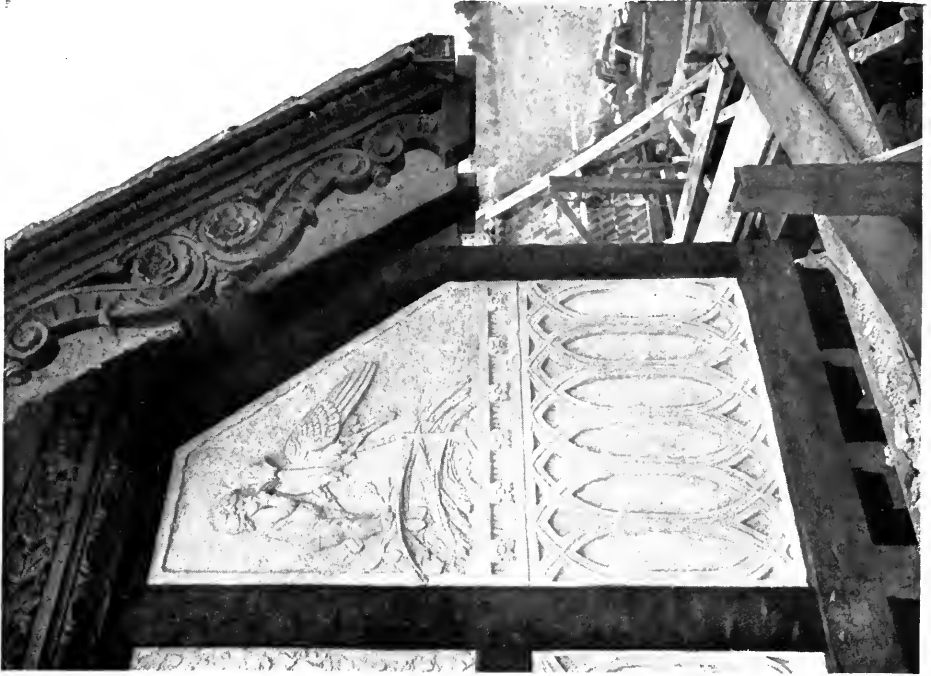
There is another motif more literary and symbolical—a sort of five ages of woman—which begins with the Sunbaby



SIDE ENTRANCE TO PRIMROSE COTTAGE—
THE CARSON COLLEGE FOR ORPHAN GIRLS.



ONE OF THE GABLES OF PRIMROSE COTTAGE BEFORE THE CARVING WAS DECORATED—THE CARSON COLLEGE FOR ORPHAN GIRLS.



STUCCO PANELS ON PRIMROSE COTTAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS.



FORECOURT OF CORNFLOWER COTTAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS,

and runs through three more panels—in cottages yet to be built—culminating in the Sun Woman, whose gilded statue will crown the Carson Memorial Tower, when the latter is finished. The tower has a base of local stone and rises sixty feet, becoming gradually more enriched with cut stone as it rises, brighter and lighter in color, lighter and more delicate and feminine in detail and design. The tall windows, where the walls begin to lighten, will reproduce in pierced design and color eight of the most famous Madonnas. The tracery above tapers up to garlands of flowers held by the Dawn Maiden, the Zenith Maiden, the Eventide Maiden, and the Maiden of the Night. Figures of children also appear in high color in the decorations, dressed in the uniforms of the world's orphan asylums historically most noted. The increasingly brilliant color will culminate in the gold of the Sun Woman. Gold has been sparingly used in decoration. It has only been used in the Sunbaby panel and the figure of the Sun Woman.

It may be suspected that the valuable

influence of some of this symbol, allegory and motif will not be effective directly on the children so much as indirectly through those in charge of them. The ideas or ideals or visions or dreams, under whose inspiration an institution is born, have a sad tendency to lose force and become faded or forgotten, as time goes on and the personnel changes. But the fixture of the ideal in the architecture and plan of the grounds should have a tendency to keep it vivid to the eyes of guardians and teachers, to keep alive this resistance to the "institutionalizing" of childhood. When the spirit of the place has been built into its architecture, cut into its stone and molded into its panels—these things do not change. This is not pretty sentimentalizing only. It is a far-sighted practical wisdom, which has seen the point where institutions break down in their relations with childhood, and met the issue squarely, with true American ingenuity, prodigal of invention and unsparing of expense.

Boys are often imaginative but seldom sentimental; girls, perhaps, more com-



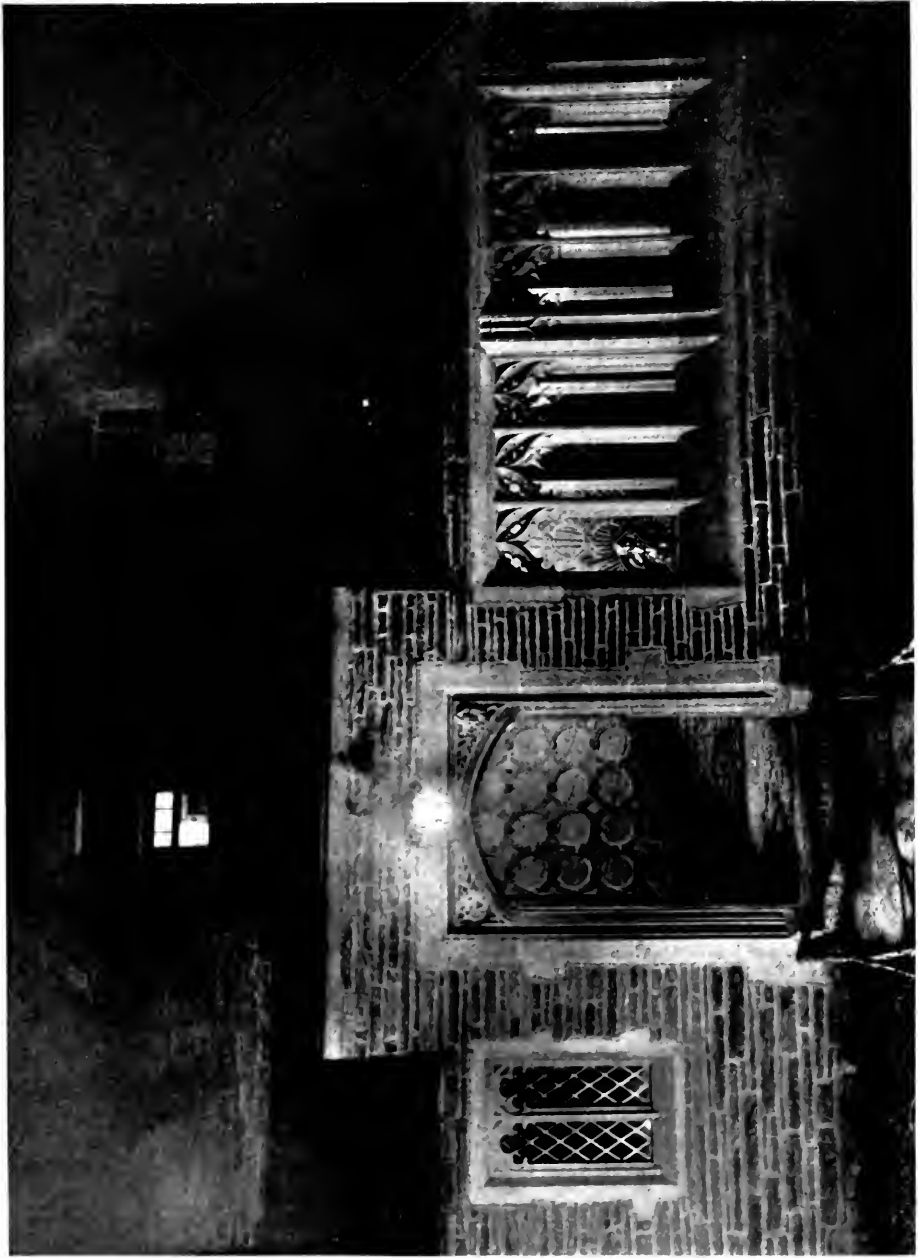
MOTHER GOOSE GABLE OF CORNFLOWER COTTAGE
—THE CARSON COLLEGE FOR ORPHAN GIRLS.



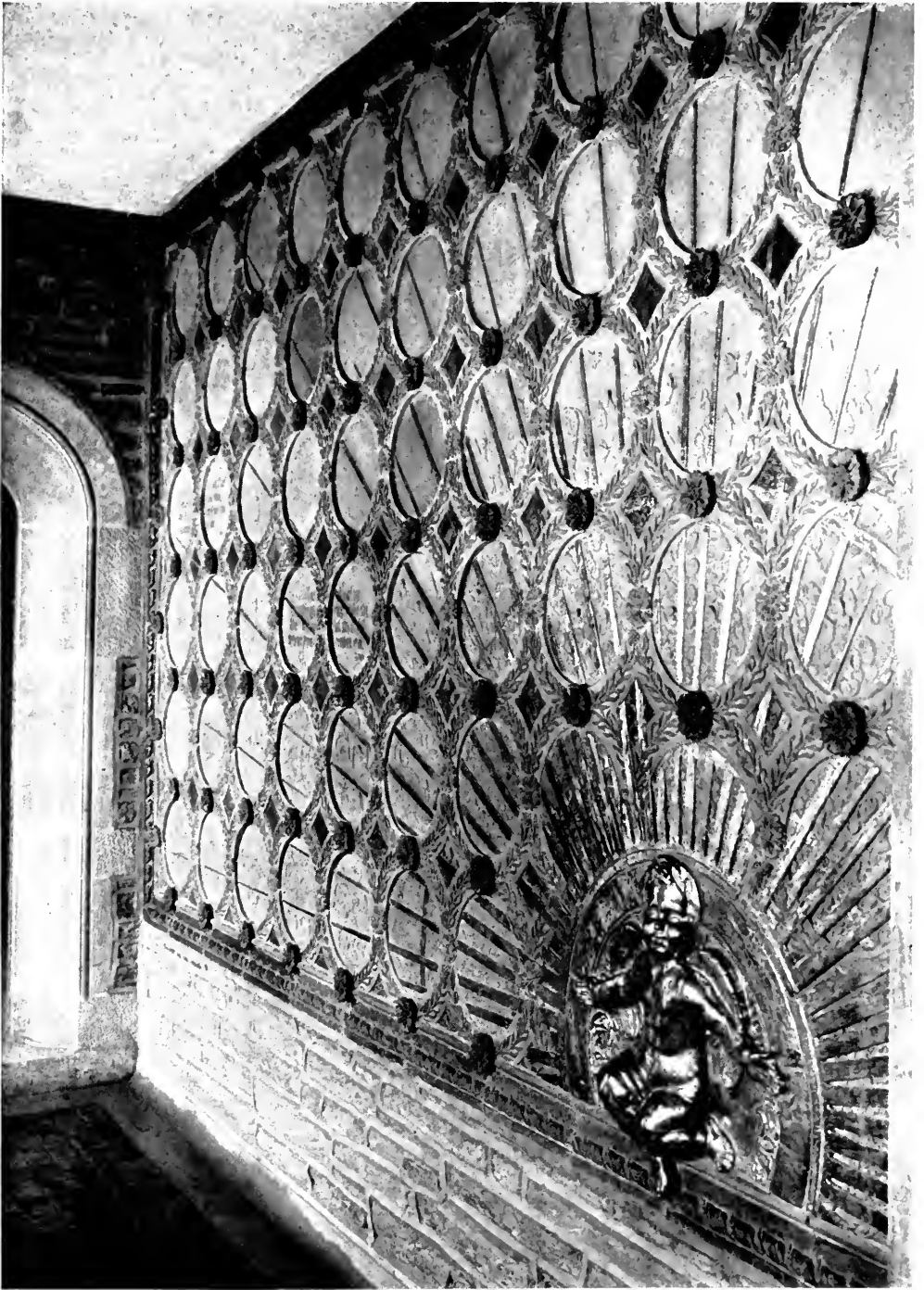
APPROACH TO THE MAIN ENTRANCE OF CORNFLOWER
COTTAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS.



MAIN ENTRANCE TO CORNFLOWER COTTAGE
—THE CARSON COLLEGE FOR ORPHAN GIRLS.



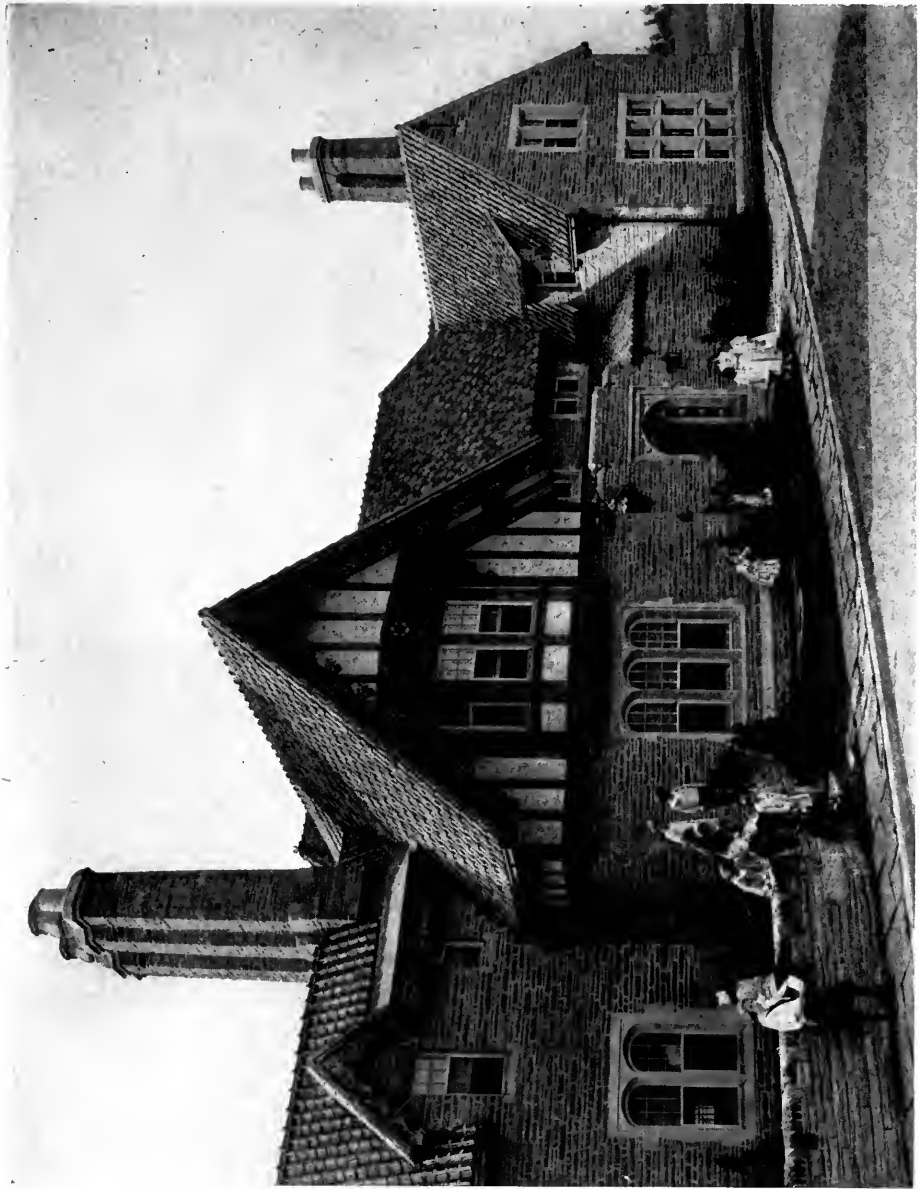
NIGHT VIEW OF ENTRANCE TO CLOISTER OF CORNFLOWER
COTTAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS.



THE SUNBABY, IN CLOISTER OF CORNFLOWER COTTAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS.



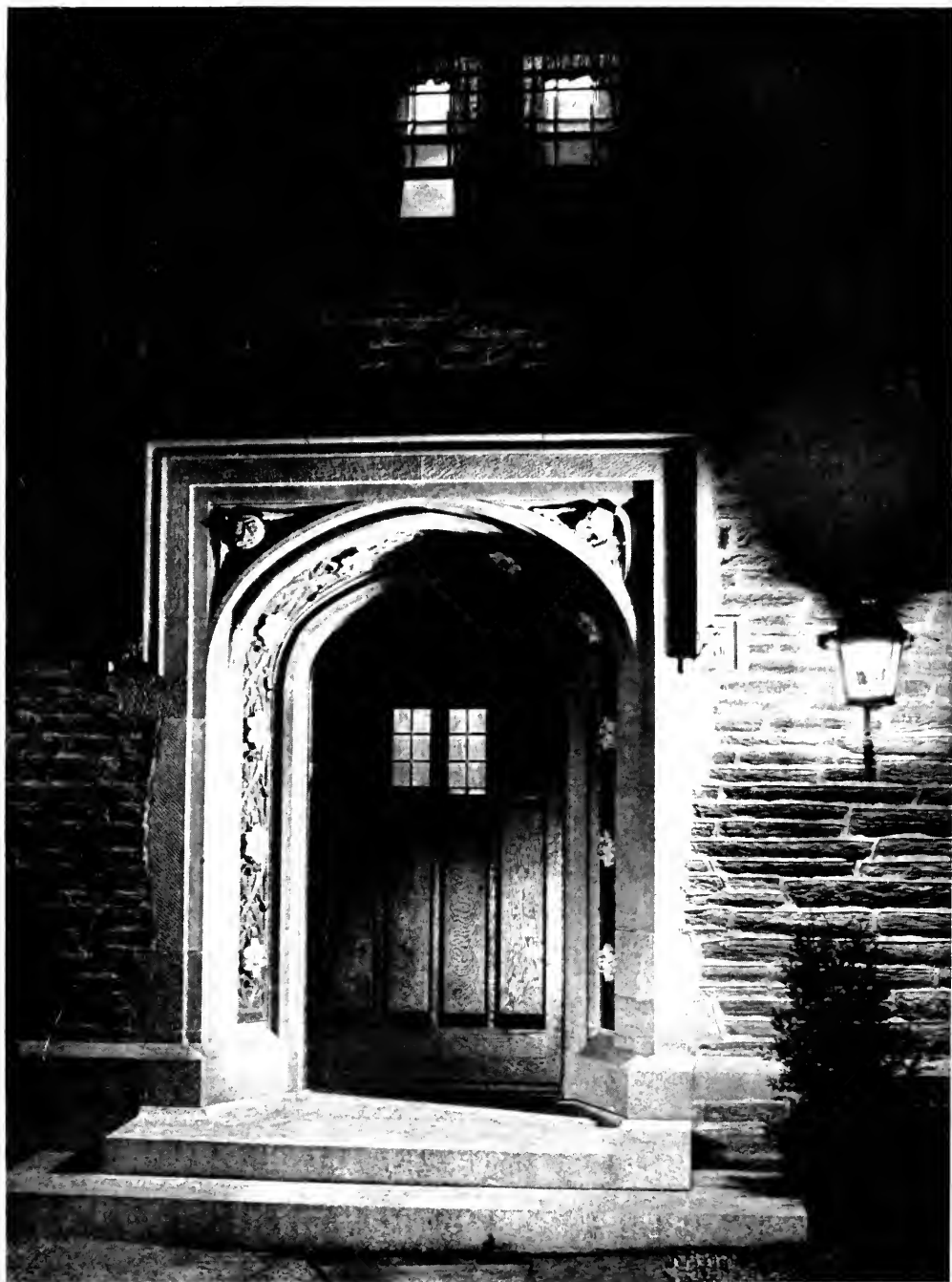
DINING ROOM MANTEL IN CORNFLOWER COTTAGE
—THE CARSON COLLEGE FOR ORPHAN GIRLS.



NARCISSUS COTTAGE—THE CARSON
COLLEGE FOR ORPHAN GIRLS.



FORECOURT OF NARCISSUS COTTAGE—
THE CARSON COLLEGE FOR ORPHAN GIRLS.



NIGHT VIEW OF FRONT DOOR OF NARCISSUS COTTAGE, SHOWING EFFECT OF INDIRECT LIGHT IN DOORWAYS, EAVES, GABLES, ETC. THERE ARE NO STREET LAMPS ON THE COLLEGE GROUNDS.



ENTRANCE TO KITCHEN COURT BETWEEN NARCISSUS AND CORNFLOWER COTTAGES.



KITCHEN WING OF NARCISSUS COTTAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS.



ONE OF THE GABLES OF NARCISSUS COTTAGE BEFORE THE ROOFS WERE TILED, SHOWING EXPERIMENTAL COLORING—THE CARSON COLLEGE FOR ORPHAN GIRLS.



THISTLE COTTAGE AND END OF GARAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS.



ONE OF THE GABLES OF THISTLE COTTAGE—THE CARSON COLLEGE FOR ORPHAN GIRLS.

monly, are sentimental, but the word has here no derogation. Its derogative meaning has a literary history: the facile emotionalism—which a change of taste and period came to look on with more amusement than respect—was an emotionalism of the moods, not of children, but of their elders. It lies in the very nature of very young girls. It is not only right that they should have it, but it is part of the grace of their transient years.

If any hardened critic, then, is inclined to find Carson College architecturally sentimental, he should be reminded that the word's derogation depends wholly on its connection; that Carson College is more or less of a nursery; hence that architect and trustees are right in this point, and should be honored—the trustees for their courage and the architect for his extraordinary inventiveness. They were not building to suit sophisticated critics, but orphan girls. The right housing and nourishing of children's imagination is a much more difficult job than the housing and nourishment of their bodies, and at Carson it seems to have been done with rare insight and prescience, and regardless of cost. One may feel, transiently,

more dubious about the Sunbaby and Sun Woman than about the Mother Goose panel or the druidical forest wells (in respect to this insight), but one had best admit that there is probably a better knowledge of childhood at Carson than in *The Architectural Record*, and that here, too, the architect of those ideas is probably right.

The girls at Carson live in all respects, so far as possible, the life of normal children, in that they have school, housework, dancing classes and pet animals. The dancing classes are attended by the boys and girls of the neighboring village.

There have been homes for orphan children before in which dreary and drab institutionalism was kept out and the needs of childhood were beautifully served; but that happened where the place was relatively small and in charge of some radiating person or persons whose influence illuminated and protected it. Carson College is perhaps the first orphanage where this illumination and protection is embodied in its architecture, and hence—so far as may be done in that way—assured in perpetuity.



MANTELPiece ON SECOND FLOOR OF
"MOUNT PLEASANT," PHILADELPHIA, 1761.

The
EARLY ARCHITECTURE of PENNSYLVANIA
PART VIII — MANTELPIECES



By A. LAWRENCE KOCHER

THUS far, in our survey of Pennsylvania architecture, we have been concerned almost exclusively with the exteriors of buildings, with the disposition of outward masses, or with the distinguishing character of such external features as cornices, windows and doors. The interiors are of no less importance for study. Many of the inner walls, with their splendid examples of wood panels, chimneypieces and stairways have been permitted to remain in their original integrity to our day, not only because of an appreciative care of generations in whose names the mansions and lesser dwellings have continued, but also because the inner fabric has been more free from meretricious alterations by the misguided restorer, acting under the changing fashion of a century.

The fireplace has played an important rôle in the history of domestic architecture from the time of the ancients. Because it forms a necessary function of supplying warmth and serves as a general gathering place of the household, it has properly been the subject for special care and attention on the part of the designer. The size of rooms has, in part, been determined by the space that can reasonably be heated by a single hearth, and the treatment of the rooms has been focused upon the elaboration of the chimneypiece. One can perceive a revised spacing in the present-day building practice with respect to alcoves and smaller rooms, which is undoubtedly a consequence of our practical if unesthetic system of radiator heating. The importance of the fireplace was fully appreciated in the century which developed our early American style, for, as Isaac Ware puts it, "no article in a room is more essential. The eye immediately

falls upon it on entering the room, and the place for sitting down is naturally near it. By this means it becomes the most prominent thing in the furnishing of a room."

Let us trace the development and the varied nature of the fireplace, from the beginnings of the colony and on to the period of the Greek Revival in the nineteenth century, in order to obtain a background of salient facts in the gradual evolution of the feature.

The fireplace, in America, was at first an exceedingly primitive affair, free from ornament and frankly purposed to give heat both for comfort and for cooking. It was of large dimensions, frequently from twelve to fifteen feet in width on the outside, and constructed of native limestone or brick. A lintel of oak or walnut, termed the "mantel-tree," usually spanned the top of the fire opening. The chimney of the eighteenth century was built of brick or stone, and in the rude temporary houses the use of wood plastered with mud-clay was not unknown. The large and primitive form of mantel was purely utilitarian and continued to be built in the Pennsylvania kitchen until recent times. We need not dwell upon the details of this ruder form. Our interest is rather in the mantel of lesser size which graced such rooms as the living, dining, and bed rooms.

The chimneypieces of Pennsylvania may be divided into four groups, each differing in the arrangement of parts and each varied in minor characteristics.

The subject of the first group may be termed the "mantel with overmantel," a creation of the early wood craftsman who devised the fireplace to be an integral part of a paneled wall enrichment, and to extend from floor to ceiling and to en-

compass the length or breadth of a room. During this epoch the dwellings were shaped by masterbuilders who were capable woodworkers and who applied their ingenuity to the elaboration of wood finish conceived for and built in a particular location. The results achieved by these early builders were highly commendable because of a satisfying unity. The examples that show this complete treatment of walls are impressive and dignified by sheer bulk and, at times, by an elegance of parts. For specimens of this mode we turn to the fashionable country residences or manor houses which continued to be built throughout the greater part of the eighteenth century. Whitby Hall (1754) and Mount Pleasant (1761) of Philadelphia, and the Hempfield-Wright House (1724) in Columbia, Pennsylvania, are treated in this manner.

The second typical form is exemplified in a smaller group of mantels—one which also displayed an enrichment of moldings about the fireplace opening and possessed the paneled and architecturally treated superstructure. The difference from the foregoing type is recognized by the fact that this form is not flanked by adjoining cupboards or paneled woodwork. The mantels from the Ephraim Blaine House in Carlisle and of the tavern in Hogestown represent the second division.

The third part of our classification includes the large number of low mantels which attained a popular favor by reason of a growth of economy in building about 1760. Wall-paper also obtained a vogue as a wall covering about this time.

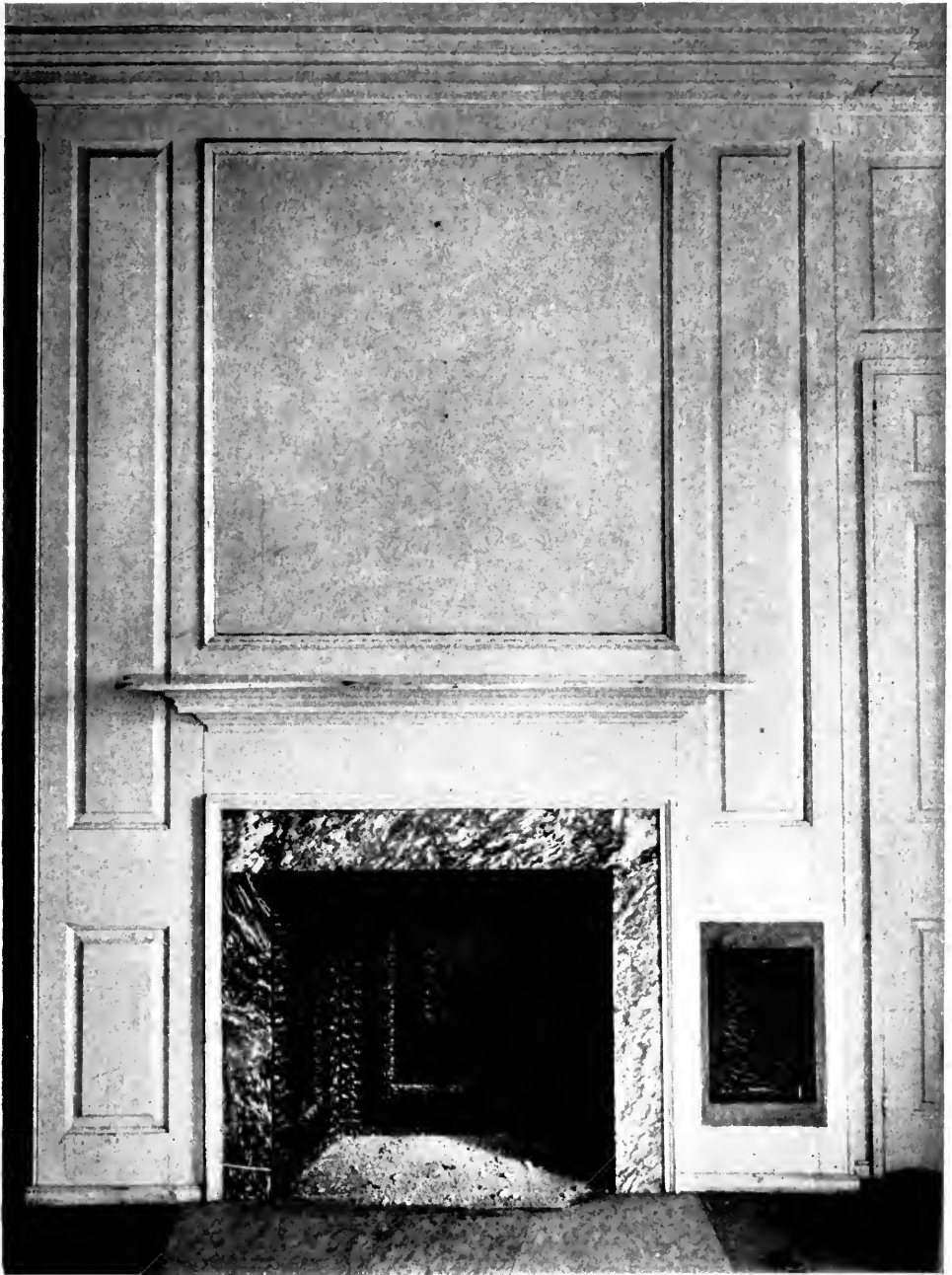
Another element worthy of our consideration was the potent influence of trade guilds which specialized in the production of individual mantels, usually of the small variety for greater ease of transport and installation.

The contraction in the size of the mantel and the elimination of the important architectural setting was, in a sense, a phase of the complete revolution that occurred in the building industry. As has been pointed out in an earlier account, houses were no longer built in their entirety by the house carpenter, but wood

finish had become a commodity which could be purchased as one would buy a piece of furniture.

The fourth form was similarly of moderate dimensions and grew out of the preceding lighter shapes. The origin of the mantels of this period was British and embodied a new spirit in architecture, dominated by the Adam Brothers, for which reason the fourth type was known as the "Adam Mantel." The form is characterized by an extensive use of composition ornament of a classical nature. The mantelpieces designed by Americans who followed the lead of the English fashion, made use of enrichment almost as an end in itself, featuring the festoon, the scroll, figures, grotesques and vases, on frieze and pilaster, wrought in the medium of stucco. The new spirit in domestic architecture adopted a slighter and more graceful membering. Moldings and details were less massive and in many ways were more formal. On the other hand, the adherence to strict rules of precedent was gradually relaxed and the movement proved to be the last flowering expression of the so-called "Colonial architecture." The groups of mantels in the Diller House in Lancaster and of the Beltzhoover House in Carlisle are characteristic.

Wood was the material chosen for mantels throughout the eighteenth century, and continued the popular choice until about 1825, when marble suddenly usurped its place. The Colonial mantel was fashioned of wood for reasons of economy and expediency. Both pine and oak were readily obtained from the forests of the province. The perishable nature of wood did not deter the builders in their selection. It did, however, influence the design, in that it became the custom to surround the fireplace opening with marble, brick, or square tiles. Criticism has been made of the prevailing use of wood and of the introduction of brick or marble about the fire opening and thus setting back the architrave and pilasters. This "architectural fault" resides in an apprehensive sense of the inappropriateness in the use of inflamma-



MANTELPiece ON SECOND FLOOR OF GOWEN HOUSE, "MOUNT AIRY," PHILADELPHIA. EXAMPLE OF MANTEL WITH OVERMANTEL.

ble material surrounding a fireplace, even though the flat intermediate space was faced with a fireproof material.

The objection would seem to be ill-founded, in view of the very nature of the "Colonial style," which was admittedly an outgrowth of English prototypes. The English architects did not appear adverse to the use of wood in an identical situation from the time of Inigo Jones and Grinling Gibbons to the end of the Georgian period.

The mantel shelf has an uncertain history. It appeared on occasions from the advent of the eighteenth century. It occurred but seldom upon the lofty chimney-piece, but before the Revolution it became an inseparable part of the low mantel and was selected as the conventional repository for bric-a-brac and candlesticks. The candlesticks were placed at the ends, over the supporting pilasters, and frequently an emphasis was produced by a widening of the shelf at the ends over the supports. An additional change occurred when the shelf clock was introduced, later in the century. This was responsible for an increase in the width of the entire shelf and for the breaking forward of the center of the shelf in order to give sufficient space for the popular timepiece.

The prominent space above the mantel was given a special significance from early English history, and we look instinctively to this place for ancestral mementos, such as the family portrait, or coat of arms, or for some highly esteemed painting by Benjamin West, Peale or other Colonial artist. General Green placed a picture of the rising sun on a panel over the mantel of the Merrick House in Bucks County. Many an impressive early portrait has been preserved to our time on account of the traditional custom of displaying the portraits of progenitors in this fitting architectural setting.

The Quakers and the Puritan-minded adherents of various religious sects frowned upon all forms of art and ancestry as partaking of a worldly vanity and wanton pretense. In consequence of

this mental attitude the lofty mantel was never general.

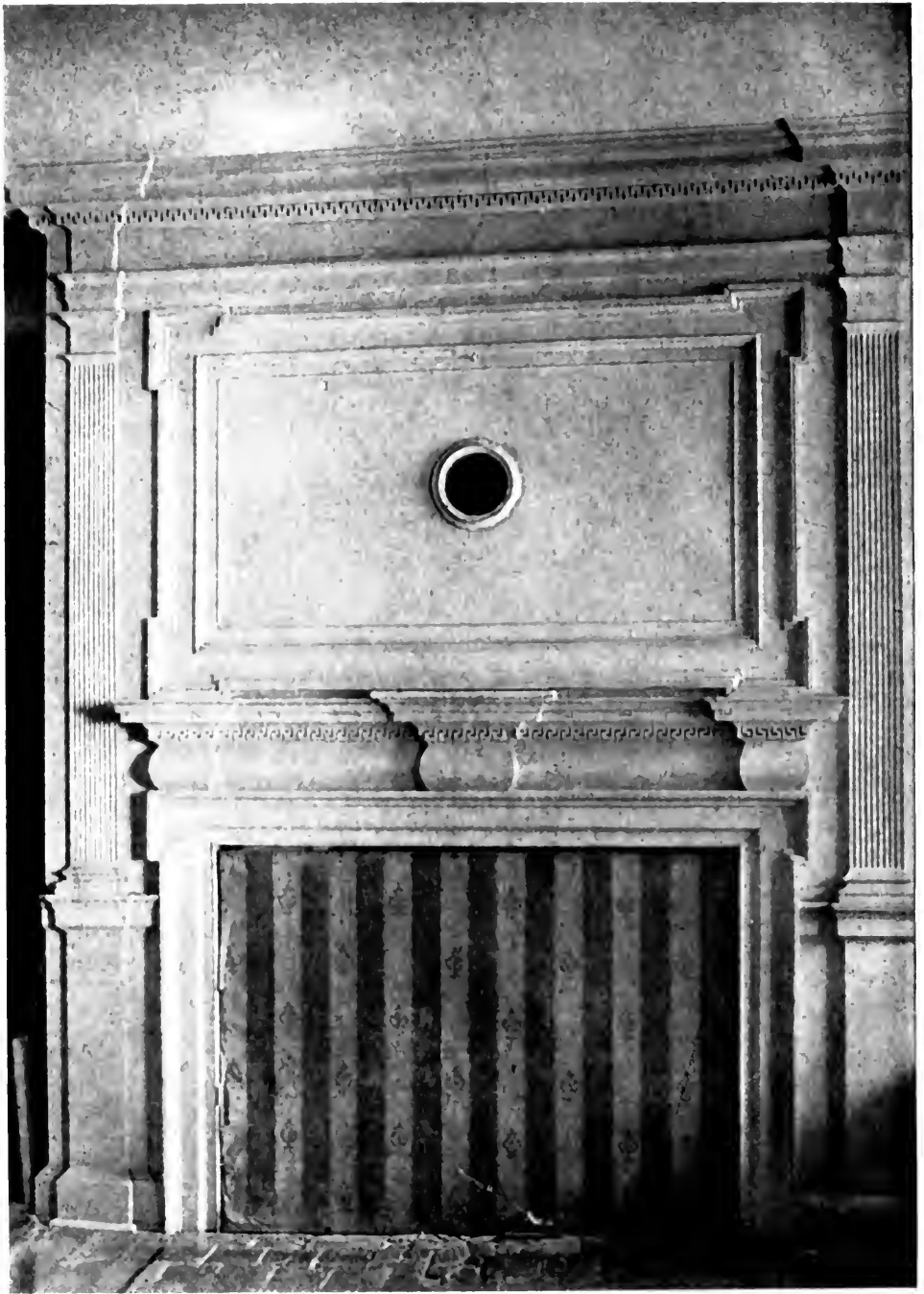
We can, however, easily overstress the influence that the religious precepts of William Penn and his followers had upon the local architecture. The Quaker tendency to favor the austere and simple was scarcely woven into the finished fabric of domestic architecture. Certainly the dwelling did not stand apart and appear "different" from the houses of the more worldly neighbors. The traditions of home building were too firmly rooted in the past to be readily swayed by the rules of faith. In the case of the meeting house we do perceive a difference, because there was not the same continuous line of precedent. The meeting house was an innovation, a new kind of structure, made to conform to the ritual of a newly evolved religion and for which there were no prototypes.

It may be said with assurance that no colony in America displayed a more unquestionable good taste in the design of mantels than did Pennsylvania. It would appear that the mantelpieces were examples of architectural art of a high order, designed by men of taste and capability who understood their craft and who were skilful enough to bring wood craftsmanship to the highest stage of development attained in America. It was also strangely true, however, that the citizens of this colony were chiefly responsible for the decline of the mantel, for it was here, and not in New England, that the well-intended improvements in heating were made. Christopher Sauer of Germantown and Benjamin Franklin were both concerned in the utilitarian changes which were destined to make the fireplace unnecessary.

The first improvements in the art of heating houses were made near the middle of the eighteenth century. We associate the name of Christopher Sauer, the printer, with the six and the ten plate stove. This stove was square or of box form, and was designed to be set in the side or jamb of the kitchen fireplace. As a conserver of fuel it proved phenomenal, but is said to have warmed the



THE STATE BEDCHAMBER MANTELPiece ON SECOND FLOOR
OF EPHRAIM BLAINE HOUSE, CARLISLE, PA., 1792-97.
EXAMPLE OF HIGH MANTEL WITHOUT ADJOINING WOODWORK.



MANTELPiece IN HOGESTOWN
TAVERN, NEAR CARLISLE, PA.



WALL TREATMENT IN WHITBY
HALL, PHILADELPHIA, 1754.



DINING ROOM WALL TREATMENT OF WASHINGTON'S HEADQUARTERS AT VALLEY FORGE, 1742-52.



BEDROOM OF WASHINGTON'S HEAD-
QUARTERS AT VALLEY FORGE.



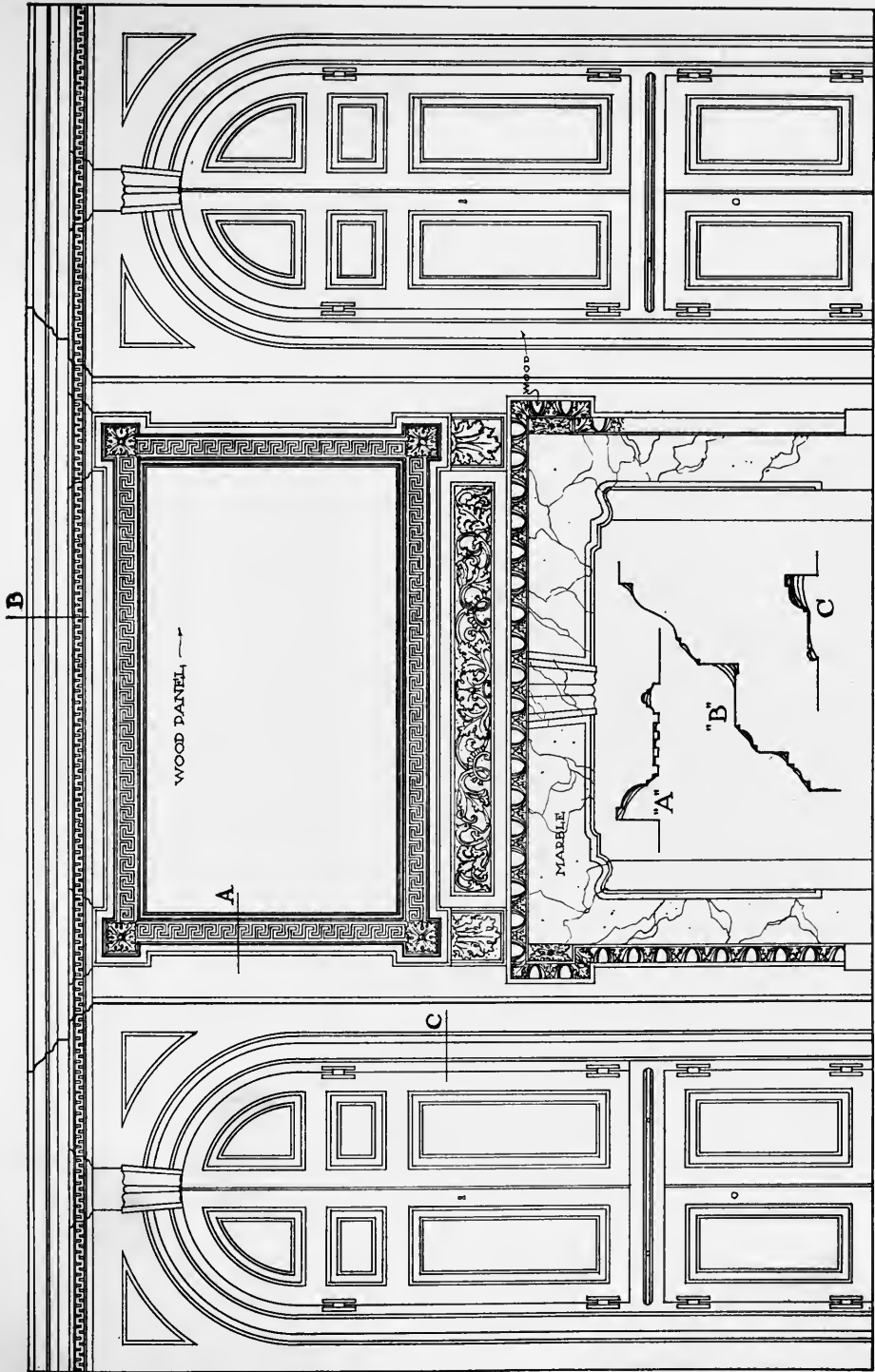
MANTELPIECE OF BOKLEN
HOUSE, PHILADELPHIA.



MANTELPiece OF HOUSE IN MERCERSBURG, PA. BRICK-
WORK SURROUNDING FIREPLACE OPENING IS MODERN.



MANTELPiece ON FIRST FLOOR OF TOM MOORE HOUSE,
NEAR CARLISLE, PA. EXAMPLE OF LOW MANTEL.



SCALE 1/2" = 1'-0"

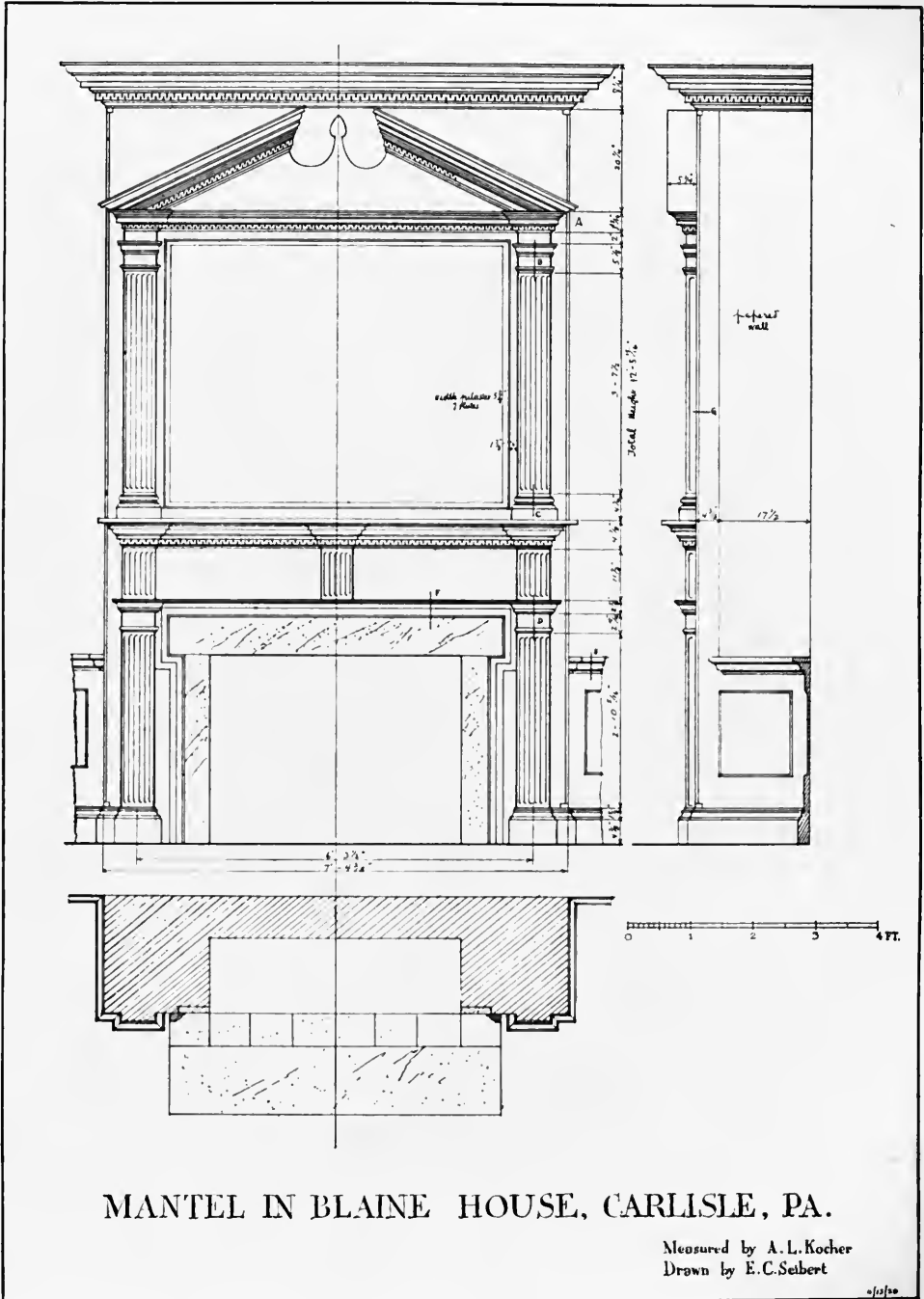
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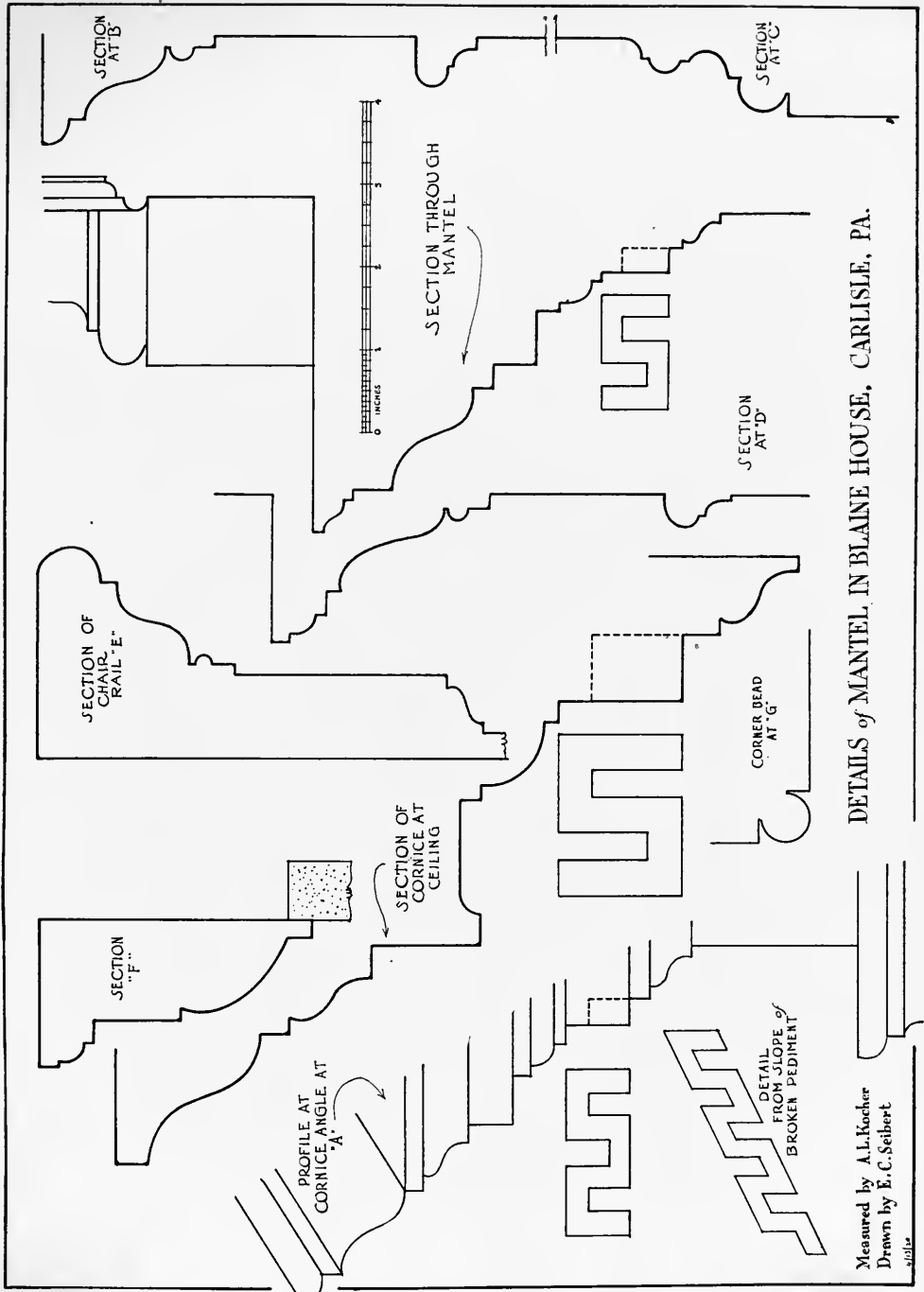
DRAWING ROOM PHILADELPHIA - SCALE 1/2" = 1'-0"

SCALE 1/2" = 1'-0"

ELEVATION

SCALE 1/2" = 1'-0"





DETAILS of MANTEL IN BLAINE HOUSE, CARLISLE, PA.

Measured by A.L. Kocher
 Drawn by E.C. Seibert



MANTELPiece ON FIRST FLOOR OF
EPHRAIM BLAINE HOUSE, CARLISLE, PA.

room indifferently, even though kept at a red heat. It was, however, the important forerunner of the stove. Credit is due to Benjamin Franklin for the development of what he termed the "new Pennsylvania fireplace." The invention of the practical-minded Franklin was supported by a pamphlet which lauded its advantages to health, its comfort and economy, based upon scientific principles of ventilation. His fireplace was constructed of plates of iron with a space between them, so that when the air became heated it circulated and thus aided the ventilation. His pamphlet maintained "that there was no draft on the back as before, whereby a person was scorched before and frozen behind. The stove gives out more heat than the old-fashioned fireplace, and saves it from going up the chimney." On the front of a model of this stove, given to his friend, Robert Grace, appeared the device of the sun, with the motto: *Alter Idem*.

The popularity of the fireplace received a further check when anthracite coal won favor as a fuel, about 1725. Coal had long remained an object of curiosity and few had faith in its power to burn and produce heat. To overcome the incredulity, certain dealers of Philadelphia demonstrated its virtue by keeping a "specimen fire" burning continuously. Stoves were soon devised for coal as well as for wood, and the epoch which gave prominence to the chimney-piece was over.

It is, perhaps, difficult for us (who live in this age of science which caters to our every comfort) to view the mantel-piece without some prejudice. Success in domestic architecture, with us, is too often gauged by the uncertain standard of convenience. A floor arrangement, a window device, a heating system, are each declared a success or failure in relation to the degree with which they contribute to our ease and comfort. Such innovations as the sliding door, the double sash window and our heating system involving the use of steam and hot water radiators are not altogether objects for æsthetic pride; they gained a foothold, not by reason of their inherent attractiveness, but because of their downright practical nature. Perhaps Thackeray was right in keenly resenting the over-developed ingenuity of his cousins of the "States," who were responsible for the invasion of England by the "American demon of an air-tight stove."

With us, today, everything seems purposed for physical comfort, while there is too little that adds to the welfare of the soul. An American lady complained on a winter's day that she "could not seem to raise a single room above 80° Fahrenheit," and the objection seems quite natural. While beauty is slowly coming into its own, let us hope that practicality will not receive a further setback, so that architecture as an art may keep pace with the progress of utilitarian science.

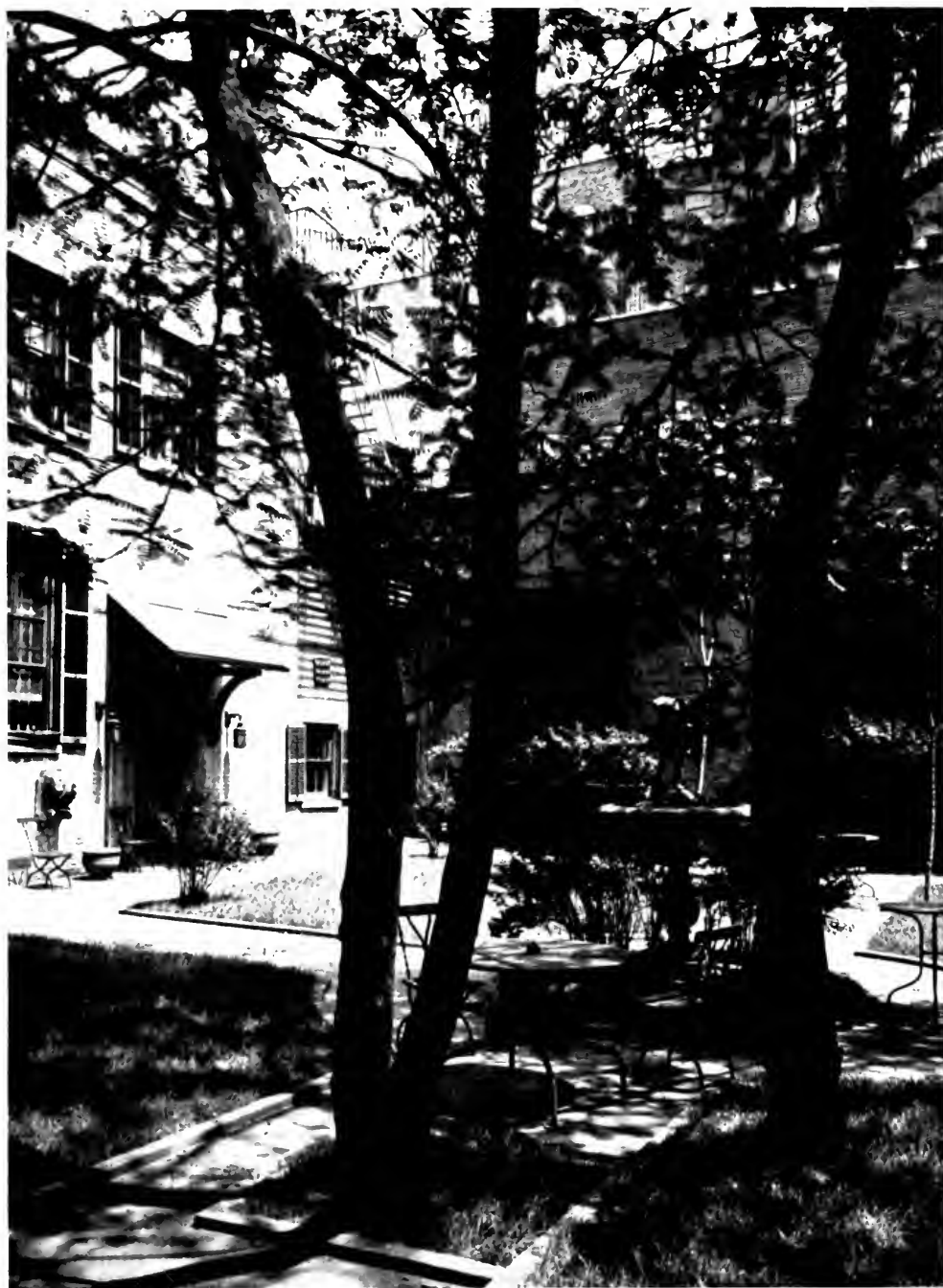


FIG. 11. ENTRANCE TO COURTYARD — "WESTOVER COURT," 206-214 WEST 44TH STREET AND 207-215 WEST 43RD STREET, NEW YORK. EVARTS TRACY, ARCHITECT.

TENDENCIES IN APARTMENT HOUSE DESIGN

PART II - EXAMPLES OF REMODELING (CONTINUED)



By FRANK CHOUTEAU BROWN

THE first of these articles dealt, last month, with the dwelling house "made over" into apartments of small size, which was advocated as of most immediate and pertinent interest because of its assistance in helping us to take care of the great number of families who are desirous of finding living accommodations at moderate prices in those portions of our larger cities most convenient and accessible to their business districts. With a certain part of this subject this present article will still be concerned, for at the present time it is almost certain that for a period of at least five years or possibly more, emergency housing is going to be a problem widespread in this country—and so far as is now to be seen, this type of housing accommodation is the one and only available and practical means of helping the situation in our largest centers of population.

The previous article did not, perhaps, sufficiently indicate that this particular relief is only to be obtained at the cost of creating another problem—still more difficult of solution—because, as a matter of fact, most of the dwellings susceptible to this particular kind of use are already fully utilized either as boarding or rooming houses (when of the better class) or as unpremeditated tenements, plain and simple, when found in the poorer sections of our large cities. In both cases, therefore, they can only be improved to meet their new uses by dispossessing a still greater number of present occupants, who are then in turn condemned to a still more hopeless task in attempting to find for themselves a place to live.

For the moment, it is important to point out and emphasize this phase of the matter. It will later be possible to direct attention a little more specifically to what few endeavors have been made to meet this still more complicated housing problem that is constantly becoming more and more distressing and insoluble. And in the very immediate moment it has been suddenly given an added and unexpected impetus in New York City by a tendency on the part of the wealthier families to turn to the older and tenement sections of the city to find convenient sites for their own new or made-over residences, selecting, of course, those portions that possess some special advantage of outlook, exposure or convenience of location. In the City of New York alone we find at the present writing no less than three such marked localities: a group between 48th and 49th Streets East, another between 65th and 66th Street and a third between 57th and 58th and the East River. Others will evidently soon start up, or may even now be under way—and all will encroach upon property that has previously been put to much more populous use—so that as the better-off solve their own housing problem they will but increasingly complicate the problems of many others, and those of a class far less able to take care of themselves.

This month we are still concerned with a "made over" type of apartment, but used in reference to a better class of property, obtaining a better rental—and therefore probably requiring a greater amount of initial expenditure in order to adapt the old property to its new and more particular class of tenants. Let us first consider an example from one of the

better class residential side streets of New York, in just about the sections that have just been referred to. The illustration (Fig. 12) can again be considered as showing a fairly typical example. A great many other city residences could be equally well adapted to a similar purpose by the same necessary alterations. Therefore, let us consider these changes as they would refer to the usual type of city dwelling rather than as they would refer to this particular one alone. It is at once fairly obvious that the house was originally a rather common type of city dwelling plan. The rooms coming on the front and back of the structure have as obviously been but little disturbed. The greater part of the alteration expense has as obviously been restricted to the middle or central portion, wherein are located at once all the essential conveniences of the plan of the single house and the small apartment, when either is restricted to this kind and size of lot and depth of building development.

First, as to plumbing; this arrangement of fixtures did not, of course, formerly exist on either the first or second floor; while the bath or baths, probably once located upon the old third floor, have been transferred to either the upper story or to one of the floors below. Necessary changes in plumbing in any such alterations as this are always considerable, and the better the class of the property the more expensive is always this particular part of the alteration work. Not only is this due to the change in popular demand for these conveniences since the date of the original dwelling, but it is also partly caused by the greatly increased value that such conveniences always add to the small apartment, where the bathroom, *per se*, is always of particular advantage in renting and making this class of property desirable and profitable as an investment. In the plan that is reproduced, for instance, each duplex apartment contains no less than three baths to a total of other rooms amounting to seven.

Most city houses of this type would contain a principal staircase running from bottom to top of the house along one

party wall—in this case at the left of the plan. That staircase has been retained, with the single change of separating the flights on the third story by means of the door forming the entrance to the apartment occupying the upper two stories, and the closing of all the doors that opened onto the old hall on the first two floors of the edifice. This makes the old front stairs the private approach to the upper apartment as far as the third floor, when it becomes the private staircase to the upper story as well. The back stairs, that may or may not have existed in the old residence, have been abandoned and the space that it formerly occupied given to other purposes on each floor, while a new staircase has been built from the first to the second floor, opening from the small private hall set aside as the front entrance to this apartment on the first floor. The old living room on the second floor has remained undisturbed, although the inner partitions of the two rear rooms and the bathroom partitions have been necessarily rearranged.

On the first floor the old front reception room has been made smaller and turned into a bedroom, while the old dining room at the rear remains, the former butler's pantry at the rear being now the kitchen, from which the staircase leads to the servant's room overhead. In some houses this added rear room might not have extended above the first floor; here this same space is put to good use for similar purposes on the two floors above, and a dumbwaiter running up from the basement serves both the kitchens.

On the third floor, besides taking out the old baths and opening out the central portion of the house plan to make an entry, hall and closets, the space for the pantry has been taken off the dining room, and on the floor above the old bedrooms, as arranged on the front and rear of the house, have required little or no alteration, except as regards the central space utilized for baths and closets. The total result is an old residence turned into two duplex apartments, bringing in more rental return to the owner or capable of being used by the owner as his

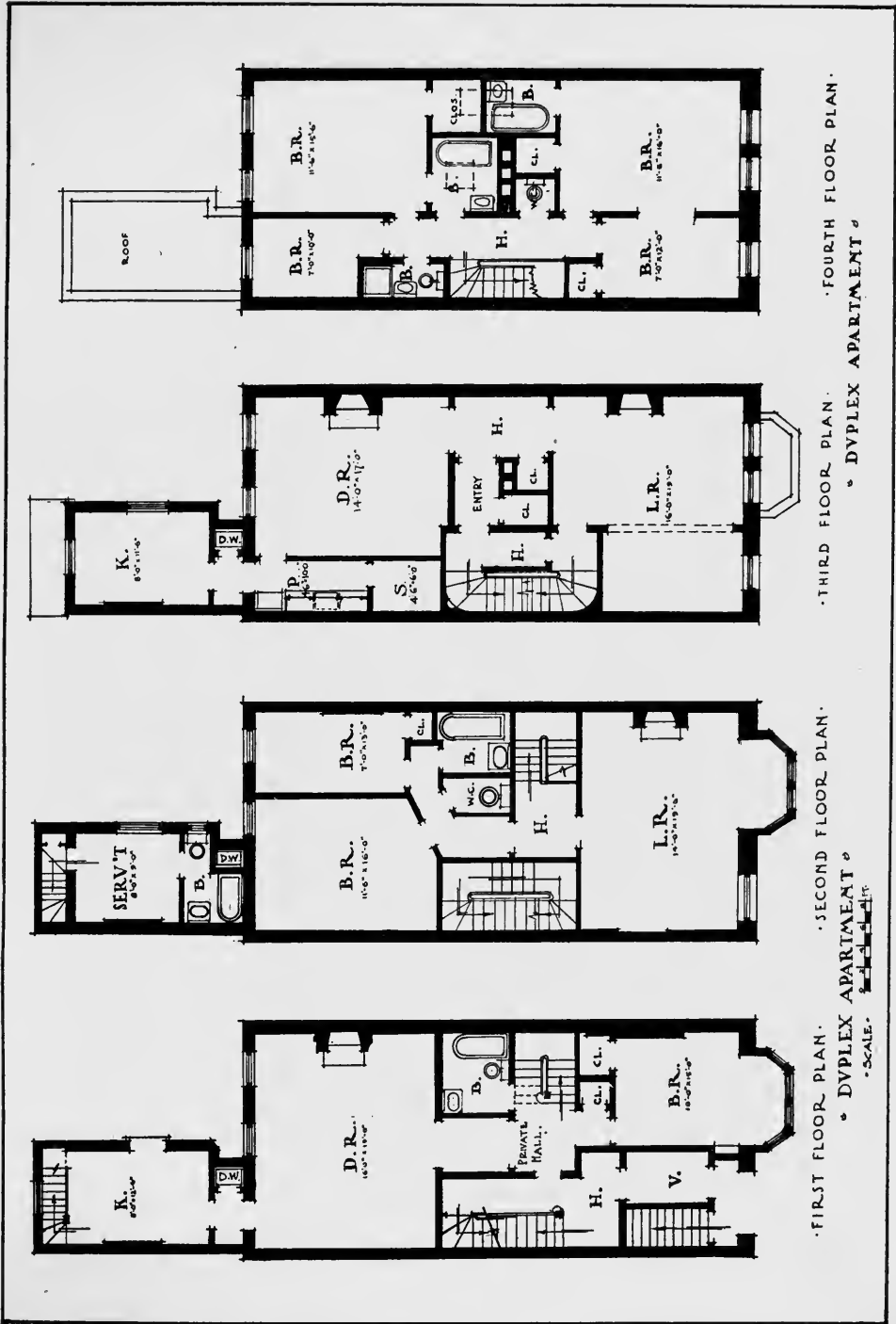


FIG. 12. ALTERATION TO 125 EAST SEVENTIETH STREET, NEW YORK.
Francis Y. Joannes, Architect.

own residence, simultaneously bringing him in an income from the other apartment available for renting—and all at considerable saving of labor. For the labor problem, mind you, is still the bugbear back of and controlling this whole situation. In this case the changes described have unquestionably made a living place for two families where only one lived before. But more has been effected than that, for in the old case the single family occupant required at least three servants (and probably a chore man) to run the house, while we have now a dwelling for two families where, at the most, two servants would be required, and more probably only one. (For the good of humanity and the building law of the City of New York one certainly hopes that it is neither intended nor allowed that a servant is to occupy the small interior closet on the third floor opening from the dark end of the pantry! We assume that it is humanely intended only for "stores.") It is even possible, under the conditions that often obtain in our time and generation, for the occupants of these small but convenient apartments to dispense altogether with the servant, and so perhaps discover that they can get along quite conveniently and comfortably with none at all!

The chances are that the exterior of a dwelling of this original type is so modern that no changes or alterations in that part of the edifice are required. It might also be pointed out that the adoption of the two-duplex type of apartment development for the four floor edifice of this kind obtains the maximum of size for the two apartments it contains, both as to numbers and dimensions of the rooms, at the same time obviating the long climb to the fourth floor, by making the living floor of the upper apartment only two flights above the street, thus adroitly avoiding the expense of the elevator generally required for taller buildings and also giving the occupants the advantage of not having sleeping rooms all on the same floor as the living rooms, a defect of course inseparable from the ordinary apartment plan.

Before taking up the second class of

small apartment to be covered in this installment (which is the distinctly "bachelor apartment" type, without housekeeping conveniences, of which another variant is the "studio apartment," although the latter has often kitchen appointments of more or less embryonic a type) there are one or two examples of undoubted interest to be considered that are yet impossible of classification into any exact division or type. There also remains another example of the alteration of a single family dwelling into small apartments that would better next be taken up, because it is so nearly comparable to the plan last considered. This is seen in the so-called "Chelsea Studios" (Fig. 13).

Although called a "studio," the rooms are actually arranged in suites to provide generally a bedroom and living room, with bath, the whole five floors providing ten suites, of substantially similar arrangement above the second floor. Again we have a city house plan, rather narrower and deeper than the last example, however, and therefore with side rooms especially cramped in area. Indeed, under more modern housing laws, in many cities these rooms would not be permitted for sleeping purposes.

The arrangement of the first and second floors indicates clearly that the architects found some difficulty in coping with the disposition of rooms existing on these floors in the original dwelling. The necessary baths have been obtained, but, in the one case upon the front and in the other upon the back, it has been found impossible to provide a separate room for sleeping except in an inner or "alcove" space—again a method frowned upon by many recent "housing laws." In these apartments no provision whatever has been made for cooking—hence they fall into the second category set for this installment; while the plan of all floors above the first provides for a material convenience, in that it is made possible to throw the front and rear apartments into one, thus enabling a tenant to obtain more space when found necessary, or for a whole floor to be used by two friends in common when they so desire.

The original main divisions of the old

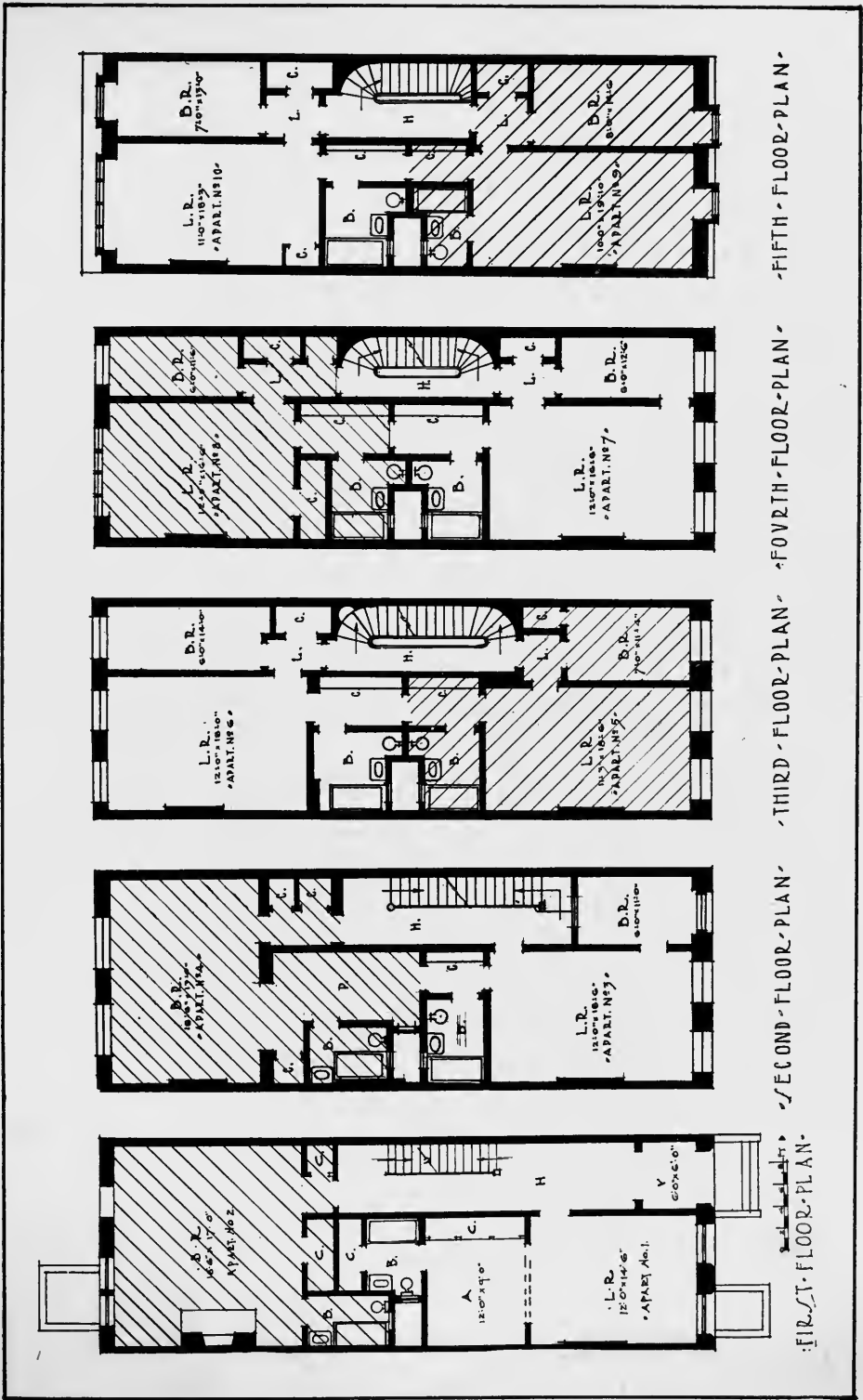


FIG. 13. "CHELSEA STUDIOS," 449 WEST TWENTY-SECOND STREET, NEW YORK.
Francis Y. Joannes and Maxwell Hyde, Architects.

house plan are still discernible, more clearly upon the upper floors, although in both the lower floors it is equally clear that the baths and closet requirements have merely somewhat encroached upon the floor areas previously given to the principal rooms at front and back. And once again it is obvious that the required baths were the occasion of the major part of the alterations made in the central portion of the structure. The exterior, on front or back, is not affected; and therefore does not require any changes or alterations, unless it is perhaps considered desirable to modernize the design of the façade.

Let us next take up the arrangements of two or three plans that present rather more individual and less usual arrangements than any we have yet studied. In arrangement these plans are intermediary between the types now being examined and are classifiable into one group merely from the incidental fact that they have all recently developed on a street where its widening has required

the taking of a certain portion of the front of the lot, thereby cutting down the space that remained, so as no longer to be available as a room for single family or rooming house purposes. It was accordingly necessary, in rebuilding the front upon the new street line, to make certain alterations in the interior arrangement of the dwelling in order to make the property bring in the needed additional return required to pay the higher interest demand-

ed to meet the additional taxation values and betterment assessments that the city will now levy on these property owners.

The two plans first to be considered were originally the same as the New York houses just discussed. One, Fig.

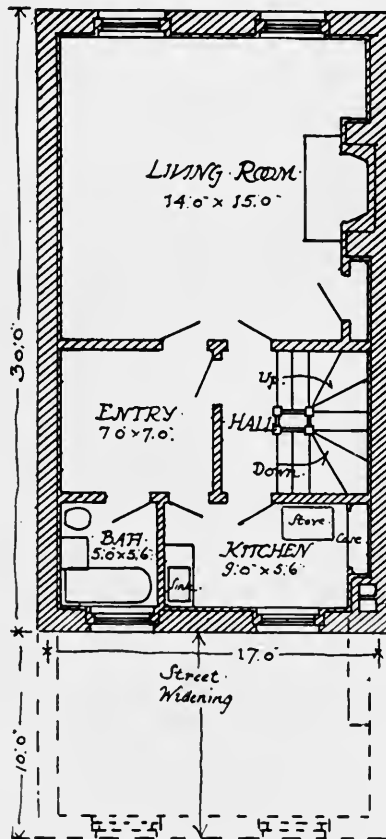


FIG. 14. SINGLE HOUSE ALTERATION INTO SMALL KITCHENETTE APARTMENT, BEACON HILL, BOSTON.

14, was of the simplest possible city house type—a room in front and back on each floor and a stairs and closets (or bath) in between. A ten foot taking left little of the front room remaining, and the building was rearranged into four floors of apartments of one room, kitchenette and bath. The space between the front and rear rooms has been so arranged that it may be used by the tenants so as to best suit their individual requirements. It might be the small entrance hall to the suite; it could be used as a dining space, convenient to the kitchen, with a small collapsible table and chairs on either side, or it could be used to contain a cot bed for extra sleeping accommodation against the side wall. No change

was made in these floors beyond the partitioning of the front space and the relocation of the doors in the inner partition connecting the little private entry with kitchen and bath. The location of these buildings was convenient to the business and theatre sections of the city, equivalent to the district mentioned in New York, and the result of the alteration was to provide the owners a return from each floor equivalent to that obtained before the alteration from the entire living portion of the dwelling—a

sum now no more than sufficient, it is to be remarked, to pay an equivalent return on the increased cost of the investment.

Fig. 15 shows two alternative plans for the floor arrangement of a similar building, differing only in the fact that the greater width of the lot has made possible the two room width on front and back commonly found in wider city dwellings of this kind. In these plans the old arrangement of the floor is shown where it has been altered by the dotted lines, and the numbers are so located as to give the key to the changes that have been made from them. The rear of Scheme B also shows the original condition of the plan, (1) marking an old lift abandoned in the scheme marked A. In this right hand plan the bathroom is also kept at its former location, a portion of the old front room (7) and a corner of the room (8) being used for a kitchen and serving or

a storage space, with the old entry (5), leaving the old closet (4), inner entry (3) and alcove (6), with what remains of the front room to form a dining or living room. (The Boston "tenement house law" contains a clause so badly worded that it is interpreted to mean that no bathroom can open from a sleeping room in any type of city residence; so that in a small plan like this it becomes necessary to open it from a kitchen, dining or living room, or from an entry, no matter how small, which can then open from a sleeping room without objection from the authorities.) In the alternative, Scheme A, the whole front portion is thrown into a room to be used for a studio, leaving a large light closet for canvases across the rest of the front, and the former small side room at the rear is subdivided into a kitchen, bath and light shaft.

The next plans to be considered present

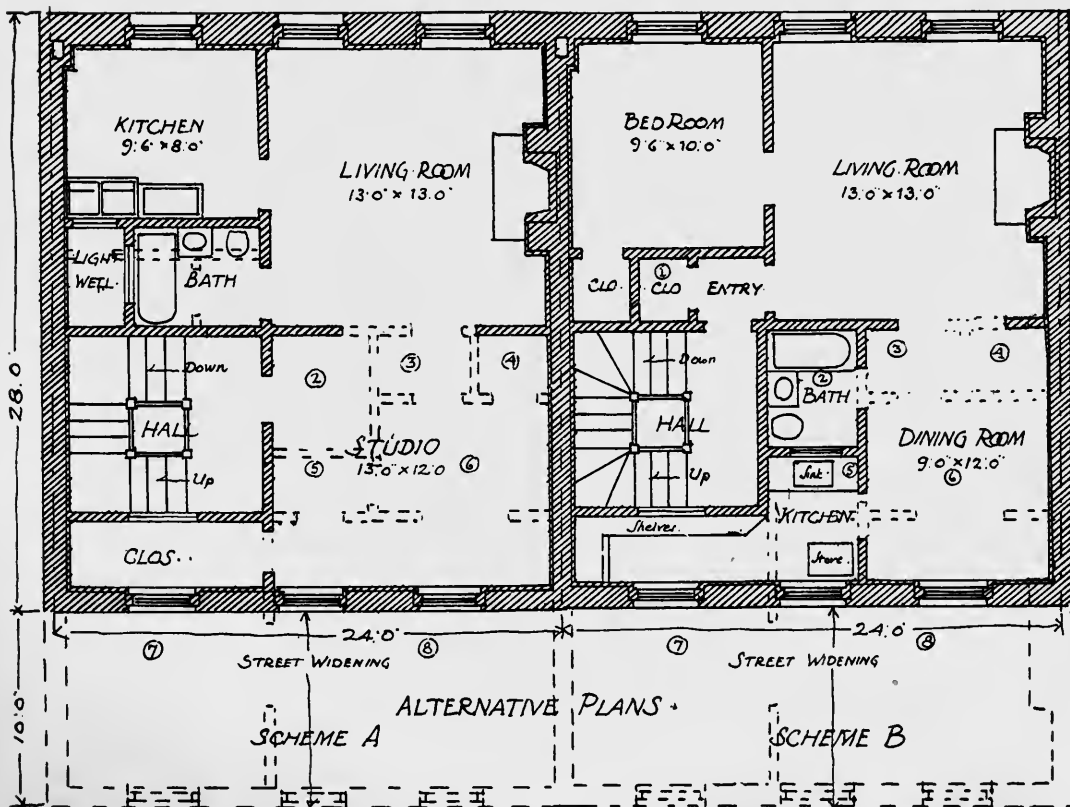


FIG. 15. TWO ALTERNATIVE SCHEMES FOR DIVIDING AN OLD DWELLING INTO STUDIO APARTMENTS, BEACON HILL, BOSTON.

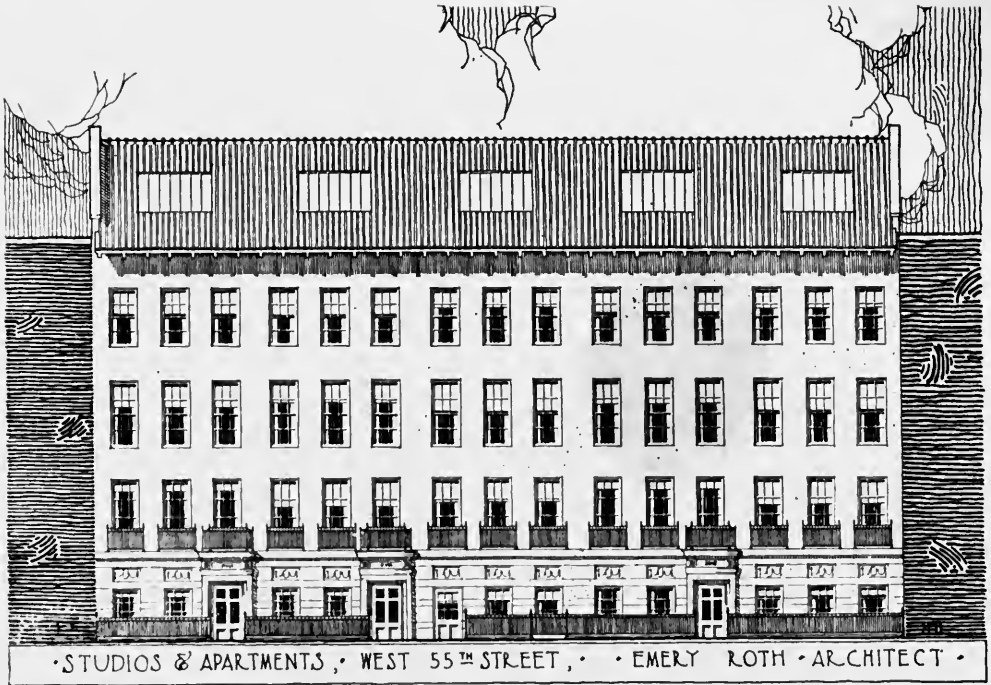


FIG. 16. STREET FACADE OF FIVE DWELLINGS AT 320-328 WEST FIFTY-FIFTH STREET, NEW YORK, ALTERED INTO GROUPED APARTMENT AND STUDIO BUILDINGS.

Emery Roth, Architect.

several unusual elements. They illustrate the opportunities that develop in the making-over of several dwellings when they can be handled in groups of several adjacent lots, a situation particularly favorable to the conditions still existing in New York City, where a great many of the large realty-holding estates still control large blocks of lots in many portions of that city. In New York, too, conditions are such that no attention need be paid to the single consideration that is against this group development of lots, the thought of the awkwardness of "unscrambling" the property at some later date in the event of possible sales taking the form of separate owners, each wishing only to have his own particular house. In New York the motion is more and more definitely toward the aggregation and grouping of lots, as it is the only profitable way toward future improvement of the property under the laws that now appertain governing heights of build-

ings and their height set-back restrictions.

This trend, while now localized only to New York, must inevitably soon apply to other American cities, where it is sincerely to be hoped, however, that it will become operative on a considerably lower height limit than it has been possible to apply in New York—where the existing conditions as to heights of buildings had already gotten too far out of hand. With the surety, therefore, that the future demand for property is to be in blocks of many lots, there is every encouragement for the individual owner to undertake his "temporary" improvements (as they are so fond of saying in New York), intended to "carry" his property and bring in a return over the transition period between the dwelling and business uses of the site, on a scale not yet to be elsewhere understood or emulated. In this case the alterations were concerned with two blocks of houses, one of five and the other of three lots, situated on West 55th

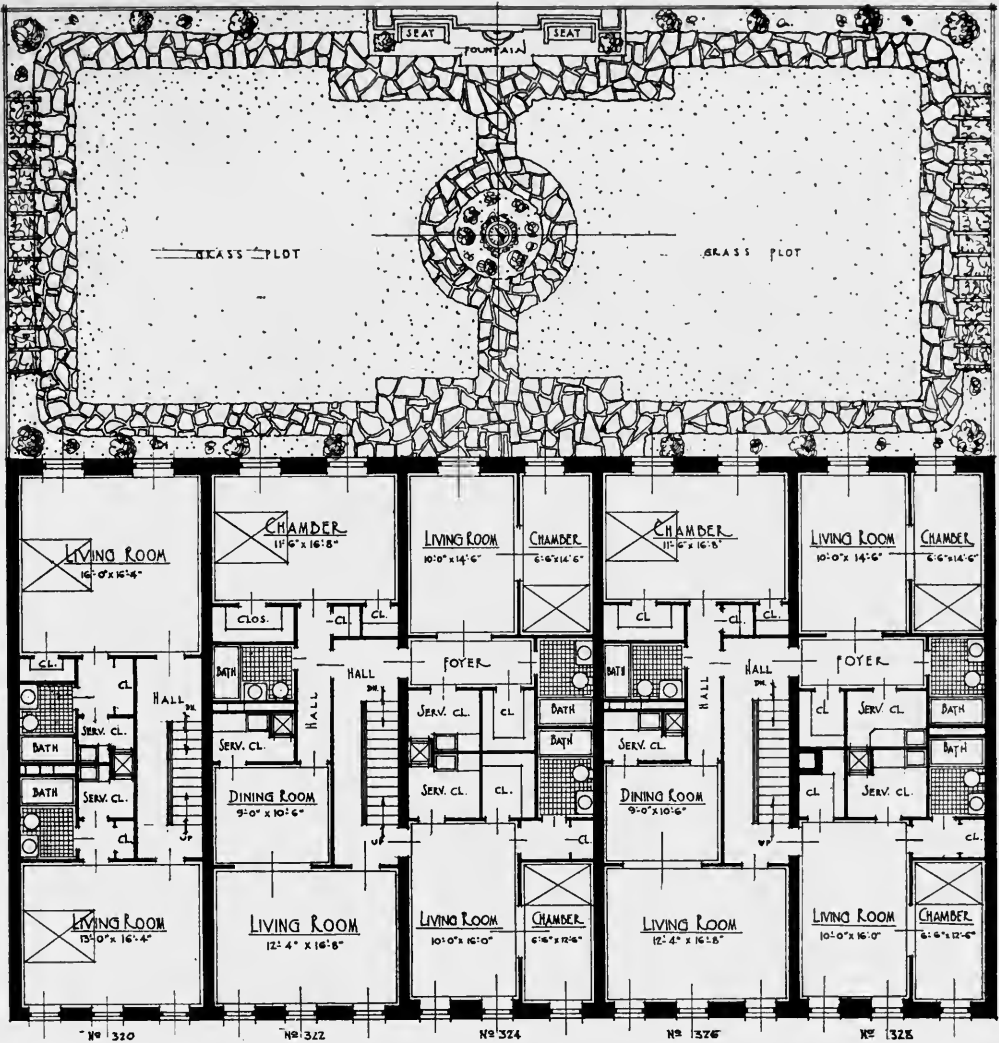
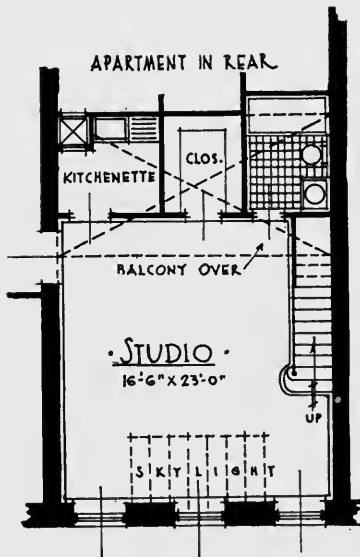


FIG. 17. PLAN OF TYPICAL FLOORS OF FIVE DWELLINGS AT 320-328 WEST FIFTY-FIFTH STREET, NEW YORK, ALTERED INTO APARTMENT AND STUDIO BUILDINGS. Emery Roth, Architect.

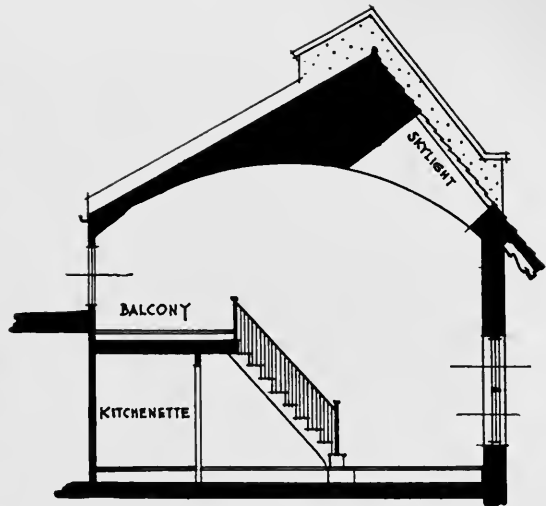
Street, between Eighth and Ninth Avenues.

This is a section where a number of the oldest buildings are being torn down or converted to other uses, and is apparently on its way to becoming the center of the uptown studio district. These two groups of houses have remained in their original state for a long term of years, but have recently been converted to apartment house purposes. The groups were each treated, so far as the law

would permit, as a single unit. But in order not to extend beyond the limits allowed for a non-fireproof building, only two houses could be connected by a doorway through the party wall, making it possible to eliminate the stairways in each alternate house and so employ the space formerly occupied by these halls and stairs for other purposes. With the relief thus obtained, the designers next endeavored to so divide the space between the principal structural walls as to ob-



PLAN OF STUDIOS ON TOP FLOOR



SECTION THRO' STUDIO SHOWING BALCONY

FIG. 18. PLAN AND SECTION THROUGH TOP FLOOR STUDIOS, 320-328 WEST FIFTY-FIFTH STREET, NEW YORK.
Emery Roth, Architect.

tain the greatest possible diversity of plan and arrangement, without altering the size or structure of the buildings.

Reference to the plan, Fig. 17, will show the various rearrangements made of the floor spaces available, so as to obtain apartments of one, two and three rooms, respectively, each apartment being provided with a bath, and what on the plans is called a "serving closet" (in reality a "kitchenette"), each serving closet being in turn connected by a dumbwaiter with a general kitchen located in the basement, so that the various apartments can be served from a common menu, or may do their own cooking—in the kitchenette. The center building in each group is provided with a restaurant upon the first floor for the benefit of all the tenants.

The house at the extreme left of the plan shows an arrangement again such as might be obtaining in any single house to be made over into the purposes of small living rooms with private baths—the necessary alterations being, as has before been stated, limited to the central portion of the floor plan, and principally be-

ing concerned with the plumbing, and—in this case—with the serving closet and dumbwaiter, which are rather unusual elements in the plan. No alterations of the stairs or hallway are necessary, either in this plan or in the plan shown next to it, although the latter has been arranged for the occupancy of the entire floor by one tenant, and the rearrangement of the central part of the plan, while less extensive, has somewhat overflowed into the old rear room, where the row of closets has been set off along its inner partition.

The floor arrangement shown on the central house plan, adapted to fit a floor on which the front and rear spaces were divided into a larger and smaller room, has been changed by placing the new baths where were the old stairs and hallway, and by altering a few necessary partitions in order to get the doorways broken through the party wall to connect with the two-room suites obtained on the front and the back of the floor plan in this arrangement. Although these various plan-arrangements are here shown as though they were all on the one floor, they are, as a matter of fact, typical of the ar-

rangements found on the several different stories in the block. The old separate yards at the back of the houses have all been thrown together, and a garden layout of about fifty by eighty feet has thus been made possible. A central heating plant for the group has also been provided.

On the exterior, the old brown stone fronts have been dressed up by a stucco surfacing and a continuous roof carried over the buildings to bring the isolated units into the one composition. The elevation (Fig. 16) shows the studio skylights, and the section through the upper front story (Fig. 18) shows how these studios are arranged in the house so as to take advantage of the opportunity offered by the upper stories, and make that fact an asset toward increasing the rental value of a floor that has otherwise in New York generally to accept a lesser rental, merely because the tenant has to climb the additional necessary flights of stairs required to reach it—and it would be, of course, absurd to go to the expense of providing elevators in buildings as low as these. As is indicated by the section, the studio occupies the level of the fourth floor (counting the floor slightly below the level of the street as the first) as well as the space in the sloping roof above, the latter giving the needed height of twenty feet, besides the light, desirable in a working and practical studio, as well as the convenient balcony that is shown on these drawings. This gallery can be used merely for storage purposes or for sleeping, if so desired by the occupant. The whole makes an unusually well thought out and practical development of an architectural opportunity to modernize a number of separate dwellings situated in immediate juxtaposition to each other.

The treatment given to the problem just described leads naturally to the consideration of another solution, found a number of years ago for some old properties lying in a much more valuable section of New York City. Although this solution is not a recent one, it is yet so little known, generally, and still is in so many ways a model successful handling

of the reconstruction of an old and run-down piece of real estate, that it is well worthy of detailed study at this point. The property consisted of five houses on the upper side of West 43rd Street and the five houses lying directly back of them on 44th Street. The opportunity that was presented the architect was unusual in that he had to deal not only with a block of five houses, but with another block of the same number backing upon them, with nothing separating the properties but an old blindboard fence and a physical difference in the grade of the two sets of back yards. The property was very valuable, lying immediately off Broadway, but the old buildings were bringing in a very small return as rental for residential and somewhat dubious other purposes. The owners did not feel that the time had yet come to develop the property with a new building, although they were at about this same time constructing a new "temporary building" covering the entire length of the block adjacent and fronting on Longacre Square. This new structure was of 6 stories height, and given to stores and offices, with a principal part of the rear street floor occupied by the Shanley Restaurant.

The property lying in back of this parcel was valuable for store purposes on the two side street frontages—so valuable that it was desirable to find some way of dispensing with the five doorways, entering the upper floors of the houses from the street. The fire law limitations also restricted the area that could be thrown together upon the upper stories to not more than two of the houses. The architects consulted evolved the following very ingenious solution.

All the entrances to the upper floors were abandoned on both streets, except the one leading to the center house of each group. This passage was then continued through the house to the rear yard, and all the remaining frontages upon both streets were then given up to the store show windows, adding materially to their rental value. Although no first floor plan is given, the rear of the lower group of houses in Fig. 20 (the back of the prop-



FIG. 19. COURTYARD—"WESTOVER COURT," NEW YORK.
Evarts Tracy, Architect.

erty fronting on 43rd Street—as is indicated by the lettering along the left hand side of the plan) shows where this central corridor penetrates to the rear yard, and its direct connection by a corridor across the rear of the two right hand stores with a new staircase ascending from the rear to the second story, where connection is made with the old stairs extending up through the house from that floor, and—by means of a doorway cut through the party wall—this staircase also connects with two of the old houses at once. The left hand pair of houses is reached the same way, except that the new staircase from the rear is approached by passing for a short distance through the courtyard—instead of being connected by an inside corridor back of the stores. The same arrangement is carried out on the first floor of the houses on 44th Street, and the line of the axis of the two street entrance corridors is marked upon the plan. The second floor arrangement is also shown, as it was worked out on the houses facing on this same street, the

heads of the three staircases connecting this floor with the entrances from the court below appearing upon this part of the plan, along with the five old staircases rising to the upper stories of the houses. Of course, the staircase from the first floor for the center house starts up from about the middle of the corridor entering from the streets—and so does not appear upon the fragment of the rear of the first floor plan that is shown.

The second floor plan was then rearranged, by the alteration of the internal partitions and plumbing, to give a three room and bath apartment upon the front of each of the houses, and a two room and bath apartment upon the rear. The shallower plans of the upper floors appear upon the lower part of the drawing, as facing on 43rd Street, showing precisely similar two room and bath apartments upon the front and rear of each house floor. It only remained for the space occupied by the old back yards to be leveled up, graded, laid out simply with paths and grass, embellished slightly by a

fountain and a few casts upon the walls, to make it—with the two or three old trees that had not been disturbed by these changes—by far the more attractive and quiet living side of the houses. The old brick rear walls—about as simply built as had been possible—were merely given a couple of coats of warm color, and the single structural embellishments required on either the exterior or the interior, were the entrance doorways (Fig. 20) leading to the staircases connecting with the upper living floors.

It remains merely to state that this alteration has well proved its value, bringing in an income return that makes it easily possible for the owners to wait patiently

their time for tearing down and replacing these structures with a new building. That now need not be considered until the development of the surrounding property has reached a point that they can be certain the new building, when erected, will be so planned as to meet a permanent demand. The apartments now bring in a satisfactory carrying income, having been about the most popular of any of those available to bachelor occupancy. It might also be added that a well conducted valet service, including the serving of breakfast and tea in the rooms of the occupants from a common kitchen has helped to make these buildings popular, especially with visitors from England, who have found this place to provide them with about the same class of comforts they are accustomed to in that country, the "Albany" in London being perhaps the example best known to us in this country. It is said that, during the early years of the war, almost the entire munition supply business of the Allies was conducted from the rooms provided by this alteration.

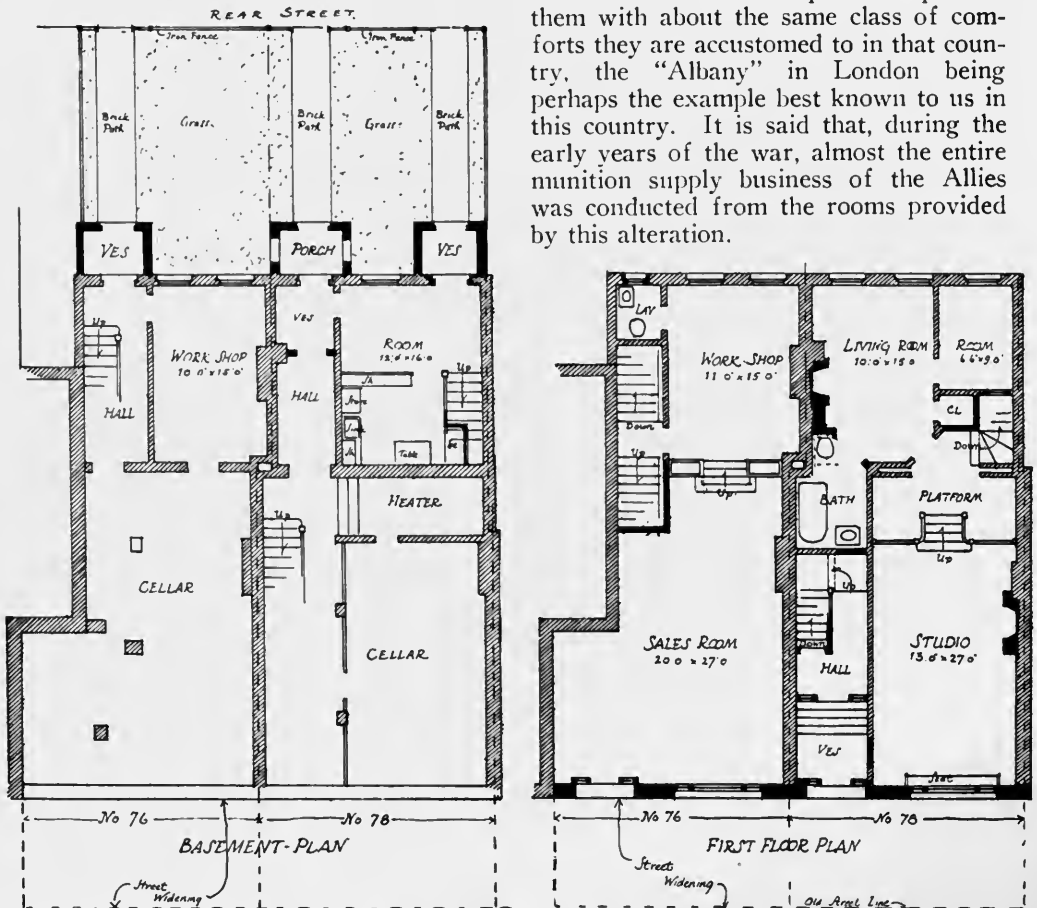


FIG. 21. BASEMENT AND FIRST FLOOR PLAN—ALTERATIONS OF TWO OLD BUILDINGS ON BEACON HILL, BOSTON, TO BUSINESS, STUDIO AND APARTMENT USES.

Frank A. Bourne, Architect.

An unusual solution that quite defies classification is that shown in Figs. 21 and 22. There are here portrayed the floor plans of two adjacent houses in Boston, also affected by the widening of a street, but having an additional factor in that they were on lots so shallow that it was possible to enter the buildings from another street at the rear. This rear street was of a quieter and more residential type, whereas the front street was a busy one, with much teaming and a gradual tendency toward light business development. The left hand of the two houses had also previously been occupied by an antique furniture business, which desired to stay through the alterations and still occupy the premises after the new fronts were completed. In the previous occupancy of this building certain of the interior dwelling partitions had already been removed, which explains in a measure the changes now indicated as being made by the blacked-in portions of the partitions.

The old front stairs and hall had previously been located on the first floor, at

the front and immediately back of the entrance door. This was discontinued and a new staircase carried up from the rear, connecting with the shop so that it could be used to reach both basement and upper floor, where much of the work of the repair departments will still be carried on. The rear extension of the plan, that formerly stopped at the second floor, has been carried up for another story, so as to provide a living apartment upon the second floor; and the top floor, at present used by the occupant of the street store, can easily, as may be seen, be altered over into a studio or for living purposes.

The right hand building, numbered 78, while originally a private dwelling, had at some subsequent period been altered into a cheap tenement, the principal sign of which was the vulgar yellow brick front, that had fortunately in the process of street widening been swept away. The building had also formerly been a story higher than the present alteration contemplates. The new additions and changes are again shown by the blacked-in portions. The old front stairs is re-

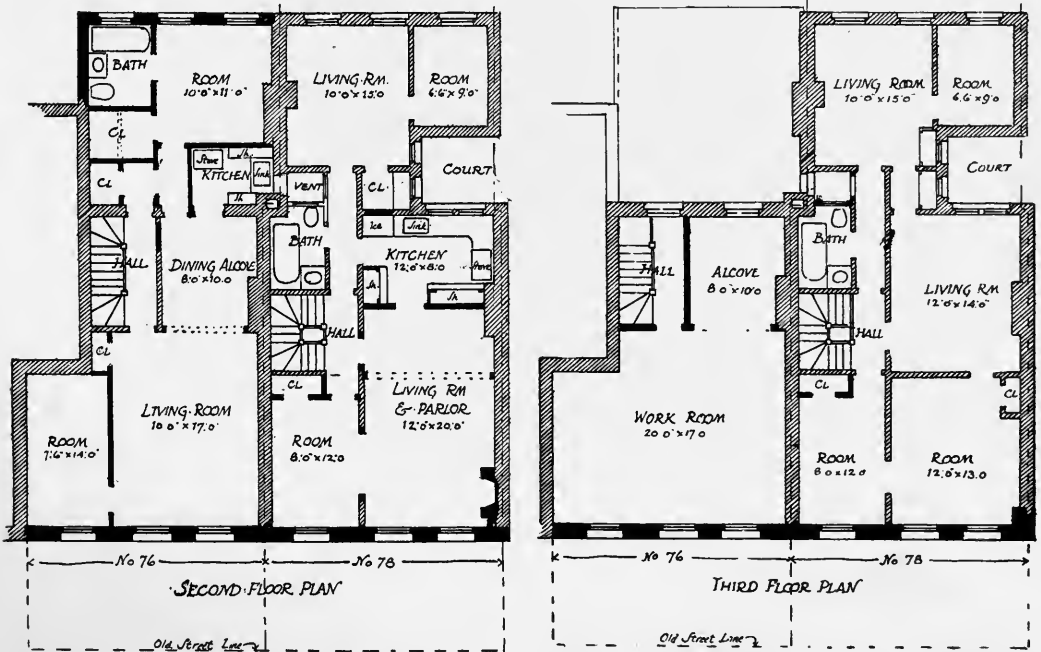


FIG. 22. SECOND AND THIRD FLOOR PLAN—ALTERATION OF TWO OLD BUILDINGS ON BEACON HILL, BOSTON, TO BUSINESS, STUDIO AND APARTMENT USES.

Frank A. Bourne, Architect.

tained as an entrance to the upper stories, and it will be seen that, although it is proposed to make use of the main street floor as a studio for the present—attached to the living quarters entered from the street at the rear—it is yet very easy to make over this floor also for store purposes at any time when the demand warrants the slight alterations around the front entrance that will then be necessary. The first floor is already lowered to the street level, thus gaining added height for the studio meanwhile. The rear of this first floor provides living facilities, with the exception of the combined kitchen and dining room, which are at the rear, with the separate entrance to the studio, upon the floor below.

Both the second and third floors have been worked out so that they may be let, in each case, as a separate and complete suite, or it is even possible to subdivide each floor into two smaller suites, or to rent the two upper floors to one tenant as a duplex apartment. Of course, this possible polyglot ease of adaptability has not been secured without making some concessions that will obviously make it a more convenient or desirable use to do one rather than another of the alternates. The scheme as shown here gives merely the plan on which the alteration was started, it being supposed that a definite adjustment of these tenancies would be decided before its completion, when minor readjustments could still be effected.

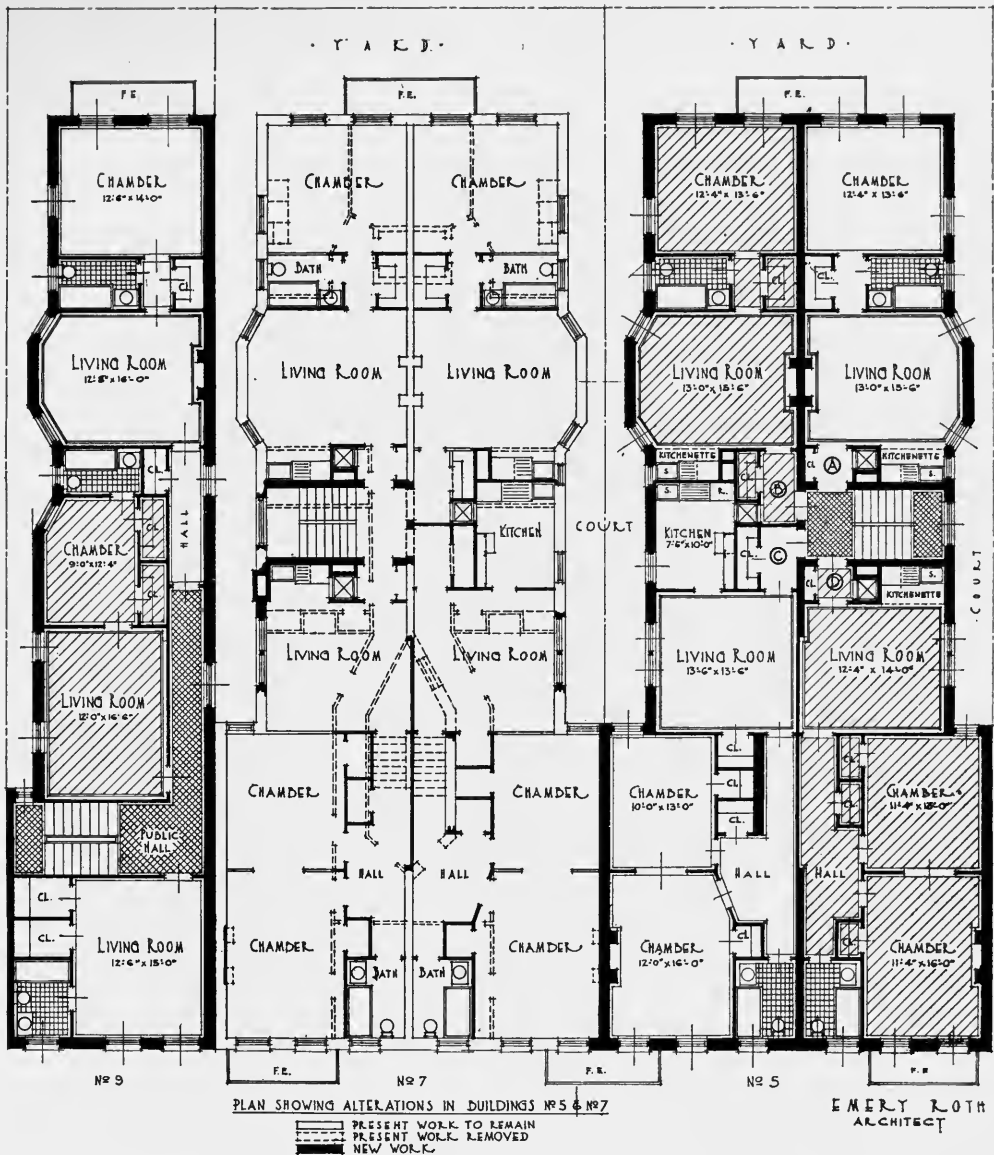
Before concluding our consideration of the problem of the "made over" apartment, by which we have previously meant the dwelling made over into the apartment, it seems desirable to show one example of a very significant alteration of an old fashioned apartment building into a newer and more modern type of apartment—a quite novel and suggestive problem to record, because of the tremendous number of apartment buildings of this type that are scattered over the entire United States and exist in such great numbers in all our larger cities. Therefore the lesson contained in this example is of especially wide application and use.

The problem is again concerned with a group of apartment buildings, in number

five (two pairs and a single), all of the old fashioned long spun-out plan with a front living room, a rear dining room, and a long dark narrow connecting passage from which all the bedrooms and the bath open in between. The type is familiar to all, and the previous arrangement of these particular apartments is shown by the dotted lines in the center double plan, the alterations being indicated by the darker portions of the plan shown over this part of the area, the completed arrangement being perhaps more readily discernible in the double plan at the right of Fig. 23.

Of course, nothing could be done to improve the narrow light courts—the interior walls and the floors being alone left undisturbed by this rearrangement. The buildings shown are at 5, 7 and 9 West 65th Street, in a desirable and expensive neighborhood, very near Central Park West. The alterations were primarily made to accommodate the teachers of the Ethical Culture School, what apartments remaining after providing for those teachers who desired to live here being rented as sources of income for the building management. The apartments originally consisted of eight rooms and a bath, strung along the hall in the well known "railroad" manner, with a stairway placed well toward the street. This stairway was entirely removed and a new fireproof stairway, enclosed in brick walls, was installed in the center of the depth of the building.

It is perhaps worthy of note that the iron and marble fireproof enclosure of this stairway was not a requirement of the Tenement House law, which permitted the alteration of these buildings without any improvement to the means of exit other than the installation of an additional fire-escape. As altered, the two larger double buildings now have on each floor one four room and bath, one three room and bath and two two-room and bath apartments, well provided with closets and good ventilation. The one staircase serves four apartments, and each one is entered through a small vestibule. The three smaller apartments are provided with a "kitchenette alcove"



.. PLAN OF TYPICAL FLOORS ..

FIG. 23. PLANS SHOWING ALTERATIONS OF "OLD TYPE" NARROW APARTMENTS INTO MODERN SMALL APARTMENTS. 5, 7 AND 9 WEST SIXTY-FIFTH STREET, NEW YORK. Emery Roth, Architect

opening from the living room, the larger apartment having a fully equipped kitchen.

The narrow, single building at the left was altered to provide three non-house-keeping apartments upon each floor, two consisting of two rooms and bath, and the third of one room and bath.

In connection with the rebuilding of these apartments, the buildings were given some of the group advantages that have already been indicated as available possibilities in the other groupings of buildings already considered. There is a central dining room and kitchen, which communicates with each apartment through the dumbwaiters rising from the basement. There is also a well equipped common laundry in the cellar of the No. 5 building. This laundry is fitted out with modern washing machine, extractors, mangles and dryers, and is intended to be run by competent trained operators for the benefit of the occupants of the five buildings.

Of course, the necessary alterations in these buildings were so drastic that it could not but be regarded as a substantial rebuilding of the structures, and therefore the cost of making these alterations now amounted to approximately as much as would have been the cost of the entire construction of these buildings at pre-war prices. Yet, considering the present high costs of labor and materials, even this amount is not excessive, when there is taken into account the complete modernization and renovation that has been effected, and the fact that the rental now being obtained from these properties has been nearly trebled. This but goes to confirm other experiences which contribute to show that the people formerly willing to live in these apartments have now come to regard it as so inconvenient to force their guests to walk forty to fifty feet down a dark and narrow passage in order to get to the dining from the living room, that, wherever alterations such as these have been made to modernize the old six-seven-and eight rooms apartments of this type into apartments of three and four rooms, the rental of the smaller half-size apartment has been generally

greater than the previous rental of the whole.

Even when located in the best neighborhoods, these buildings do not easily lend themselves to any improvement at the hands of the ordinary realty operators, who never consider, when buying them, the opportunity to put them into a better and more lucrative condition, because their original layouts were so inherently poor. There undoubtedly exist many localities where it would be preferable, both economically and socially, to tear out these old apartments and replace them with entirely modern structures of greater height. But on the other hand, where they now exist in great numbers, as is true of the locality where these buildings in particular are located, it often follows that it is considered impracticable to tear them down. In that event, this example is here published to show that it is still allowable to make improvements in them that will better their income values, whether or not so extensive or drastic changes as are shown in this particular instance can be undertaken.

In closing this consideration of the problem of obtaining apartment conveniences by means of altering over existing structures, of whatever kind, it might be stressed that this is at best a compromise improvement. It is countenanced here or advocated, only under those conditions of urgency that are likely to confront us in our larger cities for the next four to six years, as a means of somewhat bettering the conditions of living and meeting a demand for middle-class housing that is, as a matter of fact, unlikely to be met in any other way.

It is not considered ideal as a solution of the housing difficulty, but it is regarded as a practical means of meeting the situation that is now generally recognized to exist. Let us also face the facts clearly, without misleading ourselves. By that means only can we fully realize the extent to which this problem will have to be met. It is easy to say that we are "short a million homes in this country"; and, too, that "they *must* be supplied"—but by whom? Unless we—you, and you and I—undertake to accomplish that result, it

will not happen. The day of miracles is past; also, so far as the immediate future is concerned, the day of the realty operator interested in meeting the need of the middle class family. He, lured on by the higher standard of profits available during these few recent years, is after far higher and more alluring game. At the other end of the scale, philanthropy—when concerned at all—is interested only in meeting the need of a far more modest type of living demand. The government seems neither concerned with nor capable of understanding the very alphabet of the problem, as was demonstrated so conclusively and wastefully during the war.

The whole point of the matter is that it is capable of being attacked by the *individual* householder. Families desiring a permanent home for themselves, especially when confronted by the necessity of so simplifying their living conditions that they can be independent of servants, are the only intensely interested parties, and unless they can find some means of helping themselves to what they need, there is little likelihood of any one else feeling concerned to do it for them. To that type of individual is the moral of this much of these articles ad-

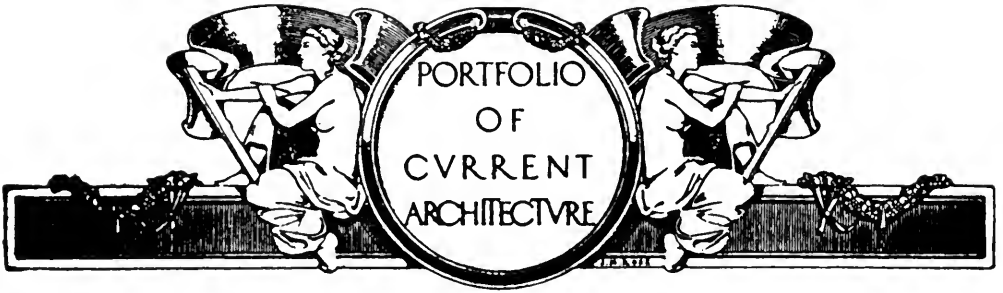
ressed. The means are here shown him by which it is not only possible for him to obtain a home for himself, but also to so subdivide some existing dwelling as to provide at the same time a home or homes for others of his class who find themselves in the same predicament.

The problem of financing such an operation is also far simpler than when starting with a plot of undeveloped land. The initial value of the property is more evident and a mortgage generally easier to obtain, while the income to be derived from the rental of the other apartments is at once a guarantee to the mortgagee, and a source of regular income to the mortgagor from which taxes and interest charges can be taken, without regard to any other business income of the owner.

It requires merely that he exercise judgment in selecting the property to be thus developed—a comparatively easy matter, as the same things that will make it convenient to his own purposes, will tend to make it appeal to others of his class—and also the little additional imagination on his part that is required to see how it can be developed in some such way as will meet his needs along the lines here illustrated.



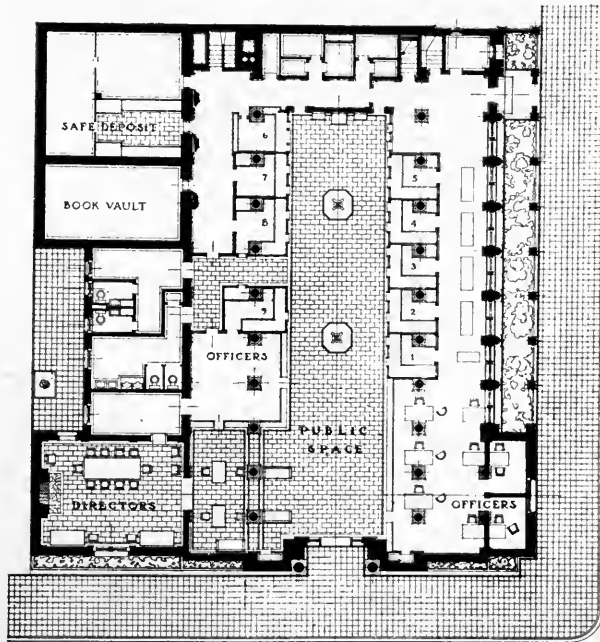
FIG. 24. DETAIL—"WESTOVER COURT," NEW YORK.



PORTFOLIO
OF
CURRENT
ARCHITECTURE



DIRECTORS' ROOM — COUNTY NATIONAL
BANK AND TRUST COMPANY, SANTA
BARBARA, CAL. MYRON HUNT, ARCHITECT.



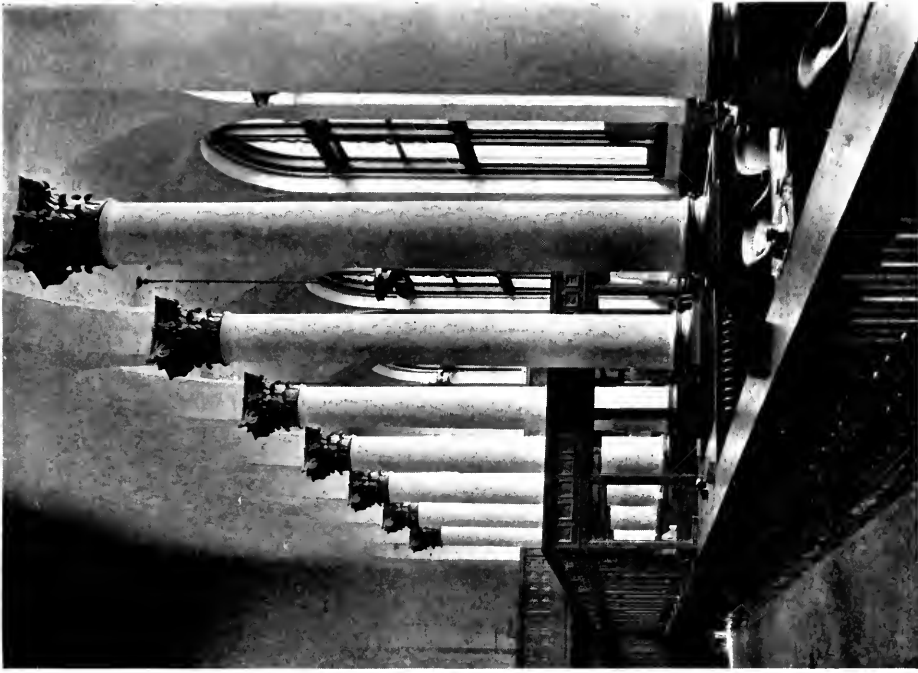
SKETCH AND PLAN—COUNTY NATIONAL BANK AND TRUST COMPANY, SANTA BARBARA, CAL. MYRON HUNT, ARCHITECT; WINSOR SOULE, ASSOCIATE ARCHITECT.



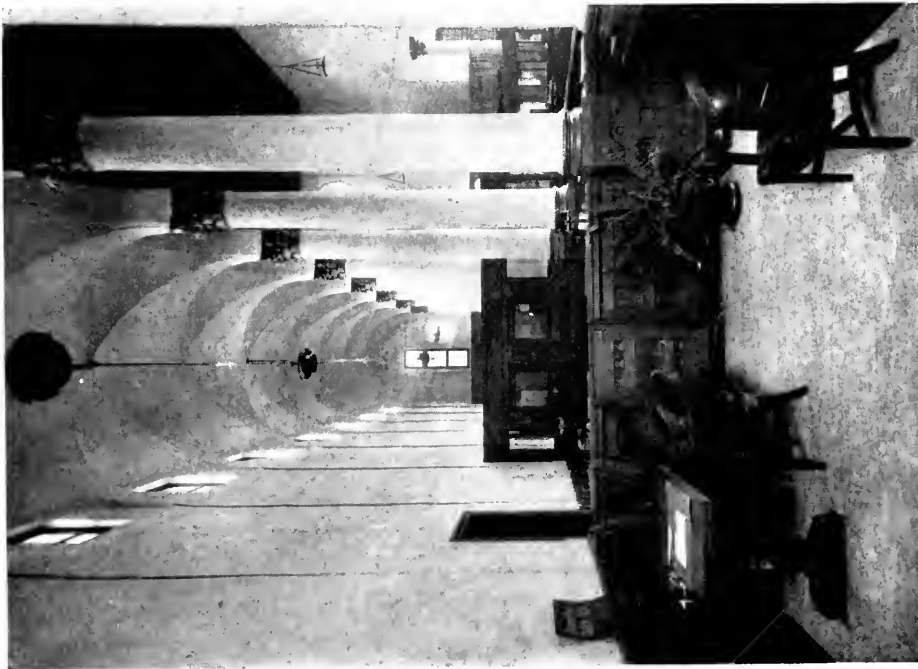
COUNTY NATIONAL BANK AND TRUST COMPANY, SANTA BARBARA, CAL.
Myron Hunt, Architect.



COUNTY NATIONAL BANK AND TRUST COMPANY, SANTA BARBARA, CAL.
Myron Hunt, Architect.



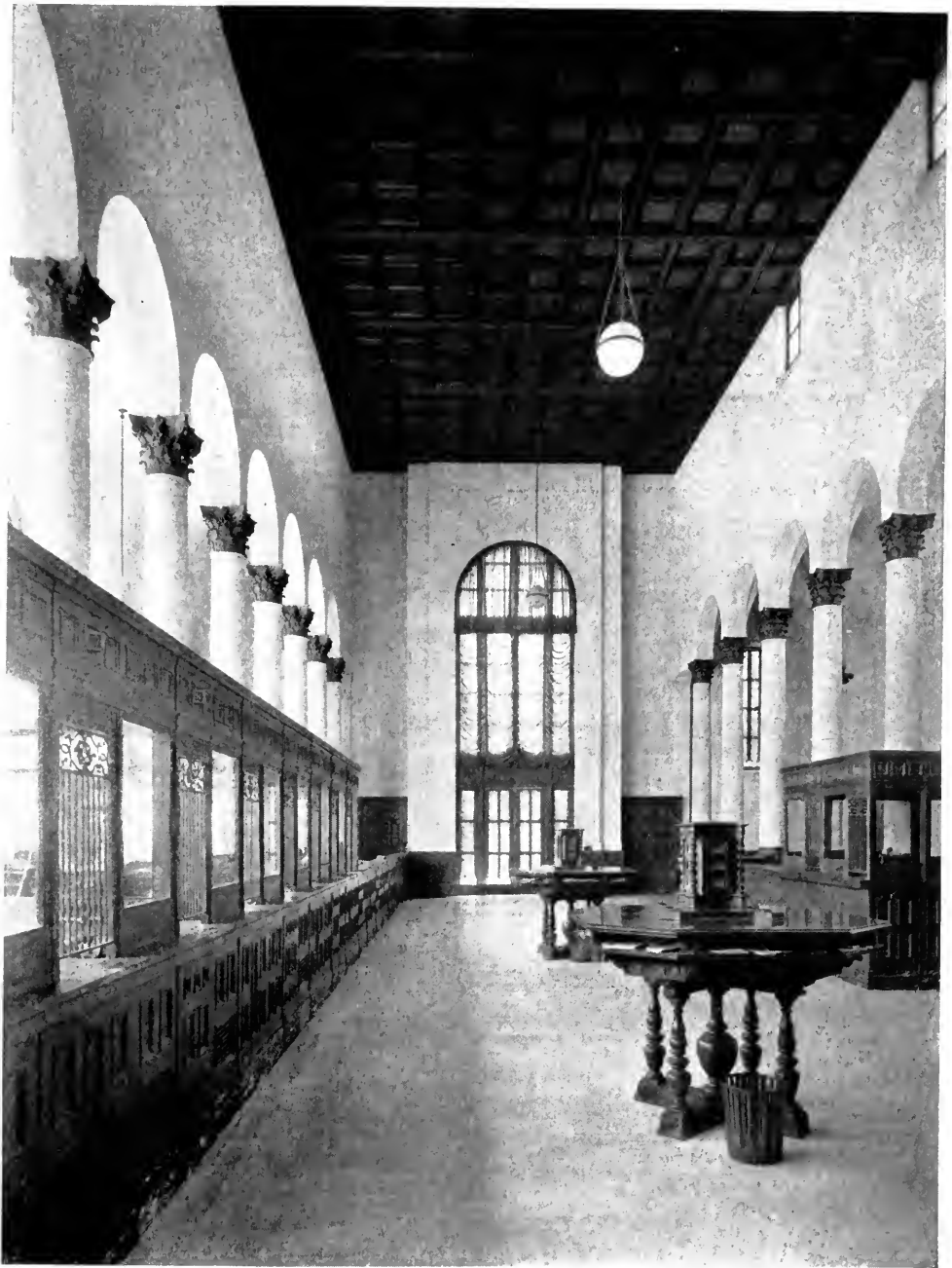
SOUTH AISLE OF BANKING ROOM—COUNTY NATIONAL BANK AND TRUST COMPANY, SANTA BARBARA, CAL.
Myron Hunt, Architect.



NORTH AISLE OF BANKING ROOM—COUNTY NATIONAL BANK AND TRUST COMPANY, SANTA BARBARA, CAL.
Myron Hunt, Architect.



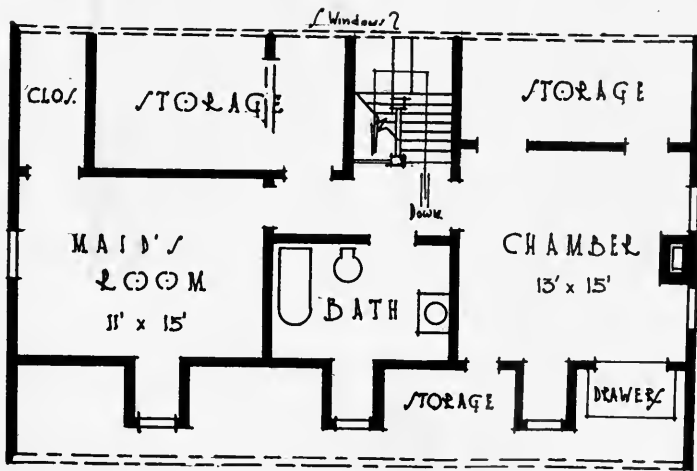
BANKING ROOM, FROM ENTRANCE—COUNTY NATIONAL BANK AND TRUST COMPANY, SANTA BARBARA, CAL. MYRON HUNT, ARCHITECT.



BANKING ROOM, LOOKING TOWARD ENTRANCE—
COUNTY NATIONAL BANK AND TRUST COMPANY,
SANTA BARBARA, CAL. MYRON HUNT, ARCHITECT.

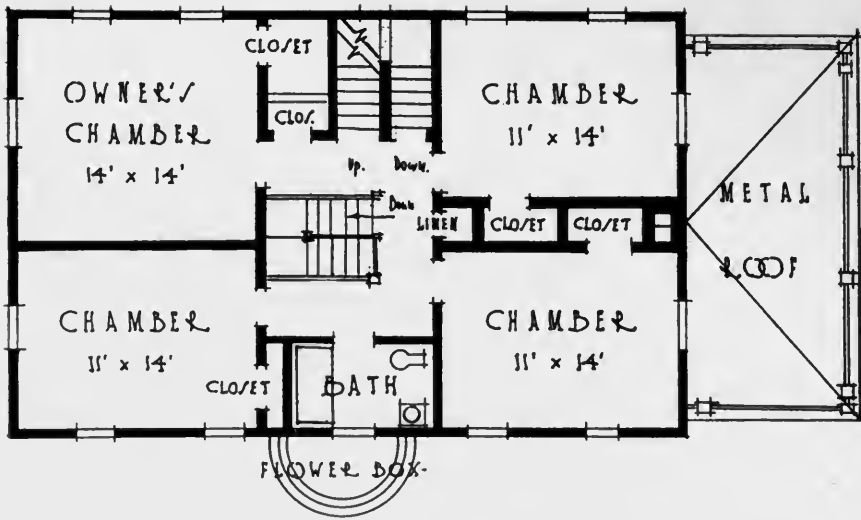


DOOR DETAIL—RESIDENCE OF MISS
E. S. CUSHING, WABAN, MASS.
GRANDGENT & ELWELL, ARCHITECTS.

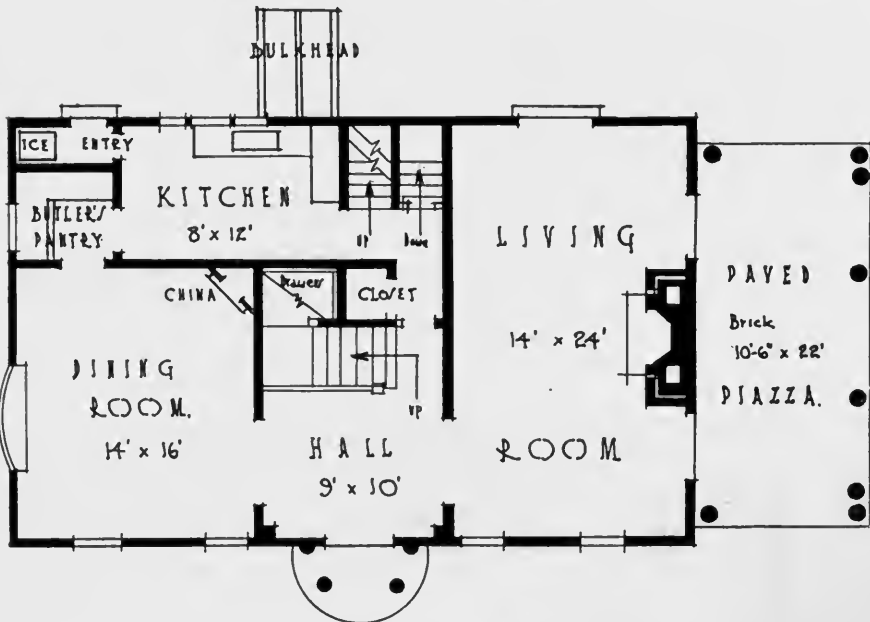


• THIRD FLOOR PLAN •

NORTH FRONT—RESIDENCE OF MISS
 E. S. CUSHING, WABAN, MASS.
 GRANDGENT & ELWELL, ARCHITECTS.



+ SECOND FLOOR PLAN.



+ FIRST FLOOR PLAN.

RESIDENCE OF MISS E. S. CUSHING, WABAN,
 MASS. GRANDGENT & ELWELL, ARCHITECTS.



EAST END—RESIDENCE OF MISS E.
S. CUSHING, WABAN, MASS. GRAND-
GENT & ELWELL, ARCHITECTS.



REAR—RESIDENCE OF MISS E. S. CUSHING, WABAN, MASS.
Grandgent & Elwell, Architects.



TOOL HOUSE AND GARAGE—RESIDENCE OF MISS E. S. CUSHING, WABAN, MASS.
Grandgent & Elwell, Architects.

The
LIBRARY BUREAU BUILDING, CHICAGO
MUNDIE & JENSEN, ARCHITECTS



By D. KNICKERBÄCKER BOYD

THE new Chicago building of the Library Bureau is especially designed to accommodate their main offices and to provide space for the manufacture of their card systems for general warehouse purposes. It is but a part of the complete plant, which contemplates an additional story over the rear portion and a future cabinet department building with a lumber yard and kilns.

The building is of the mill type, sprinklered. The sprinkler tank is taken care of in a most unusual and artistic manner within the tower which forms the feature of the main entrance. The tower, of fireproof construction, contains the vaults required in each story.

There are two switch tracks. One, at a platform for general receiving and shipping, combined with a city truck delivery platform and freight elevator adjacent, provides for convenient handling of mixed shipping as well as a convenient method of direct city delivery from cars

to trucks; the other track serves for coal and lumber delivery.

The main office entrance is at the base of the tower, the employees' entrance being on the side street. A garage to accommodate four trucks adjoins the main structure. The total floor area is 76,100 square feet.

The exterior of the building is of brick, with cut stone trimmings around the doorway and at other places. The fenestration, in conjunction with the brickwork, forms an unusual design, of which perhaps the most interesting feature is the complete absence of a projecting cornice, the place of which is taken by flat stone bands with brick courses.

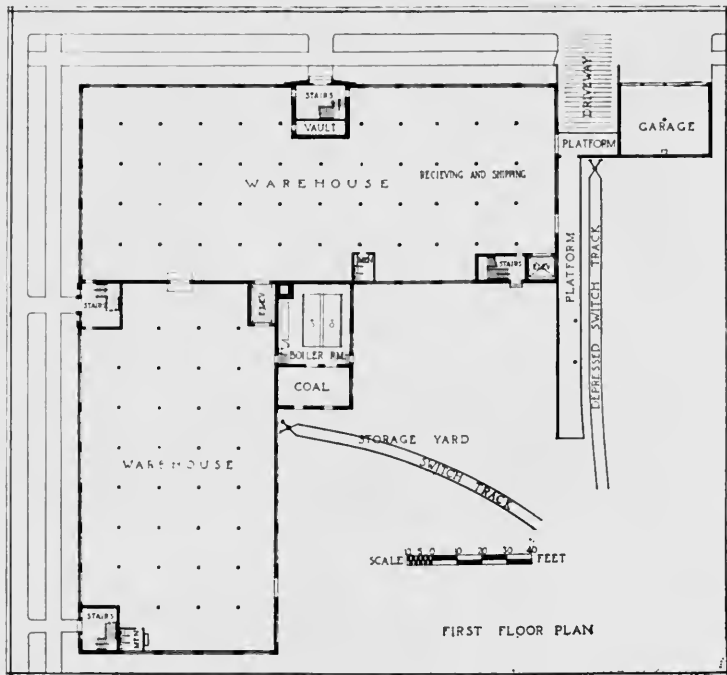
The detail of the tower, with its vertical lines accentuated by the brick courses and the arrangement of windows, combined with the use of stone bands without cornices, makes this very interesting feature the dominant one of the entire building.



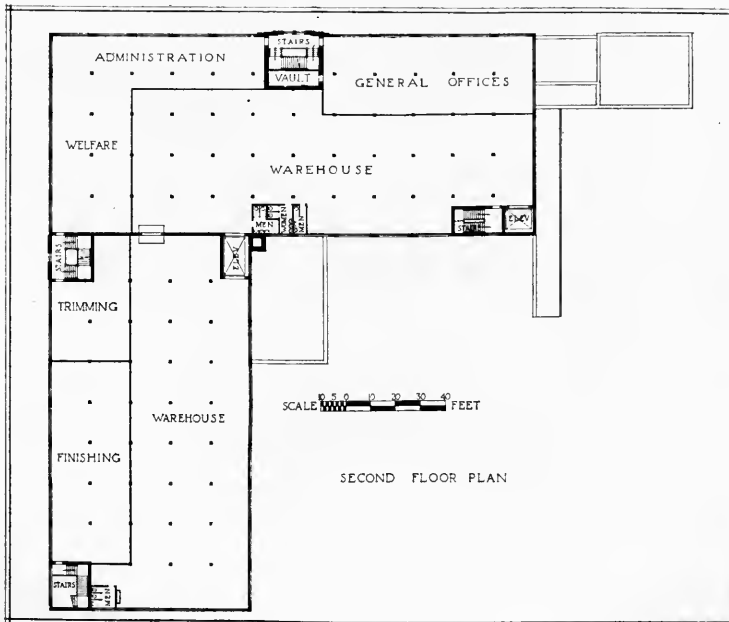
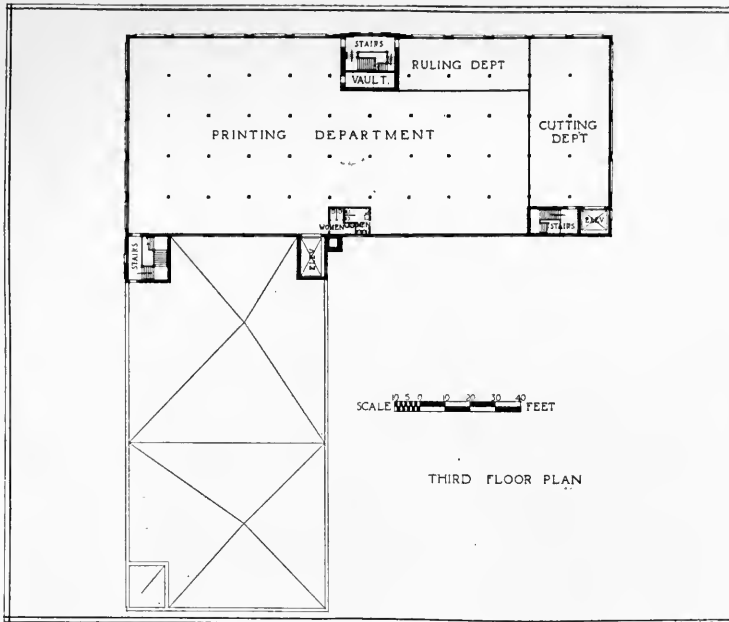
MAIN ENTRANCE—LIBRARY BUREAU BUILDING,
CHICAGO. MUNDIE & JENSEN, ARCHITECTS.



LIBRARY BUREAU BUILDING, CHICAGO.
MUNDIE & JENSEN, ARCHITECTS.



REAR VIEW AND FIRST FLOOR PLAN—LIBRARY BUREAU BUILDING, CHICAGO. MUNDIE & JENSEN, ARCHITECTS.



SECOND AND THIRD FLOOR PLANS—LIBRARY BUREAU BUILDING, CHICAGO. MUNDIE & JENSEN, ARCHITECTS.



PRESS ROOM, ON THIRD FLOOR—LIBRARY BUREAU BUILDING, CHICAGO.
Mundie & Jensen, Architects.

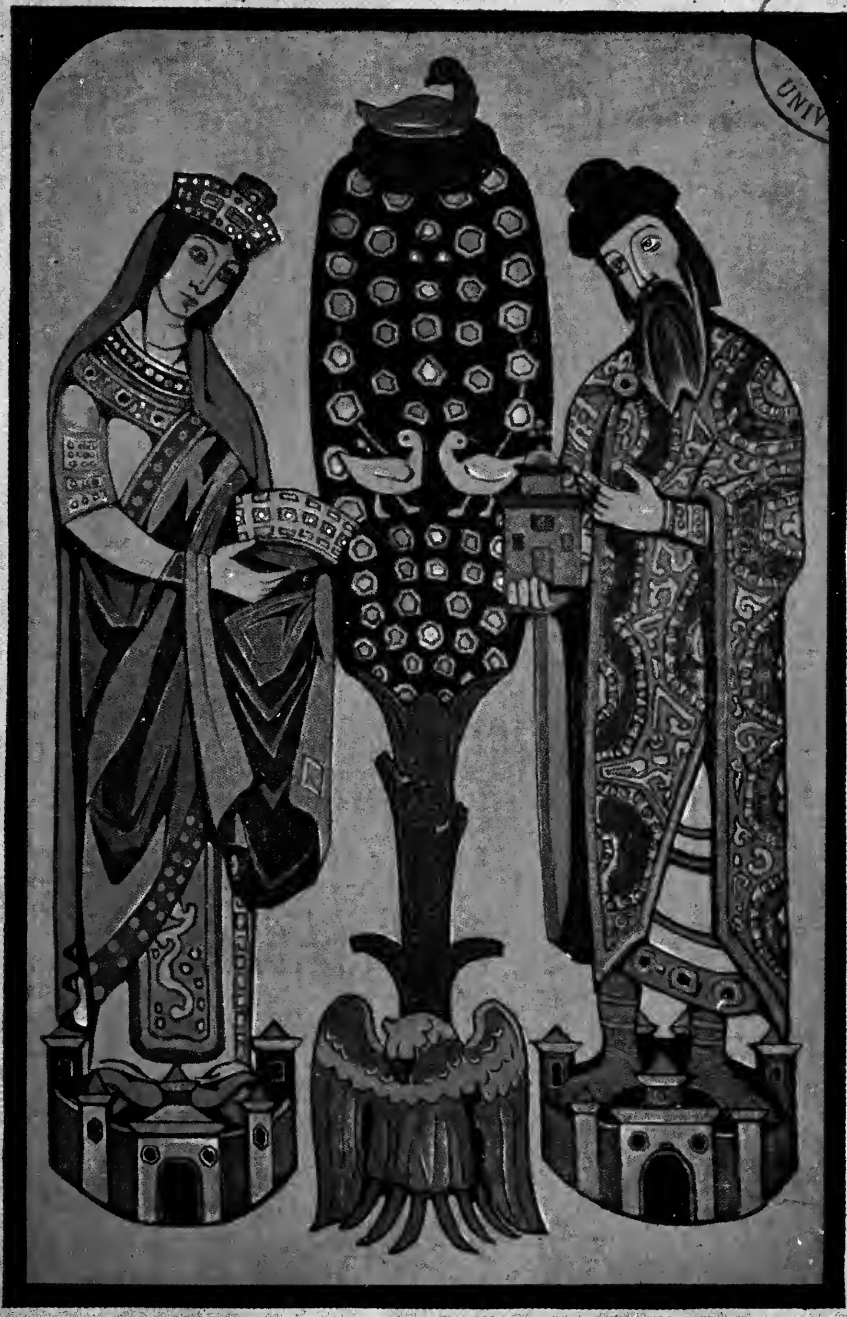


RULING AND CUTTING DEPARTMENT, ON THIRD FLOOR—LIBRARY BUREAU BUILDING, CHICAGO.
Mundie & Jensen, Architects.

The
ARCHITECTURAL
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AVGUST
1921

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SITY OF TORONTO

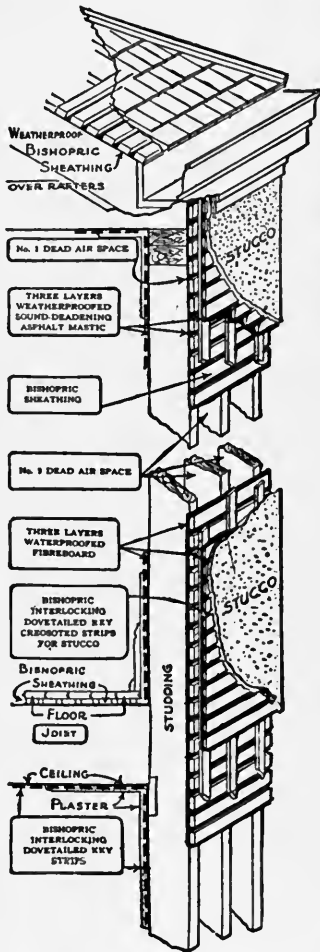


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THE ARCHITECTURAL RECORD



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"THE SONG OF MORNING." DECORATIVE MURAL
PANEL IN "DREAMS OF WISDOM" SERIES, PAINTED
FOR A PRIVATE RESIDENCE IN LONDON, 1920.



"THE VARENGIÁN SEA." PAINTING IN OIL TEMPERA, 1909.

NICHOLAS K. ROERICH

HIS ART IN ITS BEARING ON MURAL DECORATION IN AMERICA



BY ALFRED C. BOSSOM

IT IS an ill wind that does not cast good results somewhere. Russia's upheaval has sent Professor Roerich to us and he has brought a vital message at a most opportune time. During the last few years European culture has been cruelly shaken and the chaos of the war has left America as the one land in all the world where fine artistic work can probably still be accomplished. Great buildings of every type—Government structures, churches, railroad stations, banking houses, office buildings, apartment houses, hospitals—all will be built here very much sooner than they will elsewhere.

America has outgrown "white architecture" and reached a period of artistic evolution wherein color is a vital element in every complete architectural scheme. The signs of this are everywhere and the

quality and scope of color conceptions are daily enlarging.

Of all the great artists of today probably Professor Nicholas K. Roerich has the most significant message for American architecture. Born in 1874 of a Scandinavian family that went to Russia in the time of Peter The Great, he has drawn to himself all that transmittable experience of the unhurried North. He refused the Ministry of Fine Arts of Bolshevist Russia and preferred to exile himself from his native land—to abandon a collection of more than two hundred Dutch primitives and some seventy-five thousand objects illustrating Russian archeology of the stone age, the collection of a lifetime.

He appreciates the requirements of architecture as few artists do, owing to the natural bent which led him into



"SAINT NICOLAS." DECORATIVE MURAL PANEL
IN "DREAMS OF WISDOM" SERIES, PAINTED FOR
A PRIVATE RESIDENCE IN LONDON, 1920.

archeological studies; he was a member of the Board of the Imperial Society of Architecture of Petrograd and a professor in the Imperial Petrograd Archeological Institute.

Though himself somewhat of a radical, he is not a follower of any school; and his radicalism is tempered by the best traditions of the past. He believes that each artist must work out his own conceptions and technique. As a student, in addition to his native traditions, he selected the best from China and Japan, to which he added the inspiration of the semi-barbaric of Persia, Turkey, and India. His studies in Paris gave to his work a modern note which, coupled with other influences, made him fittingly the Director of the School for the Encouragement of Arts in that great country which has been sending artistic messages to the world for so many years.

Russian literature, music, the ballet, have all been deeply appreciated in America, and now we have this great painter, who was the first President of "The World of Art," a famous group which included Benois, Serov, Veroubel, Somov, and Bakst.

His work embraces many different types of expression, in addition to painting of what may be termed easel pictures—designs of mosaic stained glass, book illustrations, theatrical scenic decoration and mural work; all are equally at his command and a peculiarly successful decorative value is present in them all.

Many of his works are to be seen throughout Europe. The National Gallery in Rome, the Louvre and the Museum of the Luxembourg at Paris, the public art galleries in Vienna, Prague, Venice, Milan, Brussels, Stockholm, Copenhagen, have examples, as have also Chicago and San Francisco; and London admired his work in the famous Post-Impressionist Exhibition, in 1911.

Specimens of his art that are now moving across this country on exhibition are both inspiring and invigorating to artists, for they contain that great imaginative quality that in turn stirs the imagination of the beholder. His colors are not only unusual and beautiful in themselves,

but are grouped in rarely beautiful harmonies and also have a most decorative sense of composition. Many of his later efforts are painted in tempera, a medium which pre-eminently is suited to architectural decoration. He is a past master in color harmonies, yet he is so severe with himself that he rejects the temptation of a color play when the subject or the surroundings do not demand it.

His work has had a very remarkable influence upon the lay mind in Russia. During the war he received numerous letters from men at the front who wrote that they had seen his flames, his conflagrations, his darkness, his clouds and rocks; he literally had opened a new window to the souls of simple characters. One feels that he has a story to translate for minds of lesser insight, that he is an idealist to whom the great realities are but the suggestion of what is beyond, and that endless observation of a work of his will not lessen its interest. It carries "a thought for all time," so necessary in any work of art, such as a mural decoration, that is to be in a permanent location. When one tires of an easel picture, it can be replaced without trouble, but a mural is as much a part of the building as are the foundations or the roof.

Mural paintings in America are commonly but obvious color decoration and deal with subjects which, once observed, need never be looked at a second time. They transmit no inspiration, nor indeed any mood or concept which really justifies their existence. Professor Roerich's art is much needed just now in our transitional artistic progress.

We are advancing into a period of color. Plain white, flat exteriors are less common than they were, and the colored roof, doorway, and other details are so treated as to make a complete artistic unit of the whole building and its setting. Internally, unity of composition with color is even more frequently encountered.

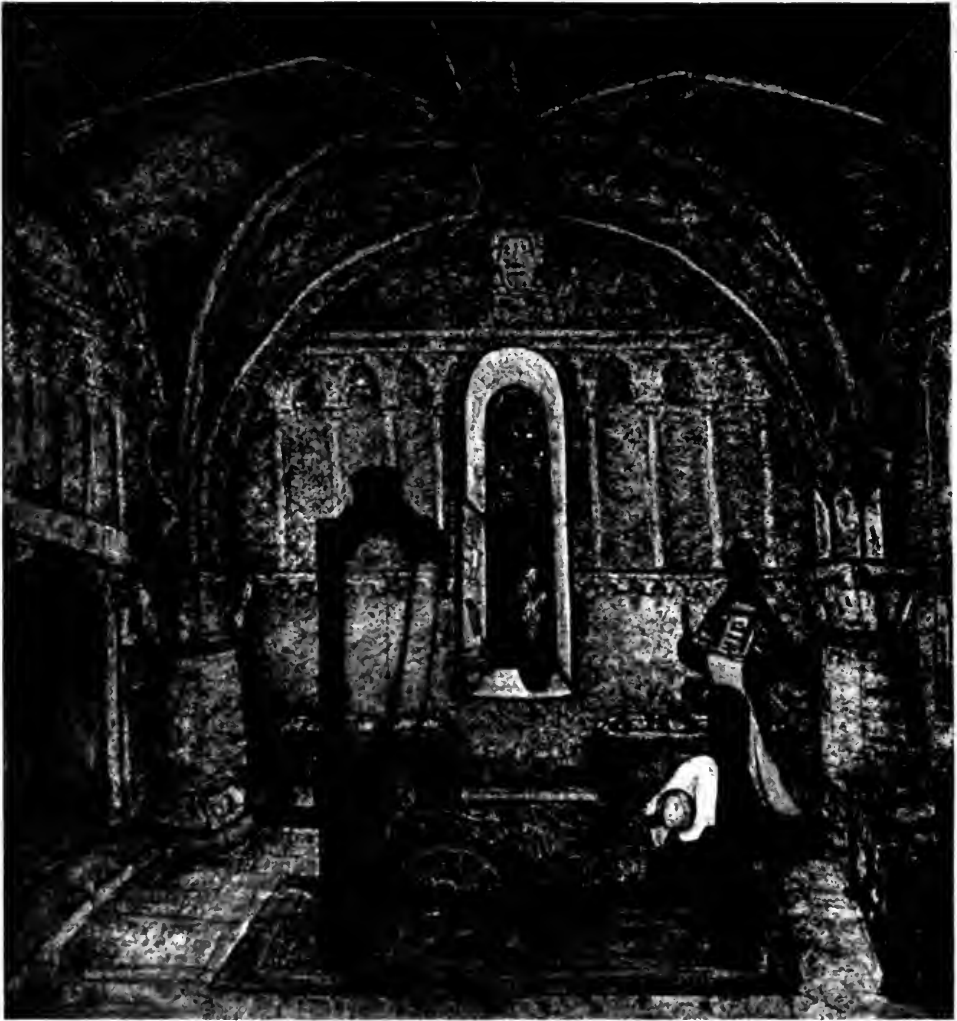
As our buildings are becoming more architectural internally as well as externally, the demand for mural expression is increasing. A composition over the mantel, others over the doors, with perhaps a frieze around the walls, may form



"THE SONG OF THE WATERFALL." DECORATIVE MURAL PANEL IN "DREAMS OF WISDOM" SERIES, PAINTED FOR A PRIVATE RESIDENCE IN LONDON, 1920.



"THE LAST ANGEL." PAINTED IN
TEMPERA AT TALASHKINO, 1912.



"PRINCESS MALEINE'S CHAMBER." ONE OF SEVEN
SCENES FOR MAETERLINCK'S "PRINCESS MALEINE;"
MOSCOW FREE THEATRE PRODUCTION, 1913.



"A CORRIDOR IN THE CASTLE." ONE OF SEVEN SCENES FOR MAETERLINCK'S "PRINCESS MALEINE;" MOSCOW FREE THEATRE PRODUCTION, 1913.



"YAROSLAVNA'S TOWER ROOM." ONE OF
THREE SCENES FOR "PRINCE IGOR;" DIAGHI-
LEV'S PARIS AND LONDON PRODUCTION, 1914.



"THE WHITE MONASTERY."
PAINTED IN LONDON, 1920.

the color spots of a unified design for the room; and the architect need no longer fear when returning to houses designed a few years before that he will see his work misrepresented by the introduction of discordant pictures; a definite mural treatment has forestalled that.

Professor Roerich's work is not too realistic, yet is sufficiently so to excite contemplation again and again, as is exemplified in the mural study forming the cover of this magazine, or in such illustrations as the "Last Angel," "The Varenagian Sea," and "St. Nicolas." These all convey the feeling so conspicuous when one is conversing with the artist that his great desire is to interpret "man's relation to the universe," which is an essential inspirational motive of any permanent mural scheme.

The effect of color upon the mind is receiving much attention. Certain colors are depressing, while others, often subconsciously, produce cheerful reactions in the same way as music does. Professor Roerich, when passing through London, was induced by Dr. Young to design mural decorations with definite color relationships for wards in the latter's hospital, on the ground that the color permanently placed would aid materially in the cure of certain diseases.

Professor Roerich's work has a scale and a depth that does not introduce a false perspective value into any space he is decorating, and his color is always fully under control. He is cosmopolitan in understanding; the Slavic traditions of the North have brought him vigor; the East, intense color; the South, mysticism, and the West, realism.

Art is the one common international language, and it is especially needed in our melting pot of a country. Every building has a message which, within limits, can be most legibly conveyed by mural decoration.

The movement toward color and simplicity is quite obvious in the trend of our stage settings, costume design and treatment of fabrics. Broader and larger compositions have established themselves there beyond doubt. They contain repose, which much of our later Victorian work

did not, and it is a very short step from the temporary of the stage setting to the permanence of the great building. Among the stage work that Professor Roerich has designed are Maeterlinck's "Princess Maleine," Wagner's "Valkyries," Rimsky-Korsakov's "Tsar Sultan" for Sir Thomas Beecham, and many of the operas produced by Diaghilev; and he is now working upon Rimsky-Korsakov's opera "The Snow Queen." He never attempts work of this nature until he feels the motive as the composer felt it. Thus, he designed the "Valkyries" without flame and without smoke. What he sought was mystery and symbol. In the first act the setting was all in yellow and black, the yellow suggesting Siegmund and Sieglinde, their love motive, their evanescent joy; the black, Hunding's doubt and hate, and cruelty.

The economic aftermath of the war has intensified the struggle between mechanical civilization and spiritual culture, and Professor Roerich believes that we are facing a decision as to whether we will permit the artistic side of life to be sacrificed. In America artistic development in the next twenty years will have to be promoted largely by architects. We are at that transitional point where we can adopt the utilitarian (as probably Europe may do) to the exclusion of the beautiful, or we can combine the two. We are in much the same situation as Italy at the beginning of the Renaissance.

America, like Italy in the fifteenth century, has the material resources and the cultural aspiration to unite beauty with utility in its architecture. The Italian Renaissance was a radical, modern, expression of the forward life of its time, yet it wrought in the rediscovered art forms of the classic past. It was the spirit of its own time which made it intrinsically great, but the perfected, traditional art forms which it employed lent sureness and serenity to its expression. Professor Roerich's work has a distinct message for American architects at this time, because, like that of the Renaissance masters, it is a radical, modern, expression of contemporary life, yet sure, serene, and permanent.



The FLINTRIDGE COUNTRY CLUB
FLINTRIDGE *near* PASADENA, CAL.

MYRON HUNT ARCHITECT

By John Taylor Boyd, Jr.

THIS design of Mr. Myron Hunt's displays certain tendencies of the architecture of the Southwest Coast. Its aspect is simple, almost bald—a characteristic which is not local alone but which may be seen in modern art all over the world.

But the local flavor is the quality of value in the Flintridge Club. Mr. Hunt chose this simple expression, not arbitrarily as a policy to be adopted in all designs, but because he felt that it grew naturally out of the landscape setting and of the human background of that South California region. The bold, rugged, vivid, colorful nature and the simple, hearty, country society—scarce two generations removed from the pioneer—are the two influences which appear in the design.

In such an inspiration there is no modernist twist which impels the artist out of the path of art and into a bog of intellectualism; there is nothing pedantic in Mr. Hunt's conception. It is an honest, direct solution of a particular problem, done in a spirit of craftsmanship in the vernacular of the region. Its type, the South California country architecture, derived from the Spanish colonial ranches and rustic missions, is well suited to a landscape of grandeur, vast sweeps of plain, rugged mountain forms, accented foliage and brilliant sunshine, and to the social background of hardy outdoor life, with a convivial spirit inherited more from the miner and the rancher and the Latin than from the Puritan.

It might be urged that the design partakes more of the spirit of the ranch than



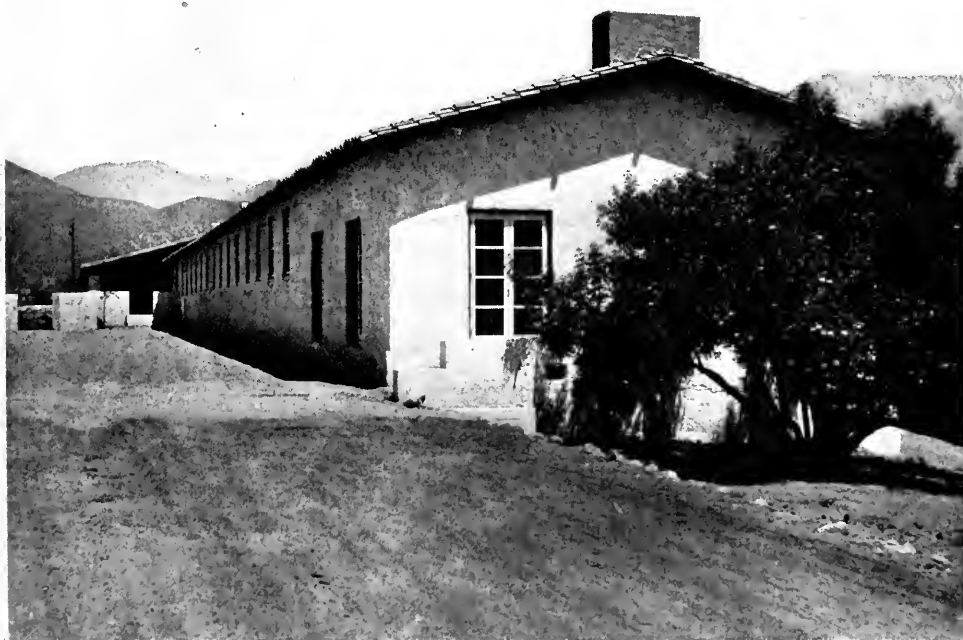
WEST FRONT—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL.
Myron Hunt, Architect



LOOKING SOUTH ON PORCH—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR
PASADENA, CAL.
Myron Hunt, Architect



WEST FRONT—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL.
Myron Hunt, Architect



VIEW FROM THE SOUTH—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR
PASADENA, CAL.
Myron Hunt, Architect



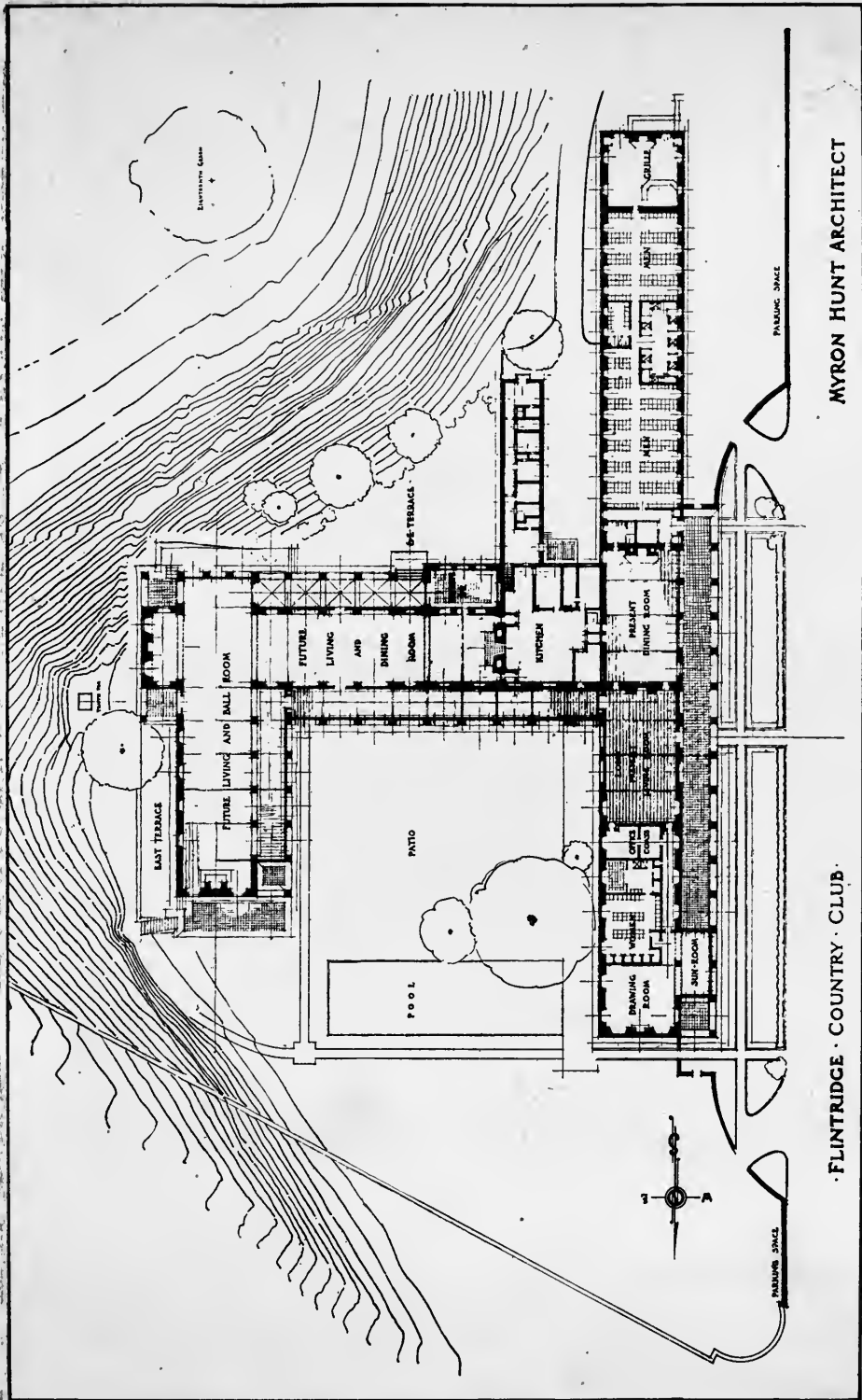
PRESENT LIVING ROOM—FLINTRIDGE COUNTRY CLUB, FLINT-
RIDGE, NEAR PASADENA, CAL. MYRON HUNT, ARCHITECT.



PRESENT DINING ROOM—FLINTRIDGE COUNTRY CLUB, FLINT-
RIDGE, NEAR PASADENA, CAL. MYRON HUNT, ARCHITECT.



DRAWING ROOM—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL. MYRON HUNT, ARCHITECT.



MYRON HUNT ARCHITECT

FLINTRIDGE COUNTRY CLUB

FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL. MYRON HUNT, ARCHITECT.



LOOKING SOUTH IN THE PATIO, TOWARD GLAZED PORCH OR TEA-ROOM—
FLINTRIDGE COUNTRY CLUB
Myron Hunt, Architect



THE PROFESSIONAL HOUSE—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR
PASADENA, CAL.
Myron Hunt, Architect

of the country club, that the exterior is not altogether expressive of the social occasion, of festivity. Also, the long unbroken roof cuts across the landscape severely. Such criticism is, in part at least, personal. The inspiration is true, and the ranch aspect is in a way vindicated by the fact that the Flintridge Country Club has a show ring, thus giving it a more vigorous, rustic character than if it were merely a golf club, although it has the inevitable golf course.

This dual character of riding and golf club makes the Flintridge Club distinct from the usual country club—that typically American “institution” which, spreading over the whole United States in two generations, is found in every town. Unlike most such features, it did not develop slowly, but sprang full-fledged at birth, in the first country club, at Brookline, Massachusetts, whose proud title, simply “The Country Club,” shows that it was the progenitor of them all. The Brookline Club, though somewhat enlarged, is much the same as at its founding—a big, mansion-like house at the end of a winding drive, a white and yellow mass on a knoll amid elms, overlooking the race track and the golf course. Thus, oddly enough, this first club, like the latest one at Flintridge across the continent, has a race track, where are held horse races, steeplechases and sometimes polo games. The two clubs have the same functions, yet how different are they in expression. The difference arises in the different landscape and social setting and is a striking evidence of the importance of these two factors.

The Flintridge Club, taken by itself, is a long, open mass, formed like the small letter “h.” Situated in a beautiful mountain valley north of Pasadena, on a rise of ground amid a small grove of live-oaks; it looks down over a meadow land and woods to the Arroyo Seco at the bottom of the valley.

In plan, the house is unusual because of the separation of accommodations for men and women—somewhat like two clubs. This scheme has proved successful, since it gives to the women the use of dining room and living room in company with the men, and reserves for their

own use the north part of the building with a separate parking space for motors. To the men is reserved the south portion of the building.

Structurally the building is interesting, and should be understood in connection with the design. The walls are concrete, cast in metal forms, four feet thick with a twenty-inch air-space. The heating pipes run in the air-space, uninsulated, and heat the rooms by radiation from the walls, except in coldest weather, when the radiators are used. No furring is necessary on account of the air-space, and the excellent texture of the walls is simply the concrete as it comes from the forms, whitewashed outside and painted inside. The roof is terra cotta tile, like that of the old California missions—a beautiful effect of reds, browns and yellows. The floors are terrazzo of a leathery brown color.

Here clearly is construction of the most solid and simple kind, a sufficient reason for the plain, sturdy architecture. Inside, the effect is the same—rough-hewn timbered roofs, of weathered appearance, heavy wooden doors with hand-wrought hardware, and furniture in character, standing out as simple decorations against the solid walls. It is not, however, so consistent as the architecture. All is in keeping with the ranch-mission style, although certain rooms, like the tea room, designed in green and yellow, are more in a club character. From this room the view is over the wooded hills and slopes, with the Arroyo below, to the distant violet mountains.

Although very original, the Flintridge Country Club is not theatrical. It is an absolutely honest design, in keeping with the spirit of the region. There is nothing forced about its simplicity, and in this it is a worthy example of Southwest Coast country architecture. In the East, the Philadelphia architects lead all others in just this ability to create country architecture in a simple, un-selfconscious way. They, too, design in the spirit of their region. This is true craftsmanship and real architecture, and it is good to see it arising on the Pacific Coast, not imitatively, but in the fresh, original inspiration characteristic of California.

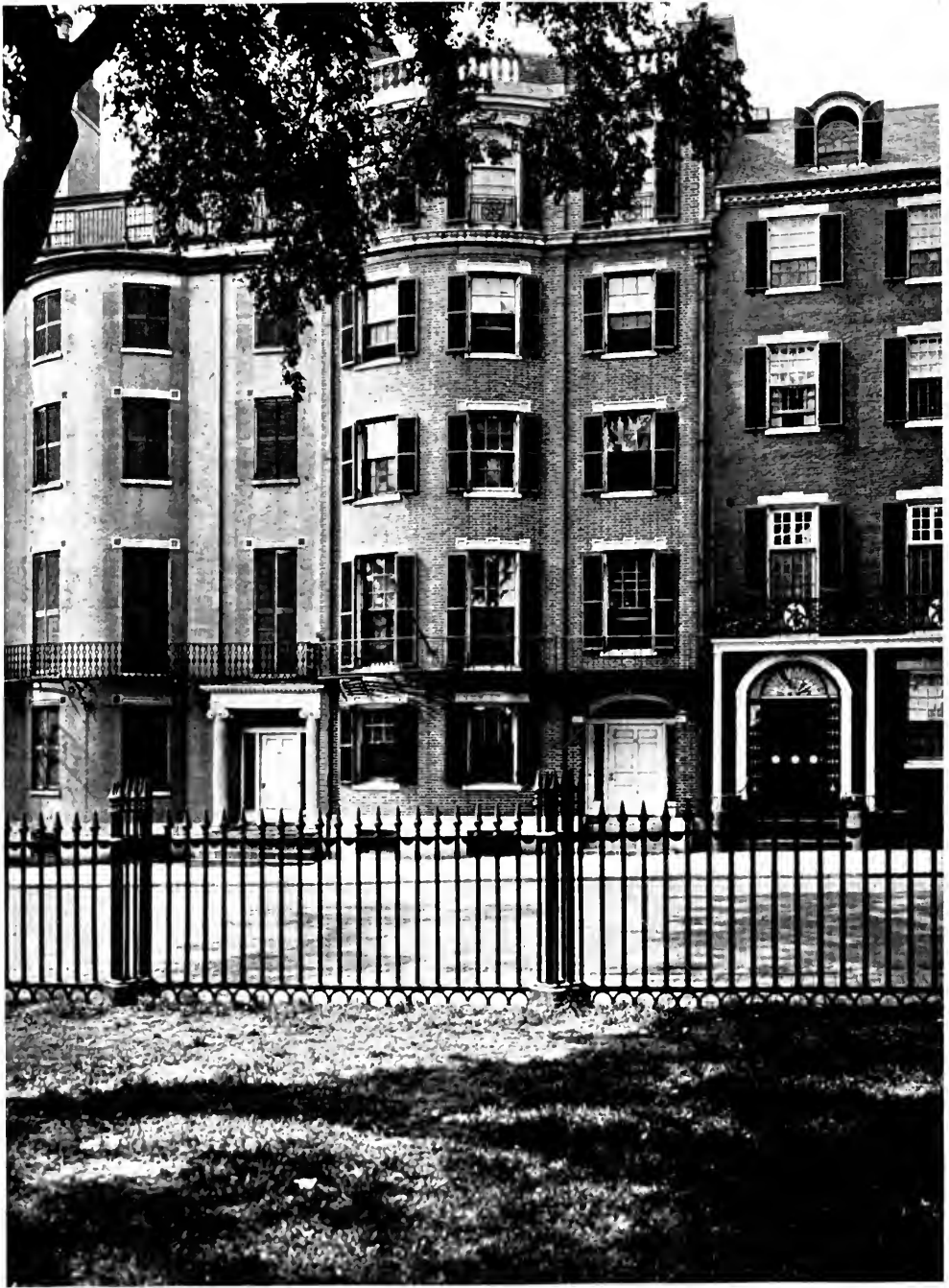


FIG. 25. APARTMENT HOUSE AT 62 BEACON ST.,
BOSTON. RICHARD ARNOLD FISHER, ARCHITECT.

TENDENCIES IN APARTMENT HOUSE DESIGN

PART III - BUILDINGS ON NARROW SITES



By FRANK CHOUTEAU BROWN

HAVING giving first consideration to the apartment remodelled from older dwellings, because of the lesson therein contained that might be of immediate assistance in helping to meet the demand for housing accommodations in our larger cities, it is now possible to undertake the study of better considered buildings, originally planned to meet the apartment house need.

The apartment manner of living is hardly an exclusively modern custom. From at least the days of ancient Rome we now know that human beings have lived in superimposed layers extending even to the height of six or eight stories. Originally the occupants of such "apartment buildings" were generally slaves, it is true, and they were always of the poorer or serving classes. It has remained for the modern of to-day, seeking a luxurious freedom from the ordinary responsibilities of housekeeping, to turn for relief to the "apartment hotel." Thus has come about a development new to our experience, and already the cause of material alteration or influence on the growth of many of our larger American cities, especially those that have within these last few years been developing most rapidly in population and wealth. Any thoughtful observer of the gradual processes of development of our modern type of civilization may well think it worth his while to study this new phenomenon and speculate as to its ultimate results and reactions.

Formerly, it is true, we in America regarded it as the misfortune of the poor rather than the privilege of the rich to inhabit the crowded "tenement," instead of enjoying the greater freedom and

space possible from living in a separate house; but once our wealthier classes became accustomed to and accepted the now customary city type of private residence, the "row" or "block" house, it was only to be a short step—and, indeed, the next logical one—to hit upon the idea of economizing space and securing more return from the constantly rising land values by improving the narrow slice of land that only the comparatively wealthy might own to themselves, by a structure so arranged that a number of families might occupy it in common.

Granted the methods accepted by us as usual and customary to the growth of our American cities, this result was inevitable. The restriction of the most desirable dwelling sections to a comparatively small area was established by natural or artificial advantages early in the growth of any city. Unfortunately, as we have now come to realize, this was always the result of haphazard accident; but once established by accident, its limits were strengthened and made more absolute and inflexible by fashion and design. The result was to be that as our cities grew large and prosperous with unexpected rapidity, the values of the comparatively restricted area thus set aside for fashionable residential purposes became more and more artificially expanded within its all too narrow original limits, until the former ample lot of the earlier inhabitants had been sliced and narrowed into the thin strip of land that, in our larger cities, soon came to be all that even the wealthiest and most prosperous could afford to possess as exclusively their own.

The process has been a gradual one, although as we now look back upon it,



FIG. 28. APARTMENT BUILDING FOR MRS. EDGAR MARTIN, CHICAGO, ILL. EDGAR MARTIN, ARCHITECT.



FIG. 29. FLOOR PLANS OF APARTMENT BUILDING FOR MRS. EDGAR MARTIN, CHICAGO, ILL. EDGAR MARTIN, ARCHITECT.



FIG. 30. H. H. BENTLEY APARTMENT, 6914 SHERIDAN ROAD, CHICAGO, ILL. H. H. BENTLEY, ARCHITECT.

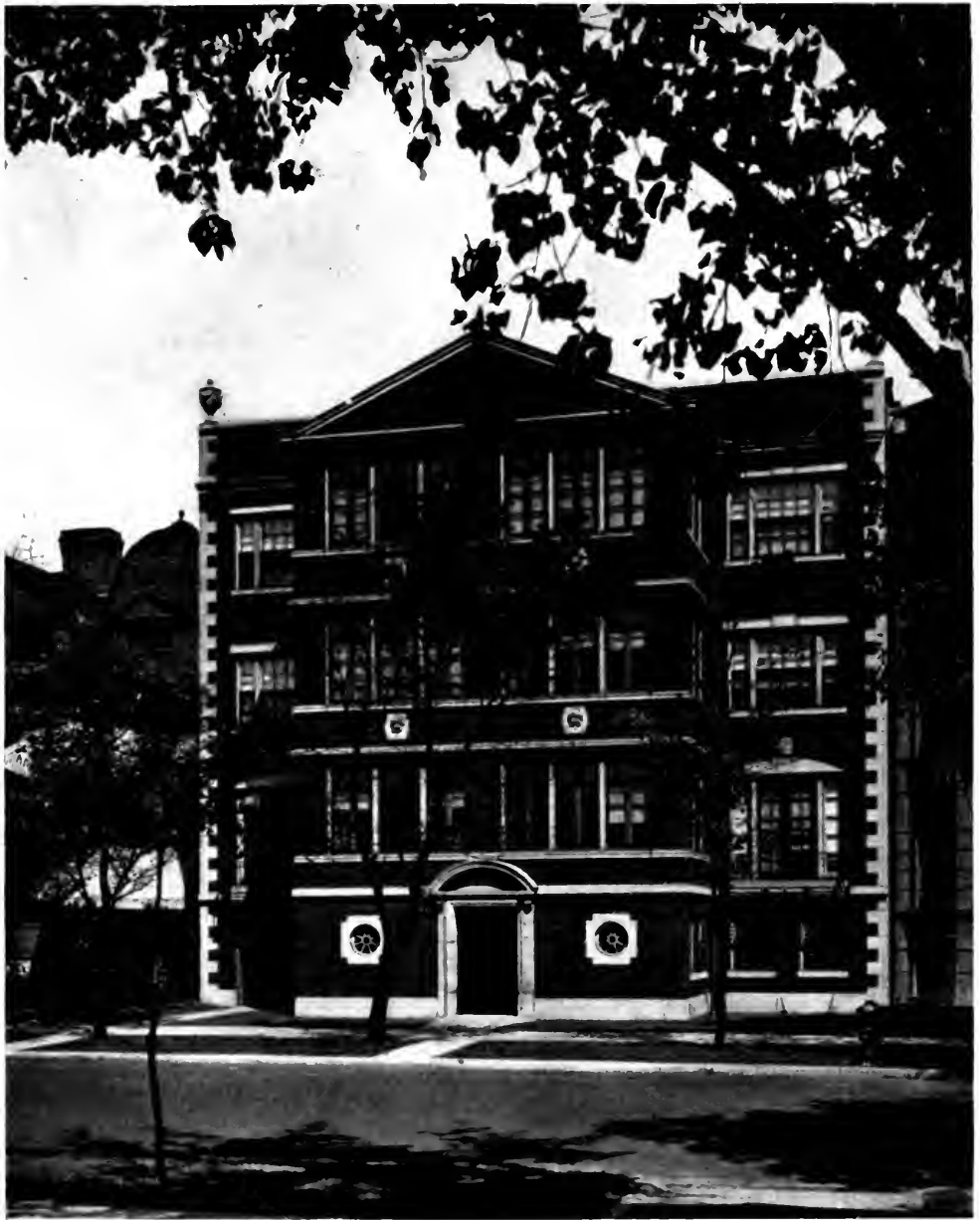
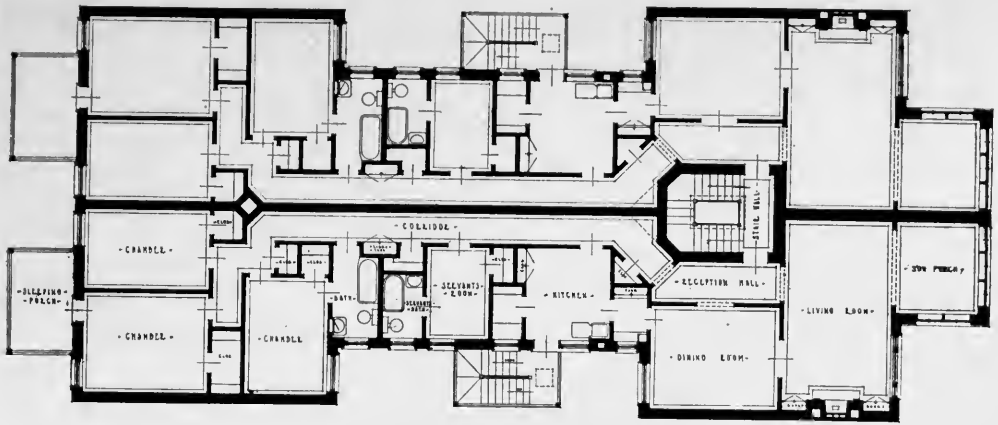
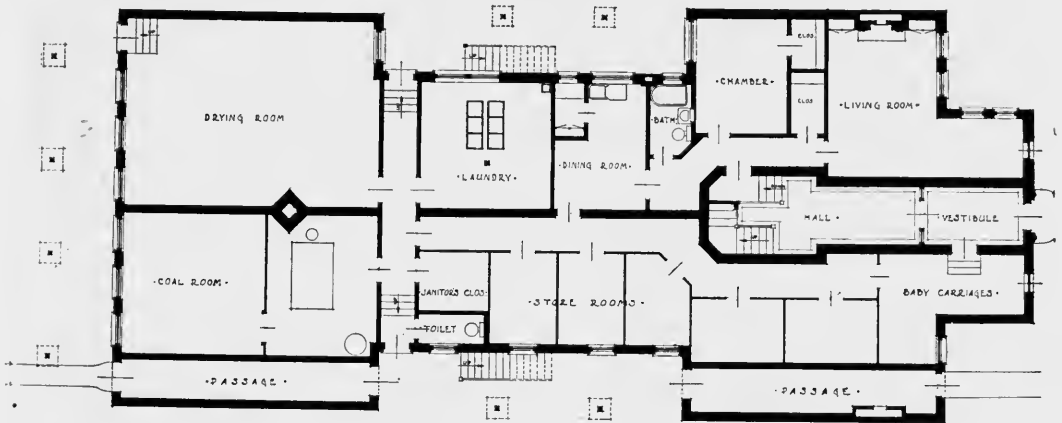


FIG. 31. F. R. MOULTON'S APARTMENTS, 6227
WOODLAWN AVE., CHICAGO, ILL. RICHARD E.
SCHMIDT, GARDEN & MARTIN, ARCHITECTS.



TYPICAL FLOOR PLAN



BASEMENT & FOUNDATION PLAN

FIG. 32. FLOOR PLANS OF APARTMENT BUILDING FOR F. R. MOULTON, CHICAGO, ILL. RICHARD E. SCHMIDT, GARDEN & MARTIN, ARCHITECTS.

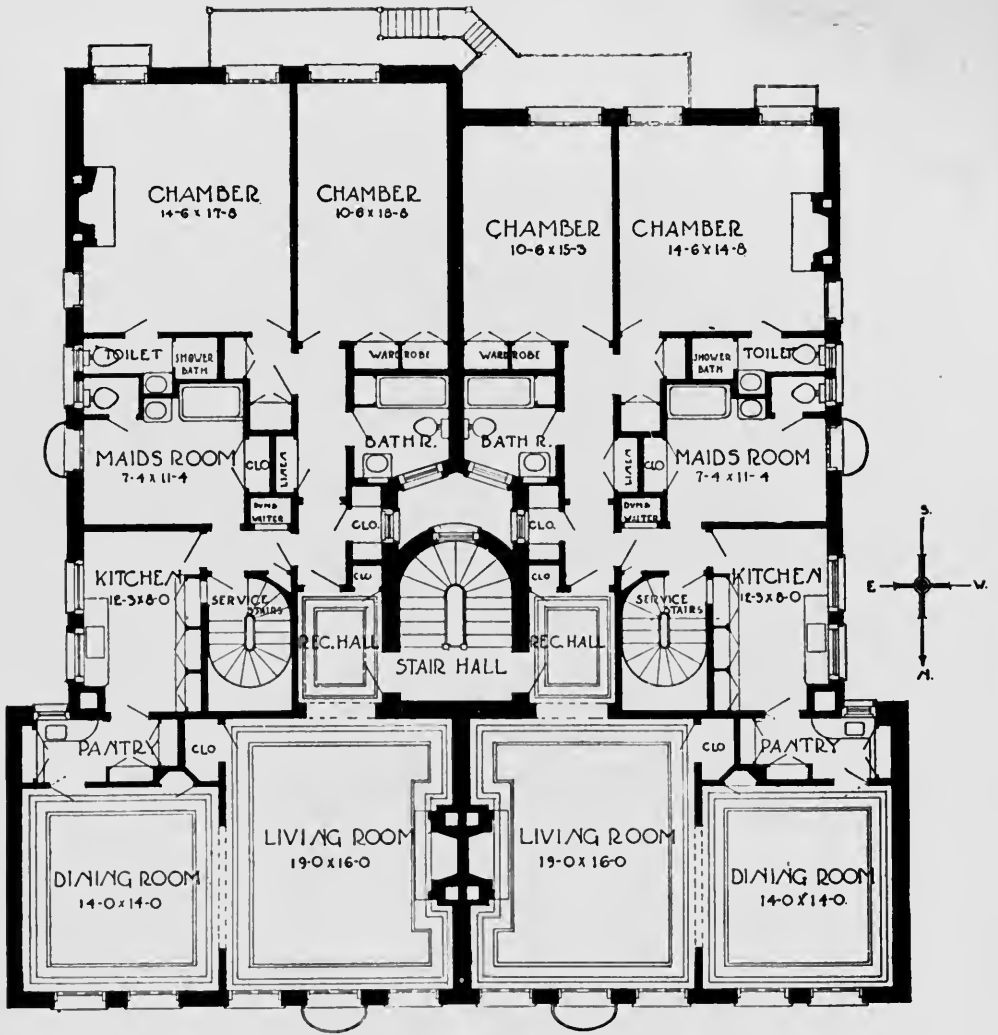
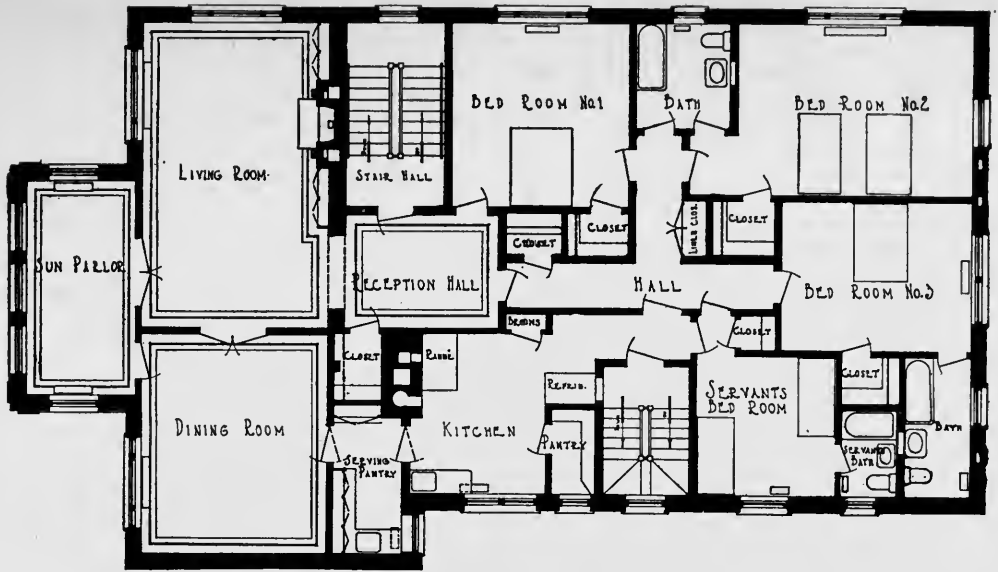


FIG. 33. TYPICAL FLOOR PLAN OF APARTMENTS AT 21 AND .31 EAST ELM STREET, CHICAGO, ILL. W. D. MANN, ARCHITECT



TYPICAL FLOOR PLAN.

FIG. 34. APARTMENT BUILDING FOR E. J. NORCOTT, CHICAGO, ILL.
Richard E. Schmidt, Garden & Martin, Architects.

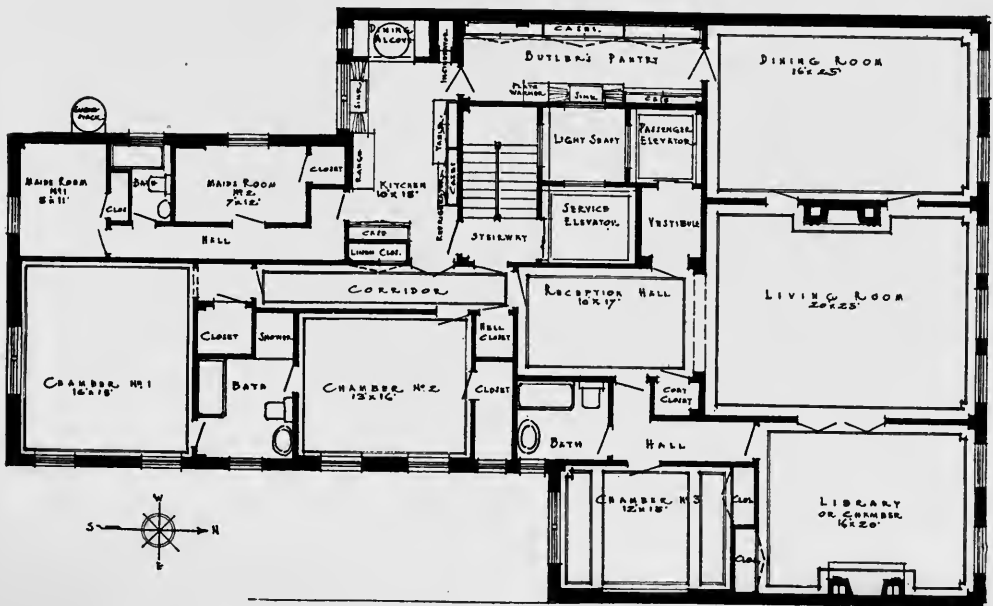


FIG. 35. TYPICAL FLOOR PLAN OF APARTMENTS AT 257 EAST DELAWARE PLACE,
CHICAGO, ILL.
John A. Nyden, Architect.

the time-intervals that have actually elapsed to separate the various steps have been short enough, and in retrospect seem even almost to blend one with another. Yet it is not so very long ago that the first "apartment house"—still existing, by the way, in downtown New York—was accepted as a place of residence for themselves by families of fashion and repute.

So now, in taking up the study of the apartment house type, it would seem at once to be most natural and helpful to start with the kind of apartment possible of being developed on the normal narrow city lot—because this is the kind of lot that is still most easily to be secured for this purpose—and it was in relation to this kind of deep narrow lot that the apartment house plan was devised to conform, as it came first to be defined and established in our larger cities. The immediate result was the type of plan we now recognize to have been both immature and unfortunate—the thin strip of rooms with living rooms in front, kitchen and dining rooms in the rear, and a long corridor with three or four bedrooms opening off it in between. This type of plan was the original arrangement of the apartments shown in Fig. 23 in last month's article, in dotted lines—from which they had been changed to the more modern plan shown in their later rearrangement.

There are thousands of apartments of this plan arrangement now existing all over the United States, for it was for a number of years regarded as the final and accepted type, and that at exactly the time when most of our Middle West and Eastern cities were going through the most rapid process of apartment house growth. The one single improvement that was anywhere undertaken was to widen the single lot unit to double width, when enough land could be obtained to make that arrangement possible, and place two apartments on each floor, served from a single front and rear staircase. These buildings were generally three and sometimes four stories high, making a six or eight apartment building between party walls; and it was soon found by experiment that the whole re-

sulting building was still not too large to be readily salable, as a unit, as an investment proposition.

Once this fact was established, all subsequent building up of our immediate city suburbs with apartment buildings took this form; and there our development of the apartment plan seemed to have atrophied or stopped, until about a dozen years ago, when, in the attempt to develop some shallower lots with apartment house buildings it was, quite by accident, discovered that by using a plan of wider frontage to the apartment, securing three rooms width upon the street (and by condensing the depth of the building, reducing the corridor length, and hitching the rear rooms up nearer to the front) a new type had been found that was at once more popular with tenants and required no more actual land area for its construction. Indeed, once the plan was understandingly attacked, it even developed that a slight economy in the area covered was possible, because of the amount of square feet of corridor space that was eliminated, thus securing a final economy both in the amount of the land covered and in the actual construction cost of the building itself.

From about this time was to date the sudden growth into fashionable popularity of the "apartment manner" of living. In New York the apartment had been accepted considerably previous to this time, but it did not actually come to its popularity the country over until the long, dark, narrow corridor between living and dining rooms had been eliminated. Up to that time the apartment had been endured by those who were unable to afford any other manner of city dwelling; but after this time the apartment began to be the chosen and fashionable method of city living, preferred even by those whose income was sufficient to meet the cost of the private city dwelling; and from that time can we date the beginning of the building of "apartments de luxe," which in our two or three largest cities has now come to be a fashionable and profitable "specialty" for the speculative builder.

But it will be better to trace the growth

of the apartment house plan more in the general sequence of its actual development along the lines that have just been indicated. And so, in the larger city, it was first started in the form adapted to the single residence lot. It was only later on, in the new nearby suburbs, that the double width apartment arrived, and it was easily and obviously derived from its immediate predecessor.

It thus happens in our principal cities—outside of the special conditions, previously considered, as existing in New York—that most all real estate development in residential sections has been accomplished on the unit of the single house lot. An additional reason for this is also to be recognized. From the point of view of the city realty operator, while he has generally, in the first instance, bought his land in large areas, his first act, after making his purchase, has been always to divide it into as narrow strips as possible, and develop each strip into a single house or structure, with the intention of eventually selling the dwellings to separate owners. In this way he has in the past made his greatest profits. And oddly enough it is the fact that the greater proportion of the best present and past dwelling sections in our larger cities were first built up in this manner, the houses being later purchased by individuals, and afterwards very often entirely and expensively made over by having the interiors rearranged and redecorated, and often even the fronts torn down in order to be rebuilt after a more pretentious and individual fashion!

As a result, any tendency toward a later development of this same property with apartments was limited most frequently to a plan capable of being devised to go upon a single lot, between the old party walls remaining after the private dwelling in between has been demolished—or at the most, what could be done on a plot of land as wide as was to be obtained by purchasing two adjoining properties and throwing two lots together, thus getting a double width apartment (Fig. 35)—or two apartments wide (Fig. 32), one on each side of a common stairway. The latter plan is the

one most commonly found in those sections most nearly allied with our city suburbs, where the operator can still purchase his land in an undeveloped state, and can then lay it out in lots of a width to accommodate these double apartment house plans.

The operator's point of view, however, continues to remain the same. He is only desirous of building these structures in small enough units to make it possible for him to find a purchaser easily for each building when he has finished his development, and thus get back his money and his profit, leaving the purchaser "holding the bag." Up to the years immediately before the war, it was a profitable and certain business. By buying a considerable area of vacant property, it could be purchased quite cheaply. A short term construction loan was then obtained, often at as high a rate as 10 per cent., the builder meanwhile getting all the benefit possible by buying in quantity, through building three double width buildings of four floors each giving him twenty-four apartments, for instance, all alike.

On completion of the building it was easily filled with tenants on advantageous terms, and the builder could then take his time in finding a purchaser, or might even depend upon placing a five-year mortgage on the completed property (generally of a large enough amount to more than cover all his expense of construction!), when he could sit back and collect the rents himself for the first five years, giving him a considerable profit over the cost of land and interest; and at the end of that time, when the property was about due for expensive repairs and replacements, let the mortgagee take it over, with as much back unpaid interest due as he had been able to manage! This had become an extensive and profitable business up to the time that the growing building costs occasioned by an ill-advised government policy in regard to giving labor everything for which it asked, operated to give this industry, in common with all other building, a severe setback, just about when we ourselves were entering the war.

But already conditions were changing so as to show that this would not much longer remain a lucrative industry, except in the smaller and more remote cities, where the scheme could still be worked on its old and simple lines. In our larger and wealthier cities the matter of real estate development had become more complex. The co-operatively owned apartment had come into view upon the horizon, with possibilities of profit such as had not before been dreamed of by the smaller operator of the years that had passed. But this is a matter of later growth and consideration, to be taken up later in this series. For the present, let us first consider the better classes of apartment developments possible of being undertaken with the single and double lot, of which mention has already been made, as this constitutes the first logical step in the growth of the urban apartment dwelling—and the one that is probably still of widest and greatest possibility of immediate usefulness throughout these United States.

We will now begin to find examples of greater interest elsewhere than in New York City. The two previous articles have dealt largely with material found in New York for the obvious reason that that city had experimented most with the acute conditions of housing shortage, and we will again turn to New York to find the furthest developed examples of another type of apartment that we shall want to study later, but for the present we shall find the greatest number of important and interesting examples in the Middle West, and particularly in Chicago and its vicinity.

The reasons for this are worth considering, as they are precisely those that will elsewhere exist to make this same type of plan of the widest possible interest to other communities.

The city plan of Chicago is so widespread, and so much of the apartment house development within the recent few years has taken place in the suburbs, more or less fashionable or remote, that there is not yet to be found in that city the amount of pressure that we find in New York and some other Eastern cities,

for the use of the narrow strip lot completely built up between party walls, with which we have previously been concerned. To be sure, much of Chicago is now so built up, and much more will be, but up to this time a major part of the more recent apartment house construction in the immediate vicinity of Chicago has taken place upon the suburban lot, laid off in the first place for the private house within its own grounds, however narrow those grounds might be, or upon the occasional large plot left over from some large estate—in which case the development might take the direction of the large "court" plan, or the rambling grouping of apartment units around a central plant that is still the best economic and community treatment for the development into apartments of the large urban estate.

But most of these apartment developments were made on smaller, narrower lots in the more closely built and congested former suburbs that are now actually a part of the crowded city, and so we will find that they more uniformly take the shape of a narrow compressed plan (Fig. 27), sometimes with windows down one or occasionally even along both sides. This we may take to be, for the moment, the typical "Chicago type" of apartment plan, although as a matter of fact it is just as generally found in certain other cities of the Middle West. We will merely simplify the matter for ourselves by turning at once to Chicago, where we find those examples of this type that are best and most thoroughly developed.

Before turning to the West, however, let us first see what we have developed in the East to fit the single narrow city lot, that is worth while illustrating as a good solution of this type of improvement; for that there is still a demand for this kind of apartment we all know, and there is something to be seen that will be better than the universal "railroad" plan that has been generally adjudged so complete a failure.

The "railroad" apartment failed to satisfy because it had come to be generally recognized that the long dark hall con-

necting dining room at the rear with living room at the front was too inconvenient. The bedrooms in between were also generally poorly lighted from a narrow well, and, in the summer at least, poorly ventilated. Of course, on a narrow built-in lot, not a great deal can be done to correct the latter defect. It is, to a large extent, inherent in the conditions that surround the plan. The rooms between the front and rear of the lot, where street or alley exposures are obtained, must be dependent on a narrow space for light and air, whatever those rooms may be.

Between a choice of evils, however, it devolved that there were at least certain internal conveniences of plan that were better served by bringing the dining room into closer relation with the entrance hall and living rooms, even at the risk of making that room darker than some others. It is not to be forgotten that the dining room is only in actual use by the family for three short hours during the day, and at least the half of that time would be given to dinner, when artificial light would probably be required or desirable in any event.

It was also not so objectionable—at least, for the members of the family itself—that the maid's rooms and bath should come next adjoining the kitchen, and so perforce share in the conditions of restricted lighting and ventilation already set down. This arrangement would bring all the publicly used portions of the apartment conveniently together, and it is at least logical to relegate to a preferred privacy the sleeping rooms of the family and the baths that serve them, even by definitely separating all this portion of the apartment physically from the portion just considered, as has been intentionally done in some cases. This can at once best be accomplished by placing them at the rear of the lot, where they will get better light and air (and possibly even some outlook) and then doing what is humanly and ingeniously possible to reduce the apparent distances to be travelled in the connecting corridors. What, then, is to be found as a possible result?

Let us take, for instance, as extreme an example as the apartment on Beacon Street, Boston (Fig. 26). Certainly, no one would be likely to encounter a lot longer and narrower than this! The depth of the lot has been divided into three nearly equal parts. The front portion has been given to the two front rooms, entrance hall and dining room. This portion covers the full width of the lot, from party wall to party wall. The dining room is given its light from a window at the end of a court that runs entirely back to the rear street.

The next third of the lot's depth contains the kitchen and closets, service stairs, maid's bath and two maid's rooms, all with a service corridor separate from the private main hall. The latter extends from the front to the back room, no attempt being made to disguise its length except by the use of occasional cross beams, and the fortunate happenstance that it was possible to obtain several windows through the party wall to light its length—a particular and unusual privilege.

The rear portion of the plan is given to three master's bedrooms and baths. It should also be noted that the long connecting corridor is offset near the front at its start, so that its length does not appear in evidence from the front portion of the apartment, and is not disclosed to the eye of the casual visitor. Although the part of this plan as carried out at the rear is new, the front portion is built where an old single house was located (the service wall of the latter extending back about as far as the present location of the maid's bath), and between the same party walls, although all the interior arrangement and the front of the building as they now appear are of new arrangement and construction.

This plan might be directly compared with the Chicago apartment, shown beside it in Fig. 27. The latter is, of course, placed on a lot of practically twice the width, with a portion of one wall only—the right—being a party wall. The lot is wide enough so that windows down the other side permit light and outlook for the major rooms, while the service por-

tion of the building, placed down the right side, is lighted from a well or court at the right.

The length of this plan is actually far less than the other—about half—and it appears even less in comparison. Much apparent and actual length is saved from the fact that the lot was wide enough to be laterally divided into approximate thirds, the right hand third being given to the service portions, the next and larger third in the middle to the master's sleeping and living rooms, and the final narrower left hand third to the open light and air space.

This apartment contains the same number of rooms as the Boston plan last noted (excepting only that it has no library), the dining room taking its place across the front of the lot, while its area is more than supplanted by new and important units, the two "porches" or enclosed rooms that appear on both front and rear. The service stairs are exposed to the open air—a treatment generally found in this section—and the greater freedom and space given to halls, closets and staircases indicate the less crowded and more suburban character of the problem, as well as the less restricted point of view from which it was considered by the designers.

That this is not an unusual but rather the customary development of a lot of this type is easily seen from the other plans of Chicago apartments that are here reproduced. Their principal points of difference are to be found in the fact that the lots may be a little wider or narrower, in recognition of which the sides may have more outlook, or less, in the latter ultimate decrease, being fitted in between party walls, as would be the case with any Eastern city apartment. With the exception of the differences just noted, the plans are so nearly alike that the one or two reproduced might serve as well for any of the others, depending merely on minor variations of unimportant details.

The plan in Fig. 29 is on a narrower lot and built to slightly less depth. It also contains one less bedroom, but except that it covers the entire lot in width at

the street front, it differs substantially little from the general arrangement of the Chicago plan first mentioned, Fig. 27. There is still less difference between this plan (Fig. 29) and the plan of the apartment next door, the façade of which is shown in Fig. 30. The plan of the latter extends more fully to the lot line at the left, being two rooms wide across the rear, with a small light court, occurring back of the staircase, lighting it, along with the hall corridor and the principal bathroom which opens off the hall in front of the rear bedroom.

These arrangements remain much the same. Indeed, given the two-room width upon the street face, and making one of these rooms the dining room, it naturally follows that the kitchen and other service dependencies must extend to the rear of this room; just as the master's portion and bedrooms must lie behind the front living room, on the slightly larger half of the lot. Most Chicago planned apartments of one apartment to the entire lot width follow this general arrangement, the lot being thus divided into two sections of uneven width down its length.

This remains true of even the wider lot shown in Fig. 35, where the apartment still covers the whole floor area, although it has three rooms rather than two rooms now upon the street, the third room being a library, and the rear portion containing both an additional master's and servant's bedroom and more space in and around the entrance hall. In Fig. 32, however, we find a difference existing in this type arrangement. This building fills the entire lot between party walls, the lot being of the approximate width of the building last mentioned. The lot has here, however, been divided laterally into two apartments, with the result that it has become necessary to locate the servant's quarters in the middle of the length of the plan from front to back, and placing the master's bedrooms at the rear, much as in the Boston plan, Fig. 26. The arrangement, nevertheless, still contains many interesting details more characteristic of the Chicago than the Eastern plan method, as is obvious by comparing the front and

rear portions of the plan with the other examples that accompany this installment.

In all these narrower and deeper plans it was of course impossible to escape utilizing a corridor of greater or less length to communicate with the rear rooms. The difference that exists in all these plans, however, from the older type mentioned at the beginning of this article, is that, in *every* case, the dining room is placed at the *front* in near relation to the living room, and the corridor leads only to the sleeping rooms, thus segregated in desirable privacy and given better exposure at the rear. Finally, in Fig. 33 is shown a plan somewhat similar to the last, in its general feature, but more crowded—and perhaps more commonplace—throughout. It is certainly less individual and expressive of the Chicago type of plan than any of the others reproduced; and it should also be noted that it suggests a direct relationship to the double-width apartment house plan of T shape, with centre extension at the rear, a type that we will later be able to study at greater length. This latter plan, as well as all the others except Fig. 26 and 32, have one or more doorways to shut off the long corridor to the rear sleeping rooms from the front living portion of the plan. In the two plans mentioned the same effect of seclusion for the sleeping rooms was obtained by “offsetting” the corridors instead.

One of the principal differences between all these plans and the regular type of Eastern apartment is not perhaps at first evident. It will only appear when the observer notices the quite different grade arrangement of the two types of building. In the photograph of the Boston example, for instance, it will be noticed that the existence of a basement is recognized in the façade, although that basement is obviously mostly below the level of the ground. It is nevertheless certainly not intended for living purposes, although it may possibly contain a few servants', or a janitor's living quarters.

The rest of its area can only be used for furnace, coal and store rooms.

But in the case of the Chicago exam-

ples illustrated, these conditions seem to differ in one important particular. The story just above the level of the street is set lower down, with less opportunity to provide light and air to the space beneath,—that could only be used as a cellar at best. The street floor of any apartment building is of course recognized to be of somewhat different arrangement than the upper stories,—although we have generally provided for our information only a “type floor plan,” of an upper story, that contains for us no exact knowledge of the details of arrangement of the first floor hall and entrance. We merely recognize that some readjustment of the “type” floor plan must be made upon that story, and generally it does not require much imagination to discover a plausible arrangement that will allow of the approach to the main elevators and stairways, that alone appear upon the upper floor plans.

But in these Chicago apartments the whole lower floor is, from the point of view of Eastern custom, wasted. From the Eastern point of view it, too, should contain an apartment, omitting probably one room in order to provide space for the hallway to the elevators,—and the heating and storage spaces would in turn be placed in a lower cellar story, largely or entirely below the level of the street grade. Yet such is not the middle western custom. Not only that, but it is evident that these Chicago apartment house owners do not belong to the same heartless and boweless race as their eastern compatriots,—they have at least some respect for the humanities and are even prepared to give some regard to the future growth and progress of the race,—for behold it, there plainly lettered, on the basement plan in Fig. 32, these significant words—“Baby Carriages”! Evidently they have a long eye toward the future, these Chicago apartment house owners; they are looking forward to other tenants, for future apartment houses, and are probably firm believers in the adage “Once an apartment house resident, always a resident in apartments,” and thus prove their belief by providing the essential conveniences for being “to the manner born”!



MAIN ENTRANCE TO ADMINISTRATION BUILDING—
EASTERN STORE OF SEARS, ROEBUCK & CO., PHILA-
DELPHIA. GEORGE C. NIMMONS & CO., ARCHITECTS.

The EASTERN STORE of SEARS, ROEBUCK & COMPANY ~ AT PHILADELPHIA ~

GEO. C. NIMMONS & CO., ARCHITECTS

By George C. Nimmons

[At the National Architectural Exhibition, in Washington, D. C., last May, held by the American Institute of Architects in connection with its annual convention, the gold medal for industrial design was awarded to George C. Nimmons & Company on the strength of this group of buildings, known as the Eastern Store of Sears, Roebuck & Company. The architectural features that lend interest and distinction to the buildings, differentiating them from customary works of industrial engineering, are simply and candidly achieved merely by giving an urbane, instead of an illiterate, expression to structural units. They are not applied ornament, adding fruitless cost to utilitarian buildings. Mr. Nimmons, in this and in other industrial plants, has made original contributions of value to industrial design, a branch of architecture in which notable progress is being made. A fuller exposition of the considerations which influence his design will be found in a series on "Modern Industrial Plants," which he wrote for THE ARCHITECTURAL RECORD, in the issues from November, 1918, to July, 1919.—Editor.]

PUBLIC interest at the completion of the construction of an important group of buildings usually centers around the answers to such questions as: What is their construction and how long did it take to erect them? Why are the buildings arranged as they are? Why do they look as they do? How is the mail order business of Sears, Roebuck & Co. conducted in these buildings, and how is it possible to operate economically and successfully over such vast areas of floor space?

The Philadelphia store is the latest of several erected by Sears, Roebuck & Co., at important distributing centers. Philadelphia was selected as the most advantageous site for prompt and economical delivery of goods to customers in the Eastern territory, and for the additional reason of relieving the Chicago store of the congestion arising from increased business.

The principal requirements which formed the basis of the problem to be solved were:

1. Buildings to accommodate at first an annual business of \$50,000,000 with complete provisions for greatly increasing this capacity in the future.

2. The proper location of the buildings on the site, consisting of forty acres, with proper railroad connections.

3. The adoption of the most economical fireproof construction and the determination of a plan, arrangement and design for the buildings best suited for the most direct and efficient handling of goods.

4. A simple inexpensive treatment of the exterior of the buildings that would meet with the approval of the owners and which would be appropriate and attractive enough, in the opinion of the Philadelphia Art Commission, to occupy this site on one of the city's most important boulevards.

5. Proper provisions for the health, comfort and welfare of the employees.

6. And finally, the very important requirement of including in the new store all of those features and improvements that had proven most successful in the old stores and the omission of all those which were unsuccessful or which had become obsolete.

After the site was secured a systematic study of preliminary plans for the new plant was made, over a period of about six months; and all departments

of the firm that could contribute any information were consulted. Seventeen different kinds of arrangements and plans for the buildings were prepared, and by a process of elimination and addition the final plan was built up and adopted.

This occupied the time up to August 24, 1919, and one of the requirements was that the new plant should be completed and in operation one year from the Autumn, so as to be ready to supply the following Christmas trade. The feasibility of this depended first upon the completion of the working drawings in an unusually short time. Work on them was accordingly started August 24, 1919, and completed, including the specifications, by September 15, a period of about three weeks. Bids were then taken and the contract let on the basis of these drawings and specifications, on October 10.

The kind of contract let was one with a fixed maximum limit of cost guaranteed by the contractor and a provision whereby the owner and contractor were each to share in any savings that might be made below the maximum contract price. On account of this form of contract, the architects maintained an auditing department, which audited and checked in detail all labor and material of the buildings.

Work was begun immediately, and the buildings were occupied and the operation of the plant was started the following October 18.

The plant consists of the merchandise building with a ground area of 119,000 square feet, basement and nine stories high, in which all the goods are handled, an office building of 31,650 square feet ground area, six stories and basement high, and a power plant of 19,270 square feet ground area. In addition to this, there are other minor buildings of no special interest.

The frontage of the buildings on the boulevard is 780 linear feet, and the aggregate floor area of all stories in the main buildings is 1,592,500 square feet, and their cubical contents 22,088,101 cubic feet.

The foundations consist of 529 concrete caissons down to rock, supporting 4,766 concrete columns in the different stories, making a total length if placed end to end of thirteen miles. There were nine million brick used, 138 thousand barrels of cement and eight and one-half million pounds of reinforcing steel.

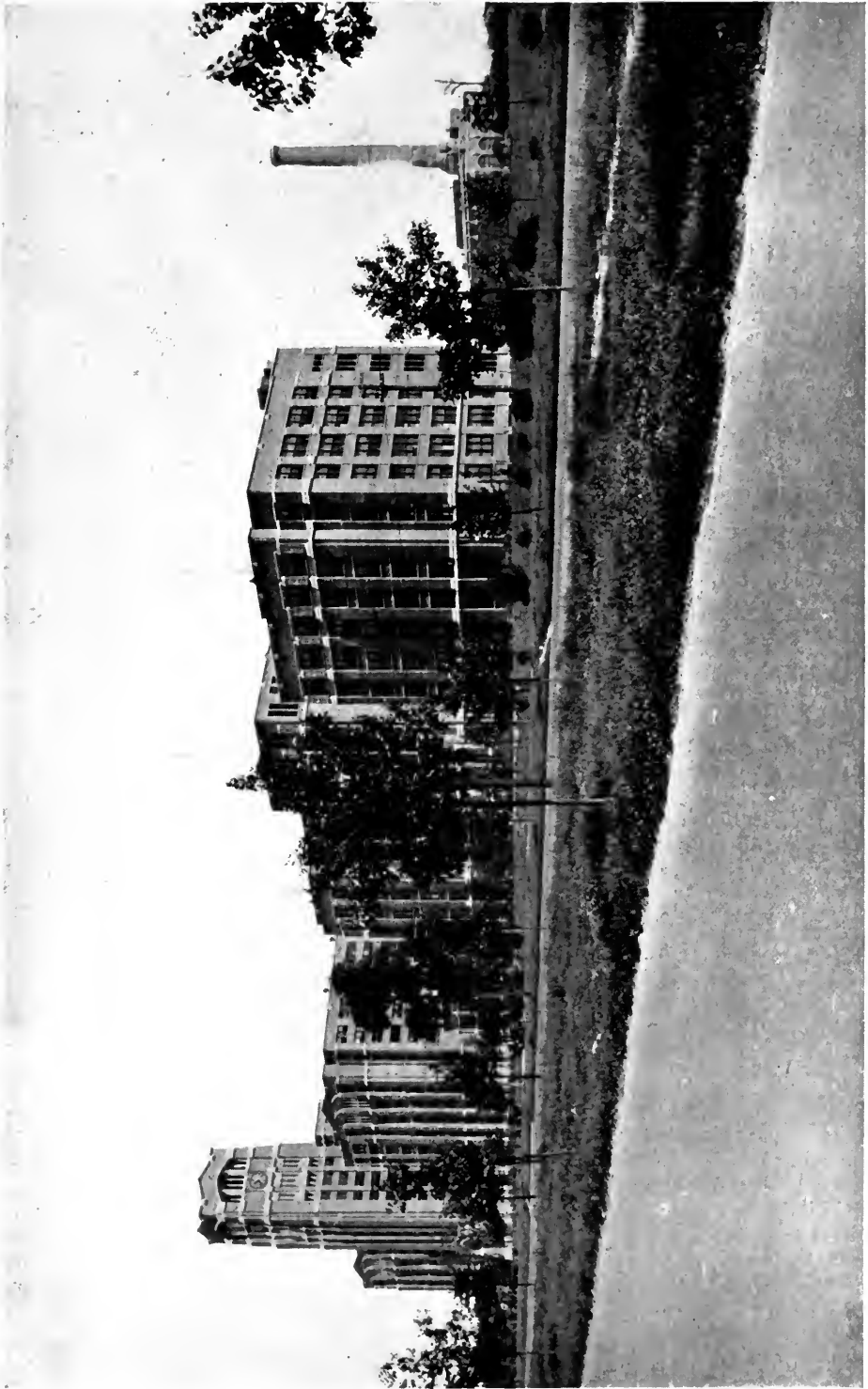
The type of construction is strictly fire-proof throughout. The cantilever flat slab system of reinforced concrete was employed in the floors and columns; the walls were of common brick, faced with dark red face brick and trimmed with gray terra cotta which has blue backgrounds where ornaments occur. Wooden window frames with sliding sash were installed, except where fireproof ones were required, because of the ease with which they can be opened for ventilation and cleaning, and their greater freedom from cracks and openings which admit dust and cold draughts. The columns are spaced twenty feet apart each way and carry a live load of two hundred pounds per square foot on the floors of the merchandise building, and a lighter load in the office building. This uniform spacing of columns, both ways, is economical in construction and also makes it possible to change fixtures and equipment in the buildings from any pair of columns to any other pair without cutting or alteration.

Anyone having had important building construction to do during the years of 1919 and 1920 will probably never forget the unusual difficulties encountered through lack of efficiency and control of the craftsmen and laborers, delay and stoppages of transportation, scarcity of material, and the numerous strikes of the unions. There probably never was a time when building operations were so hampered and interfered with as they were during that period, although when work was resumed after the war it was generally assumed that workmen would be glad to return to their accustomed pursuits.

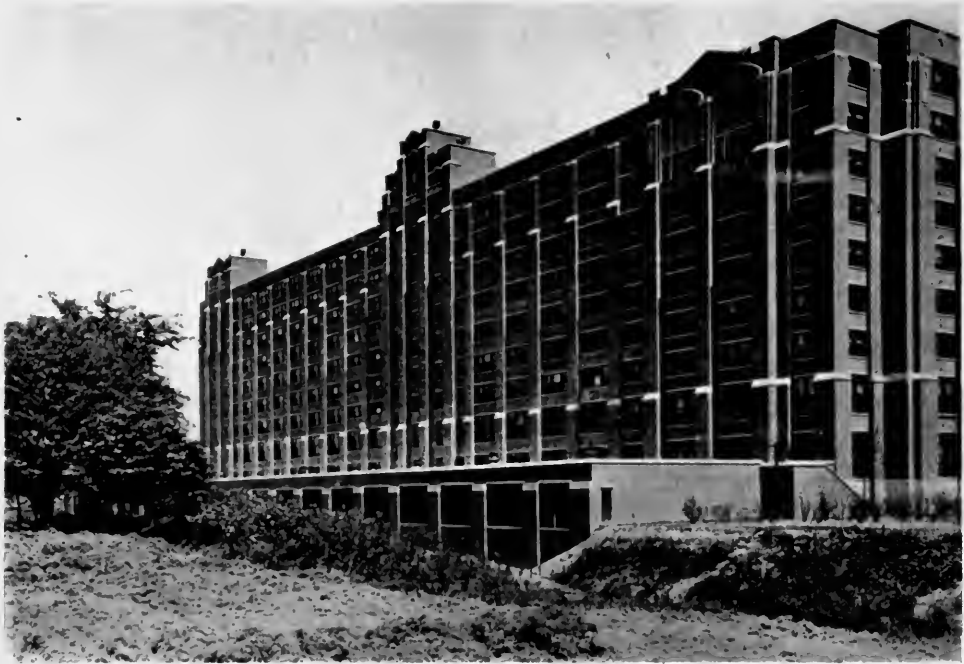
The very opposite of what was generally expected took place. The performance of the customary duties of an architect in making drawings, letting contracts,



GENERAL VIEW—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA. GEORGE C. NIMMONS & CO., ARCHITECTS.



GENERAL VIEW FROM ROOSEVELT BOULEVARD—
EASTERN STORE OF SEARS, ROEBUCK & CO., PHILA-
DELPHIA. GEORGE C. NIMMONS & CO., ARCHITECTS.



SIDE VIEW OF MERCHANDISE BUILDING—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA.

George C. Nimmons & Co., Architects.

and supervising the construction in the usual orderly fashion was easy, compared with the unusual services demanded of him at this time to safeguard the owner's interests, and in assisting the contractors to place contracts, secure necessary material, unblock transportation, and promote and expedite the work.

On this group of buildings ten men were required in the field to perform properly the duties of supervision and control by the architects. On account of the existing labor conditions and the great speed at which the construction work was obliged to go, the greatest possible vigilance and care were required to prevent accidents or collapse in the concrete work which might ruin the building and kill the workmen. At one time in the construction work, things were swinging along at the rate of a whole story of the merchandise building in a week. In order to facilitate supervision of the work and reveal at a glance a correct idea of its progress, a system of

colored charts was prepared and hung on the walls of the superintendent's office to indicate every day the exact time, location, and amount of the construction of every part of work done. This was a great safeguard against accidents such as are caused by removing the forms of concrete before it is set.

Diagrammatic charts were also completed at short intervals to show the amount of work done in relation to the amount of money paid from time to time.

On the first of May the carpenters struck for higher wages, and every trade union went on strike after that in their turn, so that during part of the summer there never was a time when all of the trades were working at once. In addition to this the weather man had produced one of the worst winters for outdoor work in the history of the Philadelphia weather bureau.

However, when the 18th of October, 1920, arrived the buildings were com-



MERCHANDISE BUILDING—EASTERN STORE
OF SEARS, ROEBUCK & CO., PHILADELPHIA.
GEORGE C. NIMMONS & CO., ARCHITECTS.

pleted sufficiently for occupation and for the starting of business.

The completion of this work in this time, in the face of all these difficulties, could never have been accomplished if it had not been for the unusual ability

to orders and their willingness to respond with renewed energy in surmounting difficulties, were the outstanding features of the spirit manifested throughout the work.

Why are the buildings planned as they

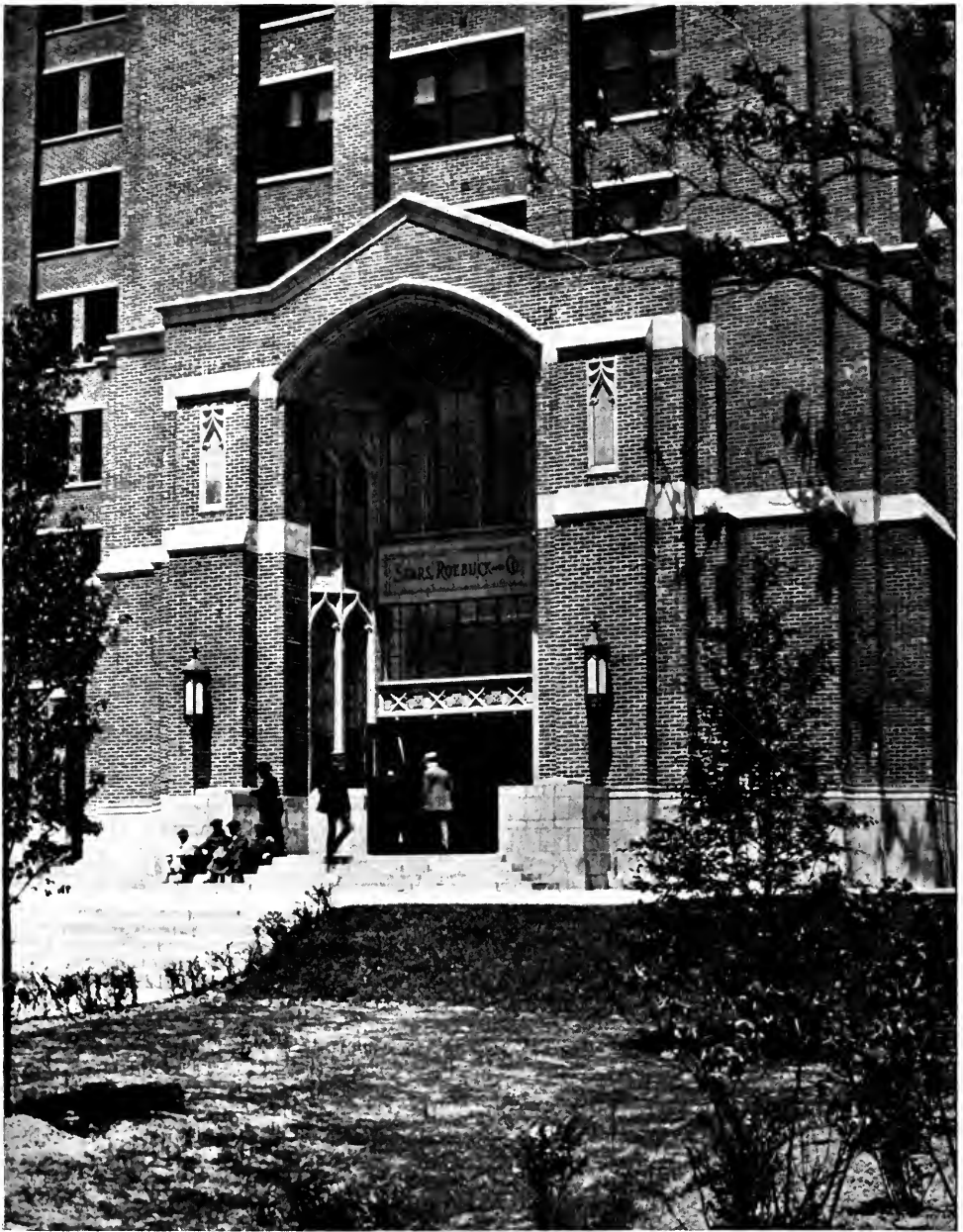


TOWER OF MERCHANDISE BUILDING

of the general contractor and his subcontractors, and of the men at the head of their organizations. From the first, all work was done strictly in accordance with a scientific and comprehensive program, which provided for the organization, the method of operation and the time allotted for the completion of each stage and portion of the work. The cooperation of all, their faithful obedience

are? Among the important considerations which determined the plan and arrangement of the buildings are the demands of the business transacted, the conditions of the site upon which they are built, the railroad and truck service and the very essential provision for ample future growth.

The mail order business is merchandising on a large scale; sales are made ex-



MERCHANDISE BUILDING—EASTERN STORE
OF SEARS, ROEBUCK & CO., PHILADELPHIA.
GEORGE C. NIMMONS & CO., ARCHITECTS.

clusively through the medium of catalogues circulated among the customers, who order from these catalogues by mail.

To the farmer or dweller in the small town or village the business offers advantages and conveniences similar to those offered by the modern department store to the residents of large cities. About ninety per cent. of the orders can be delivered to his door by parcel post.

The business of one of these plants consists of receiving the letter orders from customers, which come every day by the truck load, gathered up from the different depots in mail sacks. The letters are opened usually by machinery by the hundred. They are then read and indexed, and tickets are made out for all goods to be shipped; these tickets are sent by pneumatic tubes to the proper departments. On the tickets so made out, are indicated the departments which handle those goods, the route and manner of their shipment and, further, this very significant thing—the exact time at which each article is to arrive in the shipping room. This important feature in the handling of goods, prevents unnecessary congestion and results in distributing the handling of orders evenly over the entire period of the working day. The operation of the plant therefore becomes a uniform, steady activity which brings about maximum efficiency while at the same time preventing spasmodic speeding up.

The transmitting of orders from the departments to the shipping room is largely mechanical. If it were not, the mail order business could not be conducted in these large buildings over such vast areas of space without causing great delay in shipment and largely increased cost in handling.

The mechanical means employed for filling orders of customers, in a general way are as follows: When a ticket calling for goods to be shipped arrives through the pneumatic tubes in any department, the goods are taken out of stock and delivered to the nearest spiral chute. These goods, except the very large ones, slide round and round in their descent in these spiral chutes until they

are discharged at the bottom onto the conveyor belts, which take them to the sorting aisles. They are sorted several times in a very simple way which results finally in their arriving at the particular rack where goods for the customer are assembled, as they arrive from the different departments of the store.

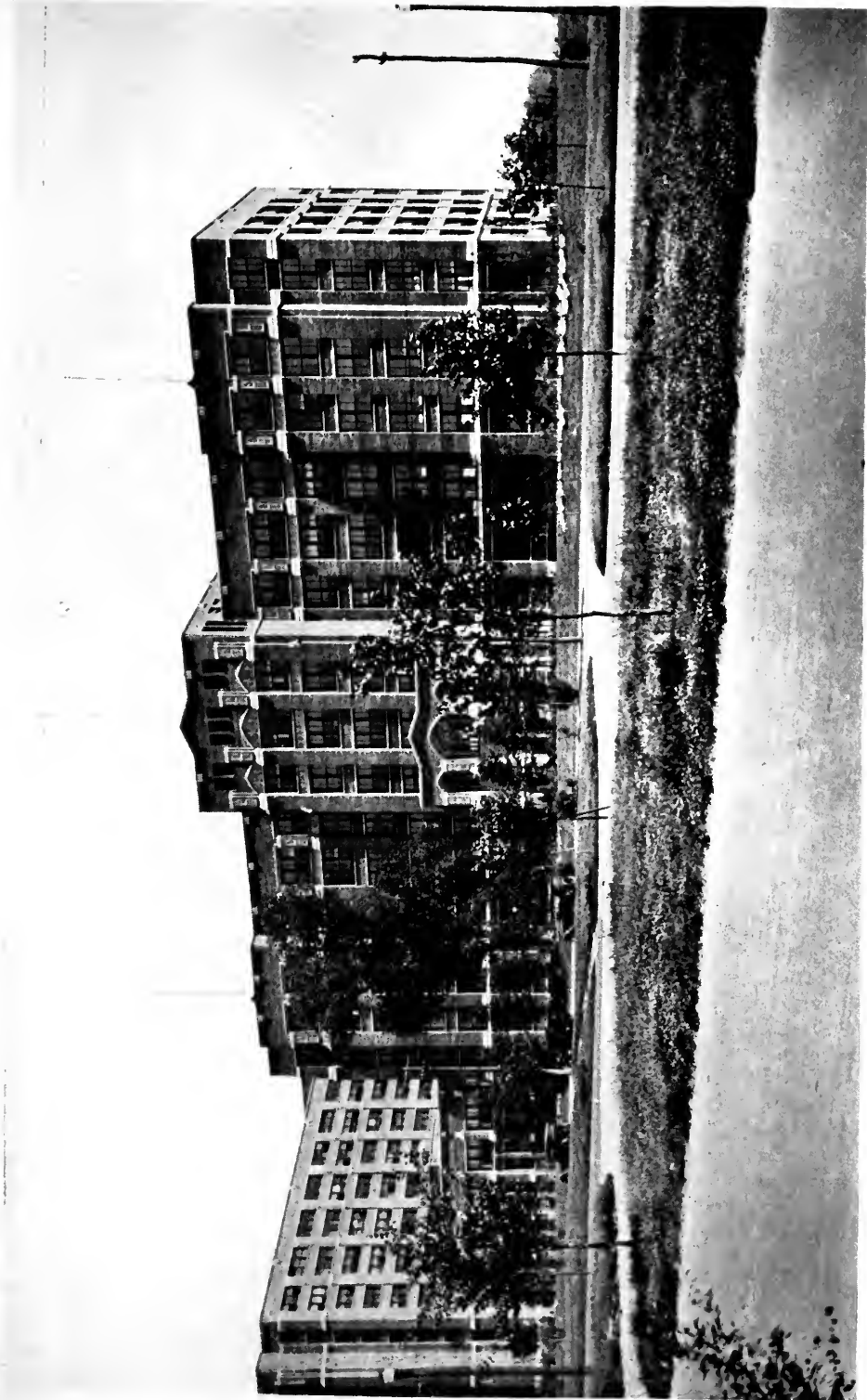
When all of the goods for any one of the customers have arrived in the various receiving racks made for that purpose, they are gathered together and packed in a bundle or box. The Post Office Department maintains a post office in the plant which furnishes canceled stamps to be affixed to the packages on the spot, thereby obviating the necessity of going through the city post office at this end of the shipment. Large or heavy articles go by freight or express.

This system of handling goods by means of conveyors, chutes, etc., was the chief factor which had to be taken into account in planning the merchandise building; in studying the arrangement and plan of the entire group of buildings, this building was the most important one and its requirements had first to be provided.

After considering the different ways in which the four big rooms of this building could be arranged it was decided to put them together in a "U" shape plan, because this gave the shipping room the most central location for direct action of the conveyor belts, also the best lighting for the rooms and the most advantageous arrangement for future extensions. The four rooms each contain 25,000 square feet in each of the nine stories and basement, and in addition, there is the connecting space of the tower and the train shed. The dotted lines on the plan indicate future extensions.

The office building was placed on the right so as to give the clerical employees the view and good light of the boulevard; besides, this situation is a convenient present location and will also be a central one when additions to the plant are completed.

One feature of particular importance in the plan of this building was the placing of elevators, stairs, toilets, etc., in



ADMINISTRATION BUILDING—EASTERN STORE
OF SEARS, ROEBUCK & CO., PHILADELPHIA.
GEORGE C. NIMMONS & CO., ARCHITECTS.



WOMEN'S REST ROOM—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA.
George C. Nimmons & Co., Architects.

the rear of the center, so as to have uninterrupted light space for office use for the entire remaining area of the building. This is a distinct advantage, because the office space may then be divided, or the whole space may be used as a single unit, as traveling belts and conveyors may extend through the entire length without interruption.

The mechanical work was handled by Martin C. Schwab, consulting engineer for Sears, Roebuck & Co.

The power house provides heat and light, power for all mechanical ventilation, elevators, pumps and the pneumatic tube system, refrigeration for the drinking water circulated through the store, and for the kitchen cold storage. Space was provided in the building for the additional equipment needed for future additions. At present there are installed six 500-horsepower return tube boilers with complete mechanical stokers and mechanical means of handling coal and ashes. All discarded boxes and wooden crates are

ground up in what is called the "Hog Machine Room," adjoining the basement of the merchandise building and blown back through a pipe to the boilers and consumed without further handling, as fuel.

In the engine room there are now installed one 125, one 350, and one 750 kilowatt generators, and one 1500 kilowatt turbine driven generator. All of the buildings have mechanical ventilation by which washed fresh air is provided for the different parts of the buildings according to the number of people occupying them. Each toilet fixture is also individually ventilated. All pipes, wires and conduits are run underground from the power house in a system of underground tunnels to the merchandise and office buildings.

The remaining question proposed for an answer was: Why do the buildings look as they do? The feature which dominates the group is the tower, and that should be accounted for first. The



REAR VIEW—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA.
George C. Nimmons & Co., Architects.

reason for this tower is not at all, in the first instance, for its ornamental effect but for the very essential requirement of providing a place for the sprinkler tanks. A low rate of insurance can be secured only when a building is sprinklered and in this case the lowest rate given for this class of building was granted by the insurance authorities, all possible safeguards against fire having been provided.

Although the insurance underwriters do not require the water tanks to be enclosed like these in this tower, they do require that they shall contain a certain amount of water, be placed at a certain height above the buildings and be protected against freezing. In this case there were required four 9,000 gallon pressure tanks and one 80,000 gallon gravity tank. Inasmuch as these tanks, with their enormous weight of water, had to be supported by heavy fire-proof construction, the additional expense of enclosing their supports in four walls where they extended above the roof, and thereby making a fourteen story tower at the main entrance, was relatively small compared with the benefits secured in increased office space, sav-

ing in maintenance of the tanks and in the appearance of the whole group of buildings.

The dominating tower has a very essential function to perform besides being a clock tower and an ornamental feature of the façade; had these tanks been left exposed above the buildings, as they generally are, they would have been so prominent and so ugly in the long distance views from the boulevard that they would have seriously damaged the fine appearance of the whole group of buildings.

The next most noticeable feature of the exterior is that the great wall surfaces are broken by pilasters which appear like buttresses between the windows. The reason for their presence is that it was desirable to keep the inside of the walls as free as possible from large projections of columns or piers, so as not to interfere with desks, benches and equipment which were to be placed next to the windows. The columns therefore, which form the skeleton structure of the outside walls were made to project on the outside of the walls instead of on the inside. As these columns grow smaller as they extend upward, the

natural form to give them was that of a buttress.

If one is not trying to invent a new style of architecture, the obvious thing to do at this stage of the design is to select that style which seems best suited for expressing the structure. As there was no reason structurally or otherwise for a large cornice or for carrying through strongly marked horizontal features and as the walls would be much more economically built by terminating them with a simple coping than with a cornice, the choice of a style naturally fell to the Gothic. While they had no industrial buildings such as big mail order houses in the Middle Ages, and while reinforced concrete was never even heard of, their buttress construction is correctly expressive of the construction of these buildings, the use of their wall copings are just as appropriate and their pointed arches just as applicable as round ones. This style of the Middle Ages was therefore employed and the result is Gothic architecture applied to a group of modern industrial buildings, or "Industrial Gothic," as some have applied the term.

In applying this style of architecture, no effort was made to find ready made features in old Gothic buildings and plaster them on wherever they would stick. On the contrary, an effort was made to mould the important parts of the buildings into shapes harmonious with this style, and to flavor the detail with a distinct feeling of modernity.

Terra cotta window sills and lintels (which had to be there for any kind of design), are employed in such a manner as to divide the building into pleasing proportions. Gothic tracery enriched with color is utilized in the terra cotta spandrels and entrance panels in such a way as to give interesting prominence to these features. The colors employed were gray for the tracery, blue for its openings or backgrounds, and dark grayish red for the brick.

In conclusion a brief description is given of the organization which operates this plant and the provisions for welfare work for the employees.

As soon as a decision was made to build this plant, work was started on selecting and building up an organization to run it. Shortly before the buildings were completed, about two hundred experienced men and women arrived from the other plants, mostly from the main plant at Chicago. These formed the nucleus of the new organization.

New employees were taken on as fast as they could be trained and assigned to their positions. The plant started to ship goods October 18, 1920, with about two thousand employees, a number materially increased by this date.

The welfare of the employees has always been given the most careful consideration by this firm at all of their plants. In an article in *The Architectural Record* for June, 1919, on the subject of "Employees' Welfare Work," a description was given of a decrease of fifty per cent. in labor turnover at the Chicago store of Sears, Roebuck & Co., attributed to the Personal Service work done there for their employees.

At the Philadelphia store the same policy has been pursued. The offices and working spaces are all well lighted and ventilated, and are in every case clean, attractive and sanitary places, well adapted for the work to be done. In the office building there is a restaurant and cafeteria supplied by a kitchen, up-to-date in all its equipment, where lunches of clean, wholesome food are served at cost price. There is a smoking room for men and a rest room for women, and also a piano and phonographs for entertainment and dancing.

On the first floor there is a completely equipped doctor's office with physicians and nurses in charge, which takes care not only of accidents and illness, but also carries on a system of examination and care of employees that endeavors to prevent sickness.

When the weather is favorable, employees are encouraged to seek the outdoors for their noon hour, where an athletic field is provided for outdoor sports, and where there are also pleasant walks among the flowers, shrubs and trees with which the grounds are landscaped.

Cigliano, San Casciano, Val Di Pesa

By

Harold Donaldson Eberlein

CIGLIANO, near the little town of San Casciano, overlooking the Val di Pesa, is a singularly striking example of the fifteenth century Tuscan villa in that it retains all the characteristic features of *cinquecento* villa life and, with one exception, has experienced no substantial change since about 1415.

Late in the Middle Ages it belonged to the Bondi, and how much of a dwelling then was there, or of exactly what sort it was, we have no means of knowing. After the Bondi the Guidetti had it, and after them the Cinelli, from whom it passed to the Marchesi Antinori, who have owned it since the fifteenth century and still occupy it.

The change alluded to occurred in 1691, when the *limonaia*, or lemon house, which forms the southern boundary of the walled garden, had its façade adorned in the Baroque manner then in fashion. To balance this somewhat formal treatment of paneled and urn-topped walls, with Father Neptune, in a pebble and shell-encrusted niche, presiding over a fountain and the pool beyond, the garden front of the house was graced with a simple and unobtrusive Baroque pediment. Otherwise the villa retains its fifteenth century aspect intact.

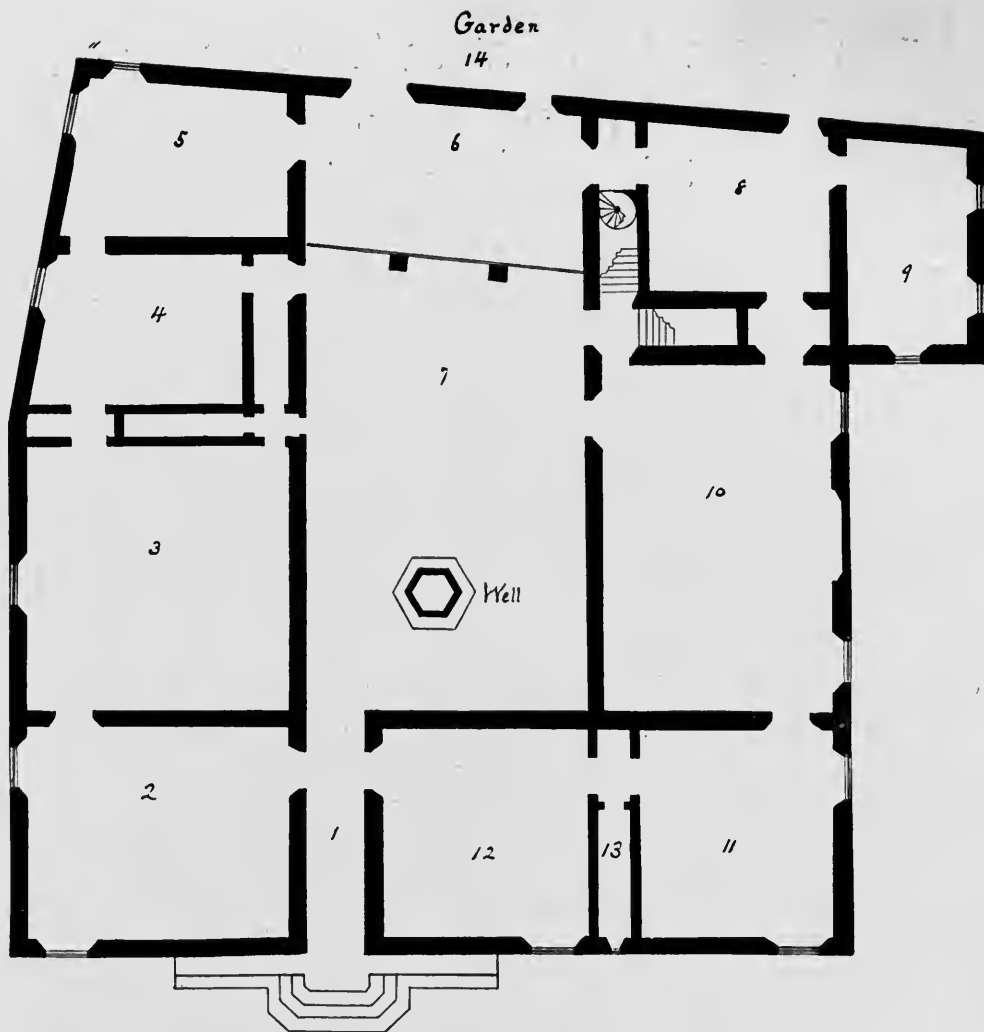
From the *portone*, or house door, of the north front, flanked by a *panca*, or low stone bench at each side of the steps—always an indication of early work—a vaulted passage leads into the irregular quadrangle of the stone-paved *cortile*. Here is an ancient well-head and, on the south side, a triple-arched loggia. The polychrome maiolica roundels with armorial bearings, set in the wall above the pillars, are by Della Robbia. From one of the illustrations it can be seen that

wires are so arranged that a canvas awning can be drawn across the whole *cortile* during the heat of the day.

The high-vaulted rooms on the ground floor are occupied by the family and also the first floor rooms on the garden front. The rest of the first floor is given over to the house servants and to some of the *contadini* who work on the immediately adjacent parts of the estate. This is quite according to the patriarchal, time-honored usage of the families who have always lived in their villas themselves, instead of renting them to others, and have preserved the traditional methods of household management, where everything is carried on under the immediate eye of the master.

At the west side, where the ground slopes abruptly away, is the great, vaulted *cantina* or store house, under the ground floor, where the oil and wine and other produce of the farm are put away. The stuccoed walls of the house are of that indescribable "Tuscan villa color" which is by turns grey, brown, buff or salmon, according to the light that falls upon it. The shutters are painted green and the window and door trims are of the customary *pietra serena*.

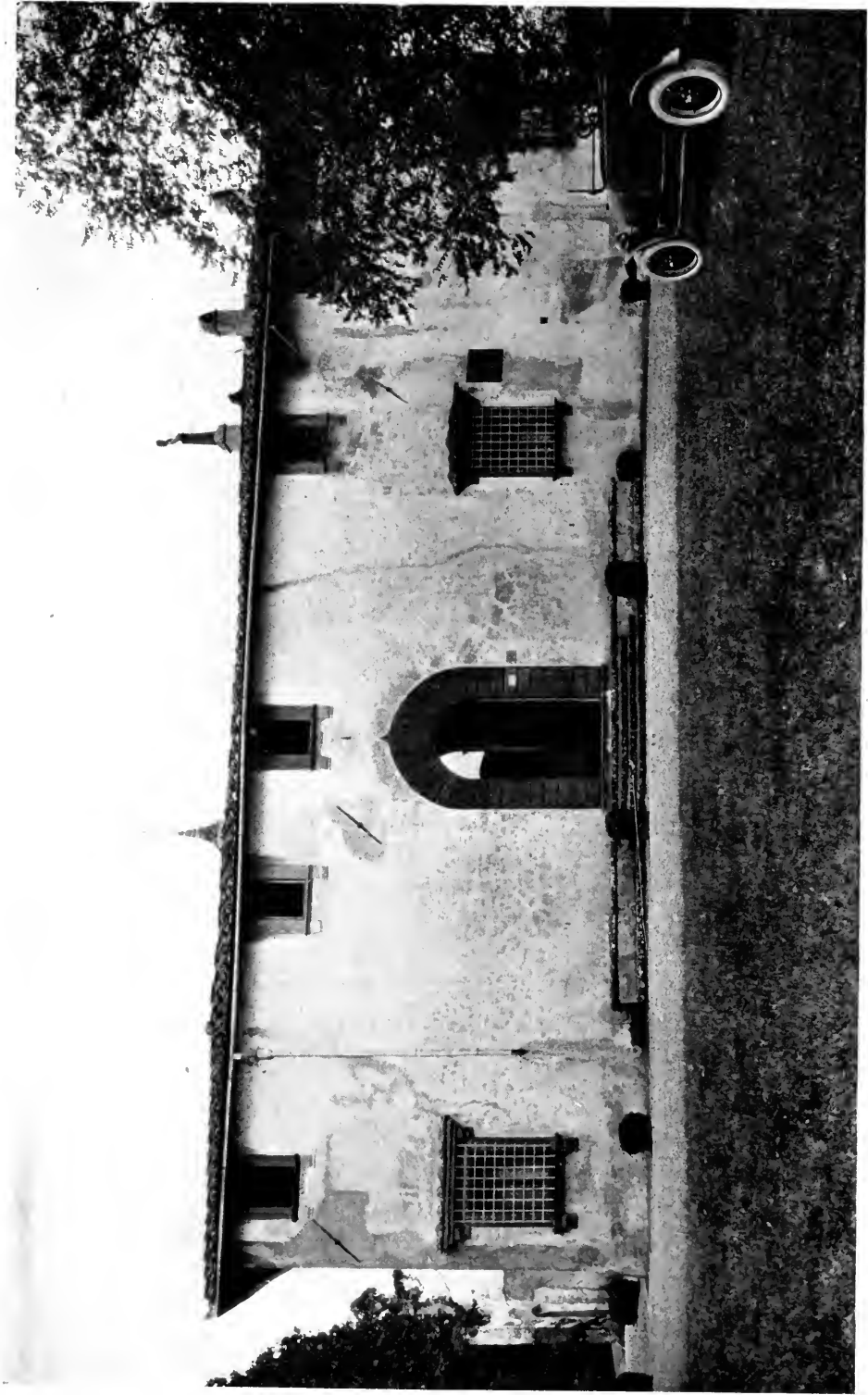
About seventy years ago the ancient geometrical lay-out of the garden gave place to the asymmetrical arrangement of a *giardino Inglese*. Nevertheless, the great pool, the walls, and the ingenious simplicity of garden practice, where rose beds are edged with strawberry plants and espaliered fruit trees grow against the side of the house, maintain the true Tuscan character of the enclosure, which constantly serves as a veritable outdoor living room for the family.



CIGLIANO, SAN CASCIANO, VAL DI PESA.

KEY TO PLAN:

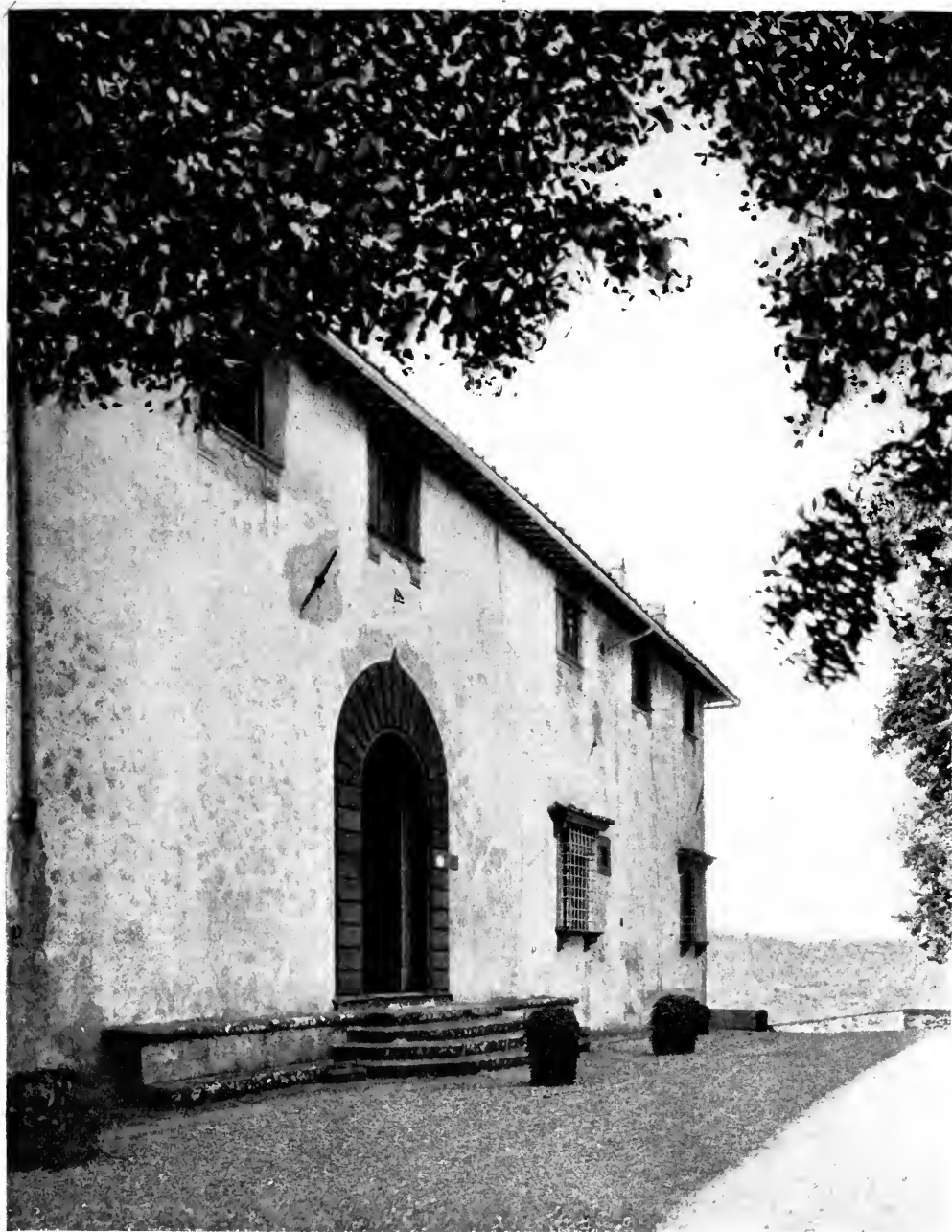
- | | |
|--------------------------------|------------------|
| 1. Hallway | 8. Dining Room |
| 2. Study | 9. Boudoir |
| 3. Bedroom | 10. Drawing Room |
| 4. Bedroom | 11. Bedroom |
| 5. Sitting Room | 12. Bedroom |
| 6. Loggia | 13. Bathroom |
| 7. Cortile—7a. Well in Cortile | 14. Garden |



NORTH FRONT—CIGLIANO, SAN
CASCIANO, VAL DI PESA, ITALY.



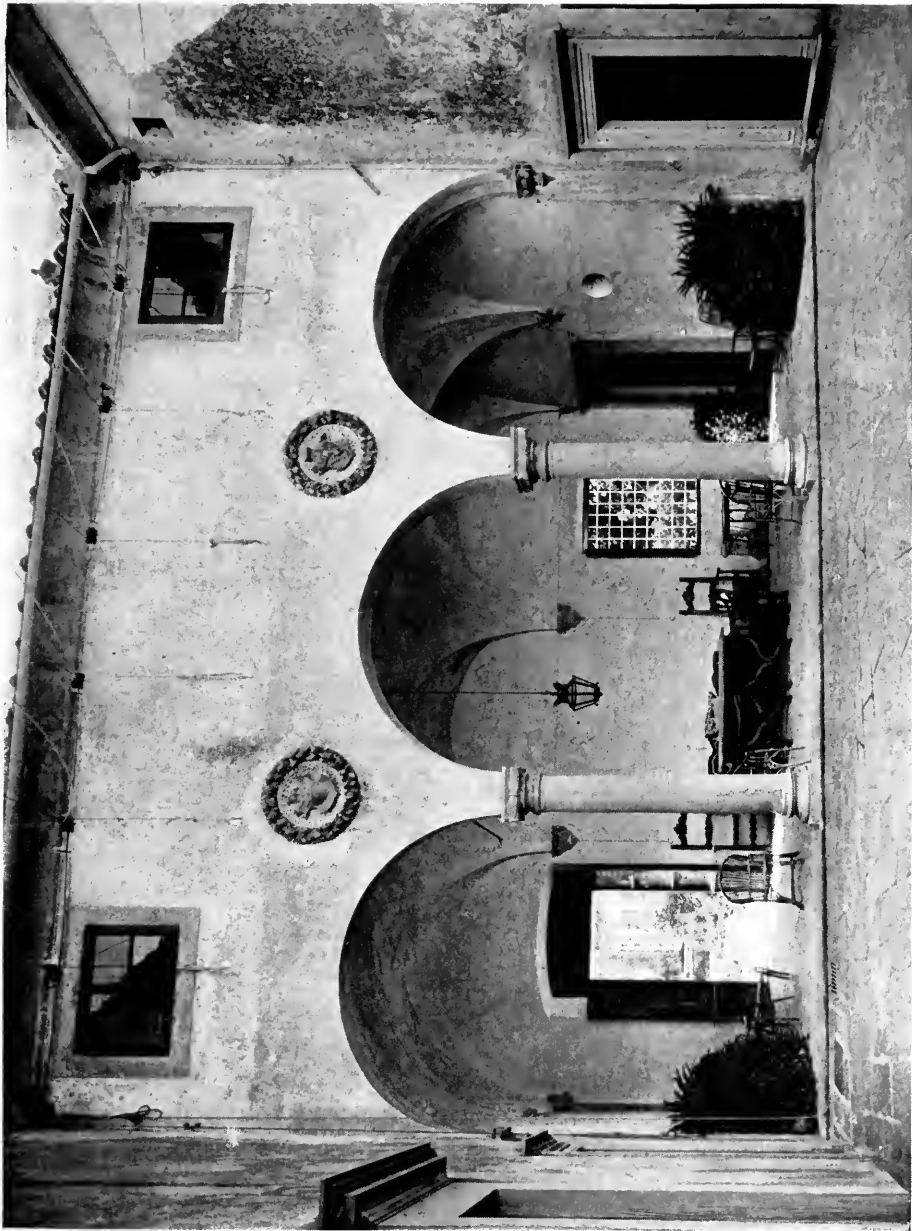
PORTONE-CIGLIANO, SAN CAS-
CIANO, VAL DI PESA, ITALY.



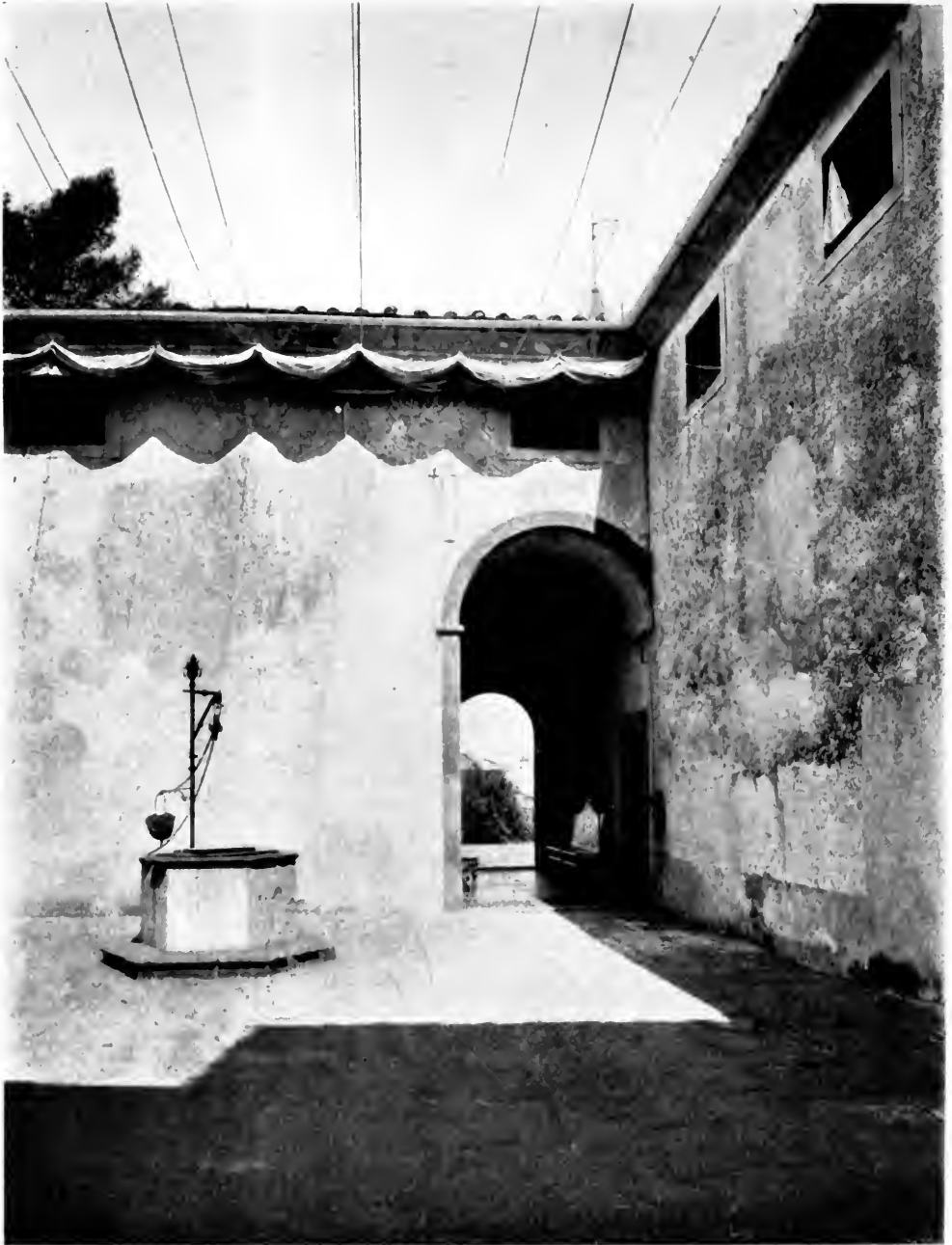
NORTH FRONT—CIGLIANO, SAN
CASCIANO, VAL DI PESA, ITALY.



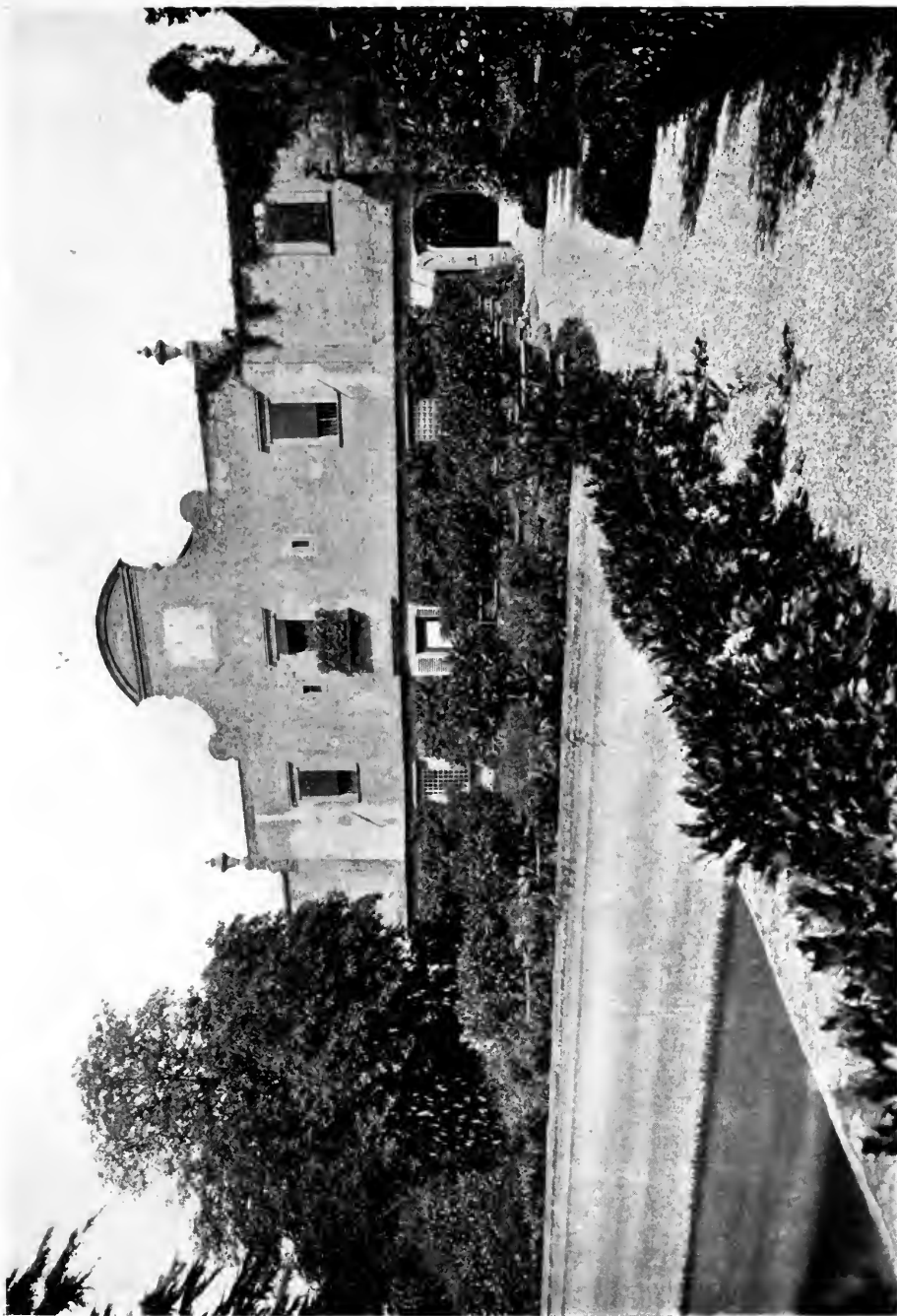
WINDOW IN LOGGIA—CIGLIANO, SAN
CASCIANO, VAL DI PESA, ITALY.



LOGGIA IN CORTILE-CIGLIANO, SAN
CASCIANO, VAL DI PESA, ITALY.



CORTILE AND ENTRANCE—CIGLIANO,
SAN CASCIANO, VAL DI PESA, ITALY.



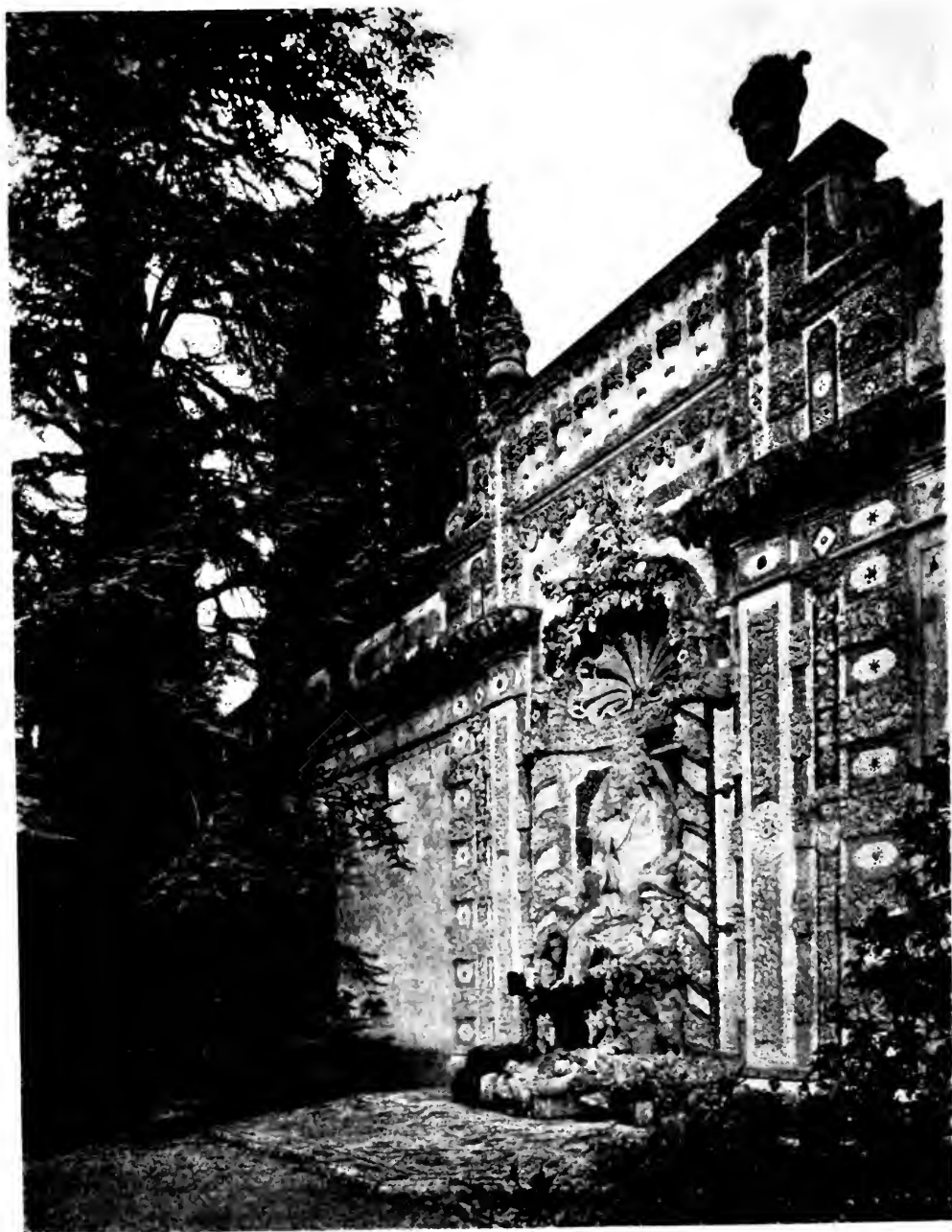
SOUTH FRONT — CIGLIANO, SAN
CASCIANO, VAL DI PESA, ITALY.



GARDEN DOOR (FROM WITHOUT)—CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.



WEST VIEW — CIGLIANO, SAN
CASCIANO, VAL DI PESA, ITALY.



FOUNTAIN IN WALL OF LEMON HOUSE—CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.



POOL AND LEMON HOUSE—CIGLIANO,
SAN CASCIANO, VAL DI PESA, ITALY.



MANTELPICE IN UPSALA
MANSION, GERMANTOWN, 1798.

The
EARLY ARCHITECTURE *of* PENNSYLVANIA
PART IX - MANTELPieces (Continued)



By A. LAWRENCE KOCHER

THE eighteenth century in Pennsylvania was essentially a period of wood craftsmanship, for it produced a domestic architecture which was adorned by the wood worker. This era witnessed the development of a group of joiners who were specialists in a branch or a detached phase of carpentry. The particular triumphs of these joiners consist of staircases, paneled and pilastered walls, and the chimneypiece. The chimneypiece was so inseparable a part of the domestic architecture that it is to be expected that an unusual and fond attention would be lavished upon it.

The mantel was notable for the variety of its design and for the uniform skill displayed in its workmanship. The remarkable variety of the form displays a fertility of imagination and a wealth of invention only possible when the fundamentals of an art are thoroughly understood and freely interpreted. It is, indeed, a very rare occurrence to find the same motive recurring in several instances, or even duplicated. The factory idea, involving quantity production of certain acceptable stock designs,—of doing the same thing over and over again,—did not appeal to the wood worker of the day. Having attained a success in the production of a mantelpiece, he treated it as the true artist does a picture. He avoided its repetition. Even in homes where there were eight or more hearths it is quite apparent that variety was held to be an unvarying requisite.

For instance, a glance at the examples of mantels illustrated in this issue will disclose a striking similarity within certain groups, but there is always a refreshing variety and an originality in the shaping of moldings and in the treatment of the enrichment.

It is by examining one of the subdivisions of architecture such as this, that we come nearest to discovering the mind of the builder. A sense of order and good proportion were his above all else; no detail was too minute to be given careful consideration; he left nothing to chance. He followed his rules of proportion, but always with a reservation,—for the precepts of handbooks were not accepted without question or interpretation. The system under which the artisan worked made invention possible and gave freedom to his efforts. In other words, he was not bound to a set of inflexible working drawings which hampered individual expression.

Quite different is our office system today! We now arrive at what we deem good proportion in the process of preparing preliminary sketches. Practically all decisions are reached indoors,—over the drawing boards. The shapes and sizes are fixed by full size details and by dimensioned drawings which are deliberated upon as detached parts. We separately consider a cornice, a doorway or a fragment of ornamentation. Our mistake is made in not reserving many of our conclusions until the time when these parts are erected, and then taking advantage of the action of the imagination under the stimulus of the actual setting.

The skeleton drawings which Andrew Hamilton prepared for the Old State House of Philadelphia were decidedly incomplete and left much to be determined upon at the time of the actual construction. It was in this manner, we are led to believe, that much of the worth while architecture of the Middle Ages and of the Renaissance was undertaken. It was Inigo Jones' custom to make a sketch, to which he appended the proportions of the design in writing at the side;

but he also supplemented this by revisions and additions as the building progressed. The deceptive quality of the rendered drawing was not known in his day and age; or, if known, its shortcomings were understood and consequently avoided.

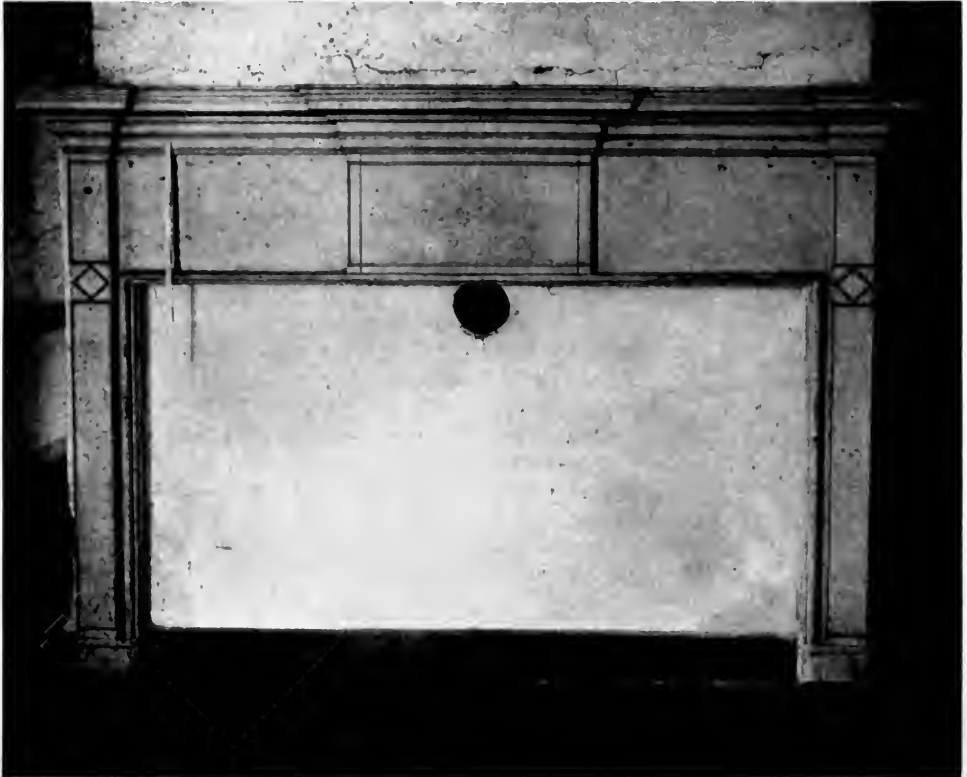
Perhaps the air of distinction which pervades much early work may be accounted for by this method of building. It certainly added to the spontaneity of the style and made the architecture less self-conscious than the creations of our offices today.

The chimneypiece in the early American colony was characterized by a decided soberness and an independence of treatment and by an almost complete absence of color. With all the apparent leanings toward Vitruvius and Palladio, there is little to convince one that the chimney-piece was influenced by the classical past. It is only in the free and reminiscent usages of cornice, frieze and pilaster that

we can detect an understanding of the canons of columnar architecture.

A country that is young might be expected to reveal some little barbarity in the matter of color, but, curiously enough, no such philistine lapse occurred in America. Color in interior wood decoration was eschewed as though by Puritanical or other religious precept. Perhaps this avoidance of color may be accounted for by a realization of youth and a fear of incurring the ridicule of the critical mother countries.

There are exceptions, to be sure. Instances where color was applied to wood are occasionally found, as at Linden Hall Tavern with its mantels and woodwork painted in a shade of grey-green. Blue tiles with biblical or conventional designs occur as fireplace borders in the districts settled by the "Pennsylvania Dutch," and there is an occasional bold contrast of material and hue revealed in the adoption



MANTELPIECE ON FIRST FLOOR OF SIR WILLIAM KEITH MANSION, GRAEME PARK, MONTGOMERY COUNTY.



BEDROOM FIREPLACE, CHESTNUT HILL, PHILADELPHIA.
Photo by Ph. B. Wallace.

of warm red mahogany for doors, wainscot caps and stair rails in conjunction with white woodwork.

There are several causes for the popularity of the low mantel during the latter half of the eighteenth century. The first was the tide of economy that swept over the colony as the despised English taxation increased; the second was the presence of shops of the building gild in Philadelphia which specialized in the manufacture and sale of the small mantel; third, the growing choice of lower ceilings; fourth, the decline in the fashion which favored paneled walls.

The earliest of the small mantels were little more than assemblages of moldings which framed the fireplace. The mantel shelf was absent in the opening years of the century, and when it appeared it con-

sisted of a narrow ledge supported by a group of bed molds, as at Old Valley Inn in York County; or it assumed the restrained appearance of the Lancaster example.

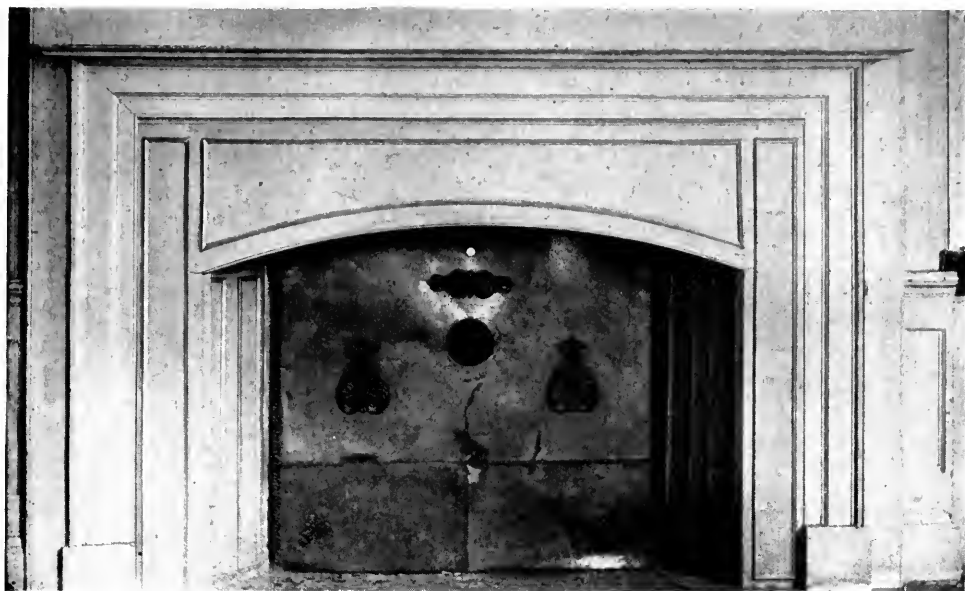
The specimen illustrated from the mansion of Sir William Keith at Graeme Park, Horsham, is very evidently not so old as the construction of the walls, which were reared in 1721-22. The reason for this supposition arises from the moldings, which are considerably lighter and greater in number than the robust membering which occurs elsewhere in this house. It is also quite different from the other mantels and has the characteristic shelf of the late century with the projecting center and ends, designed to receive the garniture of candlesticks and shelf-clock.



MANTELPiece IN L. D. WITHINGTON HOUSE, 136 QUEEN STREET, NORTHUMBERLAND.



MANTELPiece ON SECOND FLOOR OF "THE DUST PAN," BETHLEHEM PIKE.



MANTELPiece IN A HOUSE NEAR LANCASTER.



MANTELPiece ON THIRD FLOOR OF HOUSE AT 313 PINE STREET, PHILADELPHIA.
Photo by Ph. B. Wallace.

Before the Revolution a new fashion was introduced in the way of enrichment. Pilasters and projecting surfaces beneath the shelf were given interest by means of an overlay of patterned and incised cutting. The art of adorning surfaces with

rather similar bed room fireplace at Chestnut Hill, Philadelphia. In both these cases pilasters were omitted for the sake of simplicity. In both the mantel shelf is broken by a very scant projection, beneath which occur the enriched sup-



DETAIL OF MANTELPiece FROM A HOUSE NEAR MECHANICSBURG.

gouge work was evidently dear to the hearts of the Colonial joiner, for the idea was quickly developed and spread rapidly until mantel surfaces were covered with extensive interlacing ornament, occasionally diversified by carved rosettes, pierced decoration and oval spider web motives.

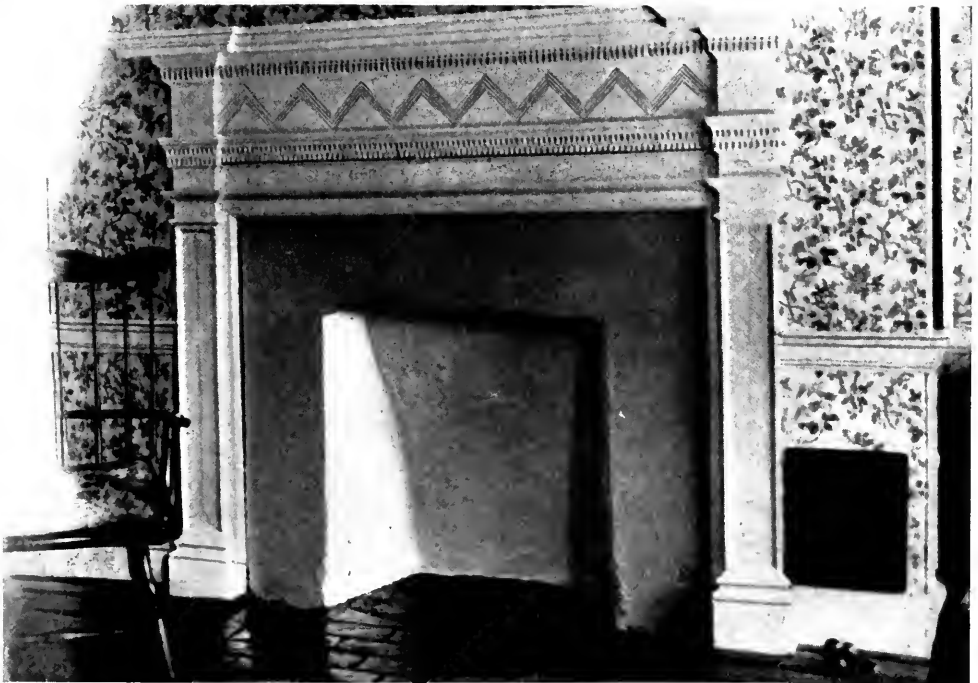
The simplest expression of this tendency can be seen in the examples from the third floor bed room of the dwelling at 313 Pine Street, Philadelphia, and the

ports. The shy beauty and charm of the two examples is made eloquent by the quiet restraint with which the ornament is used.

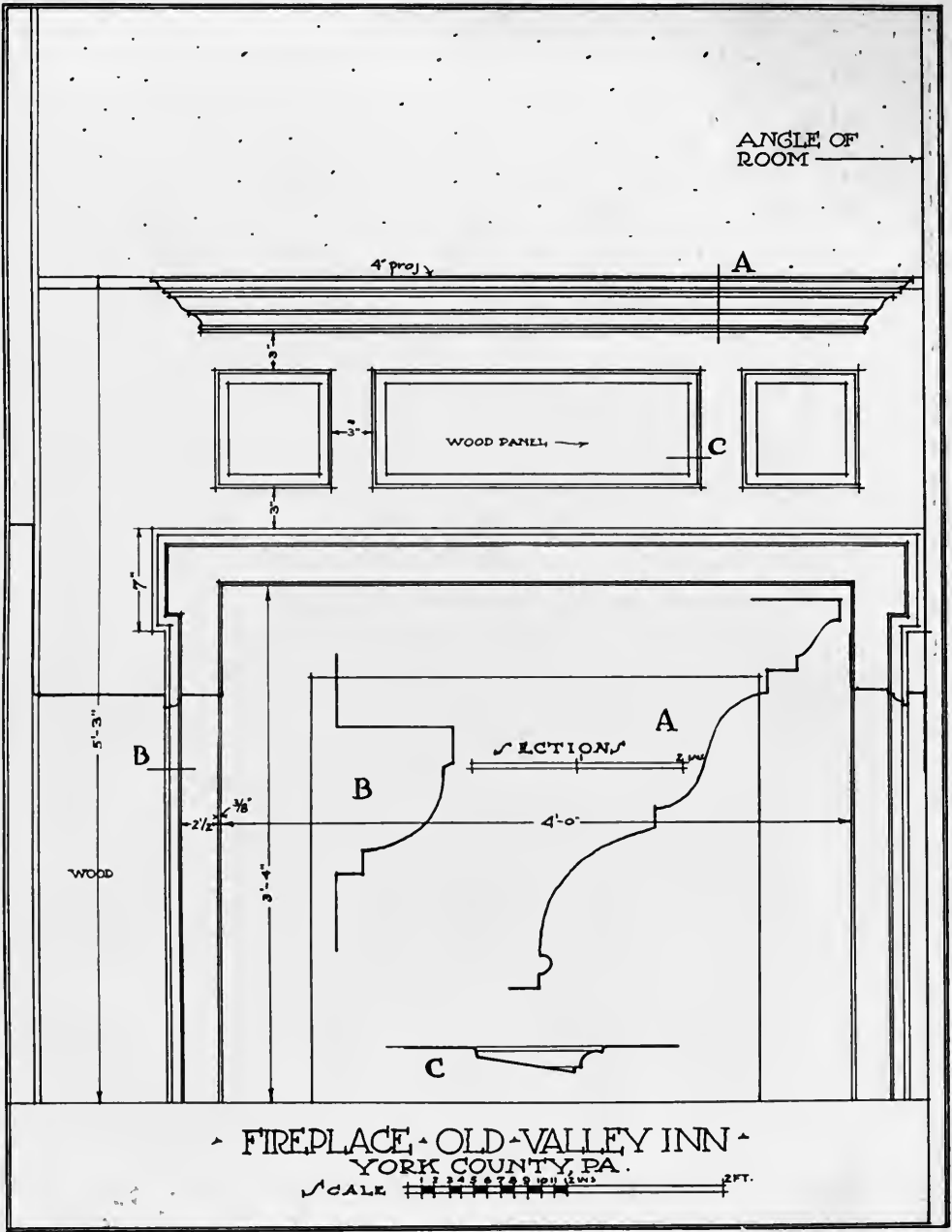
The mantel in the Withington House at 136 Queen Street, Northumberland, has flanking supports and an elementary version of the gouge cutting. The conventionalized cobweb in an oval setting is carved in intaglio and in this small scale is not unpleasing. This ornament

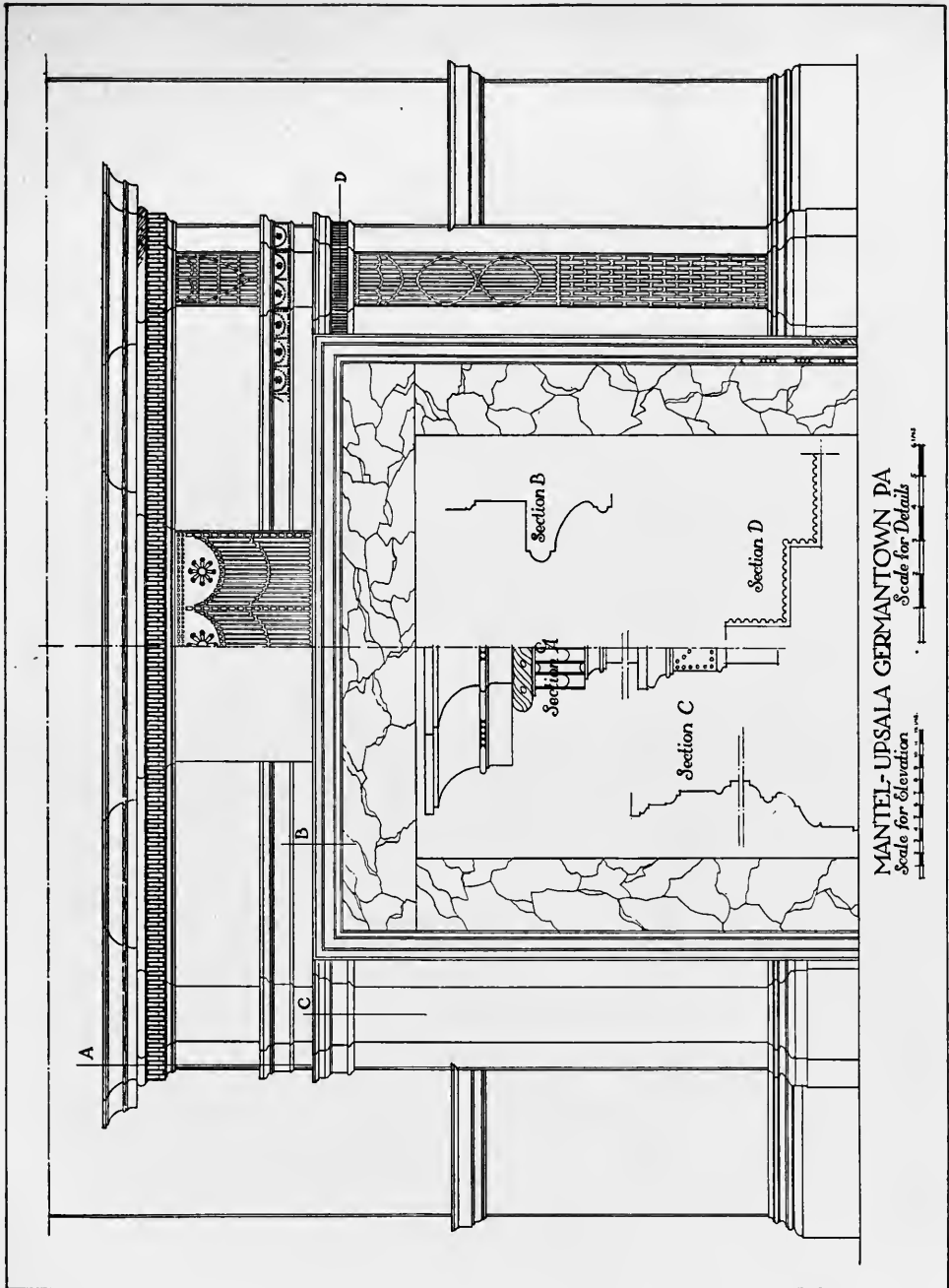


MANTELPiece IN CARLISLE.

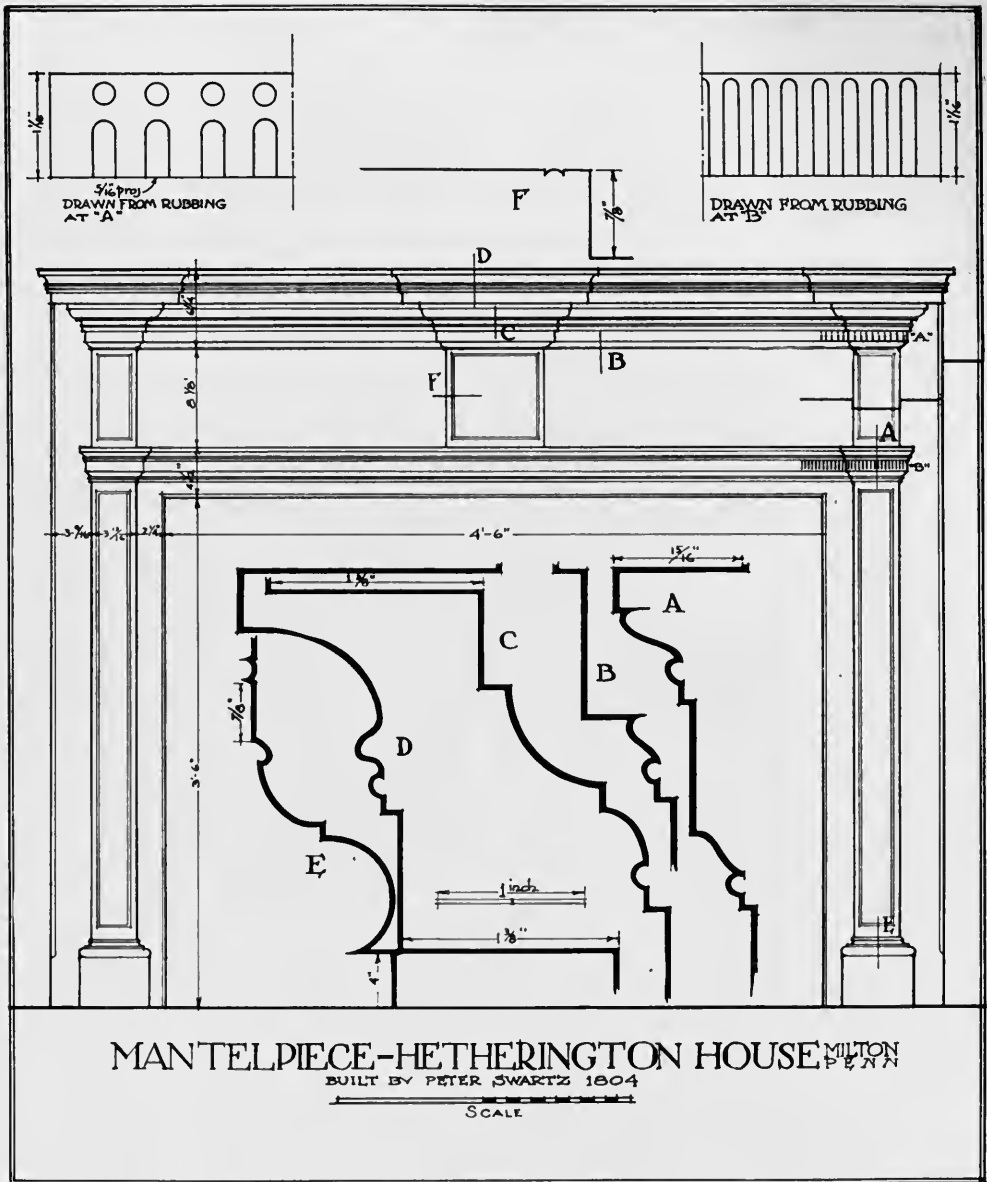


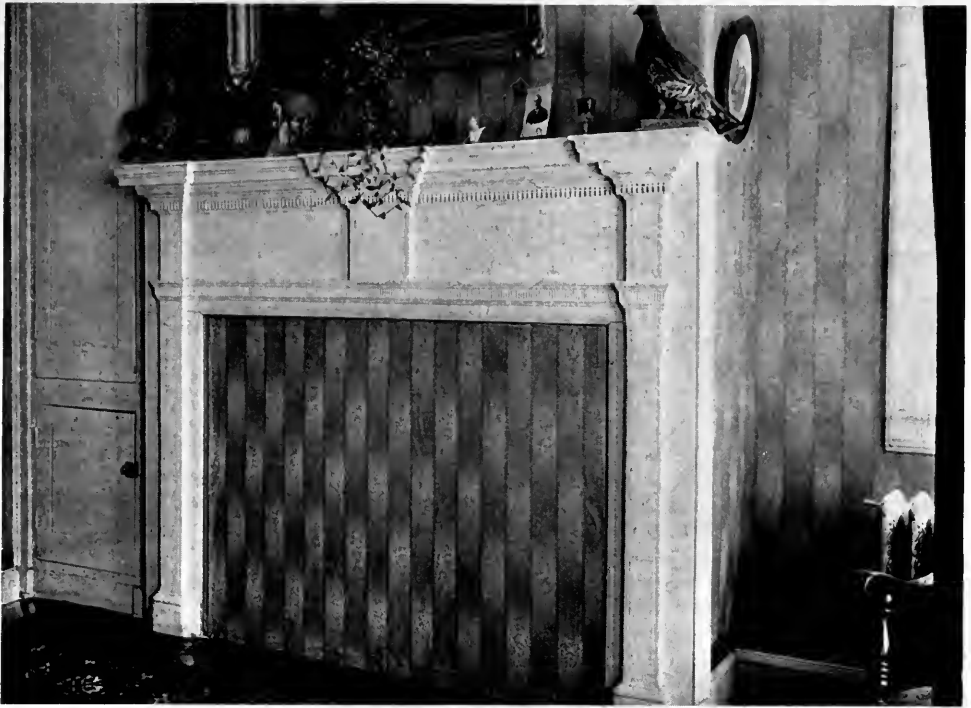
MANTELPiece IN H. S. LINN HOUSE, NORTH ALLEGHENY STREET, BELLEFONTE.





MANTEL-UPSALA GERMANTOWN PA
 Scale for Elevation
 Scale for Details





MANTELPiece IN HETHERINGTON HOUSE, MILTON. BUILT BY PETER SWARTZ, 1804.

was destined to have a long run in the later Adam phase and again in the unguided Victorian period.

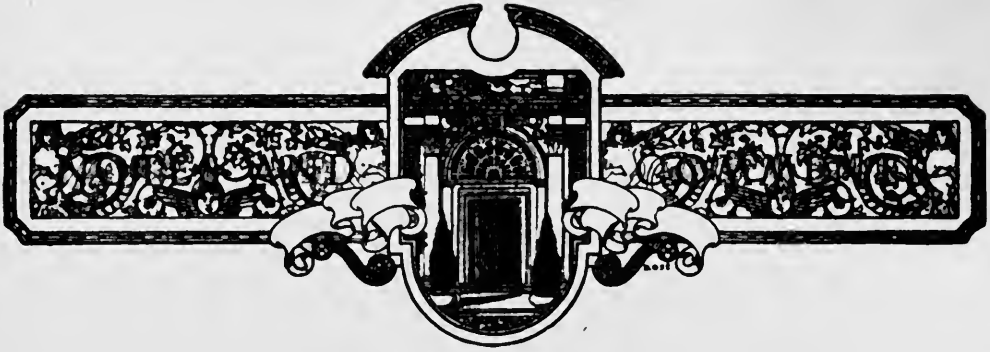
The two mantels illustrated from the Upsala mansion in Germantown are undoubtedly the finest examples of the incised mode. The exuberant richness shows some excellent elements of design, and we welcome the originality of the textured surface. The character of the adornment is well suited to the nature of wood—which is more than can be said of the applications of stucco by the mantel makers, who were soon to come under the influence of the American version of the Adam style. The manner in which the tooled cutting repeats the vertical lines of the pilasters is particularly fine and adds to the coherence of the ensemble. It is entirely possible that this peculiarly local enrichment was suggested to the craftsman by the traditional fluting of the supports and with experiment it assumed the distinctive quality that we see here.

The specimen from the Bethlehem Turnpike, known by the homely name of

“The Dust Pan,” offers a chimneypiece so closely resembling the two examples just considered as to make it appear highly probable that the group was from the same shop.

In addition to those just described, there are many others which closely correspond in shapes, but are diversified in detail by each designer’s fancy. In most there is the same use of pilaster and entablature, the same general proportion of outline. All have a correctness and sense of tradition. In spite of this superficial family resemblance, there are no two that are alike in molding, ornament or proportion.

From this time onward there were two traditions followed by the succeeding mantel builders; that of the Adam brothers and that of the late Georgian group, the one continuing the local American methods, and the other the newer classical fashion. The golden age of true craftsmanship is over and workmanship henceforth is to be subordinated to the ends of ornament.



Architecture and Its New Obligations.

The Joint Legislative Committee of New York, headed by Senator Lockwood, deserves the thanks of the building industry for checking dishonest practices. It is to be regretted that the industry itself did not put an end to these, instead of leaving the task to officials; for the whole point of the investigation is that on everyone concerned in building rests the responsibility for keeping the household in order. The architect may well take part in keeping the premises clean.

Besides the need of safeguarding the integrity of building, and keeping it safeguarded, is the more immediate task of restoring the public's confidence in building. The prestige of the industry is, for the moment, shaken; and something more than unreasoned optimism or advice that all is cured and that the past should be forgotten, may be required. People will be intensely critical of results. They will demand both honesty and economy. It is, therefore, necessary that the building world set itself strongly against blackmail and graft, and also against reckless speculation or irresponsibility which will increase costs.

Fluctuations in prices are one of the greatest causes of loss to all concerned in building. Particularly unfortunate is the custom of raising prices as soon as the demand for building begins in the spring. This forces out of the market many investors who would otherwise build later in the year, and thus really acts to increase the seasonal character of building. As far as possible, late Summer and early Fall building should be encouraged, because the structures begun at that time and roofed over before cold weather sets in allow activity in many trades to be carried on under

cover through the winter, thus lengthening the building year.

Policies such as these are needed to gain the best results in building, and they should be put into play at once in order to aid in overcoming the timidity of the investor.

Furthermore, the present time, being one of slackness in industry, is for that very reason apt to be an economical time for building. Finance, materials, transportation and labor—the four great factors in building costs—are all most favorable to economy. Costly delays during construction are then most easily avoided.

In this work of stabilizing conditions in building, the architect may take a share. He should be prominent in meeting the immediate need of reconciling the public. As the professional man, the one most disinterested figure in the building world, his reputation has not been tarnished in the investigation.

But more than that, when the future is thought of, the architect may well feel that a promising era opens up before him. Never were the times more favorable for architecture than they are now. For architecture, one of the youngest of the professions in the United States, after an uninterrupted growth of thirty years, is now reaching maturity. It has revolutionized the design of buildings. Is there a single type of building which the architect has not completely made over, infinitely better planned, more economical, and more beautiful?

The architect will always have a monopoly of designing buildings, for the reason that his training enables him to think flexibly in three dimensions, thus creating the solid geometry of buildings. This ability to think in terms of geometry is what makes him successful in the practical design of buildings, and it also makes him an artist. Because in the measure in which an archi-

tect is able to think freely and accurately in three dimensions, he necessarily seeks form and style and finish; and this brings art into design. The very power which enables him to improve the design of a building in all practical respects is the power that makes him an artist. Hence, the profound error of the occasional advice that the architect should concern himself with construction and engineering and ignore art. These, however necessary, are only means to an end, and to disparage the artistic side of architecture is to stifle those qualities of imagination and initiative on which success in any field depends.

His ability in solid geometry has brought the architect in thirty years up the long road of progress which he has climbed; and now he has only to make his knowledge more secure and his interest wider, in order to make far greater progress than ever before. His object should be to strengthen his professional position and his business and administrative experience.

One of the finest advantages of the architect is his rôle as a professional man. Everything should be done to strengthen this advantage, which now is well recognized even in a legal way. Registration is an aid, but it would be better, I think, if the registration laws embodied more strongly the counter-obligation which rests upon the architect of absolute fidelity to the highest standards of professional practice. The architect obtains from the state a monopoly on the ground of disinterested public service, and if he violates the bargain, he should be disbarred. A seriously unprofessional act should end his career as an architect. In this way, the legal value of the architect's certificate would be strengthened, as well as the confidence in him of both public and builder.

Besides this need of strengthening his professional position, nothing will better serve the interests of the profession than increased knowledge of economics and of business methods. In economics, the architect's training—especially the mathematical part of it—should help him to grasp its principles. He should be at an advantage here, because it is recognized that economics is one of the chief needs of American business. The modern world is becoming so complex that success in it depends on being able to understand general economic conditions as well as the factors in one's own particular field.

It is, however, in the matter of business and administrative methods that so much

improvement still is possible in architecture. Here architects may learn much from what the leaders of the profession are doing—how architects have gained economies in every type of structure by cutting down space and through more intensive use of the space. Such achievements can now be set forth in terms of dollars and cents in some types of buildings, and the demonstration should be carried into all other types. For instance, in low priced apartments, Allan Robinson, president of the City and Suburban Homes Company, has shown that the newest type of tenement house designed by Andrew J. Thomas can be rented about 19 per cent. cheaper than the very best of the pre-war types. In such a calculation every item of cost and of operation is determined. Could a demonstration of the usefulness of an architect's services be carried further?

Instances could be cited of the efficiency and economy gained by the architect in other types of buildings. The system of office administration and accounting in John Russell Pope's office is in many ways a model. The growing practice of letting contracts direct to sub-contractors, when done discriminatingly by the architect, insures a very considerable saving; this practice has the further merit of simplifying the complicated process of building, of allowing the architect to come into more intimate touch with building conditions, and of procuring co-operation from the sub-contractors. Finally, substantial economies are to be gained through direct cash purchasing by the architect for the client.

But, it may be argued, where will the architect find time to perform all these functions on a small commission? Such a question cannot be easily answered in all cases. One may say, however, that when an architect is able to demonstrate the business value of his services he is better able to claim a larger fee. He may gain also in another way. Formerly an architect spent much time on research into construction—on specifications, and on engineering and mechanical services, such as heating, lighting, etc.; but now these are becoming so well standardized that they are in large part reduced to routine in most kinds of buildings and require administration rather than design, which consumes so much effort.

Thus, architecture seems to stand on the threshold of a brilliant future. It has now the experience—with some perfecting still necessary—to claim its rightful part in

American life. A place stands ready for it. Today the architect's services are demanded in every field of construction, even in those fields hitherto denied him. His progress has been from the top down, from the more monumental types of buildings, public or commercial, to the commoner forms; and since the war he is entering into all kinds of housing, to its vast improvement in every respect. Formerly architecture may have been classed as a luxury; now it is a necessity. The urgent need of today is better homes, in better and more efficient towns and cities. Rising land values, creating congestion, are choking the towns; if their complexity is not controlled and simplified, their economic as well as social value is threatened. In New York City motor traffic has doubled since the armistice. This makes business hard to transact, and the social value of homes is threatened. The medical profession warns of impairment of public health, and the psychologist explains the havoc to childhood whose instincts are thwarted when deprived by the automobile of even its old makeshift playground, the street. True, this condition is not wide-

spread, but it is growing everywhere, with nothing done to offset it.

The world has for generations been struggling to solve the problem of city life under industrial and mechanical conditions. One by one it has called in the professions to the task. The lawyer, then the engineer, and more lately the physician, with his principles of sanitation and public health, has each done his share. But now it seems clear that the final solution is in buildings and neighborhoods—in planning. This is the field of the architect and his allies, and the world now must depend on him to provide the technical solution of the modern city. The older classes of buildings and the older forms of towns and cities and neighborhoods no longer avail. They are some of the last relics of our pioneer period of history—the period of hit-or-miss, of rule-of-thumb, of quantity production. We are passing into a time of intensive economics, of more thorough cultivation, of quality, and a richer life. The need of finer homes and cities is the first condition of this new time, and this need it is the duty of the architect to supply.

JOHN TAYLOR BOYD, JR.

THE ARCHITECTURAL RECORD:

In your June issue I am credited on pages 470 and 471 with some work at 634 Fifth Avenue. A few weeks ago I had a telephone call from your office inquiring if I was the architect for the building at 634 Fifth Avenue. I replied that I was, which is correct. I find, however, that I am credited with the shop front of T. Kirkpatrick & Co. This front was constructed, probably by the tenant, after the building had been completed by me and is no doubt the work of some other architect, whose name I do not know. I regret that he should not have received the proper credit and hope you will set me right should you hear from him.

GEORGE PROVOT.

THE ARCHITECTURAL RECORD:

You are in error in naming Mr. George Provot as architect for the Kirkpatrick Jewelry Store, pictured on pages 470 and 471 of the June issue. This work was designed by myself and Mr. Moscovitz (firm name, Berlinger & Moscovitz).

J. M. BERLINGER.

THE ARCHITECTURAL RECORD:

In your June issue, on page 473, you show a shop on Fifth Avenue, with Horace Ginsberg as architect. This firm were the architects for this store front and interior alterations to the store.

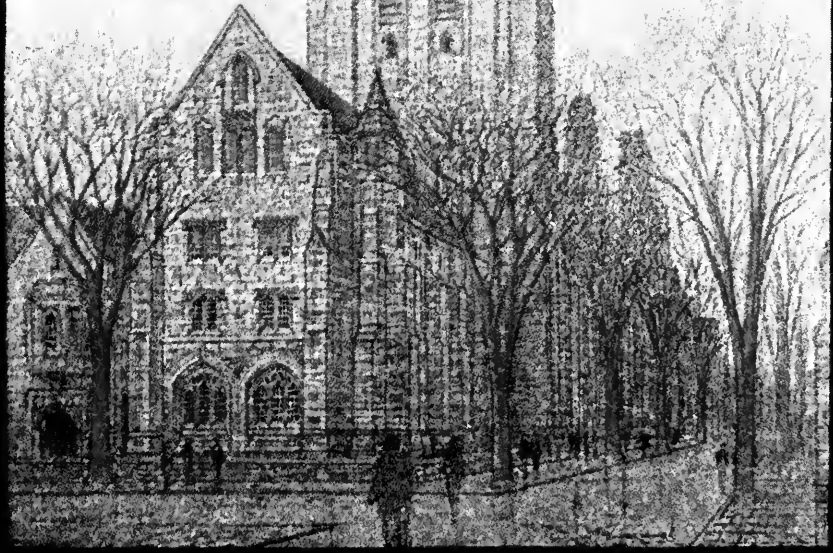
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1921

ARCHITECTURAL RECORD

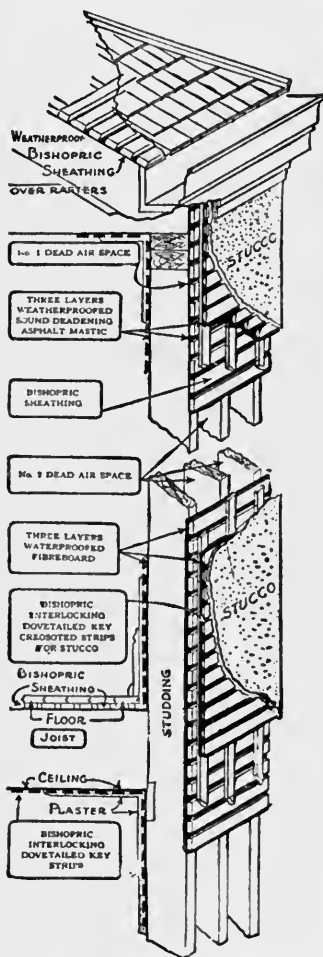


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HARKNESS TOWER—THE HARKNESS
MEMORIAL QUADRANGLE AT YALE.
JAMES GAMBLE ROGERS, ARCHITECT.

THE ARCHITECTURAL RECORD

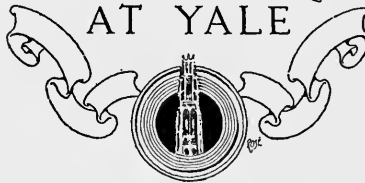
VOLUME L



NUMBER III

SEPTEMBER, 1921

The
HARKNESS MEMORIAL QUADRANGLE
AT YALE



JAMES GAMBLE ROGERS ARCHITECT

By

Marrion Wilcox

YALE, mindful of the nobler traditions, has expressed them in these great stone buildings. Even our devotion to Light and Truth (the *Lux et Veritas* inscribed over the main gateway) is quickened. For, as one truth ever shows the way, as though with a light, to another truth, so especially may architectural truths—such inspiring manifestations of art as these—light the path to truth in other sciences beside that of the new æsthetics, to truth in many branches of human knowledge.

This applies to the Quadrangle as a whole. To the Harkness Tower it ap-

plies with particular force and in a special manner.

The Harkness Tower recalls certain towers in England and on the European continent. But it and they recall vividly the Hellenistic towering lighthouse, the Pharos, which was built about 280 B. C. at Alexandria. Light is a strikingly appropriate word. And further, although the word light is used figuratively in this explicit linking of the college motto and the significance of the Harkness Tower, I should fancy that, in connection with the tower, it may become possible for us to think of the word as meaning some-

thing more definite than just a source of mental or spiritual illumination. If I hear at some future time that it has been decided to illuminate at night the upper part of the principal tower—above the chime of bells—I shall not be surprised.

Meanwhile, as I study it from many points of view, the Harkness Tower exemplifies this change in architectural forms: An immortal thought of Hellenistic architecture is here expressed in Gothic terms. And the Gothic genius has wrought, gradually, through the centuries, its most characteristic modifications upon the remote Alexandrian original, transforming pilasters, panelled walls and separate columns into continuous lines of growth. These Gothic vertical lines of growth and traceried Gothic windows replace also the several terraced stages that Sostratus, architect of the Pharos, designed in such diversity of plan that the uppermost stage was circular, the stage immediately below being octagonal, while the first stage above the foundation was rectangular.

But in the Harkness Tower I find unity in diversity, with the stress on unity; for separate stages are indicated only by skilful, subtle decorative modifications, until at the highest stage the rectangular form changes, with happy effect, to the polyhedral.

The impression that the vertical continuous lines of the Harkness Tower make upon the mind of the observer naturally increases the apparent height of the structure. Because they are not interrupted by prominent horizontal string-courses or cornices, imagination readily carries such lines upward, protracting them into the blue.

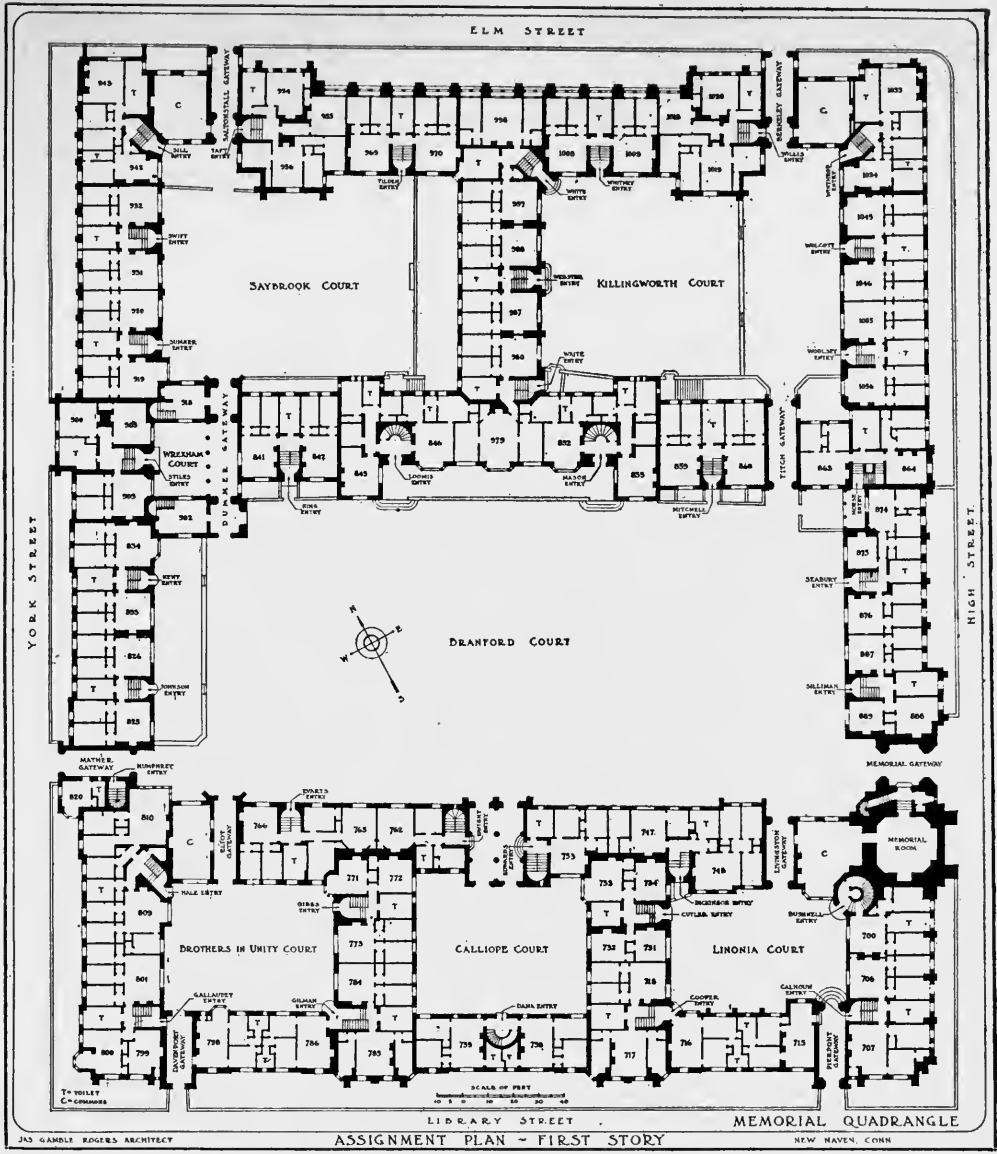
Add to this the enhancement of apparent height that is ascribable to the genuinely æsthetic use of three varieties of stone, namely, seam-face granite, that is quarried, I think, at Hingham, Massachusetts; then, as the general trimming-stone, Briar Hill sandstone from West Virginia and Ohio; with gray Indiana limestone for some of the buildings. The Harkness Tower has granite in the lower part, granite and gray stones in the middle portions, and gray stones alone at the

top. Thus the lower part is treated as the foreground, the summit as the background, of a picture; the apparent remoteness of the background, from the foreground being due, in part, to the aforesaid adaptation of well-known rules of perspective in painting, *i. e.*, those relating to the gradual withdrawal of the warmer colors, stronger lines, broader masses, from the middle distance and background.

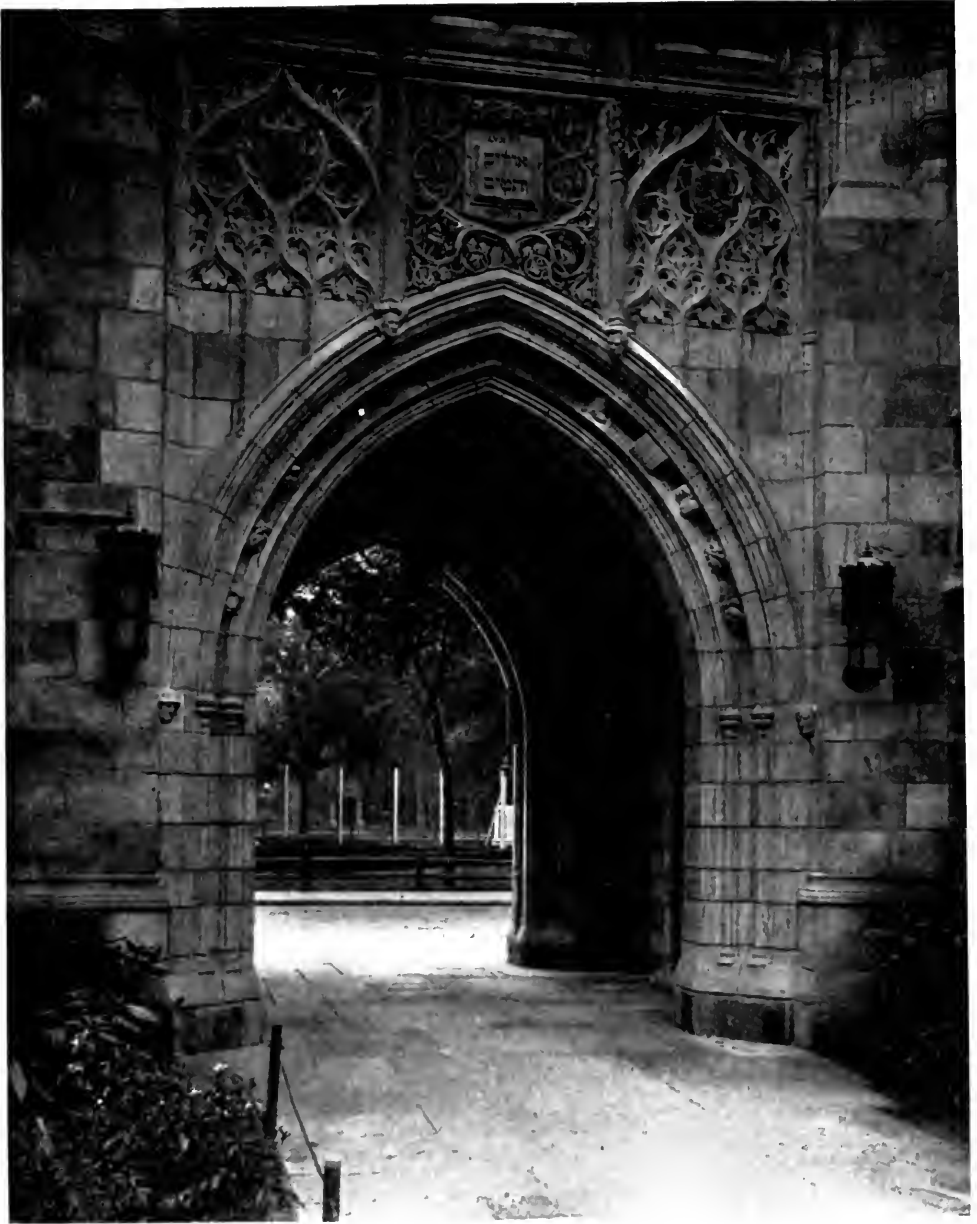
I have called the Pharos an immortal thought of Hellenistic art. Well, then, this new tower at Yale seems to me to possess the quality that visualizes art-tendencies of the past and present, and in its turn will affect those of the future.

For the first time since its actual completion, I have the pleasure of seeing it this afternoon. An imperfect impression, indeed, I received six months ago, before the scaffolding had been removed. But I saw it many years ago, when I was a boy in New Haven, and the ground on which the tower stands was part of an open lot, our playground. It was a complete structure—of its kind—then, and with its continuous, almost living lines-of-growth, was very beautiful—imperishably. It was of Yale ideals in a boy's imagination.

Now, the unity in diversity, so well achieved in the Harkness Tower, is a principle observed in this entire group of new buildings—in the Wrexham Tower and Cloister; in Branford Court, of which the north side will always be called a classic, an architectural companion of stately sixteenth-century and seventeenth-century English verse; in the smaller, charmingly homelike southern courts, "L'Allegro" courts; in the more secluded northern courts, with their higher sides, "Il Penseroso" courts; in the brilliantly successful Tourelle, that is serene on the High Street side and romantic or picturesque as a bit of Old France on the court side; in such features of the exterior as the brave tracery of a series of windows in the Elm Street façade, and that western part of the Library Street façade on which light and shadows play, or, as deep shade and high light, simply rest.



BLOCK PLAN—THE HARKNESS MEMORIAL QUADRANGLE AT YALE. JAMES GAMBLE ROGERS, ARCHITECT.



MEMORIAL GATEWAY, FROM BRANFORD COURT
—THE HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.

And in this entire group of buildings one is aware of architectural work inspired by Yale's traditional loyalty, by devout patriotism. An article on Architecture in New York, written for the International Studio, has recently given my view of the accountability of architects to the people of our country. Now it is evident to me that our distinguished architect must have asked himself as his plans took shape: "Do I know, do my clients know, for whom this work will be done, really?—whose attention it will hold or invite more or less constantly? And his answer has been, I assume: This work addresses itself to all the people of our country, through those who come from every State and Territory. My public is our nation. Would it not be glorious to be able to say: I have rendered service to *it!*"

We shall have another age of architecture, I believe. It must be founded on such loyalty, on devout patriotism, on a worship of the ideals of home and nation. And our colleges may light the path.

I am heartily glad that the order of architecture here chosen is Gothic; that Renaissance was not chosen. For I hold that Renaissance art, in its early history disjoined from the people, has in the main lacked that spirit of life which nothing but union with the people can give. Contrast with it the Gothic, the architecture of the actual exertion of power, the order (it is called) of energy in more senses than one, witnessing "to a nation," Mr. Lethaby prompts, "in training, hunters, craftsmen, athletes," our European ancestry. I hold that the Gothic (not the English Gothic exclusively, not exclusively the soaring French Gothic, but Gothic as a whole) is the only order that can serve us fully in America. From the different periods or styles of this order it is possible to choose motives suited to any genuinely architectural work, and the art-atmosphere of every period is native air to us. Our architect has found his motives in several different periods of the Gothic. They harmonize absolutely. Again, unity in diversity.

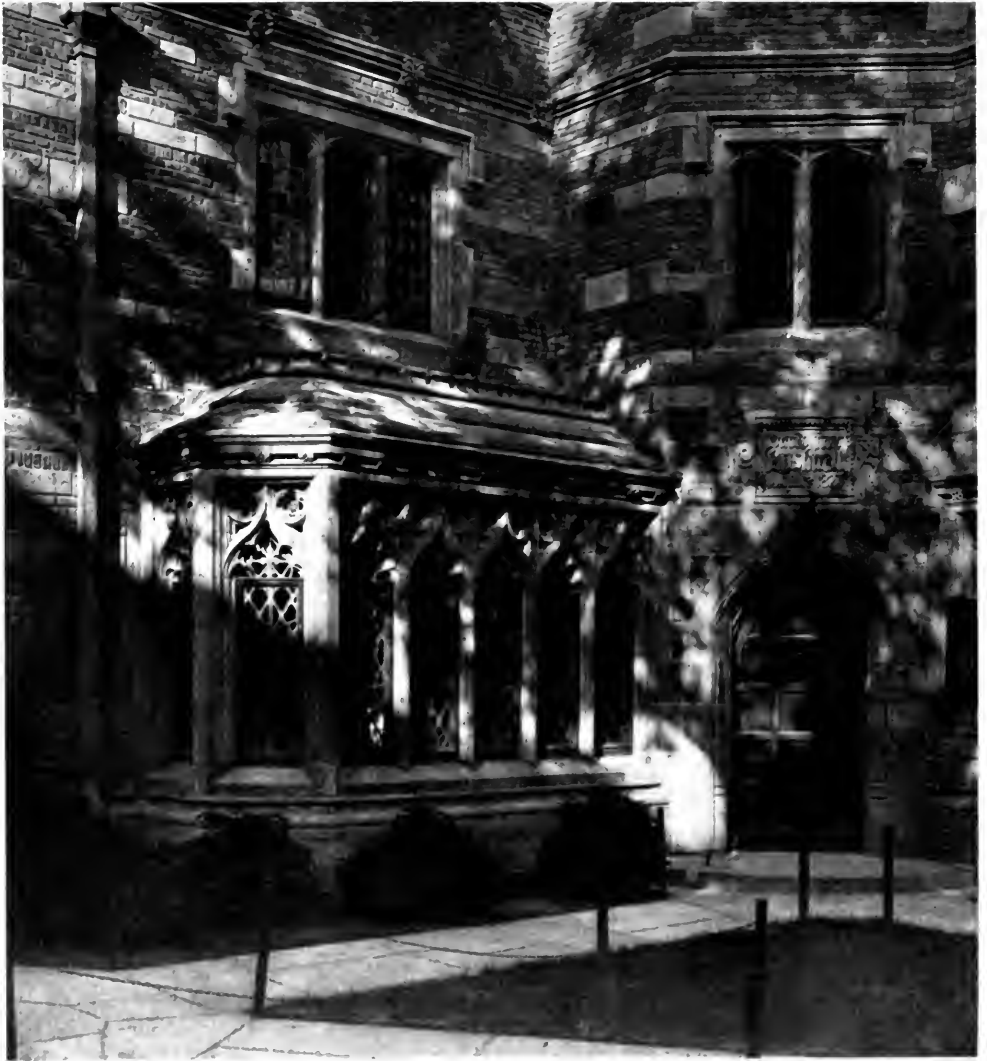
And once again this unity in diversity,

or from diversity, should be mentioned. Here is its vital exemplification: Our architect tells me that the presentation of the theme to his clients (the nobly generous donor and her associates, I suppose) was unlike anything ever seen before. He gave them merely a general sketch-plan, showing no details; a very crude, rough model in clay that indicated the disposition and relative heights of the buildings; and a few original drawings that disclosed the spirit of the undertaking (see ARCHITECTURAL RECORD, February, 1918). Thus the clients became sharers of the æsthetic concept. He did not employ contractors, but secured the service of a builder who aided in, so to speak, avoiding diversity, and who alone had dealings with the various contractors, an arrangement making for excellence and economy in the work.

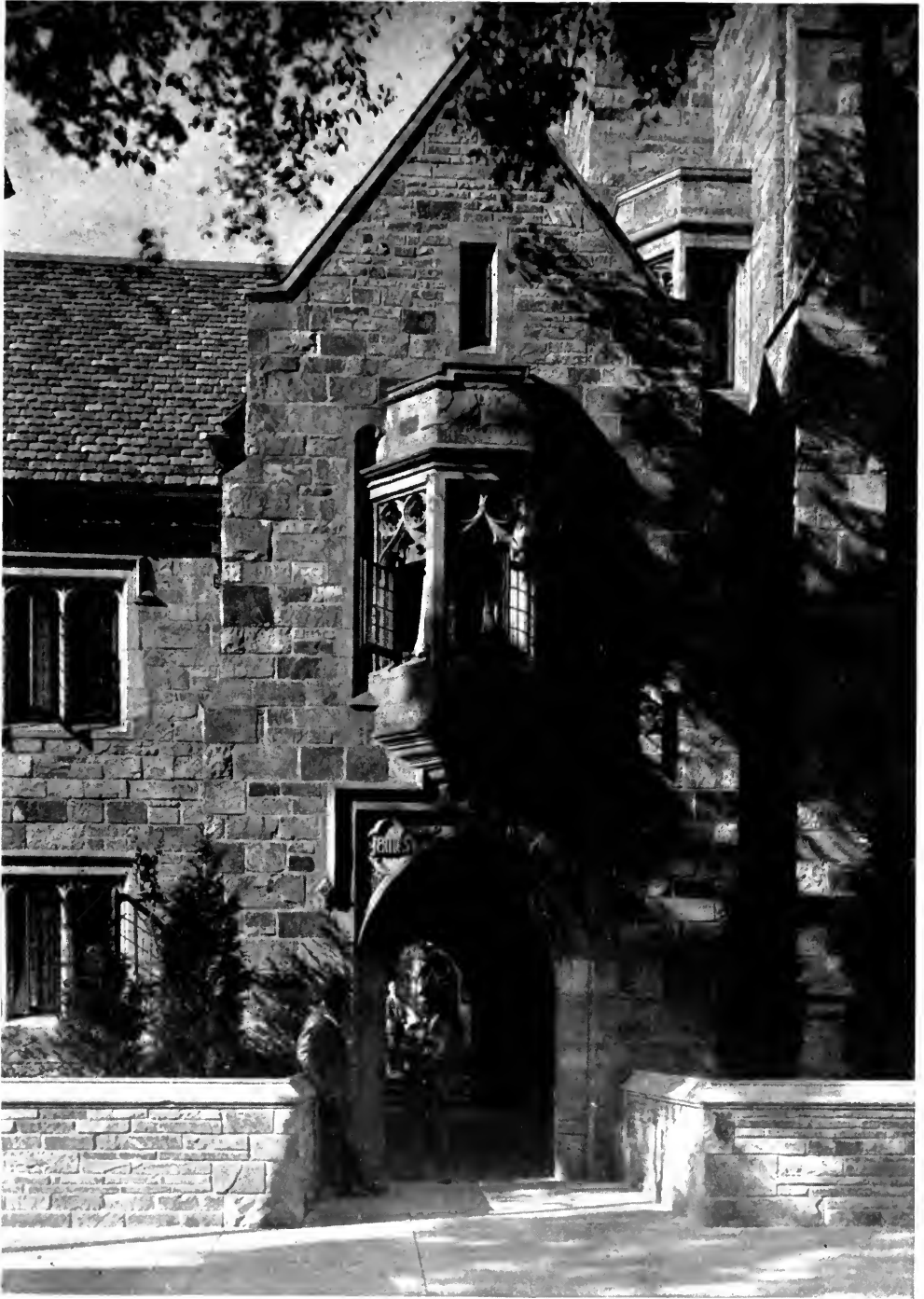
This initial spirit of shared interest, of co-operation, was carried through the whole enterprise. It extended to foremen, superintendents, sub-contractors, and workmen. Twelve laborers were Yale students. "I come from Boston," said one of the foremen, "and so I know this stone, quarried in Massachusetts and used in various buildings. But I believe the Lord had just *our* building in mind when he made this granite."

The opportunity to build so large a group, all portions of which were to be completed at one time, may be noted as an unusual circumstance. Unusual also the fact that these buildings were erected quite expeditiously during the period when building was most difficult, even in the United States.

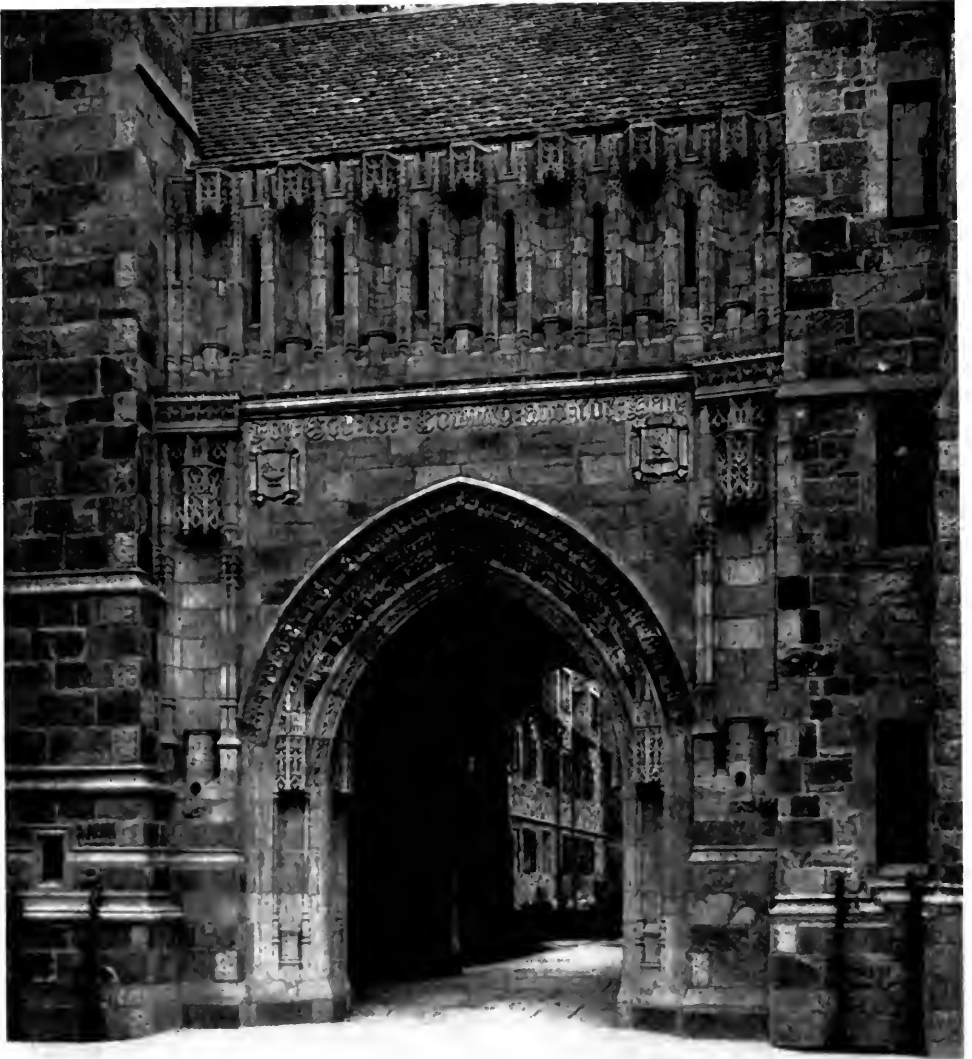
Exceptional in a very interesting way, in a high degree, is the choice of the subject of sculpture, of ornament or decoration. History, the history of Yale or Yale's sons: this is the almost unique subject; and where any other is represented, it is such that its architectural setting merges it in the general scheme. Here, quite plainly, architecture is the father of sculpture, exercising paternal authority. Mr. Lawrie's statues, his grotesques, gargoyles, figures in the cavetto of the archway; his sculptural, epigrammatized college subjects—all true chil-



LIGHTS AND SHADOWS IN LINONIA COURT—
THE HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.



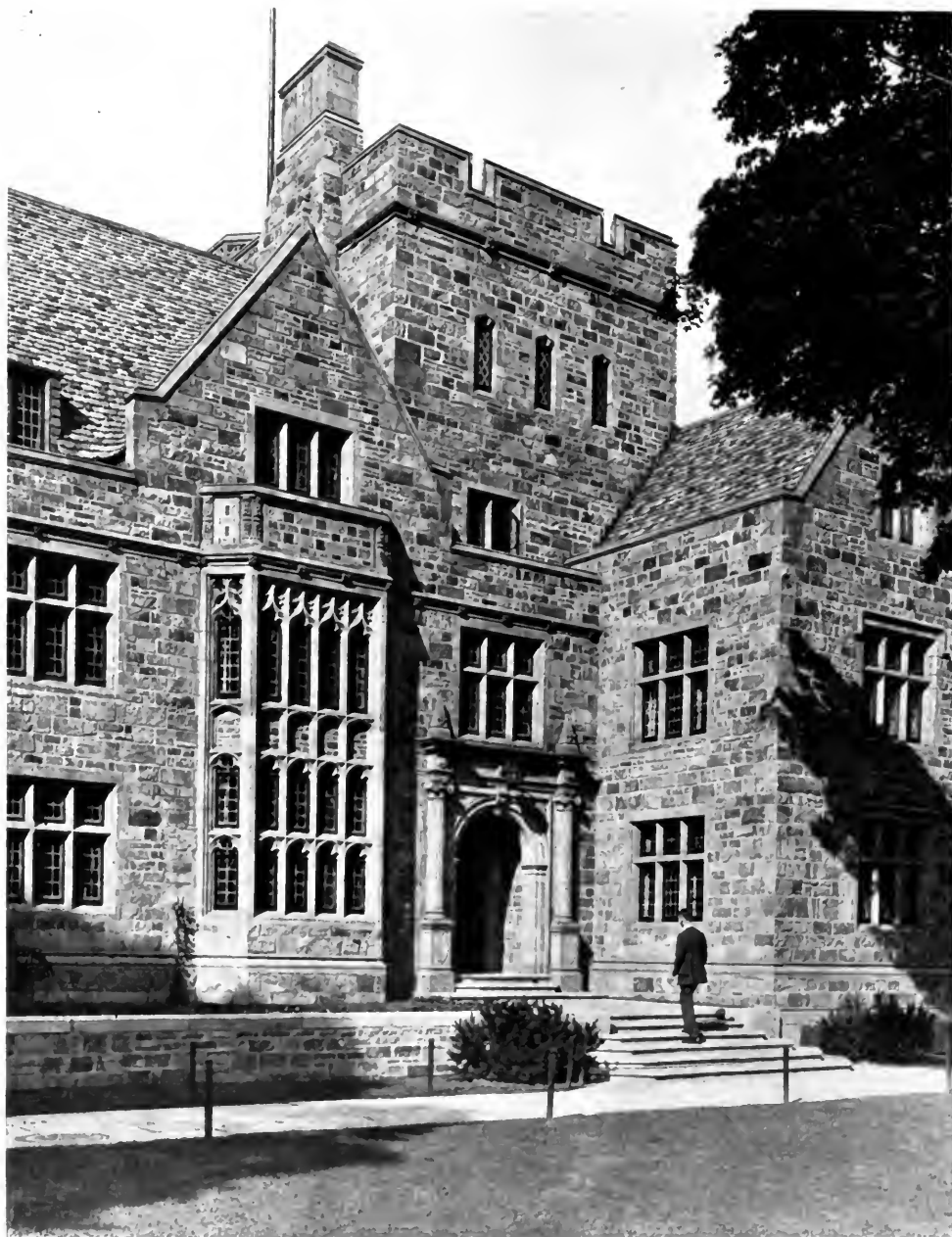
JAMES PIERPONT PASSAGE THE HARKNESS MEMORIAL QUADRANGLE AT YALE. JAMES GAMBLE ROGERS, ARCHITECT.



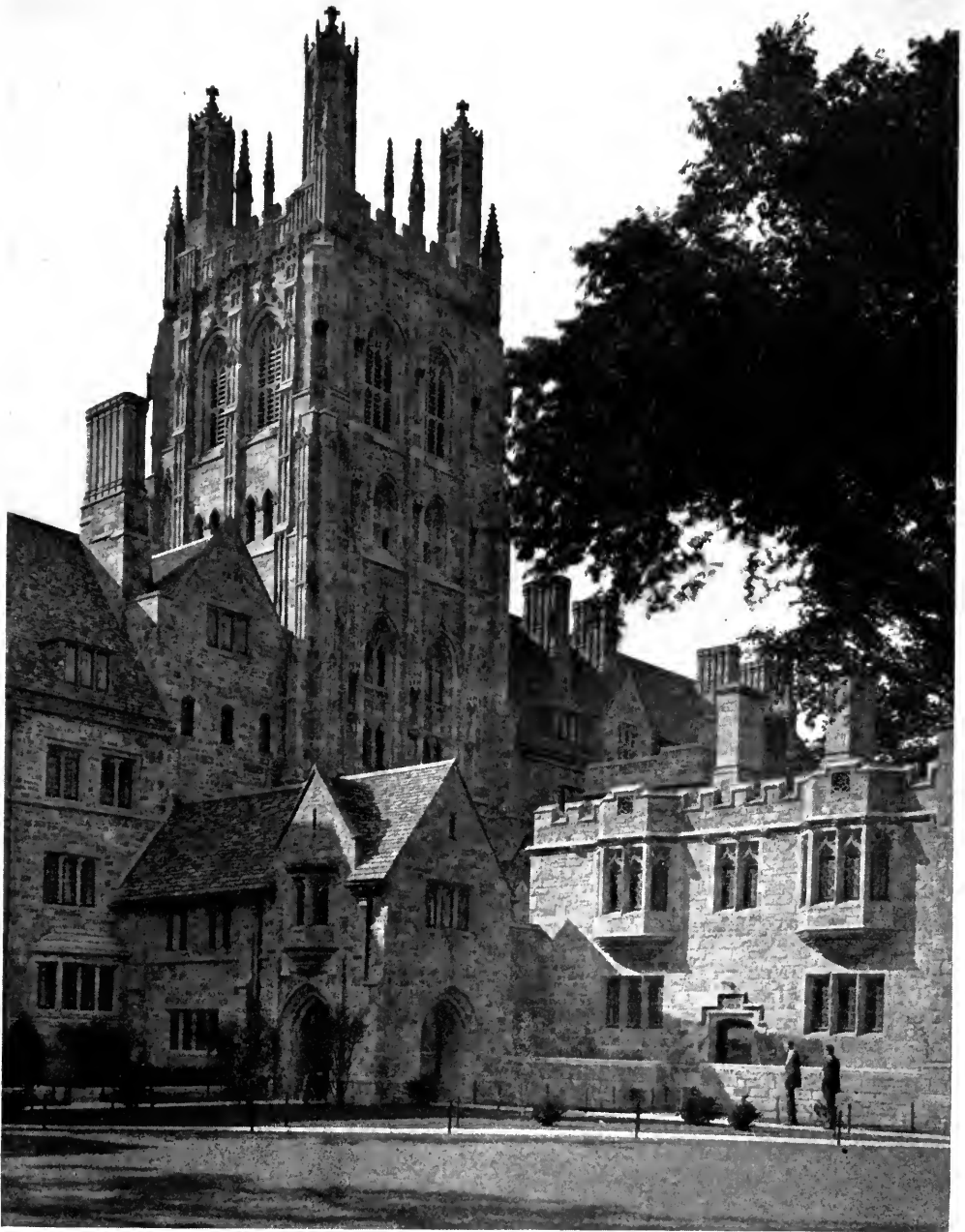
MEMORIAL GATEWAY, FROM HIGH STREET—
THE HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.



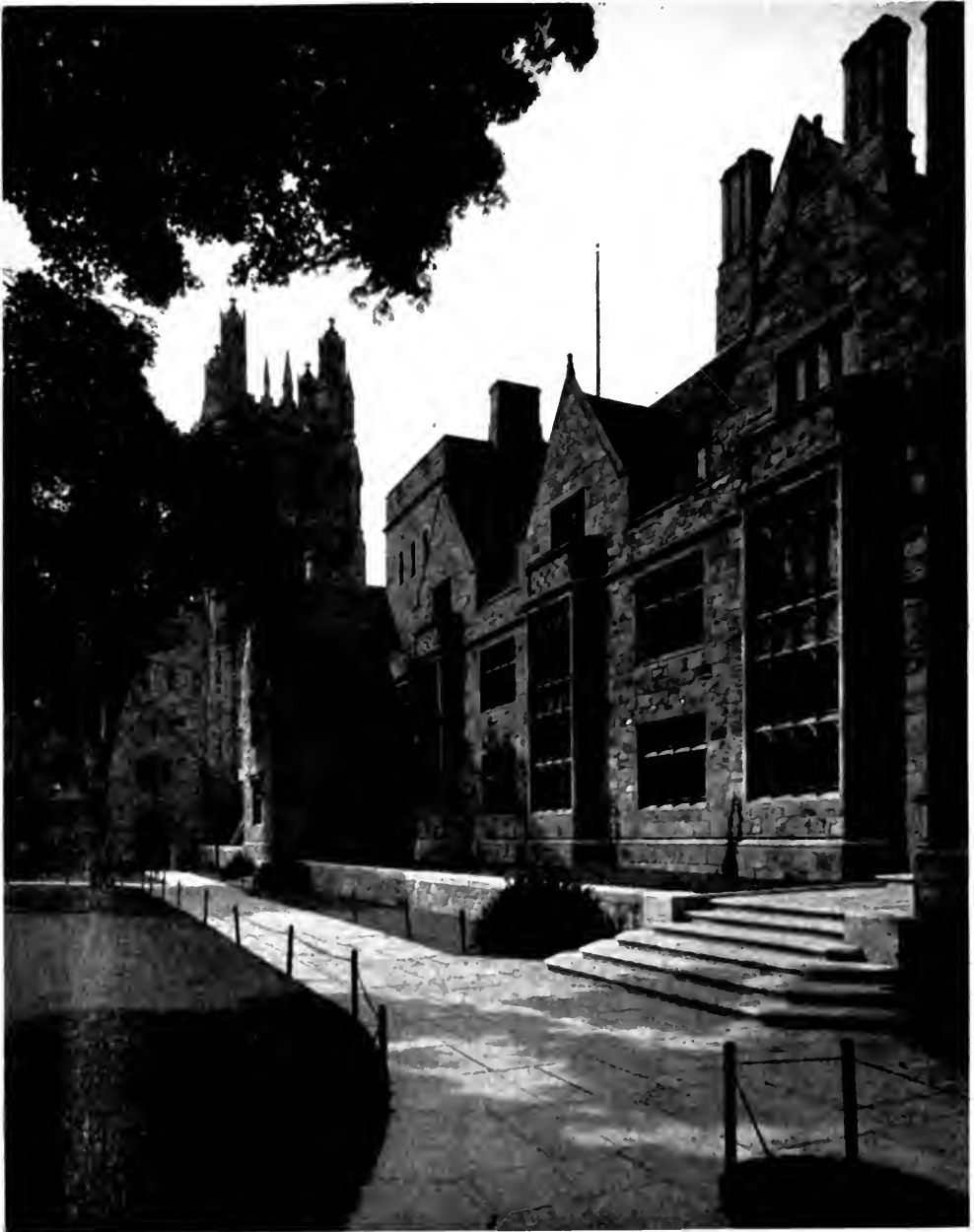
THE TOURELLE, FROM BRANFORD COURT—
THE HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.



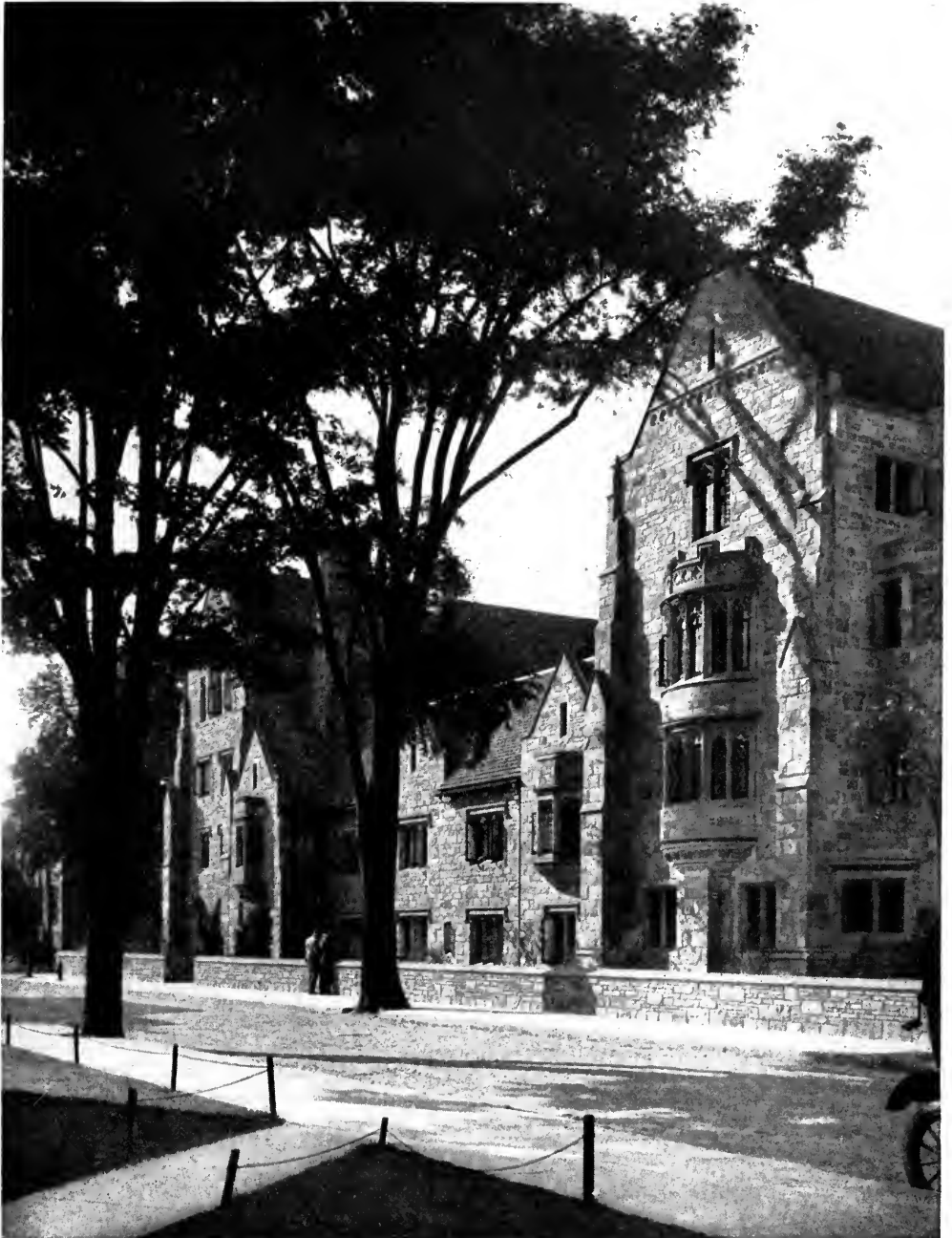
MASON ENTRY IN BRANFORD COURT—
THE HARKNESS MEMORIAL QUADRANGLE AT YALE. JAMES GAMBLE ROGERS, ARCHITECT.



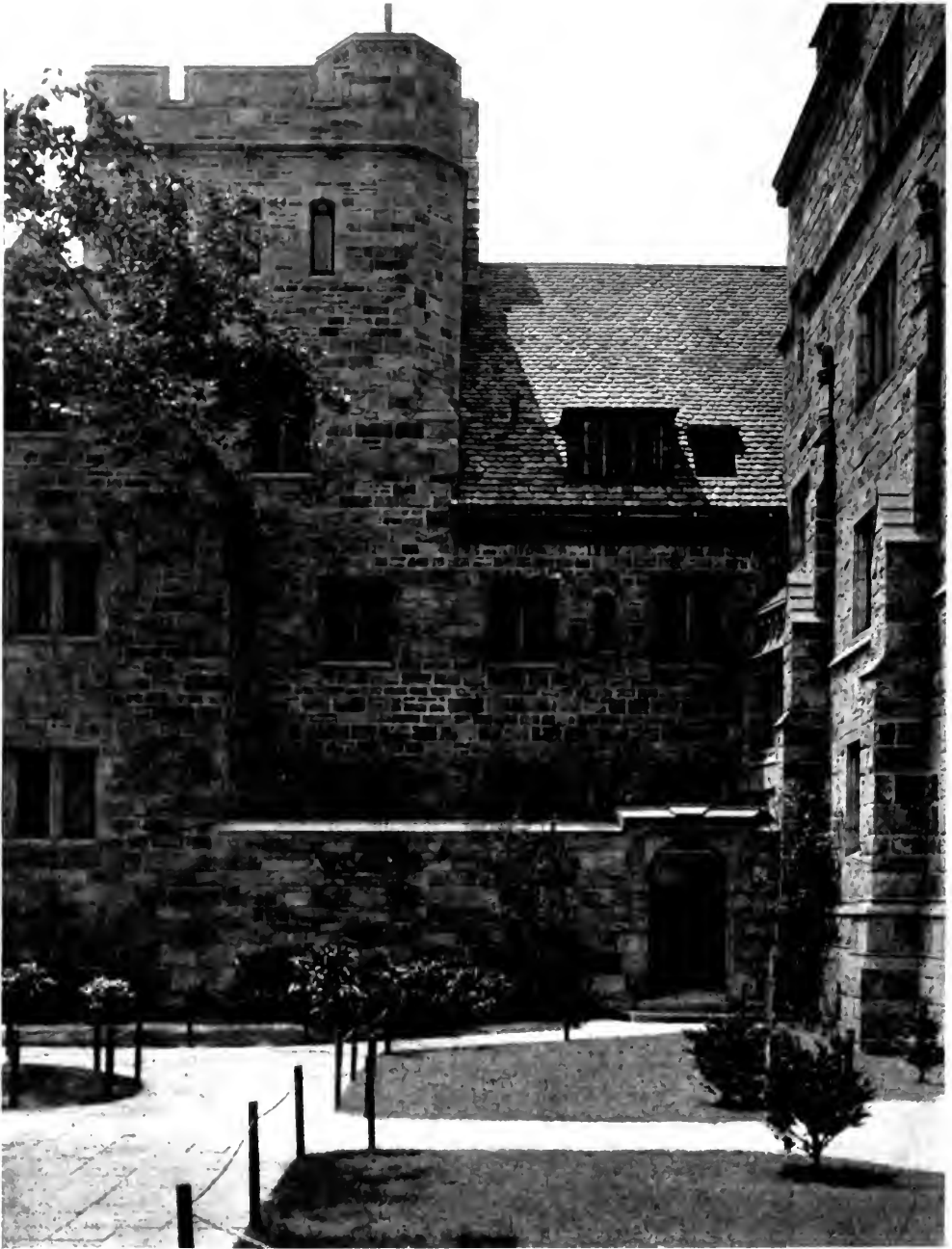
WREXHAM TOWER, FROM BRANFORD COURT—
THE HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.



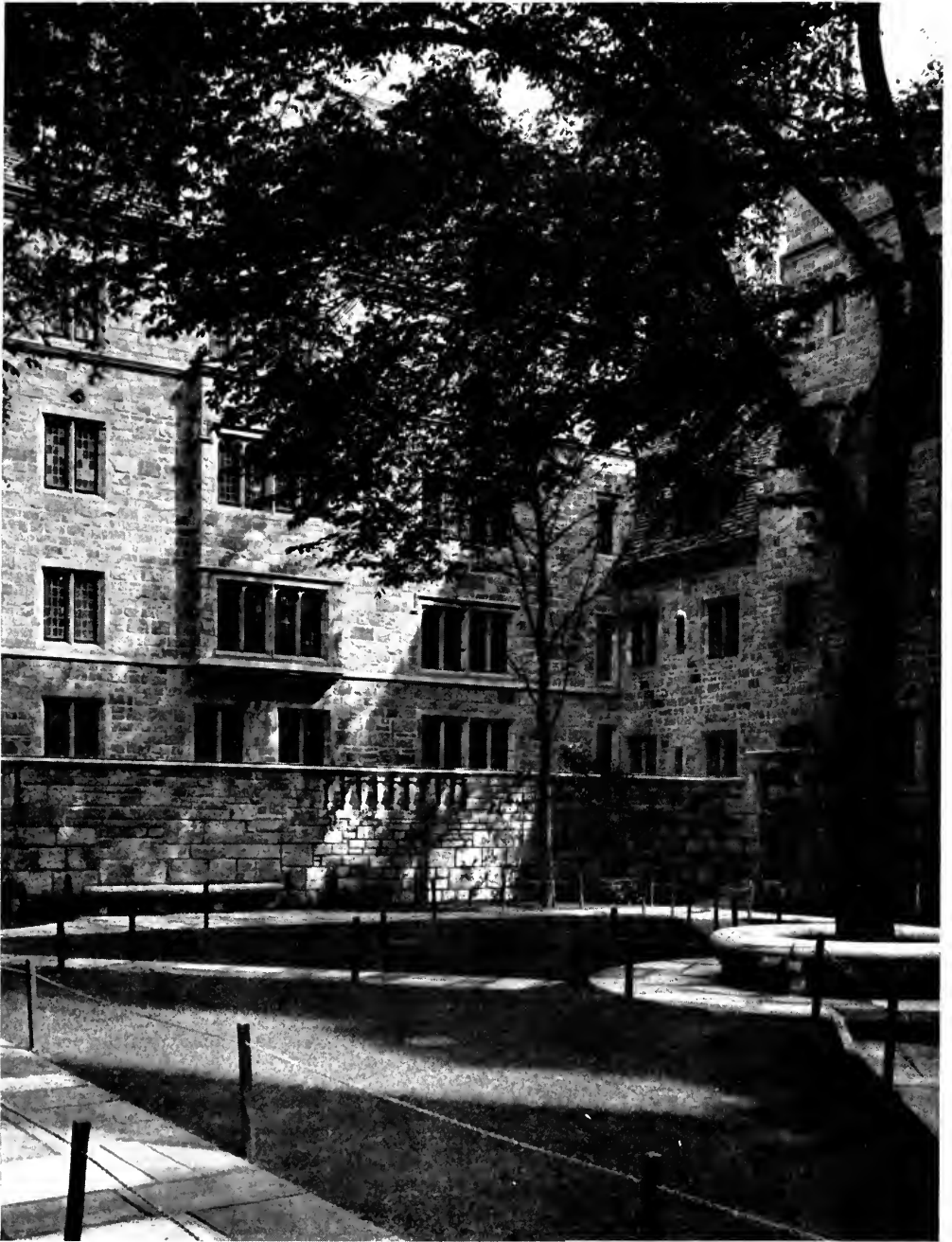
NORTH SIDE OF BRANFORD COURT, WITH WREXHAM TOWER
IN BACKGROUND—THE HARKNESS MEMORIAL QUAD-
RANGLE AT YALE. JAMES GAMBLE ROGERS, ARCHITECT.



LIBRARY STREET—THE HARKNESS
MEMORIAL QUADRANGLE AT YALE.
JAMES GAMBLE ROGERS, ARCHITECT.



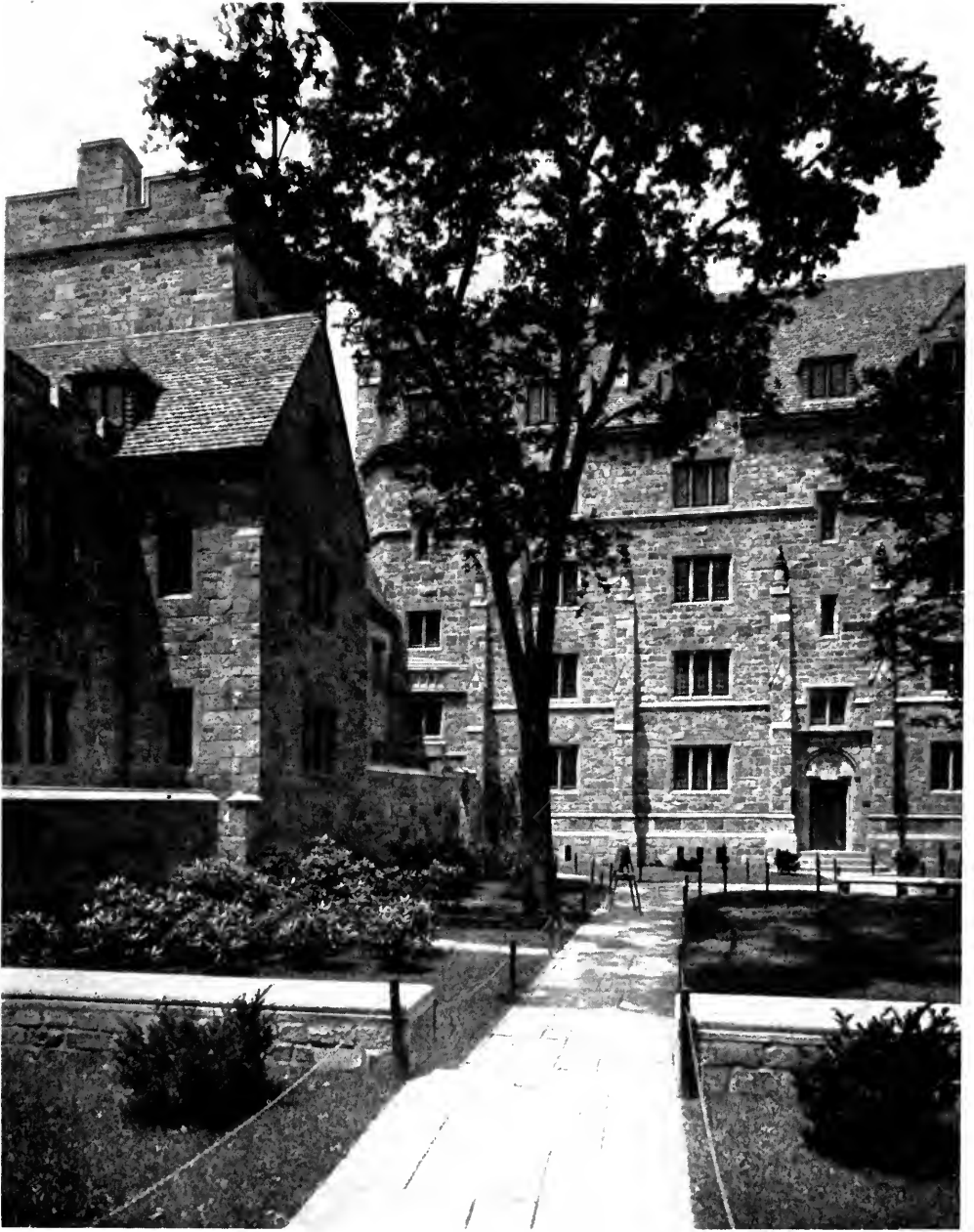
BUILDINGS ON SOUTHERN SIDE OF NORTHERN COURTS HAVE BEEN KEPT LOWER TO ADMIT SUNLIGHT—THE HARKNESS MEMORIAL QUADRANGLE AT YALE. JAMES GAMBLE ROGERS, ARCHITECT.



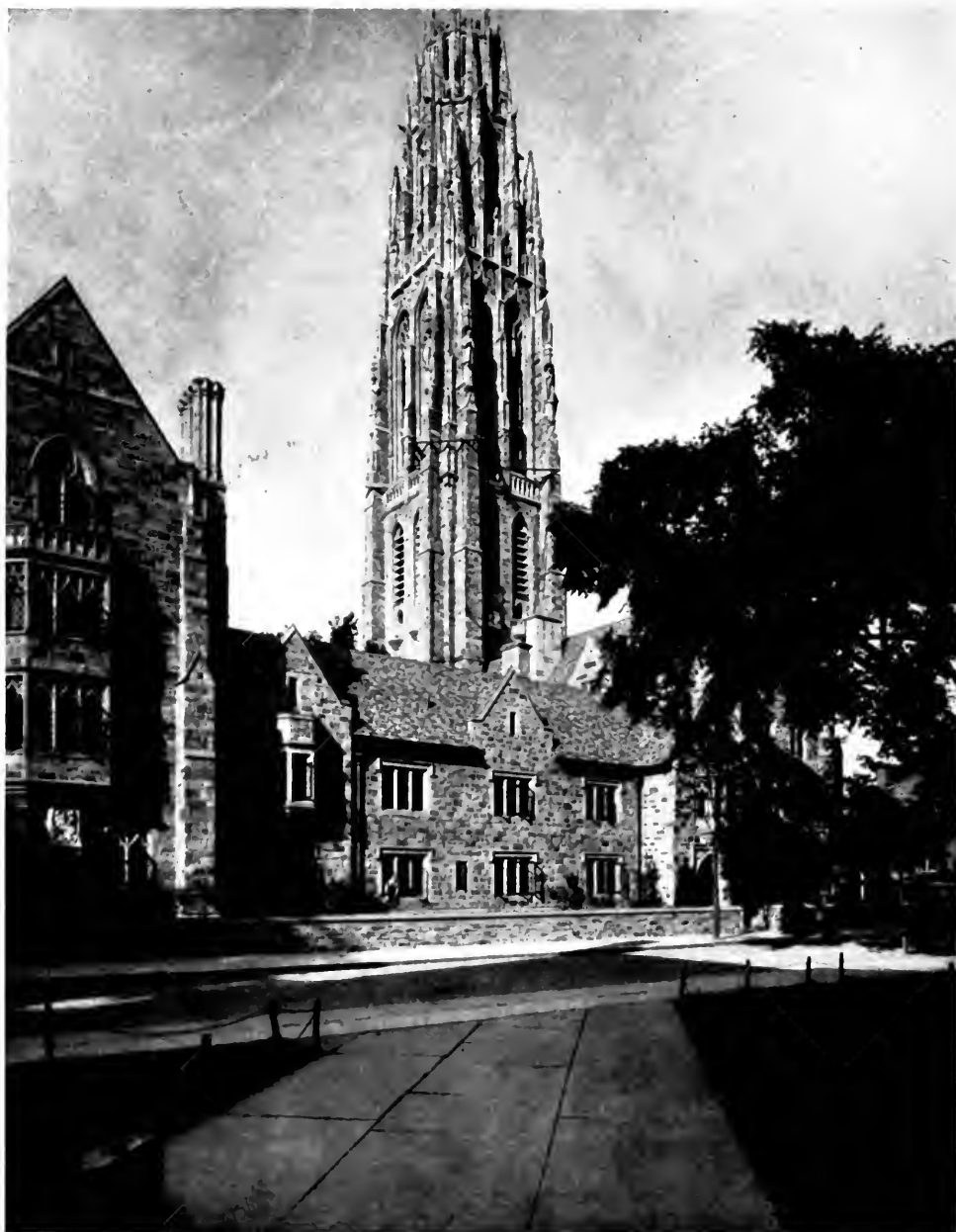
TERRACE WALL IN ONE OF THE NORTHERN COURTS—THE HARKNESS MEMORIAL QUADRANGLE AT YALE. JAMES GAMBLE ROGERS, ARCHITECT.



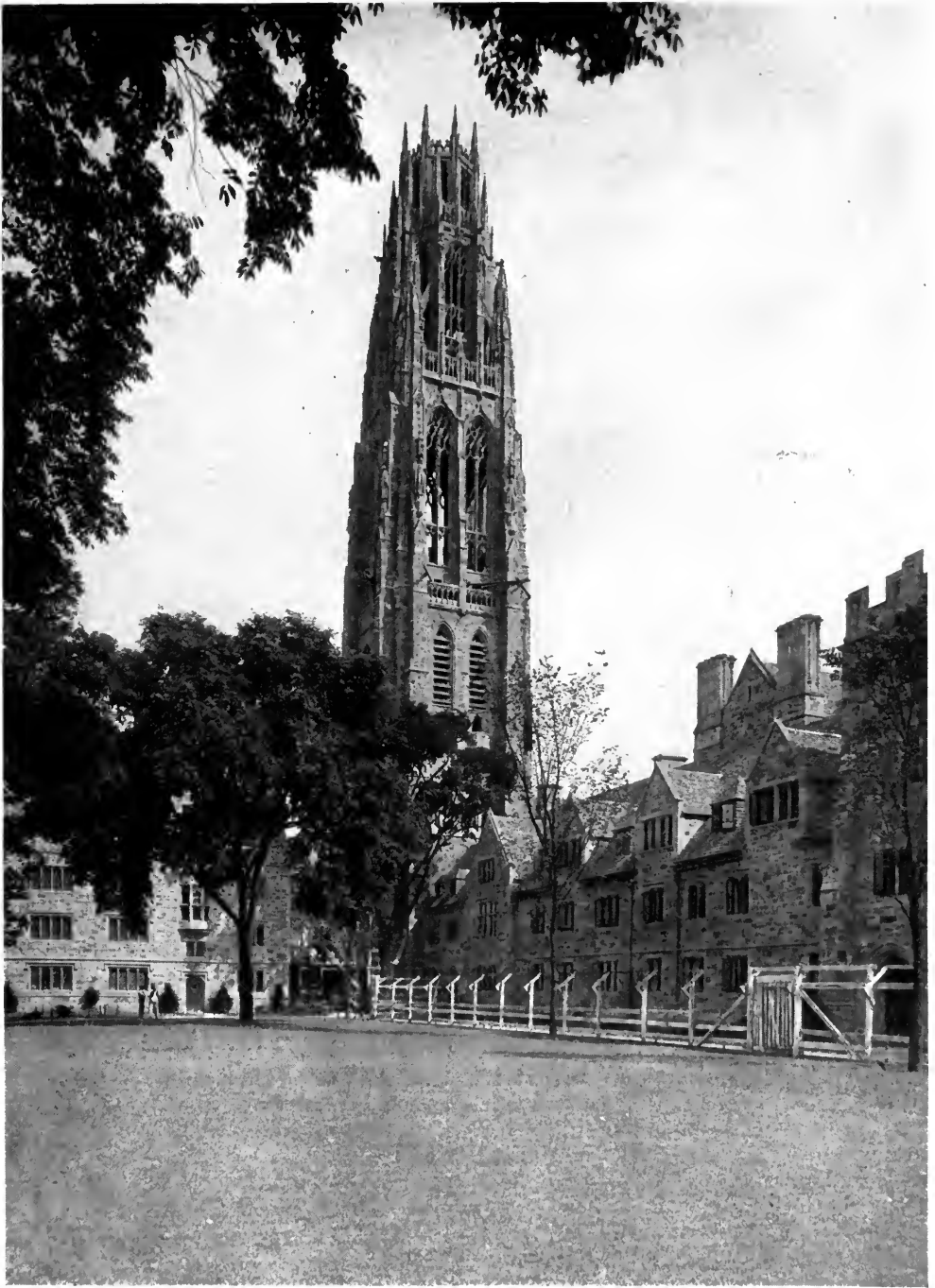
A CORNER IN KILLINGWORTH COURT—
THE HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.



VIEW IN KILLINGWORTH COURT—THE
HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.



HARKNESS TOWER, FROM LIBRARY STREET—
THE HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.



HARKNESS TOWER, FROM BRANFORD COURT—
THE HARKNESS MEMORIAL QUADRANGLE AT
YALE. JAMES GAMBLE ROGERS, ARCHITECT.



TRACERIED WINDOWS ABOVE MOAT-WALL IN ELM STREET—
THE HARKNESS MEMORIAL QUADRANGLE AT YALE.
James Gamble Rogers, Architect.

dren of the Gothic order—deserve the attentive consideration that could be given in a separate paper. In this study of buildings he must love (the children showing it), one can only proffer one's gratitude. . . . Mr. Lawrie, will you not model a group of Yale Professors voting to reduce their own salaries, as, positively, they did, once did, when the college was poor and antique drives for its relief might have been held under advisement? That fact is in our traditions, perhaps unwritten or unpublished hitherto. President Dwight told me of it; but of course it has the brushwork of an earlier day. And it is Gothic. . . . I ad-

mit it is a typically *Cistercian*-Gothic incident; whereas our Quadrangle is not Cistercian, save that here and there it does win unsought respect by some rare survival of the Cistercian tradition. Those old lads, those worthies, had the Cistercian principle of self-abnegation exactly. If you like that Yale tradition, let me say it has, to me, the color and texture of our Quadrangle's seam-face granite. (I withdraw brushwork.) The stones will weather, generally, a bit lighter, as time passes, but the horizontal lines darker, increasing present contrasts. While the granite is weathering, I hope you will carve that Cistercian group.

The
SPALDING SWIMMING POOL
AT DARTMOUTH COLLEGE

RICH & MATHESIVS, ARCHITECTS



By LEON V SOLON

WHILE of recent years the swimming pool has been a standardized type of structure in so far as engineering construction and principles of sanitary maintenance are concerned, its development has now taken a new direction along which decorative treatment and coloring are endowing it with attractiveness and scenic quality. It is recognized as an essential item in the more pretentious clubs, recently built hotels, country estates and certain social institutions; there are even private houses in New York in which the basements have been sunk to a greater depth in order that the owners may enjoy a morning swim.

In the initial stages of the development of the swimming pool, the question of sanitary maintenance was the main pre-occupation; this focussed itself on water filtration, the choice of non-absorbent material for the lining of the pool, the revetment of the walls, and the treatment of angles with the object of easy cleansing.

We find the element of attractiveness now sought by practically all pool designers. Up to recently the Y. M. C. A. adopted the most uncompromising forms of sanitary treatment for their institutions throughout this country, spending very considerable sums in total for pools. Of late, through the activities of Mr. McMillan, of the Y. M. C. A. structural department, much thought and care have been lavished upon creating interest with color, and on achieving distinction in pro-

portion and design. A pool recently built at New Haven for the Y. M. C. A. by Murphy and Dana in association with Mr. McMillan, is an object lesson demonstrating the economic value of taste and design, where simple staple products are assembled for their color quality and their combined scenic effect. An excellent and interesting result has been achieved with a comparatively restricted appropriation, and the general purpose of the institution of which it forms an important item has been substantially benefited. It represents an unmistakable step forward, possessing a specific social value, by reason of the elimination of that repellant air and lack of the sense of welcome which formerly characterized the appearance of many popular institutions that were entirely or in part philanthropic.

The erection of the Spalding Pool, at Dartmouth College, commands our interest primarily by the spirit which actuated so munificent a gift. The donor, Governor Spalding, a Dartmouth man, desired that the structure should embody not only the highest degree of efficiency, but that it should charm the eye. The best of every tested method and contrivance has been incorporated to assure the smooth working of all accessory equipment, achieving an ideal condition in sanitary maintenance; complete success has rewarded the care and deliberation bestowed upon the problem by Mr. Keyes, the Business Director and former Art Professor of the College, and by the swimming pool

engineers, Messrs. Hasbrouck and King, the pool having now been in use for several months.

The architects of the building are Messrs. Rich and Mathesius. Mr. Charles Rich formed his initial connection with the College as a student, and for many years has been the college architect. Incidentally, it might be added, his reputation as one of the finest baseball players the College ever produced still survives in Dartmouth tradition.

The gymnasium, of which the Spalding Pool is an adjunct, was built about ten years ago; it is of quite imposing dimensions, measuring 360 ft. in length and 280 ft. in width. It contains a great hall in which football and baseball practice can be held simultaneously on the same floor. The value of such premises is inestimable to the standing of Dartmouth in intercollegiate games, as the exposure of the College site, set high in the hills of New Hampshire, is such that adverse climatic conditions might interfere with outdoor practice to an extent amounting to a serious handicap.

The internal dimensions of the swimming pool are 75 ft. in length by 30 ft. in width. As the pool has to be used for intercollegiate water-polo matches, it has been planned in such fashion that the regulation length of sixty feet has a minimum depth of six feet. In many pools, the shallow end extends into the 60-ft. area, with the result that the "backs" of one team are standing, which militates against that equality of conditions essential in match contests. The floor of the pool beyond the 60-ft. depth rises to a higher level, so that beginners may learn in safety.

The surface of the pool is lined with square $\frac{3}{4}$ " ceramic tiles made of a speckled green vitrified material, which imparts a deeper tone to the water; material of the same character and size, flat and curved, in varying colors, is used for the handrail, scum gutter and pool edge, on which are distance marks with numerals. The perfect alignment and finish of the tile-covered handrail is an excellent example of the tile-setter's craft, in view of the difficulty of making a revetment

for so narrow and sharply curved a surface with such small units of tile. The promenade around the pool is covered with grey Ohio flint tile, a material that is highly vitrified and impervious to moisture; the units measure six inches square and are laid with a quarter-inch cement joint. This floor is finished with framing bands, running around the walls and pool; these are of a warm colored faience, glazed in Tuscan glazes corresponding to the coloring of the wall decoration. At irregular intervals an ornamental tile, similarly related, is introduced, to establish a decorative connection between floor and walls, which are of contrasting colors.

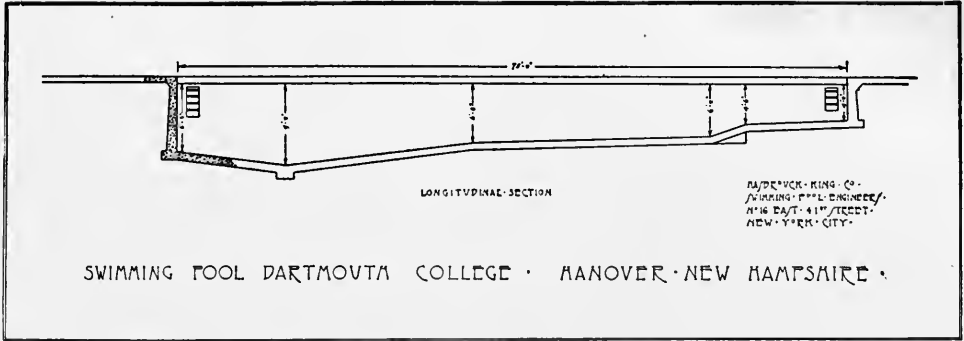
The general color plan of this interior consists of colors of opposite characteristics, conveying in the pool and promenade a sense of cool cleanliness by means of delicate greys and greens; a decided contrast is established in the mural treatment, where a sense of comfort is imparted with rich and mellow tones of browns, oranges and black, in the architectural and ornamental items, which are combined with panels composed of unglazed tiles of warm neutral tint.

As the visitor gets his first view of the great pool room, he is struck by the alluring freshness of the water and experiences an almost irresistible desire to go swimming, while the warm tones of the wainscot and rough plaster finish of walls and ceiling reassure those in whose minds qualifying doubts might arise.

The trim which moulds the windows and frames the paneling of the wainscot is of a simple Renaissance leaf and bead design of slight projection. It is made of faience, colored in rich umber and black, the former tone prevailing; the umber having that wide range of tone and color quality which only the Tuscan glazes can produce. These glazes are developed in an extremely high temperature, and have been proved to be unaffected by both climatic extremes, or to wear by friction, having three times the resistance of the harder marbles. An ornamental band of Tuscan tiles caps the base at a height of 1 ft. 3 inches. The



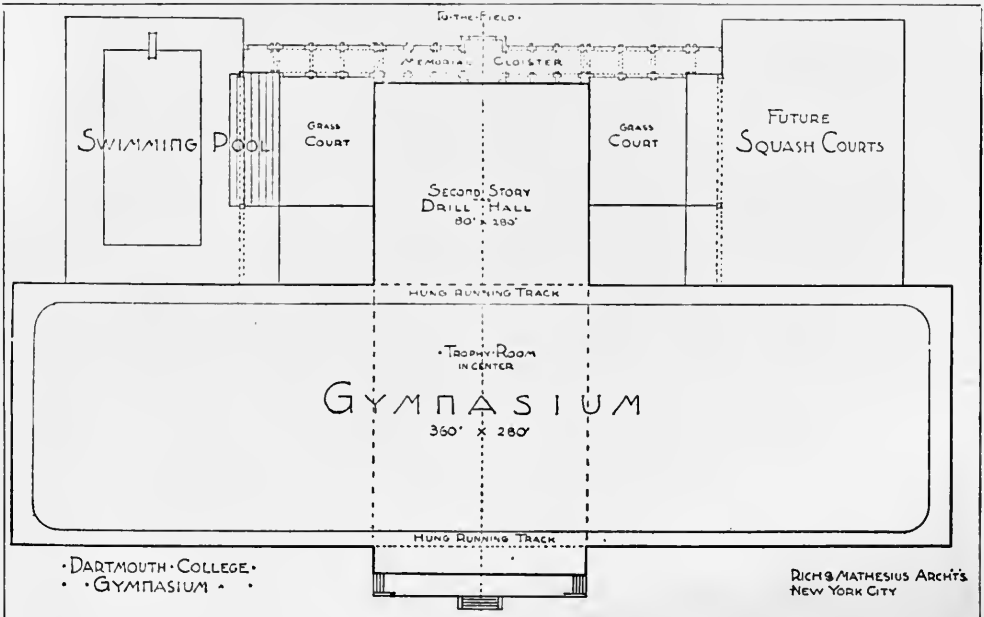
GYMNASIUM AT DARTMOUTH COLLEGE, HAN-
OVER, N. H. RICH & MATHESIUS, ARCHITECTS.



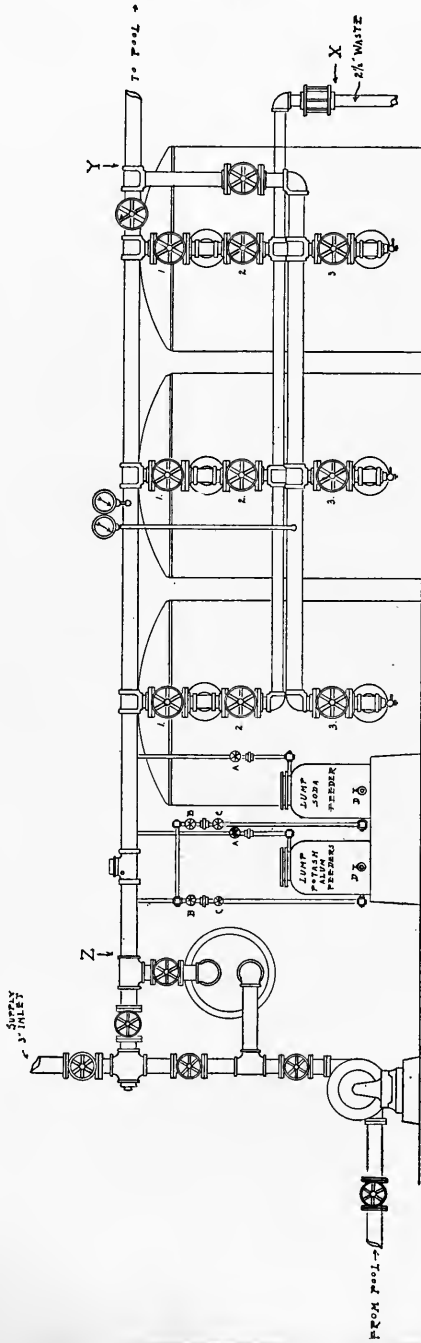
base is made of two six-inch tiles superimposed, of a blue-green Hispanic glaze, widely jointed. The four-inch Touraine granite quarry is used as a filler for the panels, of an "oatmeal" or unbleached linen tone; this has the property of absorbing light, as reflections from the water on shiny wall tiles would detract from the structural quality of the interior.

The main ornamental features are panels decorated with low-relief dolphins arranged to face a circular medallion, on which are inscribed the initials of the College. The modelling is treated in a manner intended to develop the maximum color interest in glazes, which changes

their tone, texture, and color qualities with the varying degrees of thickness in which they lie upon the faience when in process of fusion under high temperature. The field of the ornamentation is of black glaze, which varies in its degree of matness and shininess; the ornamentation is decorated in a rich glaze, varying from a drab, lustreless umber, through intervening tones to a vibrating orange; the initials and bead border surrounding them are treated in mat Roman gold. The values of these points of interest are very considerable, emphasizing by contrast the virile simplicity of this interior. A faience panel records the donation of



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 REMOVE COVER TILL ALUM FEEDER WITH LUMP ALUM
 FEEDER WITH LUMP SODA FEEDER WITH LUMP SODA FEEDER
 OPEN VALVE X · B · WITH VALVE CLOSE
 VALVE X · REPLACE COVER WITH VALVE CLOSE
 REGULATE AMOUNT OF ALUM AND SODA TEP
 WITH NEEDLE · VALVES · C ·

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 To Wash FILTERS CLOSE VALVE 4 · OPEN VALVES 5 & 3
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SPALDING SWIMMING POOL IN GYMNASIUM AT
 DARTMOUTH COLLEGE. RICH & MATHESIUS, ARCHI-
 TECTS. HASBROUCK-KING COMPANY, ENGINEERS.



SPALDING SWIMMING POOL IN GYMNASIUM AT DART-
MOUTH COLLEGE. RICH & MATHESIUS, ARCHITECTS.



SPALDING SWIMMING POOL IN GYMNASIUM AT DART-
MOUTH COLLEGE. RICH & MATHESIUS, ARCHITECTS.

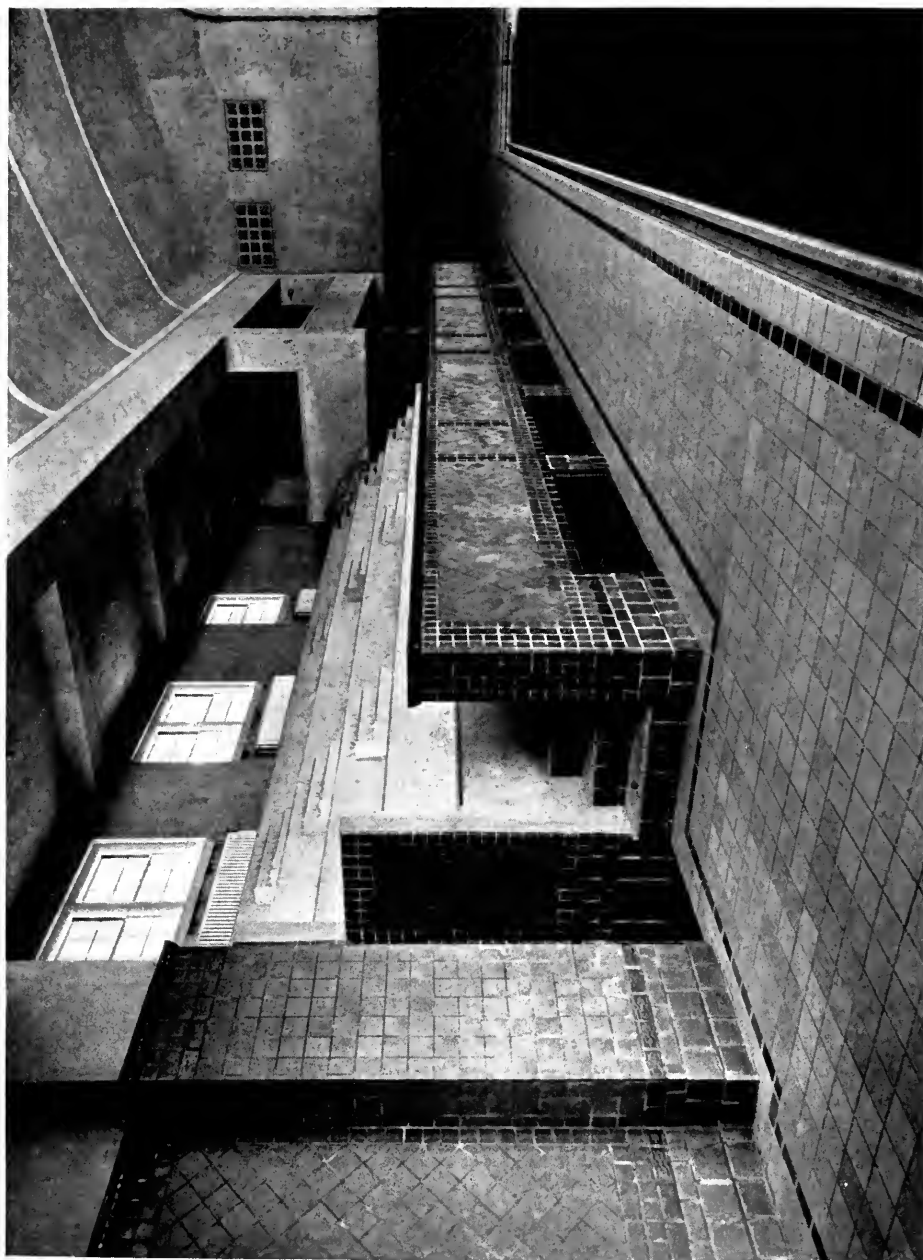


SPALDING SWIMMING POOL IN GYMNASIUM AT DARTMOUTH COLLEGE.
Rich & Mathesius, Architects.

the Spalding Pool to the College at one end of the hall; at the opposite end, the dolphins arranged in frieze-form fill a space beneath the great windows.

The engineers have avoided a procedure when constructing the cement containing-walls of the pool, which has proved detrimental to the waterproofing of many such structures, as a result of pouring the cement in successive operations. In this pool the floor and walls were cast in one operation, the pouring having taken eighteen hours to complete, the walls being nine feet high and eighteen inches thick. They have also eliminated another very detrimental factor, by devising a new method for constructing the forms in which the cement is poured, which dispenses with all wires which are generally used to counteract the lateral weight pressure of the newly poured cement. These wires naturally disintegrate by rusting, ultimately leaving holes penetrating the walls, to the great detriment of waterproofing, causing water pressure behind the containing walls.

Water filtration is an extremely important factor in pool planning. The system installed here, which we illustrate, consists of three pressure filters, measuring five feet in diameter. This is described as the three-group system, contrived to facilitate the cleansing of the filter beds in each unit periodically, without interfering with the constant process of purifying the contents of the pool. The washing of the filter is performed in the simplest possible manner, by reversing the direction of the intake, the water then passing out into the sewer after washing the filter. Filtered water is used for this purpose in preference to water from the main, which is always to a certain extent impure, causing a degree of contamination which would remain in the filter; the filtered water for washing is passed through at a predetermined temperature in order that the filter beds may not be chilled previous to resuming operation. This method is so efficient that it is unnecessary to change the water for many months, whatever the degree to which the



SPALDING SWIMMING POOL IN GYMNASIUM AT DART-
MOUTH COLLEGE. RICH & MATHESIUS, ARCHITECTS.



SPALDING SWIMMING POOL IN GYMNASIUM AT DARTMOUTH COLLEGE.
Rich & Mathesius, Architects.

pool is used for swimming; in fact, from the standpoint of purity, it need not be replaced for ten or eleven months, with the water in daily use; only that quantity of water which splashed over the scum gutter or is used for filter washing has to be made up, evaporation being a negligible factor. Constantly filtered water tends to depreciate in one respect only, viz., in its degree of alkalinity. To remedy this deficiency soda is added in fixed proportions by means of an item of equipment in connection with the filtration plant. The color of the water has also been a subject for study, as the majority of sources tend toward a brownish tone; this is rectified by the addition of alum, which has the property of clarifying water, being added, like the soda, during the process of purification.

The maintenance of a uniform temperature in the water is automatically controlled by means of live steam at five-pound pressure, in an instantaneous heater, worked in connection with the filtration plant.

The installation which we illustrate completely renovates the contents of the pool twice in twenty-four hours; the operation is constant. The final stage of the circuit is that of sterilization as the water leaves the filters to return to the pool; chlorine is the chemical used, having proved more efficient than any other for this purpose.

This pool has been arranged with one effluent drain only, planned on a unique principle devised by the engineers, which reduces to the minimum any difficulty that might arise from a stoppage of the waste pipe.

The shower-room is a luxurious adjunct to the pool. The walls and ceiling are faced with a hand-made faience tile with a cream colored glaze. The shower fixtures are attached to marble slabs; these are easily removable in the event of any defect arising in the plumbing. Each of these slabs and each doorway is framed with a decorative faience border of cloisonné glazes, in blue and white on a blackish ground.

BASILICA OR TEMPLE

By Benjamin Ives Gilman

A GENERATION ago the accepted type of railway terminus was an immense arched shed closed at one end by offices and open at the other for the passage of trains. Today the noisy and noisome arched space has disappeared and been replaced by a series of low shelters over individual platforms, while the offices that closed one end have developed into the station proper, with concourses rivalling in size the train sheds of long ago.

An equally radical change will, I believe, lead to the definitive form of the public museum building. The temple type hitherto accepted without question is about to be abandoned for a basilica type.

One of these types is Greek in origin, the other Roman; and it is curious that the Greek type bears the Roman name among us and the Roman type the Greek name. *Templum* (space set apart) is Latin; *basilica* (royal place) is Greek. But the original uses of the two buildings are *prima facie* evidence that the Roman basilica and not the Greek temple is the type foreordained for museums. For the temple was the abode of the god, and his worshippers gathered before it without entering; while the basilica was a roofed-in forum, from the start the meeting-place of the people for public purposes, at first secular and from early Christian times sacred. The temple was a small building with blank walls surrounded by a row of columns and provided with a door, but containing, as far as is certainly known, no special opening for the admission of light. The basilica, on the contrary, consisted of a central hall with high windows, called a clerestory, admitting light over a surrounding ring of lower apartments, themselves

lighted by external windows. In the early Christian basilicas, the suite of lower apartments was sometimes in two stories and sometimes in two divisions, the inner forming an aisle between columns, as in St. Paul outside the walls at Rome.

When, a century ago, buildings began to be erected especially for museum purposes, it was the temple type that was chosen and the question of its lighting was solved by openings in the roof. Nevertheless, under the pressure of practical needs the ground plan was developed toward that of the basilica; and the typical museum came to consist of a large space surrounded by a single or double row of apartments used as galleries. Usually there were two such spaces separated by an entrance and stairway hall. In one fundamental particular the developed form retained the impress of its origin. Its light continued to be derived mainly from overhead, the interior spaces being at first treated as courtyards and later made into galleries by roofing them in with glass. The blank external walls remained, and, with the low dimensions of the structure and the glass skylights indicating overhead lighting, are still the most characteristic external features of the prevalent museum type.

In parts of museums meanwhile, the clerestory had occasionally been used, as at the Kelvingrove Museum at Glasgow (1893), and elsewhere before and since; and in 1911, in an article entitled "A Museum without Skylights," contributed to "Museumkunde," I proposed to apply clerestory, studio, or (as I have ventured to call it) "attic" lighting to all the exhibition spaces of a museum, exterior and interior alike, through the use of the basilica scheme. The genesis of that article and another which followed it in the *Architectural Record* in 1915 is instructive at the present turning-point in the development of museum architecture.

The plan of the present Museum of

This article, "Basilica or Temple," by Dr. Gilman, of the Museum of Fine Arts in Boston, is reprinted from *Museum Work*, for December, 1920. By permission.

Fine Arts in Boston (1907) was the subject of much study for several years by all of those connected with the museum administration. The result was a building in which the proportion of windows to skylights was much greater than had before been customary. There was another feature incorporated in the plans which was also the result of much experience and observation. The ground plan of the central block of the Museum—two large courts separated by an entrance stairway hall and surrounded by a double row of exterior spaces—may be called the standard museum plan. But in adapting it to the needs of the Boston collections the lower floor was varied by reducing the inner of the double row of spaces about the courts to a corridor. This had already been done at the Chicago Art Institute (1893), the Museum at Cologne, Germany (1897) and doubtless elsewhere.

The advantages of both provisions were manifest as soon as the new building came into use. The predominance of sidelighted rooms gave both floors a friendly air in marked contrast to the somewhat mausoleum-like effect for which the customary top-lighted museum has always been criticised. The corridor surrounding the courts gave a most desirable freedom of movement through the lower floor. Any room could be set off or temporarily closed without preventing access to any other.

Besides these expected advantages, the experience of the building brought an unexpected result. The best galleries in the whole Museum proved by common admission to be the large top-lighted courts. Here the light openings were so high (about fifty feet) that the illumination seemed to come from nowhere. Yet it came in sufficient quantity and at a good angle to show every kind of exhibit to good effect. A serious defect still remaining was brought all the more prominently into view. On many winter days clinging snow covered the skylights, and until it melted or was removed, the courts were immersed in deep twilight, while the sidelighted rooms adjoining were as bright as ever. As one of these courts

was in my charge, I was impressed by the fact that its customary admirable lighting might have been preserved at all times had the court been a nave with clerestory windows and a solid roof.

The discontent with toplight which this observation awakened was transformed into positive opposition by a subsequent observation of a different kind. In looking over a mass of illustrations of top-lighted galleries in Europe, gathered during the studies preparatory to the new building, I gradually came to feel a certain vulgarity of effect in all of them. Vulgarity of effect is a sure sign of something that pretends to be what it is not. How did a top-lighted gallery produce this effect? Evidently, by pretending to be an interior when it really is an exterior. The essential feature in any place meant to live in is a solid roof. An apartment without an opaque ceiling is not a room to live in, but a small courtyard to pass through, partaking of the nature of the "wells" common in large buildings. When we furnish and use it as a gallery for the preservation of perishable contents, we make it pretend to be the dwelling-place it is not. Hence the vulgarity of effect that the illustrations of European top-lighted galleries disclosed when inspected *en masse*.

On the spot I abjured toplight. In the enthusiasm born of the new faith, it was easy to fancy the central block of the Boston Museum building transformed into a sort of double basilica; of which the courts were the naves, lighted from clerestory windows; the corridors, borrowing light from the nave, were the aisles; the suite of external galleries the ring of chapels, lighted by windows high up against the ceiling; and the space over the central stairway a lantern, such as crowns the crossing of nave and transepts in many cathedrals. The result of this fancied transformation of the Boston building was the Museum without Skylights described and illustrated in the article in "Museumkunde" in 1911. The accompanying Figure 1, showing the external scheme of the building, prefaced that article.

The two fundamental needs of any

museum building are good lighting for exhibits and free passage for visitors. The basilica form of the Museum without Skylights furnished both. Every exhibition space had the high side lighting called studio light because artistic *par excellence*. The corridors corresponding to the aisles of a basilica were sufficiently lighted as passages by borrowing from the nave, and permitted free access to every room without entering any other.

Two other needs less fundamental were not as well met by the Museum without Skylights. These are the ease of the visitor and the indefinite expansibility of the building.

Doubtless all museums possessing, like the supposed Museum without Skylights, a monumental stairway to the chief gal-

The result of accepting both suggestions was the basilica scheme of which I gave drawings and a description in an article with the title "Glare in Museum Galleries," published in *The Architectural Record* in 1915 and reprinted with the article of 1911 on "A Museum without Skylights" in my volume, "Museum Ideals," in 1918. The accompanying Figure II reproduces enlarged and abridged tracings* from two of these drawings.

This scheme has not yet been incorporated in the design of any museum. But it became last year the basis of a design for a Small Museum presented before the American Association of Museums by Mr. Meyric R. Rogers and since published by him in *The Architec-*



FIG. 1. A MUSEUM WITHOUT SKYLIGHTS

Scheme of Elevation: from *Museumkunde*, 1911

leries, have made the experience that time has brought the Museum in Boston; the experience, namely, that many visitors lose themselves on the ground floor and miss, until perhaps too late, the main exhibits of the Museum. How would it answer to exchange the rôles of the two floors, putting the chief galleries on the ground level, the subsidiary collections and offices above, and substituting smaller stairs for the single monumental stairway?

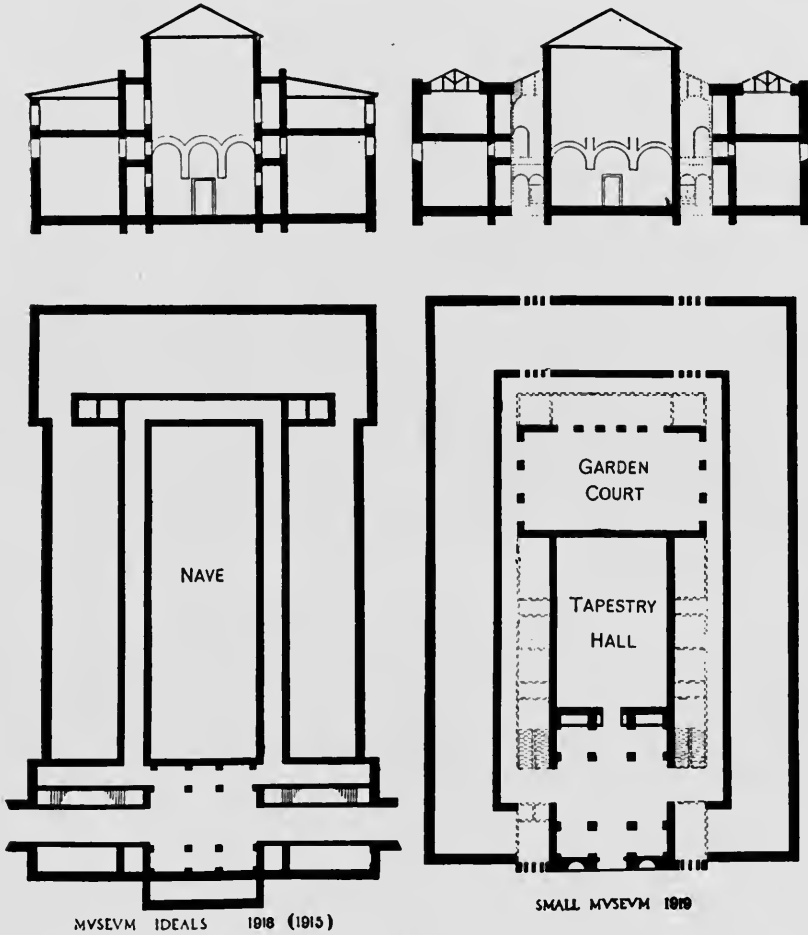
Further, the plan of the Museum without Skylights consisted of two symmetrical halves. How would it answer to use one of these as the germinal unit of a group of like buildings to be connected by external corridors?

atural Record for December, 1919, and *Museum Work*, for May, 1920. Figure III reproduces enlarged and abridged tracings* from the cross-section and main floor plan of the "Small Museum" as published in *Museum Work* with the portions added by Mr. Rogers to the scheme of "Museum Ideals" indicated by dotted lines. Mr. Rogers' description of the "Small Museum" mentions the Museum at Cleveland as the source of certain of its basement arrangements, but does not refer otherwise to any previous design. Figure IV shows the relation of the general scheme of the "Small Museum" at once to the Temple plan of the Cleveland

* By Mr. W. R. Dougherty, Assistant Instructor in Drafting, Wentworth Institute, Boston.

Museum and the Basilica scheme of "Museum Ideals." The figure consists of a tracing from the scheme of "Museum Ideals," another from the plan of the Cleveland Museum with all details omitted from both; and a third outline

Figures II and III already show; second, that the scheme contains, instead of the nave of "Museum Ideals" a tapestry hall and a garden court of approximately the dimensions of those at Cleveland; and third, that the partition of



FIGURES II and III. TRACING WITHOUT DETAIL

formed from these two by cutting the tracings from "Museum Ideals" into three parts lengthwise and replacing its nave by the two courts of the Cleveland Museum, the garden court placed crosswise instead of lengthwise. These outlines serve to make plain three facts: first, that the general scheme of the "Small Museum" is that of "Museum Ideals" divided lengthwise into three parts, as

the scheme of "Museum Ideals" is required if the garden court is placed crosswise as in the "Small Museum," instead of lengthwise as at Cleveland.

Notwithstanding the ingenious and charming details in which the design for a "Small Museum" abounds, it is impossible to approve it as a whole. A sound result cannot be reached by the dislocation of one established architectural type

in the interest of another radically different. The basilica was a wonderfully clever solution of the problem of lighting a building of great area, a problem altogether foreign to the purposes of a temple. First the central portion is raised and provided with windows clear of the surrounding roof. From its outward resemblance to a boat upside down, this portion is called a nave. The surrounding area proves to be least well lighted at its inner edge next the nave, and this is made use of for a passageway. Thus the aisle is born, leaving the rest of the outlying space well lighted from its windows for the essential purposes of the building. These thoughts of genius go for nothing if we then proceed to move the aisle into outer darkness away from the nave. The spaces inserted in its place, in part without light or air except from doorways and ducts, and on the second floor from skylights, introduce the spirit of the Greek temple among the airy and sunny basilica elements on either side, as spots of oil might float on water. In longitudinal section the exterior of the "Small Museum" announces the same incongruity by its juxtaposition of a curtailed clerestory with a courtyard roof. Again, in the proposed extension of the "Small Museum," the basilica ideal of free communication appears to be dropped and that of natural lighting is

still further disregarded. An axial corridor appears to replace the circuit passage of the parent building; and were the extensions complete, two principal galleries on the main floor would become interior spaces lighted in Greek temple fashion only through doorways.

There was, nevertheless, no reason either for cutting up the basilica type in order to get a garden court or for giving it up in order to provide for easy extensions. An atrium or cloister about a garden area is a consistent and not infrequent sidewise adjunct of a structure of the basilica type. The scheme of "Museum Ideals" provides corridors correctly placed for continuation as such cloisters about garden courts, and these cloisters could be flanked externally by a range of galleries when necessary. Extended in this way, no part of the scheme of "Museum Ideals" would require artificial illumination. Remaining a museum without skylights, the building would yet be open to the day in every room.

In a word, to turn a part of a nave into a court is an architectural solecism likely to yield untoward practical results, as the design for a "Small Museum" shows. . . . The basilica type meets every museum need that is met by the temple type; and its dismemberment or abandonment to produce a hybrid is neither desirable nor necessary.

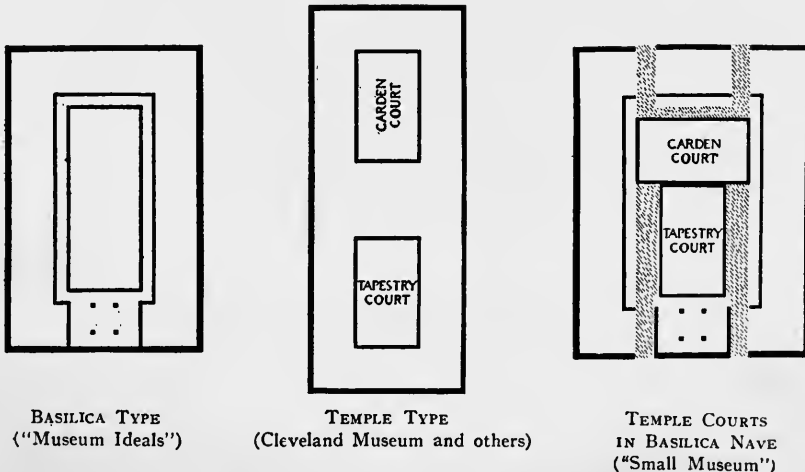


FIGURE IV



FIG. 35. APARTMENT HOUSE AT 140 MT. VERNON STREET,
BOSTON, MASS. RICHARD ARNOLD FISHER, ARCHITECT.

TENDENCIES IN APARTMENT HOUSE DESIGN

PART IV - BUILDINGS ON NARROW SITES

~ Continued ~



By FRANK CHOVTEAU BROWN

LAST month we considered the simplest, most fundamental type of apartment house arrangement, predicated upon its availability to the commonest type of city lot,—that with a narrow frontage on the street and considerable depth. The next logical step along the selected line of progress is to consider other possible variants of plan available on this same—or the next slightly larger—area of lot.

The plan types that have been selected for illustrative purposes have been grouped on the "lot" basis rather than the type of plan, because all apartment house developments start, of necessity, from the kind of lot that is to be improved, rather than from a fixed idea as to the kind of apartment that is to be built. Even granted that the owner or developer of the property has, in the first instance, some quite definite idea as to the kind of apartment he is desirous of building, and selects his lot most carefully with that point of view in mind, yet the fact remains that the architect has finally to study the problem with the idea of obtaining the most use and income from the available area and proportions of the lot thus obtained,—and so, as a matter of practical fact, we arrive once more at the lot, its size and proportions, as establishing the final limitations and requirements with which the arrangement and disposition of the plan has ultimately to be brought into accord.

For convenience in discussing or composing the different apartment house plans gathered for consideration in these articles, they have been grouped in the following manner. First, the type that was and is still most common, the long

narrow thin plan, adapted to the ordinary narrow city lot, has been considered. This plan has several possible modifications. First would be the simplest form, such as was shown last month in Fig. 26, for instance, where the single apartment extends from the front to the rear line of the property and covers the entire width of the lot between party walls. Second comes the most obvious modification, accomplished by dividing the lot into two nearly equal parts and making two smaller apartments on each floor, one entirely across the front of the narrow lot, the other across the entire width of the lot at the rear. This form of plan may be made to fit the narrow single house lot, the same as Fig. 26 in proportion, when each apartment would be of about half the number of rooms of the single apartment there shown,—or it is even better adapted to a lot of somewhat wider width, as is this month excellently illustrated by Figs. 35 and 37.

Considered as a matter of investment return, it is generally found that the smaller apartments (placed two to the floor) will each bring in considerably more than half the rental of the larger apartment. The exact proportion of increased value of the smaller apartment over the larger cannot be exactly stated, but the larger the city and the more conveniently located the apartment, the larger the increase, until we find that, in a crowded city such as New York, it is frequently the case that the owner expects and receives for the smaller apartment as much as or sometimes even a little more than he would obtain for the larger apartment covering twice as much area. These larger rentals can as a rule only be ob-

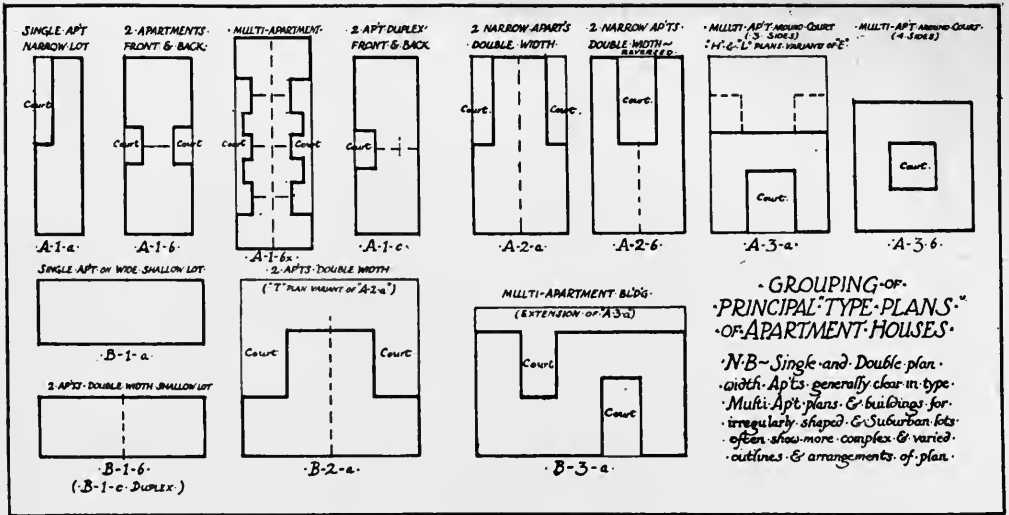


FIG. 36. PRINCIPAL APARTMENT HOUSE "TYPE-PLANS."

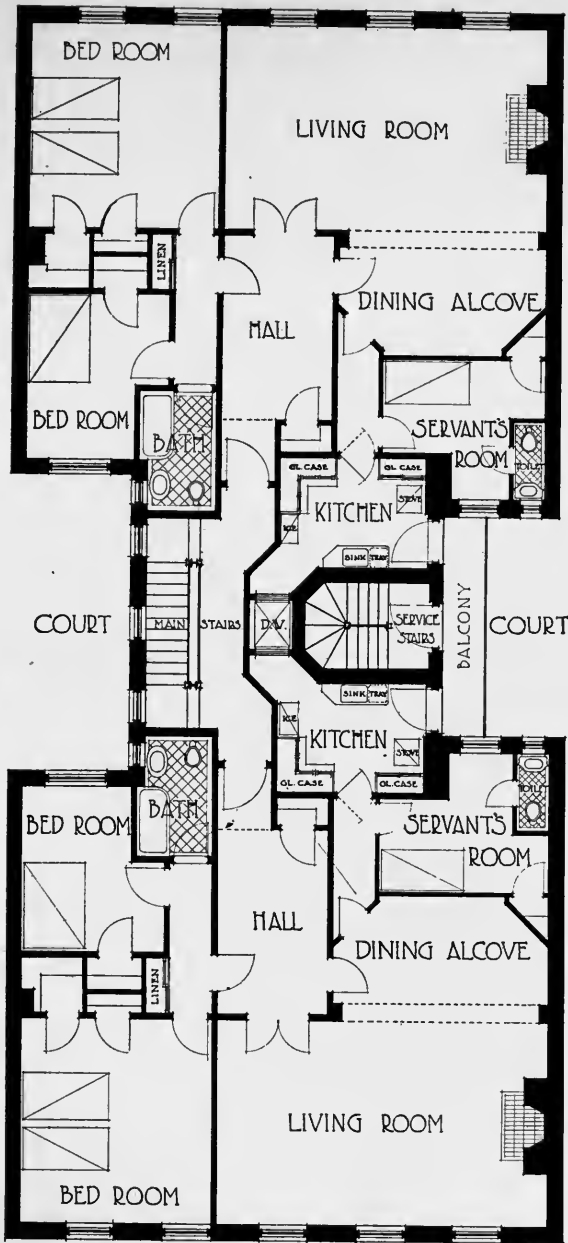
tained for the more conveniently located apartments, in near-fashionable locations; or in those more accessible yet pleasant down-town near-business or shopping streets that are yet quiet enough for family living quarters, or in suites for exclusively bachelor occupation.

It must also not be forgotten that the cost of building the two apartment to the floor plan amounts to somewhat more in the first place than the larger single apartment. Generally it requires more bathrooms; in the smaller types it sometimes doubles the number in the building, and in a living apartment it of course means double the number of kitchens—although they may be smaller in size. In other words, the installation cost of the plumbing is about doubled—although but little difference is made in the other structural elements.

Still other variations of this type of plan must be recognized. The number of rooms per apartment may sometimes best be obtained by arranging each floor into a "duplex" type of plan; that is, dividing the depth of the narrow lot in the center and placing half the large apartment upon one floor, and half upon the floor above. ("A-1-c."—Fig. 36). This is of course usually accomplished by placing the living rooms upon one floor and the sleeping quarters upon another. Gen-

erally the living quarters are upon the lower floor of the two, but this is not necessarily the better arrangement. We shall later be able to show an example of this type of apartment plan where the living floor has been placed *above* the floor containing the sleeping rooms because of the distinctly better outlook for the living quarters thus obtained.

The single apartment on the narrow lot—such as is indicated in the group of type floor plans in Fig. 36 at "A-1-a," for instance—may have substituted for its long narrow plan either two apartments to the floor—one at the front and the other at the back of the lot, each of about half the number of rooms of an equal area—"A-1-b," Fig. 36),—or it may be divided in the center of its depth, and a duplex apartment be placed upon two floors at the front and another upon two floors at the back. In the former instance the cost of the construction and equipment of the building would be slightly increased—by about the expense of doubling of plumbing fixtures that would thus be required—and at the same time the income from the rental of the smaller apartments (at some considerably larger amount than half the rental of the larger apartment) would probably bring in a still greater income from the property.



Other things being equal, this plan might also result in rooms of a slightly larger area and size, because of the saving in long corridor space. Of course, such a division of the lot in depth could not be undertaken unless the rear of the lot possessed some advantages of exposure, quiet, or attractive view or outlook, that would warrant the placing of the living rooms upon this portion of the property.

An excellent example of the compactness of plan that may result from such an arrangement is shown in Fig. 37. The fact that this particular lot is somewhat wider in proportion to its depth than the narrow city lot first contemplated does not affect the main facts in the case,—although of course it does to some extent vary the details of the arrangement of the plan. In this case the lot extends entirely through a shallow city block, and so possesses two frontages upon streets, and although the rear street is a quiet cross street of only a block in extent, it provides both a southern exposure and an attractive outlook. The entrance to the building as a whole is, of course, retained upon the more important street at the front. The area of this shorter, wider lot is somewhat less than was the case in the plan shown as Fig. 26 last month, yet both may nevertheless be studied with advantage as typical of the two kinds of lot usage. If this two apartment to the floor plan, one front and

TYPICAL FLOOR PLAN

SCALE FEET

FIG. 37. FLOOR PLAN, APARTMENT HOUSE AT 140 MT. VERNON STREET, BOSTON.

By Richard Arnold Fisher, Architect.



FIG. 38. NOS. 140 AND 142 WEST 55TH STREET, NEW YORK CITY. SCHWARTZ & GROSS, ARCHITECTS.

one back, were to be used with the very narrow, deep lot shown previously, the bedrooms would be thrown to the back of the living rooms, on the court, instead of being placed on the street from beside them, as is here the case. The latter arrangement undoubtedly offers a pleasanter, more desirable plan, commanding higher rentals, when the street frontage required is obtainable for use in this way.

One other detail in the plan arrangement must also be noted—the definite manner in which the two bedrooms and the bath to serve them are placed in a clearly defined and separated rectangle,

self contained within its own walls, at one side of the space devoted to living accommodations.

The exterior of this building (which is also duplicated—with the exception of the entrance doorway—upon the rear street façade) shows a straightforward and simple use of an economic material and a local historic style, in a way that depends upon good proportions, simple and inexpensive materials, and well controlled design for its success—a very commendable set of virtues in a field where architect and owner are both somewhat too

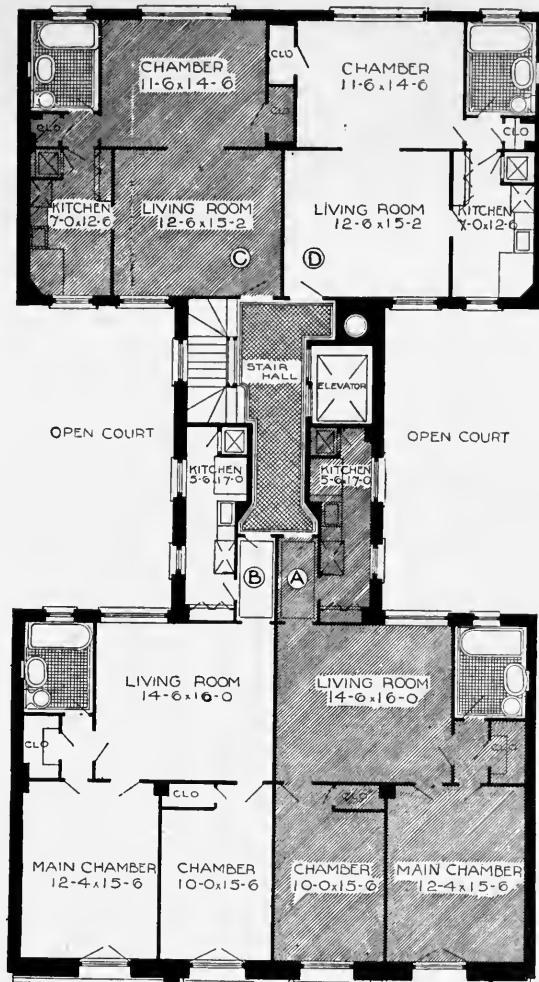


FIG. 39. TYPICAL UPPER FLOOR PLAN—NOS. 140 AND 142 WEST 55TH STREET, NEW YORK CITY. Schwartz & Gross, Architects.

likely to regard pretension and ostentation of design as necessary to the attraction of tenants.

Figs. 38 and 39 illustrate another development of a lot of still wider frontage, but of rather similar proportions, in this case carried out with two smaller apartments on each front, the two on the front street being of three rooms, bath and kitchen, and the two on the rear each having two rooms, bath and kitchen conveniences. The similarity of the general arrangement to the previous plan is at once apparent. It is a straightforward, compactly arranged scheme, and the fact that the floor plan

is duplicated many more times in the nine story (instead of a four story) structure, in no way alters the application of either plan-arrangement to other problems, for buildings higher or lower, as the case may be.

Another illustration is Fig. 41, provided by the other New York apartment building, placed upon a still larger lot, and employing a larger apartment scheme. Here the two apartments placed across the front of the building have each five principal rooms, the only difference occurring in the variation in the servants'



FIG. 40. NO. 122 EAST 76TH STREET, NEW YORK CITY. SCHWARTZ & GROSS, ARCHITECTS.

COURT

APARTMENT "C"

6 ROOMS, FOYER, 2 BATHS (EXTRA LAVATORY) 6 CLOSETS

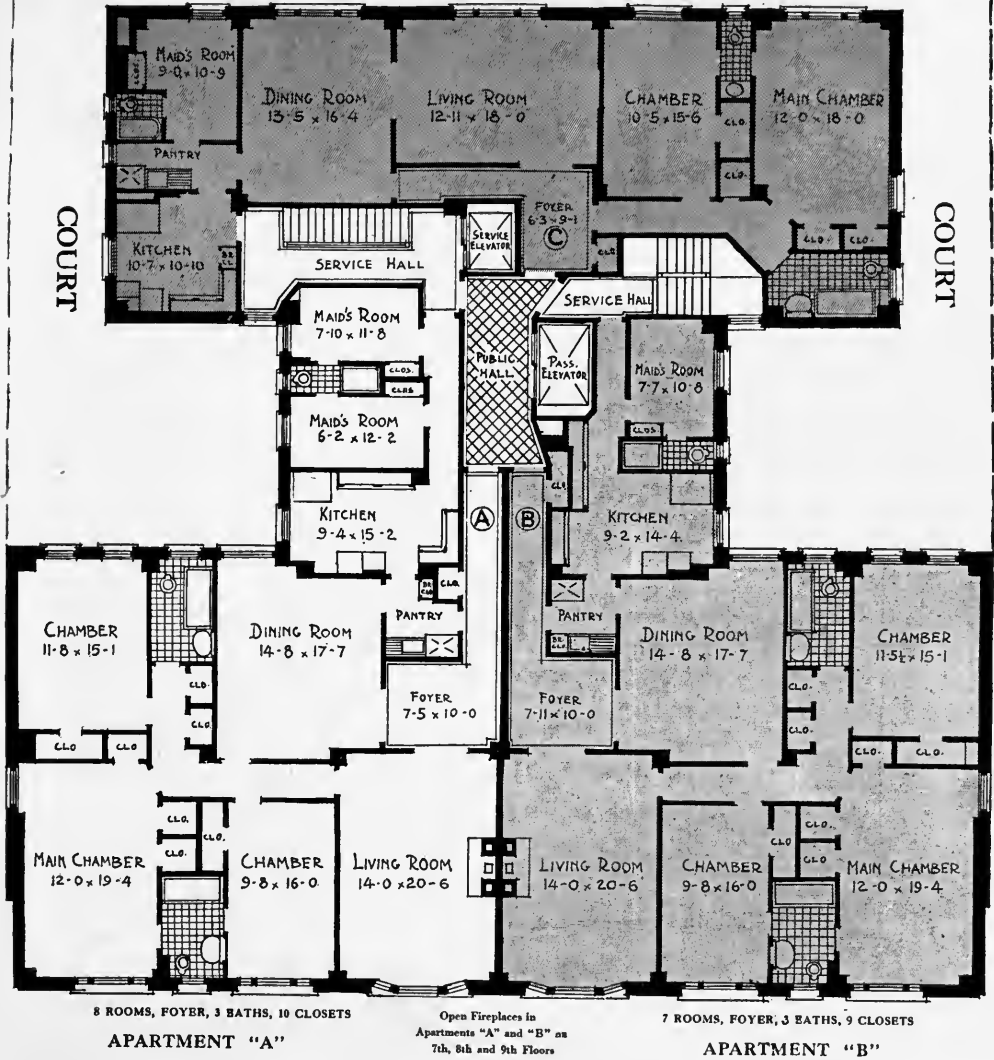
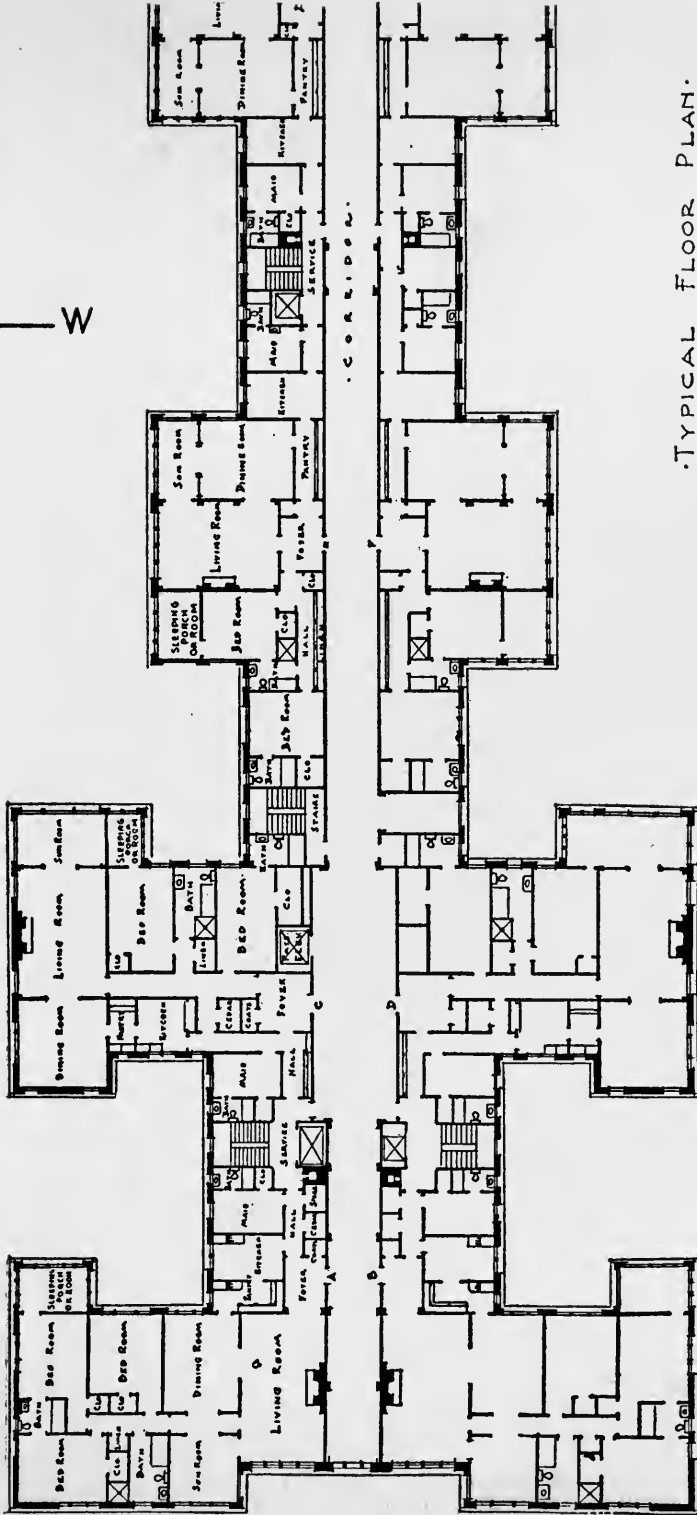
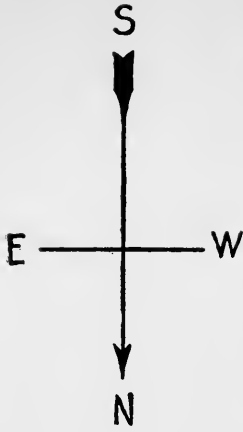


FIG 41. TYPICAL UPPER FLOOR PLAN—NO. 122 EAST 76TH STREET, NEW YORK CITY. SCHWARTZ & GROSS, ARCHITECTS.



FIG. 42. PERSPECTIVE DRAWING—APARTMENT HOUSE AT 1700 JEFFERSON EAST, DETROIT, MICH. ROGERS, BONNAH & CHAFFEE, ARCHITECTS.



·TYPICAL FLOOR PLAN·

FIG. 43. PART OF TYPICAL FLOOR PLAN, THE RE-MAINDER HAVING THE SAME ARRANGEMENT—APARTMENT HOUSE AT 1700 JEFFERSON EAST, DETROIT, MICH. ROGERS, BONNAH & CHAFFEE, ARCHITECTS.



FIG. 44. NO. 420 WEST END AVENUE, NEW YORK CITY. SCHWARTZ & GROSS, ARCHITECTS.



FIG. 46. NO. 930 PARK AVENUE, SOUTHWEST CORNER OF 81ST STREET, NEW YORK CITY. SCHWARTZ & GROSS, ARCHITECTS.

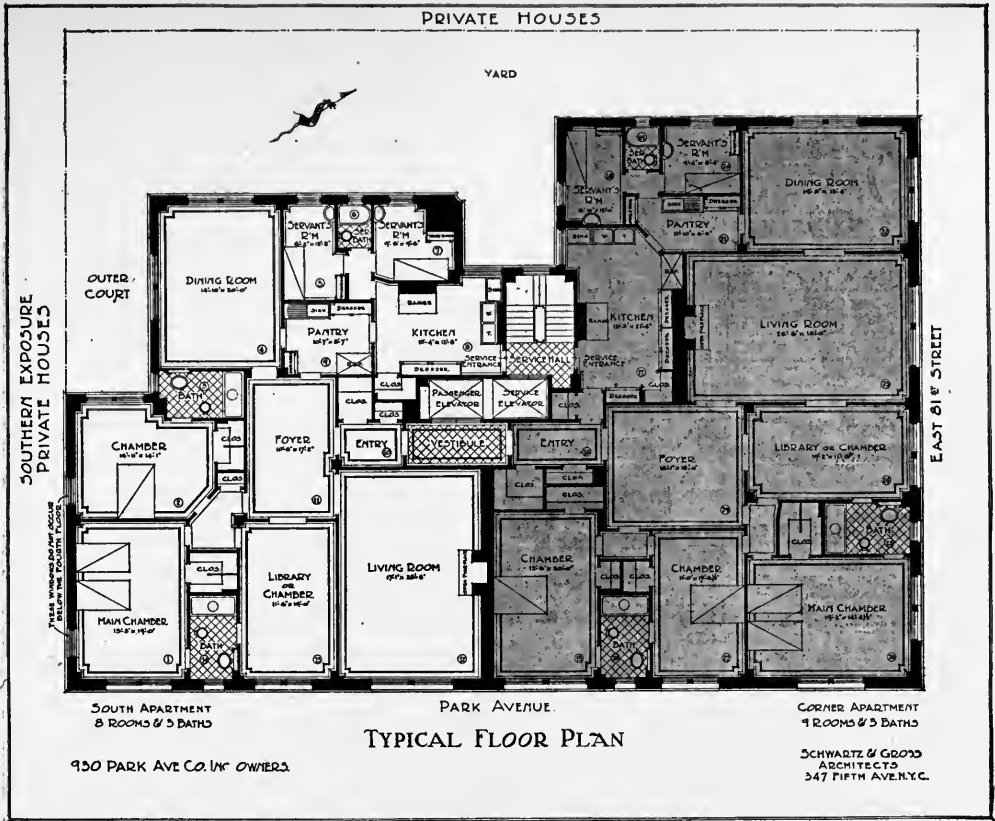


FIG. 47. TYPICAL FLOOR PLANS—NO. 928 PARK AVENUE, SOUTHWEST CORNER OF 81ST STREET, NEW YORK CITY. Schwartz & Gross, Architects.

rooms, one being provided in the one case and two in the other.

At the rear, the fact that the lot was shallower than in the case of the previous examples has made it necessary to run the rear apartment entirely across the back of the building, and even then it possesses only four principal rooms, as against five in the case of the two front apartments. The plan of this building has been considerably complicated by the need of providing two rear staircases and a service elevator. If there had been two apartments in the rear, no more service staircases would have been required, although another service elevator would have been needed to avoid the necessity of the servants passing across the main hall directly in front of the entrance doorways to the rear apartments, as

is the case in the present plan. Another minor defect would seem to be the narrow passageways through which entrance from the main hall is made to the front apartments. This space would have been better left in the public hallway, which would then have been more spacious. At the same time the entrance to the "foyers" of the front apartments would have seemed more direct and comfortable.

One other principal development of the general type of plan being discussed in this article, is also to be recognized; the employment of this same plan-scheme upon a much larger scale than we have yet considered. This development may well be illustrated in an unusually extreme example, that has but recently been completed on a site in Detroit.

This building is also an excellent example of what is likely to develop in the West, as their particular kind of expression of the "De Luxe" type of apartment that, in both New York and Chicago, has taken a more decidedly urban expression. It also well illustrates exactly how the "type-plans" that have been here grouped together, on the basis of their mere essentials of plan-scheme, are capable of extension to a degree that is well illustrated by this particular building. In the key plans in Fig. 36, this plan is represented by "A-I-bx" and its immediate relationship to the last plans we have been considering, Figs. 39 and 41, should be easily seen. The only difference is that the *idea* of the plan in Fig. 39, for instance, is here merely extended, and repeated, further and further backward until it is, as a matter of fact, duplicated three complete times.

The plan as reproduced in Fig. 43, does not show the full extent of the depth to which the building was built, because its length was so great that it could not clearly be reproduced upon this magazine page. The actual middle of the length of the building occurs in the service stairs shown on this plan opposite the letter "W" in the compass indication at the upper right hand corner. Right and left of this center line, the plan of the building is duplicated in arrangement, so that it contains on each floor twelve apartments, six on each side of the long central corridor, each apartment being indicated by the "ell" extending toward each side, the division between the apartments occurring in each case somewhere near the middle of the courts that separate them and provide exposure, light, and air to the rooms on both sides. One of the best and most expensive residential suburbs of Detroit is that known as "Grosse Pointe," beautifully wooded and planted, and containing handsome and expensive homes, and it is on one of the lots, 153 feet wide, and 900 feet from Jefferson Avenue down to the bank of the Detroit River, that this building has been placed.

The building is set back from Jefferson Avenue seventy-five feet at the entrance end (further back than many of the resi-

dences themselves) and the river front is about three hundred and thirty feet from the bank, so that the structure itself is about five hundred feet long, and occupies only about 42 per cent. of the lot area—the remaining 58 per cent. being given to the necessary driveway approaches, landscaping, and garden treatments indicated on the perspective drawing reproduced. A private driveway to the street entrance also extends down the west side of the building to the river front, where a large circle, between the entrance to the building on that end and the river bank, surrounds an elaborate Italian garden. The service driveway is carried along the eastern side of the building, and down into a basement space near the center of the building's length, where unloading platforms are provided under cover—and in fact enclosed within the outer walls of the building. Rubber tired trucks will carry the deliveries thus made from the unloading platforms to the service elevators rising at or near the rear entrances of all the suites—so that all deliveries to the tenants and the movements of the servants themselves in or out of the building, will not disturb or inconvenience the occupants, who will have the use of the main halls entirely to themselves.

Situated in the midst of the best residential district, about 15 or 20 minutes from the center of the city of Detroit, with pleasant surroundings, an attractive outlook on all sides, and the river at the rear, it will be readily seen that the plan of this apartment need not be carried out on any such restricted and crowded basis as is necessary in even the most expensive of the "De Luxe" apartments of Chicago and New York. And this statement is justified by reference to the plan. Here it will be seen that the entire arrangement is upon an unusually spacious and luxurious scale. Every apartment is given outlook, air, and sunlight upon three sides by means of the court indentations and projections that are disposed down the length of the building. All apartments enjoy both North and South exposures, and either East or West.

Besides the six or seven principal

rooms contained in each apartment in this building, each suite has also a sun room and sleeping porch; with pivoting casement windows, so that they can be closed in and used as rooms, if desired by the tenants. One notably good point is to be observed in the planning of the individual apartments in this building, and that is the comparative isolation obtained for the servants' portion. Not only have they private elevators and stairways, but the space to be used by them within each apartment is both conveniently near the front door, and at the same time remote from the master's living portion of the apartment. Besides the conveniences of arrangement that appear upon the plan, the owners have provided a chauffeurs' rest room in the basement, and a garage accommodating three hundred cars within two blocks of the building. The structure is fire and sound-proof; there is a separate built-in shower and three baths in each apartment; all radiators are concealed; the living rooms have "electric fireplaces"; the kitchens are provided with individual electric refrigerator equipment, enameled gas ranges and electric plate warmers; a vacuum cleaning system is installed throughout the building, and spacious laundries, with complete electric and gas washing, drying and ironing machinery are provided, along with private store rooms, in the basement. Also, in addition to the servants' rooms found in each apartment, sixty additional rooms are provided elsewhere in the building, with public reception room and matron, to take care of such additional maids as may be required or desired by the tenants.

Turning from this Western type to the sort of plan that is more representative of the "De Luxe" apartment of the East, we can see in Fig. 47 a simple plan arrangement, by no means as elaborate as some of the more pretentious and recent New York apartments, but all the more representative from that very fact. The apartments are two to the floor, the plan similar to the front portion of Fig. 41—except for the fact that the lot was upon a street

corner, and has so suffered some of the readjustments necessary to make the best possible use of the additional exposures thus made available for the more important rooms. The apartments are of eight and nine rooms, the one on the corner having an additional bedroom. The plan is simple; a center dividing line, with passenger, service elevators and staircases disposed for the common use of the two apartments. The plan is of the condensed, or "close-coupled," type from front to back and all the rooms are disposed around a central square hall, or "foyer," and while the minor rooms and passageways are crowded, the principal rooms remain of ample and spacious size.

Fig. 45 shows another New York building, now with three apartments to the floor, and therefore more nearly and directly comparable with Fig. 41. The plan is upon a more ample scale, and is again further modified by its corner location. In the arrangement here shown the plan is more successful than Fig. 41, particularly evident in the manner in which the kitchens of the three apartments are served by the one service elevator and single staircase located in a remote corner of the public hall. The passenger elevator is well placed, and the enclosed staircase next it is so arranged as to be available as the principal stairs, or it may be used to supplement the more remote service staircase, in connection with the servants' doorway in the corner apartment. The apartments are well and thoroughly separated from each other—either by corridors, closets placed back to back, or sound-proofed partitions. The principal criticism of this building is directed against the somewhat unfair location of the front doorway to the rear apartment, "C," placed between the two fires, as it were, of the back doorways of its own and the corner apartment—an arrangement that seems the more unnecessary because both could have been easily carried more out of sight and sound in some such ingenious way as has actually been contrived in the case of the service entrance to the apartment, "A," nearby.



MANTEL IN PENNSYLVANIA
MUSEUM. PHILADELPHIA, PA.



PANEL DETAIL—MANTEL IN PENNSYLVANIA MUSEUM, PHILADELPHIA.

The
EARLY ARCHITECTURE of PENNSYLVANIA
PART X—MANTELPieces (*Continued*)



By A. LAWRENCE KOCHER

EVERY clearly defined tendency in English architecture of the eighteenth century had its echo on this side of the Atlantic. The drift toward eclecticism and the individualism which pervaded English architecture at the time of our Revolution can be seen taking visible form along the entire Colonial seaboard. The breaking of government ties does not necessarily imply an independence in matters of art and literature. America continued to look across the sea for her fashions in dress and furniture and building.

The fruitful influence of those "four enterprising brothers named Adam," as Pugin rather bitterly termed them, was clearly marked in America, and their numerous followers have left monuments to us in the way of dwellings planned in the Adam style and many building acces-

sories, such as mantels, ceilings and doorways.

The four Adam brothers, John, Robert, William and James, were associated in the practice of architecture in England within the years 1728-1794. Of the group, Robert was by far the ablest and most active. These architects posed as reformers and laid claim to having invented new ornamental details and they also regarded their methods of house planning as an innovation.

Robert Adam insisted that they "introduced a greater variety of ceilings, friezes and decorated pilasters, and added grace and beauty to the whole by a mixture of grotesque stucco and painted ornaments, together with the *rainceau*, with its fanciful figures and winding foliage. If we have any claim to approbation, we found it on this alone: That we flatter ourselves

we have been able to seize with some degree of success the beautiful spirit of antiquity, and to inform it with novelty and variety, through all our numerous works." They state further: "We have

voli, Pompeii and elsewhere in Italy. Reference is made in the "Journal of the Italian Tour" to the ancient sepulchres, where "stuccoes are remaining vastly entire; they are of excellent workmanship,



DETAIL OF CAPITAL—MANTEL IN PENNSYLVANIA MUSEUM, PHILADELPHIA.

not trod in the paths of others, nor derived aid from their labors."

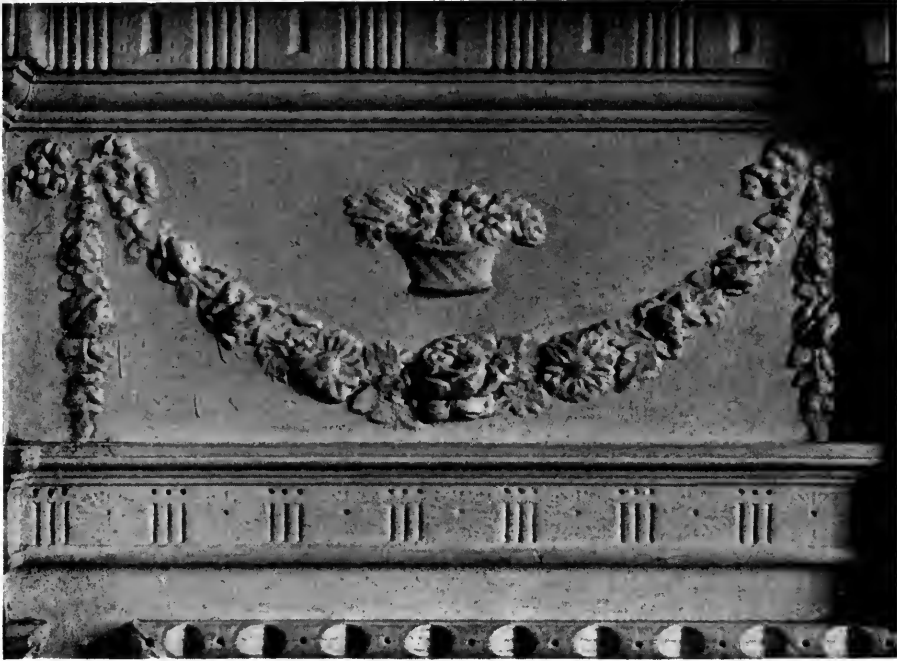
The inspiration for the Adam manner of design was derived from contact with foreign architecture. Travel on the continent brought Robert to the Roman monuments at Nismes in 1754, to Rome in 1756, and in 1757 he spent several weeks in measuring the ruins at Spalatro. The drawings and notes of these visits reveal an interest in the light and graceful stucco bas-reliefs in Rome, Ti-

and of the lowest relief I ever beheld." James Adam wrote of a subsequent Roman Journey: "At Pompeii, I saw a room which seemed to have been painted with arabesques."

It must be added that the brothers developed their design in a manner that was essentially their own. While they submitted themselves with open minds to the impression of the late "Roman grandeur," they nevertheless gave their work the impress of their own individual taste. No

architects of modern times have had a wider influence or a larger group of followers than Robert Adam and his brothers. By the architect of today there is, perhaps, no single phase of the Renais-

the universal practice to decorate the wood mantel with composition plaster. This naturally detracted from the permanence and dignity of the effect, and repetition of motives was encouraged by the



DETAIL—MANTEL IN PENNSYLVANIA MUSEUM, PHILADELPHIA.

sance in England that is given more assiduous study.

The new style proved to be a bombshell injected into the prevailing architectural practices of the late eighteenth century. The "talismanic charm of tradition was broken and the new taste soon became general in England; everything became Adamitic, including buildings and all manner of furniture." In America the new mode was gradually accepted, and it necessarily displayed modifications. In the transition, the style lost some degree of its grace, and simplicity was noticeably increased. The ornamentation of the English Adam mantel was usually in marble and but rarely was stucco enrichment* added to wood framed chimney pieces. In the Colonies, on the other hand, it was

fact that molds were required for the casting. Their repeated use was almost unlimited.

In order to form an opinion regarding the Adam style in Pennsylvania, let us first examine a few of the dwellings of this colony that possess some of the qualities of the work of these distinguished brothers.

The Woodlands is a country seat, now almost hidden amid trees on the shady banks of the Schuylkill River. It was erected by William Hamilton in 1770 and is one of the most notable of the many estates built for the well-to-do citizens of British origin who had taken refuge in the American colonies. The north façade differs from the usual severely regular and rectangular front in that the central part is treated with six irregularly spaced Ionic pilasters of moderate projection.

* Stucco is composed of a mixture of inert plaster, or gypsum, or wood fibre with a glutinous compound. It is squeezed from metal or wood molds.



MANTEL IN DERBY—CROWNINSHIELD HOUSE AT 202 ESSEX STREET, SALEM, MASS.
 CENTER PANEL AND FIGURES AT ENDS SIMILAR TO DESIGNS BY ROBERT
 WELLFORD, OF PHILADELPHIA.

Above these pilasters is an elaborate frieze which is surmounted by a steeply sloped pediment. The frieze is enriched with vertical fluting and rosettes and the necking of the Ionic capitals are likewise fluted. The detail and design are unlike those to which we have been accustomed. These qualities are undeniably foreign. It is safe to attribute the design of this mansion to the influence of the Adam brothers, particularly in view of the surprising nature of the plan. Robert Adam adopted a method of creating vistas and arranging his rooms *en suite* and of designing circular and oval apartments. Such are the characteristics of this plan.

We enter through a doorway with a segmental arched head, supported by attached columns. The vestibule is circular, with a domed ceiling. The surrounding wall is penetrated by four doorways alternating with four semi-circular niches. Engaged columns with well-shaped acanthus caps are spaced beneath a plaster

cornice. From this entrance we obtain a vista into all rooms of the first floor. The drawing room, of generous size and oval shape, is at the right. To the left is the stair hall, beyond which is the dining room, also designed upon an oval basis. The ball room is the most important and impressive compartment of the entire first floor level. It is situated at the center of the north side, overlooking the river and is approximately thirty-eight feet in length, exclusive of the large exedrae at either end which break the general rectangular outline. The circular and elliptical prototypes in England differ only in their more ornate treatment of walls. An explanation is given for such a plan by Robert Adam in the first volume of the work of his firm: "To express the advance and recess with other diversity of form in the different parts of a building, so as to add greatly to the picturesque of the composition." Also: "the rising and falling, advancing and receding, with the



MANTEL NO. 1 IN DILLER HOUSE AT 21 SOUTH QUEEN STREET, LANCASTER.

convexity and concavity, and other forms of the great parts, have the same effect in architecture that hill and dale, foreground and distance . . . have in landscape. That is, they serve to produce an agreeable and diversified contour that groups and contrasts like a picture, and creates a variety of light and shade, which gives spirit, beauty and effect to the composition."

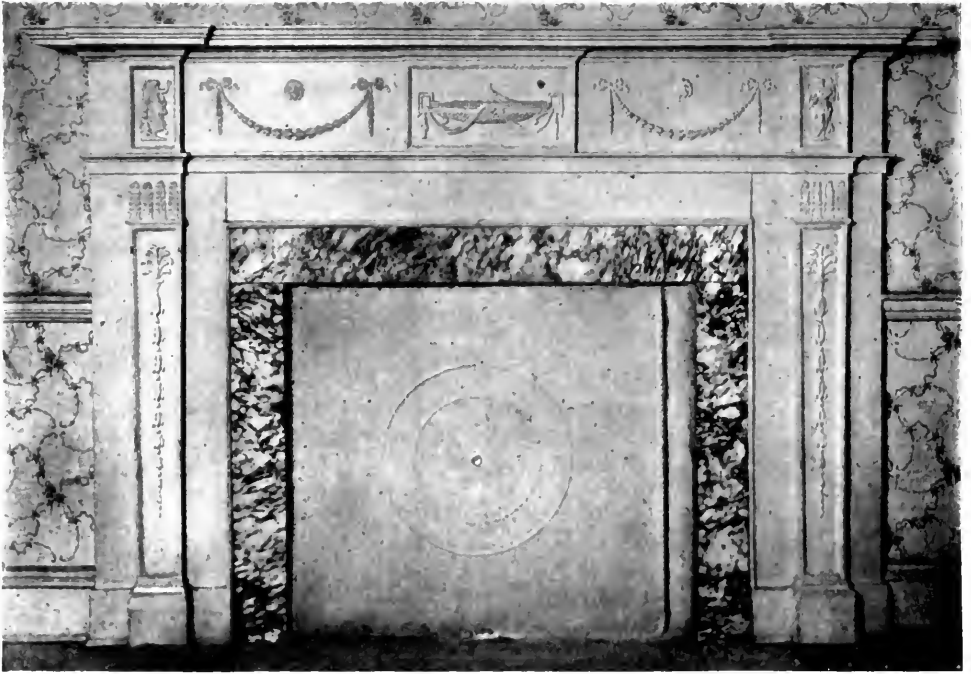
The William F. Diller House at 21 South Queen Street, Lancaster, Pennsylvania, is an example of city residence architecture of the Adam school. It was built in 1805 from drawings by the Philadelphia architect, John Hill, who gained a contemporary fame as the designer of the first State capitol building at Harrisburg.

In addition to an interesting floor arrangement, the Diller House is distinguished because of its excellent mantelpieces with stucco ornamentation applied to a wood structure. The design of these

mantels presents little variation in the general disposition of parts; each possesses the usual divisions with columns and entablature framing the fireplace proper; each has a broken architrave above the supporting members. Four of the examples have coupled colonettes as end supports, while one varies in this respect by the adoption of pilasters with an inverted taper.

The plaster ornamentation includes classical compositions of Flaxman or Wedgwood inspiration, festoons of flowers, cloth swags, vases, rosettes and pendants of wheat and of oak leaves with acorns.

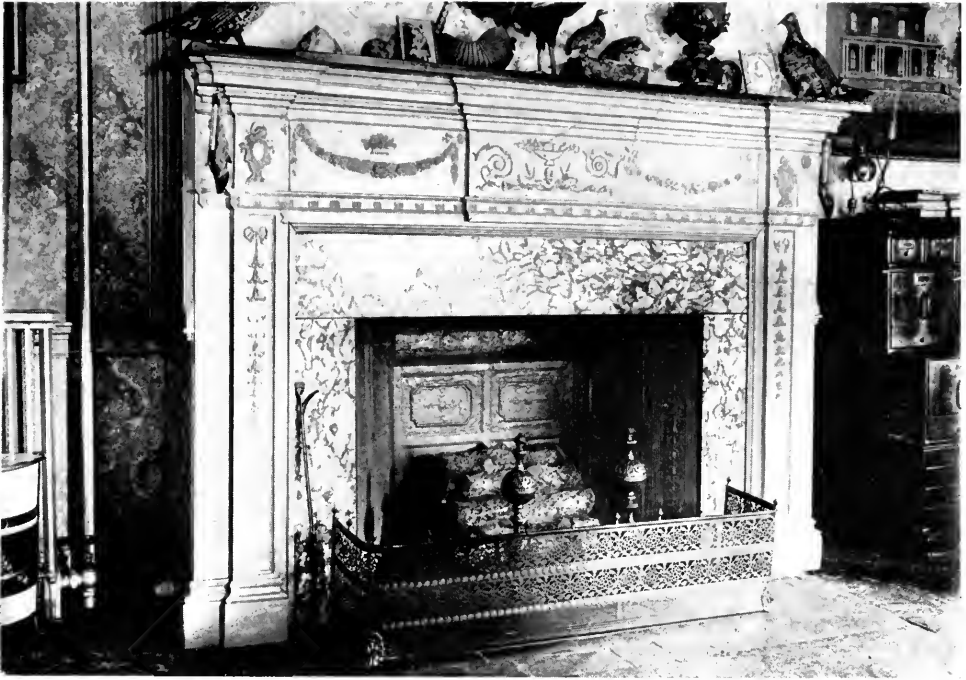
While none of these mantels is signed by their maker, there is little doubt that they are from the shop of Robert Wellford of Philadelphia. Wellford is listed as an "ornamental composition manufacturer" in the directory of Philadelphia for 1801. He continued to reside in this city



MANTEL NO. 3 IN DILLER HOUSE AT 21 SOUTH QUEEN STREET, LANCASTER.



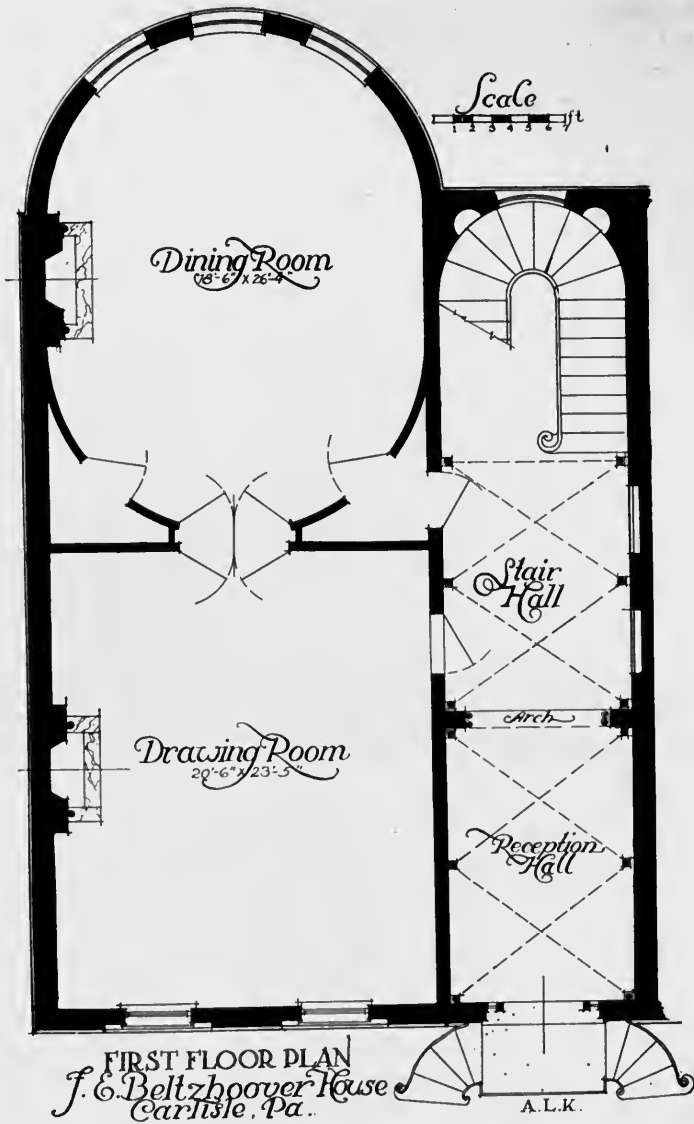
MANTEL NO. 2 IN DILLER HOUSE AT 21 SOUTH QUEEN STREET, LANCASTER.



MANTEL IN FRONT ROOM OF PACKER HOUSE, SUNBURY.

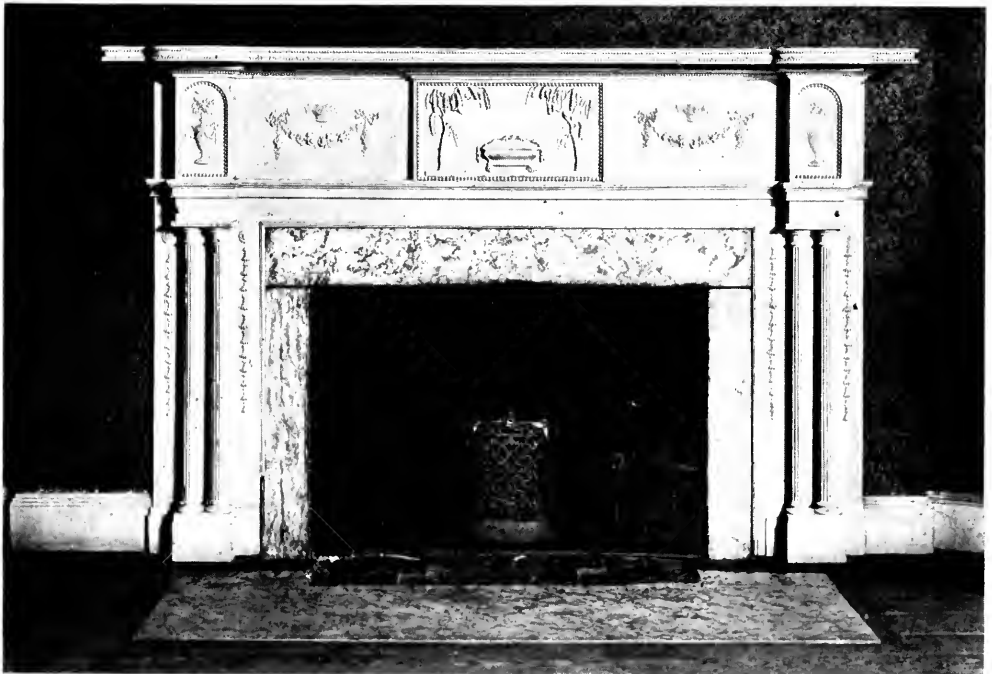


DETAIL OF MANTEL IN FRONT ROOM OF PACKER HOUSE, SUNBURY.

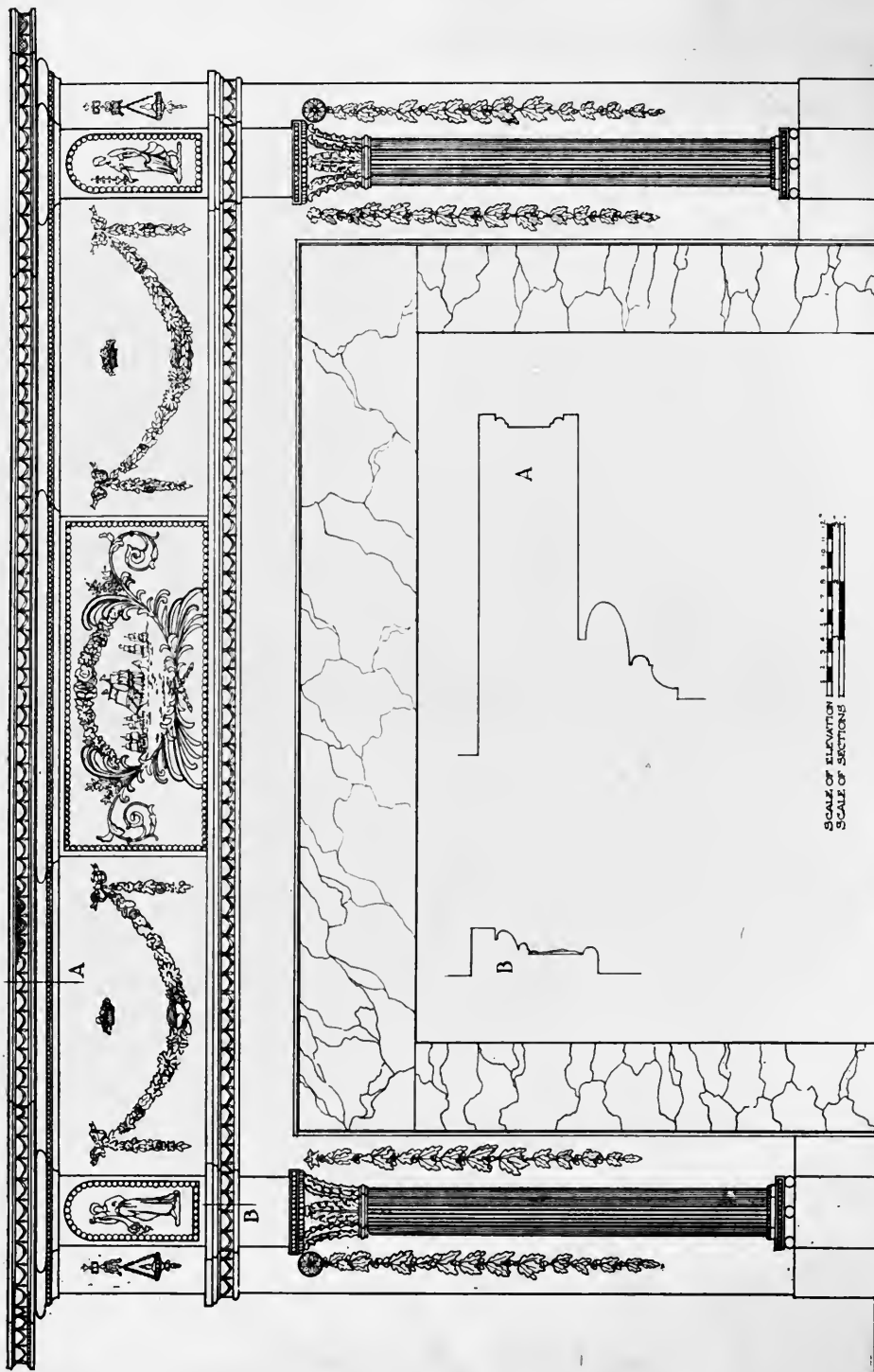




MANTEL, FRONT ROOM, SECOND FLOOR, BELTZHOOVER HOUSE, CARLISLE.



MANTEL, REAR ROOM, SECOND FLOOR, BELTZHOOVER HOUSE, CARLISLE.



MEASURED
AND DRAWN BY
A. K. Kocher

MANTEL PIECE - BELLZHOOVER HOUSE CARLISLE PA MADE BY
P. WELLS FORD

until 1839, during which time he appears to have built up a reasonably flourishing business.* Within the last three years a mantel in the F. E. Beltzhoover House in Carlisle, Pennsylvania, was brought to the attention of the writer. This mantel bore the inscription, "R. Wellford, Philadelphia, delit."

It is of considerable interest to have discovered the name of a distinguished and successful American craftsman who may have been responsible for a broad influence upon mantel design.

It appears reasonable to attribute the mantelpieces of the Diller House to Robert Wellford because some of the ornamental motives of these examples are identical with the motives which appear upon the definitely identified specimen in Carlisle. The festoons of flowers and the baskets of flowers and fruit are similar in every detail and are undoubtedly from the same molds.

By the same process of identification we can assign the mantel from the Packer House, illustrated in this issue, to the same maker, for again there is a similarity in design.

It may be of some importance to carry the investigation further in order to determine the extent in which this Philadelphia craftsman served other mantel makers in other parts of the country. We may note, for example, that the figure which appears on the projected end of Mantel No. 1 of the Diller House is repeated without modification on the same part of the chimneypiece of the Derby-Crowninshield House at 202 Essex Street in Salem, Massachusetts. This motive occurs once more upon the plaster frieze beneath the ornate ceiling of the drawing room of Solitude in Philadelphia, built for John Penn in 1785. It is altogether probable that this ceiling was added at a date subsequent to the erection of this building; or did later plaster workers derive some of their designs from it?

The composition illustrated on page 215 is from a mantel in the collection of the Pennsylvania Museum in Fairmount

Park, Philadelphia. It depicts a reclining figure holding two doves in leash. A cupid is at the right, drawing his bow as if to speed an arrow toward the birds. A second cupid is at the left. This composition is duplicated on the mantel already mentioned—the Derby-Crowninshield example of Salem. The architectural character of the two examples is sufficiently different to warrant the inference that they were the work of different joiners, but that the stucco embellishment was derived from the same source.

Handbooks of the day recommended the use of stucco of this nature. Nicholas Biddle, a carpenter and instructor in architectural drawing in Philadelphia, in 1805 wrote in his publication: "The use of composition ornaments on mantels, if judiciously chosen and placed, may have a very good effect, but care should be taken not to overload the work with them, and that there be proper connection between the ornaments on different parts." Asher Benjamin commends the same decorative means in his *American Builder's Companion*, published in 1807.

The plan of the F. E. Beltzhoover House at Carlisle is avowedly a copy of a plan by Robert Adam, but in the elevation we can detect at least a hint of the manner of such contemporary architects as Latrobe, Thornton and Mills. In fact, the design of this dwelling has been attributed to Latrobe, who prepared the plans for Dickinson College in the same town in 1805.

The Beltzhoover House was erected in 1815 for Stephen Duncan, son of a Supreme Court justice, Thomas Duncan.

Unquestionably the most important mantels of the mode which we are discussing have come down to us from this Carlisle mansion. There were, on the second floor, two examples alike in the design of their structural woodwork but different in ornamentation. The mantel of the front room, in an unusual way, reflects current events; that is to say, its inspiration was immediate and patriotic. The confident pride in the achievement of the American naval forces in the War of 1812, in which Commodore O. H. Perry defeated the British in the celebrated

*Bulletin of The Metropolitan Museum of Art; Vol. XIV; No. 2; p. 36. Two American Mantelpieces, by Mr. C. O. Cornelius.

Battle of Lake Erie on September 10, 1813, is reflected on the elaborate panel at the center of the frieze. This victorious naval achievement is modelled in scant relief, surrounded by a delicate frame of conventional scrolls and flowers.

The triple cluster of colonnettes at either end is reeded and without taper, and has capitals of circular section, surrounded by acanthus leaves. The square base rests on balls of wood. The decorative elements in plaster consist of garlands and baskets of flowers, festoons of oak leaves and acorns, rosettes, and graceful figures that suggest the workmanship of Flaxman, framed in arch-headed, depressed panels. Slabs of Scotland marble surround the fireplace and hearth.

The mantel of the rear room differs only in the more sober treatment of the details. Slender Doric columns are beneath the projected ends, and smaller garlands adorn the frieze. The central tablet, which is now partly defaced, at one time exhibited an eagle with spread-wings, resting on a sarcophagus, on which is inscribed the sentiment: "To the Memory

of Departed Heroes." Beneath this tomb is the name of the maker: "R. Wellford, Philadelphia, delit." To complete the composition, willow trees with drooped branches are placed on each side of the sarcophagus.

The Adam episode in American architecture may not have attained a very high distinction in art, if measured by the exact standards of today. With regard to the figures and the detached bits of ornament, we feel that they are more or less an intrusion; they sometimes appear awkward and not in good scale. But one must judge the accomplishment by the age in which the work was done. The achievement was notable, indeed, when we consider that our country was without a classical background; craftsmanship had largely declined to mere carpentry, and traditional architecture was on the wane. We may well be eloquent as to the grace and dignity, the variety, *verve* and even restraint of these designs, the skillful handling of drapery, and, finally, the delightful ways in which a new material was turned to an aesthetic purpose.



PANEL DETAIL, FRONT ROOM MANTEL, SECOND FLOOR,
BELTZHOOPER HOUSE, CARLISLE.

The

COMPETITION FOR THE FELLOWSHIPS
OF THE AMERICAN ACADEMY *in* ROME



By
Roscoe Guernsey *Executive Secretary*

AS the competitions for the Prizes of Rome annually awarded by the American Academy in Rome have now been concluded and the appointments announced, a brief account of the method employed for selecting the Fellows and of their life and work at the Academy may be of general interest.

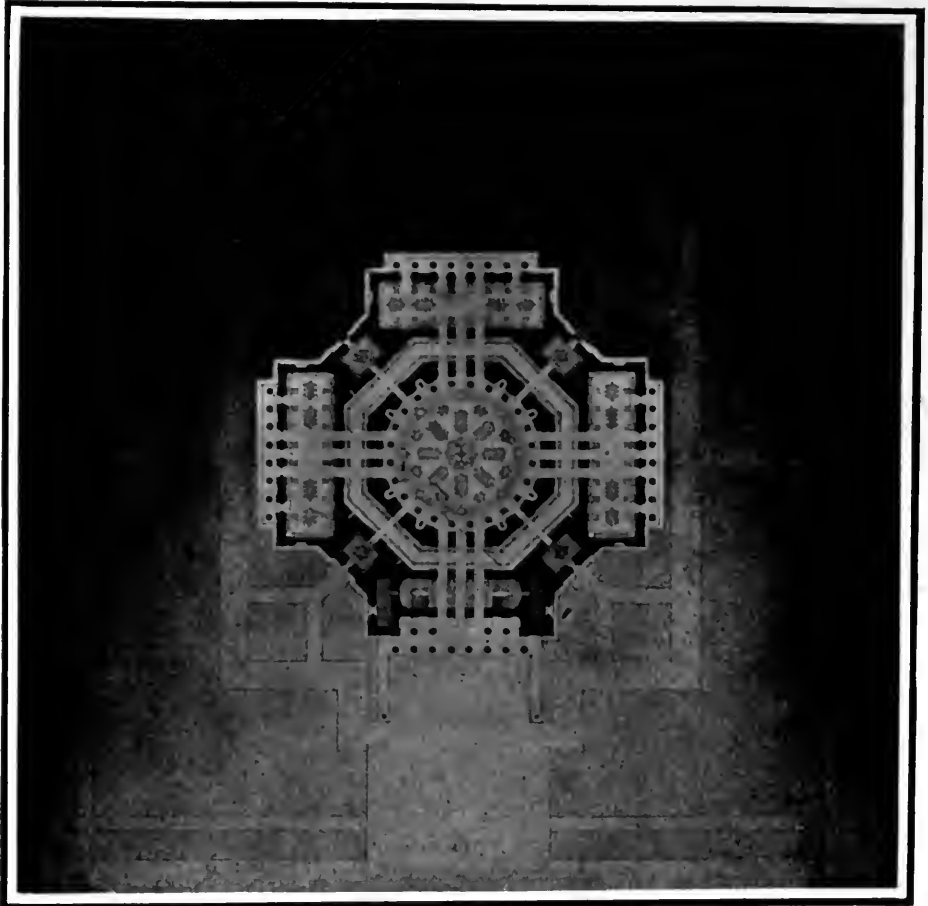
The declared purpose of the competitions in the Fine Arts is "to select from the available practitioners and advanced students in each of the arts of architecture, sculpture, painting and landscape architecture—musical composition has now been added—in the United States the one best fitted to fill for three years the position of Fellow of the American Academy in Rome. That one is best fitted whose natural capacities, general culture and professional training are such that he can best gain in the three years of his Fellowship and apply to the advancement of art in the United States after his return, a keen understanding of the qualities which give to the classics in all the arts their universal appeal, of the technical methods by which those qualities were secured in classic examples of his own art, and of the inter-relation of the arts with each other and with the general civilization of which they are part."

In the effort to secure competitors possessing these high qualifications every candidate is required to furnish satisfactory letters of reference and to submit a formal application, giving briefly the facts of his life and his training. Painters and sculptors must show evi-

dence of their special fitness by submitting specimens of their work. Candidates in architecture must have had at least one year's experience in an architect's office and must be graduates of an approved school of architecture, or college graduates who have studied at least two years in such school of architecture. The requirements in landscape architecture are similar to those in architecture.

The applicants who meet these requirements are permitted to enter the preliminary competitions. For in each branch of the Fine Arts the selection of Fellows is made after competitions, which are open to unmarried men, citizens of the United States. These competitions consist in the execution of such drawings, paintings, models and written statements as may be required. From the preliminary competitors the Jury may select any number up to ten for admittance to the final competitions, the duration of which is four weeks. The Jury then selects not more than four, and the Fine Arts Committee awards the Fellowship to that one of the four who, in their judgment, possesses the highest personal and professional qualifications.

The Fellows thus chosen are men of advanced attainment and are not sent to Rome to learn technique. In the words of the Academy's charter, its purpose is to enable "those who have passed with honor through leading technical schools or have been equally well qualified by private instruction or study to develop their powers and complete their training under the most favorable conditions of



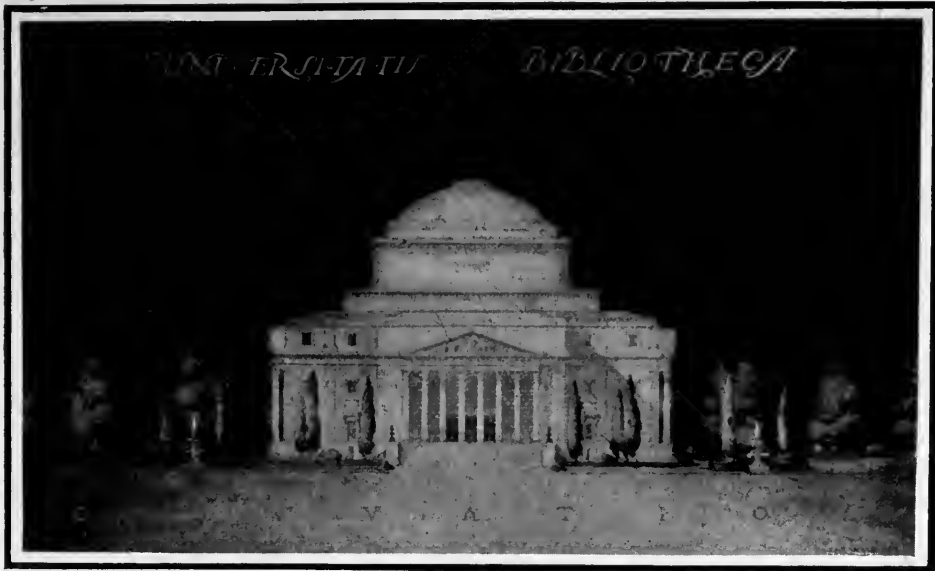
WINNING DESIGN IN ARCHITECTURE, COMPETITION FOR THE PRIZE OF ROME, 1921,
BY V. L. S. HAFNER, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 1918.

direction and surroundings." There are no classes nor compulsory lectures at the Academy. The course of study, covering a period of three years, is not rigidly prescribed but is pursued under the general direction of the Professor in charge. It is three-fold in character:

(1) General studies, including general history and the Italian language; and the history, topography and archaeology of ancient Rome supplemented by actual examination of buildings and by collateral reading. The Academy possesses a well-equipped library and museum and numerous lecture courses upon art, topography, history, etc., are given by experts. Also

frequent excursions are made in and about Rome.

(2) Specific work, known as the "Academic Work." This, of course, varies in the different arts. In architecture, for example, the architecture of ancient Rome constitutes the chief subject of study during the first year, and the Fellow is required to measure, draw and render several of the best examples of classical detail and to execute a set of rendered drawings from his own actual measurements and notes of a restoration of a single classical building. In the same way the architecture of the Renaissance forms the chief subject of study during the second year. In the



WINNING DESIGN IN ARCHITECTURE, COMPETITION FOR THE PRIZE OF ROME, 1921,
BY V. L. S. HAFNER, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 1918.

third year the Fellow must execute from his own actual measurements and notes a set of rendered drawings of one of the following subjects:

(a) The restoration of an antique building or group of antique buildings in Italy or Greece.

(b) A city square in Italy or a group of buildings in Italy.

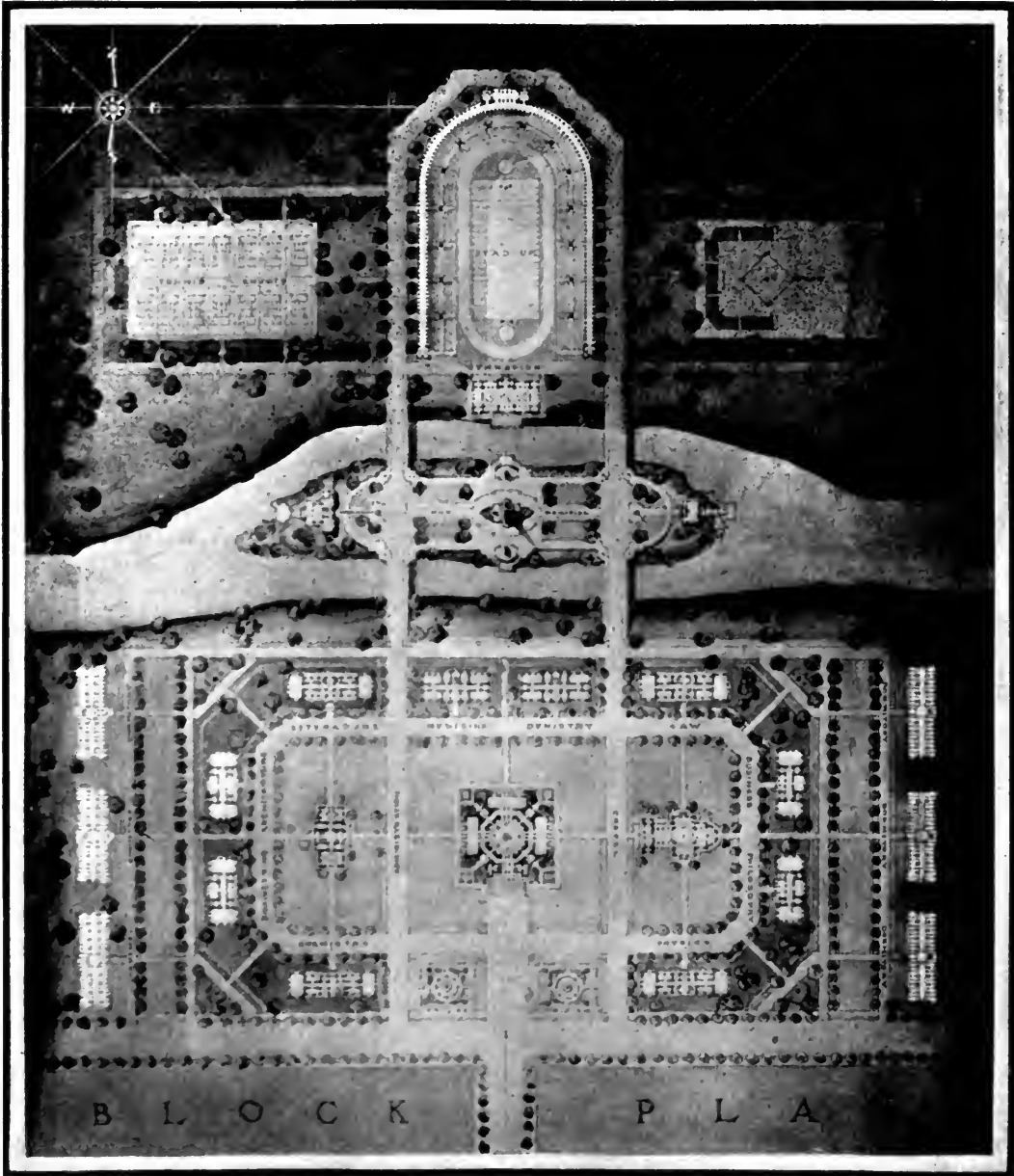
(c) A villa of the epoch of the Renaissance.

(3) Travel. Each year Fellows are required to undertake a certain amount of travel in Italy, Greece and such other classical countries as may seem advisable.

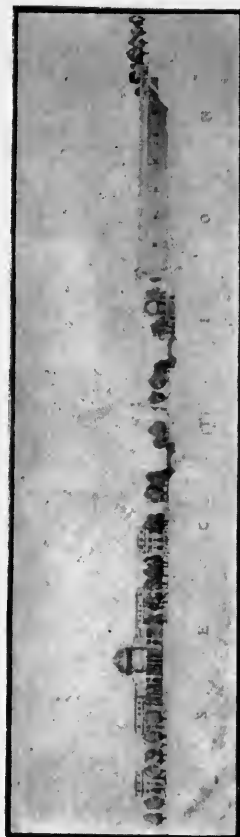
Collaboration of allied artists is a fundamental principle of the Academy, and not only are the Fellows in each department expected to cooperate with the Fellows in all other departments for the purpose of studying the inter-relation of the arts, but also for one month of each year teams consisting of a representative of each of the allied arts are required to work upon a prescribed collaborative problem. To the team whose work is adjudged to be the best a prize is awarded by the American Institute of Architects. Other collaborative prob-

lems are frequently undertaken voluntarily by different groups. During the past year an architect, a landscape architect and a sculptor collaborated upon a project for housing the American Embassy at Rome.

Coöperation and interchange of ideas are further promoted by the requirement that the Fellows shall reside in the Academy, where living quarters and studios are provided. While in residence the Fellows eat at a common table. The large dining hall in the main building accommodates both Fellows of the Academy and visiting students who hold Fellowships from other American institutions. The Academy admits to the limit of its capacity traveling Fellows from other approved institutions, provided they spend eight months of each year in classical lands. The daily social intercourse in travel, in studio, in library, in dining hall, is invaluable. Teas and receptions bring the students together and on special occasions still more attention is paid to social activities, such as a Christmas celebration or Thanksgiving dinner, to which the American Ambassador and other prominent guests may be invited.



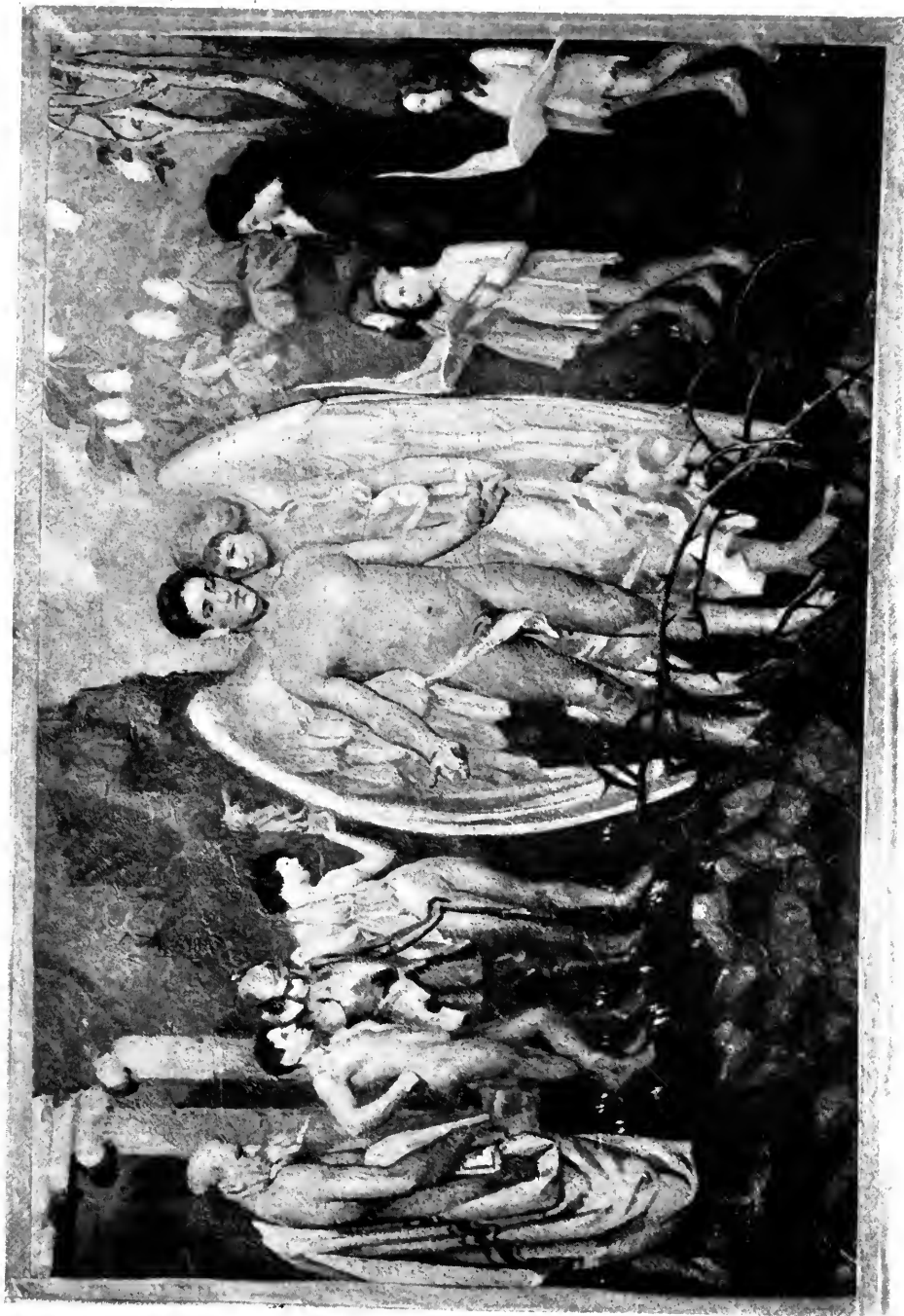
A GROUP OF BUILDINGS FOR A UNIVERSITY OF THE FIRST CLASS. WINNING DESIGN IN ARCHITECTURE, COMPETITION FOR THE PRIZE OF ROME, 1921. BY V. L. S. HAFNER, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 1918.



WINNING DESIGN IN ARCHITECTURE, COMPETITION FOR THE PRIZE OF ROME, 1921, BY V. L. S. HAFNER, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 1918.



TRIBUTE TO HEROISM. WINNING DESIGN IN SCULPTURE, COMPETITION FOR THE PRIZE OF ROME, 1921. BY E. R. AMATERS OF NEW YORK.



TRIBUTE TO HEROISM. WINNING DESIGN IN PAINTING,
COMPETITION FOR PRIZE OF ROME, 1921. BY FRANK
H. SCHWARZ, THE ART INSTITUTE OF CHICAGO.

The Fine Arts Fellows get their work before the public for study and criticism chiefly by means of annual exhibitions, both in Rome and in America. Each year the principal works of the returning artists are brought to this country and exhibited under the auspices of the Architectural League of New York. Their Majesties, the King and Queen of Italy, have honored the Academy in recent years by paying a visit to the annual May exhibition in Rome.

Publication is another means of making the work of the Fellows known. Two of the three volumes of the *Memoirs of the American Academy in Rome* already published contain plates illustrating the work of the School of Fine Arts. Articles published in the *Memoirs* may represent or be of interest to the members of either of the Schools, for the Academy is made up of two parts, School of Fine Arts and School of Classical Studies. During the present year the first of a series of *Papers and Monographs* will be issued. These publications will embody the results of the study and research of members of either School. Volume I will be a treatise on the "Cults of Campania," by Dr. R. M. Peterson, and Volume II on the "Cults of Etruria," by Dr. Lily R. Taylor. These *Papers and Monographs* may alternate in publication with the *Mc-*

moirs or, if material and finances permit, issues of both series may appear in the same year. A special endowment fund for publication is greatly desired. Other publications of the Academy which appear regularly are the *Annual Report* and the annual *Announcement of the School of Classical Studies*. Various other pamphlets have been printed at infrequent intervals.

Thus is the effort being made to fulfil the aims of the American Academy in Rome by selecting as Fellows the best candidates that can be found and giving to these artists and scholars opportunities for intimate association in the pursuit of life, study and travel in an atmosphere of art and amid the inspiration of masterpieces. Such experiences, it is believed, cannot but result in refining the taste, sobering judgment, stirring the imagination, inspiring noble standards, and enlarging the powers of the mind. It is in this way that the Academy, as a national institution, is endeavoring to lead in the lofty purpose of raising the standard of American art and letters.

[In the account of last year's competition in architecture, in the September issue, an error of attribution was made in the case of two of the designs. That of Mr. Cardwell, ranked second by the jury, was erroneously attributed to Mr. Hindenach; and the latter's design, ranked third by the jury, was attributed to Mr. Cardwell.—Editor.]

THE MEMORIAL ROOM AT QUANTICO, VA TO CAPTAIN PHILLIPS BROOKS ROBINSON

Murphy & Dana, Architects

A NEW memorial room at Quantico, Virginia, has been presented to the officers stationed at this permanent camp of the Marine Corps, by the widow of Captain Phillips Brooks Robinson, who served in the corps during the war and who died as the result of an automobile accident at Hyattsville, Md., November 2nd, 1918. He was the son of Edward Robinson, of the Metropolitan Museum of Art. A model and photographs of this room are being shown at the 36th Annual Exhibition of the Architectural League at the Museum.

Quantico is, in a sense, the Annapolis or West Point of the Marine Corps, most of its officers graduating there, but in 1916 there was very little accommodation for either officers or men. Even after the Y. W. C. A. and the Red Cross put up buildings for the care of the sick and the enlisted men, there was no general officers' club.

Recognizing the need, Captain Robinson started plans for a simple living room in which officers might at least entertain their wives, mothers or friends. But before this could be accomplished he was called from Quantico and sent to headquarters to serve on General McCawley's staff.

From his youth Captain Robinson had admired the Marine Corps. He knew its history and believed it the highest form of patriotic service. When the Marines made their stand at Chateau Thierry and Belleau Wood—at a crisis when, as one Frenchman expressed it, "We felt in our faces the very breath of the approaching beast"—Captain Robinson said that that

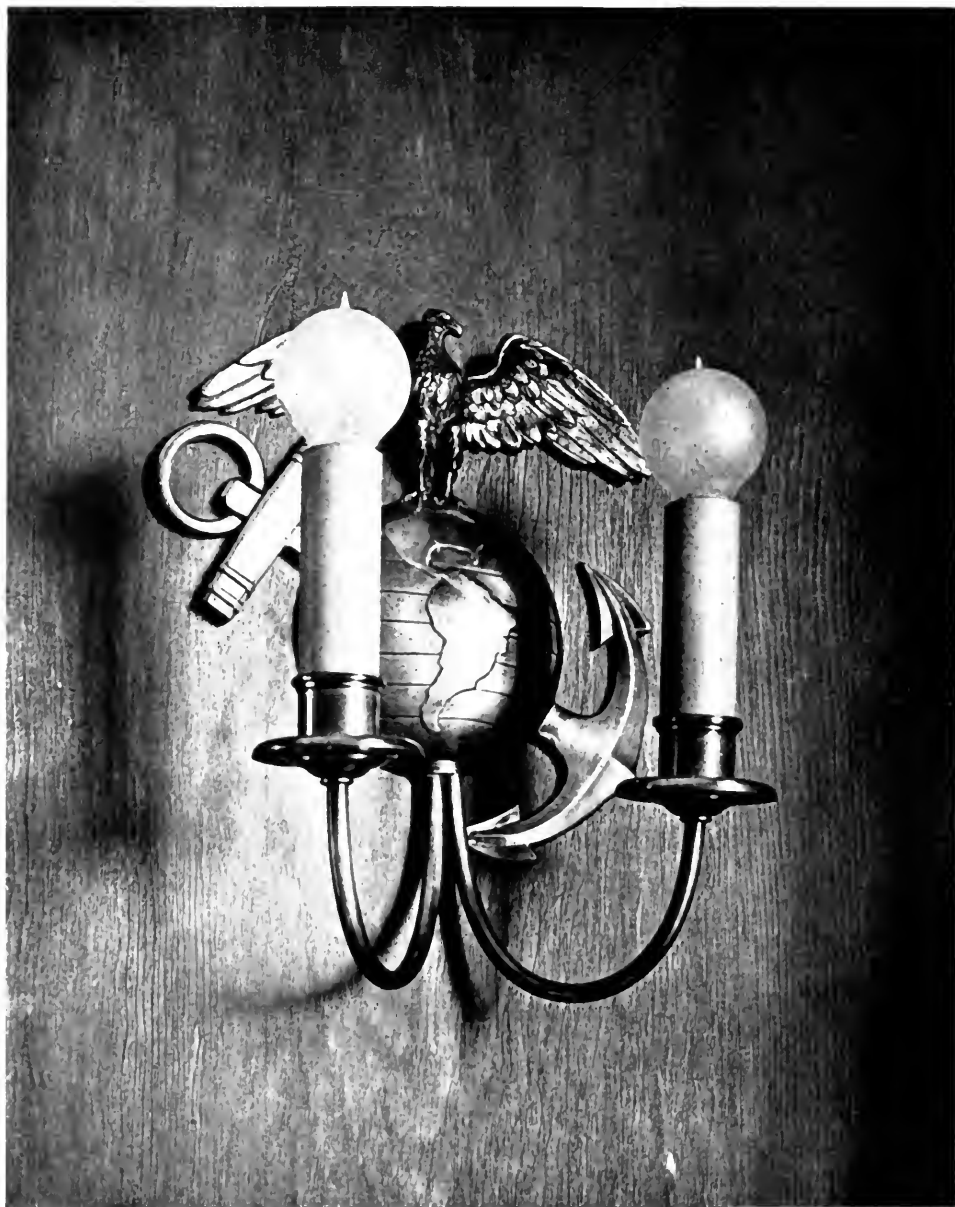
was only what they had always done; people simply didn't know about it.

The room at Quantico is the result of his enthusiasm and affection. It is 36 by 21 feet, with two windows opening out upon a green, faced by officers' quarters, and a third, a large Palladian window, overlooking the Potomac River and the Virginia hills.

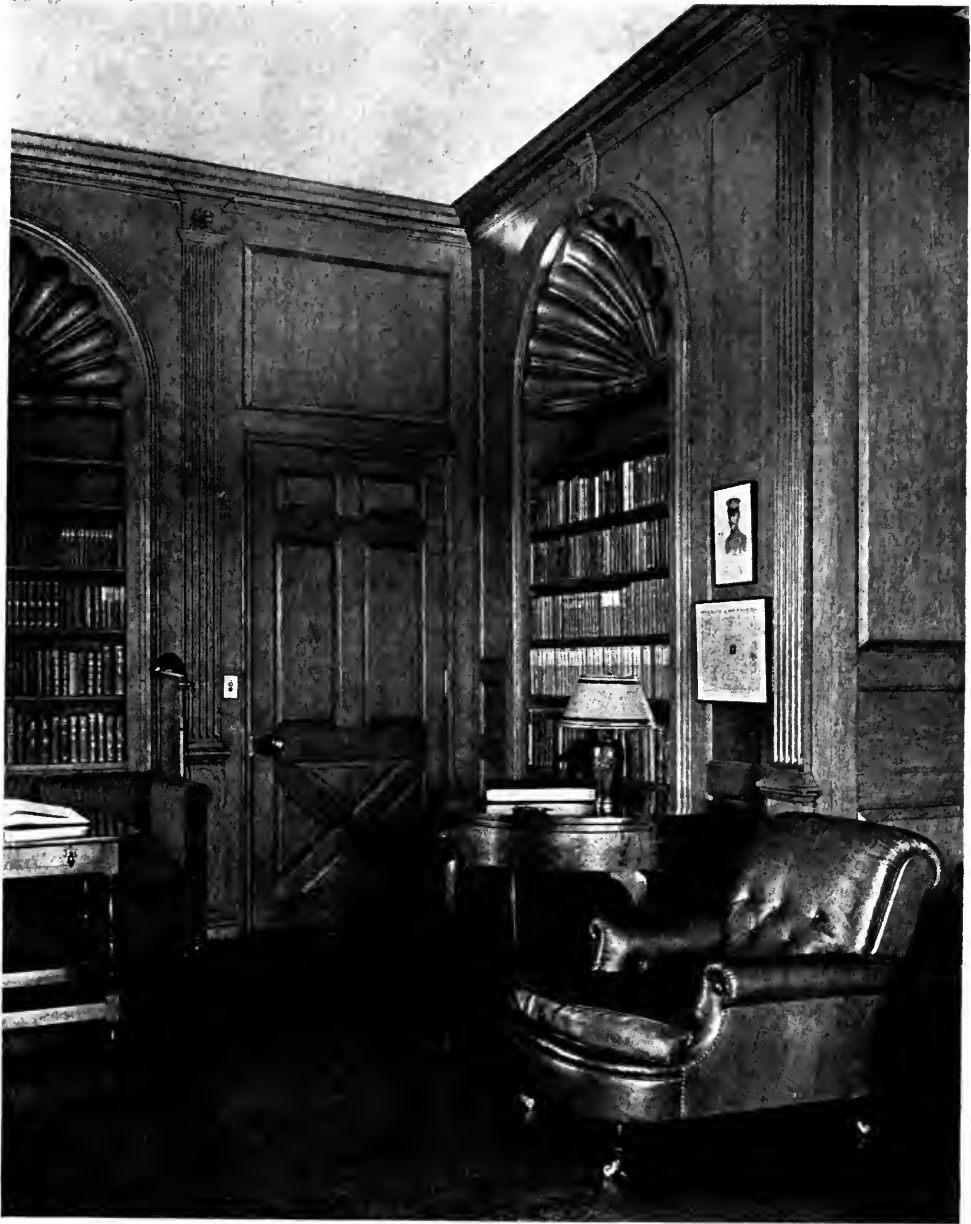
The room is full panelled in selected pine. The fluted pilasters and recessed bookcase with decorative shell top and all the details are in the early American manner. They were inspired by the panelled room from South Coventry, Connecticut, now in the Metropolitan Museum. The floor is of broad oak boards set with wooden pegs. The fireplace is in gray and white marble after the fireplace at Marmion, the home of Mrs. Washington's family.

The large decorative map of Belleau Wood over the fireplace was designed and painted by Barry Faulkner from actual air maps and documents gathered by the Marine Corps for their official records. At the top of the map is the famous citation from General Degoutte:

"Order: In view of the brilliant conduct of the 4th Brigade of the 2nd U. S. Division, which in a spirited fight took Bouresches and the important strong point of Belleau Wood, stubbornly defended by a large enemy force, the general commanding the 6th Army orders that henceforth in all official papers the Bois de Belleau shall be named Bois de la Brigade de Marine." This map is the gift of Mr. and Mrs. Edward Robinson. Below the map are vignettes of stricken towns of the district.



WALL BRACKETS WITH INSIGNIA OF THE MARINE CORPS. MEMORIAL ROOM AT QUANTICO, VA., TO CAPTAIN PHILLIPS BROOKS ROBINSON. MURPHY AND DANA, ARCHITECTS.



MEMORIAL ROOM AT QUANTICO, VA., TO
CAPTAIN PHILLIPS BROOKS ROBINSON.
MURPHY AND DANA, ARCHITECTS.



THE FIREPLACE, MEMORIAL ROOM AT QUANTICO, VA., TO CAPTAIN PHILLIPS BROOKS ROBINSON. MURPHY AND DANA, ARCHITECTS.



DECORATIVE MAP OF BELLEAU WOOD BY BARRY FAULKNER. MEMORIAL ROOM AT QUANTICO, VA., TO CAPTAIN PHILLIPS BROOKS ROBINSON. MURPHY AND DANA, ARCHITECTS.



MEMORIAL ROOM AT QUANTICO, VA., TO CAPTAIN PHILLIPS BROOKS ROBINSON.
Murphy and Dana, Architects.

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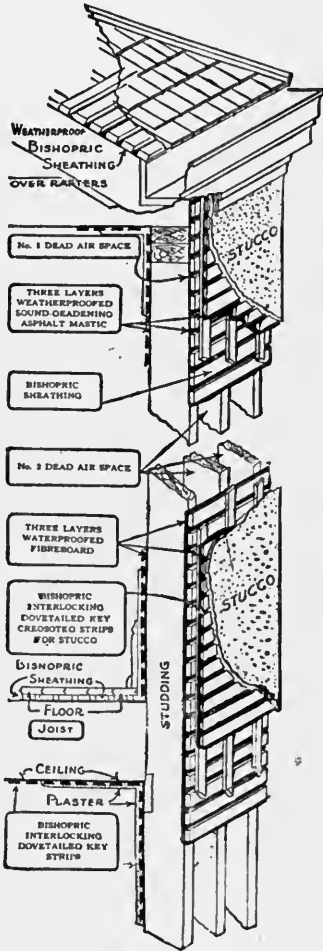
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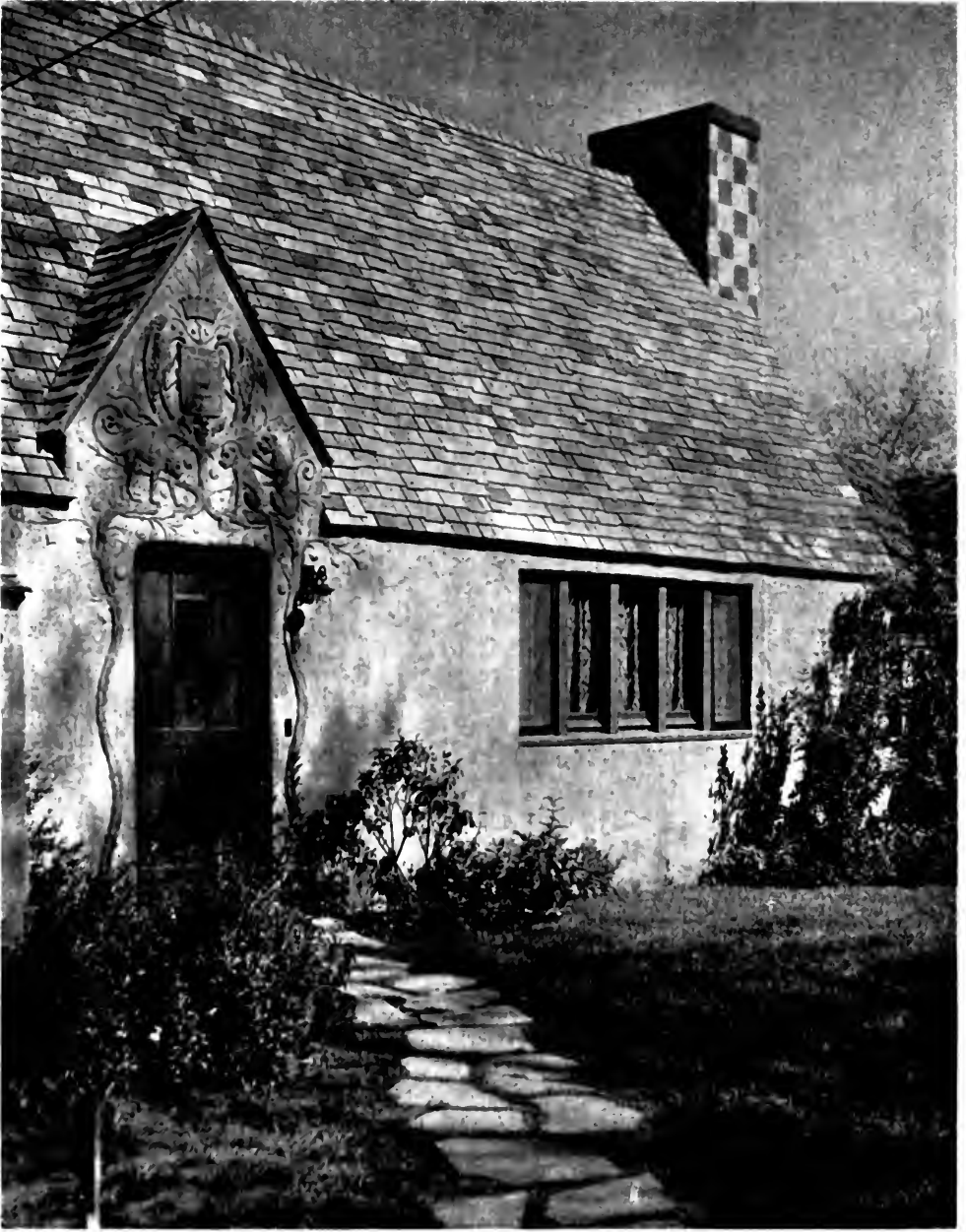
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DOORWAY—"THE CHATEAU," RESIDENCE OF
MRS. M. S. MUCHMORE, HOLLYWOOD, CAL.
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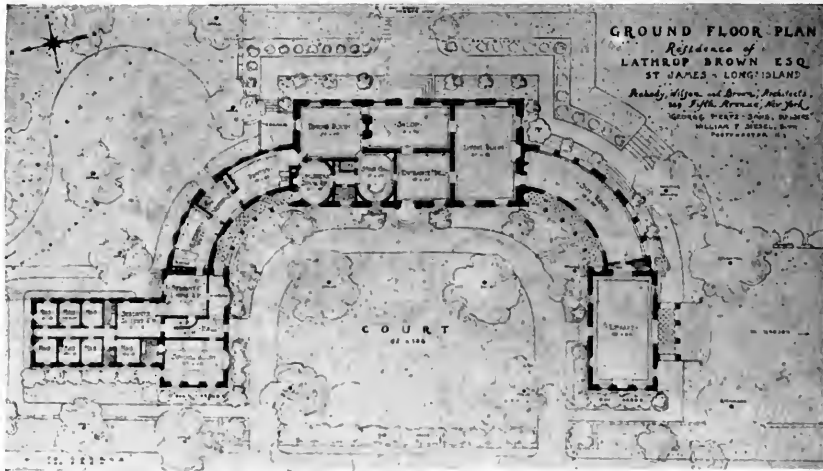
The *Design of the Country House*

By William Lawrence Bottomley

WHILE the population of the country is moving into the town at such a rate as to alarm economists, there is at the same time a great counter-movement of city dwellers toward the country. More and more are people of intelligence and means living in the country. Every year finds town houses and apartments remaining closed for a longer period, and the pleasures of year round or nearly year round country life take hold of an increasing number of city dwellers. Thus the movement back to country life by those who want the comforts, convenience and luxury of city living, coupled with the improvement of taste in architectural design, has devel-

oped an increasingly important branch of the architectural profession.

The pleasures of open air life and informal treatments of the interior have even had an effect on the planning and interior decoration of city houses, and we find now that roof gardens, loggias and terraces are being used in a way never before seen in this country. Thus this trend for country living makes the study of the country house necessary for all architects, not only for specialists in country houses, but for all those who design residences. All this may have been true a year ago, but it has been made more vitally true today on account of the drop in building prices and the revival in residence building.



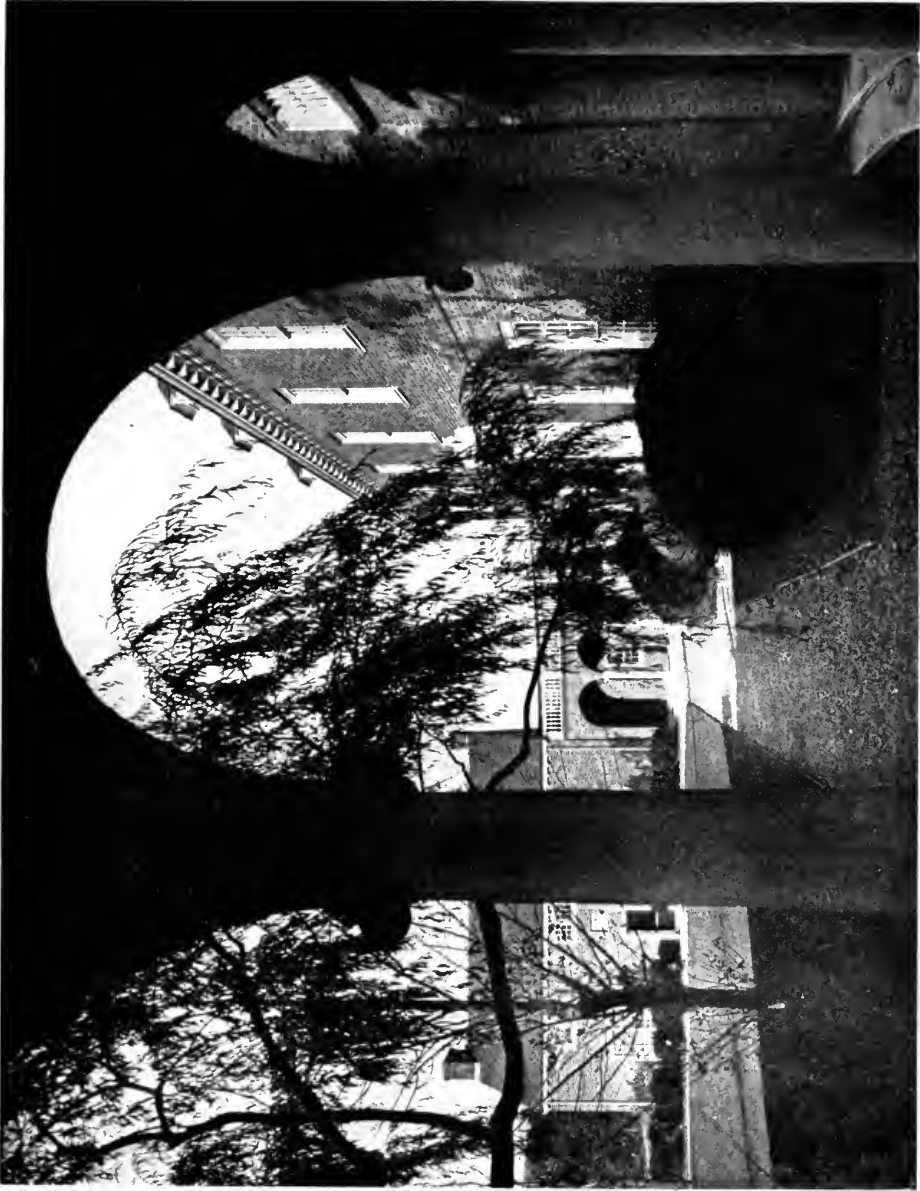
This back to the country movement is a very healthy tendency in our life today. The pleasures of outdoor exercise and outdoor living and the greater simplicity and informality of country life are showing their effect in all classes. The pictures of the houses which are published this year compare most favorably with the previous work of the architects and decorators in this country, and eloquently illustrate the sanity and the pleasures of this mode of life.

It is curious to think that there is a great majority of people who know practically nothing about artistic things, who never read anything but some light magazine or novel, whose houses are bought from a speculative builder, whose furniture is purchased at a department store. The whole setting of their lives is built up of things bought from stock and put together without thought. Their chief gratification in life is spending money on motors, on restaurants and theatres. They like and appreciate a fine public room. They like the intellectual stimulus of a well designed interior, where some one else has given time and thought to the creation of a new and delightful setting. They like to have something to talk about as they dine or dance. The other night, sitting in the Palais Royal, I heard a man say at an adjoining table, after looking at a decorative Japanese tree, trained and dwarfed until it made an exotic but beau-

tiful silhouette, that showed the skill bred from centuries of traditions, "Say, ain't that the gosh durndest looking tree"? An eminently respectable looking party of people, not distinguished looking but well dressed, comfortable, out to enjoy themselves. A whole chapter of "Main Street" was summed up in a single line.

There are necessarily only a few great works of art produced every year. Even at the time of greatest artistic achievement in house building, as for instance, the Renaissance in Italy, under the Medici, the Sforzas and the Borgias, or in France from the time of Francis the First through the reigns of the Bourbons, only a couple of hundred houses were produced of pre-eminent importance and beauty. At these times there existed a great public taste, a taste if not positively developed, at least reflected to a great degree in all classes. The artisans were artists, men trained in design, with fine traditions of composition and logical construction, a few with great imagination.

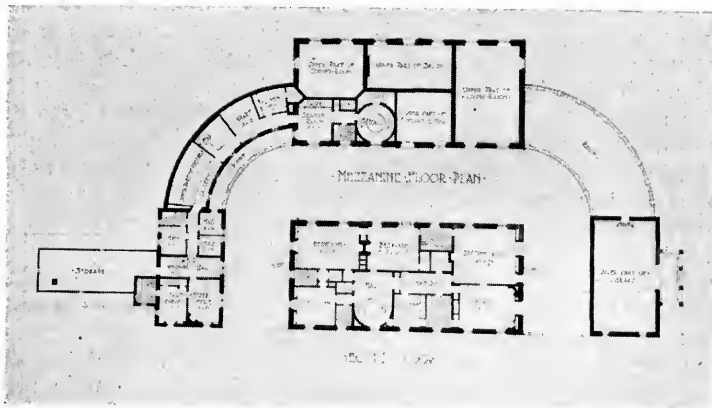
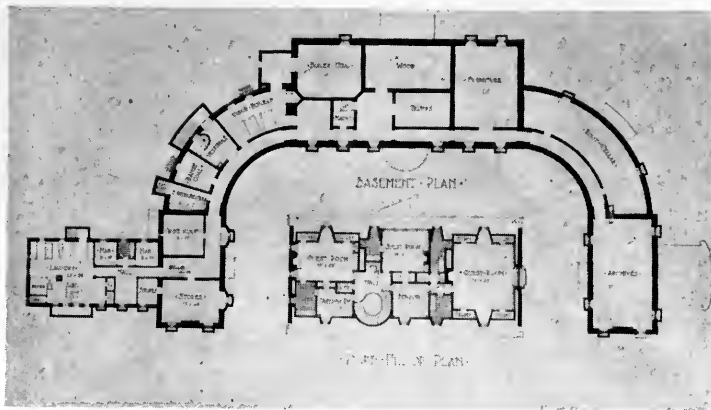
In Spain the guild of carpenters produced a large number of wood ceilings, carved, painted and gilt, the finest, the most beautiful ceilings of their kind that have ever been done. A wealth of imagination is shown in the detail, and the beauty of composition has never been surpassed. Imagine going to the best carpenter in a small city today and commissioning him to do a carved and painted



RESIDENCE OF LATHROP BROWN, ESQ.,
ST. JAMES, LONG ISLAND, N. Y. PEA-
BODY, WILSON & BROWN, ARCHITECTS.



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BASEMENT AND MEZZANINE FLOOR PLANS, RESIDENCE OF LATHROP BROWN, ESQ.,
ST. JAMES, LONG ISLAND, N. Y.
Peabody, Wilson & Brown, Architects.

and gilt ceiling. The idea would be comic if it were not so pathetic. You might get workmanship of good quality, but no idea of design, a case of the flesh being willing but the spirit being weak.

It is unfortunate for the community that workmen think and know as a general rule only their work and very little about design. The two functions have become separated. I have the impression that the labor unions are interested only in the economic advantages of their members, at best. The men individually, I have found, are interested and even enthusiastic about a new and interesting pattern to be worked out. Recently I designed a pierced brick wall with each panel worked out in a different pattern. The men who built it thought it would

be impossible to make it stand up. They had never seen or heard of such a thing, but as the work went on they seemed very interested. I was extremely pleased some weeks after to have the different masons speak about it again, individually bringing up the subject and saying what a wonderful piece of work it was. "That's the greatest stunt I ever seen," said the Foreman. One of them even took some small pots with plants growing in them and stood them along the top of the wall. They made suggestions as to how to finish the surface of the brick with a thin wash of cement before painting it and evidently were very much impressed by the simple trick that has been used abroad for years.

The traditions of the XVIII and XIX

centuries were for great perfection of finish, crispness of drawing, of moulding and smoothness of wall for the best character of work. Now, we in this country are beginning to like less formality in design for the smaller buildings and houses. The efforts of our forefathers for smoothness and perfection of execution have developed wonderful tools and methods. It is easy for any plasterer now with his trowel and float, straight edge and plumb, to get an absolutely smooth wall. These efforts have been crowned with such success that the results instead of being wonderful are utterly commonplace. But nowadays a great many people prefer the simpler, cruder old effects for the simpler types of building. A few plasterers are getting the idea of what they call the "antique finish," but few really understand the reason for the effect and it is extremely difficult to get a man to do it properly. From a carefully made sample, with a slight wave and irregularity of the surface, they will on occasion, and unless watched all the time, produce a wall that looks like a choppy sea or the result of a mud fight.

It is a great achievement to take our own American style and design a house that conforms to all our best traditions, to fit it perfectly to its setting, to give it the look of belonging so well in its place that it appears to have always been there, and in addition to have it both original and beautiful. I should say that the most difficult thing but at the same time the best thing to do is to follow the idiom of the country where a building is to be placed and to do it in a fresh, new way. The national style in this country is certainly a modification of the old classic style, a modification which shows English influence, Italian Renaissance features and a strong feeling of our early Colonial style. I do not mean that in certain sections it has not been strongly influenced by the Spanish, the Dutch and French styles, but these are really branches and not the main trunk that has been constantly growing since the country was first settled. It is this very thing that Peabody, Wilson and Brown have done

in the house for Mr. Lathrop M. Brown at St. James, Long Island. The plan is admirably arranged. A great central mass contains the principal rooms of two stories and a high roof, with two lower wings connected by curved arcades forming a porch on one side and a pantry on the other. It is well worth noting that the rooms are finely arranged, all the parts well balanced and proportioned, the doors and windows beautifully spaced. On the second floor one could not find a more economical arrangement of halls and stairs in a four-room cottage. Not an inch of space is wasted. Over the small morning room is arranged a mezzanine floor, the extra story being built in the height of the first story, by lowering the floor of the morning room a few steps. This is clever work when it is considered that the lines of the façades are not broken in any way and that the rooms of these two floors are well proportioned and agreeable inside.

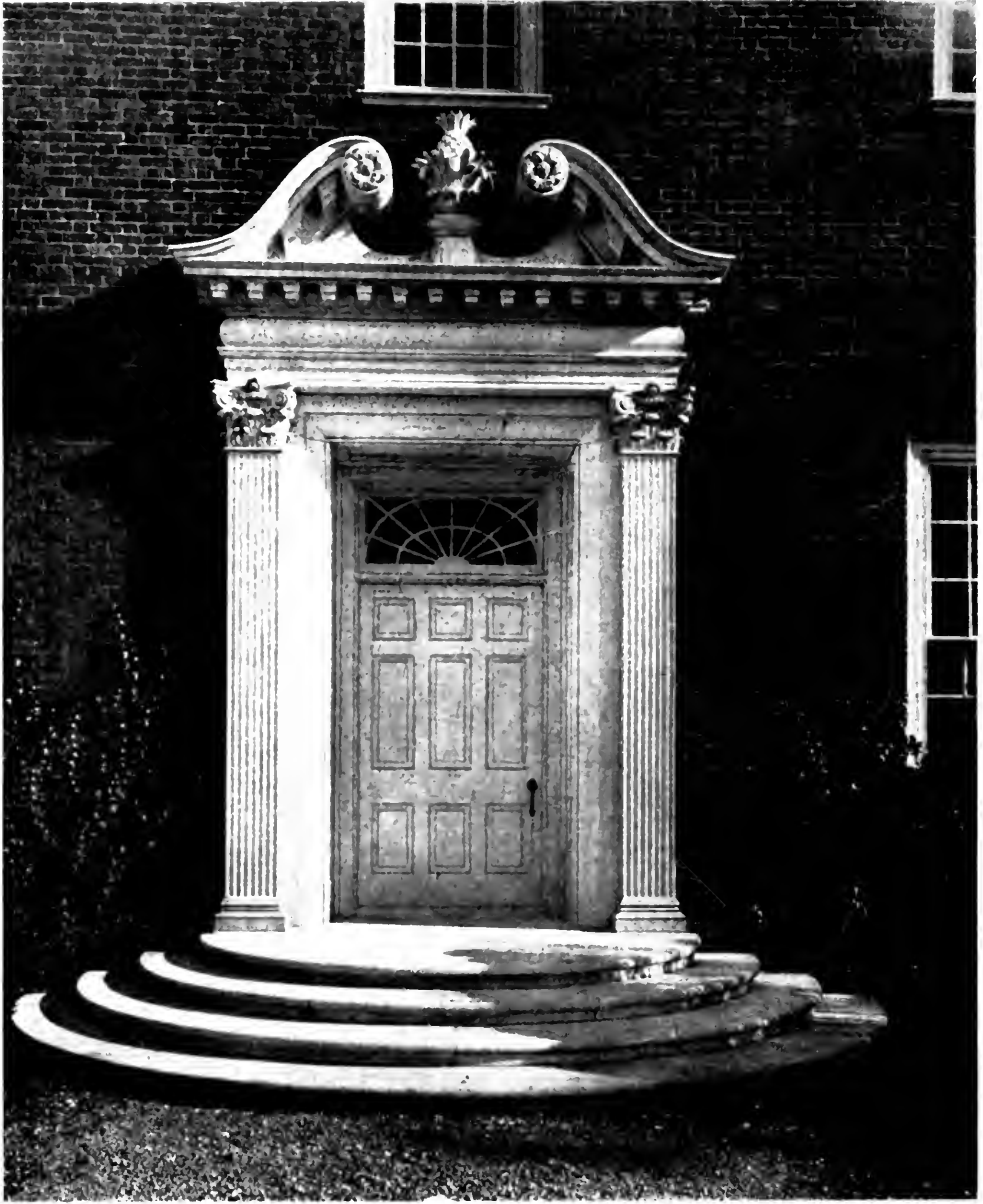
A very clever treatment of the dormers should be noted. In plan the walls are strongly splayed, making all the difference in the world to the openness and cheer of the rooms inside, as it gives the appearance of a pleasant and ample bay window, and on the outside it in no way injures the appearance of the house. The same device was used by McKim, Mead and White in the old Colony Club on Madison avenue, but I do not know of another instance of this treatment.

It is a great pity, in such a fine piece of work, that the celebrated door of Westover on the James River should have been used again. Every town must have its Washington street, but when two new houses by celebrated architects in the same issue of THE ARCHITECTURAL RECORD have the Westover doorway, our reputation for originality in American Architecture seems to rather suffer.

The house of Charles E. Chambers, by Julius Gregory, is compact in plan. It has the number of rooms that fits the requirements of an average family, and therefore thousands are done every year of this size, but it shines out totally unlike its mates both in form and design.



RESIDENCE OF LATHROP BROWN, ESQ.,
ST. JAMES, LONG ISLAND, N. Y. PEA-
BODY, WILSON & BROWN, ARCHITECTS.



DOORWAY—RESIDENCE OF LATHROP BROWN, ESQ., ST. JAMES,
LONG ISLAND, N. Y. PEABODY, WILSON & BROWN, ARCHITECTS.



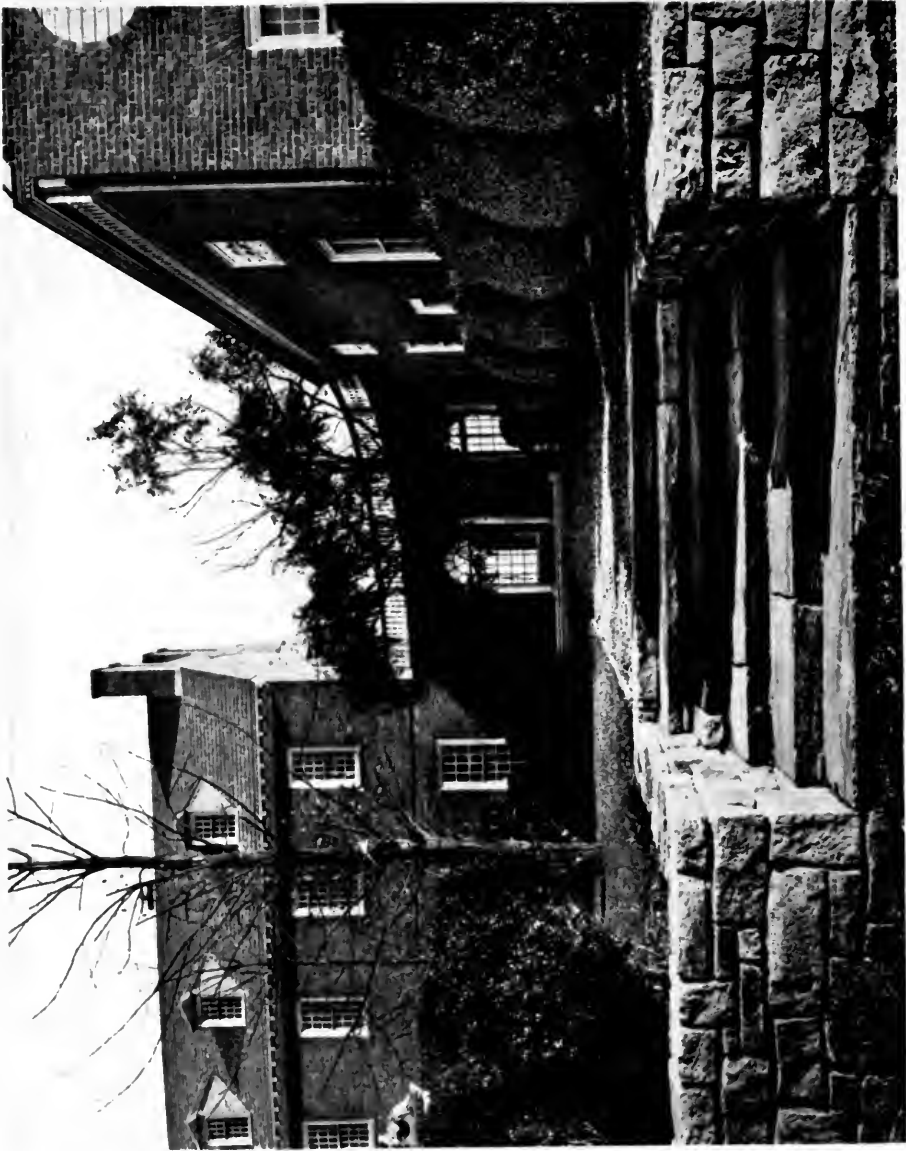
DETAIL OF CURVED PORCH - RESIDENCE OF
LATHROP BROWN, ESQ., ST. JAMES, LONG ISLAND,
N. Y. PEABODY, WILSON & BROWN, ARCHITECTS.



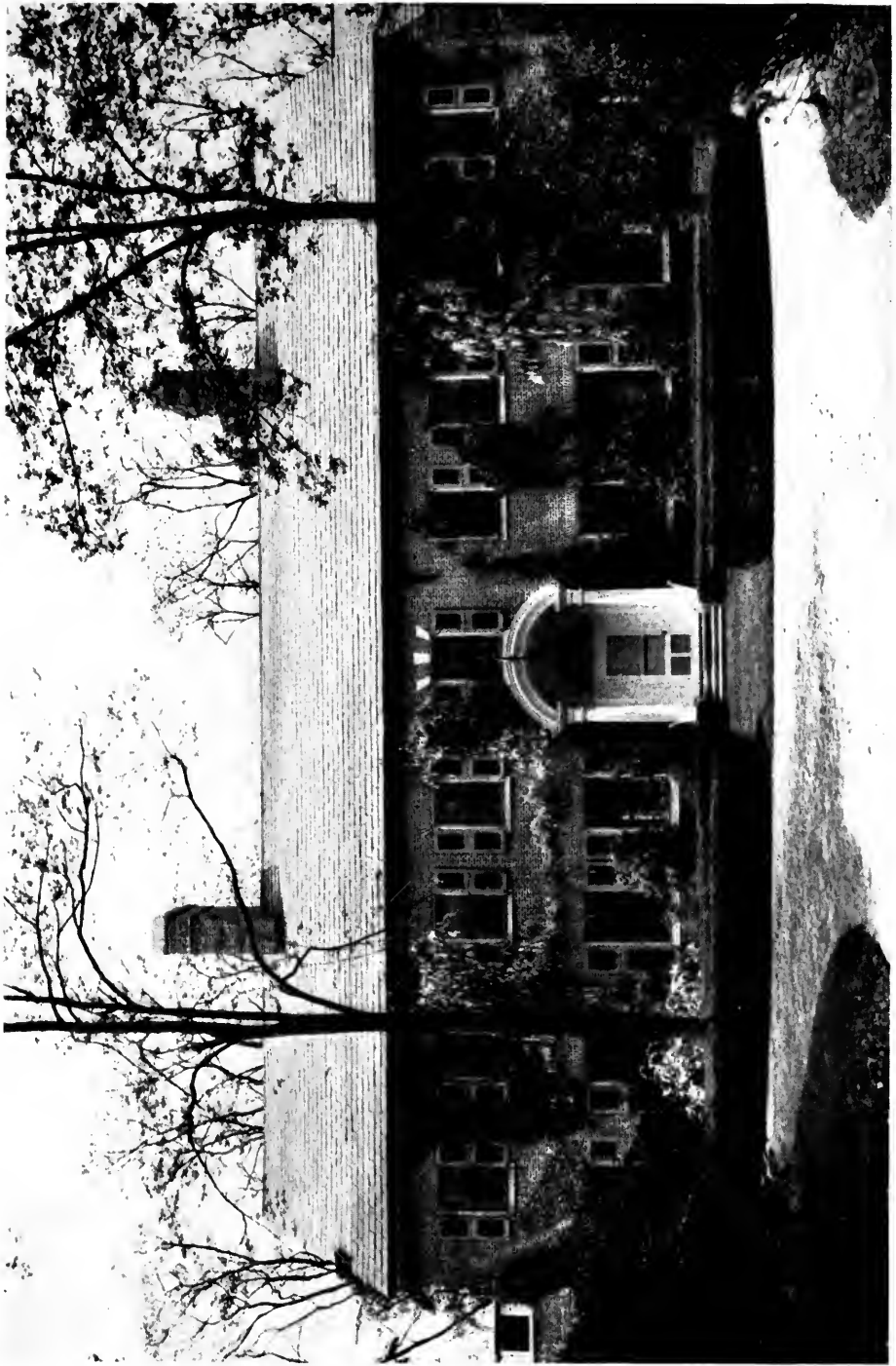
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Peabody, Wilson & Brown, Architects.



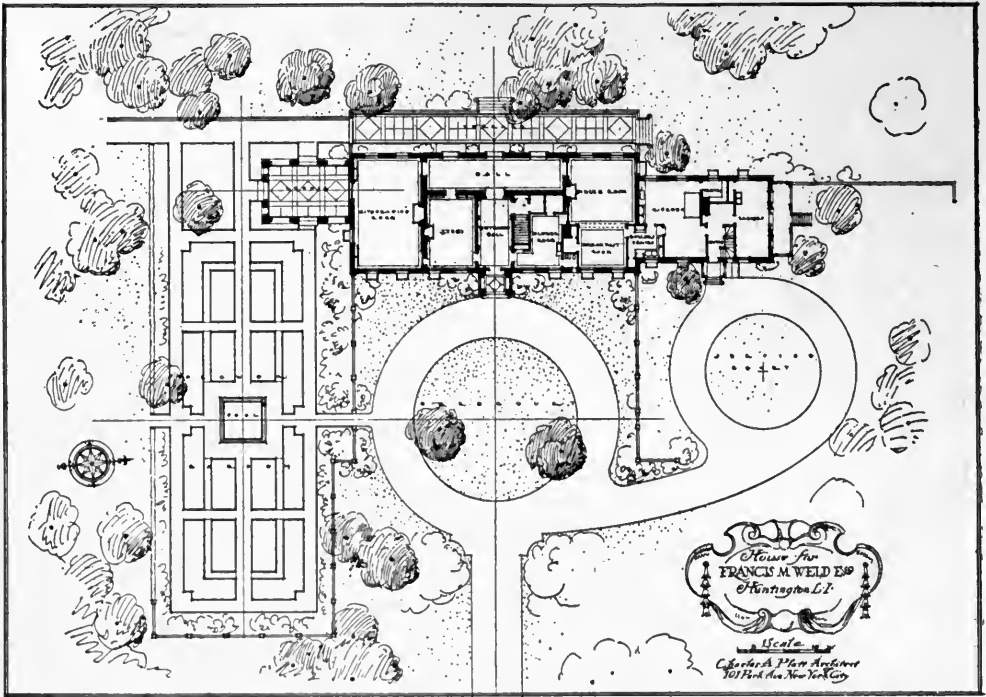
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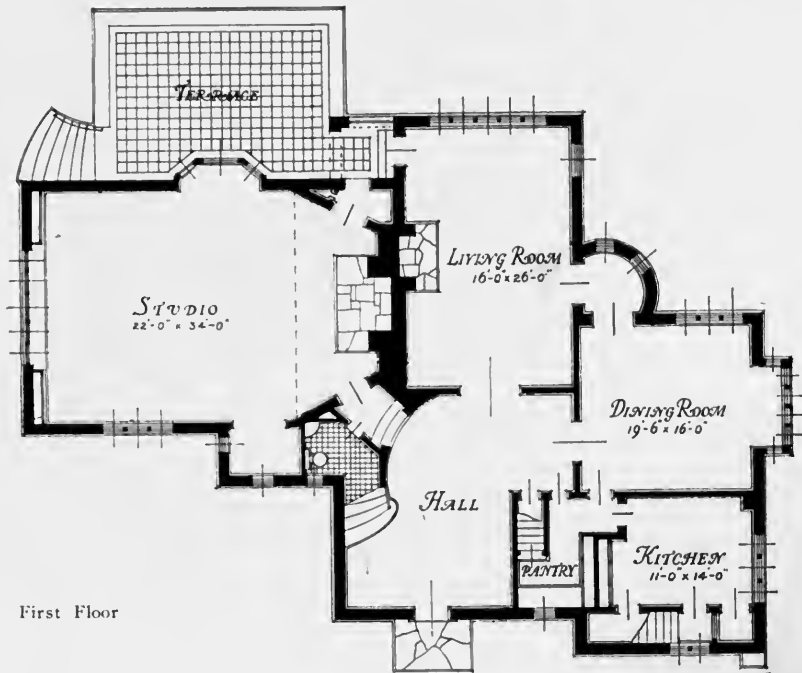
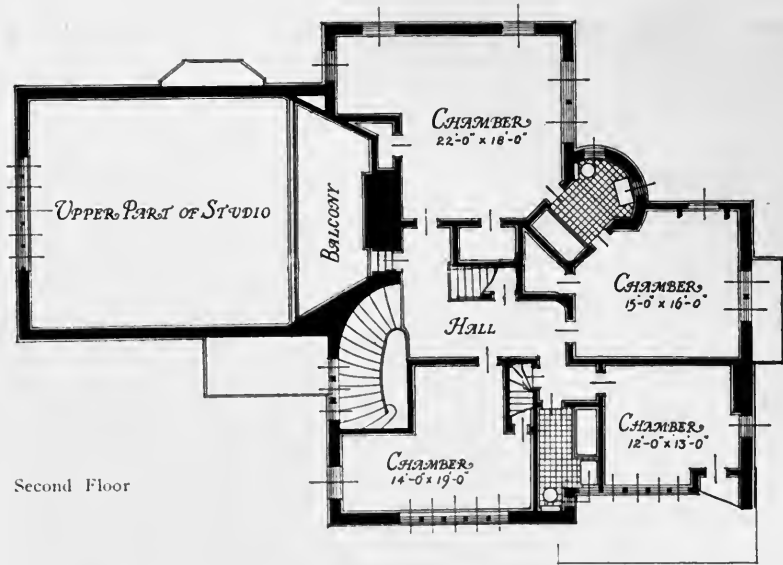
RESIDENCE OF FRANCIS M. WELD, ESQ., HUNTINGTON,
LONG ISLAND. CHARLES A. PLATT, ARCHITECT.



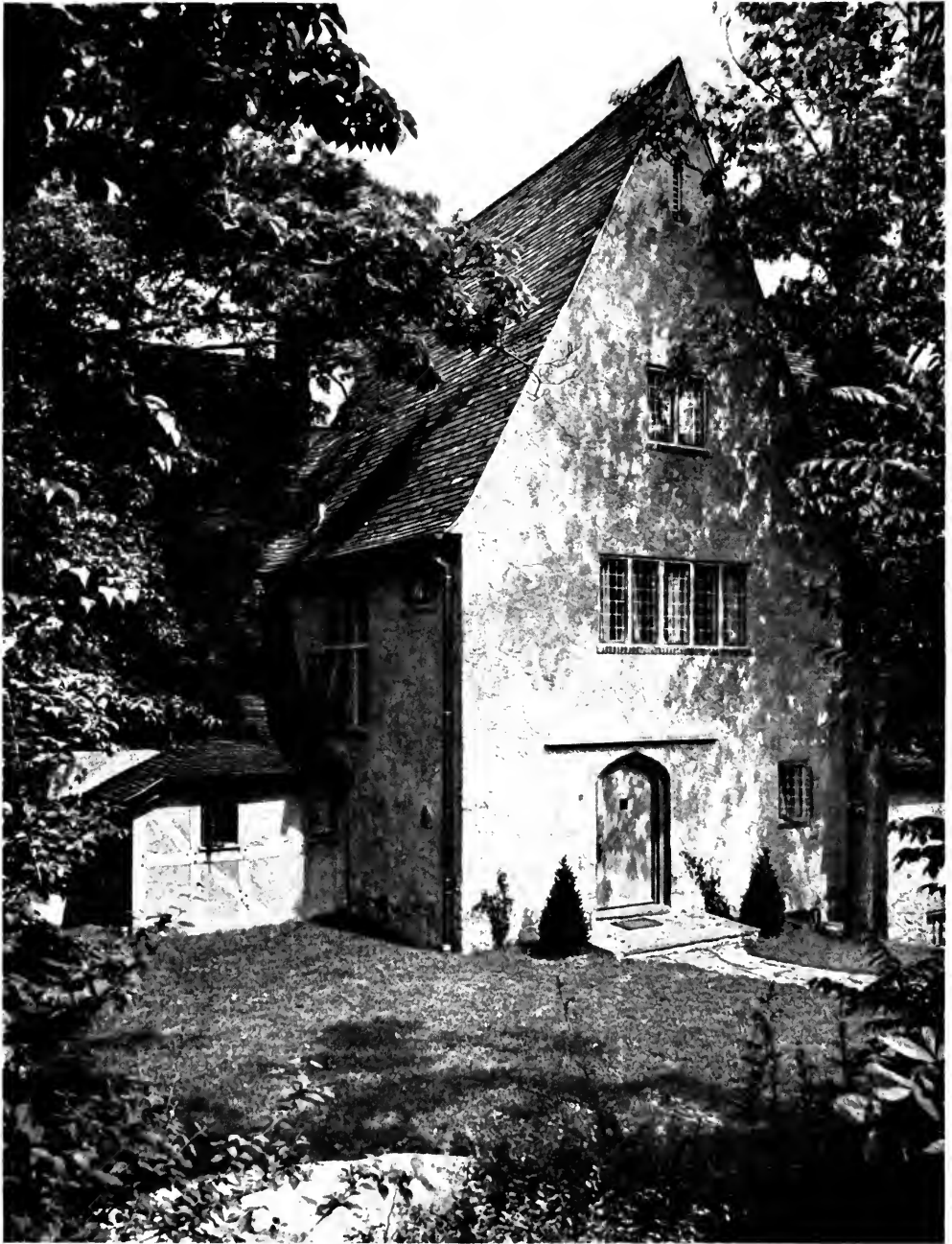
RESIDENCE OF FRANCIS M. WELD, ESQ., HUNTINGTON, L. I.
 Charles A. Platt, Architect; Mrs. Ellen M. Shipman, Landscape Architect.



RESIDENCE OF FRANCIS M. WELD, ESQ., HUNTINGTON, L. I. CHARLES A. PLATT, ARCHITECT.



FIRST AND SECOND FLOOR PLANS
 RESIDENCE OF CHARLES E. CHAMBERS, ARTIST AND ILLUSTRATOR, FIELDSTON, N. Y.
 Julius Gregory, Architect.



ENTRANCE ELEVATION—SHOWING FRONT DOOR
AND STUDIO WING. STUDIO AND RESIDENCE
OF C. E. CHAMBERS, ARTIST AND ILLUSTRATOR,
RIVERDALE, N. Y. JULIUS GREGORY, ARCHITECT.



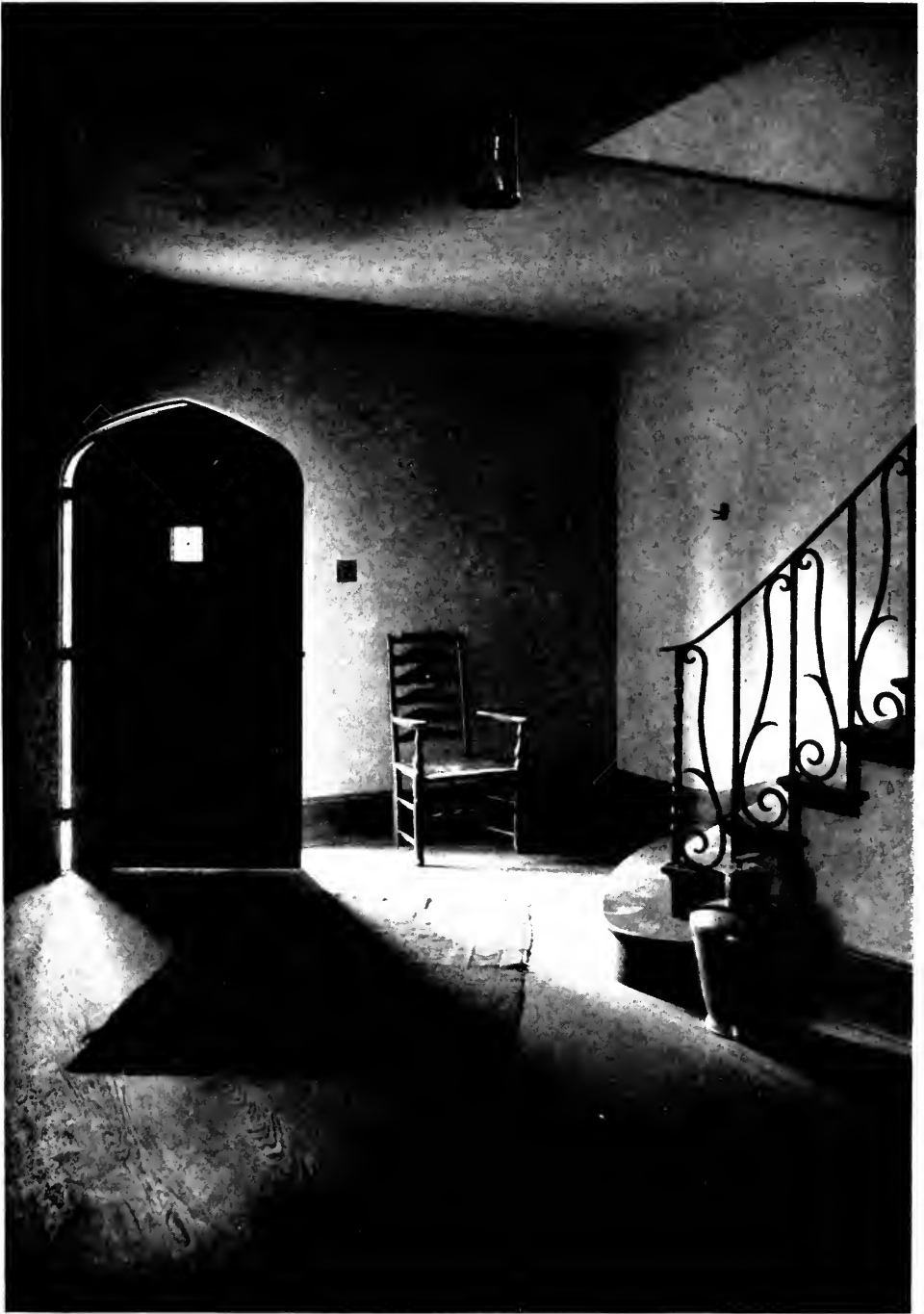
STUDIO AND RESIDENCE OF C. E. CHAMBERS,
ARTIST AND ILLUSTRATOR, RIVERDALE, NEW
YORK CITY. JULIUS GREGORY, ARCHITECT.



STUDIO AND RESIDENCE OF C. E. CHAMBERS,
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YORK CITY. JULIUS GREGORY, ARCHITECT.



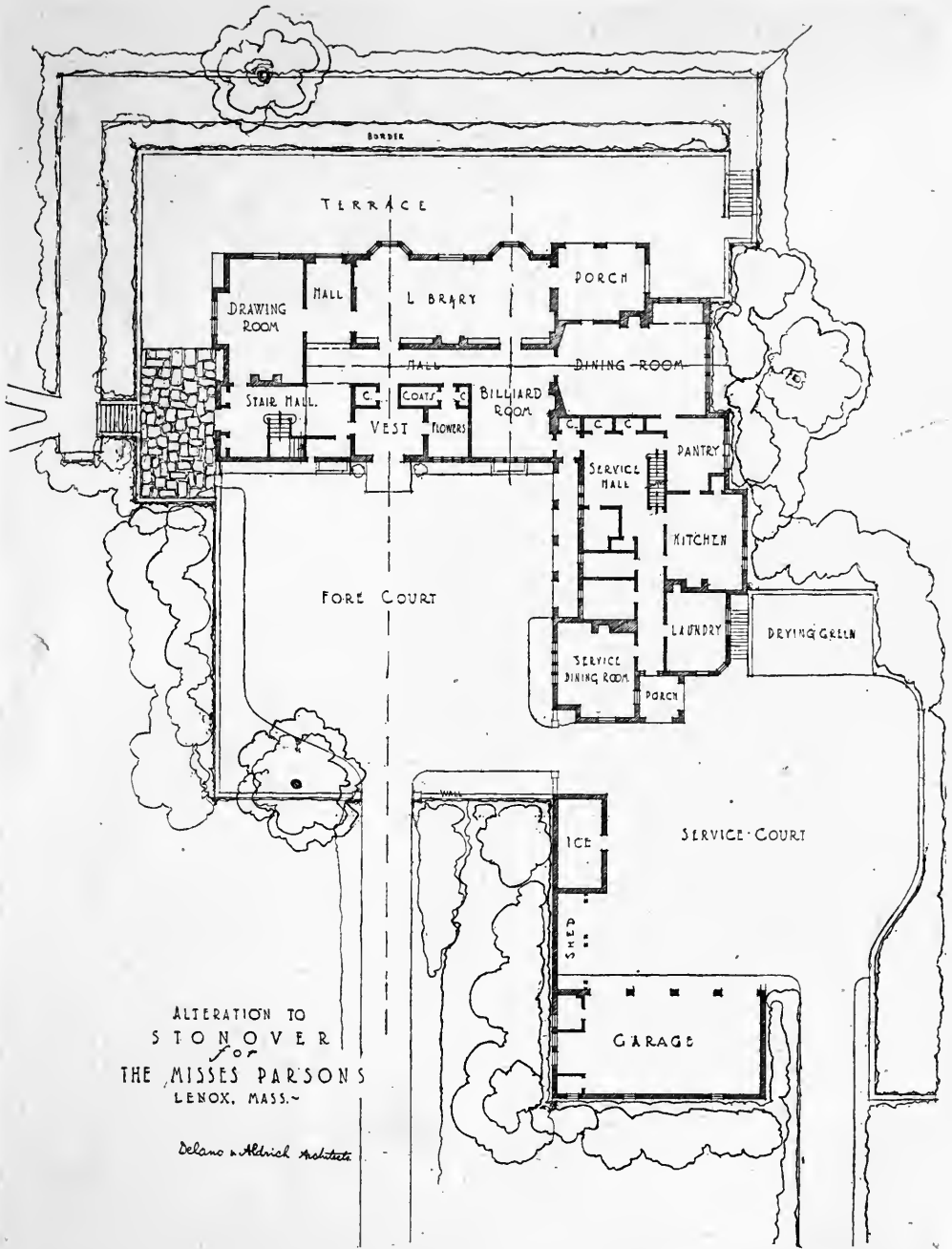
STUDIO AND RESIDENCE OF C. E. CHAMBERS,
ARTIST AND ILLUSTRATOR, RIVERDALE, NEW
YORK CITY. JULIUS GREGORY, ARCHITECT.



MAIN HALL—STUDIO AND RESIDENCE OF C. E. CHAMBERS, ARTIST AND ILLUSTRATOR, RIVERDALE, NEW YORK CITY. JULIUS GREGORY, ARCHITECT.



DINING ROOM—RESIDENCE OF C. E. CHAMBERS,
ARTIST AND ILLUSTRATOR, RIVERDALE, NEW
YORK CITY. JULIUS GREGORY, ARCHITECT.



ALTERATION TO
STONOVER
OF
THE MISSES PARSONS
LENOX, MASS.

Delano & Aldrich Architects

BLOCK PLAN—RESIDENCE OF THE MISSES PARSONS,
LENOX, MASS. DELANO & ALDRICH, ARCHITECTS.



RESIDENCE OF THE MISSES PARSONS, LENOX,
MASS. DELANO & ALDRICH, ARCHITECTS.



RESIDENCE OF THE MISSES PARSONS, LENOX,
MASS. DELANO & ALDRICH, ARCHITECTS.



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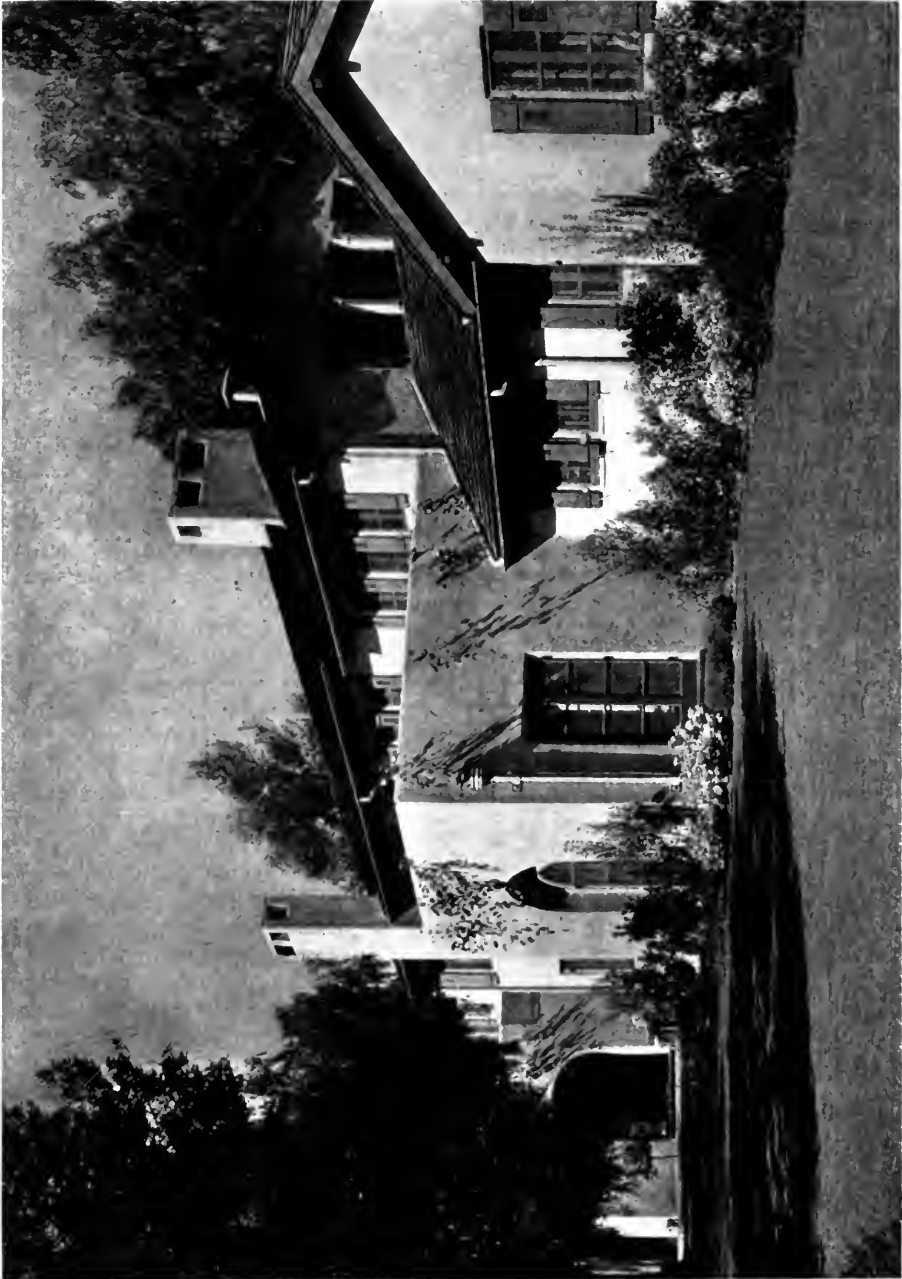
RESIDENCE OF THE MISSES PARSONS, LENOX,
MASS. DELANO & ALDRICH, ARCHITECTS.

It is extremely good looking and very original. It is simple and direct in plan, conveniently arranged and well worked out in all its interior arrangements. The salient thing about it is that it has lots of ideas. The exterior and interior design has been carefully thought out. All sides of it are interesting, the front with its interesting low doorway, the rear with its high, straight lines and the side with its round tower and conical roof, making a delightful composition with the steep pitch. The texture of the walls and the contrast of the stucco, wood and stone give a fine impression as one sees it and shows well in the photographs. It is a house that I wish a large number of people could actually see, because it is the kind of thing that should be more tried for. There is nothing expensive or elaborate about it, nothing fussy or strained, yet with all its quiet simplicity it is a very strong piece of work. The entrance hall with the unusual wrought iron balustrade of the stairway, the simple door, so well done, and the fine texture of the walls and floor makes a good introduction to the interior of the house. All the elements, the position of the door and the stairway, the size and shape of the hall, are familiar arrangements and show that it does not matter much what is done, it is the *way* it is done that counts so much. The picture on page 263 well illustrates this point.

With the greater knowledge of older styles has arisen the wish to produce again the old effects. Whether this is a proper wish or not is another matter. The fact remains that to get a picturesque and charming result in a building of informal and irregular design it is essential that the materials be used in a picturesque and informal way. It is difficult to explain how the slates should be set with a slight irregularity, how the plaster should have a delicately wavy surface and how the mouldings should have a softened profile varying slightly in section in different places. The lines and surfaces should not be perfect, hard and straight, and on the other hand, if the effect looks intentional, studied or overdone, it is even worse. To give this unintentional impres-

sion through workmen who have no conception of the reason for it, is a difficulty which has to be overcome. The house of Mr. DeWitt at Scarsdale, by Mr. Bodker, is a shining example of the way the texture of the house both inside and outside should look. The house as one looks at it gives an effect of mellowness and simplicity, of belonging distinctly to the landscape. One is unconscious of the hard work and the unremitting supervision so necessary to produce this result. In the photographs, however, it is perhaps easier to see the way the materials have been handled, and from the slates of the roof to the steps of the front door one can note how every surface has had consistent and careful study.

Much has been said about the influence of the war upon the fine arts. There was a group of poems published on war themes, some wonderful paintings and a certain amount of sculpture. Just how much the war influenced the arts is a much discussed question and the opinions have been very varied. Here, however, in the house of Mrs. M. S. Muchmore by Pierpont and Walter S. Davis the influence is very evident. Mr. Davis started to design the house before our entry into the war, using a California Spanish type of plan, and then went through long service with our army in France. Stationed at times in quiet sectors, he became very much interested in the French farm groups and had an unusual opportunity to study them intimately. One sees these groups through the country as one travels, but very little is known about them on this side of the water, as it is only by close association that one can know them well. When Mr. Davis returned he again took up the study of the design with great enthusiasm, infusing into it the very spirit of the old French work that he had grown so fond of. The result is delightful and so successful that I feel sure it will be much admired and emulated by others. It is certainly to be hoped that Mr. Davis will go on with his good work along these lines and that the "Chateau" will be only the first of a great deal of this delightful work.



RESIDENCE OF C. F. PANTON, ESQ., PASADENA,
CAL. REGINALD D. JOHNSON, ARCHITECT.

The Interior of the Country House

By Amy Richards Colton
and Arthur Willis Colton

THERE are two general types of interior decorating; one of them is called "period"; the other is not only more difficult to name but more difficult to practice. Period decorating is merely following good examples of the past, generally confined to a particular time and country, and one has only to imitate with good taste. The type, style, or method which we may imperfectly call the "personal," and which lies in developing of original ideas and expressing of the personalities of the decorator and the people who are to live in the house—is not so easy. On the other hand, it is more interesting. It takes a better artist to do it successfully, but the doing is more worth while.

Period decorating is safer because its general effect is known beforehand, but it tends to be formal, to savor of the dryness and faintness of things foregone, and the dissatisfaction of a forced intimacy with things not as ourselves. Personal decorating, in its turn, runs the peril of eccentricity, and eccentricity has a very transient interest.

The two styles can be combined, a little of the traditional gives to personal choices a more enduring result. The best formula is personal taste *plus* a knowledge of the good traditions.

The new living room of Mr. William H. Wheelock of Mount Kisco, N. Y., designed by Benjamin Wistar Morris as an addition to the original house, is a good example of the successful combination of a "period" and "personal" room, where architect, decorator, and owner have worked together and achieved a harmonious and livable result. The general color scheme of the room combines rough plas-

ter walls with dark walnut colored trim and floor, enriched by fine Italian red which appears in the curtains, antique wall hangings and in a few pieces of furniture. This red is offset by notes of blue in the verdure tapestries and there are accents of the clear yellow found in old Spanish and Italian damasks. Many pieces of fine antique Spanish furniture are arranged in company with both Italian and English pieces of the same period—the XVII century. The electric light fixtures and hardware are specially designed and hand wrought, with a rusty iron effect.

The room is a very large one, but the proportions are so good and the groups of furniture so placed that there is an air of comfort, combined with a sense of space. Fireplaces at each end of the room make points for separate groups of furniture, and the use of refectory tables and subsidiary groups of furniture join the two ends of the room.

There are exceptions, but in general it is not well to make period houses in America, because our people tend to be a comfort loving, easy going folk, miscellaneously derived. No period style can be the natural expression of present-day American life. One of the most essential principles in decoration is that the house interior must be not only in harmony with itself but with the people who are to live in it, not only for the practical business purpose of pleasing the owners, but because the owners, if they are not the kind of people which the house implies, will spoil the scheme of the house by living in it, by the kind of changes that they will naturally make. But when you do a house in a period

you put the thing in a mold, and miscellaneous things cannot be done to it without spoiling the mold. A period house where incongruous details have been introduced or have gradually crept in, is a unity first declared and then violated. But some kind of unity, of harmony, there must be if there is to be beauty and peace.

Many fine old houses in Europe have unity, and yet are the product of successive periods and generations of people. But these successive generations have been people of the same class, with a certain class unity of culture. Each generation grew out of the preceding one, and carried on an unbroken, though changing, tradition. Time has mellowed and blended the whole.

Nothing can quite take the place of time. But if we can make selections as discriminating as the selections made by those successive cultivated generations in Europe, we can produce in this country somewhat of an equivalent. We can select from all the ages, and yet have the sense of harmony. Our ancestors were very local, whereas our reach is world wide. We can do things in a way formerly impossible, because we have access to all ages and times. If we can only put our selections and arrangements to the test of a sensitive taste, we can have a harmony, a blending and a beauty that will express American feeling and resemble America itself by the very diversity of its sources, and be adapted to American life as no strictly period decorating could be.

We can, in quite a simple way, make a thing delightful by applying the principles of proportion, composition and balance of color, while considering constantly the minds and tastes of those who are to live in the house. The same principles can be used for simple as for elaborate schemes, for those which involve small and for those which involve large expense. Our decoration, like our architecture, should be personal, but touched with tradition—with many traditions.

All really good interior decorating, then, derives its interest from some kind of character or individuality, either of

person or period or place. Whatever this person, period or place may be, whatever the interest or individuality, there should also be a sense of unity in every room or group of rooms. You do not make a beautiful room merely by putting beautiful objects in it, for beautiful objects can quarrel violently with each other. If there is no feeling of harmony and form in the whole, it is not a beautiful room, but only a room containing beautiful objects. One beautiful thing may even spoil another by being totally unrelated to it. An object in a room may be bad, not in itself, but in its relation to other objects. Harmony is as real and necessary in color and form as it is in music.

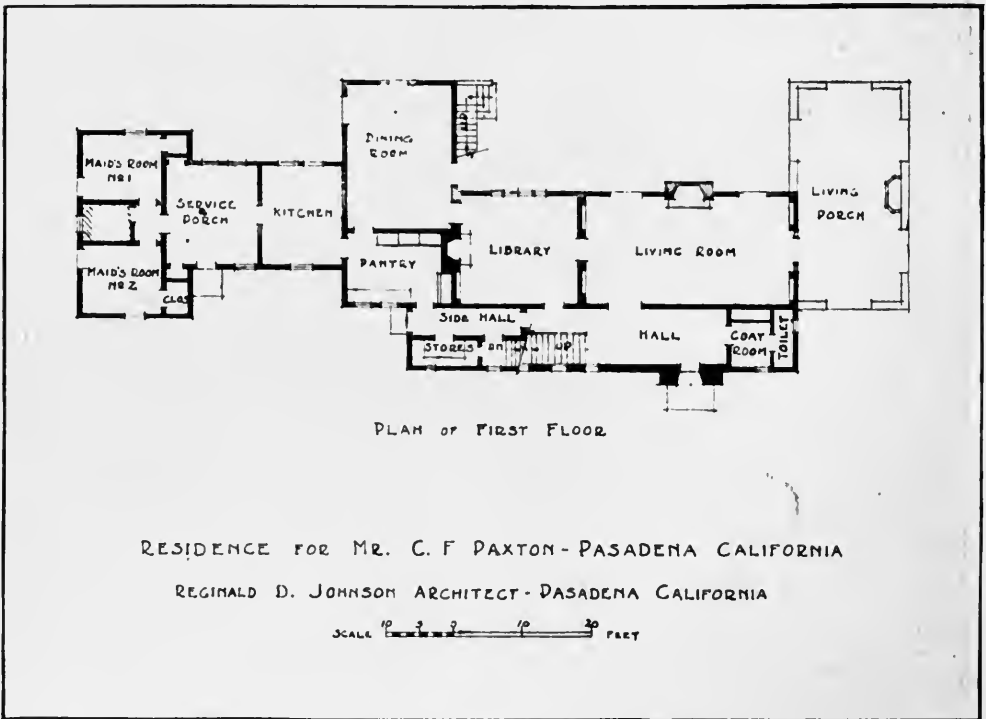
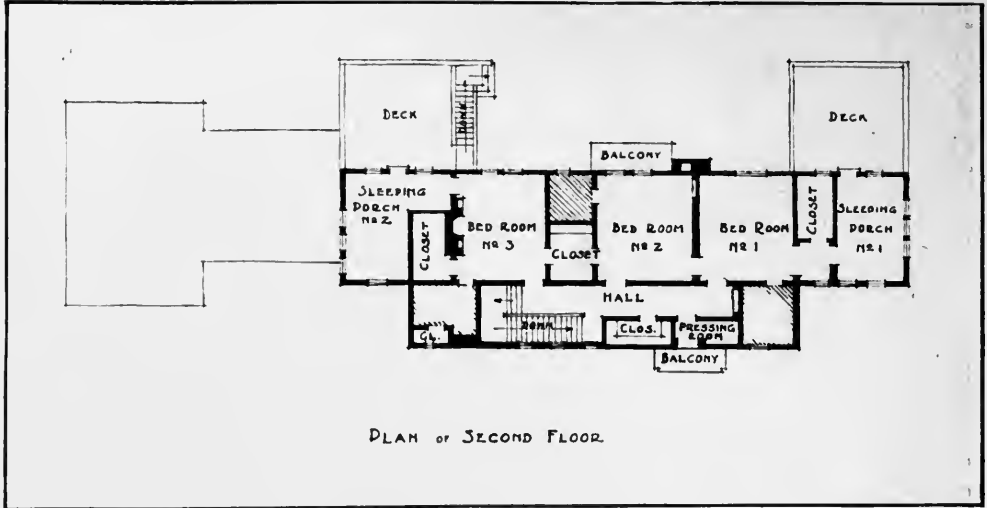
It is often an interesting method to develop the color scheme of a room from one important or suggestive object, such as a piece of pottery, a decorative picture, or an oriental rug. A room so developed from a single object will be apt to have a peculiarly interesting, a quasi-organic, unity.

The general sense of unity, harmony, and restfulness is often spoiled by furnishing adjoining rooms independently of each other, without considering them as parts of a general scheme. This is particularly true of American houses, where the doors are habitually left open.

The average American house, both inside and out, is certainly in better taste than it was twenty-five or thirty years ago, partly because it is so easy to acquire correct copies of period furniture, and to have plans drawn after some traditional house—although more often than not this is done regardless of suitability to owners or locality. It is easy for anyone possessed of a moderate amount of money, to have a house built in fairly good taste after a model in a popular art magazine, and furnish it chiefly from the better kind of department store. But the result is an entire lack of individuality. This endless repetition, these stereotyped effects unintelligently repeated, these copies without feeling of the cheap shows of elegance, this standardized architecture and stock furnishing, sometimes make a suburb more depressing than a slum. Whereas, if the formation and contours



RESIDENCE OF C. F. PAXTON, ESQ., PASADENA,
CAL. REGINALD D. JOHNSON, ARCHITECT.



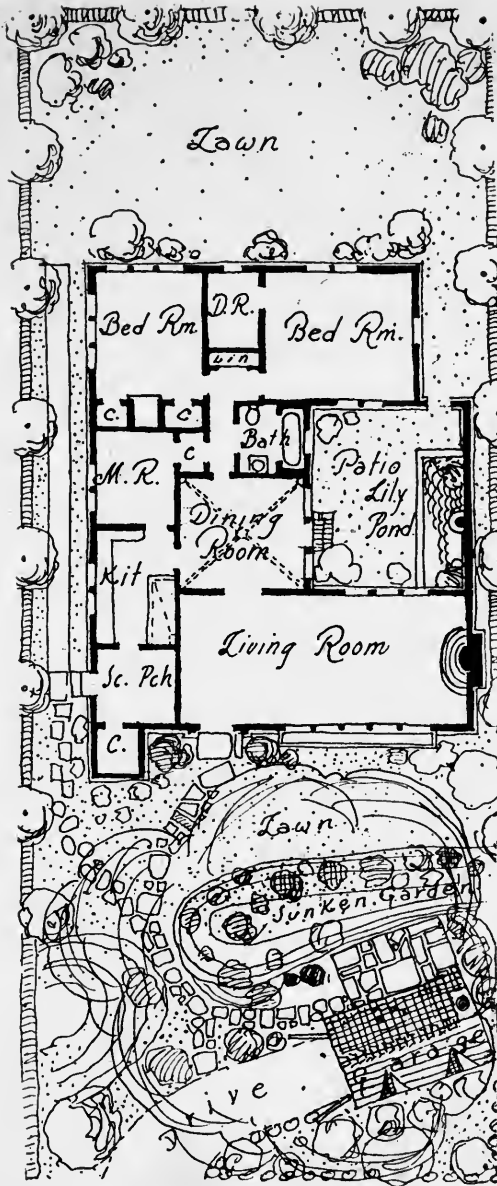
FIRST AND SECOND FLOOR PLANS—RESIDENCE OF C. F. PAXTON, ESQ., PASADENA, CAL.
 Reginald D. Johnson, Architect.
 Awarded Medal by A. I. A.



RESIDENCE OF C. F. PANTON, ESQ., PASADENA,
CAL. REGINALD D. JOHNSON, ARCHITECT.



RESIDENCE OF C. F. PANTON, ESQ., PASADENA,
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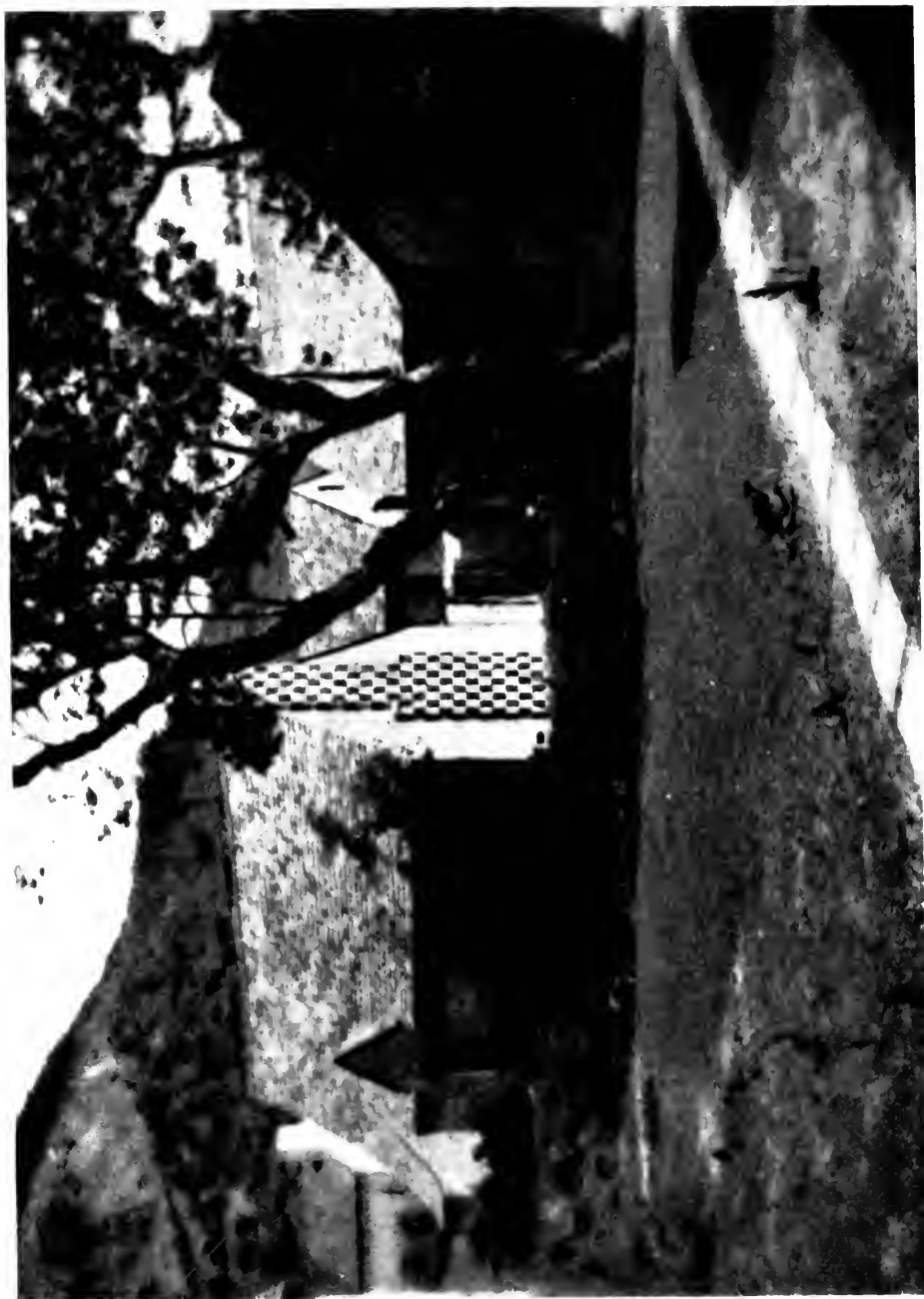
BLOCK PLAN—"THE CHÂTEAU," RESIDENCE OF MRS. M. S. MUCHMORE, HOLLYWOOD, CAL.
 Pierpont & Walter S. Davis, Architects.



"THE CHATEAU," RESIDENCE OF MRS. M. S. MUCHMORE,
HOLLYWOOD, CAL. PIERPONT & WALTER S. DAVIS, ARCHITECTS.



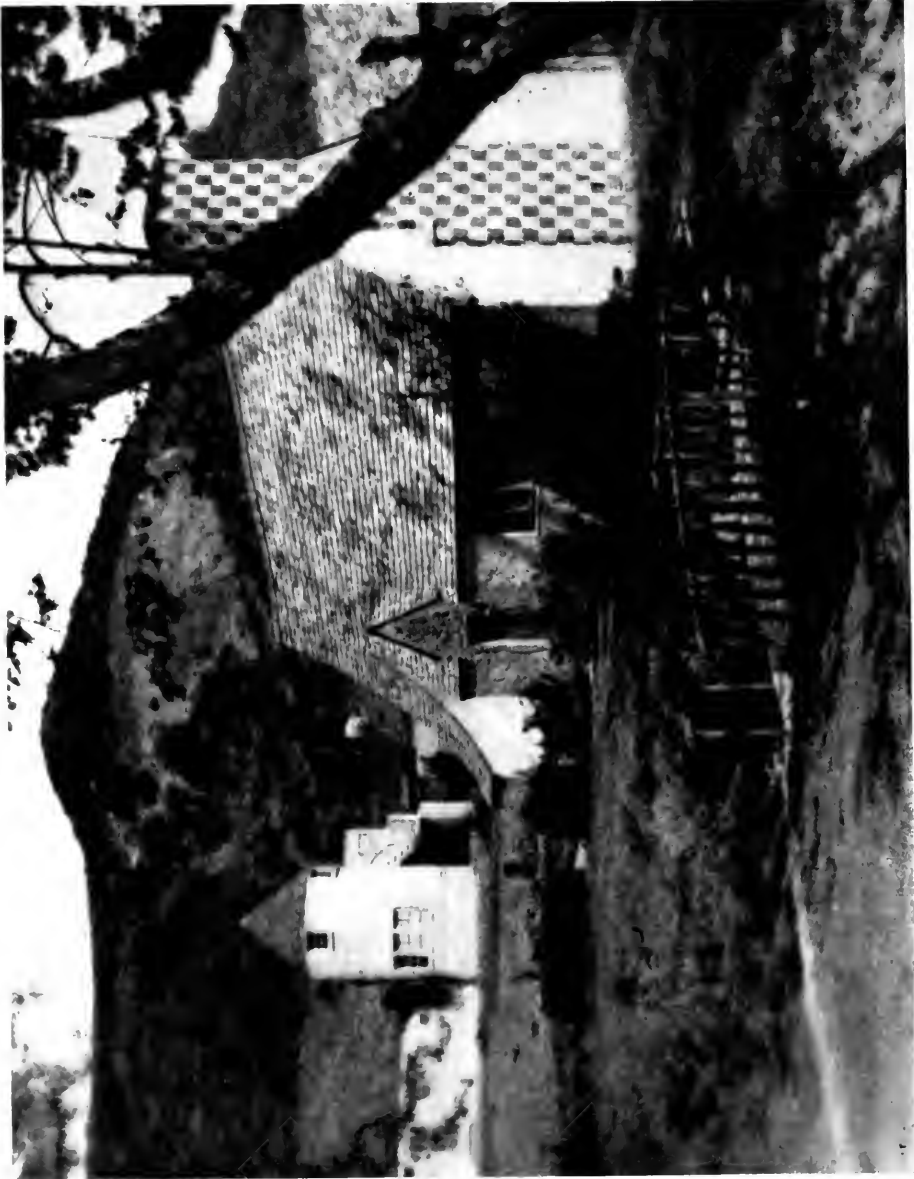
"THE CHATEAU," RESIDENCE OF MRS. M. S. MUCHMORE, HOLLYWOOD, CAL. PIERPONT & WALTER S. DAVIS, ARCHITECTS.



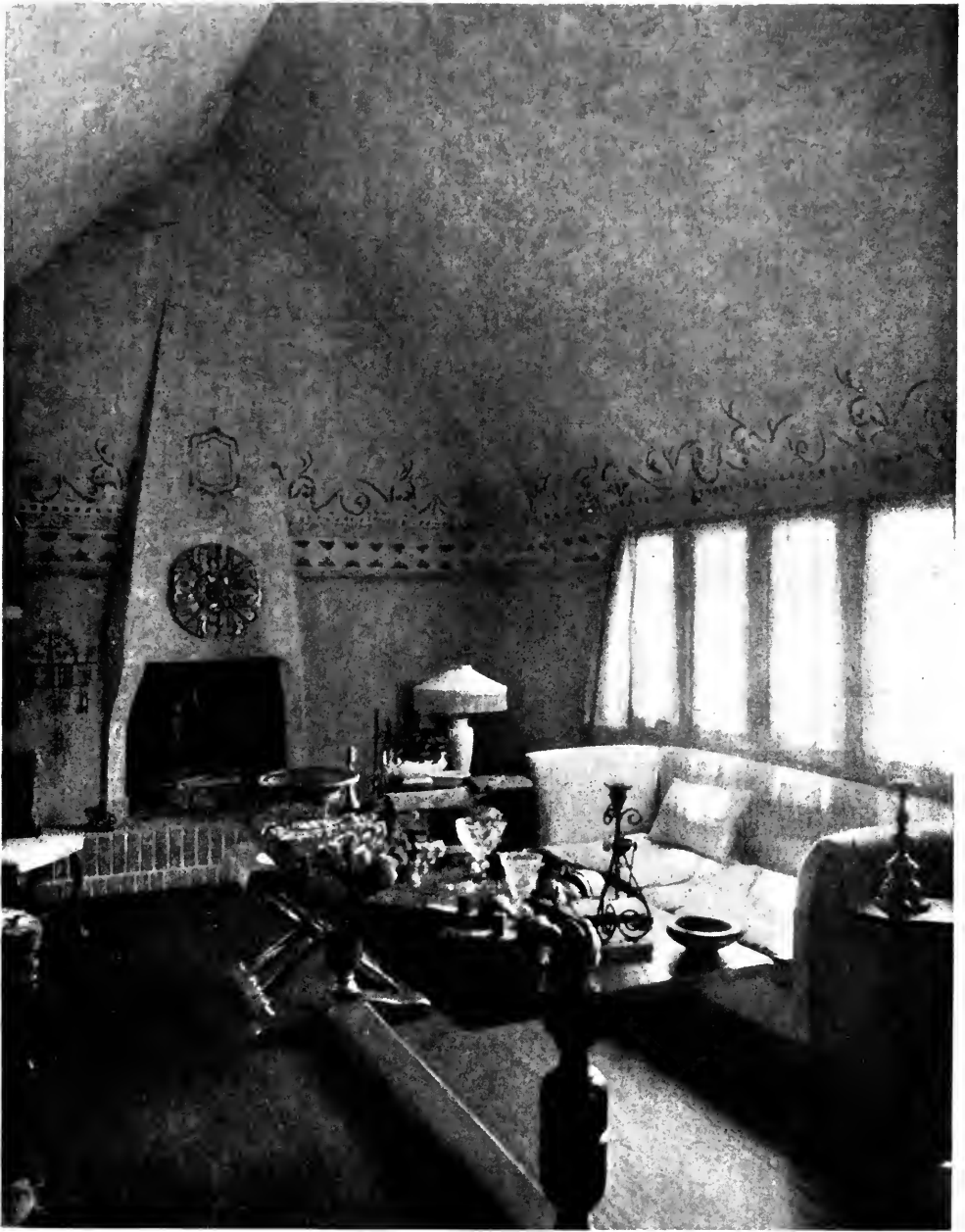
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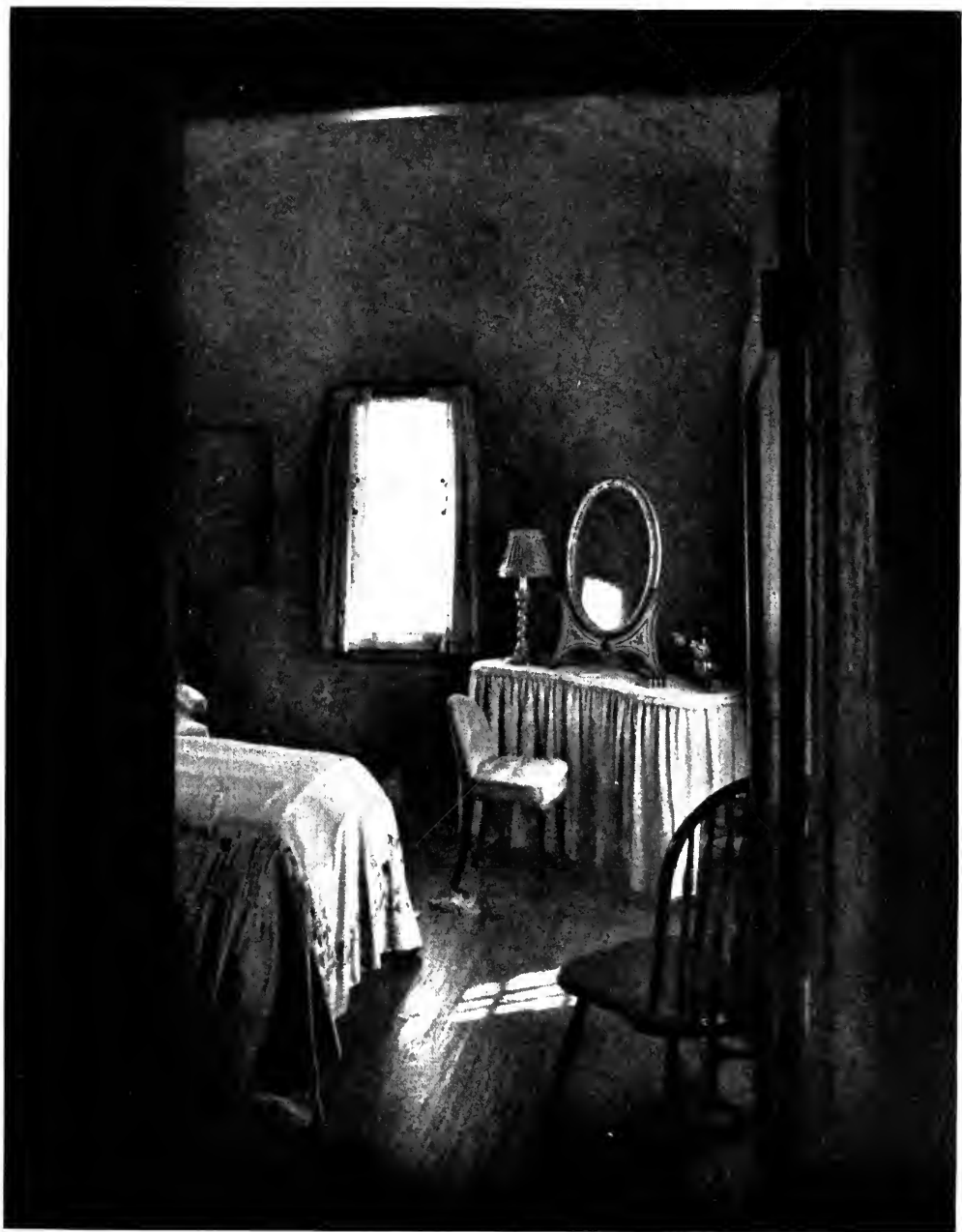
"THE CHATEAU," RESIDENCE OF MRS. M. S. MUCHMORE, HOLLYWOOD, CAL. PIERPONT & WALTER S. DAVIS, ARCHITECTS.



LIVING ROOM AND STUDIO—"THE CHATEAU," RESIDENCE OF MRS. M. S. MUCHMORE, HOLLYWOOD, CAL. PIERPONT & WALTER S. DAVIS, ARCHITECTS.



DINING ROOM—"THE CHATEAU," RESIDENCE
OF MRS. M. S. M'CHMORE, HOLLYWOOD, CAL.
PIERPONT & WALTER S. DAVIS, ARCHITECTS.



BEDROOM—"THE CHATEAU," RESIDENCE OF
MRS. M. S. MUCHMORE, HOLLYWOOD, CAL.
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PART OF LIVING ROOM, WITH ENTRANCE TO DINING ROOM—
"THE CHATEAU," RESIDENCE OF MRS. M. S. MUCHMORE,
HOLLYWOOD, CAL. PIERPONT & WALTER S. DAVIS, ARCHITECTS.

of the land were invariably studied first, and if every house were made to grow as though spontaneously from the suggestions of its surroundings, and to suit the personalities and requirements of the owners, then all this stereotyping would automatically disappear.

A splendid example of a house developed from a suggestion of the locality is "The Chateau" at Hollywood, California, built by Walter Davis for Mrs. M. S. Muchmore. The old sycamore was the inspiration. The architect began to visualize a small house nestling just behind this old sycamore and on the edge of the little arroyo which formed a natural sunken garden, with a tiny patio at the back containing a small pool against the wall and a tangle of roses and vines overhanging; some orange and lemon trees, and of course many flowers—those wonderful flowers that bloom for the asking in California.

Years after he saw in Burgundy some charming cottages of the Cote D'Or with their tiled and thatched roofs, upon which time, weather and the vegetation had wrought a veritable rainbow effect. The mosses and lichens and grasses, time stained tile and weather beaten thatch blended together in so beautiful a medley of color, that it set the young architect to dreaming of a day when he might imitate this colorful work of kindly time in his own land of sun and color.

The Chateau (first of the old French village group at the head of Cahvenga Pass in Hollywood) was the outcome. It has a wonderful roof line, a roof of many colored shingles, each shingle being dipped separately by hand and so resembling the old lichen and moss covered tiles of the Cote D'Or country. There is a checked red and yellow chimney at one end, and two wings on the same side enclose the small patio—a concession to California. The pool is flanked by an old stained wall upon which moss and that old world plant, called "hen and chickens, are growing," and over which hang vines of jasmine and wild clematis. In front of the house a winding path of stepping stones is flung across the sunken garden, planted informally with wild flowers and pungent

smelling native shrubs, and aflame in the spring with a mass of golden poppies. The wide spreading old sycamore covers this friendly garden and its gnarled branches hang over the picturesque little garage at its foot. The native wild shrubs are repeated about the front of the house, while at one side a hedge and line of young poplars stand guard over a little vegetable garden laid out in beds which have a low flowering hedge, the blue flowers vying in color with the soft greens of lettuce and peas, the blue-greens of cabbages and the red of beets and the flaunting red cabbage.

The quaintness of the exterior of The Chateau is carried out in the treatment of the interior, where the walls are all trowel plastered, multi-colored and decorated after the manner of the XII century. The doorways lack trim, and the primitive stained wood doors swing upon hand-made iron hinges. The living room and dining room have vaulted ceilings with old world decorations in dull reds, blues and yellow. In the dining room, four lunettes in the dull blue ceiling bear all the marks of having been put there centuries ago. One of the bedrooms has a barreled ceiling highly decorated, and on the dull mulberry walls beneath are two inset plaques of dancing girls.

No one house, perhaps, in Southern California can be said to have created a more widespread interest than this jewel in its alluring and picturesque setting.

Such a house as this is probably expensive. But it is not necessarily any more expensive to build and decorate a "personal" house than a stereotyped "period" house, where money has been spent superficially on period woodwork and electric light fixtures, and where it would have been far better to have made a careful study of the general proportions of the rooms, to have confined oneself to very simple mantelpieces and woodwork, and to have spent the money saved on individually and carefully chosen furnishings, instead of buying so-called "period" objects, supplied *ad nauseam* by all large commercial furnishing houses.

Stock mantelpieces, stock fixtures of all kinds, and the catalogues from which



"THE CHATEAU," RESIDENCE OF MRS. M. S. MUCHMORE, HOLLYWOOD, CAL. PIER-PONT & WALTER S. DAVIS, ARCHITECTS.

they are ordered, are things to be avoided if possible. Just as you will save money as well as health by resorting to a good physician instead of to a patent medicine, so you will get better value for the cost by employing a good architect and decorator instead of resorting to a stock supply. No pretentious panaceas can supply either health or good taste. Good taste is not cheap, but it can be inexpensive. Everyone's health is a personal phenomenon, and so should be his house. Not only does a house take personality from its occupants, but its occupants are under the influence of the house. There is a mutual adjustment. It may be less important what kind of a house you live in than whom you marry, but it is important for a number of similar reasons. A man should get neither his house nor his wife from a catalogue.

These "catalogue" houses are sown broadcast over the land. The trouble with them is that they attempt to produce cheap elegance by the use of badly designed woodwork, etc., in order to gloss over the imperfections of stock architecture. The attempt is futile and the goal not worth striving for.

If strict economy must be considered it is better to have a competent architect—who has considered you and your needs and the location individually—draw a simple plan which can be executed by an intelligent carpenter; then be your own contractor and superintendent. The result will be that you will acquire a house all your own, representing *you*.

All this is more specifically about architecture. But the fact is that the decorator cannot do decorating of any interest where the architecture is radically wrong. It may be corrected a little, but it can-

not be cured. For the house and its furniture and decoration are not separate, but one. The interior must have relation to the exterior, just as the exterior must be related to its setting, and in particular to its garden. The architectural lines and proportions of a room, with the various openings where the fireplace, windows and doors occur, are the structure of the furnishing and decorating.

Consequently there should be more connection than is usual between the architect and the decorator in order to do away with that discrepancy and discord, which now too often occur, between the architecture and decoration of a house. At present architects and decorators have a tendency to misunderstand each other. Instead of helping each other and working in harmony, they are apt to be at daggers drawn. The architect in general regards the decorator as an untrained, unprofessional person, chiefly interested in the commercial side. The decorator, in turn, looks upon the architect as devoid of all sense of color and interested only in a cold academic type of furnishing. Yet if they could get together, it would plainly be better for them both, and for the owner. If the interior architecture is hopelessly wrong from the decorator's standpoint, it is nearly hopeless of correction; and the architect's carefully planned effects, on the other hand, may be spoiled by incongruous decoration. It is high time for a League of House and Garden Makers; for the formal recognition by architects—as the old and more established body—of competent and trained decorators and landscape gardeners; and for the establishment of an *entente cordiale* among them all.



MORNING ROOM RESIDENCE OF JAMES A. BURDEN, ESC., SYOSSET, LONG ISLAND, N. Y. DELANO & ALDRICH, ARCHITECTS.

The Garden of the Country House

By William J Lamb

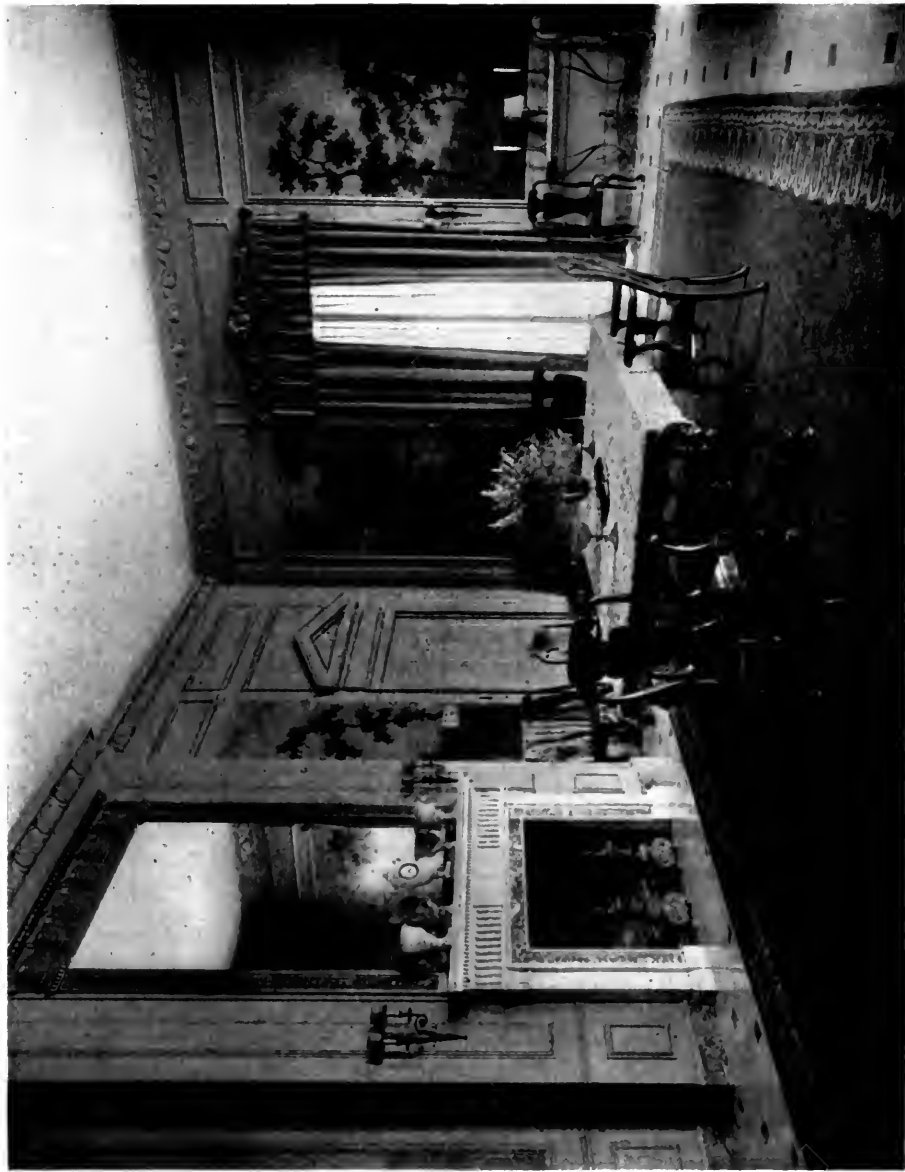
TO those who have never felt the delight of watching the slow growth of the work of their brain and their hands, whatever that work may be, the art of the gardener should make an almost irresistible appeal. To watch with infinite patience the first uncertain experiments, usually with the things that are most difficult to grow, and then with greater confidence, soon coming to the realization, as we do occasionally in this "Age of Progress," that our grandfathers knew pretty well what they were doing and that we may with safety follow in their footsteps, adding only what our experience has taught us are useful to the body and beautiful to the eye.

The young lady who was so overcome with the grandeur of nature was, except for her grammar, quite right. Nature may be, and often is "grand," but, except where she is softened and brought into the human scale by the hand of man she is rarely beautiful. A countryside, dotted with trees and villages and houses, contrasting the great square acres of the green and brown and gold of the growing things, broken by the soft lines of the hedgerows and fences, is more satisfying to the soul than the great canyons and mountains of our western country where she has achieved unaided her greatest works. It is this co-operation of the genius of man with the genius of Nature that has produced the happiest results, and it is the gardener, who, by the very character of his work, can come closest to her and, by true sympathy and understanding, can make her do his will.

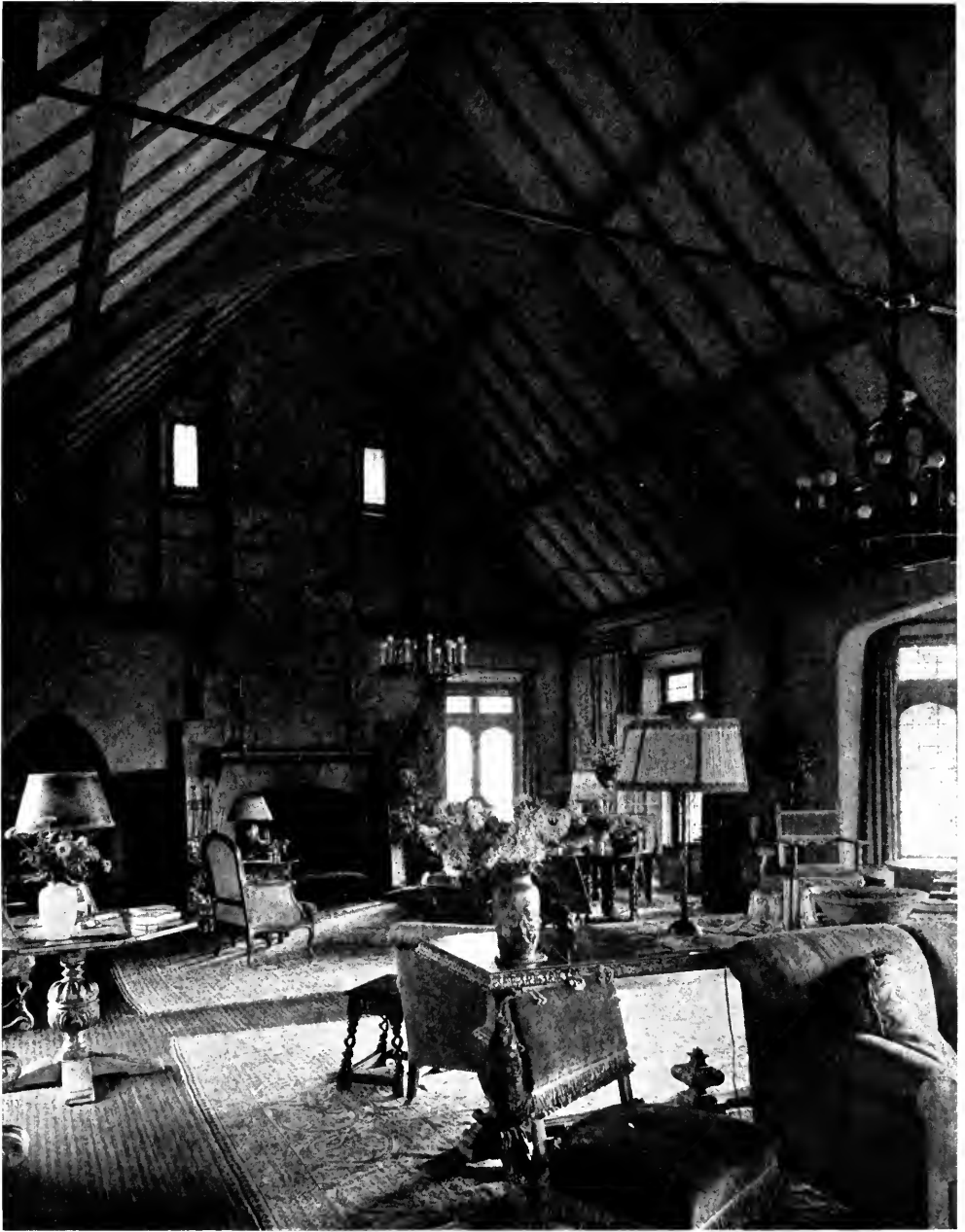
But Nature is not always to be driven or, sometimes, even led, however gently. We may plan our house, as once hap-

pened, and with the most loving care design our garden about a magnificent primeval old elm, and when we are about to enjoy the results of our efforts, find that she has been smiling quietly, and when she is quite ready, she laughs rudely at us through a tropical thunderstorm and with a shriek of joy sends the giant tree crashing to the ground. I am sure, for I have too great a respect for her, that she will not repeat that sort of practical joke.

Those who have visited the great gardens of the old world, Versailles with its great allées, its tapis-vert, its vistas of clipped trees now in their prime, its fountains, its grottoes and the myriad paths and "rond-points," unreal and out-of-place in modern France, in spite of all its luxuriance after two hundred years, and crying for powdered wigs and brocade and lace ruffles,—the gardens of Italy filled with their picturesque gates and casinos and cascades, dominated always by the great lines of magnificent cypress trees,—the English gardens, more informal, and perhaps, better inspirations for our more modest needs, are quite apt to be discouraged when they attempt to plan the gardens for their less pretentious homes. It is interesting to compare some of these great gardens of Old Europe as we know them to-day with the old engravings of a hundred and fifty years ago. How bare they must have been, with their trees newly planted and their gorgeous box hedges only knee high. We see them at their best, now that their real purpose has gone. For our own gardens, however great or modest they may be, we need only a single idea—but it must be a good one—carried out with the discretion of



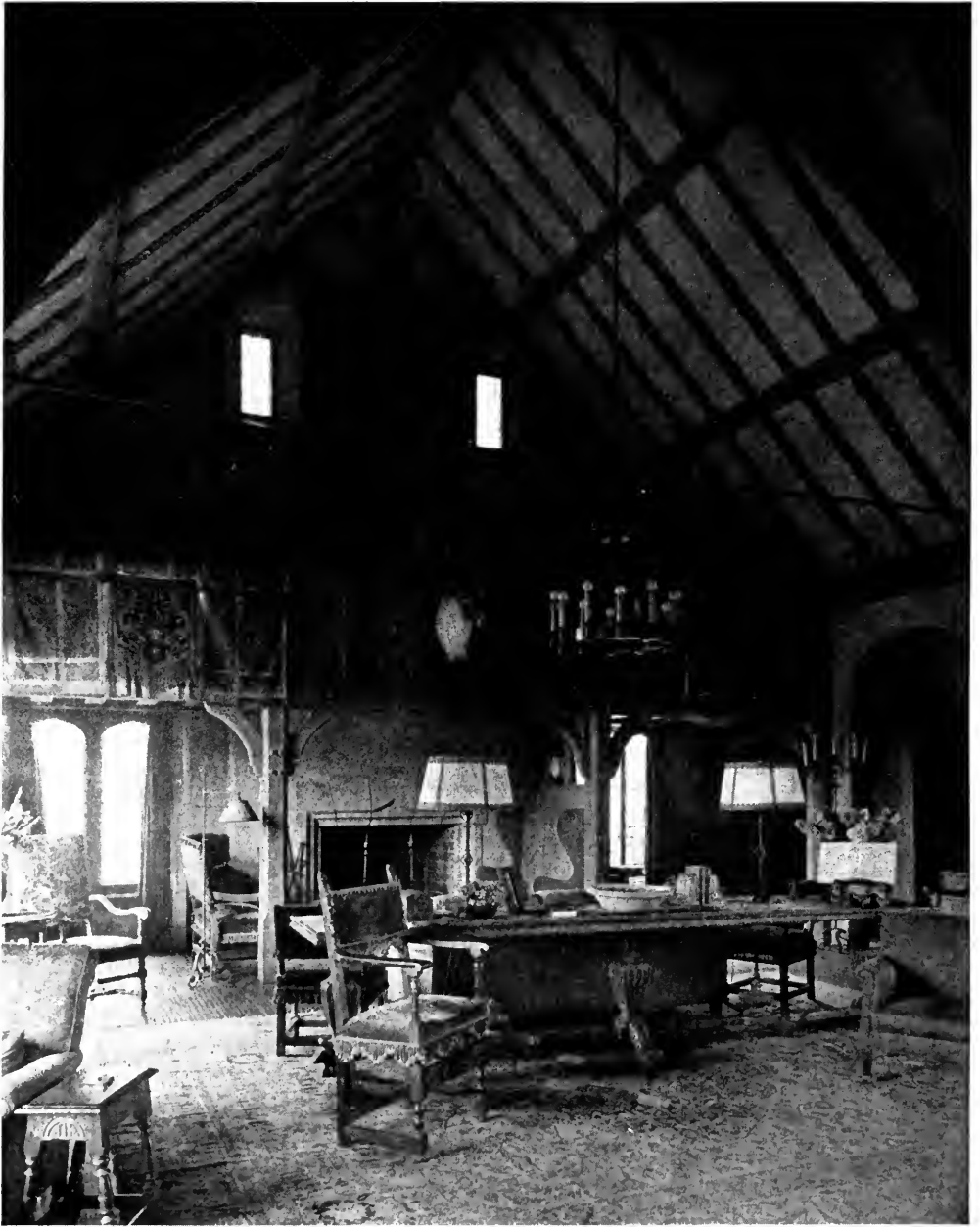
DINING ROOM—RESIDENCE OF BERTRAM G. WORK, ESQ., OYSTER BAY, LONG ISLAND, N. Y. DELANO & ALDRICH, ARCHITECTS.



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ESQ., MOUNT KISCO, NEW YORK. BENJAMIN WISTAR
MORRIS, ARCHTTECT; AMY RICHARDS COLTON, DECORATOR.



RESIDENCE OF WILLIAM H. WHEELOCK, ESQ., MOUNT KISCO, NEW YORK. BENJAMIN WISTAR MORRIS, ARCHITECT; AMY RICHARDS COLTON, DECORATOR.



LIVING ROOM—RESIDENCE OF WILLIAM H. WHELOCK,
ESQ., MOUNT KISCO, NEW YORK. BENJAMIN WISTAR
MORRIS, ARCHITECT; AMY RICHARDS COLTON, DECORATOR.



THE RESIDENCE OF A. M. BROWN, ESQ.,
STONY BROOK, LONG ISLAND, N. Y. PEA-
BODY, WILSON & BROWN, ARCHITECTS.



THE DRAWING ROOM—RESIDENCE OF EDWARD
C. DEAN, ESQ. EDWARD C. DEAN, ARCHITECT.



DRAWING ROOM RESIDENCE OF EDWARD C. DEAN, ESQ. EDWARD C. DEAN, ARCHITECT.



DRAWING ROOM—RESIDENCE OF EDWARD C. DEAN, ESQ.
Edward C. Dean, Architect.

good taste, keeping all other things in their proper places, making them lead up to our central motif from every point of view like the climax of a great painting. And in a small garden the problem is quite simple, a gate, perhaps, at the end of a grass walk bordered with flowering plants and shrubs, and enclosed within a niche of great trees—a small pool or a fountain, made of old flagstones with a judicious use of blue-green paint inside the cement basin—a garden seat, a sun-dial, a vista of trees, which does not always, to be effective, need to have as its axis the front door of the house. Even a single great old tree might become the center of interest of a garden which we all would enjoy to see. The ever useful grape-arbor, more so if of two hundred gallons capacity, has now a new charm, and when we sit beneath it, "amid its vagrant shadows and shafts of light," we may feel a new en-

joyment of anticipation and a new sense of freedom of which the city dweller is in complete ignorance.

Then there is the charm of the surprise which is always delightful, and not difficult to get. There is nothing more interesting than to find, upon walking down the main allée of a garden, an unexpected little path leading to a fountain or a tea house or a beautifully carved bench which the gardener, by the very nature of his work, can so easily conceal. Even in so formal an arrangement as Versailles there are, at almost every turn, numberless surprises of this sort which the entranced visitor delights in discovering, all the more appreciated because they are not seen in the first casual survey. It is true of gardens more than of any other works of art, that, when we exhaust their beauties at a single glance, they cannot possibly have any further interest for us.

For those who are not satisfied with the picturesque and the beautiful alone there is always the vegetable garden, and what place is too small to grow its own peas and beans and swiss chard? Even such a garden may be made a thing of beauty and a delight to the eye, of an interest beyond that of the inner man. To lay it out in parterres like a Louis XIV *potager* is not a difficult matter, but unfortunately it may become too great a temptation to preserve it in all its glory of intricate outline and form ever to sacrifice any of it on so prosaic an altar as the kitchen stove. Imagine the heart burnings, the struggle between our Le Nôtre and our Vatel, when the climax of our artistic triumph has to grace the inside of the salad-bowl! Though, on the whole, it is better, unless there may be two of them, to have one's vegetable garden safe from anything of the sort and to let it take its place beside the cutting

garden, with all its gorgeous variety of color, modestly and unobtrusively as an offering to the more prosaic side of the verdant Ceres.

But it is not to the country or suburban dweller alone that the delights of the gardener may come. We have begun, in many instances, and very successfully too, to bring the garden into our city homes. There are gardens I have seen in Cleveland and in other cities of the Middle West that have all the charm and intimacy that one could desire, shutting out the noise and dust of the street with their thick masses of foliage—gardens on a very restricted scale, to be sure, but nevertheless, when carefully and intelligently planned, surprisingly refreshing and a wonderful relief from the usual uninspiring yard. And then, too, we are beginning to see some possibilities for the redemption of our endless row upon row of "three-story-and-basements" built in



INTERIOR—RESIDENCE OF EDWARD C. DEAN, ESQ.
Edward C. Dean, Architect.



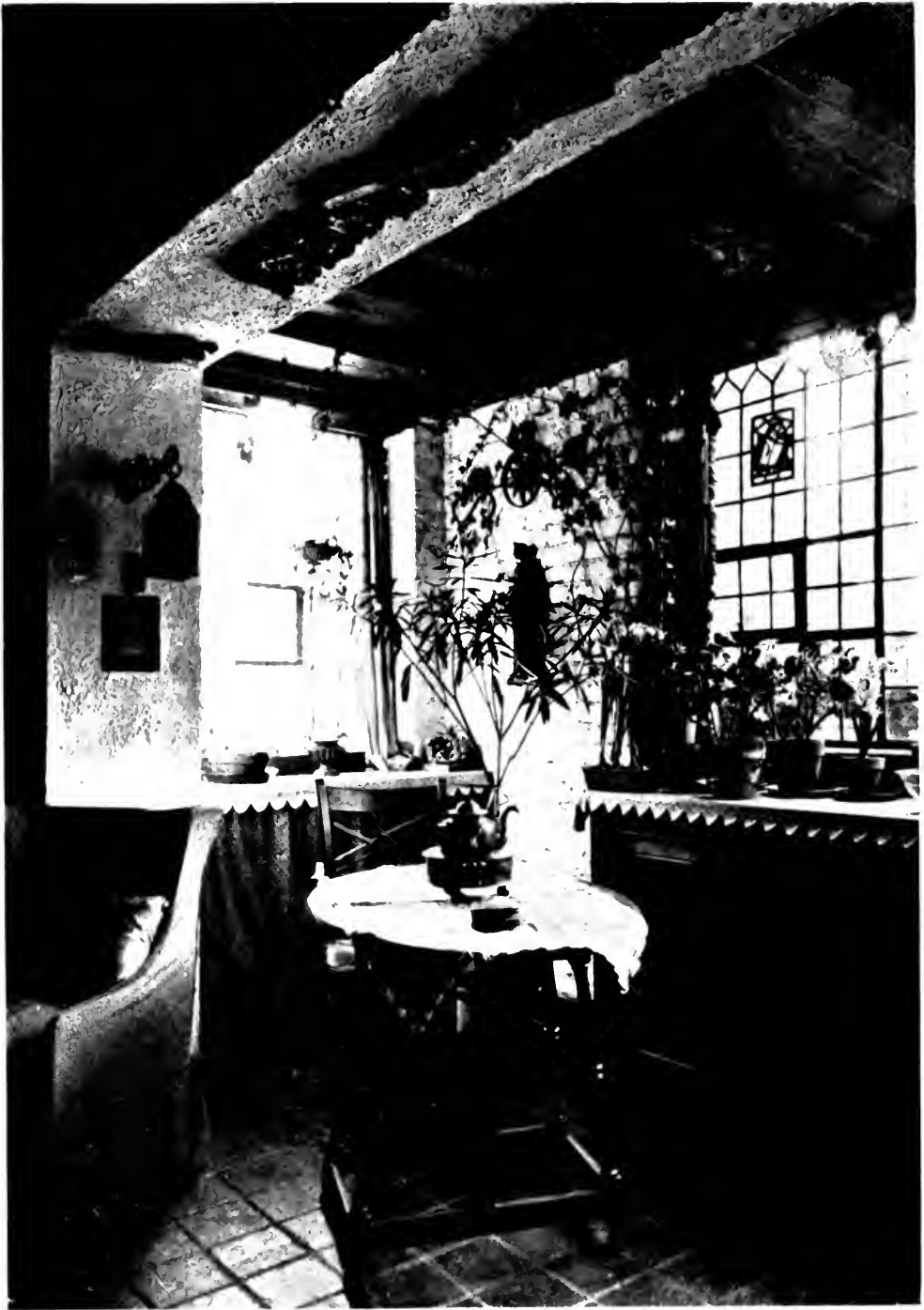
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INTERIOR—RESIDENCE OF EDWARD C. DEAN,
ESQ. EDWARD C. DEAN, ARCHITECT.



DRAWING ROOM—RESIDENCE OF EDWARD C.
DEAN, ESQ. EDWARD C. DEAN, ARCHITECT.



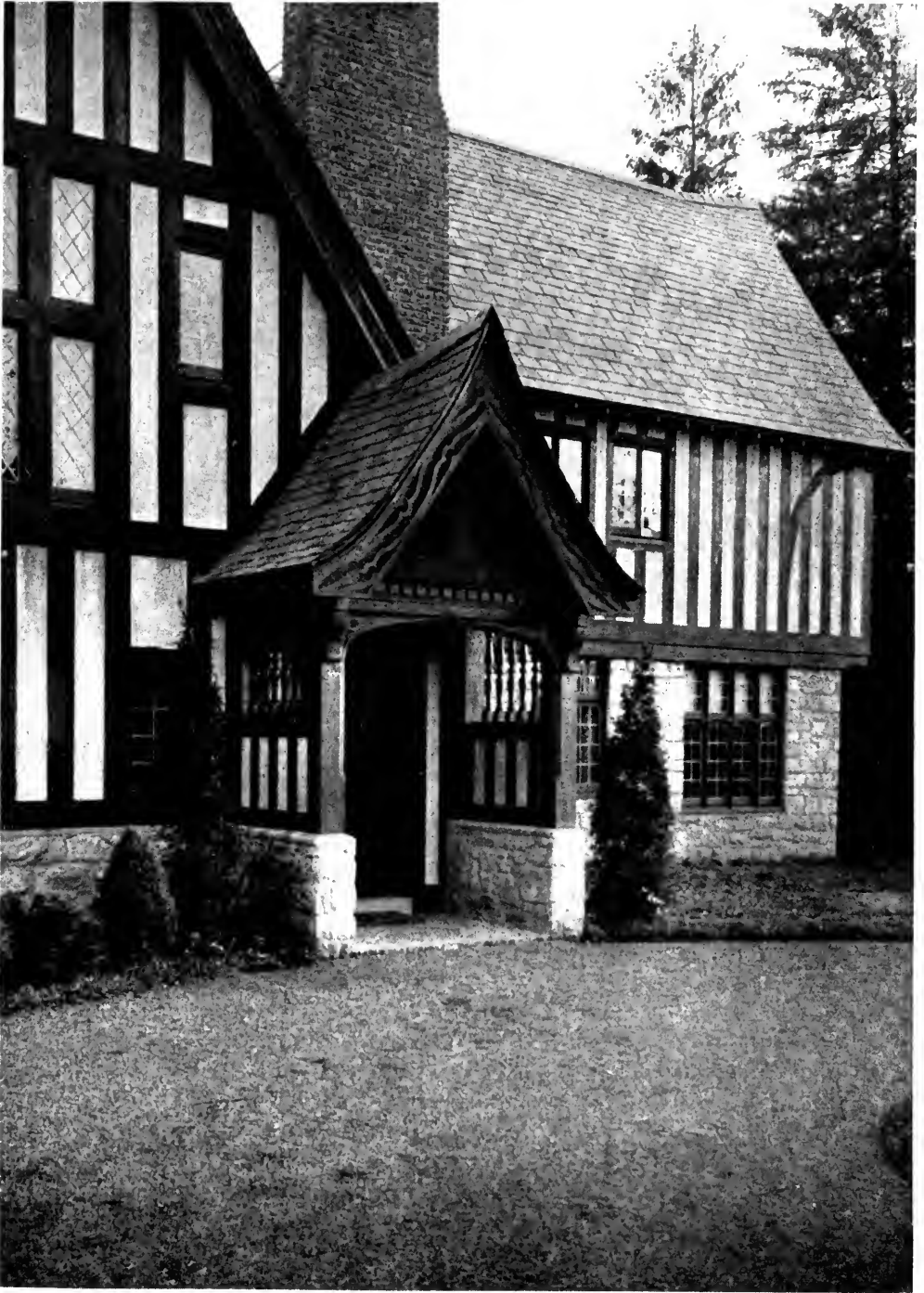
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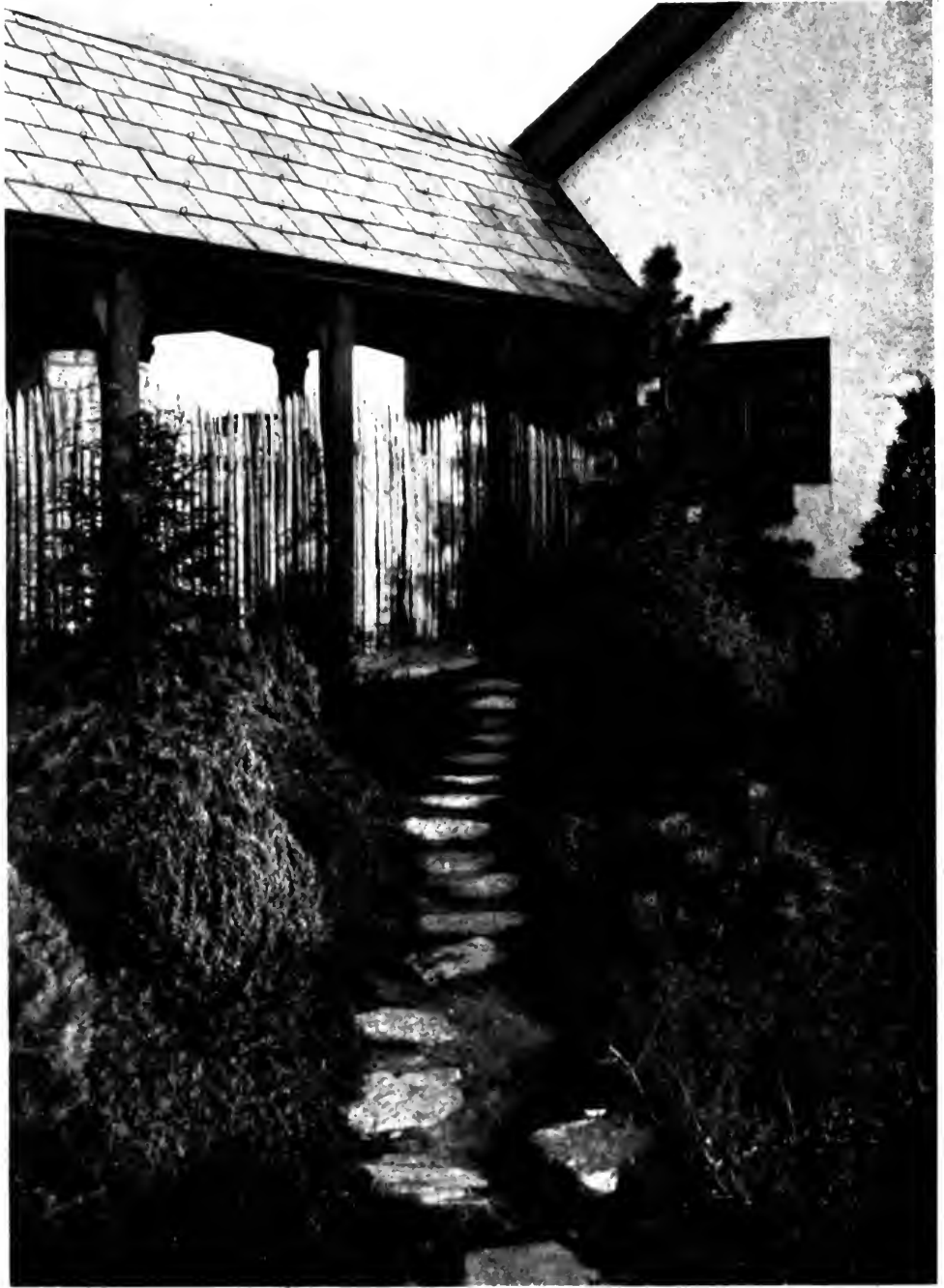
SITTING ROOM - THE RESIDENCE OF
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AND. DELANO & ALDRICH, ARCHITECTS.



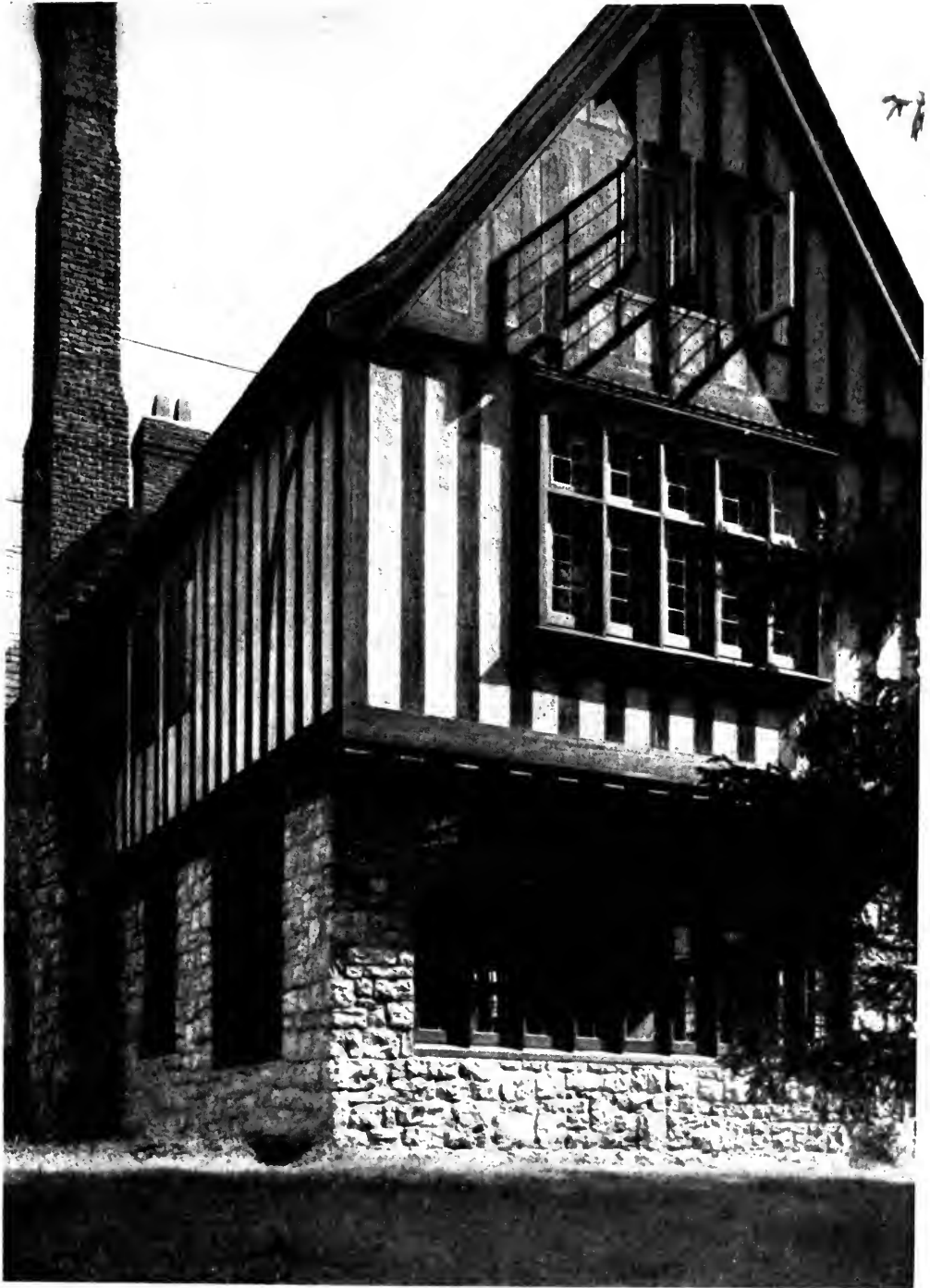
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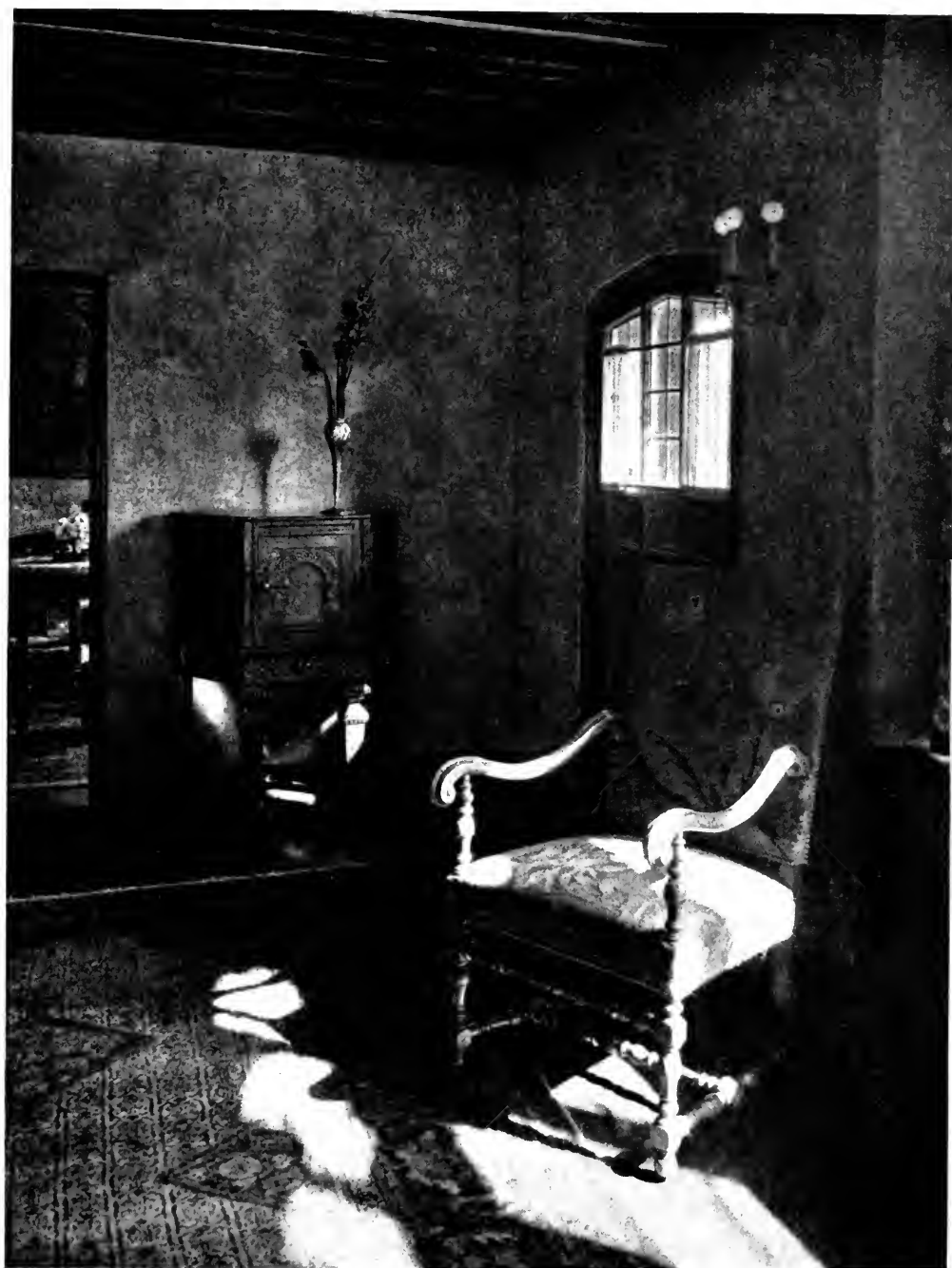
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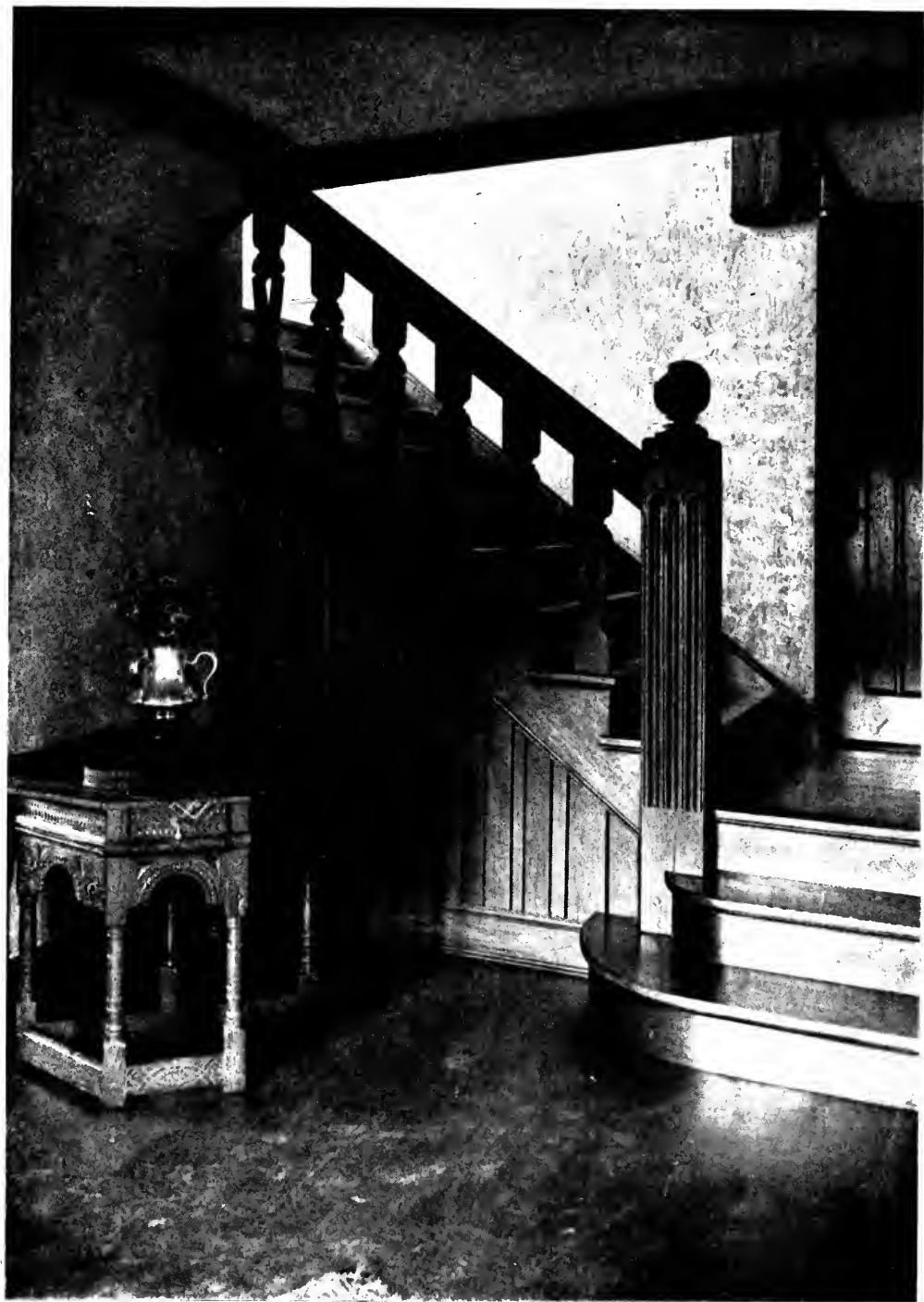
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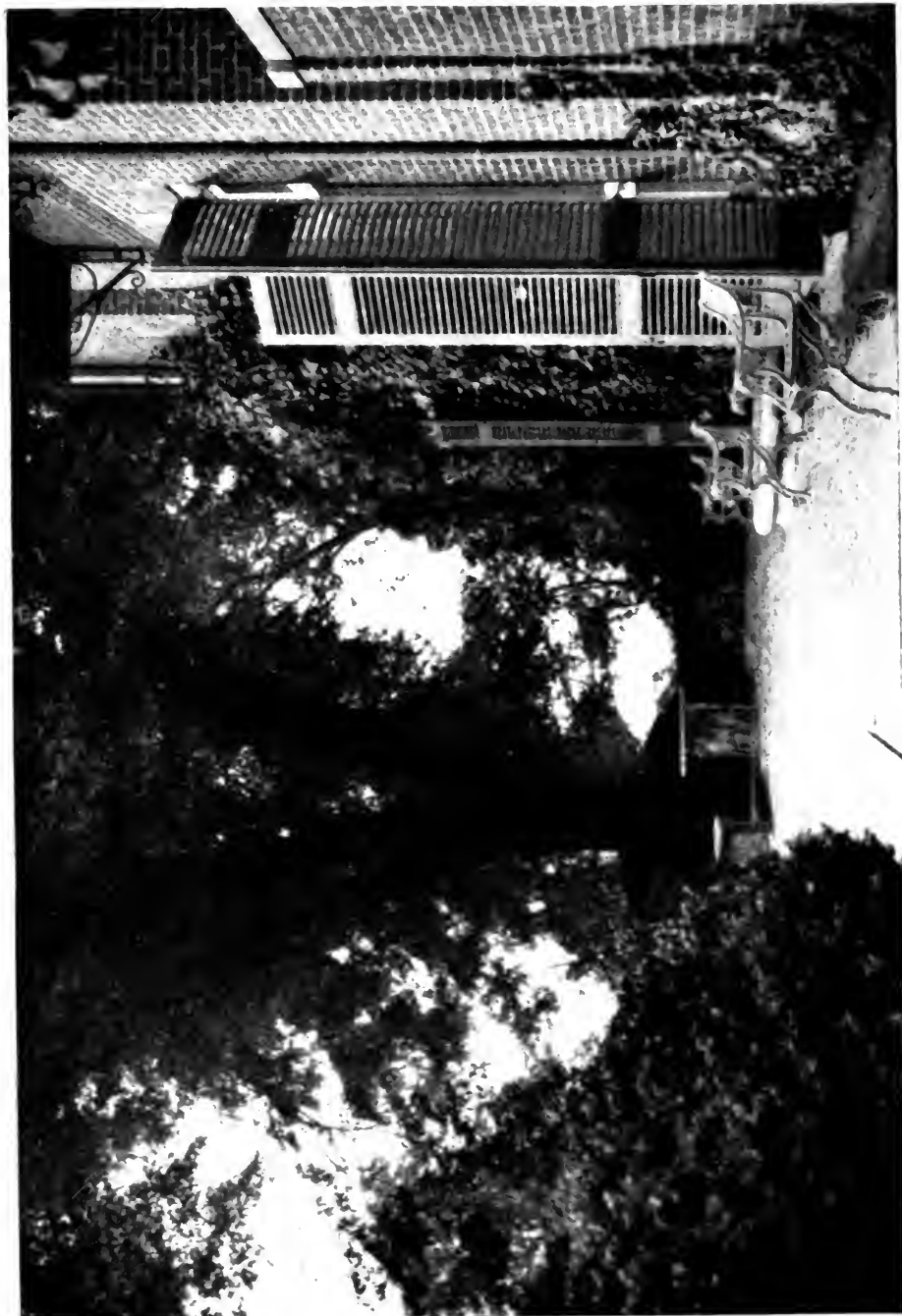
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TERRACE ABOVE THE GARDEN—ESTATE OF JOHN PRATT,
GLEN COVE, LONG ISLAND. CHARLES A. PLATT, ARCHITECT.



GARDEN OF HERBERT STRAUS, ESQ., RED BANK, N. J.
MARTHA BROOKS HUTCHESON, LANDSCAPE ARCHITECT.
F. BURRALL HOFFMAN, JR., ASSOCIATE ARCHITECT.



RESIDENCE OF J. THOMAS, ESQ., WARRENTON, VA.
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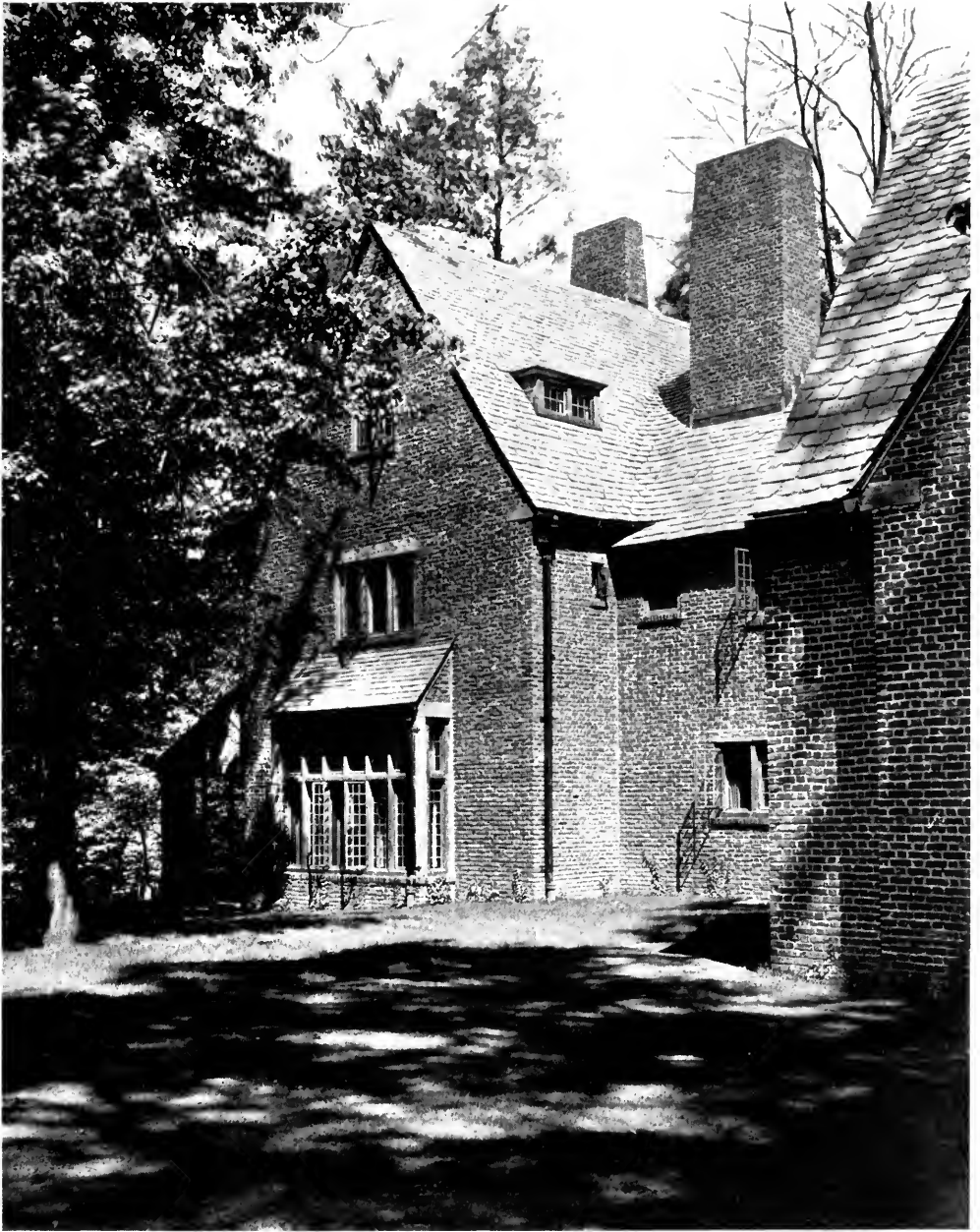
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Peabody, Wilson & Brown, Architects.



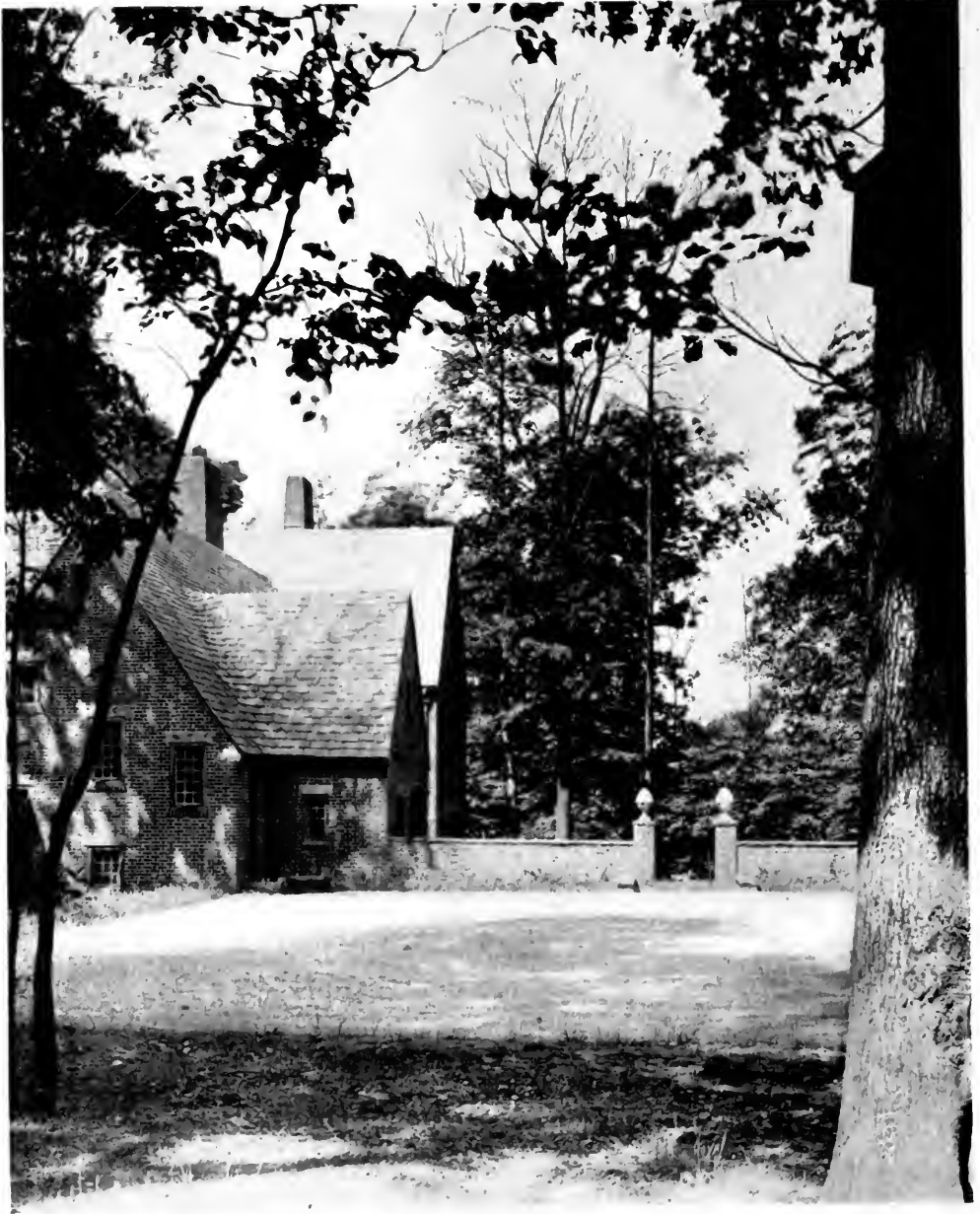
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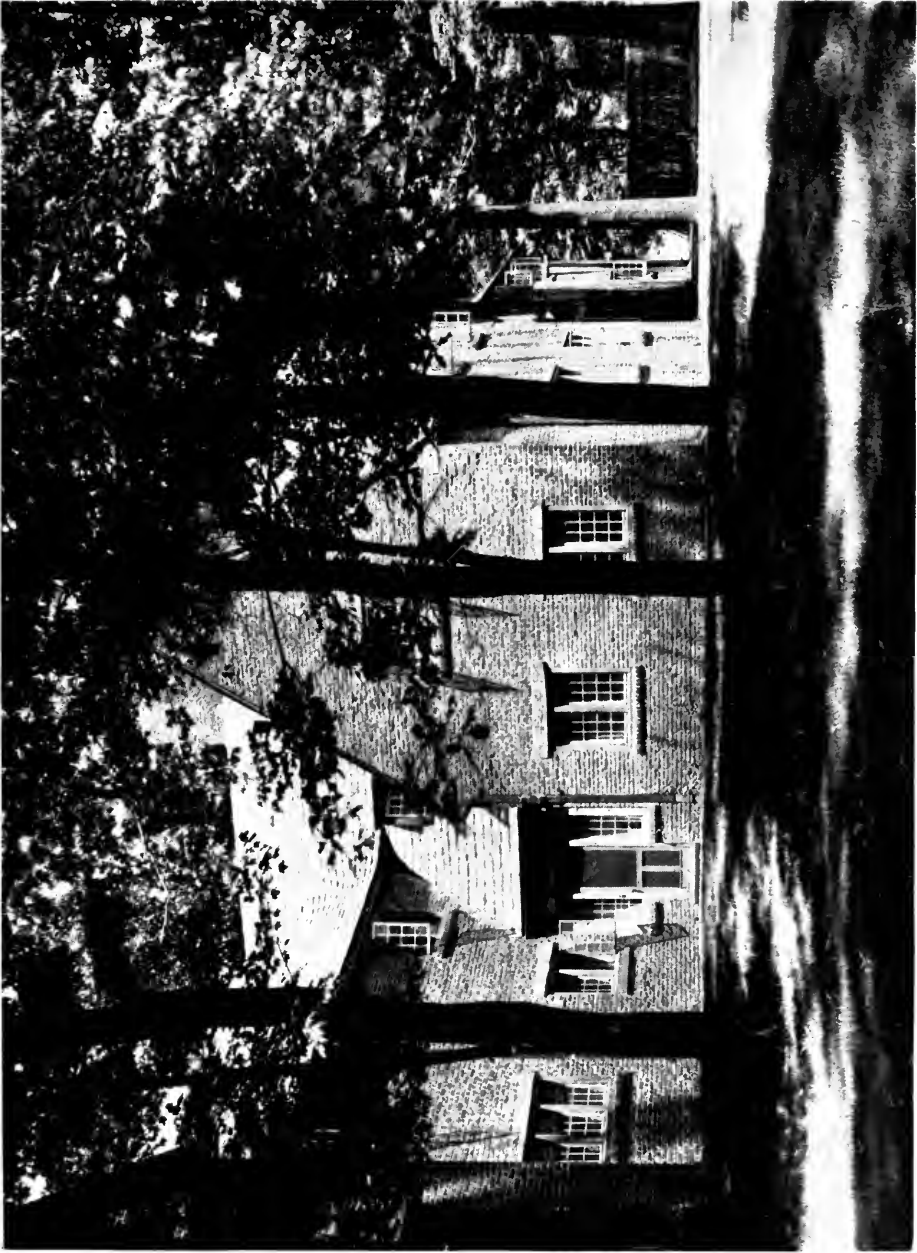
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FRONT DETAIL--"NONESUCH HOUSE"—RESIDENCE OF
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REAR DETAIL—"NONESUCH HOUSE"—RESIDENCE OF
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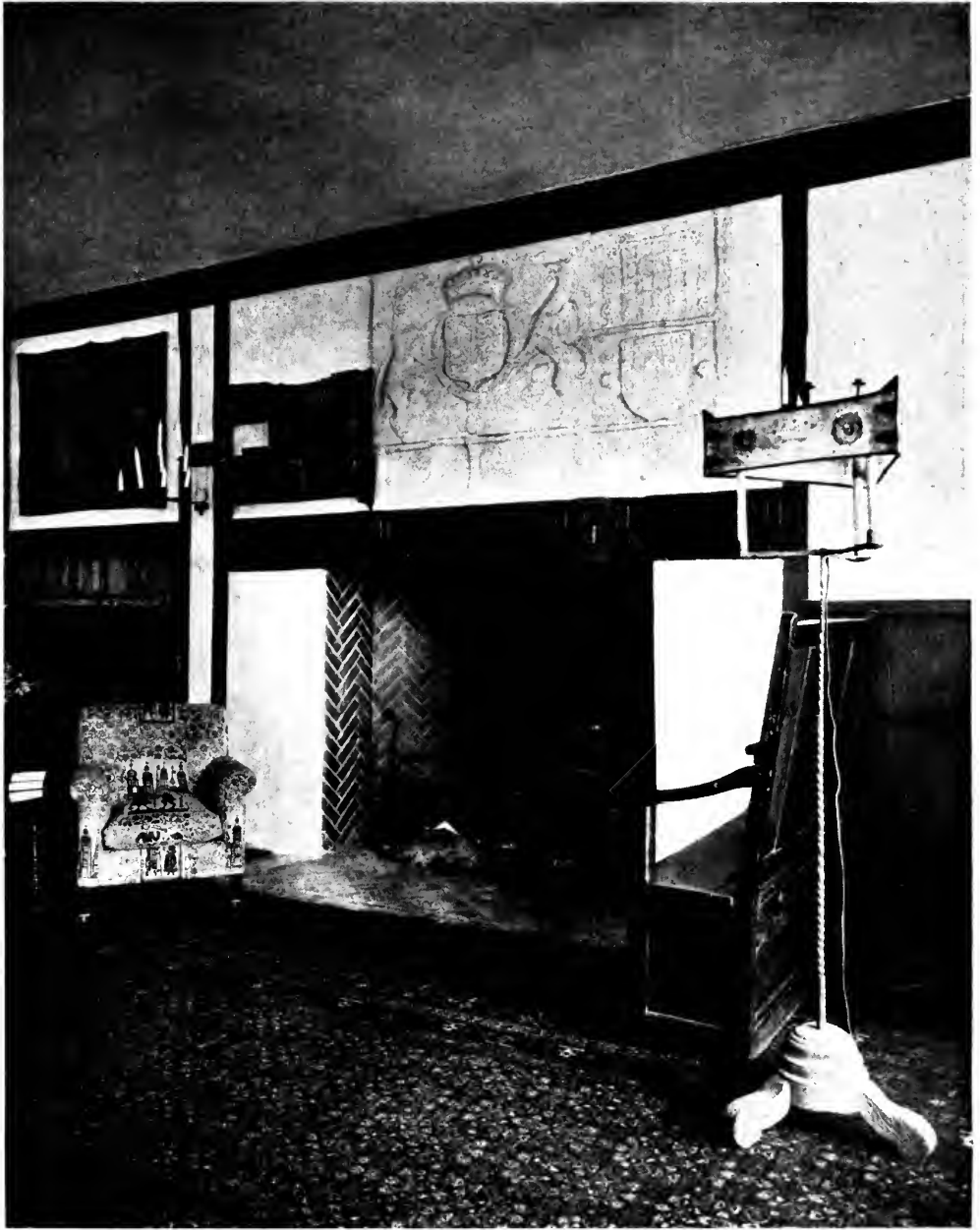
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DINING ROOM — "NONESUCH HOUSE" — RESIDENCE OF
COURTLAND D. BARNES, ESQ., MANHASSETT, LONG
ISLAND, N. Y. PEABODY, WILSON & BROWN, ARCHITECTS.



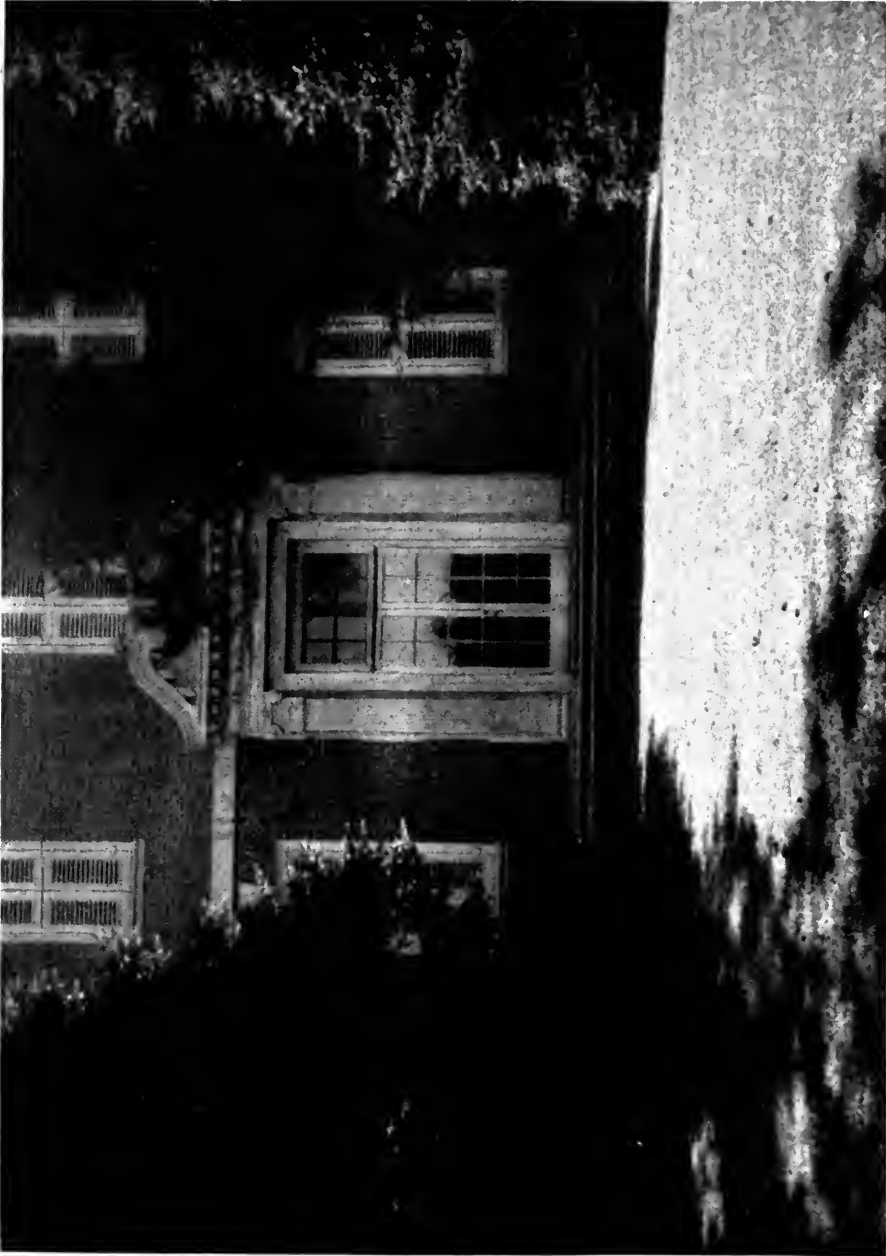
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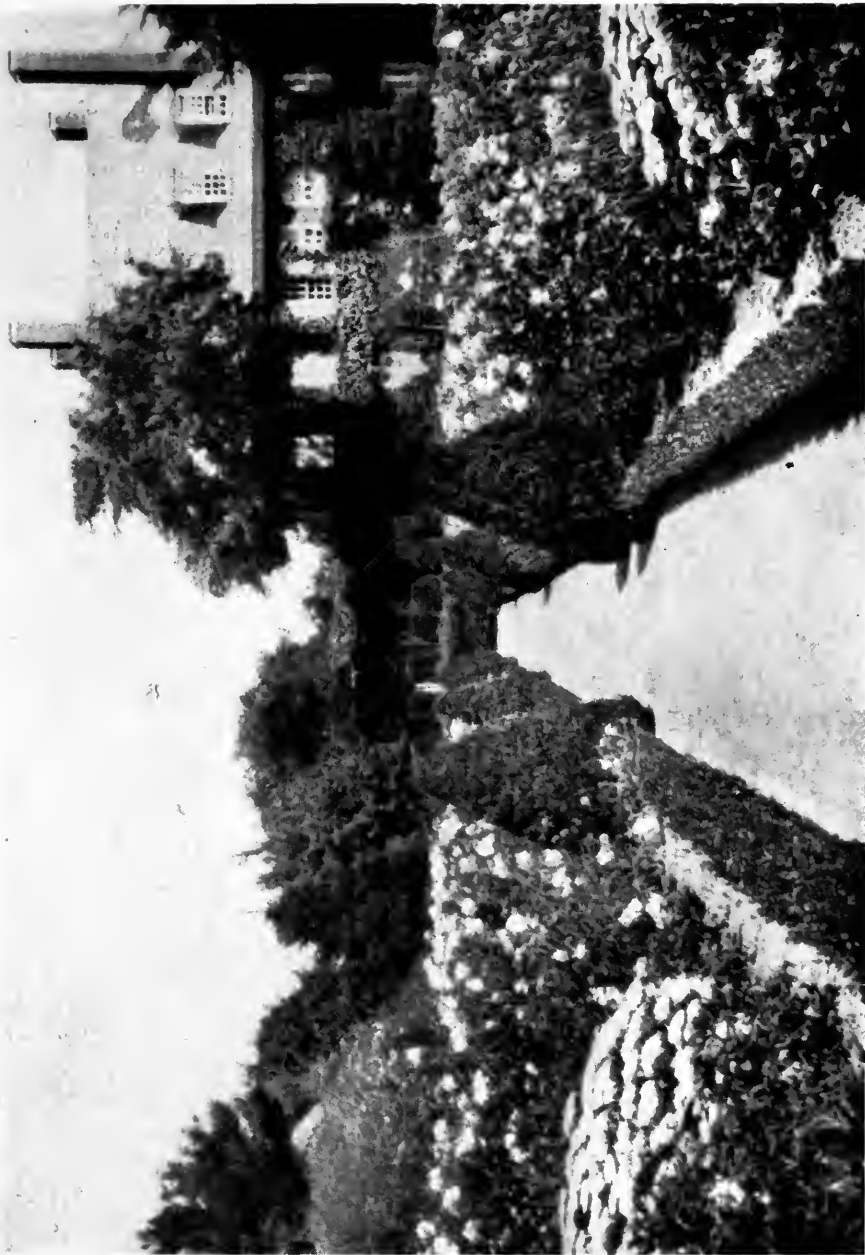
GARDENS OF H. W. CROFT, ESQ., GREENWICH, CONN.
JAMES L. GREENLEAF, LANDSCAPE ARCHITECT.



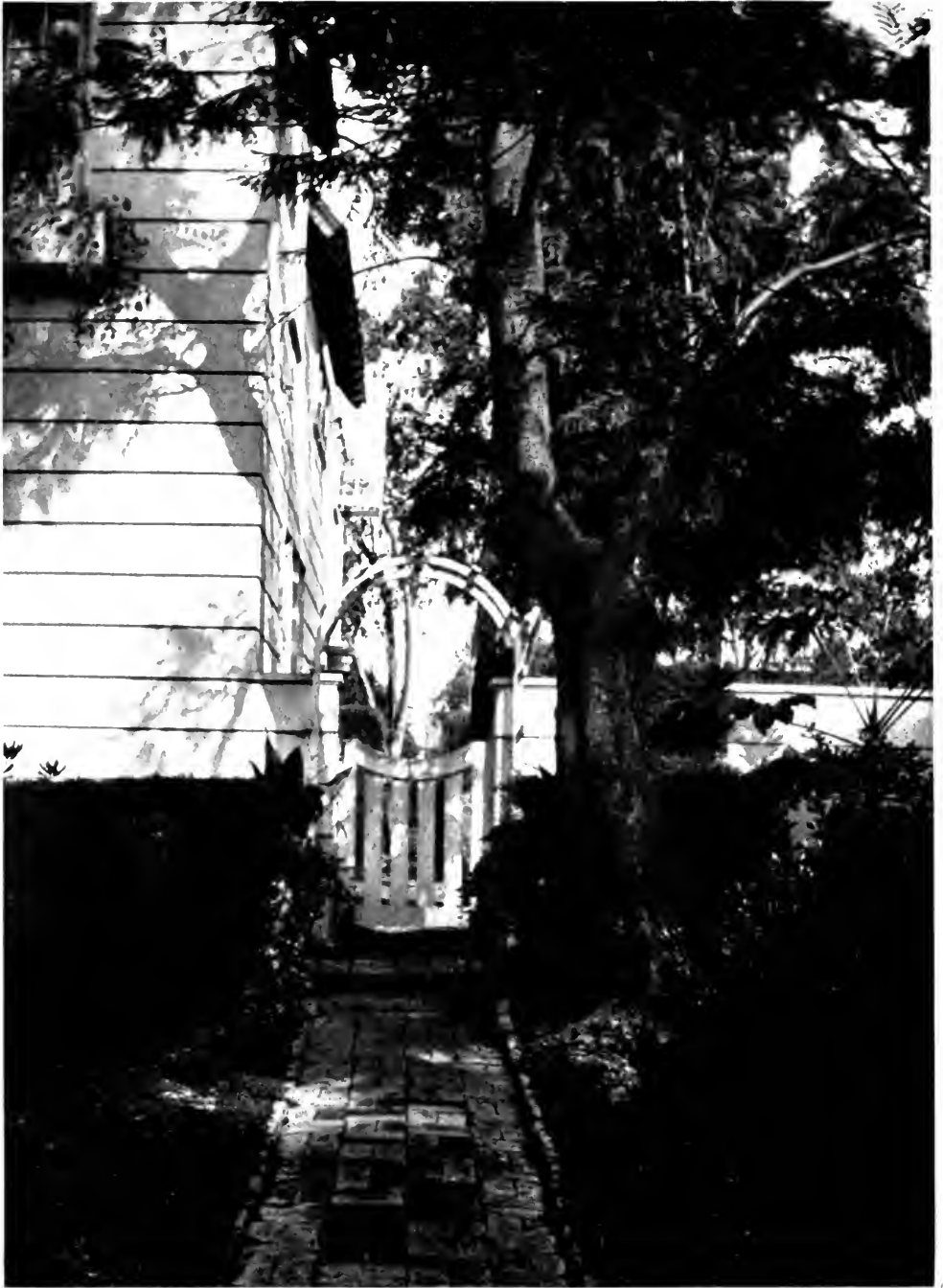
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RESIDENCE OF GEORGE S. PALMER, ESQ., NEW
LONDON, CONN. CHARLES A. PLATT, ARCHITECT.



GARDENS OF GEORGE S. PALMER, ESQ., NEW
LONDON, CONN. CHARLES A. PLATT, ARCHITECT.



RESIDENCE OF MRS. GERTRUDE DAVIS, LOS ANGELES,
CAL. PIERPONT & WALTER S. DAVIS, ARCHITECTS.



GARDEN OF JOHN PRATT, GLEN COVE, LONG ISLAND, N. Y. CHARLES A. PLATT, ARCHITECT.

the almost hopeless period of the eighteenth-seventies, in remodeling them and replacing the ugly back fence and straggling ailanthus by picturesque fountains and pools and flagstone paths, with as much as can be grown of trees and grass and flowering shrubs. What has already been accomplished has been executed with a leaning toward the intimate and the

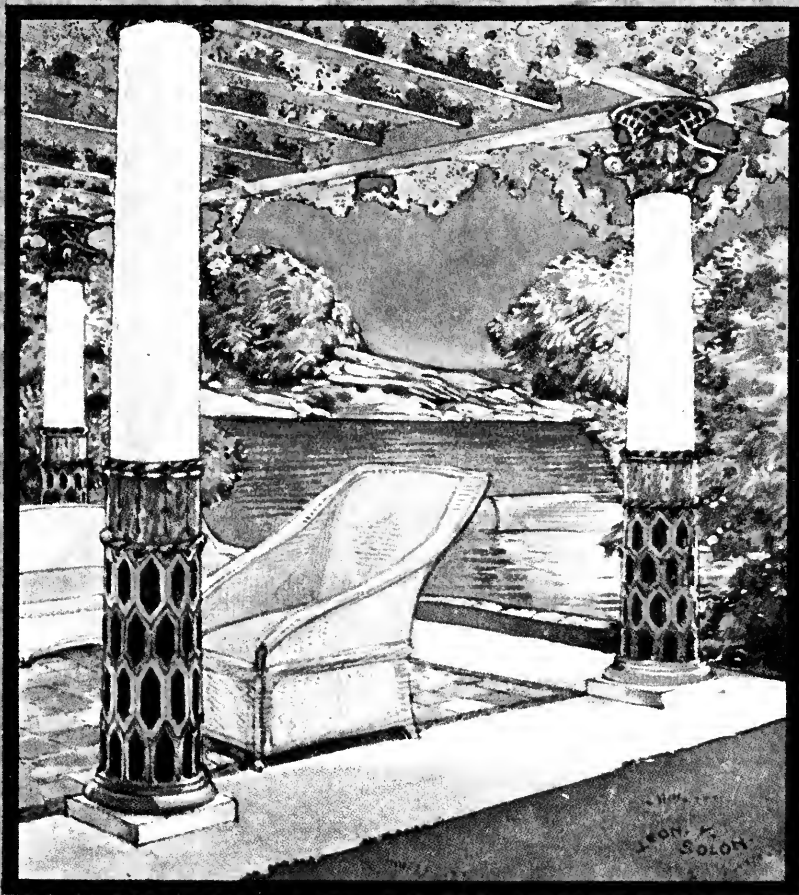
picturesque that is quiet in character; and to have breakfast on one's balcony, listening to the splash of a fountain with a glimpse of flowers and shady paths, takes one for a moment quite far away from the hot pavements and brick walls, and makes us appreciate that the gardener can give us something as necessary to us as the houses in which we live.



DARRAGH PARK HOUSE, ROSLYN, LONG ISLAND, N. Y.
Peabody, Wilson & Brown, Architects.

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November 1921



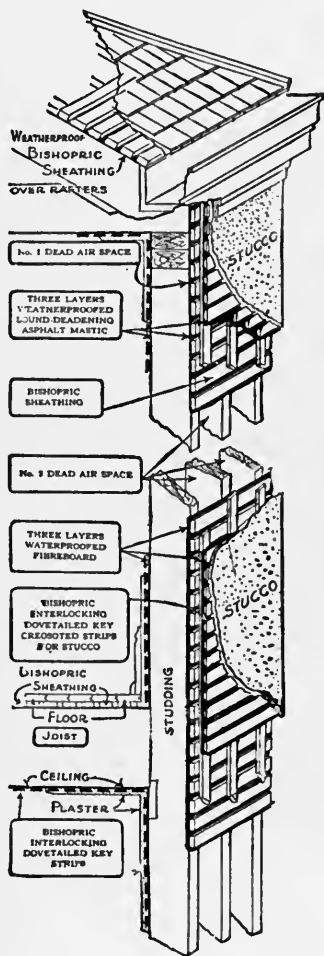
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THE ARCHITECTURAL RECORD



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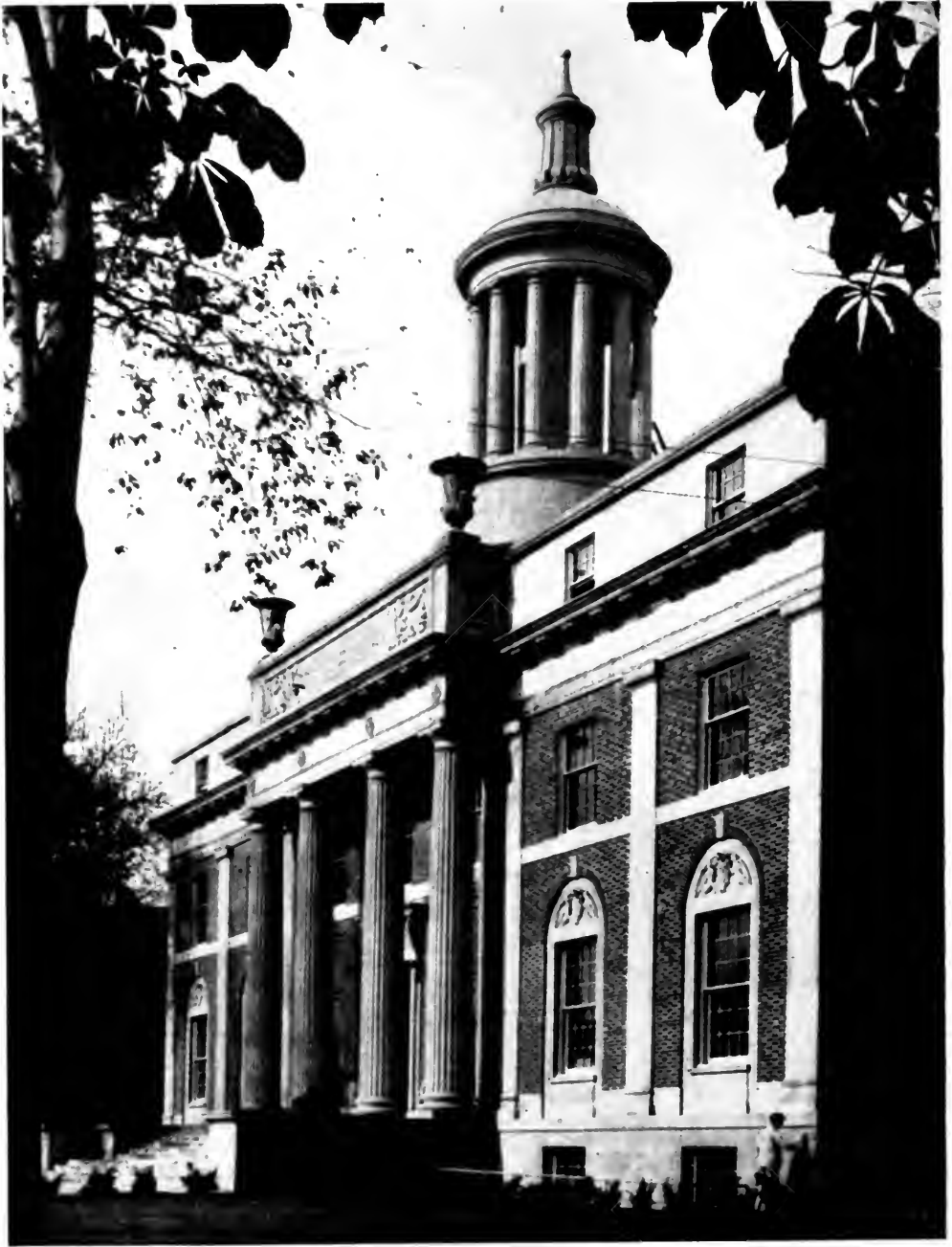
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MAIN FAÇADE—MUNICIPAL BUILDING, PLAINFIELD, NEW JERSEY.

THE ARCHITECTURAL RECORD

VOLUME L



NUMBER V

NOVEMBER, 1921

THE WORK OF WILLIAM LAWRENCE BOTTOMLEY

PART -I-



By Arthur Willis Colton

MR. BOTTOMLEY might be called a classicist by training and a romanticist by temperament, if the terms did not beg so many questions. The formulas of old controversies apply only to mislead, in a time and place like our own, composed of inextricably blended streams of influence. It is not today so much a question of sources, single or varied, simple or complex, classic or gothic; but rather of things academic, or things picturesque; of old principles that are sound but dry, contending with the growths of a fresh feeling.

Mr. Bottomley had a long, severe training for his profession in the *École des Beaux Arts* at Paris, at Columbia

University and in the American Academy in Rome; and there learned to reduce green ideas to the precision of diagrams; to admire the great monumental buildings and more monumental traditions. But he had an innate liking for things picturesque, which experience has developed against the background of that training. He seeks the picturesque in the classic tradition. And certainly it is there! It is not the medieval only that produced peculiar doorways and interesting windows.

The villa architecture of the Italian Renaissance is varied and curious, though with a basic flavor of the classic tradition. It seems to reach the ears of contemporary

American architects with more suggestive eloquence than any other period, but the keynote of Mr. Bottomley's work is a certain peculiar freshness and fertility of ideas. His eclecticism comes naturally from a versatility of taste. He likes to do different kinds of things—a church, a hotel, a country house, a high school, a restaurant, an apartment house—and he finds that each one of these sends him to another with new ideas and a livelier interest. He does not like to specialize. In specializing a man is apt to become a tradition unto himself, and Mr. Bottomley specializes, so to speak, in not so becoming. He does not believe in copying old buildings and slavering after precedent, nor on the other hand in trying to be original as a principal object. One can always find a number of examples of treating a given motive, and it is better to study the old examples in seeking to satisfy oneself how the motive can best be treated. The design should suit the setting. When a certain flavor in a building is derived from and recalls some adjoining object, it tends to make the building an intimate part of its setting. Work of this kind soon draws one away from slavery to any academy or model, into a condition where precedent is not a shackle but a free-hand tool. One ceases to care what the style is called.

And yet, with all Mr. Bottomley's freedom and fertility, the foundation of early training is plainly there, not merely in a preference for classic or Renaissance detail, but in a firm grip on the old principles—that the dominating things should be considered and seen first, the details later; and that one should never use so many different motives that the whole looks complicated—principles upon which Greek tragedies as well as temples were built, and whose statement was formulated by Aristotle.

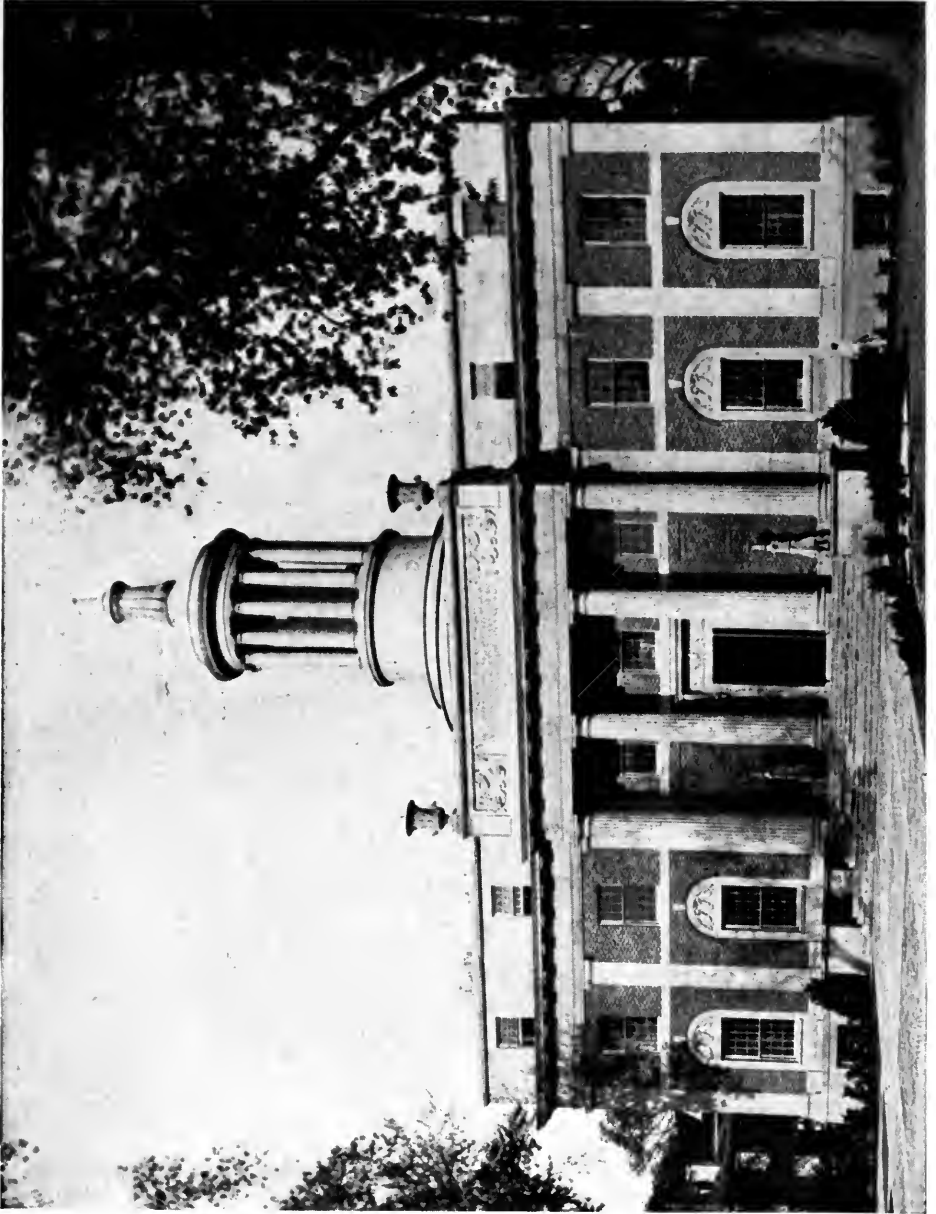
"The things that I particularly think of in making any design," Mr. Bottomley writes, "are, first, to get an interesting mass to the building, so that the building does not look like a bandbox. One façade cannot make a complete composition without relation to the sides and

rear of the building. I work towards interesting silhouettes to the roof lines, contrasting flat surfaces with projecting masses, and contrasting plain walls with interesting detail at salient points. I also try to make as much use of color as is possible, both on the interior and the exterior, not only in the painting but in the use of materials, not only in the strict sense of color, but in the sense of color that the sculptor uses, namely, variation of values as produced by different textures, often of the same material."

This might almost have been written by a Greek!

Decorators often complain that architects as a rule care too little for color, and without doubt, our architecture as well as our (at least masculine) clothing is less colorful than of old. Why did successive generations of New Englanders paint their green blinds a darker and gloomier green? Is it perhaps a timidity which feels surest of good taste when most subdued? If everyone covets the quiet distinction of being clothed and housed in more subdued tones than other people, the result is a progressive elimination of all color. When much color has appeared it has seemed to come from those who cared more for display than for good taste. But if our clothing and our houses—especially our city house fronts—should again become polychrome, under the inspiration, not of vanity or eccentricity or display, but of sheer love of color, and under the guidance of knowledge and good taste—the prospect would be exhilarating. There is more happiness in the "pleasure of the eye" than there is in the "pride of life," and the amount of sub-conscious happiness that a polychrome city might bestow on its inhabitants—as contrasted with a dingy, dark, brown, or drab city—can only be conjectured. The celestial vision of the New Jerusalem was the vision of a polychrome city in whose construction "economy was no object."

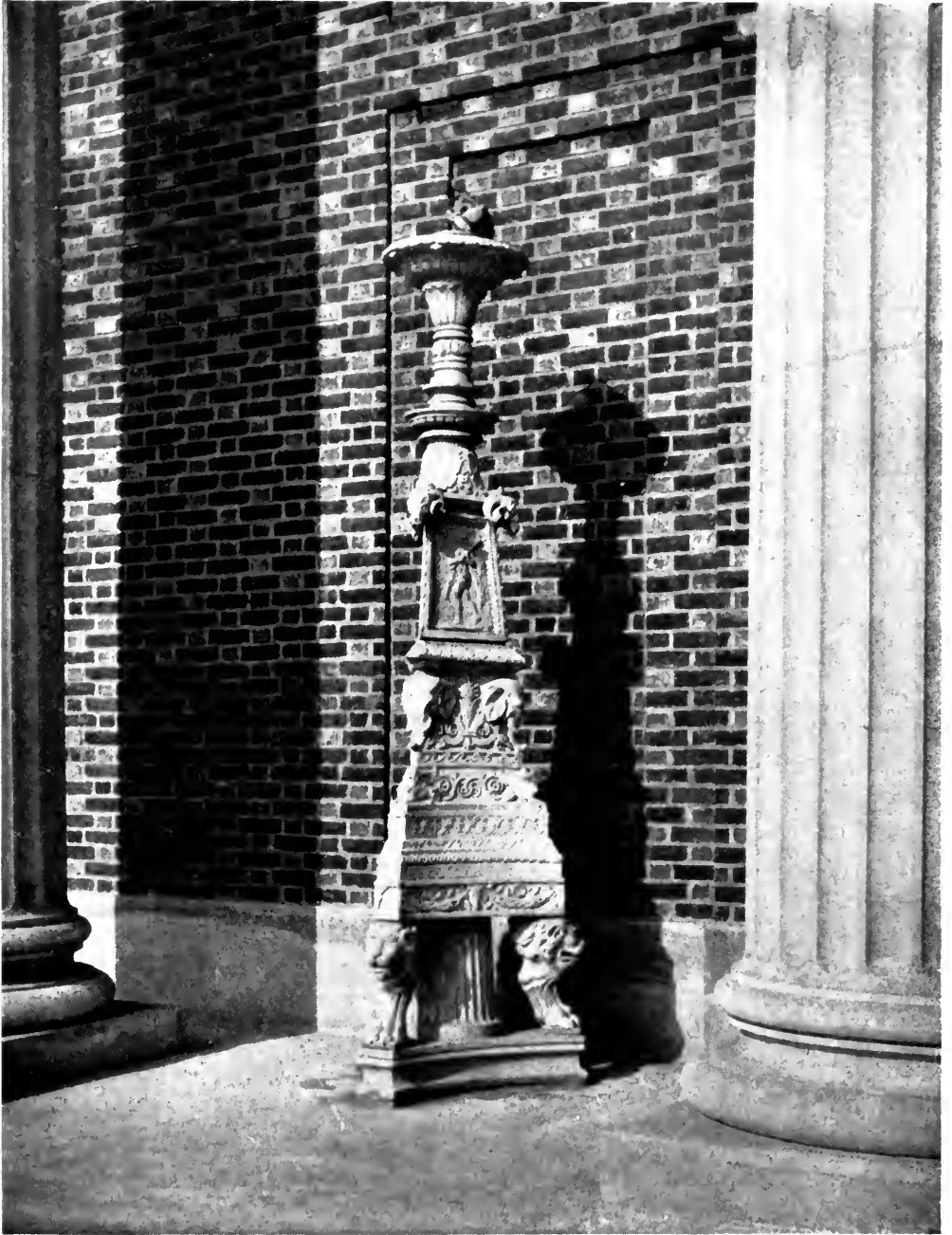
And the use of color is another of Mr. Bottomley's distinctions. The restaurant at 5 and 7 East 52nd St. is a very colorful place within and without. The dif-



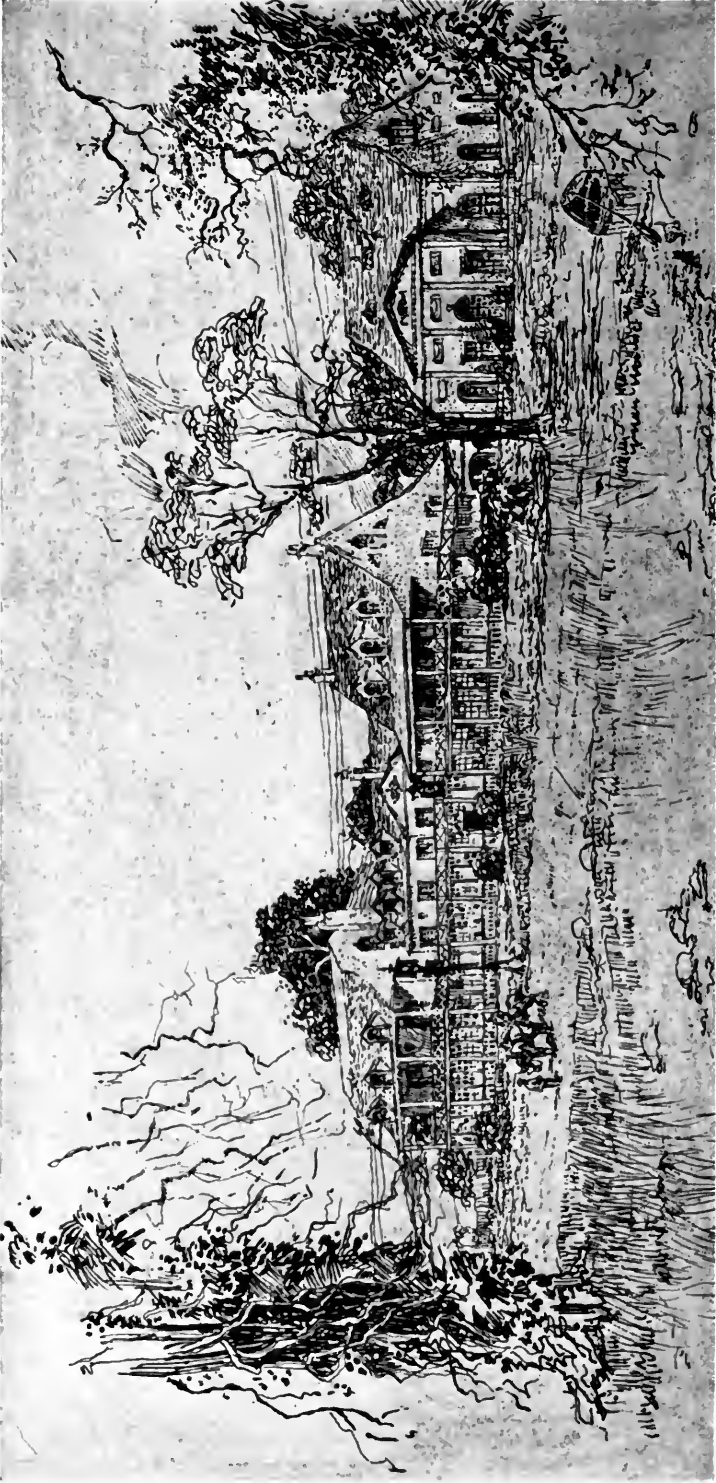
MUNICIPAL BUILDING,
PLAINFIELD, NEW JERSEY.



THE MAYOR'S OFFICE — MUNICIPAL
BUILDING, PLAINFIELD, NEW JERSEY.



DETAIL OF LAMP STANDARD—MUNICIPAL
BUILDING, PLAINFIELD, NEW JERSEY.



CANOE PLACE INN—SHINNECOCK
HILLS, LONG ISLAND, NEW YORK.



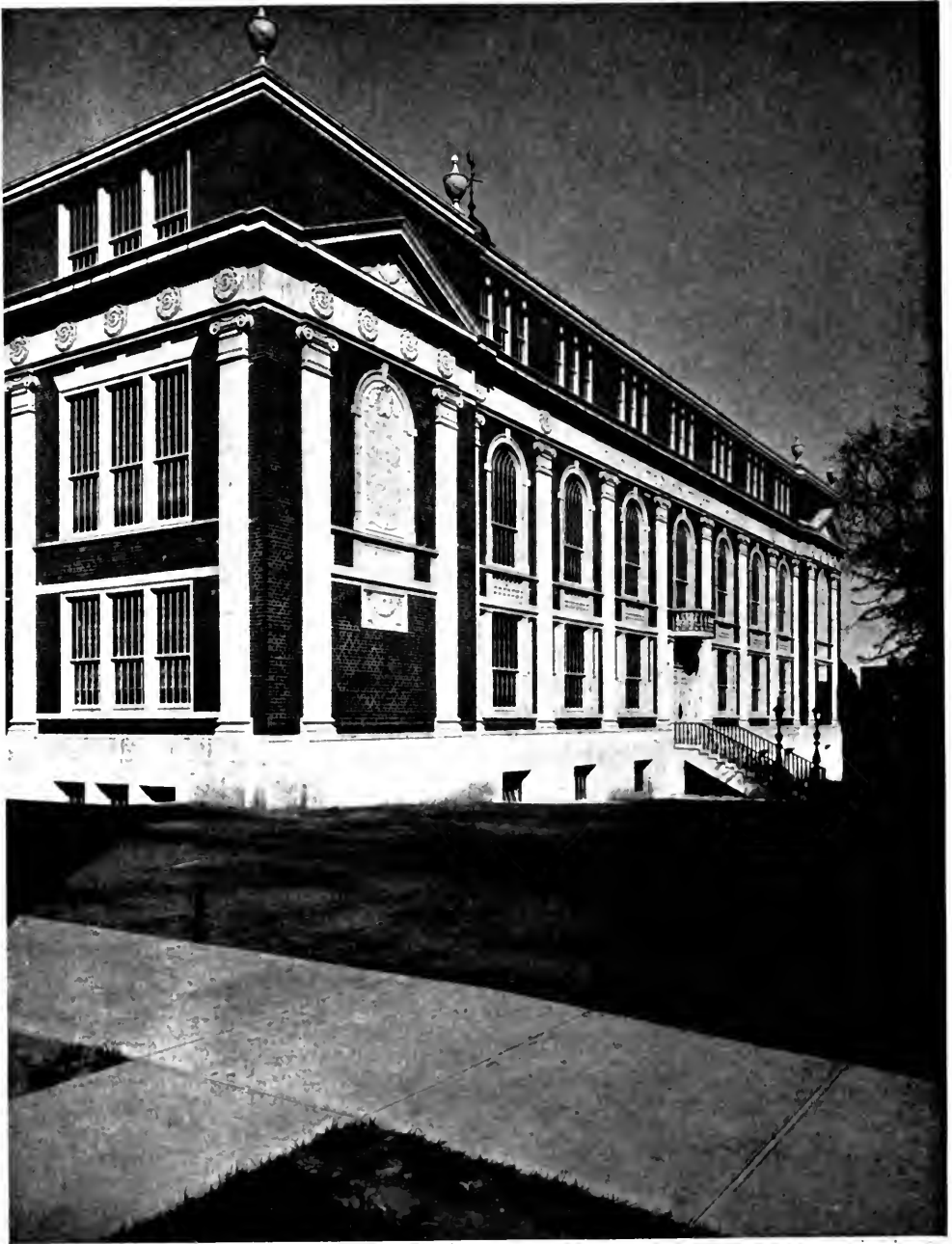
VIEW OF THE NORTHWEST CORNER—
TURTLE BAY GARDENS, NEW YORK CITY.



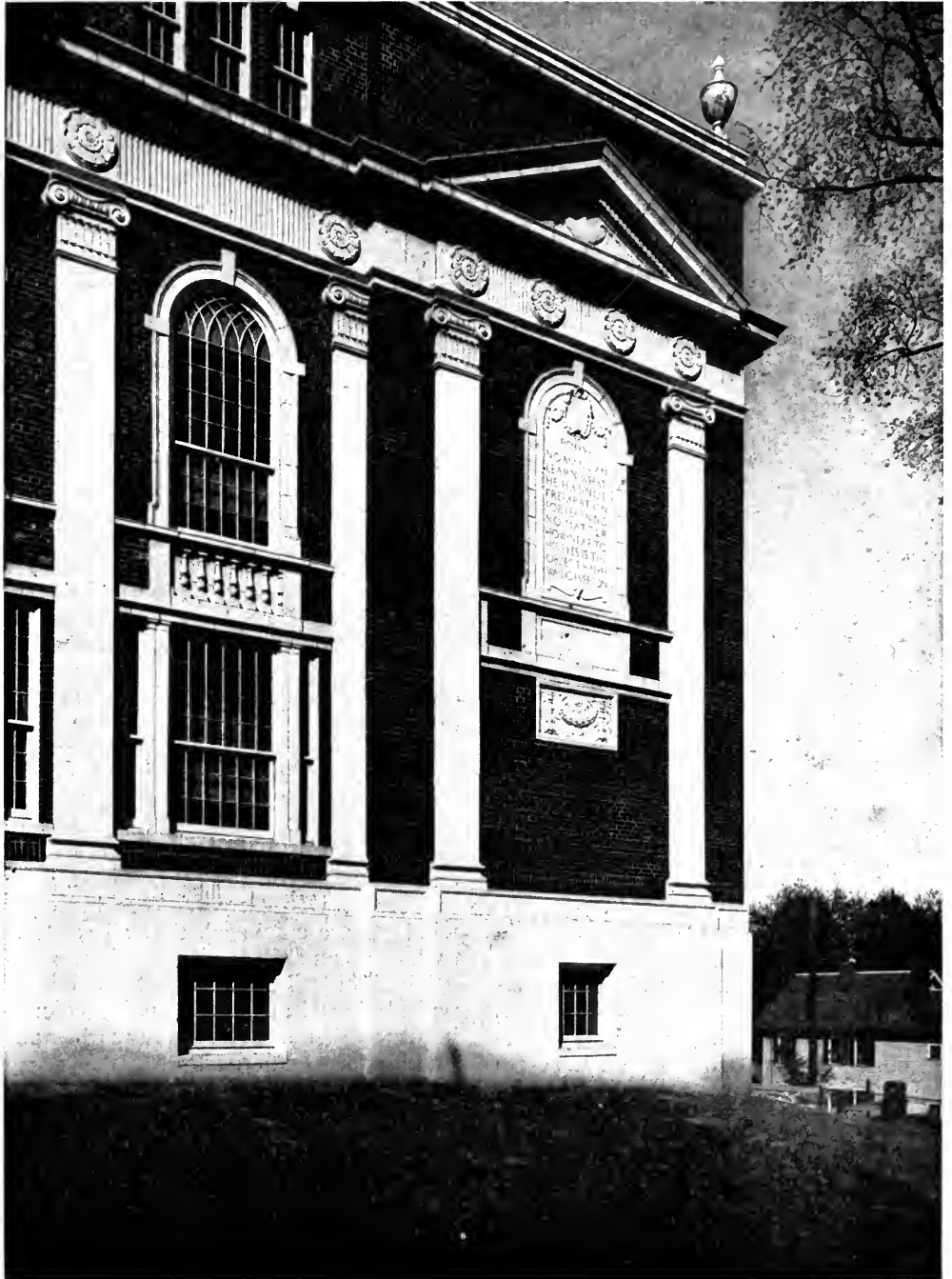
FOUNTAIN ON THE CENTRAL WALK—
TURTLE BAY GARDENS, NEW YORK CITY.



ENTRANCE STEPS—HIGH SCHOOL,
PORT CHESTER, NEW YORK.



MAIN FAÇADE—HIGH SCHOOL,
PORT CHESTER, NEW YORK.



TERMINAL PAVILION WITH INSCRIPTION BY
EMERSON—HIGH SCHOOL, PORT CHESTER, N. Y.



DETAIL OF STEPS—HIGH SCHOOL,
PORT CHESTER, N. Y.

ference between this interior and the way such things have commonly been done, seems to point to a difference between patrons who can feel sumptuous if they have enough glitter and heavy ornamentations, and patrons whose taste for the sumptuous contains a demand for proportion and harmony, for a richness that is blended with culture.

The Plainfield City Hall follows to a certain extent the American tradition, and while it is not a strictly colonial building it shows certain influences derived therefrom. It is, however, more vigorous and more powerful. The great limestone columns, pilasters and entablature are really lighter in proportion than the conventional classic orders, but at the same time they are more vigorous and

bold than the corresponding order was in this country in the 18th and early 19th centuries, that is to say, prior to the Greek revival. The problem was a very difficult one. It was to take a rectangular mass three stories high and not very long, to work out a practical plan, and at the same time to give a gracious proportion to the building. In order to do this a deep recess was made in the façade to form a vestibule for the four great columns that mark the entrance. The columns were made two full stories high, and an attic of white stone was carried for the entire width of the building across the third story, with a main cornice at the top of the second story, and a minor cornice at the top of the third—a typical 18th century treatment. A very interesting panel, flanked by ornament, bold in relief and rich in moldings, forms a frame to an inscription, and unusual candelabra stand at either side of the entrance door. The central mass of the building, instead of being accentuated by a tower—according to all the traditions of American City Halls—is surmounted by a fine cupola, almost towerlike in its proportions, which is placed directly over the dome of the public committee room on the second story. The proportions of the cupola and the contrasting sizes of the windows of the different stories lead one to observe further that, while a great number of different motives and sizes of windows are employed, they all relate to each other and give a simple effect.

The Port Chester High School is of typical American design under colonial influence, of red brick, white marble, and wood painted white—fine in detail and delicate in scale. The two decorative pavilions, at either end of the façade, express the ends of the rows of classrooms at the sides of the building. The great study hall, extending entirely across the front on the second story, is shown by round-headed windows. The central doorway is interesting with its graceful flight of steps flanked by iron railings and lamps.

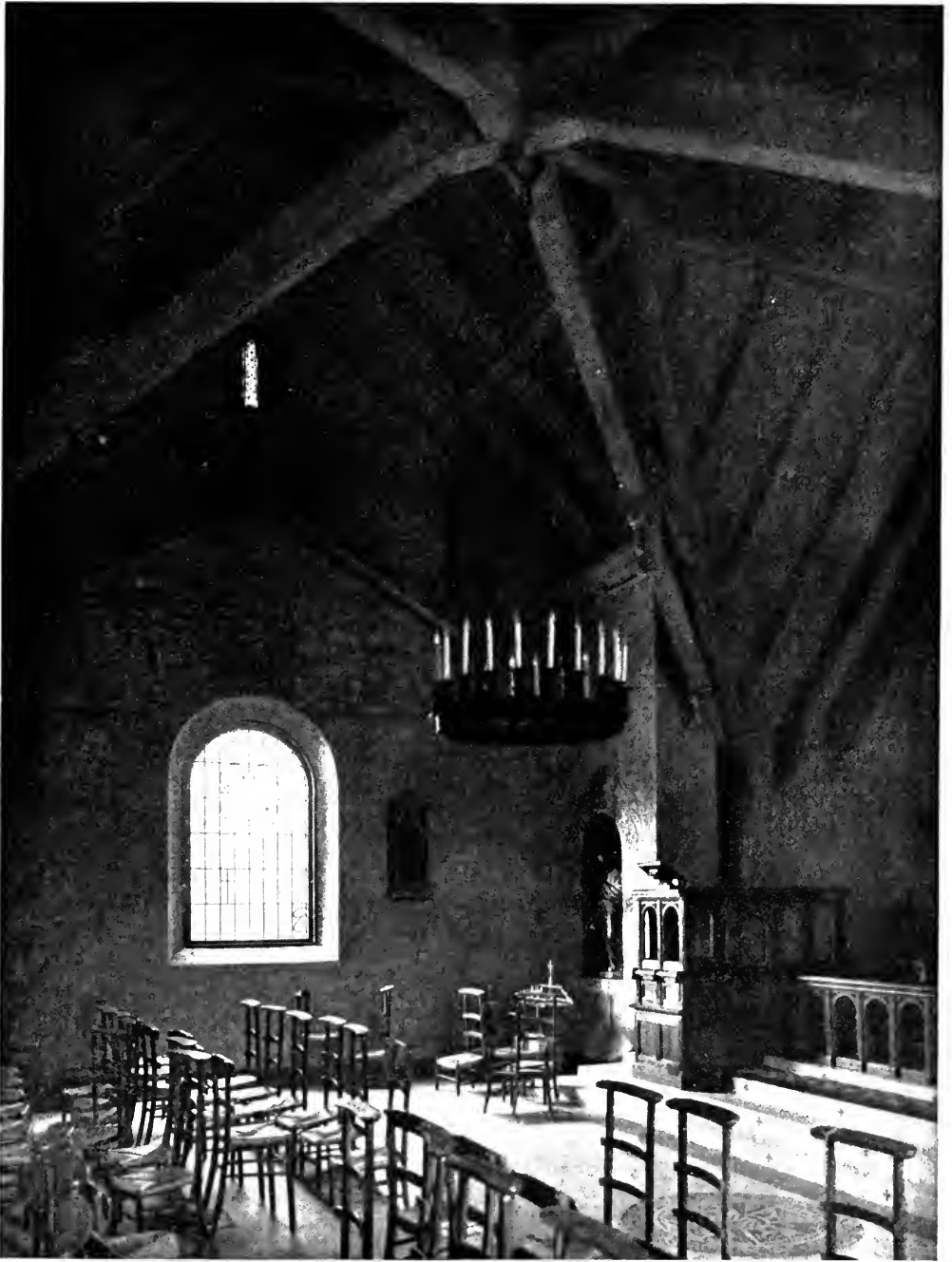
St. George's Church, Lake Mohegan—a memorial to Mr. George Lewis Heins, the architect, and Mr. John La Farge, the



ST. GEORGE'S CHURCH—LAKE MOHE-
GAN, WESTCHESTER COUNTY, N. Y.



DETAIL OF ONE OF THE MOTIFS FLANKING
ALTAR—ST. GEORGE'S CHURCH, LAKE MOHE-
GAN, WESTCHESTER COUNTY, NEW YORK.



VIEW ACROSS TRANSEPT—ST. GEORGE'S CHURCH,
LAKE MOHEGAN, WESTCHESTER COUNTY, N. Y.



RESIDENCE OF WOLCOTT G.
LANE, ESQ., NEW YORK CITY.



RESIDENCE OF WOLCOTT G.
LANE, ESQ., NEW YORK CITY.



HIGH SCHOOL, SOUTHAMP-
TON, LONG ISLAND, N. Y.

painter—is built of native stone taken from the old stone walls of the place, and laid up in a rubble wall in the manner of the country churches of France. The flavor of the church is a simple French Romanesque, with high square tower, extinguiser roof, and slate laid in concentric diamond patterns. The color is a beautiful warm grey, varied and soft in tone, the slate roof grey green, very heavy and laid in graduated courses, heavy at the bottom, and narrower at the ridges. The ridges are finished with an antique red tile pointed up with grey cement. The *flèche* or central spire is of green copper with weather vane of St. George and the Dragon. The long lines of the exterior of the building are shaped for contrast with the vertical lines of the tower, the apse and the *flèche* over the crossing surmounted by the St. George weather vane.

The church within contains, over the altar, a beautifully colored glass window of St. George by Mr. La Farge, and a number of his earlier jewel glass windows, delicately colored. The walls are of grey stone with heavy roof beams of a darker grey. The apse of the sanctuary and the two small flanking niches are gold, and give a beautifully rich tone to the interior by contrast with the grey of the stone walls. The floors are of grey stone of a lighter tone, with four medallions of rich design in black and white marble. Old French rushbottom chairs and kneeling benches take the place of conventional pews. The Stations of the Cross in gold and terra cotta, a number of rich old paintings, the panels by Fra Angelico in tabernacle frames, the red carpet on the sanctuary, and some dark old wood work and carvings, give to the interior its glow of color. The altar has very rich candelabra and tabernacle. The crucifix over the altar is in ivory and is attributed to Benvenuto Cellini. The lighting fixtures, too, are interesting.

The problem in design in the Canoe Place Inn was to reproduce as nearly as possible an old colonial inn—burned down this spring—which was originally built in 1657 and added to at a number



HIGH SCHOOL, SOUTHAMPTON,
LONG ISLAND, N. Y.

of different times. The old inn had a certain charm in mass and proportion which has been preserved. It had to be enlarged from a building containing eighteen bedrooms with a couple of bathrooms, to a hotel with forty rooms and bathrooms adjoining each room. The walls are of tile and stucco, the black slate roof pointed with cement, and the color of the shutters is turquoise blue—rubbed down. The main building has a Dutch colonial roof; the next building is in the manner of an 18th century inn; the third is a typical Long Island farmhouse; and, finally, the pavilion has more of a Georgian classic front, with a plain barn-like roof.

Mr. Bottomley has done a great deal of work in association with other architects distinguished in design, and the Port Chester High School and Southampton High School, the Lane House and St. George's Church were designed while he was a member of the firm of Hewitt & Bottomley. The Plainfield Municipal Building was done in association with Mr. Lawrence F. Peck. Turtle Bay was designed in association with Mr. E. C. Dean.



ROTUNDA—THE ALLEN THEATRE, CLEVELAND, OHIO. C. HOWARD CRANE, ARCHITECT.

The ALLEN THEATRE

C. HOWARD CRANE, *Architect*

By *I. T. Frary*

IN Cleveland, which has experienced a wave of theatre building during the past few years, the largest and most completely equipped of the amusement houses have been the ones devoted to photo plays and in Playhouse Square, which is the name applied to the newly developed district centering at Euclid Avenue, Huron Road and East Fourteenth Street, the most important in many respects of the recently completed theatres is the Allen, which was designed by C. Howard Crane of Detroit.

Its plans embody a number of unusual features, which make it seem at first sight complex and bewildering. The theatre is located at the rear of the new Bulkley Building and is reached from Euclid Avenue through a long lobby which rises from the street on an easy incline. Owing to unavoidable conditions in the building plan, this lobby enters the theater six feet to the left of the central axis and in order to overcome the unpleasant transition, a rotunda surrounded by an open colonnade has been introduced between lobby and auditorium with most happy results.

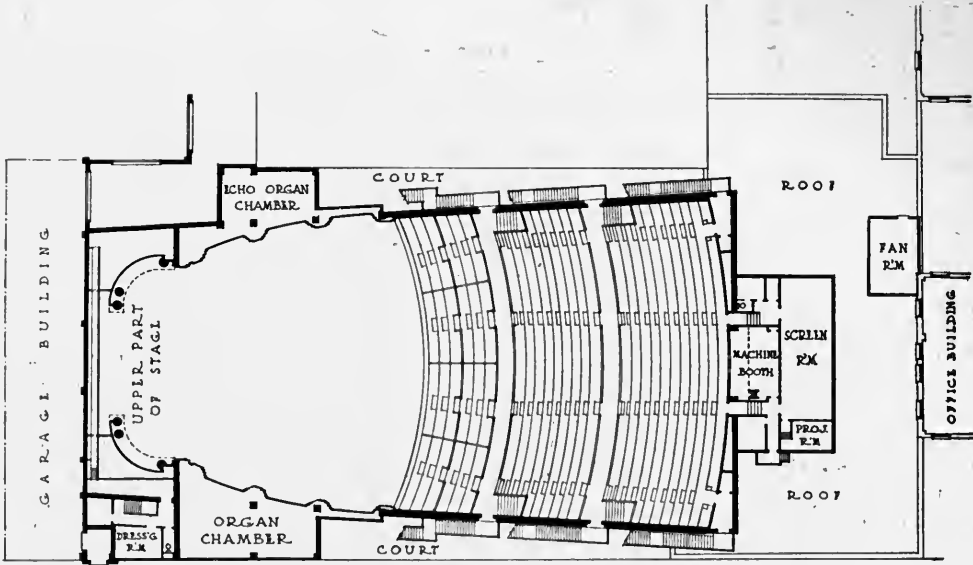
The auditorium is unusually long in proportion to its width and the effect of length is increased by the fact that it narrows gradually toward the stage. This tapering of the interior permits of a corresponding increase in width of the alleys at each side of the building which provides room necessary for an adequate discharge from the exits and fire escapes.

A small stage accommodates simple theatrical productions and in front of it is space for a large orchestra. The side walls, from the balcony front to the or-

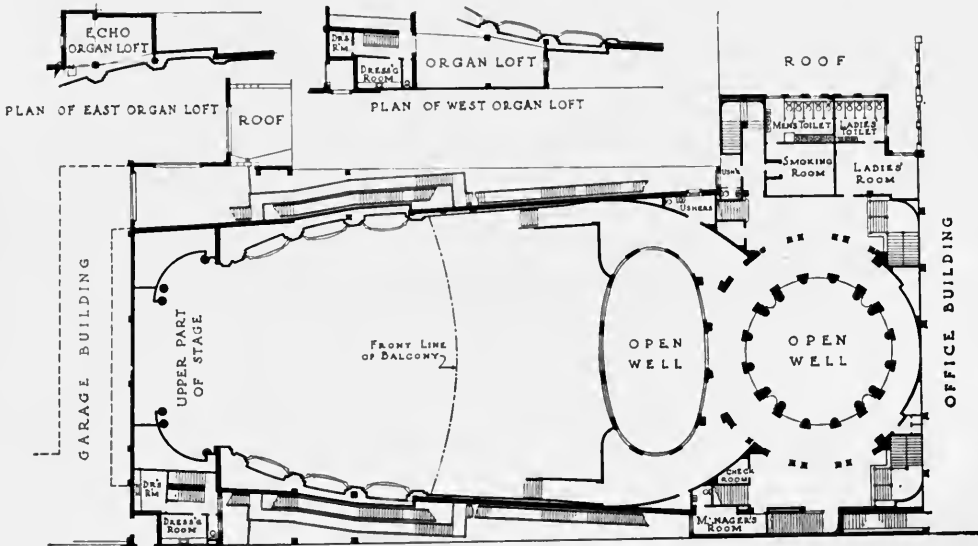
chestra, sweep sharply toward the stage, cutting off space that is utilized above the mezzanine level for organ chambers.

From the time one steps up to the ornate bronze and glass ticket kiosk at the entrance, until the attention has been settled on the surroundings of the stage itself, one is impressed by the opulence of the architectural and decorative schemes. The long lobby leading back and up from the street is thoroughly dignified, its mirrored walls, coffered ceilings and delicately wrought lighting fixtures producing an effect of richness that is not overdone. Beyond this is the great rotunda, at one side of which is a tea room and on the other a lounge. Both of these open into the theater proper so that patrons may sit at the tables or rest at ease and at the same time watch the pictures and enjoy the music. The mezzanine floor is pierced by this rotunda and also by a large elliptical well above the rear of the main floor, both of these openings being covered by flat domes whose rich decorations were inspired by the work of the Italian Renaissance. This second dome tends to relieve what would otherwise be an oppressive expanse of ceiling under the vast balcony, and the two break up the mezzanine into a series of curving balconies with delightfully bewildering vistas in every direction. They also exert an important influence on the acoustics, permitting the music from the orchestra to penetrate every corner of the interior.

Above the balcony is still another great, flat elliptical dome, decorated similarly to the one over the well; and the curving ceiling above the body of the house is broken by a large recessed panel around



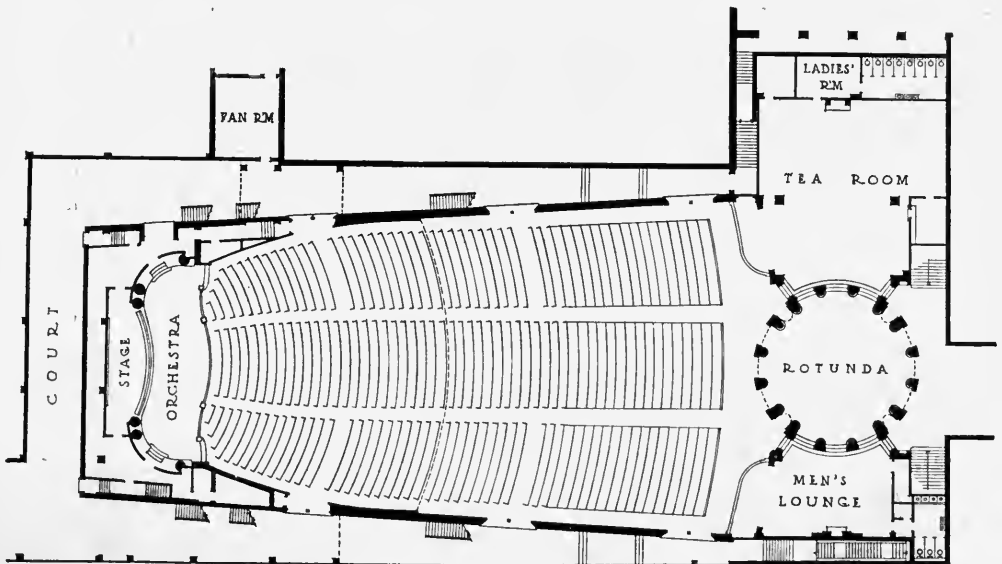
BALCONY PLAN
 THE ALLEN THEATRE, CLEVELAND, OHIO.
 C. Howard Crane, Architect.



MEZZANINE FLOOR PLAN
 THE ALLEN THEATRE, CLEVELAND, OHIO.
 C. Howard Crane, Architect.



DOME ABOVE BALCONY—THE ALLEN THEATRE, CLEVELAND, OHIO.
 C. Howard Crane, Architect.



MAIN FLOOR PLAN
 THE ALLEN THEATRE, CLEVELAND, OHIO
 C. Howard Crane, Architect.



INTERIOR FROM BALCONY—THE ALLEN THEATRE,
CLEVELAND, OHIO. C. HOWARD CRANE, ARCHITECT.



INTERIOR—THE ALLEN THEATRE, CLEVELAND,
OHIO. C. HOWARD CRANE, ARCHITECT.



INTERIOR—THE ALLEN THEATRE, CLEVELAND, OHIO. C. HOWARD CRANE, ARCHITECT.



LOBBY—THE ALLEN THEATRE, CLEVELAND,
OHIO. C. HOWARD CRANE, ARCHITECT.



MEZZANINE—THE ALLEN THEATRE, CLEVELAND, OHIO. C. HOWARD CRANE, ARCHITECT.



LOUNGE—THE ALLEN THEATRE, CLEVELAND, OHIO.
C. Howard Crane, Architect.

which are four small ones on its axes.

All of these features are ornate in their decorative treatment, a lavish use having been made of both relief and flat painted ornament. If one felt in duty bound to criticise, it would doubtless be on the score of over-elaboration and complexity, yet architecture and decorations are carried out so well in both conception and execution that one feels inclined to forgive the tendency on the part of the designer to let his enthusiasm run away with him at times. The main decorative scheme is carried out in rich, full color, but toned down so as to avoid any suggestion of garishness. It is Raphaelesque in treatment and was studied to a large extent from the Villa Madama, the Vatican Loggie and other work of that period. There is the fertility of invention, the use of scroll work, arabesque and mythological figure subjects, and the breaking of plain

surfaces into flat moulded panels that is so characteristic of Italian work.

The rotunda is of unusual impressiveness, the subdued walnut and dull gold tones of its great Corinthian order being most effectively relieved by the rich polychrome decorations of the dome and the sparkle of the central chandelier. Any tendency toward heaviness, which might otherwise be felt here, is neutralized by the light ivory tones of the mezzanine, tea room and lounge which are to be seen on every side through the intercolumniations. The rather frivolous valances which break the lower openings are not particularly happy, although they do introduce a needed note of color and soften the abrupt drop to the low ceilings of the rooms beyond.

Excellent opportunity for relaxation is afforded patrons by the tea room and lounge and by the even greater seclusion



WELL—THE ALLEN THEATRE, CLEVELAND,
OHIO. C. HOWARD CRANE, ARCHITECT.

of the mezzanine, all of which are fitted with furnishings of an interesting type inspired by Italian models. Here are found the restful tones of ivory and cream, relieved by the solid coloring of the carpet, the brilliant touches in the furniture and the glimpses of the rotunda. The furnishings of lounge, refreshment room and mezzanine, together with their simple wall treatment in ivory tones, supply an intimate domestic touch that goes far toward breaking down the oppressive formality which might otherwise result from the great size and richness of the theatre.

Every provision is made for the use of lighting effects so the place may be flooded or spotted with any tone or intensity of color needed to enhance the screen illusion or stage effects. At either side of the house are triple groups of great windows, rising from balustraded balconies, which are used with telling effect in connection with the lighting schemes, and provide a pleasing relief from the usual array of boxes.

One sees here striking illustration of the many changes that the screen drama



TICKET KIOSK—THE ALLEN THEATRE,
CLEVELAND, OHIO.
C. Howard Crane, Architect.

has brought about. Instead of the great stage with its complex scenic equipment, the Allen has but a tiny platform suitable only for the simple pageantry and singing with which the pictures are usually interspersed. Instead of a sunken orchestra pit crowded up under the footlights, in order to bring the seating as close as possible to the stage, a great orchestra space is provided here which purposely keeps the audience back from the screen. The boxes, which have always been so important a feature of the theatre, are eliminated entirely, and instead of the closed doors between auditorium and foyer to insure quiet, here is only a low balustrade separating the auditorium from tea room and lounge.

All these features give significant evidence of the changed conditions with which the architect finds himself confronted now that the eye, instead of the ear, dictates the requirements and limitations of playhouse architecture, and in the Allen Theatre are to be found many interesting solutions of the problems which these changed conditions have created.



FIG. 48. PERSPECTIVE STUDY—NO. 230 EAST WALTON PLACE, CHICAGO, ILL. FREGARD E. KNAPP, ARCHITECT.

TENDENCIES IN APARTMENT HOUSE DESIGN

Part V-DEVELOPMENT of the APARTMENT PLAN



By FRANK CHOVTEAU BROWN

IN the last article, published in the September issue, we traced the development of the apartment house plan from the very narrow city lot to the lot of practically square proportions. The plans utilized to illustrate this process were, in their larger manifestations, those of New York examples, that being the city which has thus far furnished us with the greatest number of instances of this class of apartment arrangement.

The same or a similar plan has been utilized in other American cities, it is true, but generally either on a smaller lot or with a more congested plan arrangement. Thus far, it has been principally in New York City that we have found a plan using very large spacious rooms, and having a tendency to spread only one or two apartments over the whole floor of a nearly square lot, located, as a rule, at the corner of two streets. In our other American cities, a lot of land of so large an area would probably be developed with more apartments to the floor and so would generally possess a more involved plan, possibly even attaining the "E" or "U" shape, built partially around a court. This *parti* is not to be adopted, however, with rooms of such large size as are now required in that portion of New York City where such a type of apartment is most in demand.

As a matter of fact, it has not been regarded as part of the purpose of this series to include the Apartment "de Luxe" within its scope,—except insofar as a particular example also serves to illustrate some otherwise important point. The demand for this ultra-expensive structure is still comparatively so slight that, outside of New York, and possibly two other

North American cities, is has as yet little general application of interest to our urban communities. In some of the later illustrations, however, and in two of the buildings shown this month, the plan of the apartment building has come almost as near to this class as we need go. Among them, they provide enough examples of the two or three apartment to the floor arrangement, to serve to illustrate sufficiently the characteristics typical of this class. They will also provide the designer, wishing to devise an apartment building of this same scheme to go upon a smaller lot, with the information needed to convince him that he is following sufficiently modern and up-to-date models,—and so ensure that his client is investing his money in a structure competent to retain its position in competition with other similar structures for the length of time necessary to recoup the expenditure.

After completing the illustration of this group, we will turn to a few examples of a plan available to the wide and shallow city lot, and from that departure again advance to the same place to which the growth on the lot of narrow dimensions has already brought us. From that point onward we can undertake to consider the plan of a structure on an area large enough to allow of its extension around a court of sufficiently ample dimensions to make it an esthetic asset as well as a necessary adjunct to the successful treatment of the apartment house plan.

Three of the plans shown in the article last published, all of New York City apartments, were arranged on lots of nearly square proportions. Of these, two, Figs. 41 and 47, were so designed as to place two apartments across the front of the



FIG. 49—NO. 399 PARK AVENUE, CORNER OF 54TH STREET,
NEW YORK CITY. SCHWARTZ & GROSS, ARCHITECTS.

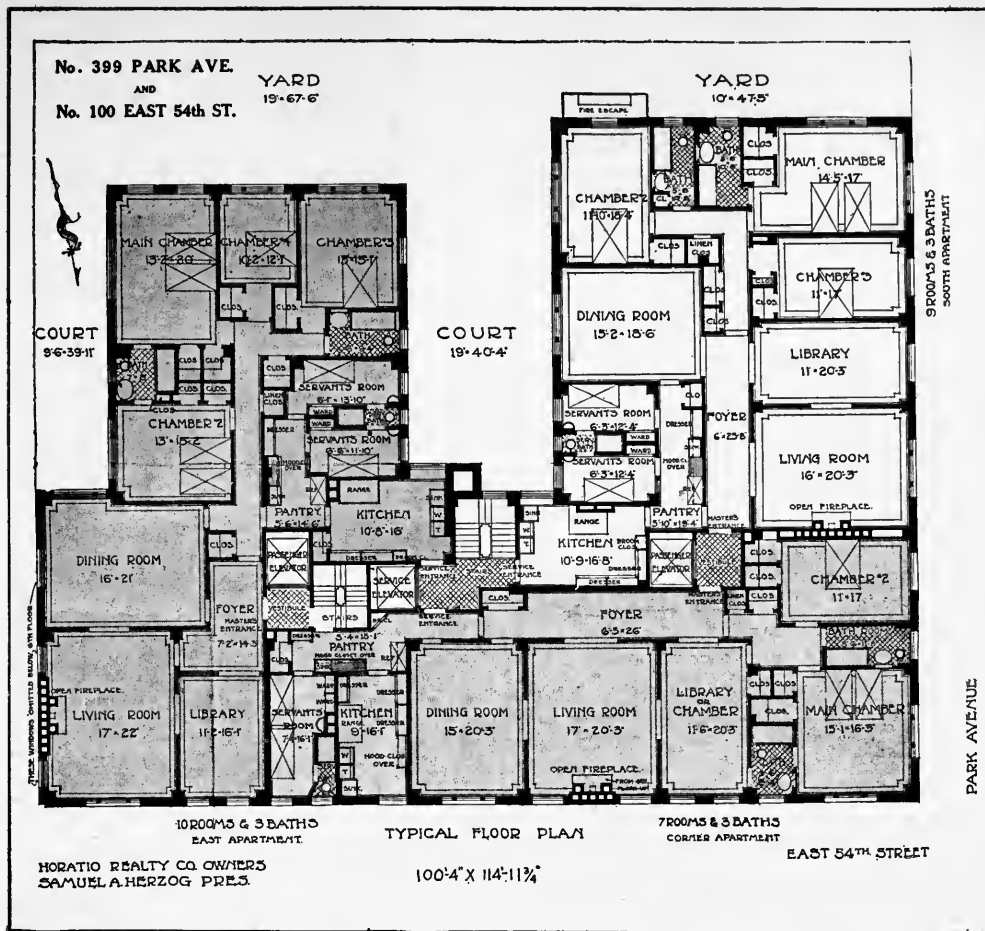


FIG. 50—NO. 399 PARK AVENUE, CORNER OF 54TH STREET, NEW YORK CITY.
Schwartz & Gross, Architects.

building, extending out toward the rear along the center line,—and still a third apartment was placed across the width of the lot at the rear. This made the plan outline suggest the letter “T” or “I” in shape.

In the case of the plan in Fig. 47 this likeness was perhaps not so evident, because the lot had there been filled out by the building quite to the right hand margin of the property, which was located on the corner of two principal streets. Both these plans were also worked out to go upon lots that were somewhat narrower than they were deep.

On the other hand, the plan of the apartment shown in Fig. 45 was also

located on the corner of two streets, but as the lot was in this case rather wider in proportion to its depth (and the depth was even somewhat shallow at that) this plan would almost come within the category of the group that is broad in its frontage upon the street, or within the classification indicated by the letter “B,” in the arrangement of “key-plans” shown in the diagram published in that issue.

This month we illustrate, in Fig. 50, a plan closely related to the last published group, in several ways. First, the lot being a rectangle a very little wider than it is deep, and again occupying a corner, it has been possible to carry what was in the illustrations in the last article dis-

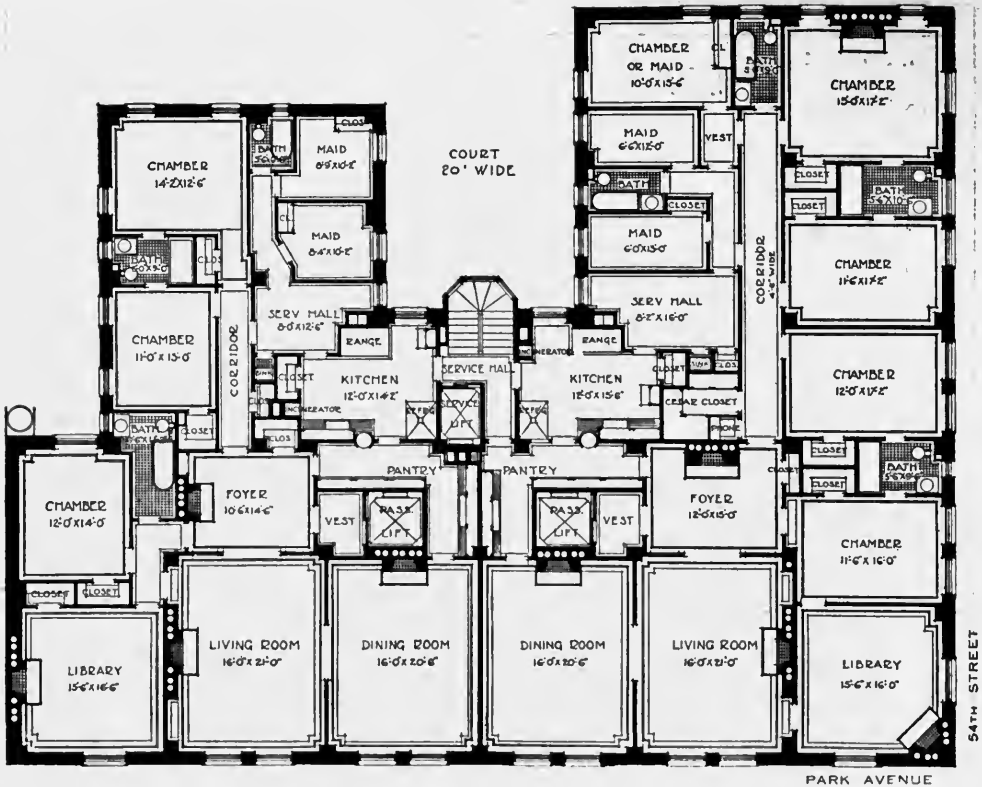


FIG. 51. TYPICAL FLOOR PLAN—NO. 405 PARK AVENUE, NEW YORK CITY.
Cross & Cross, Architects.

tinctly a rear apartment with its longer dimension parallel with the front street, out upon the narrower street frontage of the lot, and there arrange its rooms with the length of the apartment occupying most of the frontage on this street, itself the more important of the two on which the building is located.

Accordingly, while the illustration shows a floor plan with three apartments to the floor, the fact is that the plan is really of two buildings, one with its entrance on the right hand street, admitting to the two right hand apartments, while another entrance is provided exclusively for the left hand apartments, — which in itself conforms quite distinctly to the "T" shaped plan that predominated in the last article. The building is nevertheless a single unified structure because, by very ingenious planning, a single rear entrance and service elevator has been made to

serve all three apartments; and that, too, with no more serious inconvenience than the necessity of serving to one dining room across an interior bedroom corridor.

A comparison of this plan with the next building to be illustrated is instructive and interesting. In Fig. 51 we have an example of a plan arranged to go upon a lot of almost precisely the same proportions as the last example, and of only slightly smaller dimensions. This building, however, has been intended to take care of but two apartments to the floor, although the service arrangements are, in general, very much the same as in the previous plan.

The service stairs and elevators are located at almost the identical spot that they occupy in the other plan, and each of the two apartments has its own passenger elevator. Although the two main elevators are reached from a common



FIG. 52—NO. 405 PARK AVENUE, NEW YORK CITY. CROSS & CROSS, ARCHITECTS.



FIG. 53. DETAIL OF ENTRANCE—NO. 405 PARK AVENUE,
NEW YORK CITY. CROSS & CROSS, ARCHITECTS.



FIG. 54. ENTRANCE HALLWAY—NO. 405 PARK AVENUE,
NEW YORK CITY. CROSS & CROSS, ARCHITECTS.

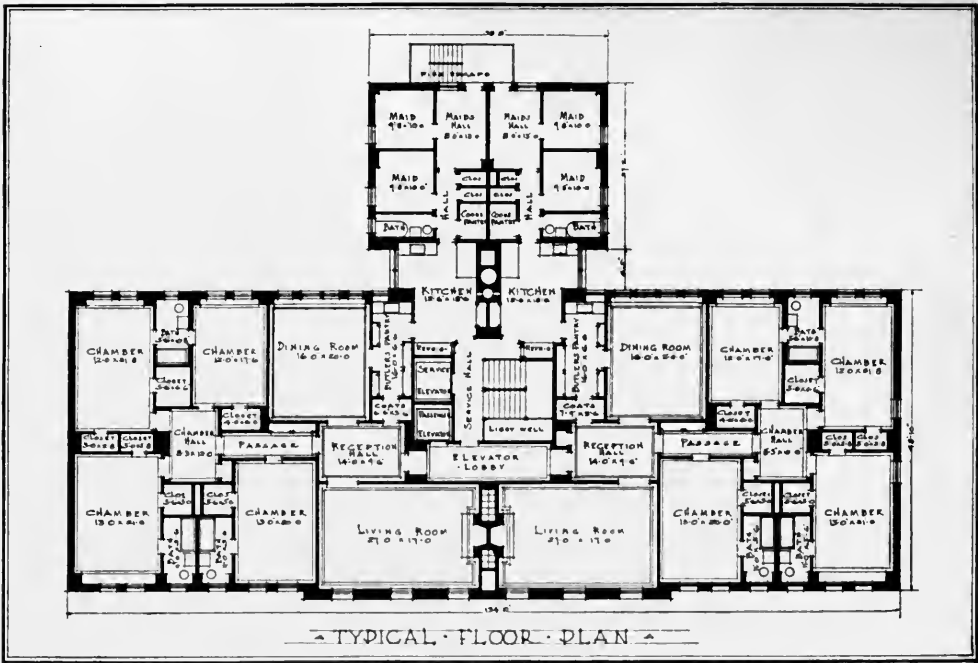


FIG. 55. TYPICAL FLOOR PLAN—NO. 230 EAST WALTON PLACE, CHICAGO, ILL.
Fregard E. Knapp, Architect.

hallway on the entrance floor, these hallways are entirely eliminated on the upper floors, all hallways and corridors being private except a small length (and that unnecessary) near the rear stairs.

This building, as also some other New York examples, possesses no front stairway, one stairs serving all purposes, in addition to the elevators. Of these there are three, but they are all located within ten feet of each other,—along with the single stairway. The consequence is that a possible element of danger in case of fire is introduced, and the plan, as a whole, for this reason would not be acceptable in exactly its present form in certain other cities where “at least two permanent means of egress, accessible directly from each apartment,” is a common requirement of the building law.

The schematic arrangement of this plan is commendably simple and direct. It consists of locating all the principal rooms across the street front of each apartment, placing the principal sleeping rooms down the outsides of the building, but as only

one side is upon a street it is necessary to provide a court for lighting the rear rooms of this tier upon the other side). All the service rooms are grouped around a central court at the rear, the servants sleeping rooms upon the two sides, and the kitchens, each side of the service stairs, upon the end. In both plans the long narrow pantries are also intended to serve the purpose of corridors connecting not only with the dining rooms, but also the kitchen with the front foyer and vestibule, and the front part of the house with the rear staircase as well.

It should also be noticed how exactly this plan divides down the center line into two single apartments, each of the “T” shape, adapted to the medium width city lot. The only change necessary would be to move the stairs and elevators to the center of the single apartment, along the bedroom corridor and just at the rear of the apartment entrance foyer.

The building shown in these illustrations, Figs. 51 to 54 inclusive, built only a few years ago, has not yet been sur-



FIG. 56—NO. 230 EAST WALTON PLACE, CHICAGO, ILL. FREGARD E. KNAPP, ARCHITECT.



FIG. 57. DETAIL OF ENTRANCE—NO. 230 EAST WALTON PLACE, CHICAGO, ILL. FREGARD E. KNAPP, ARCHITECT.



NO. 58. ENTRANCE HALLWAY—NO. 230 EAST WALTON PLACE, CHICAGO, ILL. FREGARD E. KNAPP, ARCHITECT

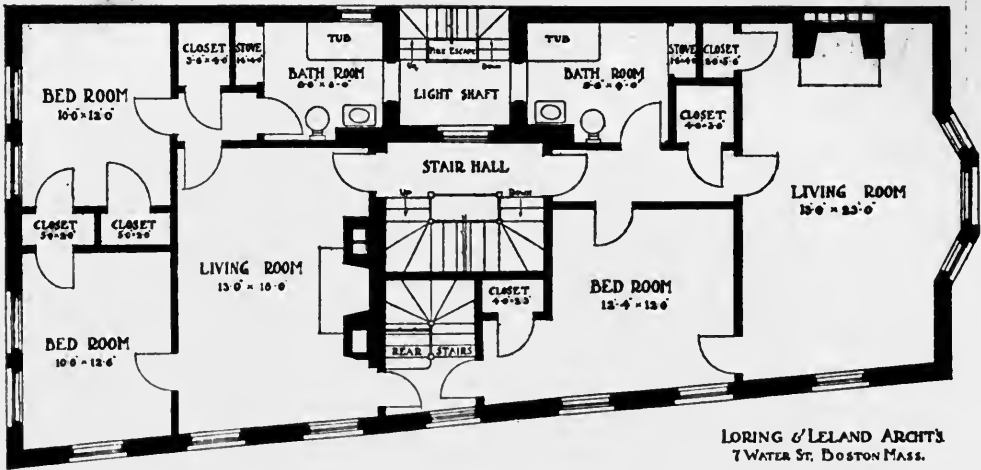


FIG. 59. FLOOR PLAN—"THE RIVER STREET APARTMENTS."
Loring & Leland, Architects.

passed as an example of the best of its type, although it is no longer as "de Luxe" as other more expensive and larger apartments that have since been erected in New York City.

New York has, however, continued the evolution of this class of apartment buildings with perhaps too limited an outlook. All the illustrations thus far shown in this article, as well as those in the latter part of the preceding one, were of a type. They illustrate, within somewhat narrow limits, the incidental advantages or minor defects of their class, and are all so similar as to suggest that they have virtually exhausted the variations possible—or at least desirable—with this kind of plan. That this is so is not entirely the fault of their designers. But in New York practically all of the apartments destined for this class of occupancy, have been built on some one of the four corners available at the street intersections along Park Avenue or Fifth Avenue,—or possibly facing Central Park. The lots have accordingly all been of much the same proportions, and with the exception of the varying exposures (a factor that has been given all too little consideration in most apartment house planning, by the way) the recurring right angles of the gridiron plan have given little excuse for variation in plan arrangement. It is also, of course,

the case that once a certain kind of plan has proved its popularity, in our American point of view there is little else to be done than to imitate and repeat it with as near approximation or as little improvement, as is possible; until some minor earthquake occurs to divert attention to another type of plan.

We have, therefore, to go again to the Middle West, and to Chicago, to find a radically different plan type, intended to meet a somewhat similar class of occupancy—and arrangement to fit a different proportion of lot. This plan (Fig. 55), comes within the second principal group, to go on a wide and shallow lot,—although it is true that the lot is not as shallow as some, and is sufficiently developed in depth at the center to conform with the "T" shaped plan, albeit of a much broader and shallower proportion than any we have yet illustrated. Nevertheless, because of its interests of contrasts with the plans we have just studied, and because it is also planned for an expensive class of tenantry, it is shown here.

The scheme that dominates the plan of this apartment, while radically different from the plan last discussed, is quite as simple. The principal rooms and the living essentials are all confined to the central portion of the lot, with the servants' rooms all contained—with the kitchen—



FIG. 60—"THE RIVER STREET APARTMENTS,"
BOSTON, MASS. LORING & LELAND, ARCHITECTS.

in an "ell" extended at the rear, in approximately the same location as the service courtyard in the last plan. This gives a central hall space, occupied by service and passenger elevators and stairway (the latter, although located in the space labelled "service hall," being evidently also available for use from the front of the apartments, when necessary). This again groups all agencies communicating with the street in a dangerously small area, immediately adjacent to each other,—but the plan also provides another stairway, in the line of a fire escape, in a different and separated location, connecting with both apartments at the extreme end of the service "ell."

These apartments themselves are also not quite as large as in the last New York building illustrated, each apartment having a total of eleven rooms including the hall,—four principal bedrooms, three servants' bedrooms, a kitchen and dining room and a large living room, whereas the New York plan provided in the smaller apartment three masters' bedrooms, dining room, living room and library, with a kitchen, two maids' rooms and a servants' hall, outside of the foyer, a total of eleven (although quite differently divided, as is seen); and the larger apartment, on the corner of the streets, has a total of thirteen rooms, two additional bedrooms, one of them available either for family or servants.

In the Chicago plan all four bedrooms are grouped around a "chamber hall" in a wing on each side of the central portion of the building, an arrangement the advantages of which have already been noted. Particular attention is also directed to the elimination of all long corridors or passageways in this plan, where it has considerably the better of the New York type with its long corridor leading to the bedrooms. In this connection it might also be indicated that this building has less than 10 per cent. of its floor space given over to public use,—where the average building of this type has generally from 15 per cent. to 25 per cent. of its area thus used. The saving to the owner—both in original cost, as well as in upkeep, heat, light and decoration—should

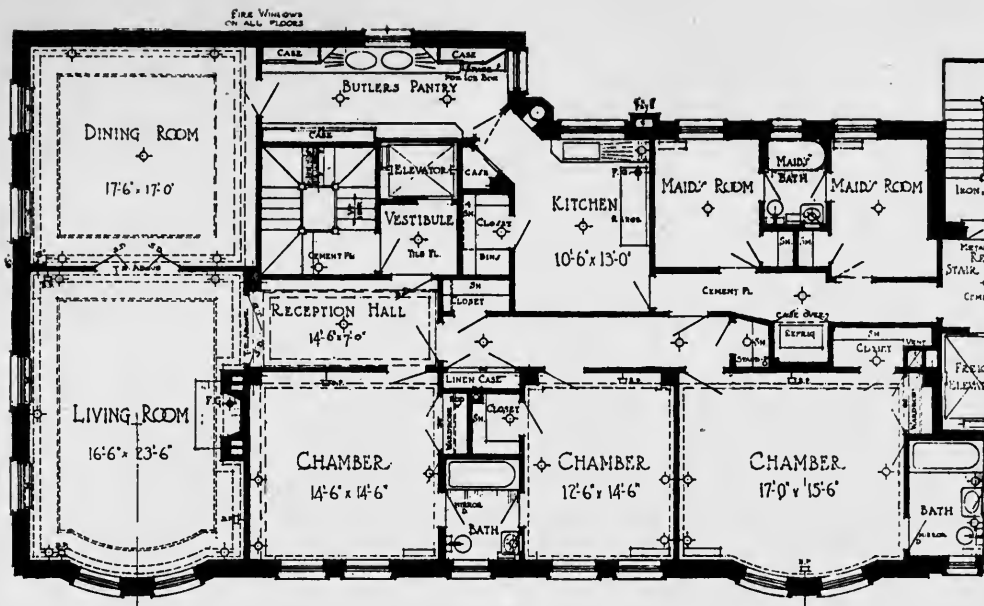
be obvious and considerable, as the tenant pays directly only for the area he immediately occupies. Or, at least, that is the portion of the building that he always sees and compares with other competing apartments,—so that, other things being equal, the owner of an economically planned apartment can at the same rentals make a comfortable income on his building at a price that is barely supporting the expense of conducting a more wastefully planned structure.

Although this building is one of the latest and best of this type of plan that has been built in Chicago, it is not an unusual or peculiar plan arrangement for that vicinity. In fact, the development of an apartment house plan on some of the many narrow blocks, the wide sides of which often come on these cross streets, is rather common in that city. In evidence thereof, and also in further illustration of the possibilities of this kind of plan arrangement, the other plan shown in Fig. 61 will sufficiently show the varied possibilities of the type.

The apartment plan fitted to a wide and shallow lot is in some ways similar to the problem of the plan on a narrow and deep lot, the principal difference residing in the fact that a larger number of rooms obtain street frontage outlook. The latter fact makes at once for a pleasant apartment, capable of renting more easily and at a higher price—a fact that is necessary in order to meet the additional carrying charges on the higher cost of land for a lot of this proportion. Generally, however, a lot of this shape, with its longer front available for street frontage, is found on the corner of a city block,—and the longer frontage is probably upon the less popular or desirable street.

Under these circumstances, it may well be that the entrance from the street should be located on the narrower frontage, so as to number on the more important avenue. The matter of street entrance, however, need not seriously affect the arrangement of the plan upon the other floors, where full advantage of the longer frontage should be taken.

In the case of the corner lot, it is probable that the structure will not only ex-



NUMBER TWELVE SCOTT STREET—East Building

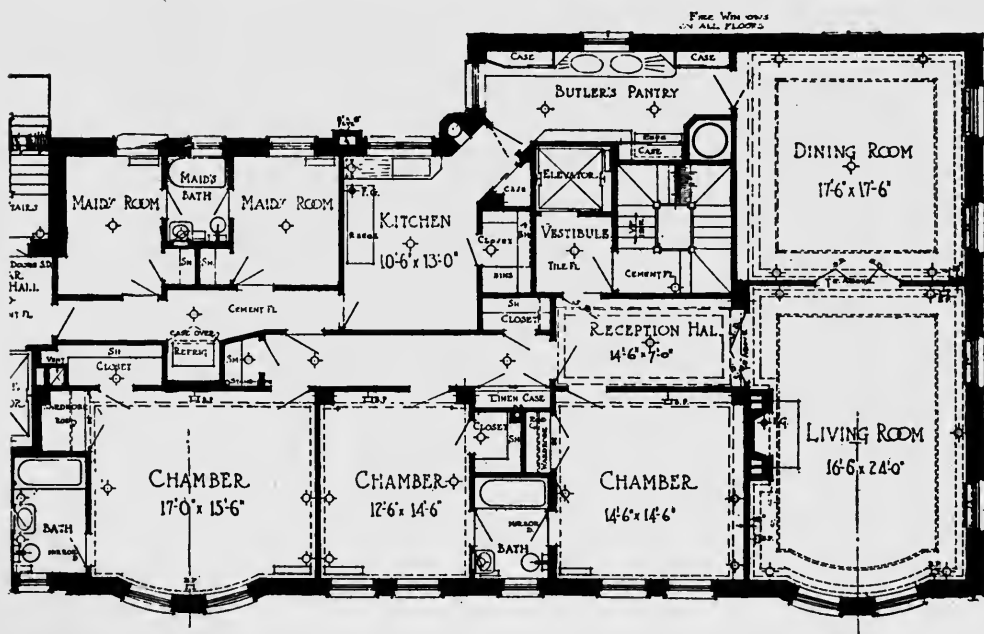
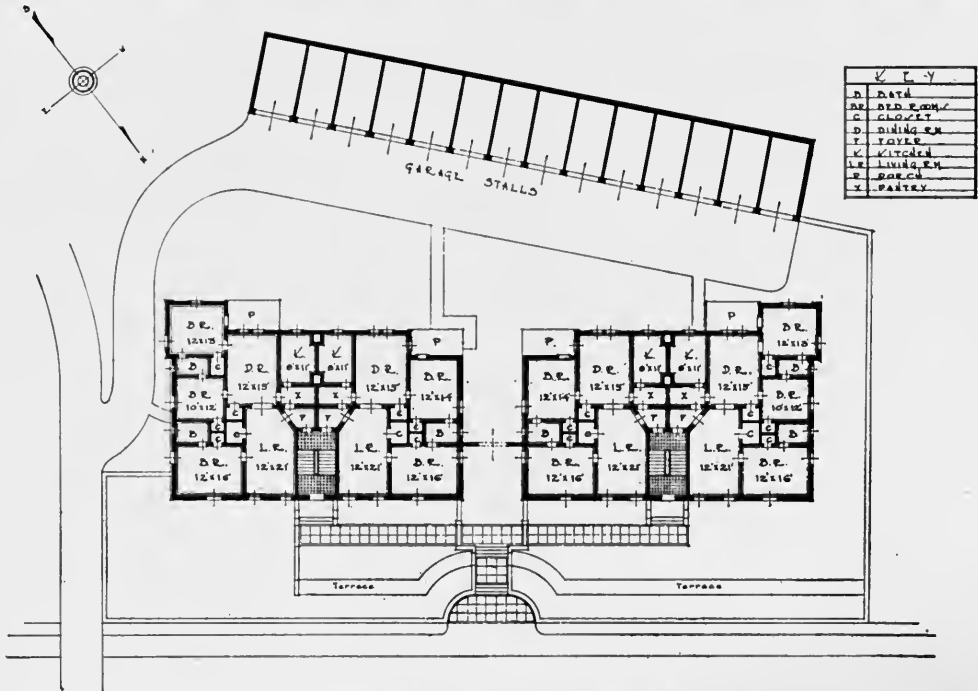


FIG. 61. TYPICAL FLOOR PLANS—NOS. 6 AND 12 SCOTT STREET, CHICAGO, ILL. WILLIAM ERNEST WALKER, ARCHITECT.



FIG. 62



CAROLETTA AND CLYDE APARTMENTS
BALTIMORE, MD

CLYDE N. FRIZ ARCHITECT

SCALE 1" = 10'

FIG. 63.

tend down the length of the corner lot—varying probably from eighty to a hundred and fifty feet, but that the plot being developed will also generally consist of two or three lots wide, even in its narrower dimensions, thus attaining a depth of thirty to fifty feet.

Even when this is not the case, however, it is perfectly possible to develop a sixteen to twenty foot lot with success (Fig. 59)—although generally so narrow a lot would require a division into small apartments, probably of two to four rooms.

If the plan is divided into two apartments to the floor on each side of the building's central axis, long corridors will probably easily be avoided, but each apartment will then be of about half the size—unless the duplex idea is adopted, which might be necessary or preferable in order to obtain a large apartment without long corridors on a lot of this proportion and size.

In analyzing the long narrow lot single apartment plan; we find the kitchen and maids' rooms preferably located in the center of its depth. The same approximate location would probably be found desirable under these new conditions,—although the change in the frontage of the plan would make this location now the centre of the width of lot, rather than of its depth. In the case of two apartments to the floor, the location of these portions of the plan would undoubtedly remain the same, whether the plan was developed along the lines of Fig. 55, or Fig. 61.

The plan of the apartment shown in Fig. 59 indicates, in one example, the possible variations of treatment with a lot as shallow as 25'-0" at the end—and as wide as 30'-0" at the other. The three staircases shown, on so small a plan, is one much discussed feature. The kitchenette is here shown in its simple and rudimentary form—a gas stove recessed into the wall of the bathroom.

Fig. 60 shows a compactly planned structure with two apartments to the floor, each of six rooms, intended to go on a lot about one hundred by fifty feet. There is some space left at the rear of the build-

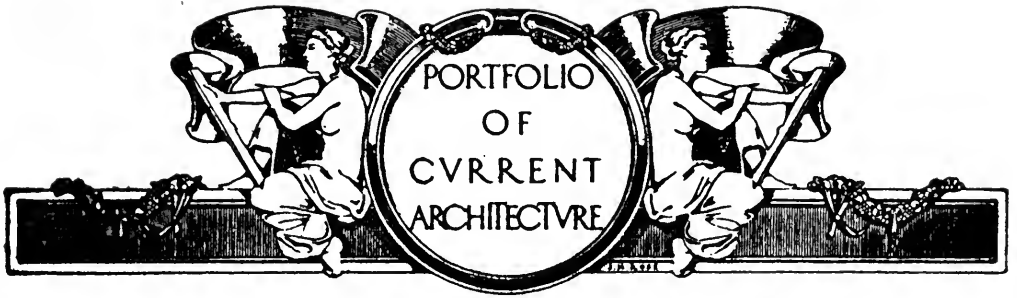
ing to give the rooms with that exposure a good outlook, but this apartment anyway possesses the advantage of fronting on two streets, whereas the other apartment fronts only upon one. The relation of the two elevators for passenger and service, and the front and rear halls, with a stairs in common and a fire escape opening from the two kitchens, has something in common with the larger, more developed plan of Fig. 55, but this floor contains a far greater area given to corridors, halls and passageways, both public and private, in proportion to the area of the whole plan, than the other example.

Coming to the apartments shown in Fig. 61 we find a building placed on a still narrower and longer lot, about 180 feet long and 35 feet deep, but with streets at both ends. An elevator and stairs are provided for the front entrance to each of the two apartments, near the ends of the building. A rather long lateral corridor, although of less area than in the previous plan, is then necessary to communicate with the bedrooms, the latter portion of the floor plan being separated by a door from the entrance hallway.

Finally, to conclude the showing of this type of plan arrangement, a building of a different class and locality is selected. The shallow depth plans shown—even the simplest of them—would all be fairly expensive in use. The two simple and compact buildings shown in Figs. 62 and 63 are located in a suburban portion of Baltimore, on a shallow lot, pitching sharply down from the street, so that the major development has been confined to the part immediately along the street front. Each building of the pair contains two apartments to the floor, of five and six rooms respectively, the smaller apartments occurring on the portions of the buildings nearest each other. The suburban character of the plan is indicated finally by the porch with which each apartment is supplied. These porches occur at the rear overlooking the falling landscape. Another convenience now much in demand is shown in the plot plan on the lower level in the rear, in a range of cubicles giving a separate garage "stall" to each apartment occupant.



ENTRANCE—RESIDENCE OF BAYARD DOMINICK,
ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW
YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.



PORTFOLIO
OF
CURRENT
ARCHITECTURE



RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.



MAIN STAIR—RESIDENCE OF BAYARD DOMINICK,
ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW
YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.



DINING ROOM—RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.



DETAIL OF DINING ROOM SCREEN—RESIDENCE OF BAYARD
DOMINICK, ESQ., 115-117 EAST FIFTY-FOURTH STREET,
NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.



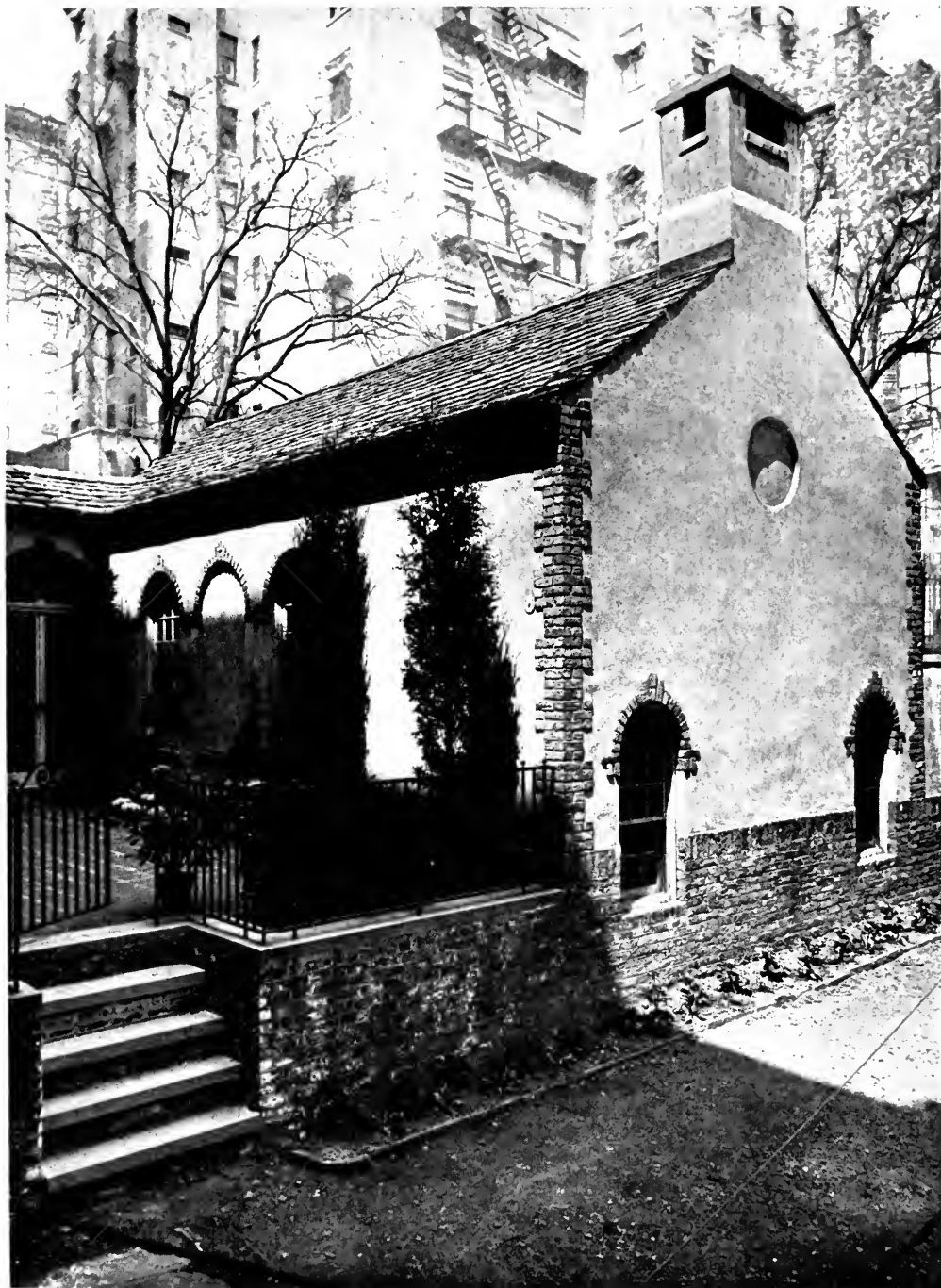
MORNING ROOM—RESIDENCE OF BAYARD DOMINICK, ESQ.,
115-117 EAST 54TH STREET, NEW YORK CITY.
William F. Dominick, Architect.



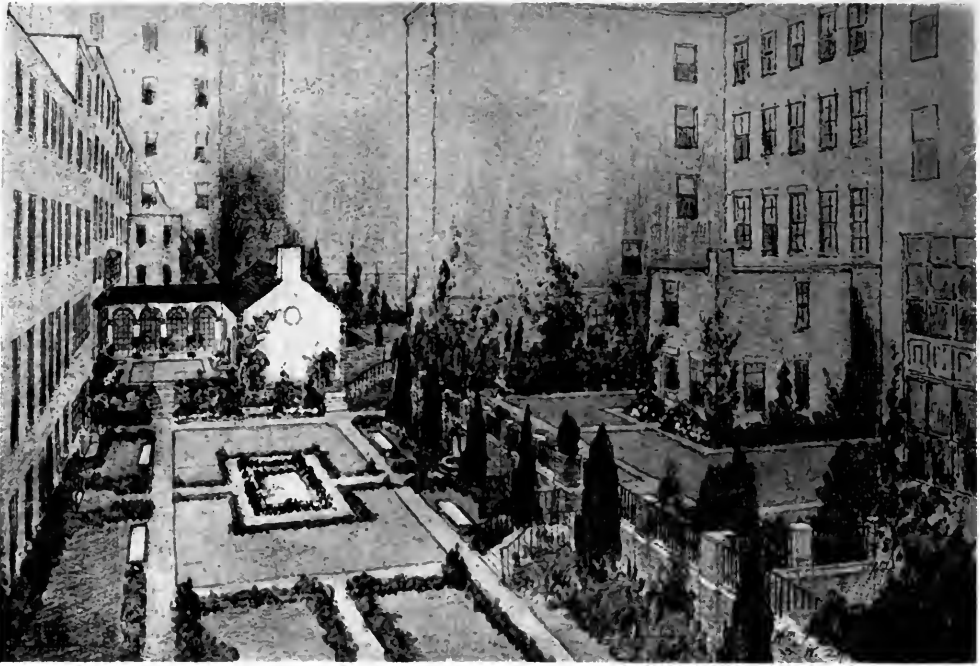
MORNING ROOM—RESIDENCE OF BAYARD DOMINICK, ESQ.,
115-117 EAST 54TH STREET, NEW YORK CITY.
William F. Dominick, Architect.



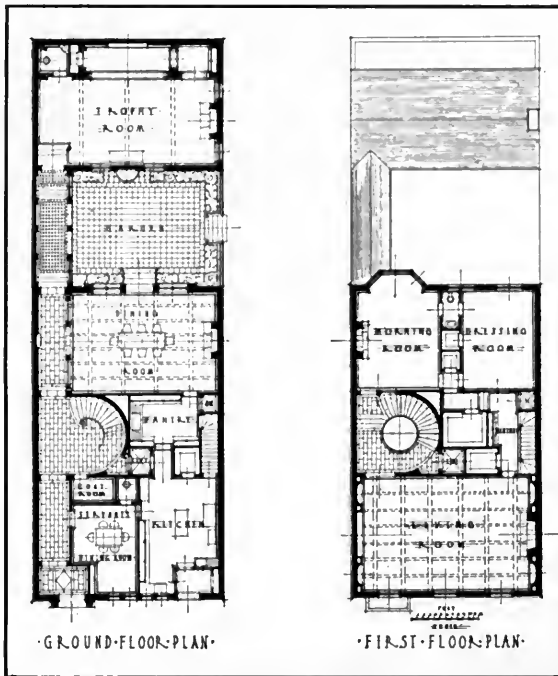
TROPHY ROOM—RESIDENCE OF BAYARD DOMINICK,
ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW
YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.



TROPHY ROOM (BEYOND DINING ROOM GARDEN)—RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST 54TH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.



STUDY FOR INTERIOR GARDENS—EAST FIFTY-FOURTH STREET, NEW YORK CITY
William F. Dominick, Architect.



FLOOR PLANS—RESIDENCE OF BAYARD DOMINICK,
ESQ., 115-117 EAST 54TH STREET, NEW YORK CITY.
William F. Dominick, Architect.



STAIRWAY, INDEPENDENCE
HALL, PHILADELPHIA (1750)

The
EARLY ARCHITECTURE of PENNSYLVANIA
PART XI — STAIRWAYS



By A. LAWRENCE KOCHER

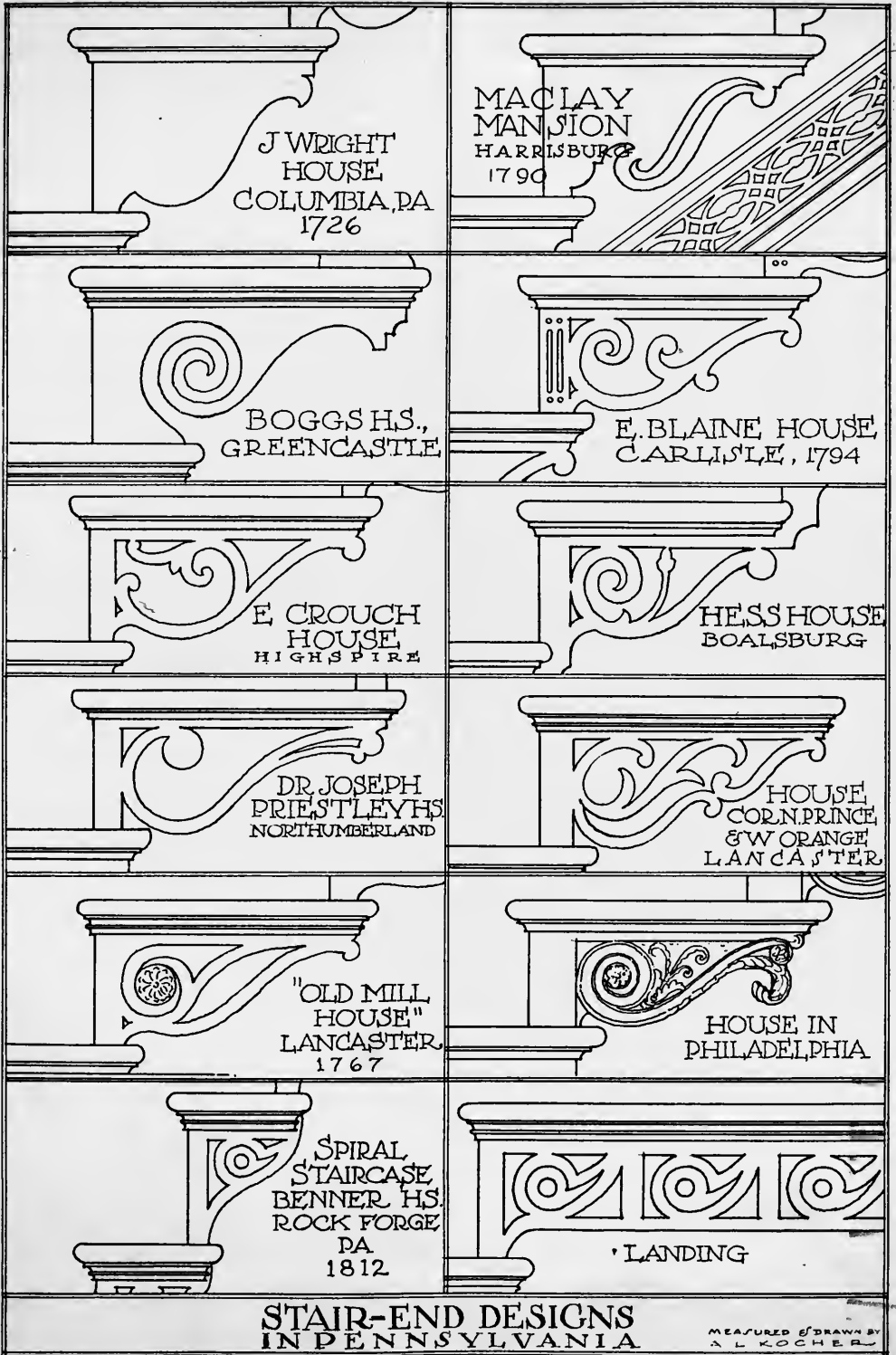
THE stairway, from the time of the Renaissance onward, has played an important role in the planning of both public buildings and private dwellings. As the artery of communication between one floor level and another, it has generally been considered the key to the majority of plan arrangements and the subject for most profound study and dignity of treatment. The importance of the feature was voiced by Palladio, who said, "in placing of staircases, the utmost care ought to be taken; it being a difficulty to find a place convenient for them that will not at the same time prejudice the rest of the building." Perhaps Palladio sounded this warning because the architects of his day were beginning to realize the mistakes of their predecessors. The Italian architects of the late Renaissance were the first to break away from the stairway between walls, as in the Riccardi, Strozzi and Massimi Palazzi, and to create the open stairway of large size and ambitious decorative treatment.

To the French has usually been credited the most successful handling of the feature in plan. The grand and spiral staircases of the palaces and royal country seats of France continued if they did not outdo the fundamental traditions established in Italy. The "*escalier à la Française*" was a practical solution of the motive on a smaller scale and one that was destined to influence the design in the British Isles.

The contribution of the English in the design of stairs consisted chiefly of examples in domestic dwellings in Tudor and more particularly in late Renaissance times.

The conception of the staircase in America of the eighteenth century was solely of English inspiration and its development in the colonies was a continuation of British precedent, modified slightly by the limitations of the prevailing wood construction but revitalized with singular energy by the ingenuity of local craftsmen.

It is important at the outset to understand clearly what is meant by the term "staircase." This will enable us to better interpret the position of the stairway in the early American house and particularly in Pennsylvania. The staircase in both England and America in the eighteenth century, was understood to be a feature that was separate and distinct from the hall. Gwilt in his *Encyclopedia of Architecture* designates the staircase as "that part or subdivision of a building containing the stairs which enables people to ascend or descend from one floor to another." The hall is defined as: "The first large apartment on entering a house." That this understanding of the province of the stairs as distinct from the hall was adhered to in America, is made clear by an examination of the plans of the more important dwellings in Pennsylvania. At Mount Pleasant Mansion the imposing central hallway is separate from the staircase. The latter is situated in a separate compartment, being at the left of the hall as you enter and also shut off from it by an architectural treatment consisting of a heavy classical beam, upheld by square fluted piers. At Hope Lodge the staircase is to the left of the further end of the hall and is completely hidden from the entry way. The feature in the Morris House





DETAIL OF STAIR BALUSTRADE, CLIVEDEN, GERMANTOWN (1763).

in Germantown is similarly situated but at the center of the right side. Again at Cliveden the staircase occupies a confined space at the rear which is partially screened from the spacious hallway by means of a colonnade. This practice of separating these two parts of the house occurs so frequently as to establish a custom.

Even in instances where the stairway is at the rear of a central hall, as in many farmhouses and lesser dwellings, an attempt was generally made to differentiate between the two parts by means of a separating colonnade or arch, with the result that the entrance hall is visibly apart, if not shut off, from the stairway.

The vestibule, which occasionally occurs in the early houses of New England, was never a part of the Pennsylvania dwelling. The more rigorous climate of the North no doubt imposed the necessity of the addition in that locality; although Great Britain offers no precedent for the feature. Our own present day practice of using a vestibule finds some justification in that there is a need for privacy with our stairs most often placed, with

frank unconcealment, in the main hallway.

The staircase in this colony was varied in form. The types that were most commonly used may be reduced to three. The first was termed "the dog-leg'd stairs" and it consisted of a flight of steps to a "half pace" or landing from whence a second flight attained the floor above. The second type was known as an "open newelled stairs," composed of a small flight to a square landing from which a second flight continued upward at a right angle to a second landing and finally the third flight attained the floor above in a direction that is the reverse of that at the beginning of the ascent. These two stair motives are illustrated in the drawing on page 402.

The third familiar form was the circular or elliptical staircase.

The continuous rise of steps from floor to floor was not used, except in rare instances, in narrow and deep city dwellings, and so need not be admitted to our classification. We may also omit the consideration of the service stairs which



STAIRWAY, MOUNT PLEASANT MANSION, PHILADELPHIA (1761).

Example of "Dog-Legged Stairs."



STAIRWAY, MACLAY MANSION,
HARRISBURG (1790)
Example of "Open Newelled Stairs."



STAIRWAY AT LANDING, MACLAY MANSION,
HARRISBURG.



STAIRWAY OF THE C. G. DONNEL HOUSE,
SUNBURY (1780).



STAIRWAY IN KEEPER'S HOUSE, CHARMING
FORGE.

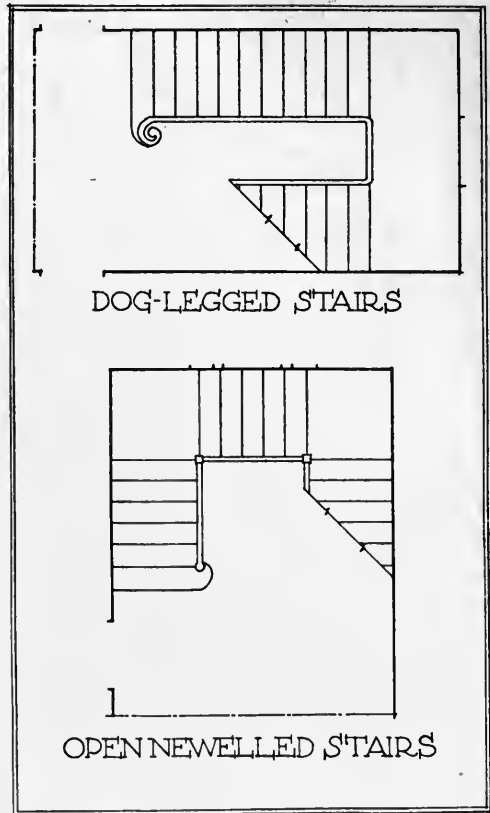
when used occurred in a confined and winding space in the thickness of walls at the side or rear.

The staircase of Mount Pleasant Mansion is an instance of the first type. Our illustration presents a view that was taken from a position in the main hall, just within the front entrance door. This shows effectively the detached character of the stair hall. The spaciousness of the two halls, which occupy a third of the floor level, indicates the high standards of comfort that prevailed in the life of the colony. The newel posts are here noticeably suppressed. The handrail begins as a spiral or volute at the foot of the stairs and continues upward to the second floor.

A more modest stairway of the same form is in the Donnel House in Sunbury where the unusual rail, without balusters, bespeaks the simplicity of frontier isolation.

The second or "opened newelled stairs" is represented by the refined stairway of the Maclay Mansion in Harrisburg. The turned newel posts occur at the angles and at the beginning of the flight, to add an effect of structural solidity. At the top of each flight the walnut handrail is ramped; that is, there is a downward curve which eases the transition from the horizontal to the slope of the stairs. The spiral termination of the stairway at Charming Forge is a decided improvement over the turned post. There is something satisfying and hospitable about the wider lower step, and the graceful curve of the unfolding balustrade is quite appealing.

The circular or elliptical staircase was never very popular in the central colony. Its rarity may be due to the fact that a circular compartment necessary for the spiral stairs did not fit into the rectangular plan without a resulting loss of space. It also required a greater skill both in planning and in construction to contrive a staircase in one continuous sweep from floor to floor—a degree of skill or at least a turn of ingenuity that our craftsmen seldom attained. Later in the eighteenth century, when the influence of the Adam brothers gained a foothold



and when circular and oval shaped rooms were an essential feature of the new mode in the setting out of the plan, the sweeping curve from floor to floor was not only logical but also of fairly frequent occurrence. An example of this spiral stairway is in the Benner House, built near Bellefonte in 1812. The stairs of the Beltzhoover House in Carlisle, while not of the true circular form, does involve a half circle in reversing the direction of the steps in rising from one floor to another.

There were rules to be observed in the laying out of this form of stairway which were set forth in *The British Carpenter*, published by Francis Price in Dublin in 1768. The suggestions made by Price are quoted because of their reasonableness and because the observance of his rules might well be followed by builders of similar stairways today.

"Circular stairs are used . . . chiefly



DETAIL OF STAIR BALUSTRADE, GOWEN HOUSE, MOUNT AIRY.



STAIRWAY AT WHITBY HALL, PHILADELPHIA (1754).



DETAIL OF STAIR BALUSTRADE, UPSALA, GERMANTOWN (1798)



STAIRWAY OF THE JOHN WRIGHT HOUSE, COLUMBIA (1726)

for conveniency of going up in a little room; they admit of being better lighted from above, in case they are placed in the middle of a building; and in their formation should have this strict observation, viz., to be equal in their tread or breadth to the other steps at a distance of two feet from the middle of the rail, or nearly so: The reason is, in going up or down, your hand is generally on the rail (which is made for that purpose), so that betwixt both your feet, will generally be this distance of two foot, as was before observed, so that the stairs are thereby rendered easy; the feet feeling no difference, for what is contracted on one side, is seldom trod on, and very seldom on that part that is extended, unless two persons go up or down together, or pass each other."

It also should be noted that it is best to use what is termed "the sinistral spiral," that is, circling upward to the left, for with this arrangement the hand-rail—most essential in descending the stairs—will then be at the right hand.

The baluster was a subject on which the craftsman exercised his power of invention. He seems to have studiously



STAIRWAY AT LANDING, BELTZHOVER HOUSE, CARLISLE.



STAIRWAY AT LANDING, CONGRESS HALL, PHILADELPHIA.

avoided duplication, so that this detail shows a surprisingly wide variety of shapes. The baluster sometimes assumed the outline of an attenuated Doric capital, or it was composed of a combination of bosses, blocks and vases. An example of great beauty appears in the Wright House (1726) in Columbia, Pennsylvania. The balusters are of walnut. The robust turning is well modulated and somewhat foreign in aspect.

In contrast with these are the slender spindles of the Gowen House, Mount Airy. Perhaps a difference in date accounts for the lightening of the balusters. Certainly the square form was always slender, the dimensions of the sides being sometimes so light as three-quarters of an inch. A width of an inch and one-eighth was most frequent. The square baluster was sometimes beaded at the angles, and the outer and inner faces were sometimes concave, combined with the beaded corners as at Upsala Mansion.

The stair ends are of interest for their

fanciful elaboration of detail, consisting of every conceivable variation of the bracket. The instinctive abhorrence of monotony again prompted the American stair-builder to translate this utilitarian feature into an endless variety of cut out and carved forms which very well expresses the vigor of the local style.

The stairways of public buildings, in the main, followed the conceptions that we have observed in private dwellings with the difference that the arrangement was made to accord with the particular character of the structure where it was placed. In the public building the stair construction and its design was more sturdy, there was less of the domestic in the decorative parts and an increased amplitude in the breadth of steps and landings.

The stairs of Independence Hall (1750) are of the finest and represent the nearest approach to the monumental stairway in America in colonial days. They are, first of all, appropriate to their setting within the great square tower, and the main axis of the building on this, the most important floor, is not obstructed. They are distinguished by a proper vigor, refinement and grace, and they do not in any measure suffer by comparison with the Georgian prototypes of the mother country.

The bracketed ends of the steps are here carved with skilfully handled acanthus ornament in bold relief. The balusters are slightly enriched, while the string course at the face of the stair balcony displays a carved band consisting of the acanthus combined with the Vitruvian



STEP END DETAIL, INDEPENDENCE HALL, PHILADELPHIA.

wave ornamentation. The double stairway of the Pennsylvania Hospital in Philadelphia is considerably lighter in scale and possesses an effective grace and air of comfort and combines well with the columnar hallway.

In our review of the staircase in Pennsylvania we should not lose sight of the broad organic growth of the style with all its component parts and various attributes. It must not be appraised as a growth of a detached feature or of details alone. It was, indeed, the visible manifestation of a broad art tradition that made vivid the high intelligence of the new world. Good taste and sane judgment have always been more potent than material wealth alone. Thomas Jefferson once said: "To give buildings symmetry and taste would not increase their cost, it would only change the arrangement of the materials, form and combination of members. This would cost less than the burden of ornament with which these public buildings are often charged." The truth of this dictum consists in the fact that architecture is no mere affair of details. Its success consists of an unflinching sense of appropriateness and an artistic unity consistent with strength, from which no part can be altered or removed without an evident loss in appearance. To anyone who has made a careful study of early American architecture, it must be evident that adornment was of subordinate interest; that practical aims prevailed over surface adornment. Otherwise the results would have been self conscious, petty and insincere.

UNIVERSITY INSTRUCTION IN ARCHITECTURE



By Charles H. Moore

HAVING discussed the question of training for the practice of architecture* and endeavored to show that such training cannot, in the nature of things, be given in a university, or in a professional school working on university lines, I would now attempt to give a general outline of what I conceive a proper university course in architecture should be. For the study of architecture is no less important in liberal education than that of any other of the humanities, since it is the study of man in the exercise of some of his highest faculties, and the proper aim of academic instruction in this subject is, therefore, to introduce students to a knowledge of the part that architecture, as a mode of intellectual and emotional expression, has played in human history.

Architecture is not merely an important branch of what we call the fine arts, it is the root of them. For all graphic and plastic arts depend for their primal qualities on principles that are fundamentally architectural. It is often said that the fine arts are essentially one; but how they are so is seldom made clear. They are one because they are all based on the same principle of organic coordination of parts with a view to beauty. They differ among themselves only from differences of purpose, of materials, and of consequent technical treatment. Every true design, whether in building, in sculpture, or in painting, has an arrangement of lines, spaces, or solid forms, that are proportioned and adjusted so as to produce an harmonious whole; thus the architectural principle of structure governed

by the sense of beauty, is common to them all.

Since the proper aim of liberal instruction in architecture is to awaken apprehension of its significance in the history of human thought and feeling, it must embrace a wide field, in order that the various characteristics and affiliations of the monuments through the ages may be noted and compared, and their respective qualities appreciated.

The materials for study are, of course, primarily the monuments themselves; but as first hand examination of the actual monuments is impossible in academic courses, resort must be had to such second-hand sources of information as are reliable and obtainable. The discerning student will soon find that books and graphic representations are rarely altogether trustworthy, even so far as they go; and that they never give full information. That they are seldom to be trusted will appear from the fact that in treating the same subjects, different books do not wholly agree with one another, even in matters of plain description of facts; and their incompleteness will be painfully realized when one seeks full knowledge of any structural system. That correct and complete information cannot be gathered from books, the student should be made early to understand, in order that he may not waste time and encumber his mind with misunderstanding. It is no exaggeration to say that the greater part of the large and costly volumes in architectural libraries are, to a deplorable extent, of little worth, from defect of faithful observation and description of the monuments of which

* *Architectural Record*, January, 1921.

they treat.* Therefore the student should be cautious in the use of books, and regard nothing in them as dependable without verification. He cannot too soon begin to form a habit of critical discrimination in the use of so-called authorities.

Happily, we have in photography a source of information that is entirely reliable as far as it goes, and the first need in equipment, as to materials for study in academic courses in architecture, is a practically unlimited collection of large scale photographs. These will supply all in the way of first-hand information that such courses need. Photographs afford, indeed, some advantages that the monuments themselves do not afford; for the monuments are widely scattered, and cannot be directly compared, while the photographs may readily be brought together on a table. Thus through photography the comparative study of architecture is become for the first time possible with convenience and fulness. Further on we may briefly consider what a working collection of photographs should be, and how such a collection may be most conveniently arranged, stored, and catalogued for use. Meantime I may suggest shortly the lines on which liberal courses in architecture may properly proceed.

Architecture being primarily an art of construction, the leading principles of construction call for the student's first attention. He should be taught to see that while the countless varieties of so-called styles may appear of bewildering complexity in their superficial aspects, they nevertheless, in fundamental structural character, fall into but three categories, namely, (1) that in which the simple principle of upright support and horizontal load is embodied—as in the Greek temple—where the load exerts no force save that of crushing weight; (2) that in which the load is an arch exerting thrusts which are met by buttressing with inert masses of masonry; and (3) that in which the arch is shaped and adjusted so as to reduce thrusts, as well as to meet other needs, while the upright sup-

ports and buttresses make up an organic skeleton in which stability is maintained by equilibrium of active forces. It will be found, however, that the arched types of building are broadly divided into those which are covered with timber roofs only, and those which are vaulted; but it is important to notice that among the vaulted buildings the full development of arched construction is worked out only where the organic skeleton constitutes the whole supporting fabric, as in Amiens cathedral.

That in one or another of these three primal types, the essential structural character of any given building resides, is a fact that should be clearly grasped, and held in mind as a guiding principle in architectural study. From want of recognition of this fact, great confusion has prevailed in the classification of historic styles, with consequent fundamental misunderstandings. For the structural nature of a building may be superficially disguised, so that its general aspect will be inconsistent with its real character; and this has been done in manifold different ways through the ages. The attentive student will find that extensive misuse of structural members has been made in various localities at nearly all times of architectural design. Members originally formed and combined with propriety for structural functions, have been imitated and employed without structural purpose, but merely as would-be ornament independent of structure. And thus employed they have been variously denaturalized and capriciously readjusted, from imperial Roman times down to our own day. Therefore in the study of architecture, a habit of critical discrimination in respect to construction cannot be formed too early. And to this end all instruction should be accompanied by demonstrations from the monuments, by means of photographs and trustworthy diagrams of construction.

The student has next to note how structural members and adjustments, in the hands of craftsmen who work with a natural sense of beauty disciplined by experience of the best, are shaped, proportioned, and combined, from least to

*Cf. my article entitled, *The Study of Mediaeval Architecture*, published in the *Journal of the Royal Institute of British Architects*, 3rd Series, Vol XXIII, No. 3.

greatest, so as to produce an harmonious whole in which the utilities of building become grateful to the eye. The manifestation of this disciplined sense of beauty, controlling all that the workman does, is, I conceive, what differentiates architecture from mere building.* Mere building may, indeed, have a kind of beauty from natural adaptation to use; but this is not what we understand by the beauty of architecture—which involves the idea of purposed expression of beauty transcending that of mere utility.

Coming now to architectural enrichments—as the profilings of mouldings and sculpture, whether of the human and animal figure, or of vegetation—a vast field for study opens. The student should note well the character of ancient profilings, more particularly the Greek, and observe the proportions, combinations, and qualities of curvature of their parts, and how the curved members are foiled by fillets. He will find that these profilings are among the features that chiefly determine the relative merits of schools. In mediaeval works he should notice how the ancient forms, with countless variations, survive through all the transformations of Romanesque and Gothic art, and note what new and subtle beauties were wrought in them by the genius of the Middle Ages.

In treatment of the human and animal figure, it should be noticed how far it is governed by tradition and limited in representation by conditions of material, of craftsmanship, and of architectural effectiveness; and how archaic works, however uncout, may exhibit qualities of composition that are often wanting in more technically advanced art. In the supreme art of Greece—that of the Phidian age—will be found every quality of human and animal figure sculpture developed to the highest degree possible within the limits of the natural conventions of stonework and of monumental purpose. The essentials of form are rendered with consummate truth, and thus appear instinct with life; but the student

* While the etymology of the word architecture may not sanction this distinction, the distinction is a real one, and common usage—which has grown out of a recognized need—has virtually accepted it.

should see that no trivial naturalism occurs, and a quality of breadth and an expression of repose prevail. It should be particularly noticed that in the finest Greek art, as that of the Parthenon, no violent action appears. There may be swift movement, as in the horses of the frieze, but it does not overstep the bounds of moderation; and it should be noted that the first signs of decline in Greek sculpture appear in resort to violent movement, contorted postures, and exaggerated anatomical development. A comparison of the sculptures of the Parthenon with those of the Pergamene altar-frieze will be enough to show this. The student should observe, too, that the Phidian representations of animals are, in combined truthfulness of expression and lithic convention, the most admirable ever produced. Equine nature has never elsewhere been given in sculpture with such consummate perfection. The student should notice also, that in Greek architecture, sculpture occurs, for the most part, only as an adornment of surfaces—either of the sheltered spaces of the pediments, where it is in the full round, or on long friezes, where it is in low relief—and this he will find is commonly the case in ancient art. It remained for the craftsmen of the middle ages to produce forms of architecture in which sculpture assumes a closer relationship to structure, and thereby develops a new character.

In the study of mediaeval sculpture, the student should note the persistence of ancient tradition through all the manifestations of the new spirit by which the art was being so remarkably transformed. He will find that in the earliest Gothic statuary, the general treatment of form and the character of details, as tresses of hair and folds of drapery, strikingly reproduce those of archaic Greek art—as a comparison of the figures of Delos and those of the western portals of Chartres will show; and he will find further that Gothic sculpture develops out of its archaic character by successive steps that closely correspond to those through which that of classic antiquity develops, though it does so on lines that are distinctly mediaeval. He will see that as to form, the

statuary of the middle ages is less perfect than that of ancient Greece, partly on account of the stricter architectural subordination which the Gothic ideal demands, and partly in consequence of conventions arising from the use of coarser materials—which, for the most part, preclude approach to the Greek kind of perfection. Nevertheless, such was the skill of the Gothic carver, and the quality of the best stone afforded by the French quarries, that in many instances Gothic sculpture will bear comparison, as to form and workmanship, with the finest Greek art;* while in spiritual expression and in architectural value, it is supreme.

Coming to the carving of ornament derived from natural vegetation, the student should observe that the architecture of the middle ages, in northern Europe, displays a character before unknown; but yet that, equally with the statuary, the influence of ancient tradition is strongly marked. The old schemes of composition persist in the multitudinous varieties of scrolls, meanders, and geometrical figures, within which the details of foliation are enclosed, or on which they are arranged. Thus an historic continuity runs through the art of the past, while yet it will be seen that certain peculiarities distinguish the art of one locality, and one epoch, from that of any other. These marks of difference in artistic temperament and culture will call for constant discrimination. It will be found that the mediæval genius not only rang many changes on the historic elements, but that it often transformed them almost past recognition without destroying the basis of traditional composition.

Discrimination is of particular importance in respect to the changes that take place in an art as it advances and as it declines. The remark of Guizot, that great movements in human history begin with the good that is in them,† is as true of art as of other things. It will be found that the beginnings of every great art show an integrity of purpose in advance of ability to develop forms. As the art

progresses the uncouthness of primitive workmanship gives place to better execution until complete mastery of hand is attained. Then come those remarkable perfections that distinguish the finest art. But it behooves the student to observe that no great school has ever maintained its pristine integrity for very long. Redundance and extravagance, accompanied by loss of vitality, soon overtake it. This is clearly shown in the foliate carving of all European schools, but more particularly in the French Gothic. In the foliation of this school, the degree in which the vital spirit of nature is made manifest, through the proper conventions of stonework, gives the measure of the integrity of the art. This spirit in nature is most fully marked in the early stages of growth, as in the budding and early development of vegetation. In the finest Greek foliation, such as the acanthus leafage of the Epidaurus capitals, it is finely manifest. In the later Greek art it is less apparent, and in Greco-Roman foliation it disappears under exaggerated flexures of line and surface without nerve. In the early Gothic leafage this living principle finds expression under a marvelous variety of new and beautiful forms; and it is worthy of particular notice that in the earlier Gothic art the germinating forms of springtime give the ornamental motives, while in the more advanced period the spring leafage gives place to the developed forms of summer, and again, in the later art, the dried leafage of autumn appears; and still further, in the last stages of Gothic art foliation, becomes shrivelled and lifeless, as in the so-called Flamboyant style. This is no fanciful notion. It is a fact that may be readily verified.

As for painting, mosaic, and stained glass, as modes of architectural embellishment, the student should be taught to see that each of them, when practised normally, exhibits conventions that are inherent in the materials and processes employed; and that, apart from the artistic capacity of the craftsman, the qualities of each depend on the strictness with which its natural limitations are observed. The essential purpose in each case is to

**Cf. my Development and Character of Gothic Architecture*, pp. 374, 375.

†*Histoire de la Civilisation en France*, Paris, 1884, p. 365.

illuminate the walls or openings with color that shall in itself be pleasing to the eye. From an architectural point of view nothing more need be considered; though the work may have the further purpose of pictorial interest in so far as this is compatible with the conventions of the process involved. The principles and processes of each of these modes of color embellishment should be explained, in order that the student may perceive their proper limitations. He should see, for instance, that when the mosaic worker seeks to obtain pictorial qualities that belong to painting he disregards the natural conventions of mosaic, and destroys its ornamental value, while he necessarily fails to reach the proper qualities of painting; and that in stained glass any attempt to produce pictorial effects is still more disastrous and futile.

As for painting proper as wall decoration, it should be seen, from the monuments, that some mistaken notions concerning its conventions have prevailed in modern times.* These cannot, however, be discussed here any further than to say that such painting—in common with all kinds of color embellishment—has value architecturally only in proportion to its ornamental effectiveness; and its conventions are properly determined by this alone, save as they are inherent in the materials and processes of fresco or other medium employed. In architectural wall painting, the student will find that naturalism in representation may or may not exist—since the ornamental value of it depends on its quality as illumination only.

The foregoing suggestions will, I think, be enough to show the lines on which academic instruction in architecture may be usefully conducted. Many more things will occur to every competent instructor, and no two instructors will teach in precisely the same way in this any more than in other subjects. The instructor ought to have some solid first-hand knowledge of architecture, in addition to a native inclination to the subject; and his success in teaching will be in pro-

portion to his faculty of quickening observation by close study of the monuments. To this end he must have adequate equipment in trustworthy materials; and the only entirely trustworthy materials—apart from direct access to the monuments—being photographs, a suitable collection of these is indispensable. They should be of fairly large size, and from clear untouched negatives.* For each monument to be examined, a considerable number of photographs will be required in order to show, as far as may be, its complete form and structure both internal and external, as well as its ornamental details.

The proper classification, cataloguing, and storage of a working collection of photographs present some difficulties that cannot be wholly overcome. The most convenient method is, I think, to classify first by periods—as ancient, mediæval, and modern; then by countries, and then by particular localities. Thus the Parthenon, for example, would be found in the ancient group under Greek architecture of Athens. But as many architectural monuments of the past have been altered, or added to, at different times, so that parts of them as they now stand may be of several different periods, and so in several different styles, they cannot be wholly assigned to any one period. In such cases—which include the majority of ancient and mediæval buildings—it is well to group them according to the periods to which their greater parts belong, with cross references to the periods in which their other parts fall. Thus all illustrations of the style of any given period which the collection affords may be readily brought together.

The collection will need to be classified further under the different kinds of work represented—as architecture, sculpture, and painting, and where several kinds occur in the same building, cross references will again be needed. Sculpture and painting not associated with architecture may be grouped according to periods, countries, and particular localities, and

* I have dealt with this question in an article entitled, *Architectural Wall Painting*, published in *The Architectural Record* for January, 1918.

* What is called "artistic photography" is unsuitable. For architectural study a photograph is useless in proportion as it has suffered from retouching.

again under the names of masters, where these are known. Under painting it will be convenient to include both mosaic and stained glass. It is not well to classify paintings by galleries, because only a few works by a given master are to be found in any one gallery; and there may be important works by him not in any gallery. But when grouped by masters, all photographs in the collection representing works by a given master may be found in one place. Where names of masters are not known, the photographs may be classified by schools in so far as these can be determined.

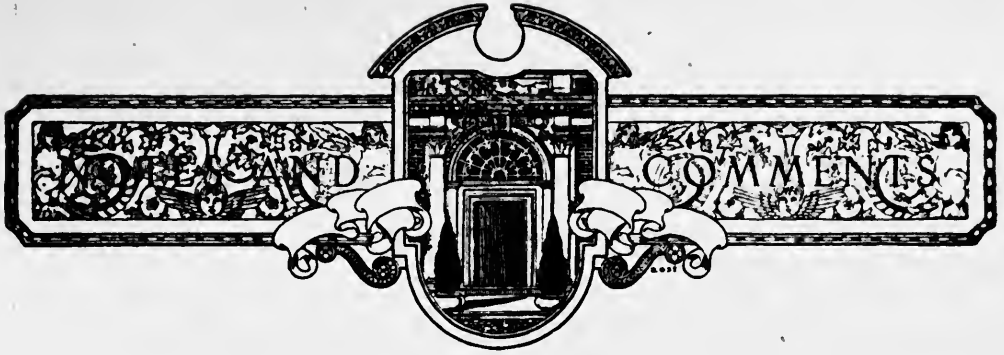
Any possible classification will present difficulties, but no serious inconvenience need arise in the system here described, if it be understood that nothing is affirmed conclusively as to periods, authorships or anything else. Many things are doubtful in these matters, and whatever system be adopted will be only for convenience in administration. There is difficulty in grouping things even under periods, not only because these may in some cases be doubtful, but also because definite limits cannot be set to the beginning or the ending of any period. As a working principle, however, limits must be fixed, and it may be assumed for convenience that the period of ancient art ends with the fifth century, that of the middle ages with the fifteenth, that of the Renaissance with the century following, after which everything may be called modern. As for storage and ready access, particularly for a large collection, no boxes or portfolios should be used. These occupy much space, and involve useless trouble and expenditure of time. The most convenient and the most compact method of storing photographs for use is in cases with upright compartments which may be in several tiers, in which the photographs, mounted on stiff boards, may stand upright, like books on a bookshelf. The mounts should be of uniform size, with only one photograph on each mount. The size of the mount will be given by the larger photographs, of which it is desirable that the collection should mainly consist; and for these, the margins need

only be wide enough to allow space at the top on which to write the catalogue and shelf numbers. The compartments ought not to be more than eight or ten inches wide, for otherwise the mounts will tend to sag when the compartments are not full. If they get bent they will be inconvenient to use. The catalogue numbers should be written near the front edges of the mounts, so that they may be easily run over in order to find what is wanted. If the cases be provided with dust-proof doors, the photographs will be better preserved.*

Of other desirable materials for study, the most important are, of course, original works by great masters in painting and sculpture; but these are both costly and difficult to obtain. Of the great historic schools of painting, no adequate materials for first-hand study can be found in America; though the growing public collections of the country already include some important works. For the study of sculpture, plaster casts may be useful, and are easily obtainable at little cost. But I think, as a rule, that photographs are better. Plaster casts are ugly things, and take up much room so that few of them can be housed. Photographs show more of the character of the originals, may be had in unlimited quantities, and if several views of each work be had, they will afford all that is required for academic study.

It should be added that in the study of architecture, as of the Fine Arts in general, some practice of drawing is desirable as an aid to apprehension and as a means of record and description. No study of the Fine Arts can be very fruitful without the kind of culture that comes through some training of the eye and hand. It is important, therefore, that courses in drawing should be maintained. Simple delineation and water color wash will give all that is required; but the exercises must be rigorous and sustained.

* This method of classification and storage was adopted in the Fogg Museum of Harvard University, where the collection of photographs was begun about thirty years ago, and was, I believe, the first of its kind. This collection comprised, when I last saw it in 1909, upwards of fifty thousand photographs.



Tapestry Styles and Room Design.

The architect who has built a room in any strictly period style can safely entrust it to a decorator without fear that his plan will be betrayed. For the decoration of a period room requires only expertness and there are plenty of references to supply the necessary information. But the fashion for period houses has reached its zenith and is now on the decline. In place of rooms that attempt to be only consistent reproductions of the taste of sixteenth century Italians or of seventeenth century Englishmen the discriminating person now wants rooms that profit by the architectural genius of the past but sustain their own individuality without being limited to any one historical type. The architect who has built such a room may well tremble for his design. For it will have to be furnished by a coherent collection of pieces from different origins and dates composed into a consistent whole by their community of spirit, and the selection of such a group of pieces demands of the decorator a sensitiveness to the particular quality of styles which comes only from native taste reinforced by a profound understanding of the spirit of different periods. Without such a sympathetic feeling for the character of different styles the decorator will never be able to blend his furnishings into a coherent whole, and, above all, will never be able to interpret by means of his decoration the intent of the architect.

While there are a number of decorators who can succeed in the choice of furniture for such a room because of their knowledge of this branch of the decorative arts, there are almost no decorators who are consistently successful in the selection and use of tapestries. The feeling seems too often to

be that where a textile is needed it must conform to the room only in size and color. There is almost no respect shown for tapestry as a highly evolved kind of design that has a definite character in every school and a specific personality in every piece that can be ranked as art. That character and that individuality must be regarded in any room whose coherence depends on maintaining a certain feeling quality.

In fact, a tapestry which has any strength of design at all probably impresses itself on the character of a room more insistently than any other one object in the room. Its very size makes it a relatively important factor in creating the spirit of the room and its claim on the attention is reinforced by the sharp contrast of its texture with all of the other textures in the room. An incongruous tapestry in an otherwise perfectly assembled room will disorganize the entire composition and shatter the unity of feeling in the decorations. And certainly the tapestry is of major importance in sustaining the architect's design, for tapestry is essentially an architectural decoration, almost as intimate a part of the structure of the room as the mouldings and panels. The architect who has concern for the outcome of his plan will do well to insist on an intelligent and sympathetic choice of tapestries.

In proportion as a tapestry is great as a work of art its character will, of course, be definite and dominating. So the greatest of all tapestries, the Gothic, must be used with the most delicate care for the feeling which they convey. Theirs is, moreover, a difficult feeling to sustain in a modern house, so difficult that perhaps success in their use can be assured only when the tapestry is given priority and allowed to dictate the scheme of the rest of the room. Yet most decorators are willing to add a

Gothic tapestry as an incidental afterthought to any room that has a general antique atmosphere.

The spirit of the Gothic is severe even in its gayest, most frivolous expressions. The Gothic is democratic, but it has a democracy that is achieved, not by indiscriminate inclusion, but rather by lifting every aspect of life up to rigorous aristocratic standards. So it is always dignified, haughty also; even when it is obscene, and by modern standards it not infrequently is obscene, it maintains an aloof quiet which shields it from any taint of vulgarity. It may be gay, ribald almost, and never violate its restraint.

Yet, notwithstanding this severe hauteur, the Gothic spirit is childlike and sweet. Its restraint is the reserve of native good breeding and is so inherent it is quite unselfconscious. Being unselfconscious it has none of the acrid antagonism that belies the hauteur of the parvenu. It is genuine and direct and perfectly honest, but it is never familiar. Only a rare American room can rise to the demand which the spirit of the Gothic imposes, and no room can fulfill its demands that does not take them carefully into account.

For the gentle but decisive formality of the Gothic, the Renaissance substitutes a much freer, really boisterous spirit. Restraint gives way to opulence, and reserve is melted in a flood of sunshine, yellows and brilliant reds. The rigorous, noble vertical lines of the Gothic are abandoned and in their stead is the abounding vitality of full curves and flowing movement. The Renaissance was aristocratic, but it was the aristocracy of wealth and power that it best expressed, force and abundance and pagan good health. There are no bounds to the Renaissance spirit. It dares anything because it never stops to question its own capacities.

The sumptuous confidence of the Renaissance weakens out to coarseness in many, if not most, of the pieces that have come down to us from the late sixteenth and early seventeenth centuries; but even the poorest of these pieces keep still the feeling of abounding good spirits, festivity and energy. To this predominant feeling of power and surety any room in which a Renaissance tapestry is used must be adjusted. Particularly the later, weaker pieces demand that the room live up to their spirit and so re-enforce it, else they will seem only distended and empty and exaggerated.

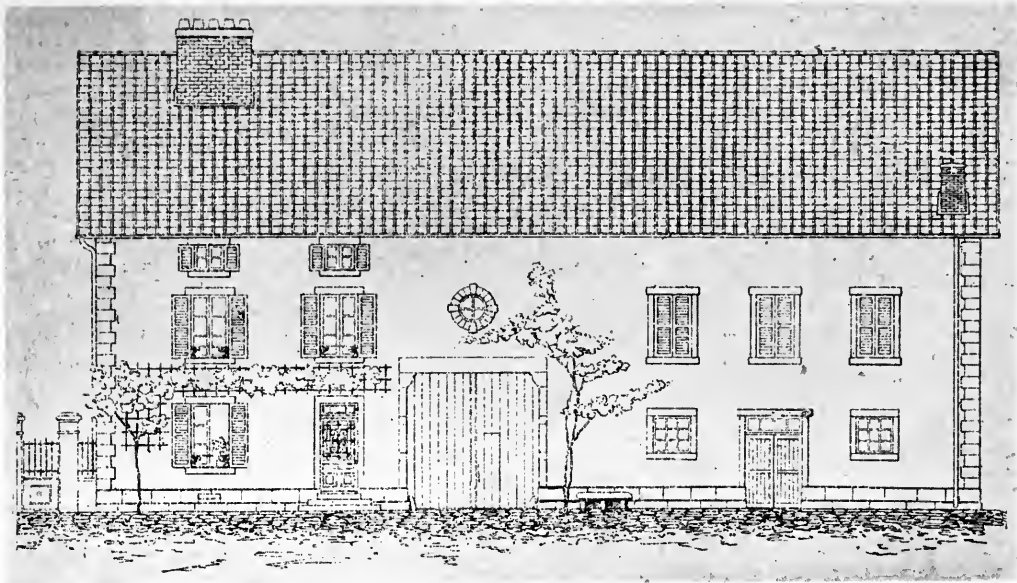
The tapestry of the seventeenth century takes on a heavier tone. The characteristic

designs of the pre-Gobelin and early Gobelin looms, with their strong, heavily modelled figures, their massive architectural sets, their dramatic placing and gesture are adapted rather to institutions than to the usual home. This was the age when the great impersonal institutions were developing. The state of the Middle Ages was intensely personal, built on the feudal relations of man to man, and the most characteristic institution of the Gothic period, the Church, was the elaborate glorification of two persons, Christ and the Virgin, with innumerable other persons about them, the long calendar of Saints. In the period of the Renaissance the domination of institutions gave way to a strong individualism that elevated the powerful to positions of pre-eminence but kept each man of first importance in his own eyes. The seventeenth century again reestablished institutions, but this time institutions built, not on personal relations, but powerful and independent in their own right. So we have the rapid development of the national State in France and in England, and so, too, we have the amazingly strong growth of capitalism in the economic world. This impersonality of strong institutions the tapestry of the period reflects, making it totally unfit for any room that strives for intimacy or quiet reserve.

There is, however, one familiar type of seventeenth century tapestry that has a more general utility, the Teniers verdure. These rich blue-green woods with their squat peasant figures are a satisfactory background for a wide range of decorative effects. Endowed with little character of their own, they do good service in providing a pleasant texture and color that is comfortable, but neither restrained nor boisterous nor grandiloquent. They are the great middle class of tapestry, not very decisive or interesting but sure and solid and convenient, and almost depressingly numerous.

The busy and skilful French looms of the eighteenth century have left but few contributions that are useful in a room which is not purely period in design. The delicacy of their tone and the frivolity of many of their subjects adapts them to an extravagant boudoir, but beyond that they almost always demand gilt furniture or elaborate and delicate marquetry. Outside of their own highly artificial atmosphere they are faint and ineffective.

A tapestry is not merely a cloth to cover conveniently a barren wall. It is a work of art, with a character of its own, that must



NO. 2. FROM "MODÈLES—TYPES DE CONSTRUCTIONS AGRICOLES."

Published by the French Ministry of Agriculture in Librairie de la Construction Moderne, Paris.

be respected; and if it is not respected, it will intrude itself and do violence to the character of the rest of the room. This the decorator must understand if he is attempting to do rooms of individuality. He must understand the spirit of each period and he must respect, too, the demands of the subject. What folly to put a Crucifixion in a living-room, and yet that sort of thing is being done. How ridiculous to hang an armorial tapestry, with its implications of a baronial hall and a vast establishment, in the small library of a New York apartment. If a tapestry is worth hanging, it is worth taping and worth treating with intelligent respect. And on this the architect who is protecting his plans must insist.

PHYLLIS ACKERMAN.

Types Reproduced in the Reconstruction of Farm-Houses in Northern France.

The French Ministry of Agriculture has published a volume entitled *Modèles—Types de Constructions Agricoles*, containing designs of farm-houses to be built in place of those destroyed during the war; and to lovers of the picturesque it is gratifying

to note that these designs retain the local characteristics of the older farmsteads of the several districts in Northern France. Here are two examples, each typical of a

particular locality: Drawing No. 1 is the street elevation of a type of farm-house intended for a district where stone of a certain kind is rather easily obtained. There is much charm in this very simple composition, notwithstanding that the illustration is a mere architectural drawing and not a pictorial one. It has the kind of charm that is inherent in the works of the Millet school of painting. The design is thoroughly expressive of the purpose of the simple dwelling—a place of rest after a good day's work. The whole façade is representative of the attitude of rest by its prevailing horizontality. There is not a single ornament and none is required. Does not the design in every feature remind one of the constant work of the forces of nature? Look at the texture of the wall: The jointing is a sort of ashlar-random in which the joints themselves form an interesting design in harmony with the lines of the climbing vines. The gradation observed in the distribution of stones—the larger at the bottom, the smaller at the top—and the variety in color that always exists in any quarry give the peasant's home a touch of the picturesque. Note the proportions of the windows, the difference between those of the first floor and those of the second: the unaffected beauty of symmetry, of balance. In any attractive design there are

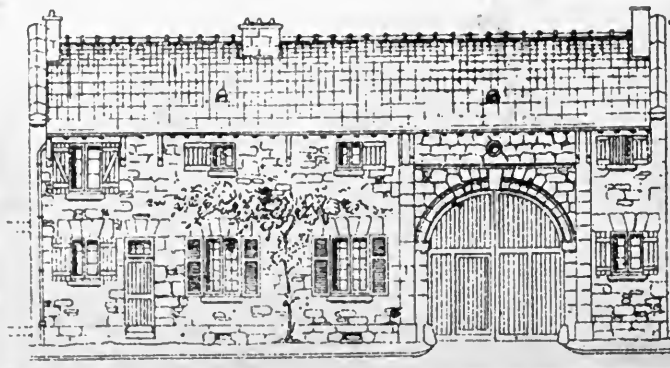
usually some curved lines; here the large wagon entrance is spanned with an arch which imparts to the whole an air of grace. The miracle realized in this design is due mainly to commonsense allied with the sense of proportion. Because the whole composition is horizontal enough, and would be suggestive of too great a calm if more horizontals were added, the verticality of the windows gives a sufficiently contrasting note of activity. The space between the windows indicates clearly the interior, in which the peasant loves to place his few beautiful pieces of furniture.

In drawing No. 2, the façade is plastered. We have no longer the picturesqueness of No. 1, but the charm of simplicity is here also. Only the structural quoins form the ornamental part of this design, stone, in the neighborhood for which this type is intended, being too expensive to be lavished on doors and windows. The importance attached to the cattle is vigorously written in both examples by the common roof given to the farmer and his horses, with the barn above them. In fact the former is subservient to the latter. The hard work and the deprivations of the French peasant are well accentuated, but it would be fairer to say "that these are the marks of his devotion to his work."

In other examples of these typical houses the artist has contrived to give a touch of grace to his design by simply alternating on his walls ashlar or pebbles with bricks. Wherever half timber is possible the degree of picturesqueness is increased. In each case financial considerations will dictate the proper material and forms. Every-

where there will be truth, an essential quality in a lasting art. No tattooing of ornament. In a way the hieroglyphics of the Egyptian column were interesting, but they formed a sort of tattooing on the surface of the shafts. More artistic, the Greeks tabooed this practice and allowed the shafts of their columns to run free all the way up, contenting themselves with the simple and beautiful effect of the fluting. Nature has permitted no useless ornaments to grow on man. The beauty of an arm is to be found in its very form and lines. The healthy and active one shows more strength, more power, than the idle one. The openness of look in the peasant is his best ornament, his consciousness of virile manhood. He knows how to smile though a little oddly dressed. Qualities of the heart do not depend upon the attire for expression. This quality is very well expressed in drawing No. 2. You can picture yourself the neatness of such a white shelter basking in the sun with no other ornament than its whiteness and its green shutters. How reposeful they must look. Tomorrow, when the farmers are again visited with the prosperity of the days preceding the war, new additions will be made to the present schemes. Those may display, not more luxury, but more refined craftsmanship. I cannot forget the wonderful feats of carpentry seen on the dormers of dwellings in the towns scattered along the valley of the Loire, which are still today the most patent proofs of the love of work for work's sake of which the Frenchman has always been possessed.

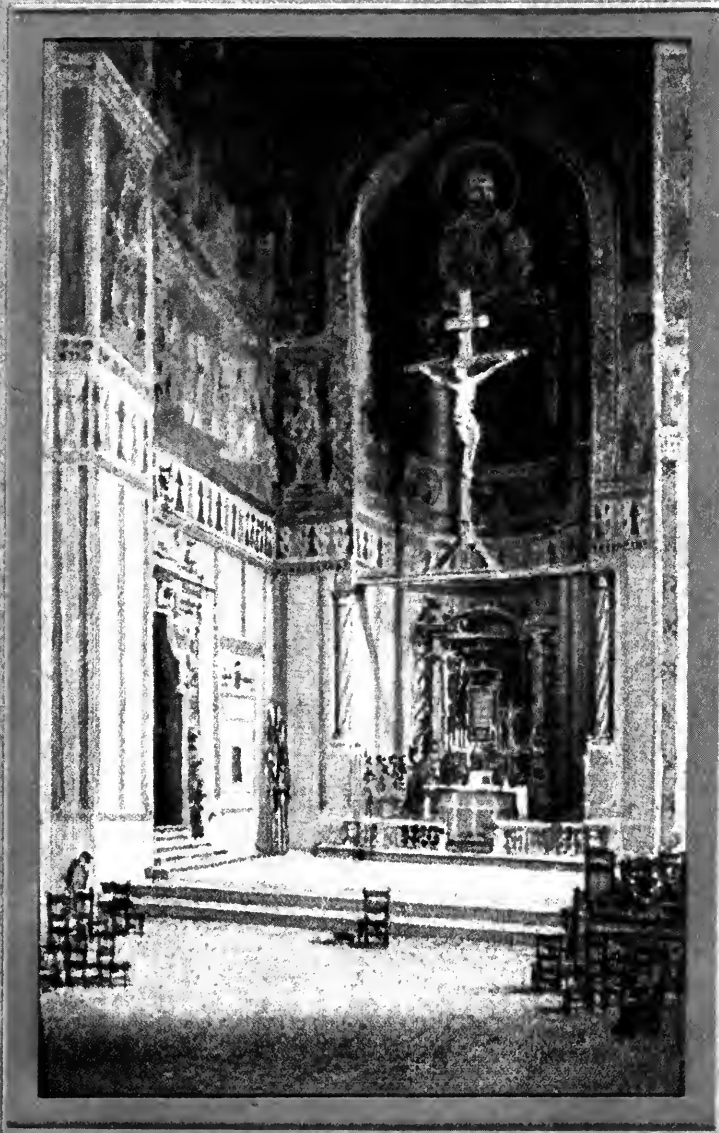
DAVID VARON.



NO. 1. FROM "MODÈLES-TYPES DE CONSTRUCTIONS AGRICOLES."

The ARCHITECTURAL RECORD

December 192

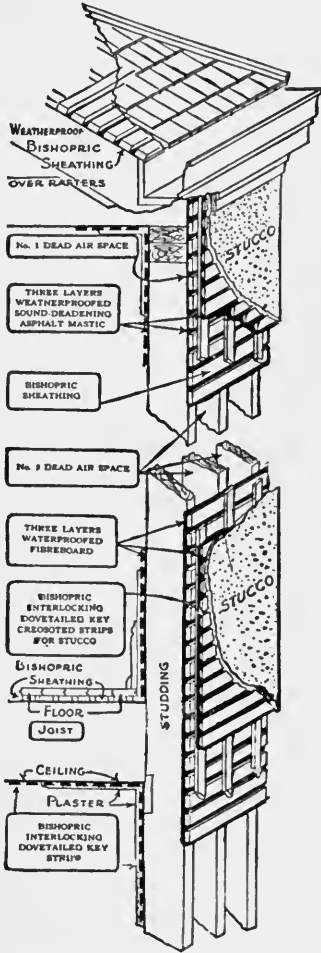


Published in New York
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Bishopric Stucco Base used on all exteriors.

IT is of great importance in the construction of the house of stucco to provide for the preservation of its beauty, its resistance against fire, vermin and decay, its insulation against change of temperature and dampness. Bishopric stucco and plaster base in construction and in use, offers the possibilities of this insurance.

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SWEETS CATALOG
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INCLUSIVE

We have prepared a booklet for you, containing facts and figures, and illustrated with photographs of beautiful houses built with Bishopric stucco, plaster and sheathing units. Ask for it.



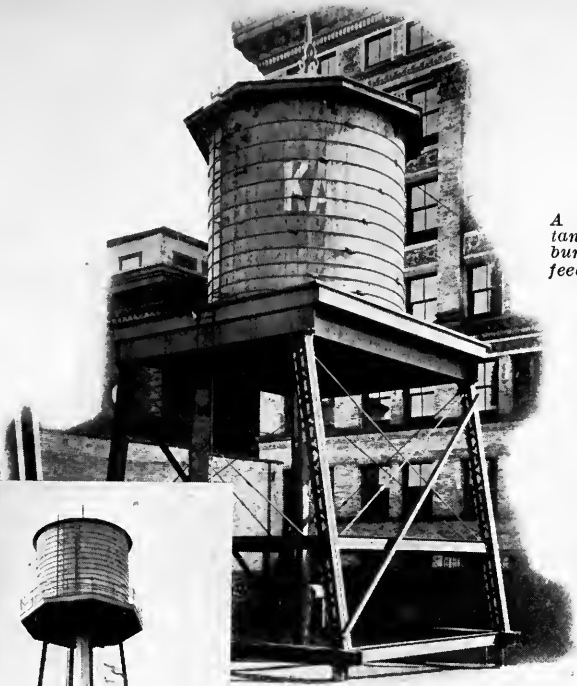
The Bishopric Mfg. Company

102 Este Avenue

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Factories: Cincinnati, Ohio, and Ottawa, Canada

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A 15,000 gallon Redwood water tank on the roof of one of Pittsburgh's large department stores—feeds the sprinkler system.



A 30,000 gallon water tank of 3" Redwood. Installed at the Pittsburgh Field Club for club house water system, watering the greens and supplying water for swimming pool.

REDWOOD TANKS ARE A SOUND INVESTMENT

Utility, service and cost are the three considerations that should determine water tank specifications.

In first cost some tanks—both wood and metal—are slightly cheaper than Redwood tanks. But judged by the term of service—and cost for upkeep—Redwood tanks are better and cheaper. Hoops may rust out and be repeatedly renewed. Redwood endures. Repair or replacement costs are minimized whether the service be ten years or thirty years.

Water does not rot Redwood. Fungus does not attack it. No protective treatment is required because Redwood is impregnated during growth with a natural preservative which remains in the fibre during the life of the tank.

Redwood is odorless and tasteless. It is unaffected by acids, alkalis or oils. Redwood tanks, pipes and vats are in continual use for supplying cities and institutions with water, tanning leather, dyeing textiles and for the strong solutions used in the leaching of copper. In all climates of the world Redwood tanks have been used for years, giving exceptional service.

Install a Redwood tank and you have a permanent job—a tank that neither rusts or rots—that remains tight and sound indefinitely—that does not affect the tank contents and is not affected by them.

Technical Data on Redwood

The many construction, engineering and equipment uses for Redwood are illustrated and described in the seventh edition of Sweet's Engineering Catalogue. Write our Chicago office for the Redwood Engineering Digest and for Redwood Booklets describing the special properties of Redwood for a wide range of special uses—from cigar box making to lining refrigerator ships and building pergolas, for exterior woodwork and interior finish, for silos and summer homes, for tanks and vats for all purposes.



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Main saloon on Mr. Vincent Astor's yacht "Nourmahal." Furniture and paneling in American Walnut

Quite naturally—

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"The Walnut Book"—illustrated—contains much interesting information about this "Cabinet-wood of the Ages." Free upon request. Will you send us your name?

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The selection of our goods for these well-known and much-used buildings, in which the locks have such an important place, is due more than anything else to their demonstrated worth; they meet the requirements of the management in security, protection and convenience and they also provide a decorative value that conforms to the artistic features of the architect's work.

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Have a STEADY Water Line

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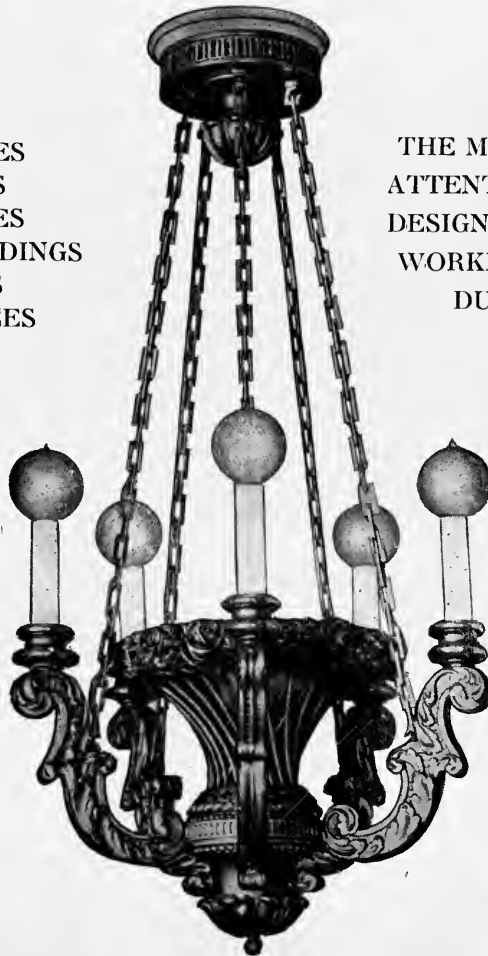
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THE MOST CAREFUL
ATTENTION GIVEN TO
DESIGN, PROPORTION,
WORKMANSHIP AND
DURABILITY



No. 983
6 LIGHTS

CALIFORNIA REDWOOD



The mantel, panels and ceiling beams of this living room are Redwood, finished in the natural color of the wood.

Firelight on Redwood—Ask your Architect

A Redwood living room is at its best in the evening, with the light from a wood fire making flickering patterns on the softly glowing walls.

Among architects and decorators there is a growing realization that Redwood, with its rich variety of grain and texture and tone, offers a marvellous palette to the artist in interior design. Hence a growing proportion of the Redwood cut is going into beautiful and distinguished living rooms.

But Redwood's uses are extremely varied. Being free from pitch and resin it is particularly adapted to paint and enamel work of all kinds. Its unequalled resistance to rot is well known—hence its extensive employment for exterior trim, siding, shingles, etc., for tanks and silos on the farm, and for numerous special industrial uses.

To get accurate and disinterested information about Redwood, go to your architect, building contractor, or lumber dealer, and say, "What about Redwood?"

Redwood is unequalled for the special uses to which it is best adapted, and for these uses the available supply is adequate for generations. Meanwhile, according to U. S. Forest Service Bulletin 318, merchantable second-growth Redwood is produced in less than 60 years by natural growth from the stump.

This Advertisement is appearing in the December issue of Atlantic Monthly, Century, Harpers, Scribners, The Review of Reviews, World's Work.

THIS advertisement is written with just one purpose in mind: to send prospective home-builders to their logical technical advisers—the architect, the building contractor and the lumber dealer—with a question: "What About Redwood?" You can answer this question, and it is your opportunity to secure a client or a customer. Complete information, prices and specifications may be obtained by addressing any of the sales and distributing branches listed below:

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A. C. Dutton Lumber Corporation, (agent), Springfield, Mass.
The Pacific Lumber Company, 311 California Street, San Francisco, and Central Bldg., Los Angeles, California.



The Pacific Lumber Co., of Illinois, 522 Fifth Ave., New York City; McCormick Bldg., 322 S. Michigan Ave., Chicago, Ill.; Grand Ave., Temple Bldg., Kansas City, Mo.
Union Lumber Company, (representing two additional producing companies), Crocker Bldg., San Francisco; Merchants National Bank Bldg., Los Angeles, Calif.; 2850 Grand Central Terminal Bldg., New York City; McCormick Bldg., Chicago, Ill.

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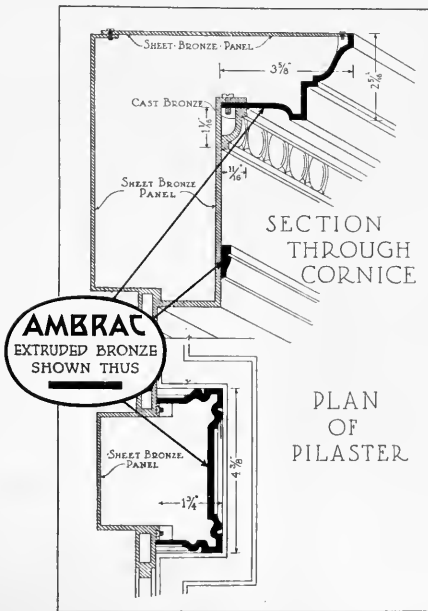
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Ambrac Structural Shapes



AMBRAC EXTRUDED BRONZE COUNTERSCREEN OF THE BANK OF COMMERCE, SPRINGFIELD, MO.
Opel & Torbett, Architects. Fabricated by the Michaels Art Bronze Company, Cincinnati, Ohio, from AMBRAC extruded bronze shapes and mouldings manufactured by The American Brass Company.



Ambrac Extruded Bronze Shapes—Clean and Sharp

THE extrusion process, long employed by The American Brass Company for the making of AMBRAC architectural bronze shapes, has made it comparatively easy to carry out the architect's specifications for bank screens, grilles, wickets, counters and cornices.

Because AMBRAC bronze is forced through a die made to conform exactly with the architect's sectional drawing, the resultant shape has the sharp lines and well defined shadows that the architect demands.

The Extrusion Departments of The American Brass Company at Kenosha, Wis., and Ansonia, Conn., will gladly supply any technical information desired.

The American Brass Company

Kenosha Branch
Kenosha, Wis.

Waterbury, Conn.

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Hotel Fuller
L.W. Fuller, Archts.



Stroh Building
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& Ellington, Archts.



Detroit Edison Bldg
Smith, Hinchman & Grylls, Archts.

WILLIAMS

Reversible Fixtures

The buildings displayed are all located in Detroit, Mich., and are indicative of the type of buildings in which the "Williams" Double Hung Reversible Window Fixtures are being used.

The outside of the sash in these buildings can be cleaned from inside the room in absolute safety and with the window closed. All risk of accident is eliminated. Insurance rates on this labor are reduced.

Furthermore, the actual time saved in so cleaning windows



First and Old
National Bank
Albert Kahn, Archt.

pays for the cost of the equipment within three years. There is also less annoyance to the occupants during the cleaning.

An ideal overhead ventilation is obtained by tilting one or both sash.

Detroit is but one of the cities where "Williams" Reversible Window Fixtures are being used in many buildings.

Our twenty years' experience in this work has carried us far past the experimental stage. We maintain a force of trained workmen whom we send to make the installation which includes fitting the sash. This insures proper operation and fixes responsibility.

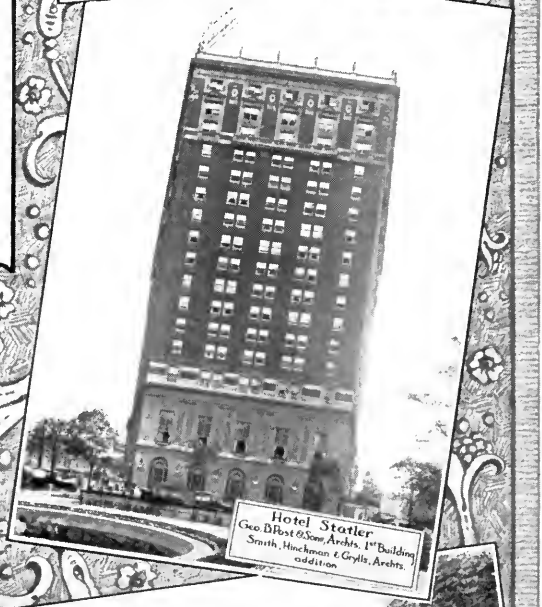
See Sweet's, pages 1197-9, for details and branch offices.

The WILLIAMS PIVOT SASH CO.

CLEVELAND, OHIO



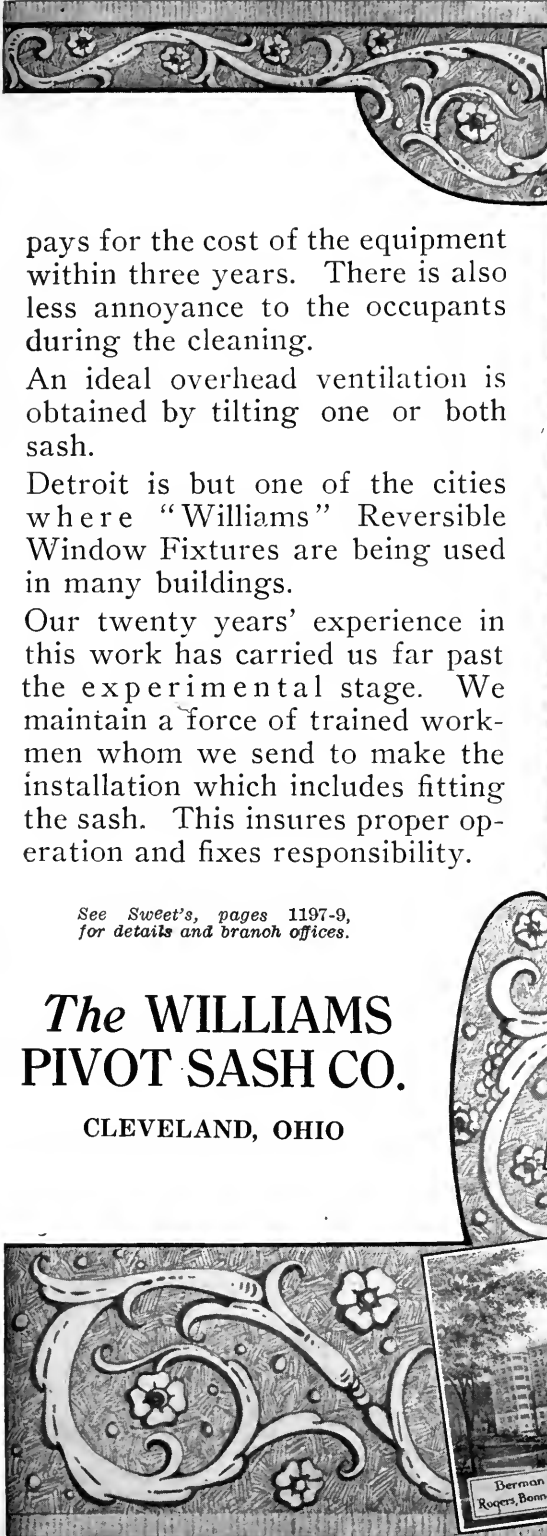
Standard Accident Insurance Co. Building
Albert Kahn, Archt.

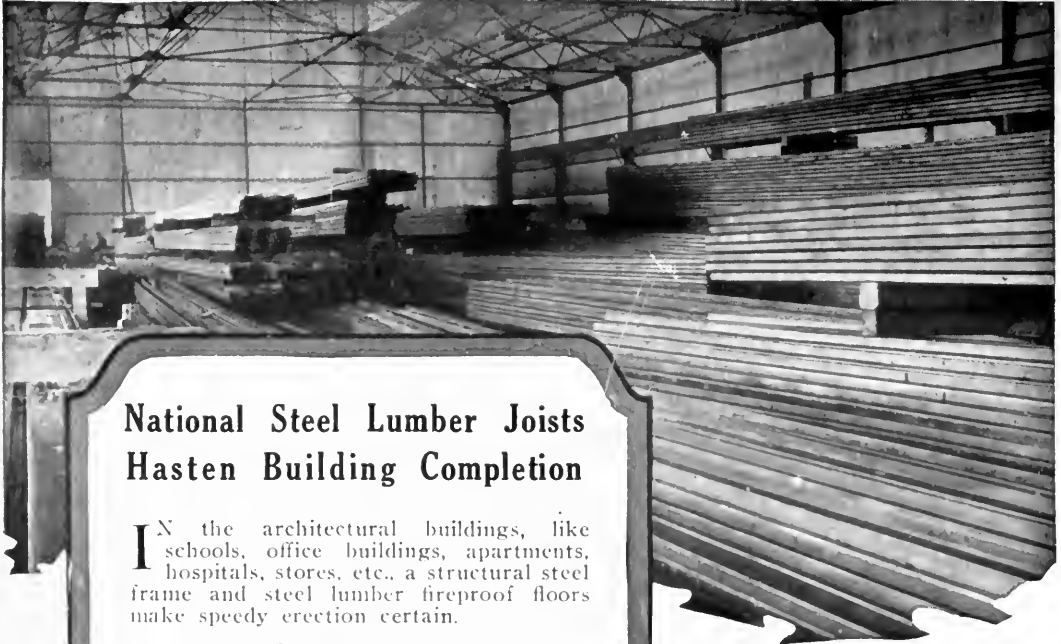


Hotel Statler
Geo. D. Post & Sons, Archts., 1st Building
Smith, Hutchinson & Caryl, Archts., addition



Berman Apartments
Rogers, Bonnah, & Chaffee, Archts.





National Steel Lumber Joists Hasten Building Completion

IN the architectural buildings, like schools, office buildings, apartments, hospitals, stores, etc., a structural steel frame and steel lumber fireproof floors make speedy erection certain.

The work of all trades on the job is perfectly synchronized. Masonry and floors go right along with the steel frame. Every bit of work brings the building nearer completion since in this construction all "dead work" is eliminated. Cold weather does not impede progress.

Leading structural steel fabricating companies throughout the country stand ready to render local service in the way of engineering, estimating and delivering material from their own warehouses, cut to length and ready to be set in place.

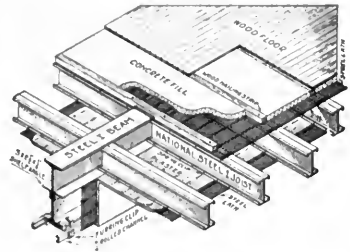
You can rely on steel lumber and structural steel construction for strength, for permanency, fire resistance, quick erection and broad economies in everything that affects the cost of a structure.

Write for details

The NATIONAL PRESSED STEEL CO.
MASSILLON, OHIO

DIVISION OF CENTRAL STEEL CO.

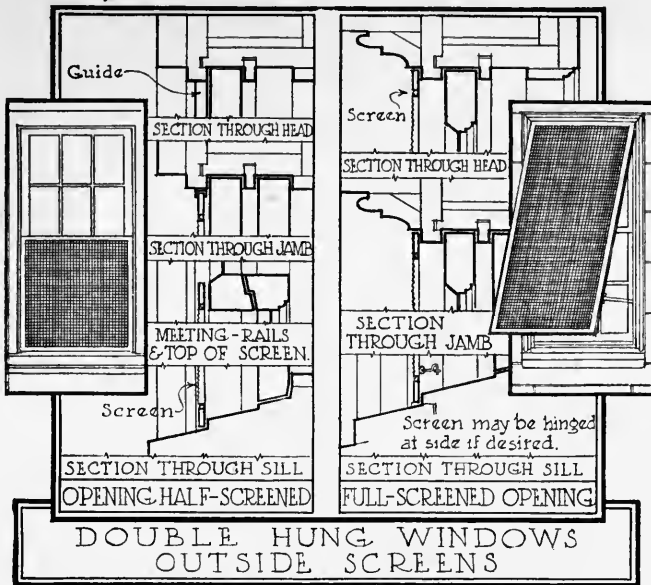
Stocks of National Steel Lumber joist sections are carried by structural steel fabricators throughout the United States. These fabricators supply contractors with the material ready for use.



Detail of Steel Lumber Full Fireproof Floor Construction.



NATIONAL STEEL JOISTS



Higgin All-metal Window Screens

WHEN an architect specifies HIGGIN Screens he thereby writes in HIGGIN Service, which extends all the way from the quality of the raw material to the installation of the product. We have agencies in charge of screen experts in practically all the largest cities—men who can estimate and who know what equipment is best adapted to meet conditions usual or unusual, how to measure and how work should be installed. Each agency has its corps of specially trained HIGGIN Screen mechanics—the net result being that both we and the architect are fully protected and are at all times *sure* of perfect work, which is as it should be in handling a product that we take pains to make 100% perfect in design and manufacture.

***On your next job, let us handle the screening.
It will be a revelation to you.***

Represented in Sweet's Catalogue, 1035-1039.

The Higgin Manufacturing Company

Window and Door Screens and All-metal Weatherstrips

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(For Everlasting Economy)



“Afraid They Are Too Expensive”

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In educating the client to the truth about Oak Floors, architects render high professional service—influencing him towards his best

interests. A service doubly appreciated later on.

A special thickness ($\frac{3}{8}$ of an inch), for over-laying old floors, should be remembered in remodeling commissions.

Write for our 3 free booklets, in colors. They contain much accurate information for architects' files.



For general specifications, see page 458, Sweet's Architectural Catalogue, 16th Edition.

OAK FLOORING *MERSAISON*

1039 Ashland Block, Chicago, Ill.



Grace Evangelical Lutheran Church, Wadsworth, Ohio. Mr. Reynold H. Hinsdale, Cleveland, Architect; Artstone furnished by The George Rackle & Sons Co., Cleveland, using Medusa Stainless White Cement. Waterproofed.

“Medusa” Trim Adds Distinction

THIS interesting edifice, in French Gothic design, strikes a note of good taste very often missed in the buildings in our smaller cities and towns. The contrast afforded by the fresh, white Artstone finish (made from Medusa Stainless White Cement and suitable aggregates) against the tapestry brick, is distinctive, yet restrained and pleasing.

The use of Medusa Waterproofed Stainless White Cement is assurance to architect and congregation that the finish will not only repel moisture permanently, but that even many years' exposure will not cause the trim to discolor or change texture.

The Medusa Booklets will be gladly sent on request.

THE SANDUSKY CEMENT COMPANY,
Department A CLEVELAND, OHIO

*Manufacturers of Medusa Stainless White Cement
(Plain or Waterproofed) and Medusa
Waterproofing (Powder or Paste).*



The interior is done in quartered oak; Caen stone walls with Artstone trimming. Aisle and vestibule floors of Faence tile; Chancel floor of Grey Tennessee Marble. The altar is of White Vermont Marble.

The "MEDUSA REVIEW" deals with problems of architect, engineer, contractor and dealer, and shows various applications of cement in construction work of various kinds. We shall be pleased to enter your name on request. The subscription is free.

MEDUSA Stainless White Cement - Waterproofed

Build the roofing of rock, too

THE permanence of this building's roof is definitely assured because, like the walls, the roofing is also of stone.

Layer upon layer, sheets of felted asbestos rock fibres impregnated with mineral asphalt were built up into a roofing of stone that will endure through years and years of exposure to any weather.

If you would be certain of the roof covering, specify a roofing of stone—Johns-Manville Asbestos Roofing.

Johns-Manville Asbestos Roofings are approved by Underwriters' Laboratories, Inc.

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Madison Avenue, at 41st Street, New York City

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JOHNS-MANVILLE ASBESTOS ROOFING



"The Captains and the Kings Depart"

THE last workman has packed his tools and gone. The builder's job is finished. Through the empty house the architect passes, taking it all in for the last time, room by room.

It is *his* job—his life's work. No matter who *buys* the house, no matter who *uses* the house, the architect's title to the soul of the structure will stand unchallenged as long as the walls themselves stand.

It is *his* job. *His* vision guided the stroke of every hammer, of every chisel, of every trowel, of every brush. Thought endures forever, while labor has an end.

* * *

Yet there was a time when the architect contributed more than design, form, harmony—he was himself a master builder, working with his men—himself a manufacturer also, forging and shaping iron, brass, copper, and bronze.

To others long since have fallen the duties of forge and anvil, smelter and crucible, hammer and trowel. The

That there may arise a more conscious appreciation of this—a spirit of closer cooperation—a return of that ancient "Craft fellowship" when pencil, hammer and forge worked under one roof—is a message of sincere good will which we are certain will find a responsive echo in many hearts.

substance of the house is no longer one with its *thought*. No longer *one*, substance and thought are still inseparable. Inert and meaningless the stone, brass and wood until summoned by the power of the architect's thought. Disembodied, equally meaningless is the carefully sketched thought until realized in substance of steel, wood, and stone.

* * *

Architect, Builder, Manufacturer—no matter how far apart they seem in purpose, in technic, or in ambition, the good of one is the good of all, and the good of all is the good of each.

THE STANLEY WORKS
NEW BRITAIN, CONN.

Makers of Wrought Hardware and Carpenter's Tools



LONG-BELL

TRADE MARKED

Lumber and Timbers

WHEN BUYING LUMBER

Consider Value as Well as Price

"Is it the best buy in the long run?," "Will it fill the bill?," are the questions to be answered before getting down to dollars and cents. In other words—there can be no compromise with poor lumber and timbers where strength and durability are the main essentials.

Behind every piece of Long-Bell lumber, there is more than forty years of lumber experience and into every piece goes our reputation because we brand our product with our trade-marked name. This means identification all the way from mill to user.

The Long-Bell Lumber Company's stands of long leaf Southern Pine in the Calcasieu district recognize no superior among woods, commercially available, where strength and durability are essential. From tree to loading dock our products are subject to vigilant inspection and our strict adherence to the grading rules, together with careful manufacturing, results in lumber with a reputation for uniform high quality.

Upon request we will send architects, without charge, a copy of our book, "From Tree to Trade," the story of lumber manufacture from the woods to the finished product. Please mention this magazine when requesting the book.

SOUTHERN PINE LUMBER AND TIMBERS; CREOSOTED LUMBER, TIMBERS, POSTS, POLES, TIES, PILING, WOOD BLOCKS; CALIFORNIA WHITE PINE LUMBER, SASH AND DOORS, STANDARDIZED WOODWORK; GUM AND OAK LUMBER; OAK FLOORING.

The Long-Bell Lumber Company

R. A. LONG BUILDING Lumbermen since 1875 KANSAS CITY, MO.



PIPE ORGANS FOR SPECIFIC PURPOSES

There are at least five kinds of buildings in which pipe organs may be installed—

Churches

Theatres—*moving picture and other*

Concert halls

Hotels

Residences

An architect may be called upon from time to time to advise on an organ for any one of these structures.

We want to convince you that we, a firm of organ builders with seventy-five years' experience, with examples of our work in buildings of all five kinds all over this country, with a well equipped factory, staffed with both artisans and artists who understand the pipe organ structurally, musically, and artistically, are at your service to furnish advice, information, experience, and cooperation of every sort, if you have a client who wants a pipe organ for any purpose.

ESTEY ORGAN COMPANY

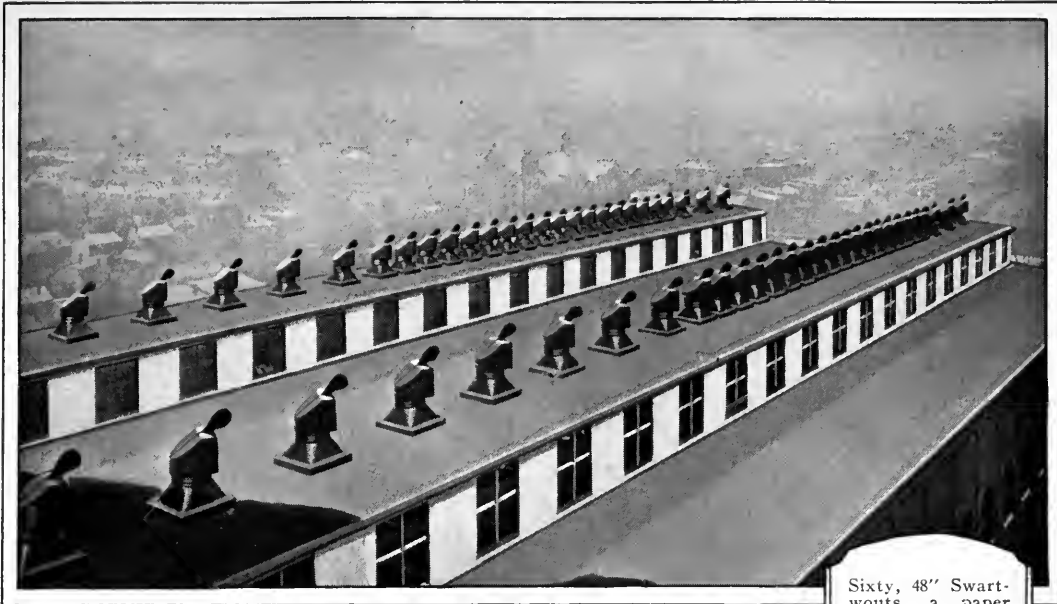
Brattleboro, Vermont

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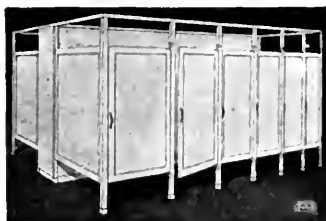
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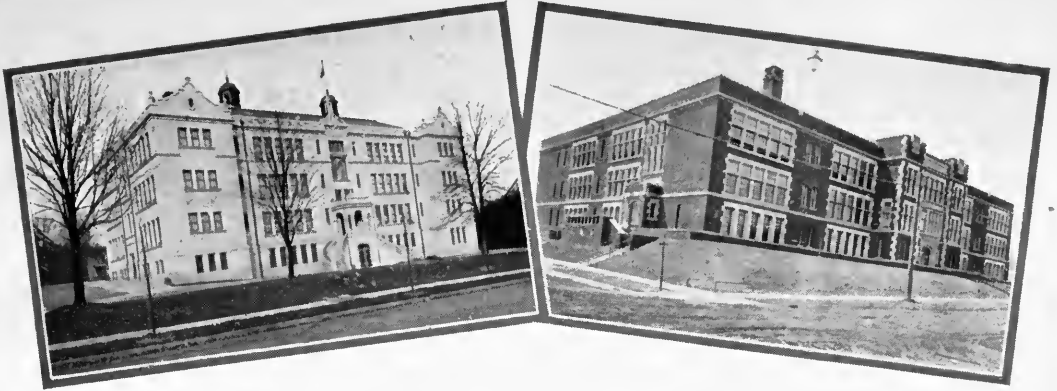
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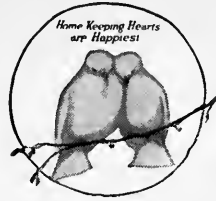
RECENT PUBLICATIONS *of* ARCHITECTURAL INTEREST

Under this heading is listed a selection of (1) new catalogues, monographs and reports published by manufacturers, manufacturers' associations, technical societies, educational institutions and government departments, and (2) books on architecture and the allied arts. The manufacturers' publications may be secured by architects from the firms who issue them free of charge except where otherwise noted.

- ACOUSTICS.** Sound Reflections. Junius H. Stone Corporation, 1400 Broadway, New York. Vol. 1, No. 1. 5½x8 in. 12 pp. Illustrated.
- ACOUSTICS.** Akoustolith as Related to Architectural Acoustics. R. Guastavino Co., Woburn, Mass. 10x13 in. 16 pp. Illustrated.
- AIR HANDLING.** "The Climate Doctors." B. F. Sturtevant Co., Hyde Park, Boston, Mass. 3½x6 in. 12 pp.
- BELLS.** Meneely Bells. The Meneely Bell Co., 22-26 River St., Troy, N. Y. New York Office, 220 Broadway. 5½x4¼ in. 20 pp. Illustrated.
- BOILERS, HEATING.** Kay-Sola Gas Fired Heating Boilers. Folder No. 51. The Solar Engineering Co., 505 Fifth Ave., New York. 4x8½ in. 8 pp. Illustrated.
- CLOCKS.** Seth Thomas Tower Clocks—Catalogue No. 7. Seth Thomas Clock Co., Thomaston, Connecticut. 8x10½ in. 72 pp. Illustrated.
- CLOCKS.** Seth Thomas Electric Secondary Clocks. Catalogue No. 701. Seth Thomas Clock Co., Thomaston, Connecticut. 6x9 in. 20 pp. Illustrated.
- CLOCKS.** Electric Clocks. Bulletins 1, 2 and 3. Radio Time Service, Incorporated, 161 Devonshire St., Boston, Mass. 8½x11 in. 4 pp. each. Illustrated.
- COATINGS, PROTECTIVE.** M-R—The Story of Waterproof Plastic Protective Coatings. Mitchell-Rand Mfg. Co., Waterproofing Dept., 18 Vesey St., New York. 8½x5½ in. 20 pp. Illustrated.
- COATINGS, PROTECTIVE.** M-R Protective Coatings. Mitchell-Rand Mfg. Co., 18 Vesey St., New York. 4x9½ in. 8 pp. Illustrated.
- COMPRESSORS.** Worthington Unaflo Steam Driven Compressors. Bulletin L-542. Worthington Pump & Machinery Corporation, 115 Broadway, New York. 6x9 in. 24 pp. Illustrated.
- CONVEYORS, ASH.** Green Steam Jet Ash Conveyors. Green Engineering Co., East Chicago, Indiana. 4x9¼ in. 8 pp. Illustrated.
- COPPER & BRASS.** Bulletin No. 3 of the Copper & Brass Research Association, 25 Broadway, New York. 8½x11 in. 12 pp. Illustrated.
- DISH-WASHING MACHINES.** Victor Haustetter Electric Dish-Washing Machines. F. G. Street & Co., Inc., 132 Nassau St., New York. 8½x11 in. 4 pp. Illustrated.
- FANS & EXHAUSTERS.** "Bringing Nature's Fresh Air Indoors." L. J. Wing Mfg. Co., 352-362 West 13th St., New York. 3½x6½ in. 8 pp. Illustrated.
- FINISHES, WOOD.** "Various Woods Finished With Johnson's Artistic Wood Finishes." S. C. Johnson & Son, Racine, Wisconsin. 5½x10¾ in. Finishes shown on actual samples of wood. 14 pp. Illustrated.
- FLOOR CONSTRUCTION.** Republic Two-Way Fireproof Floor Construction. Republic Fireproofing Company, Inc., 116 West 32d St., New York. 8x11 in. 28 pp. Illustrated.
- FLOORS, BLOCK.** Report of an Investigating Committee of Architects & Engineers on Hastings Asphalt Block Floors. The Hastings Pavement Company, 25 Broad Street, New York. 8½x11 in. 8 pp. Illustrated.
- FLOORS, BLOCK.** ZR-2. The Navy Dirigible Hangar, Lakehurst, N. J. The Hastings Pavement Co., 25 Broad St., New York. 8½x11 in. 6 pp. Illustrated.
- FLOORING.** Marbleloid, the Modern Flooring for Hospitals. The Marbleloid Company, 461 Eighth Avenue at 34th St., New York. 8½x11 in. 4 pp. Illustrated.
- GLASS, LIGHTING.** Macbeth Lighting Glass. Catalogue No. 112. Macbeth-Evans Glass Company, Pittsburgh, Pa. 6x9 in. 64 pp. Illustrated in color.
- GLASS CONSTRUCTION.** Keppler Rooflight Constructions. Bulletin No. 207. Frederick L. Keppler, 1799 First Avenue, New York. 8½x11 in. 4 pp. Illustrated.
- GRILLES, WROUGHT STEEL.** H. & C. Quality Grilles. Hart & Cooley Co., Inc., New Britain, Connecticut. 6x9 in. 16 pp. Illustrated.
- HARDWARE, WINDOW.** Standard Comfort Window Hardware. Standard Comfort Window Corporation, 426 Broome St., New York. 6½x9¼ in. 12 pp. Illustrated.
- HARDWARE, WROUGHT.** Catalogue of the Stanley Works Wrought Hardware. The Stanley Works, New Britain, Connecticut. 6¾x9¾ in. 376 pp. Bound in stiff covers and illustrated.
- HEATERS, UNIT.** Engineers' Data Book of Wing-Scruplex Unit Heaters. L. J. Wing Mfg. Co., 352-362 West 13th St., New York. 9x11 in. 7 pp. Illustrated.
- HEATING & VENTILATING.** The Peerless Unit System of Heating and Ventilating. Peerless Unit Ventilation Co., 437-9 West 16th St., New York. 8x10½ in. 28 pp. Illustrated.
- HEATERS, WATER.** Worthington Stilwell Open Feed Water Heaters. Bulletin PM-210. Worthington Pump & Machinery Corporation, 115 Broadway, New York. 6x9 in. 16 pp. Illustrated.
- HEATERS, WATER.** American Gas-Fired Automatic Water Heaters. American Heater Corporation, Sixth & Carr Sts., St. Louis, Missouri. 5x7 in. 24 pp. Illustrated.

RECENT PUBLICATIONS—Continued

- HEATING SYSTEMS.** Gorton Single Pipe Vapor Heating System. Gorton & Lidgerwood Co., 96 Liberty St., New York. 3½x6¼ in. 16 pp. Illustrated.
- HEATING & COOLING.** Heaters, Coolers, Economizers & Interchangers. Catalogue No. 3. Alberger Heater Co., Buffalo, New York. 7½x10½ in. 48 pp. Illustrated.
- HOISTS, TELESCOPIC.** The G. & G. Telescopic Hoist with Automatic Gear Shifting Brake Device & Silencer. Gillis & Geohegan, 550 West Broadway, New York. 8½x11 in. 20 pp. Illustrated.
- INSULATION.** "Everything in Insulation." Catalogue No. 262. Mitchell-Rand Mfg. Co., 18 Vesey St., New York. 7¾x10½ in. 72 pp. Illustrated.
- KILNS, DRY.** Sturtevant High Humidity Dry Kilns. Catalogue No. 282. B. F. Sturtevant Co., Hyde Park, Boston, Mass. 8½x11 in. 52 pp. Illustrated.
- LIGHTING, ELECTRIC.** Vol. VII, No. 2 of "Eye Comfort." National X-Ray Reflector Co., 235 West Jackson Boulevard, Chicago, Illinois. 8x10 in.
- LIGHTING, ELECTRIC.** Bruscolite Bulletin No. 3 Architectural Series, "Schools, Colleges & Y. M. C. A. Buildings." Luminous Unit Co. Division of St. Louis Brass Mfg. Co., St. Louis, Missouri. 7¾x10½ in. 44 pp. Illustrated.
- LIGHTING, ELECTRIC.** Catalogue BC-11 of Residence Lighting Fixtures. St. Louis Brass Mfg. Co., St. Louis, Mo. 7¾x10½ in. 48 pp. Illustrated.
- LOCKS, ELEVATOR.** "A Sign of Safety." M. C. K. Elevator Locks. The Elevator Locks Co., Peoria, Illinois. New York Office, 101 Park Avenue. 4x9¼ in. 28 pp. Illustrated.
- MATERIALS, BUILDING.** Hand Book Describing Berloy Building Materials. First Edition. The Berger Manufacturing Co., Canton, Ohio. 4½x6½ in. 400 pp. Illustrated and bound in boards.
- METERS, SWITCHBOARD.** Bulletin No. 57 of Sangamo Switchboard Meters. The Sangamo Electric Co., Springfield, Illinois. 8x10½ in. 28 pp. Illustrated in actual colors.
- MORTAR, BRICKMORTAR—The Perfect Mortar.** Louisville Cement Co., Incorporated, Louisville, Kentucky. 5¾x7¾ in. 10 pp. Illustrated in color and bound in boards.
- PARTITIONS, FOLDING.** Wilson Folding Partitions. The J. G. Wilson Corporation, 8 West 40th St., New York. 8½x11 in. 16 pp. Illustrated.
- PARTITIONS, POMEROY HOLLOW METAL PARTITIONS.** Bulletin No. 203. S. H. Pomeroy Co., Inc., 30 East 42d St., New York. 8½x11 in. 4 pp. Illustrated.
- PILES.** Raymond Concrete Piles. Raymond Concrete Pile Company, 140 Cedar St., New York. 3½x6¼ in. 12 pp. Illustrated.
- PRESERVATIVES, WOOD.** The Annual Charge Against Treated Timber. Bulletin No. 40. By F. S. Paddock, Chemical Engineer. The Protexol Corporation, 34 Barclay St., New York. 6x9 in. 28 pp. Illustrated.
- PUMPS.** Motor Pump, Horizontal Single Plunger Pattern. Bulletin D-902. Worthington Pump & Machinery Corporation, 115 Broadway, New York. 6x9 in. 4 pp. Illustrated.
- REFRIGERATION, MORTUARY.** Mortuary Refrigeration and the De Cani Improved Support. Lorillard Refrigerator Co., Madison Avenue at 48th St., New York. 5x6¾ in. 14 pp. Illustrated.
- REFRIGERATION.** York Vertical Enclosed Single-Acting Ice-Making and Refrigerating Machines. York Manufacturing Co., York, Pa. 6¼x9¼ in. 32 pp. Illustrated.
- ROOFING.** "The Roof That's Always New"—An Introduction to Illinois Zinc Shingles. The Illinois Zinc Co., 280 Broadway, New York. 3¼x6 in. 10 pp. Illustrated.
- SASH, STEEL.** Trusecon Sidewalk Sash, Counterbalanced Sash, Continuous Sash and Mechanical Operators. Trusecon Steel Company, Youngstown, Ohio. 8½x11 in. 80 pp. Illustrated.
- SHELLAC.** "The Story of Shellac." Wm. Zinsser & Co., Inc., 195 William St., New York. 3¼x6¼ in. 16 pp. Illustrated.
- SHINGLES, RED CEDAR.** Distinctive Homes of Red Cedar Shingles. The Shingle Manufacturers' Association of B. C., 911 Metropolitan Building, Vancouver, B. C. 6x9 in. 28 pp. Illustrated.
- SHINGLES, RED CEDAR.** Farm Buildings of Red Cedar Shingles. The Shingle Branch, West Coast Lumberman's Association, 10th Floor, White Building, Seattle, Washington. 6x9 in. 18 pp. Illustrated.
- SLATE, STRUCTURAL.** "Miscellaneous Uses of Slate"—Chapter II of a Series on Structural Slate. The Structural Slate Co., Pen Argyl, Pa. 8½x11 in. 8 pp. Illustrated.
- STANDARDS, LIGHTING, ETC.** "Lead, Kindly Light." Bulletin on Union Metal Lamp Standards. The Union Metal Manufacturing Co., Canton, Ohio. 6½x11 in. 10 pp. Illustrated.
- STORE PLANNING.** A Blue Print of a Floor Plan & Elevations Submitted by the Store Planning Department of the Grand Rapids Show Case Co., Grand Rapids, Michigan.
- TILEWORK.** "Work Sheets" for Specification Writers. The Associated Tile Manufacturers, Beaver Falls, Pa. 7½x10¾ in. 16 pp.
- TILES.** Basic Specifications for Tilework & Related Documents. Publication No. K-300. Associated Tile Manufacturers, Beaver Falls, Pa. 7½x10½ in. 38 pp.
- VARNISHES, ETC.** Shellac Products of Quality. Wm. Zinsser & Co., Inc., 195 William St., New York. 4½x7 in. 12 pp. Illustrated.
- VENTILATING SYSTEMS.** "A Better Summer Business." Monsoon Cooling System, Inc., New York. 6½x8¾ in. 32 pp. Illustrated.
- WARDROBES.** Wilson Disappearing Door Wardrobes. The J. G. Wilson Corporation, 8 West 40th St., New York. 8½x11 in. 4 pp. and detail plan. Illustrated.
- WINDOWS, METAL.** Pomeroy Austral Hollow Metal Fire Retardant Windows. Bulletin No. 2201. The S. H. Pomeroy Company, Inc., 282-296 East 134th St., New York. 8½x11 in. 8 pp. Illustrated.
- WIRES & CABLES.** Specifications for Extra Grade Commercial Code, Intermediate and Extra High Grade Rubber Insulated Wires and Cables. Atlantic Insulated Wire & Cable Co., Stamford, Conn. 8½x11 in. 3 pp. each.
- WOODWORK.** General Catalogue No. 185 of Good Quality Woodwork. Gould Manufacturing Co., Oshkosh, Wisconsin. 5¼x7½ in. 288 pp. Illustrated.



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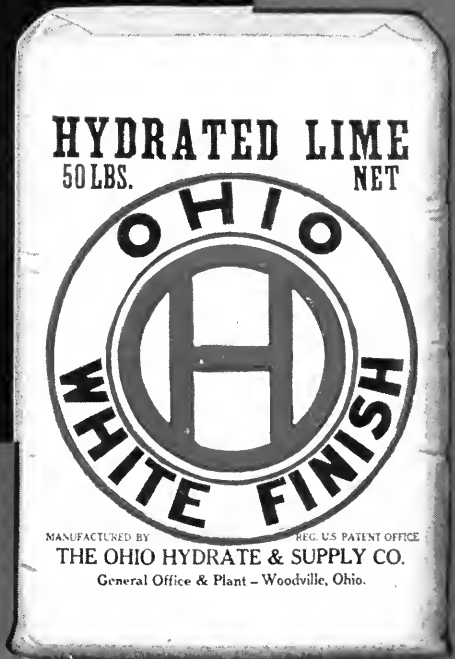
The Margin of Quality which Appeals to the Experienced Architect

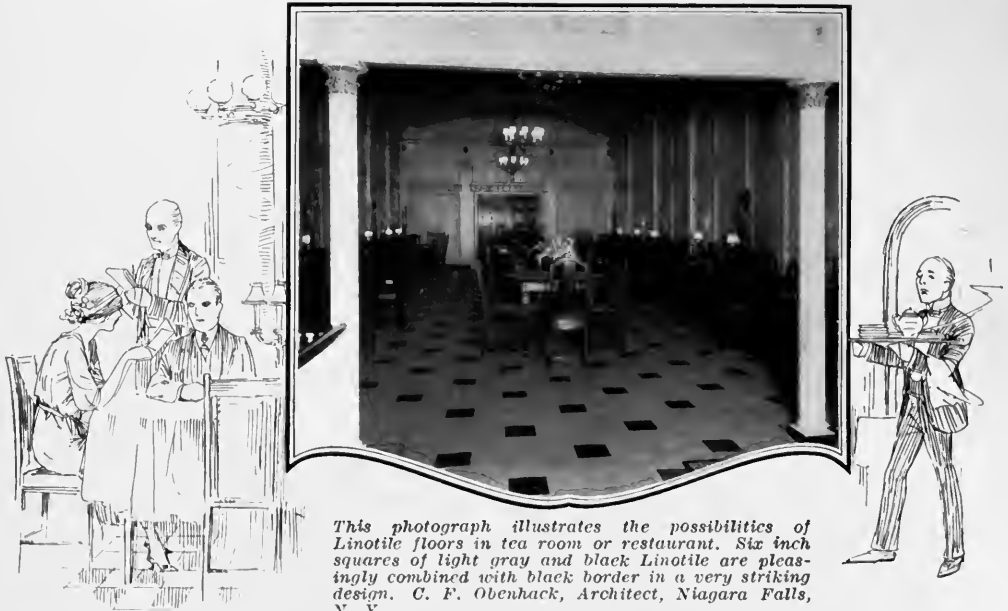
EVEN as it comes from the bed of dolomite limestone here at Woodville, OHIO WHITE FINISH carries less than one-half of one per cent of impurities—and this better-than-99½ percentage of purity is painstakingly guarded throughout manufacture.

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This photograph illustrates the possibilities of Linotile floors in tea room or restaurant. Six inch squares of light gray and black Linotile are pleasingly combined with black border in a very striking design. C. F. Obenhack, Architect, Niagara Falls, N. Y.

Featuring the Floor with Linotile

LINOTILE in tea rooms and restaurants enhances the dignity and charm that attract discriminating patronage. A floor of character—in itself a distinctive decorative feature—Linotile gives individuality to the room in which it is laid.

Linotile is a cork composition, made in tiles of various shapes and many sizes and in eleven pleasing colors. Laid piece by piece in an almost unlimited variety of combinations, Linotile floors conform to areas of any size or shape, harmonize with any architectural treatment and afford unusual scope for originality in design.

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Armstrong Cork & Insulation Co., 161 Twenty-fourth St., Pittsburgh, Pa.

LINOTILE FLOORS

"Spreads like warm butter"



—consequently covers greater area; and insures smooth, even wall surfaces, perfect corners and angles.

See Sweet's Catalog, or write us for detailed specifications. Over four thousand dealers are at your service when you specify TIGER.

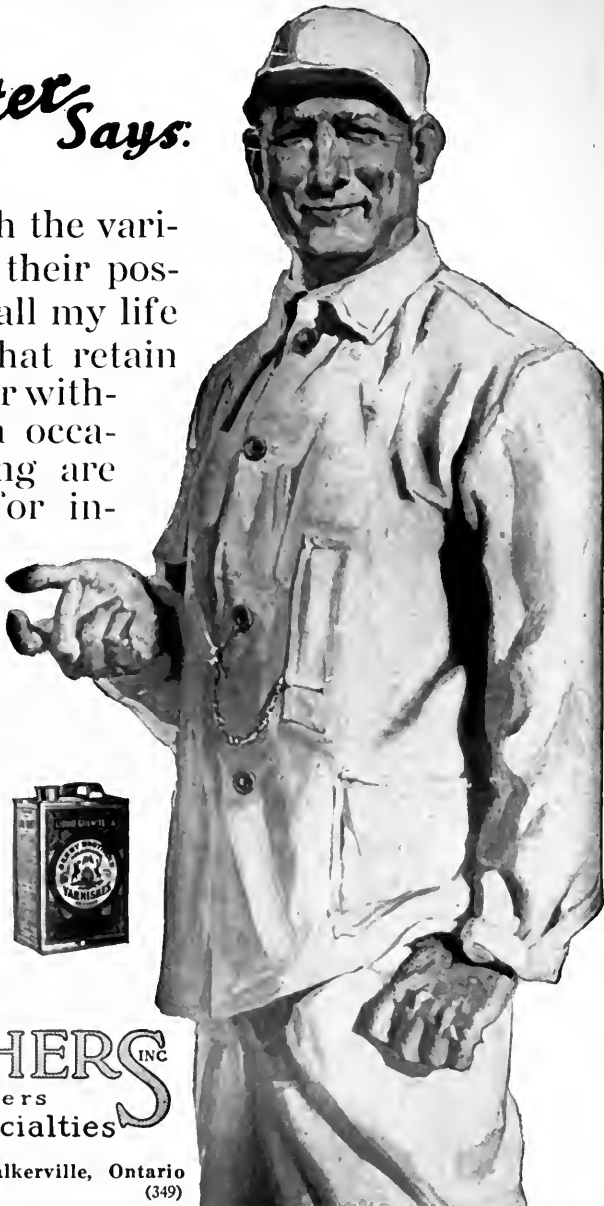
THE KELLEY ISLAND LIME & TRANSPORT CO.

World's Largest Producer of Lime
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The Luxeberry Painter Says.

"I've been acquainted with the various brands of varnishes, their possibilities and limitations, all my life and I know that those that retain their beauty year after year without any attention but an occasional wiping and dusting are the only ideal finishes for interiors.

"This is why I use Berry Brothers Varnishes, Enamels and Stains whenever I can, because results always gratify my professional pride, please the architect and satisfy the owner."



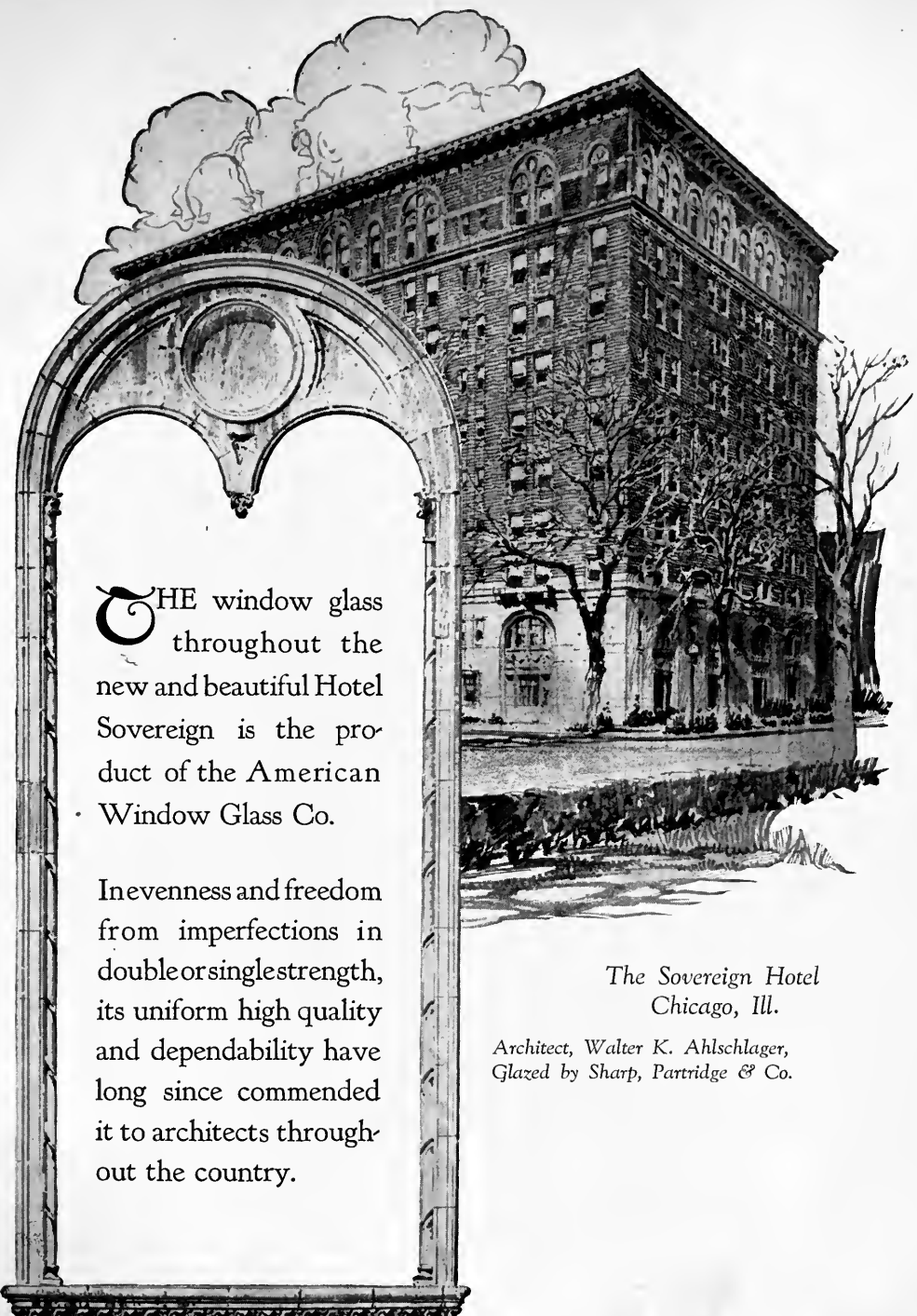
BERRY BROTHERS INC

World's Largest Makers
Varnishes and Paint Specialties

Detroit, Michigan

Walkerville, Ontario
(349)





THE window glass throughout the new and beautiful Hotel Sovereign is the product of the American Window Glass Co.

In evenness and freedom from imperfections in double or single strength, its uniform high quality and dependability have long since commended it to architects throughout the country.

*The Sovereign Hotel
Chicago, Ill.*

*Architect, Walter K. Ahlschlager,
Glazed by Sharp, Partridge & Co.*

AMERICAN WINDOW GLASS CO.
General Offices - Pittsburgh, Pa. - Branches in leading cities as listed in Sweet's

Economical Construction

A Department of Practical Information

1st Year

December 1921

Edited by William Carver, Architect

Brick Veneer is a Pretense

Costs as much as good construction

Reliable manufacturers of brick, anxious to have brick used only in ways that will reflect credit on their material, condemn veneer on frame.

*"In architecture another and a less subtle, more contemptible violation of truth is possible; a direct falsity of assertion respecting the nature of material."

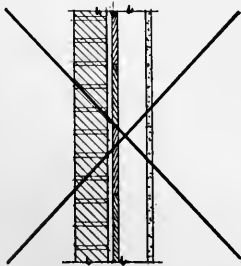
It is natural to expect that a building apparently of brick will have the attributes of a brick building—permanence, strength, fire-resistiveness, etc. These qualities are not possessed by brick veneer on frame. It pretends to a worth that it does not have. It pretends to be what it is not.

*"Leave your walls as bare as a planed board or build them of baked mud and chopped straw, if need be, but do not rough cast them with falsehood."

*John Ruskin—
"The Seven Lamps of Architecture"

Experienced Building Official on Brick Veneer

Reporting recently on this type of construction which



BRICK VENEER ON FRAME

NOT FIRE-RESISTIVE FROM INSIDE
DIFFICULT TO FIGHT FLAMES
MAY COLLAPSE ON FIREMEN
NON-PERMANENT
DECEPTIVE, UNSOUND CONSTRUCTION

had been proposed for two-story schools, a building official of a western city has this to say:

"I find the type of building recommended in said document (brick veneer on frame) is a dangerous type of construction for the following reasons:

"Should an earthquake occur during recess or while children were playing on the grounds, the veneering would shake off and, no doubt, seriously injure many of the children.

"A solid masonry wall will confine a fire for more than a day, and about one hour is the limit to the veneered wall. Also, when fighting a fire the studs burn through and the veneering collapses, making it very dangerous to firemen.

"Worst of all, veneered buildings are subject to dry rot. In all of my experience I have yet to find a veneered

building twenty years old which has not been subject to dry rot or has much structural value left.

"Under favorable conditions a brick veneered building does well to last twenty years. Many reach initial failure before this time. In fact under ordinary conditions the housing of children in any two-storied veneered building which has stood sixteen to eighteen years is a dangerous undertaking.

"With the above in mind I cannot recommend a veneered building. Also, many of the bonds are issued for a period of forty years, yet the veneered school building will scarcely last twenty years at best."

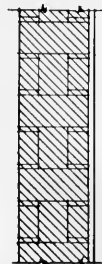
Real Brick Construction Costs Less Than Sham

Walls of traditional solid brick construction, generally, cost no more than brick veneer on frame. The Ideal Wall costs less.

For data on Ideal Wall and other information on brick, see Sweet's Architectural Catalog, 1921, pages 107-114. The Common Brick Industry of America, 1318 Schofield Building, Cleveland, Ohio.

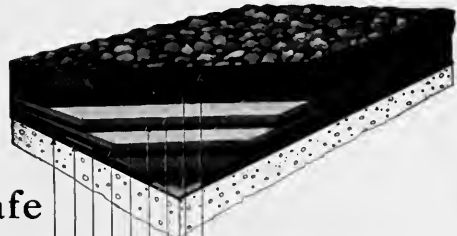
Have You a Copy of this Brick Manual?

For 25 cents only, we will gladly send this 72-page construction manual—"Brick, How to Build and Estimate." Some of the subjects covered are: The Ideal Wall brick in fire-resistive and slow burning construction; brick in fire and party walls; compressive strength of brick; fire-resistiveness of column coverings; cement and limes; sand; mortar colors; selection and preparation of mortar; bonds; joints; fireplaces and chimneys; brick construction in freezing weather; and many other topics. If the local brick manufacturer cannot supply you, write The Common Brick Industry of America, 1318 Schofield Building, Cleveland, Ohio.



SOLID OR IDEAL WALL

PERMANENT
FIRE-RESISTIVE
SAFE FOR FIREMEN
HONEST, SOUND CONSTRUCTION



Ruberoid Built-Up Roofs Durable—Economical—Safe

Durable. Ruberoid Built-up Roofs, from the under layer of felt to the top layer of roofing are composed of Ruberoid products throughout. Ruberoid Roofing used for the two upper layers is the same high grade roofing, which in a *single layer* has lasted on thousands of buildings, without repairs, for over a quarter of a century. It follows unquestionably that, when used in built-up form, the limit of the durability of this type of roofing is indeterminable.

The under layer of Ruberoid Saturated-felt and the Ruberoid Solid-bitumen, used for cementing the layers together, are similarly manufactured to meet a standard of quality and durability.

Economical. Ruberoid Built-up Roofs are formed of but three layers, yet due to the improved weather resisting properties of the constituent materials will give service as long as a five layer roof of ordinary type. This means a saving of 40% in fabric and cementing material and a corresponding saving in the cost of application. It means a roof which weighs 75 pounds less than a five layer roof per 100 sq. ft. of roof area.

Safe. Ruberoid Built-up Roofs, surfaced with slag or gravel, are accorded the highest rating by the Fire Underwriters Laboratories, Inc. This class "A" rating permits their use within the fire limits of any city.

Samples, descriptive matter and specifications will be gladly furnished upon request.

(A)	Slag (or Gravel)	350 lbs.
(B)	Ruberoid Solid Bitumen	50 lbs.
(C)	Ruberoid Roofing	25 lbs.
(D)	Ruberoid Solid Bitumen	25 lbs.
(E)	Ruberoid Roofing	25 lbs.
(F)	Ruberoid Solid Bitumen	25 lbs.
	Ruberoid Asphalt-Saturated Felt	15 lbs.
	Ruberoid Solid Bitumen	25 lbs.
	Concrete Primer	5 lbs.

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- Floor-covering
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- Asphalt-saturated Felt
- Cement-waterproofing
- Plastic
- Paints
- Varnish

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FORMERLY THE STANDARD PAINT COMPANY
95 Madison Avenue, New York

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RUBEROID built up ROOFS

SHINGLES
FELTS

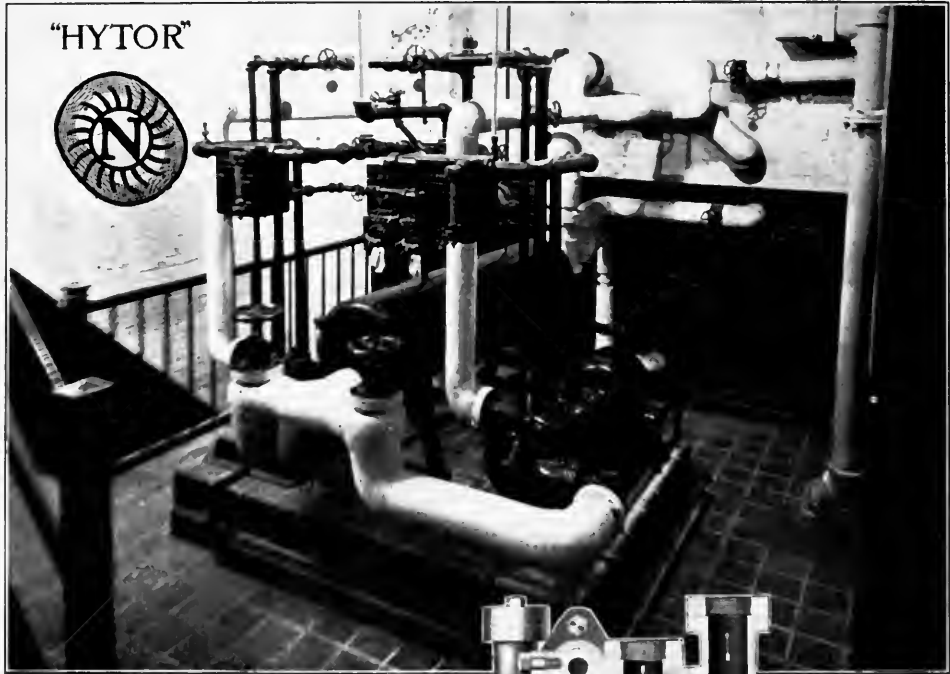
ROLL ROOFINGS
PAINTS



BUILT-UP ROOFS
VARNISHES

BUILDING PAPERS
PLASTICS

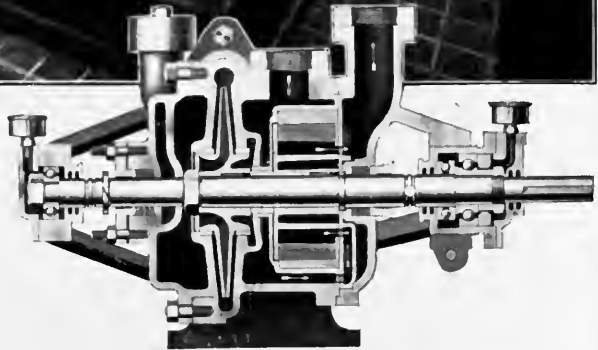
EFFICIENT HEATING *demands the* JENNINGS PUMP



Duplex "D" Unit Continuous
Operation
BORDEN BUILDING
Madison Ave. and 45th St.
New York City

Capacity each pump 40,000 square feet direct radiation; air capacity 25 cubic feet per minute in addition to a water capacity of 60 gallons per minute.

The motors are only three horse power.



THE Jennings Pump consists of two independent turbine units, an air pump and a water pump. As each material is handled separately, the boiler pressure is against the water only. The air and vapor, approximately four-fifths of the volume handled, are delivered to the atmosphere without back pressure. The saving in horsepower is over fifty per cent. In other words, the current to operate is cut in half.

Because of its compact design, this equipment can be installed in less than one-third the space necessary with other apparatus. All interior parts are bronze, supported on annular ball bearings mounted outside of casing. Moving parts revolve without contact.

A quiet, reliable operation with minimum expense for repairs and without annoyance because of shut-downs, is assured if the Jennings Pump is installed on your Vacuum Heating System.

There are many other reasons why the Jennings Pump is being installed in practically all of the important buildings. Bulletin No. 15 gives them in detail. Write for it.

THE NASH ENGINEERING COMPANY

SOUTH NORWALK, CONN., U. S. A.



MAUSOLEUM FOR THE DAVIS
FAMILY, PORTLAND, MAINE.



PANEL OVER ENTRANCE DOOR OF DAVIS MAUSOLEUM.
Lorenzo Maldavelli, Sculptor.

THE WORK OF WILLIAM LAWRENCE BOTTOMLEY

PART -II-



By Arthur Willis Colton

AMERICANS are in the process of realizing, for architectural and landscape gardening purposes, that their climate is not English; for in spite of some steps in the process, such as furnaces and broad verandahs, the inevitable conclusions from that climate are still far from attainment. The present interest in Italian precedents has probably somewhere in it a feeling that the climate is more Italian than English, and in due time we shall react to the perception that it is not Italian either; but meanwhile, for the purposes of summer residence, the Italian is the better analogy.

The true doctrine is to seek after the fittest. The fittest will survive in the

long run, and whoever finds it now will best satisfy the taste of posterity. The house that feels most comfortable and harmonious in its setting—in its situation, in its relations to the country round about, in its conditions of sunshine and rain, of budding and falling leaf—is the house that is, artistically, “most founded on a rock.” It is a doctrine that militates against all wholesale transfer of styles and periods in the lump. It admits any amount of borrowing provided there is a molding force at work, a selection, a taste that is alive and alert. An American house need be no less American, as a play of Shakespeare’s is no less English because a plot or an episode, a plan or a detail, comes from Italy.

The New England Colonial probably fitted the temperament of old New England, but only partially the climate. The Southern Colonial seems well adapted to the southern climate, but it developed under social conditions that no longer exist.

Mr. Bottomley's work always shows a "selection and taste that is alive and alert." Whenever he has built an apparently period house it seldom is strictly period, but it is always harmonious.

The house originally built for Mr. J. C. Wise, near Richmond, Virginia, has some resemblance in outline to Westover and Mount Vernon, in the high, more or less imposing central part and the lower, semi-detached wings. This loose breadth and spaciousness seems to have a correspondence to old social, and permanent climatic, conditions of the South; as the more compact Northern Colonial had its relations with the social and climatic conditions of the North. The social demands of modern life have been radically changed, and the chief cause of the difference is the increase of mechanical devices. Climatically it is mainly a matter of furnace heat. Socially the causes are complex.

But these demands affect interiors more than exteriors. The modern needs for system, order and convenience can be met within the frame and shell of the old exteriors, and this was achieved in the Wise house, while the old charm of contrast between the high central part, with its steep roof and the low spreading wings; still remains.

The Davies house at Roslyn, Long Island, is not a period house, though it looks like an 18th century colonial. It is personal and polychrome. It is a cream-colored stucco house with Greek columns and Venetian grilles. The roof is peacock blue, and there are cerulean blues on the window frames, black caps on the chimneys, big terra cotta panels over either side of the vestibule, and brilliant terra cotta colors against the buff-colored stucco. Yet it all looks quiet, for everything is in almost the same key and scale. It stands on top of a wooded hill, with an open court to the

south surrounded on three sides by the middle part of three stories and the two wings of one story each. The middle part contains on the ground floor the dining room, library, drawing room, and loggia looking out on the court. The southwest wing has two guest rooms and a porch open to all the breezes. The southeast or service wing goes over the hill and has two stories at the back, with a garage below, which gives it an appearance of fitting and clinging to the hill.

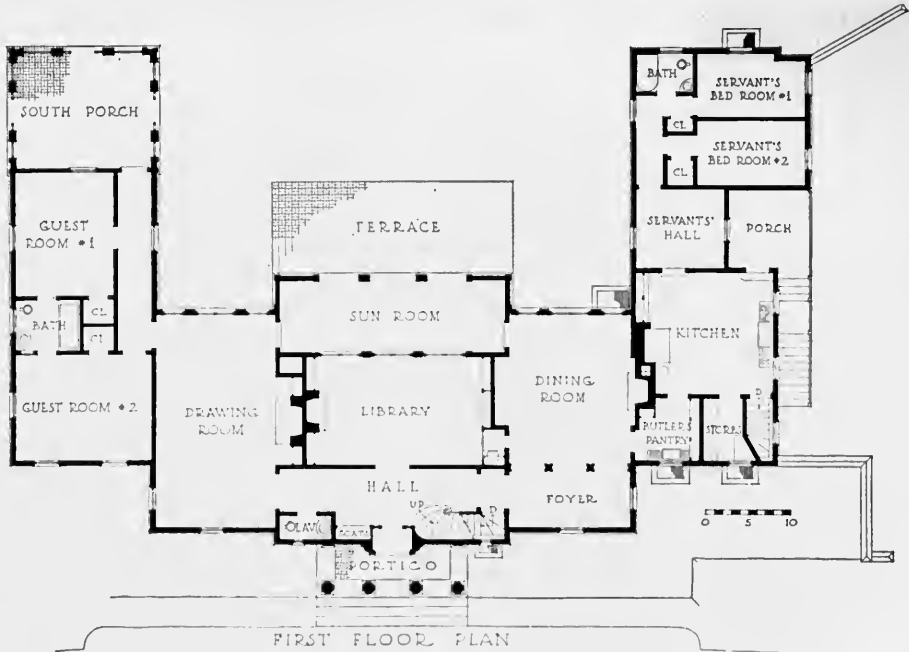
The house of Mr. Walter G. Davis in Portland, Maine, is, in some fashion, of a William and Mary type, a brick house facing west, with a view of Mount Washington. It has a long façade with slightly projecting pavilions at either end. In the library the book cases are at the two ends; the windows are on the west side; and on the east side opposite is a large scenic wall paper of Boston harbor, printed from old blocks. The so-called "William and Mary" style shows a strong Dutch influence of the Renaissance which came through Holland. It looks stronger and more virile than English Georgian. Dutch building is largely of brick, and it runs to soft reds and browns rather than bright red.

The house of Mr. Faris Russell at Mill Neck, Long Island, in appearance is a typical Long Island farm house, but is planned to adapt itself to the complex requirements of a modern establishment. All the main rooms face south to the garden side; the entrance halls, kitchens, pantry, servants' dining room and other service functions face north. A gardener's and caretaker's house is placed on the east side of the service court, connected with the house itself by a high wall with gates, and these completely surround this court, enclosing and hiding the green houses, root cellar, garages, tool sheds and other service buildings.

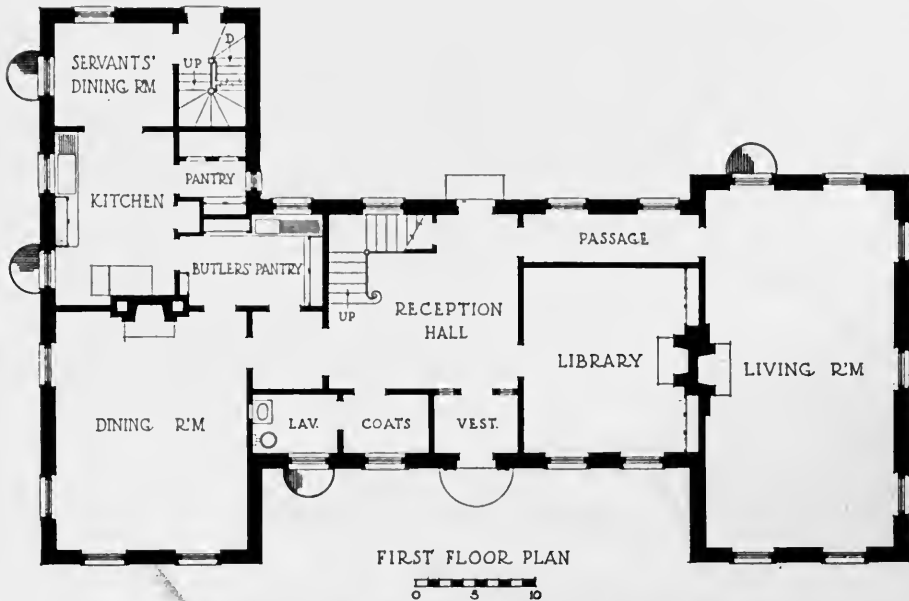
To turn from these country houses to the large apartment house at 1049 Park Avenue, designed in association with Mr. J. L. Mills, is to be reminded again of Mr. Bottomley's versatility. The design is an interesting expression of the construction. A modern fireproof apartment house is a great frame of columns and



RESIDENCE OF J. C. WISE,
ESQ., WESTHAM, VA.



RESIDENCE OF ERNEST P. DAVIES, ESQ., ROSLYN, LONG ISLAND, N. Y.



RESIDENCE OF WALTER G. DAVIS, ESQ., PORTLAND, MAINE.



RESIDENCE OF J. C. WISE,
ESQ., WESTHAM, VA.



DOORWAY IN DRAWING ROOM. RESIDENCE
OF J. C. WISE, ESQ., WESTHAM, VA.



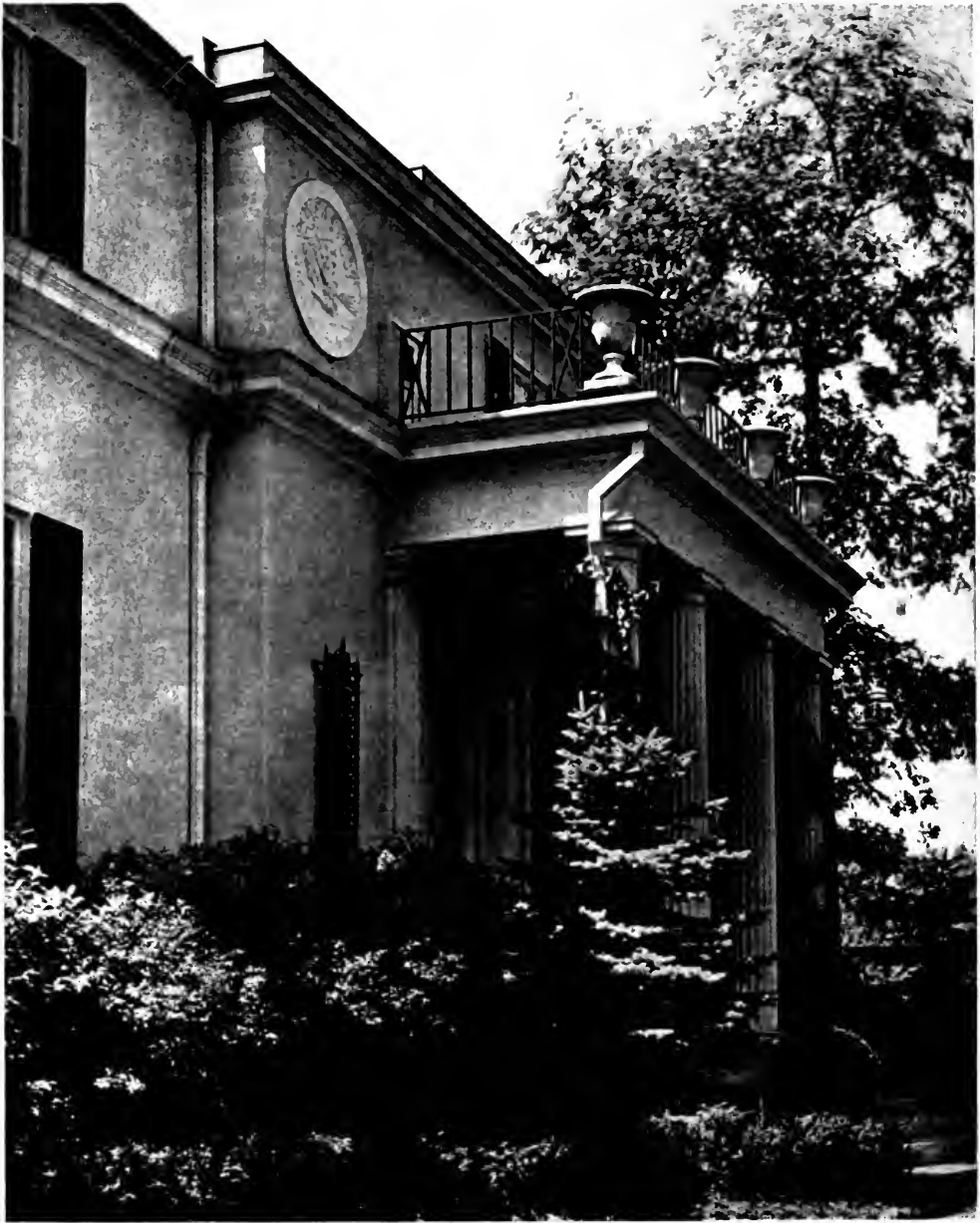
DRAWING ROOM. RESIDENCE OF
J. C. WISE, ESQ., WESTHAM, VA.



RESIDENCE OF ERNEST P. DAVIES,
ESQ., ROSLYN, LONG ISLAND, N. Y.



RESIDENCE OF ERNEST P. DAVIES,
ESQ., ROSLYN, LONG ISLAND, N. Y.



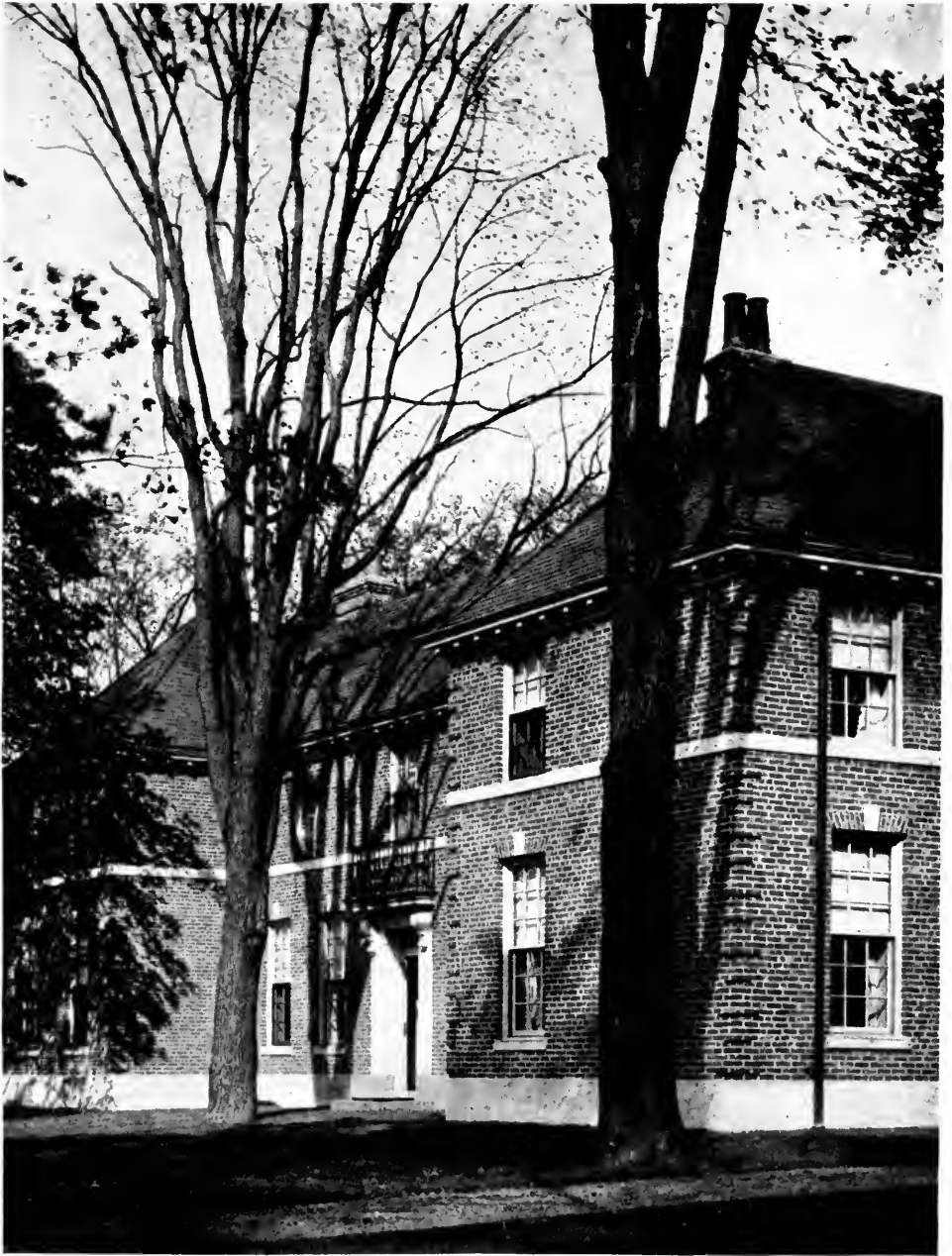
RESIDENCE OF ERNEST P. DAVIES,
ESQ., ROSLYN, LONG ISLAND, N. Y.



LIBRARY—RESIDENCE OF ERNEST P. DAVIES, ESQ., ROSLYN, LONG ISLAND, N. Y.



DOORWAY—RESIDENCE OF WALTER
G. DAVIS, ESQ., PORTLAND, MAINE.



RESIDENCE OF WALTER G.
DAVIS, ESQ., PORTLAND, MAINE.



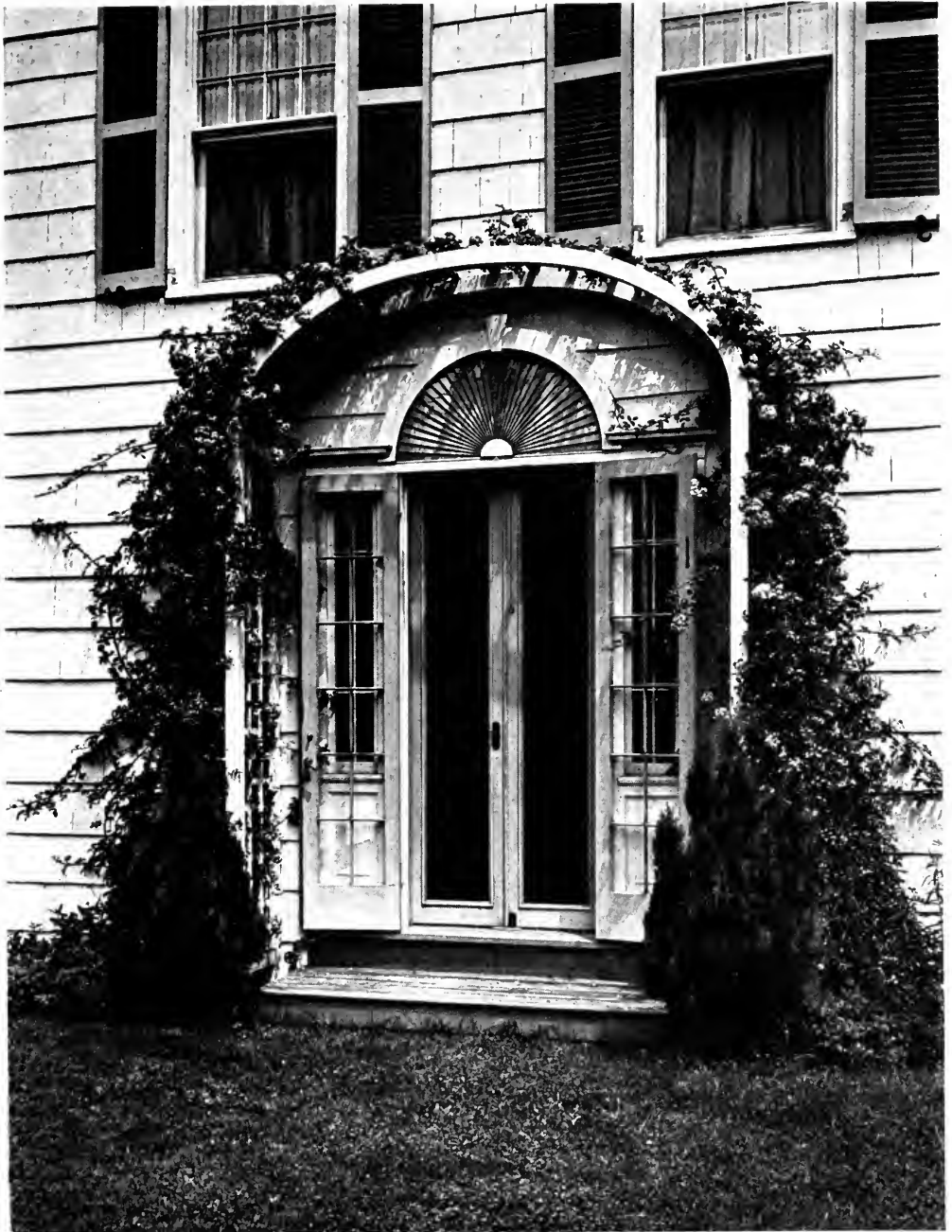
LIBRARY—RESIDENCE OF WALTER
G. DAVIS, ESQ., PORTLAND, MAINE.



DRAWING ROOM--RESIDENCE OF WALTER
G. DAVIS, ESQ., PORTLAND, MAINE.



DINING ROOM—RESIDENCE OF WALTER
G. DAVIS, ESQ., PORTLAND, MAINE.



DOORWAY—RESIDENCE OF FARIS RUSSELL,
ESQ., MILL NECK, LONG ISLAND, N. Y.



RESIDENCE OF FARIS RUSSELL, ESQ.,
MILL NECK, LONG ISLAND, N. Y.



GARDEN WALK—RESIDENCE OF FARIS RUSSELL, ESQ., MILL NECK, LONG ISLAND.



RESIDENCE OF FARIS RUSSELL, ESQ.,
MILL NECK, LONG ISLAND, N. Y.



DETAIL OF ENTRANCE. APARTMENT HOUSE,
NO. 1049 PARK AVENUE, NEW YORK CITY.



APARTMENT HOUSE. NO. 1049
PARK AVENUE, NEW YORK CITY.

girders, each unit of the construction as nearly a square as possible in plan, piled one on another for twelve or fourteen stories. Inside of this, the partitions of the rooms and corridors are worked in, and the exterior is a wall (supported at each floor) which has no value as a support, but merely encloses the interior and protects the steel frame. There is, therefore, no logical reason for expressing a sense of support in this wall, and it may well be treated in a purely decorative way.

This has been the treatment at 1049 Park Avenue. Strong horizontal lines form the three main divisions of the façade, namely: (1) A rich base with strongly decorative treatment of the three doorways, two leading to doctors' private suites and the central one being the main entrance to the building; (2) the main shaft of the building, perfectly plain, which contrasts and brings out the rich treatment of the base and the upper stories, (3) the top of the building treated with great panels of carved stone set into the brick on the principle of a mosaic.

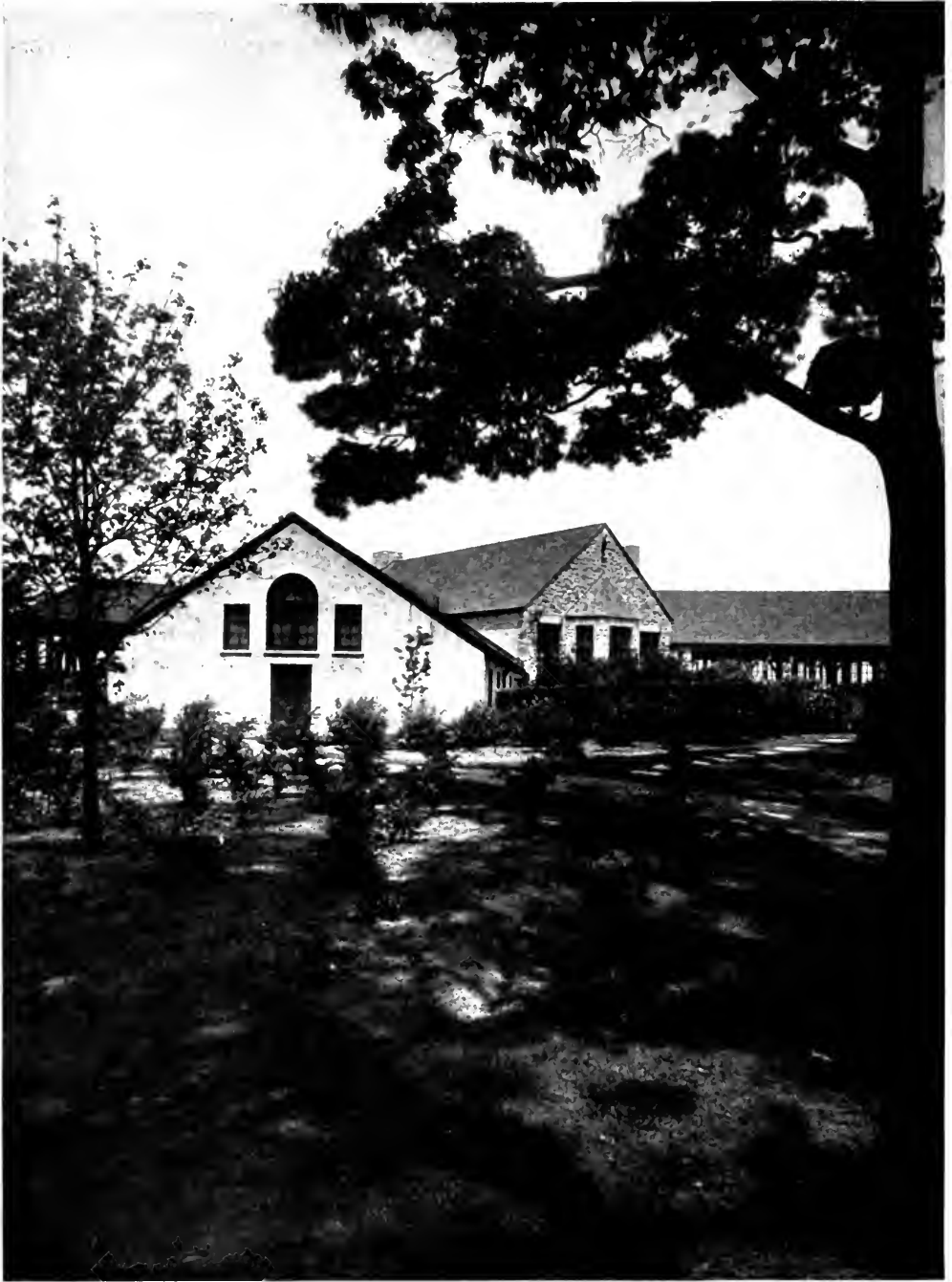
The building, contrary to almost all previous precedent, has no strong cornice, but the sky line is broken by finials in the form of candelabra at the sides and corners. Decoration is sparingly used, but counts strongly where it is employed. It is classic in feeling, modern in its use, and is influenced by the Spanish tradition. It is bold, strong in modeling and interesting in design. The color is soft red brick relieved by the warm buff-colored, traventino decoration.

The distinction of this from most of the great apartment houses in New York, both on Park and Fifth Avenues as well as on the West Side, is that these buildings are almost all crowned with heavy projecting cornices of stone, terra cotta, or metal—great shelves that have no meaning, and are merely conventional

repetitions in deference to the classic tradition of the necessary crowning cornice.

Tradition we must always have. No art is more necessarily traditional than architecture, and perhaps the chief reason is that it is an art in which experiment is expensive. If architecture is discernably more conservative than painting—if its schools and cults pursue each other across the generations in less rapid succession—it is probably, in large part, for the reason that stage conventions are more persistent than literary conventions; because architects and playwrights practice an expensive art, and the pressure upon the builder of buildings and the producer of plays to "play safe" is relatively greater. It takes more courage for an architect to risk a single large building—as Mr. Bottomley has done—that breaks with the tradition of the cornice, than for a painter to risk a single canvas that breaks some tradition of the ateliers. It would be difficult to name any art which carries, as architecture does, so many features and peculiarities, whose original reasons long ago ceased to exist and are now hardly more than conjectural.

The elimination of the cornice from high buildings in New York would have other than the merely logical advantages. It would allow more light to reach the obscure canyons below, and would probably help to soften the city's harsh and somewhat ragged skyline. With its many waters and varied shores, its hills and islands, its stately river and the long line of its western cliffs (so lofty and yet so level, so stern and yet so quiet) New York should be a beautiful city by a logic in art as strict as the logic in economics by which it has become an immense city. Doubtless it will be, when Time has had time to think it out. In the meanwhile all contributions are welcome which look to that end.



VIEW FROM GROVE—NORWOOD GOLF CLUB, LONG
BRANCH, N. J. HARRY ALLAN JACOBS, ARCHITECT.

The NORWOOD GOLF CLUB LONG BRANCH, N. J.

Henry Allan Jacobs, Architect



THE expansion of the golf club through accretion of new functions—its development into a social center for outdoor life—has opened up interesting architectural possibilities. The diversity of the club membership attracted by golf makes for diversity of social and recreational activities, many of which demand particular housing arrangements, generally on the ground floor. A low building of considerable extent is therefore normally required—a physical condition lending itself to individuality of architectural treatment.

The Norwood Golf Club is in the shape of an irregular "U," framing three sides of a sunken lawn; the uninclosed side is bordered by a fine grove of trees. This arrangement invited the adoption of an informal design based upon English tradition, with a mixture of rough stone, stucco, and half-timber. The picturesque exterior has been brought about naturally by a practical and honest plan, the rooms being so grouped that they have proper relation to each other. The rustic timbers for the porches and the dining room, cut in the woods near-by, are soft in character and blend readily with the stone and stucco.

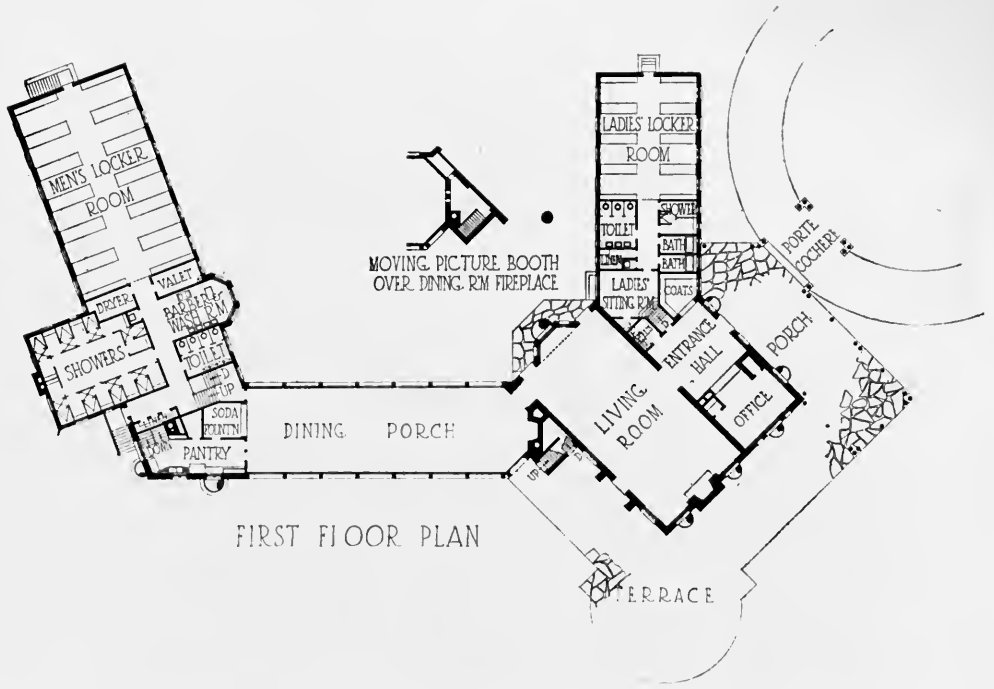
A herbaceous planting of the sunken lawn, designed by Mrs. Annette Flanders, in association with Vitale, Brinckerhoff & Geiffert, has the charm of color throughout the year, and the garden is a center of use and interest. On pleasant nights a movable platform is placed in it

for dancing. Colored Japanese lanterns are hung around the perimeter of the U-shaped building, and, with musicians screened behind palms, the garden takes on an exotic aspect.

The introduction of an unwrought material in the form of rustic posts into the more formal materials of stone, stucco, and half timber gives a pleasing result. In all the rooms advantage has been taken of the full ceiling height by exposing the roof construction into the room itself; no ceilings have been furred down, with the exception of that in the ladies' reception room. The walls are of sand finish plaster, which architects and decorators are beginning to appreciate as a decorative background. Its softness and atmospheric quality give distance to the walls—one never feels that they are closing in upon one. Besides, it is a background which can be used for almost any type of architecture and is particularly happy for the English, Spanish, and Italian styles.

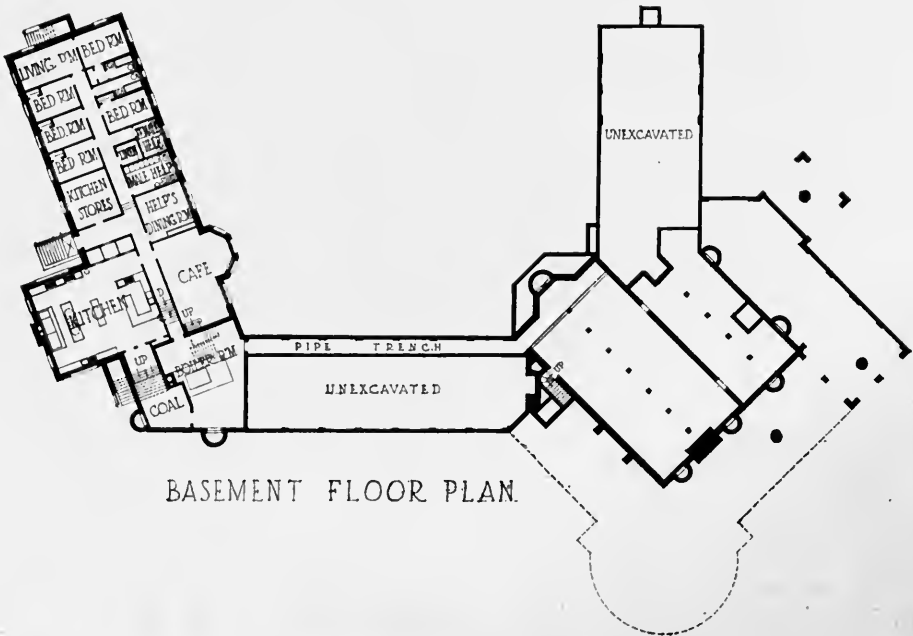
The living room, thirty feet by fifty, is amply large for a dance. The dining room is so situated as to have a view of the garden on one side and the golf course on the other. Prohibition being in force, a soda fountain takes the place of the obsolete bar.

The dining room is designed with rustic posts. At one end is a high fireplace made of rubble stone; at the other are the entrance to the pantry, and the soda fountain. The windows on either side give free circulation of air, so that one



FIRST FLOOR PLAN

NORWOOD GOLF CLUB, LONG BRANCH, N. J.
 Harry Allan Jacobs, Architect.



BASEMENT FLOOR PLAN.

NORWOOD GOLF CLUB, LONG BRANCH, N. J.
 Harry Allan Jacobs, Architect.



CLUB AND PROFESSIONAL HOUSE—NORWOOD GOLF CLUB, LONG BRANCH, N. J.
Harry Allan Jacobs, Architect.



VIEW OVERLOOKING LINKS—NORWOOD GOLF CLUB, LONG BRANCH, N. J.
Harry Allan Jacobs, Architect.



END OF MEN'S LOCKER ROOM—NORWOOD GOLF CLUB,
LONG BRANCH, N. J. HARRY ALLAN JACOBS, ARCHITECT.



CENTRAL GARDEN COURT—NORWOOD GOLF CLUB, LONG
BRANCH, N. J. HARRY ALLAN JACOBS, ARCHITECT.



LIVING ROOM—NORWOOD GOLF CLUB, LONG BRANCH, N. J. HARRY ALLAN JACOBS, ARCHITECT.



ENTRANCE HALL—NORWOOD GOLF CLUB, LONG BRANCH, N. J. HARRY ALLAN JACOBS, ARCHITECT.



LIVING ROOM FIREPLACE—NORWOOD GOLF CLUB, LONG
BRANCH, N. J. HARRY ALLAN JACOBS, ARCHITECT.



DINING ROOM—NORWOOD GOLF CLUB, LONG BRANCH,
N. J. HARRY ALLAN JACOBS, ARCHITECT.

has a feeling of dining out of doors. The U-shaped garden, opening out upon a grove of fine trees, adds to the sense of airiness and spaciousness.

The appointments and services are most complete and modern. Every member has his own steel locker, one tier high.

The showers are accompanied by individual dressing rooms and there are a valet room, dryer, barber shop, card room and café.

The ladies have correspondingly generous arrangements, including a comfortable reception room and a prinking room.

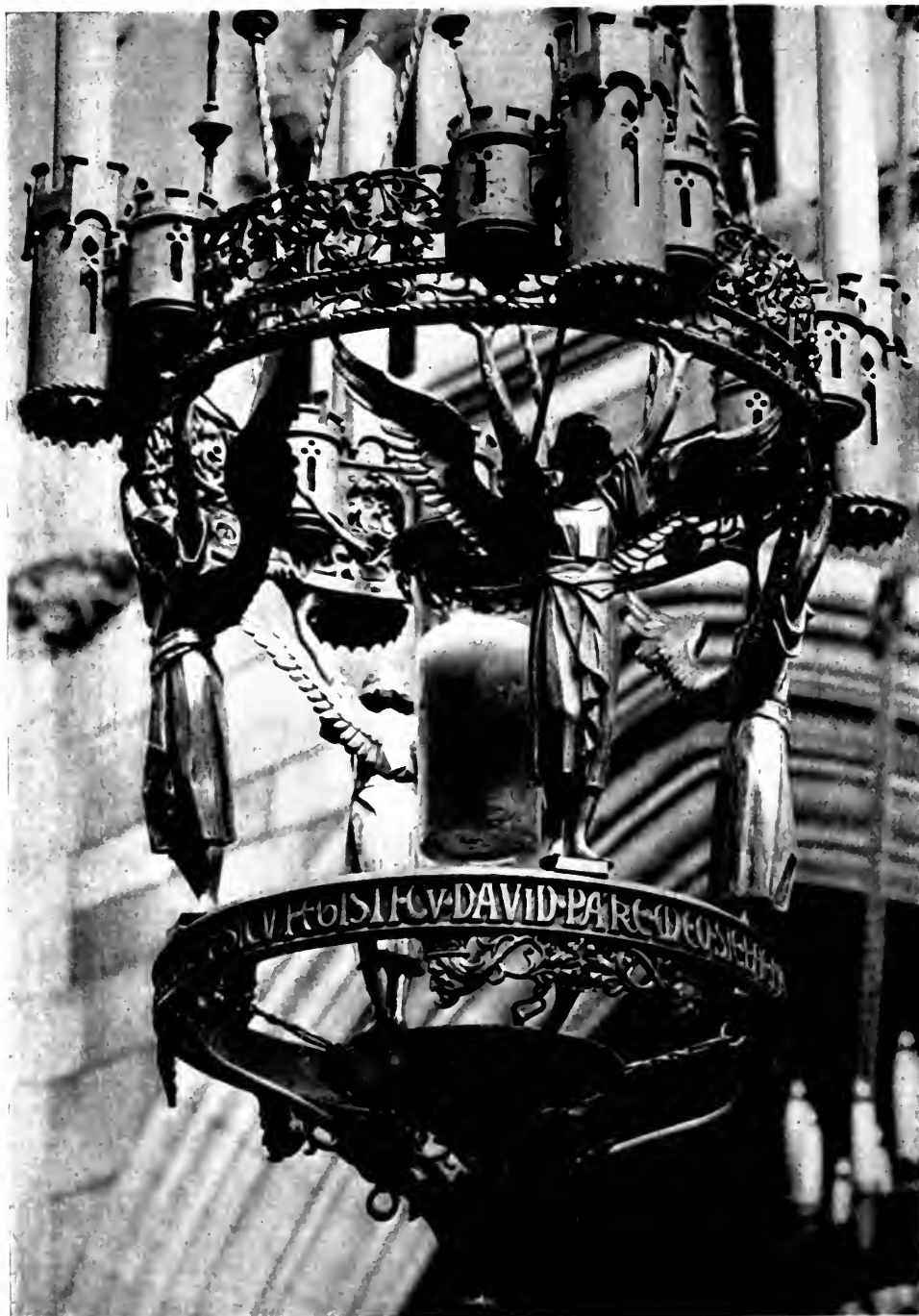


ENTRANCE TO MEN'S LOCKER ROOM, NORWOOD
GOLF CLUB, LONG BRANCH, N. J.
Harry Allan Jacobs, Architect.

Portfolio of Current Architecture

1. Sanctuary Lamp, Chapel Screen, and Friars' Chapel in Church of St. Vincent Ferrer, New York: Bertram G. Goodhue, Architect.
2. Post Office and Stores, Upper Montclair, N. J.: Francis A. Nelson, Architect.
3. Packard Motor Car Service Building, Chicago, Ill.: Albert Kahn, Architect.
4. National State Bank, Elizabeth, N. J.: Dennison & Hiron, Architects.
5. Suburban Residence, Mt. Kisco, N. Y.: Aymar Embury II, Architect.
6. Music Studio, Upper Montclair, N. J.: Francis A. Nelson, Architect.
7. The Bible House, New York: Wilfred E. Anthony, Architect.
8. City Residence, New York: Frederick Sterner, Architect.

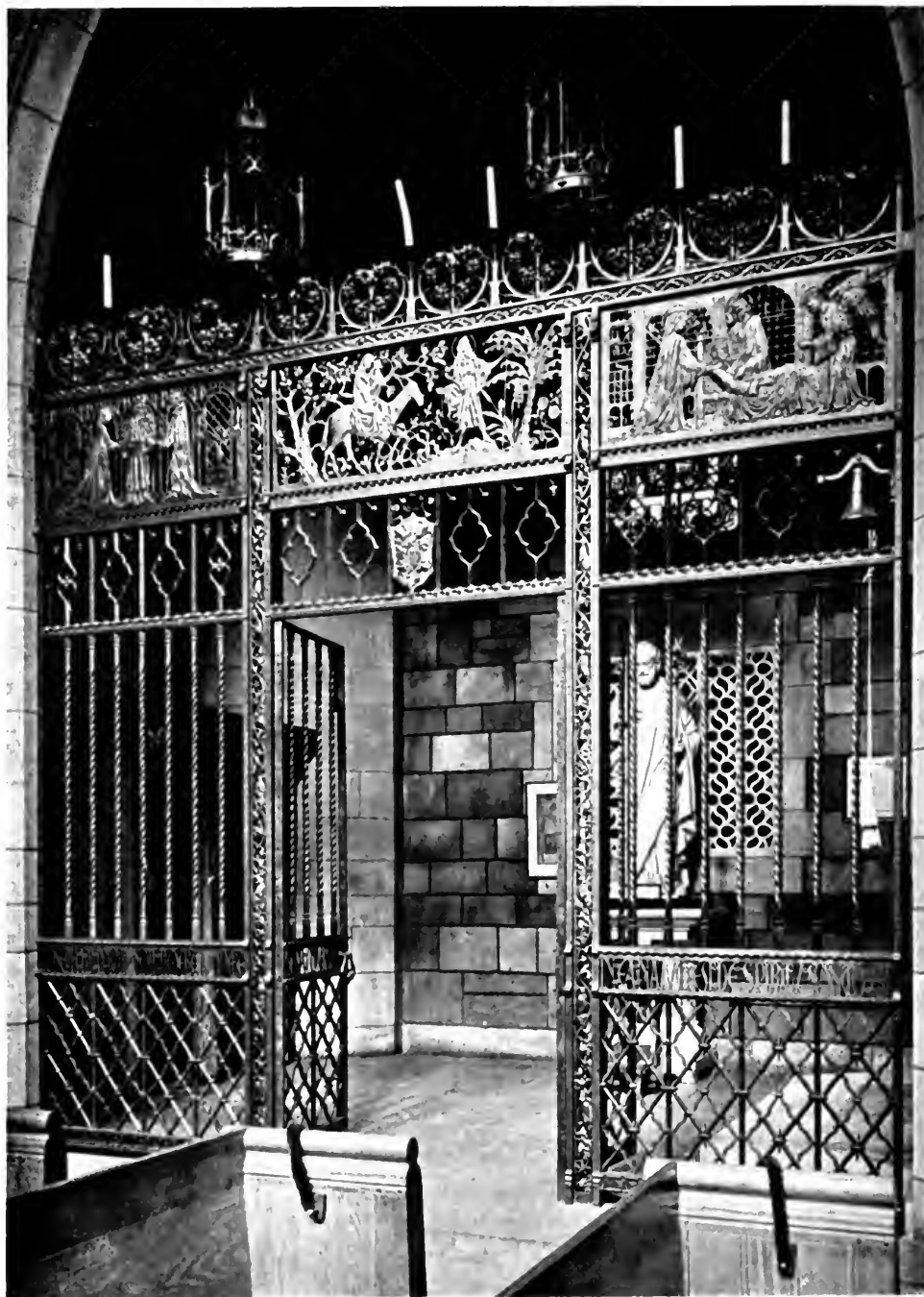




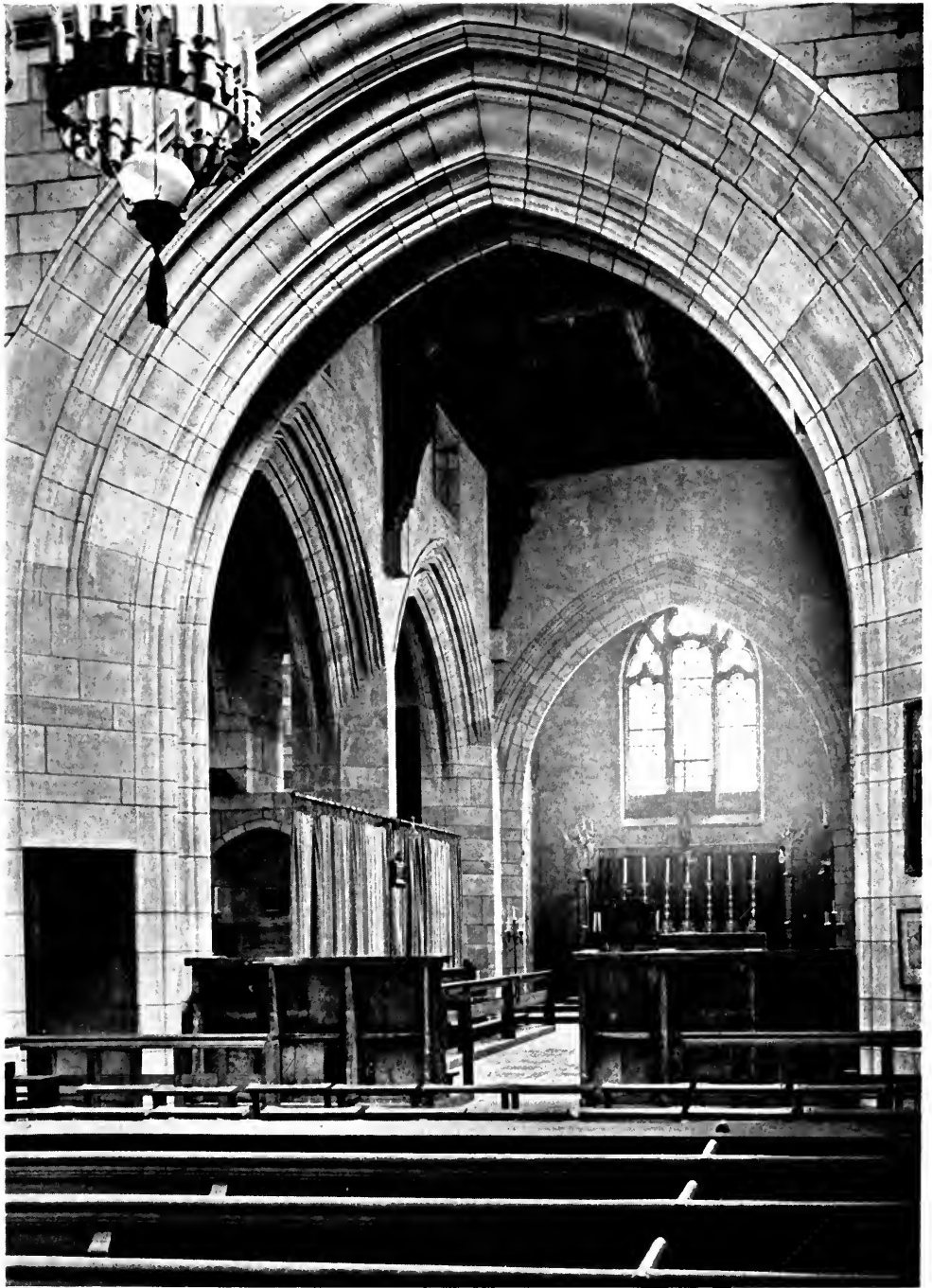
MAIN SANCTUARY LAMP—CHURCH OF ST. VINCENT FERRER,
NEW YORK CITY. BERTRAM G. GOODHUE, ARCHITECT.



VIEW THROUGH NARTHEX WINDOW—
CHURCH OF ST. VINCENT FERRER, NEW YORK
CITY. BERTRAM G. GOODHUE, ARCHITECT.



SCREEN: ST. JOSEPH'S CHAPEL—CHURCH
OF ST. VINCENT FERRER, NEW YORK CITY.
BERTRAM G. GOODHUE, ARCHITECT.



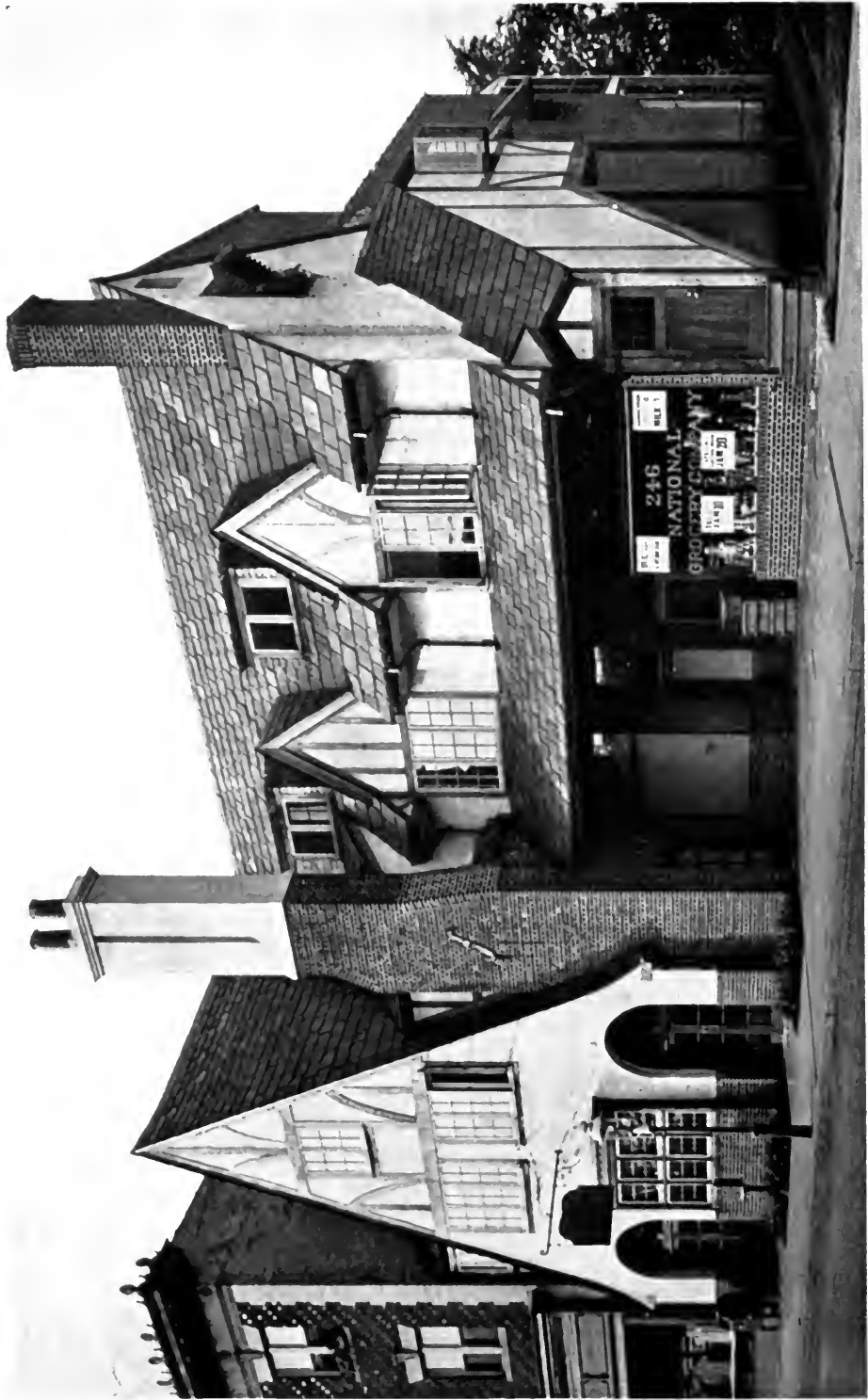
FRIARS' CHAPEL, CHURCH OF ST. VINCENT FERRER,
NEW YORK CITY. BERTRAM G. GOODHUE, ARCHITECT.



ALTAR IN FRIARS' CHAPEL—CHURCH OF
ST. VINCENT FERRER, NEW YORK CITY.
BERTRAM G. GOODHUE, ARCHITECT.



DETAIL OF POST OFFICE, UPPER MONTCLAIR,
N. J. FRANCIS A. NELSON, ARCHITECT.



POST OFFICE AND STORES, UPPER MONT-
CLAIR, N. J. FRANCIS A. NELSON, ARCHITECT.



PACKARD MOTOR CAR SERVICE BUILDING,
CHICAGO, ILL. ALBERT KAHN, ARCHITECT.



ELEVATION OF NATIONAL STATE BANK, ELIZABETH, N. J. DENNISON & HIRONS, ARCHITECTS.



DETAIL OF DOORWAY — NATIONAL STATE BANK,
ELIZABETH, N. J. DENNISON & HIRONS, ARCHITECTS.



BANKING ROOM—NATIONAL STATE BANK, ELIZABETH, N. J. DENNISON & HIRONS, ARCHITECTS.



DETAIL OF HAAS HOUSE, MT. KISCO,
N. Y. AYMAR EMBURY II, ARCHITECT.



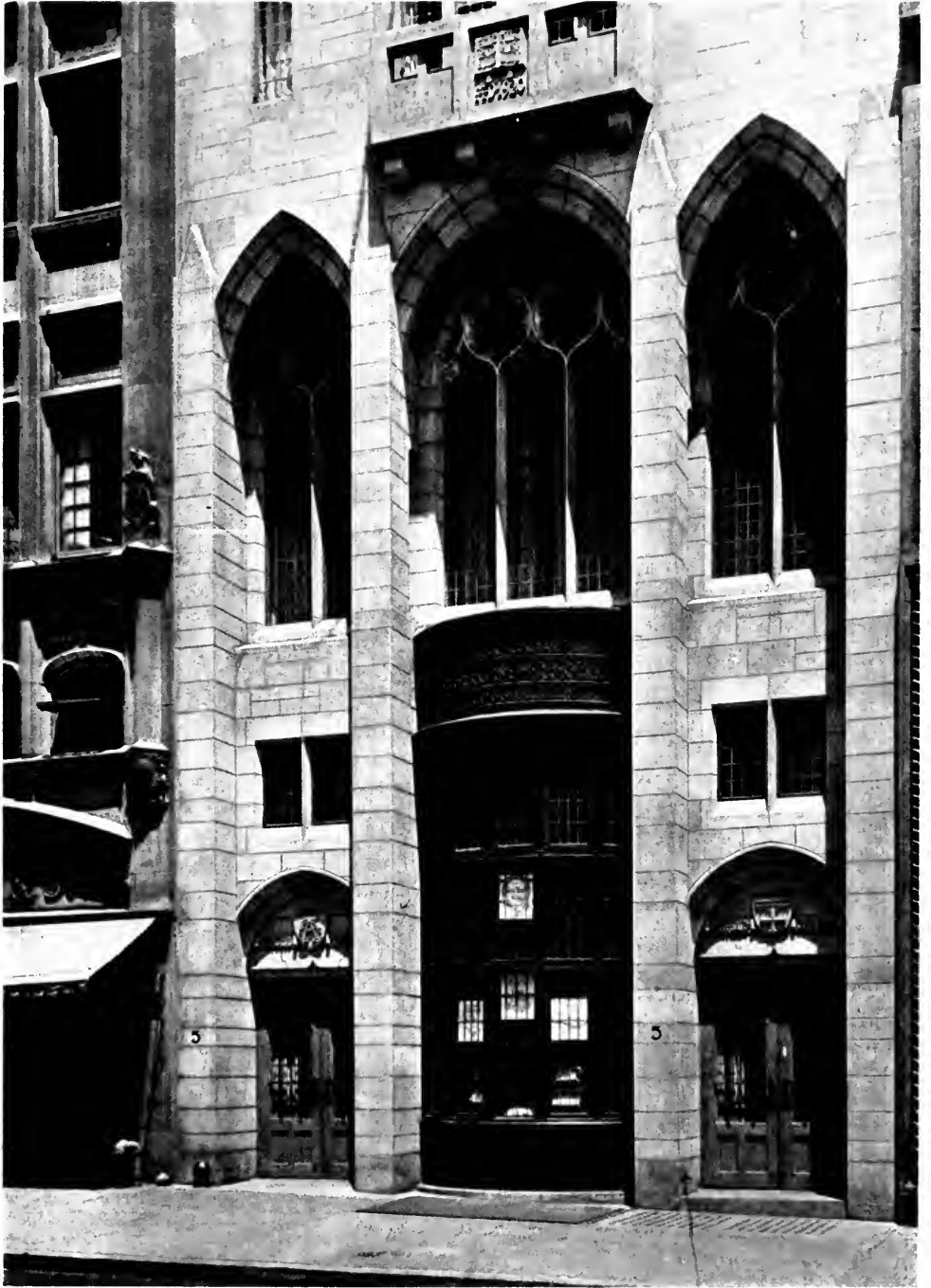
GENERAL VIEW OF HAAS HOUSE, MT. KISCO,
N. Y. Aymar Embury II, Architect.



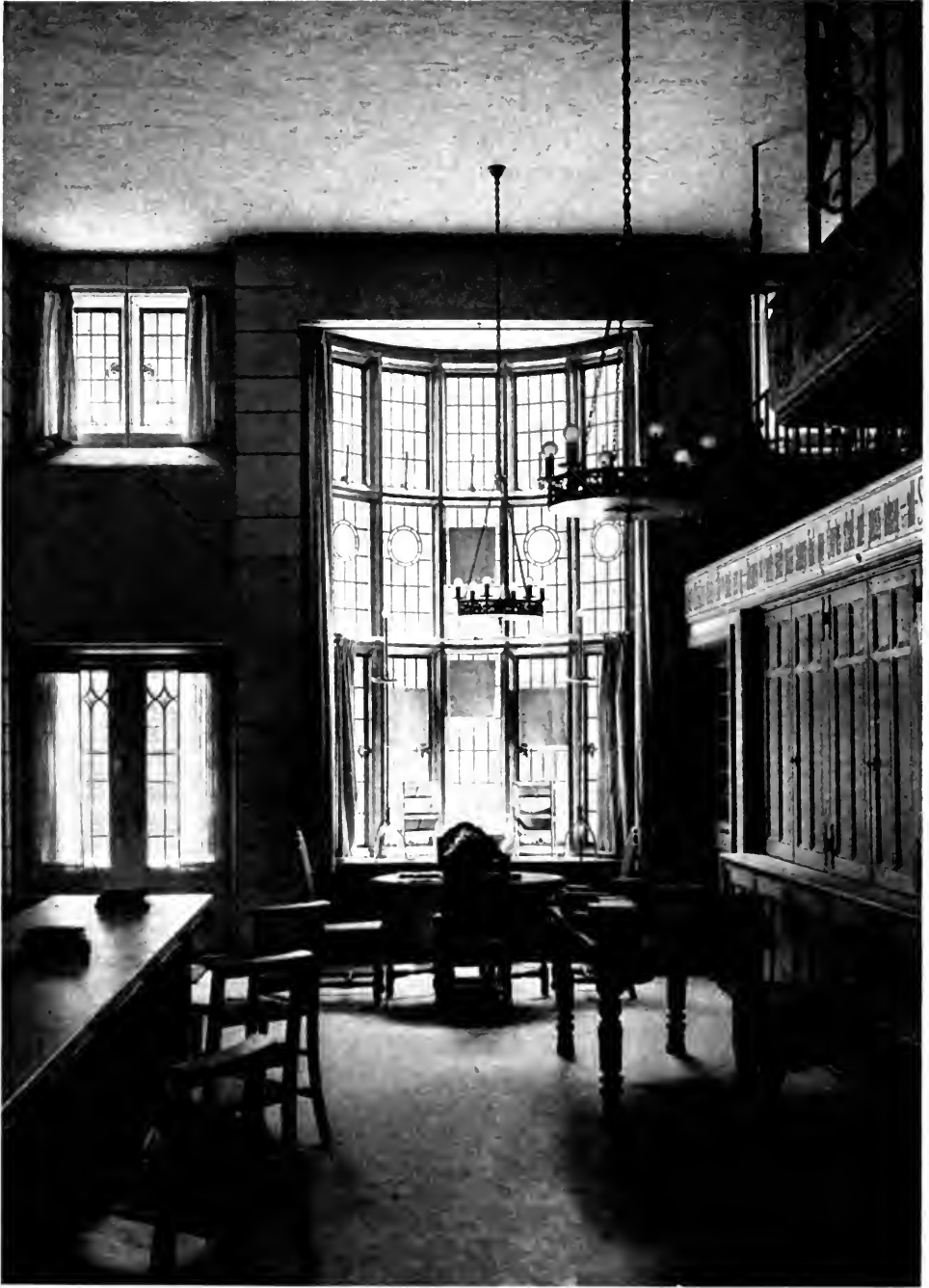
MUSIC STUDIO BUILDING, UPPER MONTCLAIR,
N. J. FRANCIS A. NELSON, ARCHITECT.



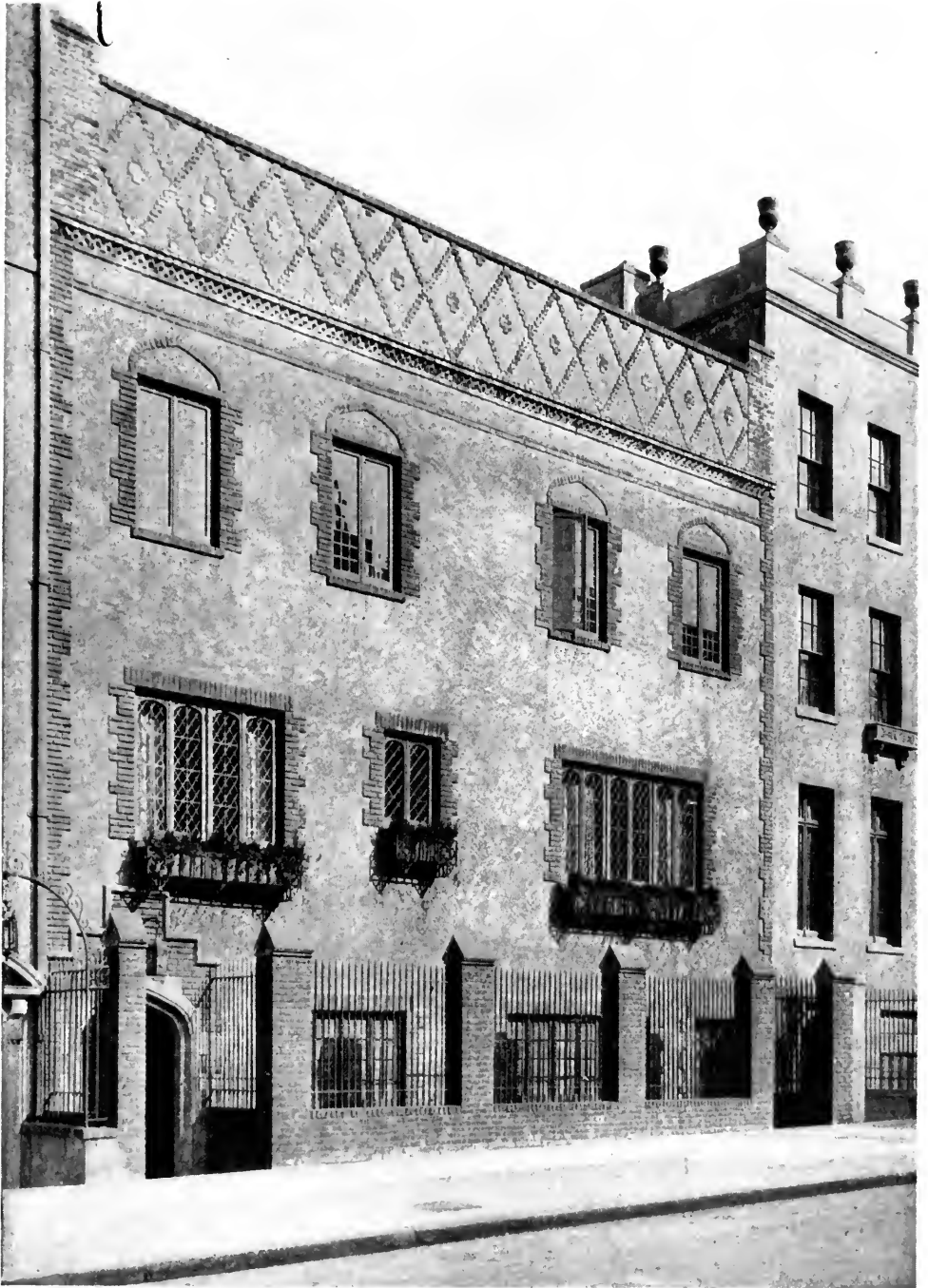
THE BIBLE HOUSE,
NEW YORK CITY.
WILFRED E.
ANTHONY,
ARCHITECT.



DETAIL OF THE BIBLE HOUSE, NEW YORK CITY. WILFRED E. ANTHONY, ARCHITECT.



INTERIOR—THE BIBLE HOUSE, NEW YORK CITY. WILFRED E. ANTHONY, ARCHITECT.



HOUSE ON EAST SIXTY-THIRD STREET, NEW YORK CITY. FREDERICK STERNER, ARCHITECT.



CHURCH DOOR—THE FIRST METHODIST EPISCOPAL CHURCH, ASBURY PARK, N. J. LUCIAN E. SMITH AND HARRY E. WARREN, ARCHITECTS.

The
FIRST METHODIST EPISCOPAL
CHURCH of ASBURY PARK, N. J.



Lucian E. Smith & Harry E. Warren
Associated Architects

OWING to the importance of the sermon in the Methodist Church service, the plan for a church of this denomination should afford the largest possible unobstructed floor space so that the congregation as a whole may see and hear the preacher. From this basic idea the plan of the First Methodist Church of Asbury Park was developed, the domical-roofed building suggested and the elements of the style determined. Modern conditions and structural methods influenced the design, but the spirit of the Lombard Romanesque has in the main been adhered to, with some inspiration from the Romanesque detail and ornament of Southern France.

The fact that the church was to be built near the great brick and terra cotta producing districts of the State was the esthetic reason for the choice of these materials for the exterior, just as the Lombard builders chose brick because it was the material of their country.

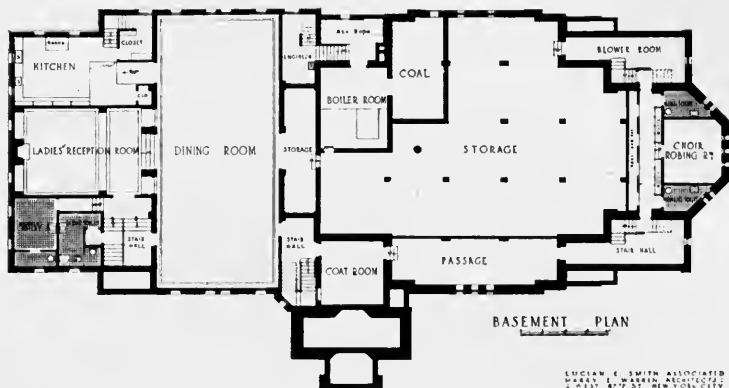
Effort has been made to avoid a mechanical type of bond in the wall surfaces, and the brick itself ranges in color from a salmon pink to a deep purple. The wide mortar joint of buff tone serves to tie the color of the wall together, and owing to the variations in the color of the brick itself, the wall takes on different hues in different lights. The base of the building up to the stone table is of a very large brick, to give a stability of appearance. The brick above are of small size, which helps to increase the scale of the building.

The large triple windows are designed with free standing stone columns and

crudely modeled foliated stone capitals. The central opening is wider and slightly raised above the side openings to make it a dominant in the triple motif. The five arched windows below serve to enhance the apparent size of the great triple windows above. Rich brick mosaic with marble inserts flank the windows, and the spaces above them are filled with brick mosaic in a carefully worked out design. Under each small arch of the crowning feature is a piece of rare colored marble set in the brickwork. The angle brick or tooth motif is used in the main cornice to give an interest in light and shade to this feature.

The south or choir end of the church is treated with an arcade. The brick arches contain pieces of marble skilfully utilized to fill up the wide joints occasioned by turning the arches with unground brick. A different type of brick mosaic is used above the arcade and choir windows. The small sections of wall in the arcade are slightly battered or sloped back to produce an interesting shadow. Small decorative crosses are formed of black brick in each opening.

The entrance porch serves as a dominant architectural feature of the façade. The splayed arches rest on richly modeled polychrome terra cotta capitals decorated with leaves, vases, birds and small gilded crosses. The bases of the octagonal piers are of stone. The interior walls of the porch above the arches are given a decorative interest by the use of a header bond in the brickwork, every alternate brick projecting beyond the face of the wall. The denticulated brick cor-



LUCIAN E. SMITH ASSOCIATED
 ARCHITECTS
 5 WEST 47TH ST. NEW YORK CITY

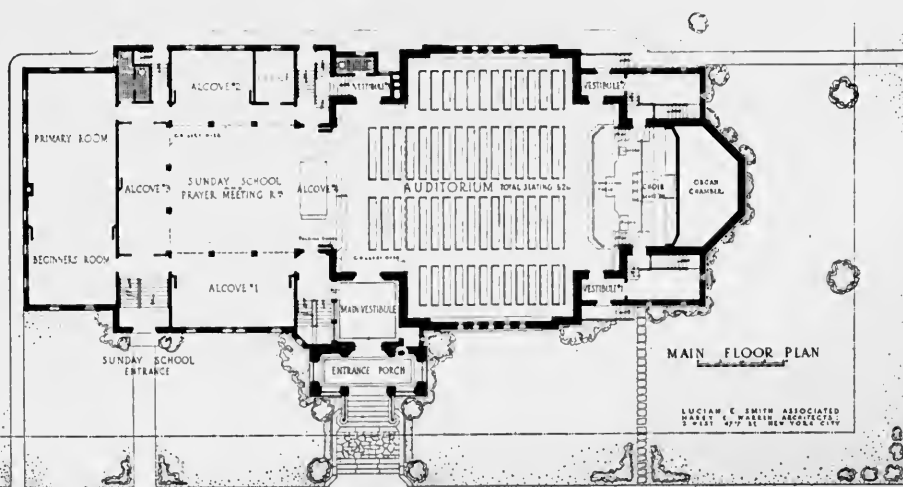
nice and mosaic frieze with its marble inserts and marble band serve, with the marble stars, to enrich the exterior of the porch.

Surmounting the dome is an octagonal turret of copper, designed with corner buttresses finishing in small pierced Greek crosses. The alternate openings are glazed and louvred—the louvres cut in a curved design. Surmounting the whole is a gilded finial with pierced ornaments and lights which shed a mystical glow over the surface of the dome at night.

The color and texture of the tile roof has been obtained by the use of a yellow tile, mixed with a darker tile and laid to produce an irregular effect.

The treatment of the Sunday School portion of the building has been kept low to give greater architectural value and size to the church proper, with its crowning dome. The windows are arched, the central windows being treated with the typical free standing stone colonette and arches.

The great simple expanses of wall on the exterior are the logical result of the structural requirements of the building. The thrusts exerted by the arches of the dome and by the pendentives require the walls to be of definite heights and weights, and from these purely practical premises the style has been developed. The walls are made interesting by their color and



MAIN FLOOR PLAN

LUCIAN E. SMITH ASSOCIATED
 ARCHITECTS
 5 WEST 47TH ST. NEW YORK CITY

texture, while the decoration has been concentrated and given full value in the richness of the porch motif, windows and doorways.

The main entrance doorway is of rich polychrome terra cotta, to harmonize with the general color tone of the surrounding brickwork. The ornament of the doorway is characteristic of the style, with running motif of leaves, grapes, birds and animals, twisted columns and columns bound with ropes. A peacock motif appears in colored terra cotta medallions on either side of the doorway.

The vestibule to the auditorium and the gallery has an arched treatment on the north, with twisted spindle grilles dividing the stair from the vestibule proper. The lunette over the door is richly modeled with an angel holding a scroll and having peacocks, signifying the Wisdom of God, on either side.

The dome is of the single shell type, built of thin, rough terra cotta slabs in horizontal rings which break joint one with the other. The structural shell of the dome is bound around with two steel rings, one at the base, and another one-third of the way up to the crown, to resist the outward thrusts developed by the weight of the dome and the turret which surmounts it.

The interior of the dome is lined with a sound-absorbent material, of pumice stone and cement, modeled, cast and set in the form of tiles of fish scale design in fields divided by wide plaster bands orna-

mented with a running foliated motif of crude leaves and bunches of grapes.

The rich cornice at the base of the spring line of the dome is designed with characteristic leaf motifs of different designs with alternating rosettes over large

twisted rope molding; the whole surmounted by alternating cupids' heads and the doves with halos which symbolize the Holy Spirit.

The pendentives of the dome each contain a large circular medallion with bas-reliefs of the four Evangelists properly oriented, each with his usual symbol.

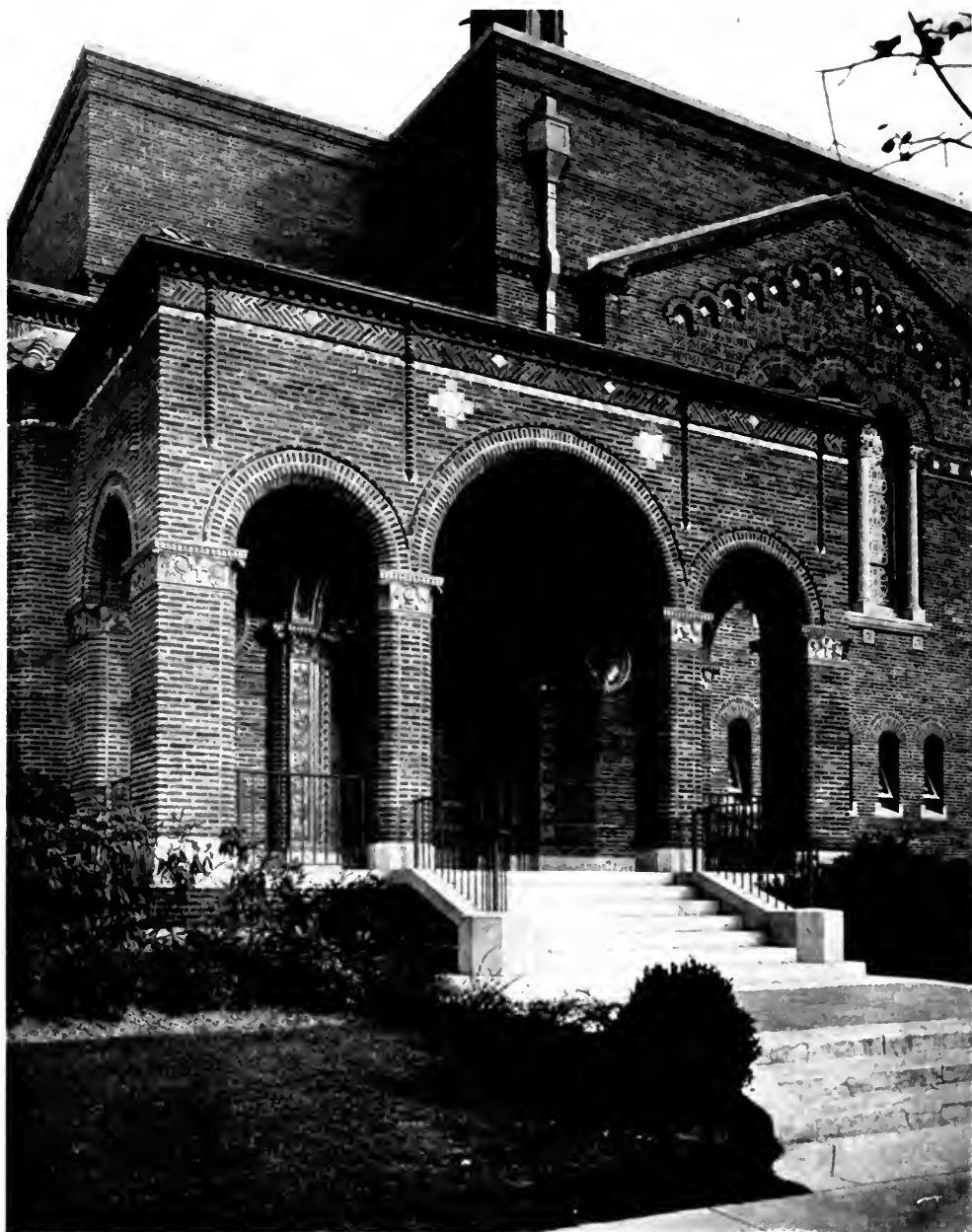
The medallions are surrounded by a running vine motif and the Venetian dentil. The decoration of the medallions of blue, gold and yellow-brown suggests the religious pictures and terra cottas of the style. The modelling has been kept purposely crude to simulate the early carving of the period. The vaults supporting the dome come down upon a small cornice ornamented with the Venetian dentil. The cornice is of slight projection so as not to break the line of the



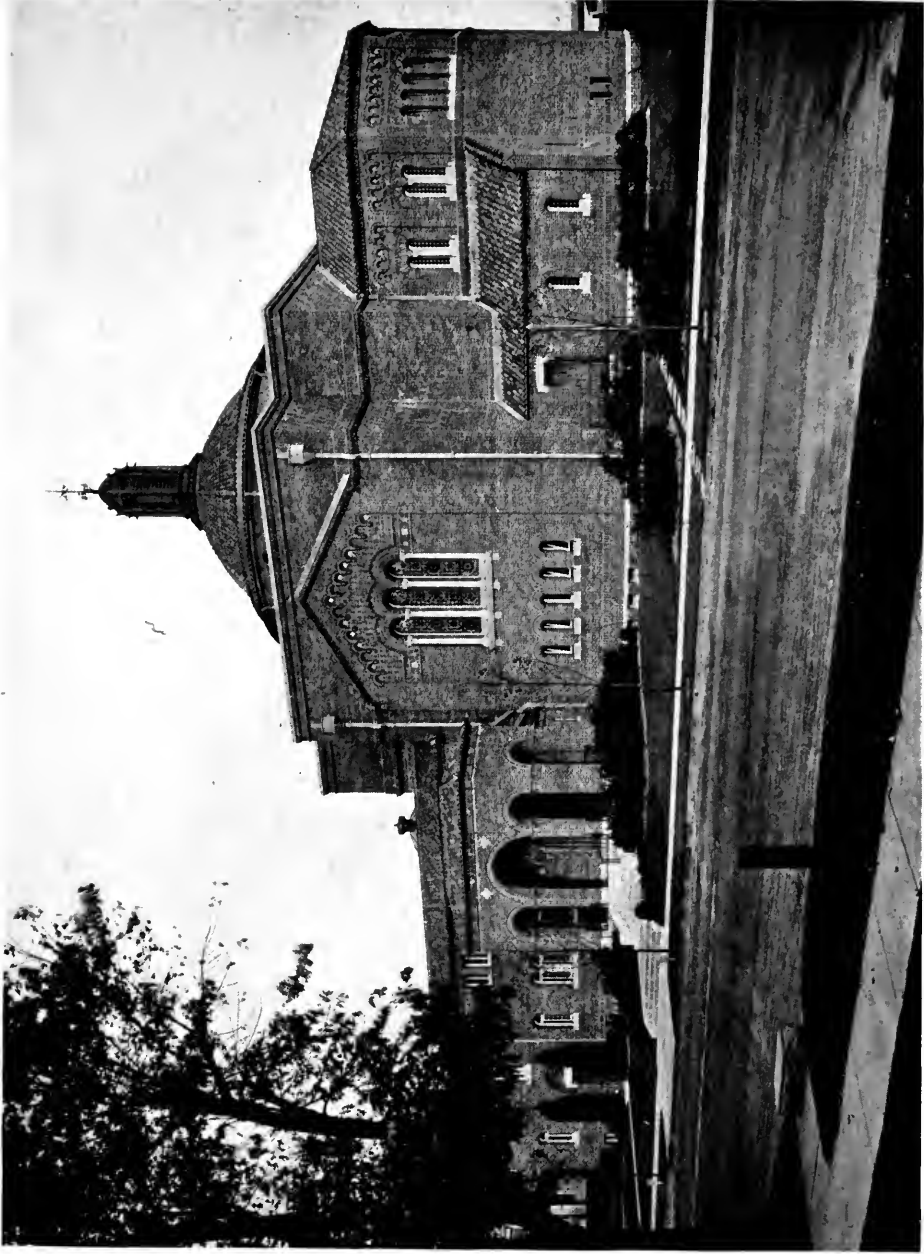
SUNDAY SCHOOL ENTRANCE

vaults from the floor.

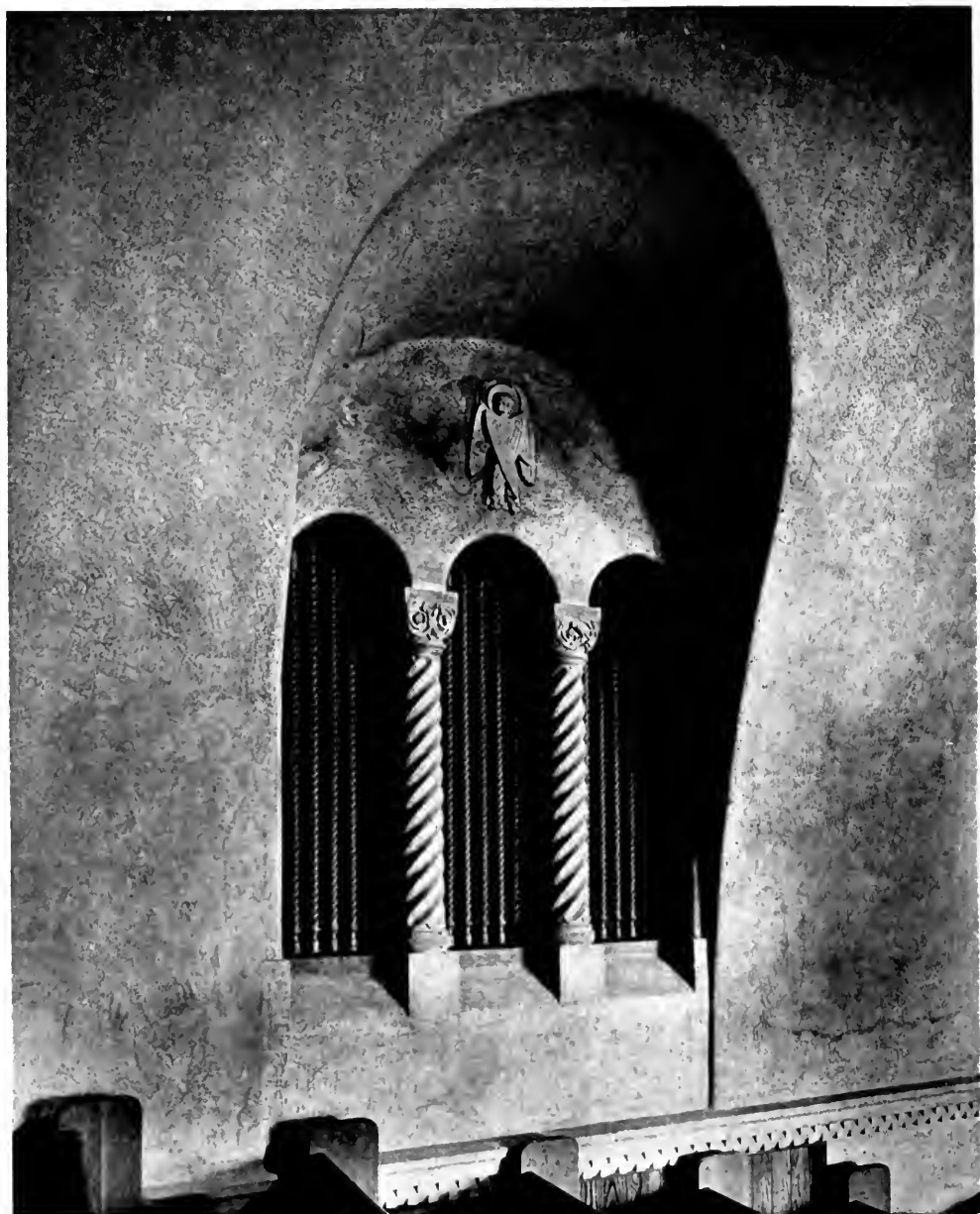
The triple windows to the east and west with their columns and crudely modeled capitals resting on small corbels ornamented with anthemion motifs, are reminiscent of crude early work. The label molding has the diamond motif met with in many of the old windows and doorways. This molding is supported on corbels designed with the fish, which recalls the early Christian symbol denoting



ENTRANCE PORCH—THE FIRST METHODIST EPISCOPAL CHURCH, ASBURY PARK, N. J. LUCIAN E. SMITH AND HARRY E. WARREN, ARCHITECTS.



GENERAL VIEW—THE FIRST METHODIST EPISCOPAL CHURCH, ASBURY PARK, N. J. LUCIAN E. SMITH AND HARRY E. WARREN, ARCHITECTS.



WINDOW IN GALLERY—THE FIRST METHODIST
EPISCOPAL CHURCH, ASBURY PARK, N. J. LUCIAN
E. SMITH AND HARRY E. WARREN, ARCHITECTS.



DETAIL OF DOME—THE FIRST METHODIST EPISCOPAL CHURCH, ASBURY PARK, N. J. LUCIAN E. SMITH AND HARRY E. WARREN, ARCHITECTS.



LOOKING TOWARD GALLERY AND
SUNDAY SCHOOL.



LOOKING TOWARD CHOIR AND
PULPIT.

entrances to meeting places in the Roman catacombs. The windows of the choir and gallery have the twisted colonettes with crude cubiform capitals of four different designs. In the spandrels above are placed the six-winged seraphim.

The semi-circular lunettes over the doors to the gallery and vestibule are ornamented with a representation of the Lamb of God carrying the small cross and flag and standing on the Book with the Seven Seals, as described by the Evangelist John, surrounded by a nimbus of light and flanked by two adoring angels with censers. The vaults and walls of the auditorium are of rough plaster treated to represent the painted stone of old work. Buff coloring has been incorporated in the plaster to render it permanently decorative.

The supporting motif for the organ is in two planes to give greater relief for the case itself. The small arched openings recall the arcaded treatment so often met with in this style. The decorative elements consist of three foliated corbels, large stepped brackets ornamented with the characteristic crude acanthus leaf and winged cupids' heads. While there is no

prototype for an organ in this style, the case has been worked out to harmonize with the style of the interior, the moldings crudely profiled, the Venetian dentil freely used, the cresting and finials recalling those seen in Venice; the arches designed with cusping as was used in the altar of Or San Michele in Florence and the organ of the Hospital of Siena; the pierced panels of the great central tower recalling the pierced screens of Ravenna.

The woodwork and furniture have been designed to harmonize with the style using the octagonal colonette, Venetian dentil and tooth ornament. The color of the woodwork throughout has been kept as near as weathered natural wood as possible. The aisles are of marble terrazzo.

For the lighting fixtures of the auditorium there is no precedent, but a new type has been developed using Romanesque decorative motifs executed in sheet metal, enameled and painted. The great cross in the auditorium is of pierced, painted and gilded metal. The side brackets are of pierced metal, enameled and gilded. The lamps give a golden glow to the light, which blends happily with the rich stained glass of the windows.

~ TWO TOWN HALLS ~

At Millburn, N.J.: Horatio W. Olcott, ~ Architect

At Roselle, N.J.: Warrington G. Lawrence, Architect

By

Jack Manley Rose and
Grace Norton Rose :>

IT occasionally happens that, despite political influence, the more or less mediocre taste of the majority of citizens, and the everlasting necessity for compromise, an architect miraculously gets a chance to design and erect a civic building expressive of his own conception. The two buildings shown in the following pages are a credit to the communities which surround them and a joy to the lover of architectural beauty.

The problems presented by both municipal buildings were in many respects identical. The communities, while of rather differing character and population, still required the same general incorporation of the various civic departments. For instance, in each building the housing of a vigorous fire department had to be considered; almost primarily considered in the case of Millburn. How excellently the architect, Mr. Olcott, met this utilitarian purpose, and kept his building so charming in proportion and so delightfully ornamental to the little town, is decidedly apparent.

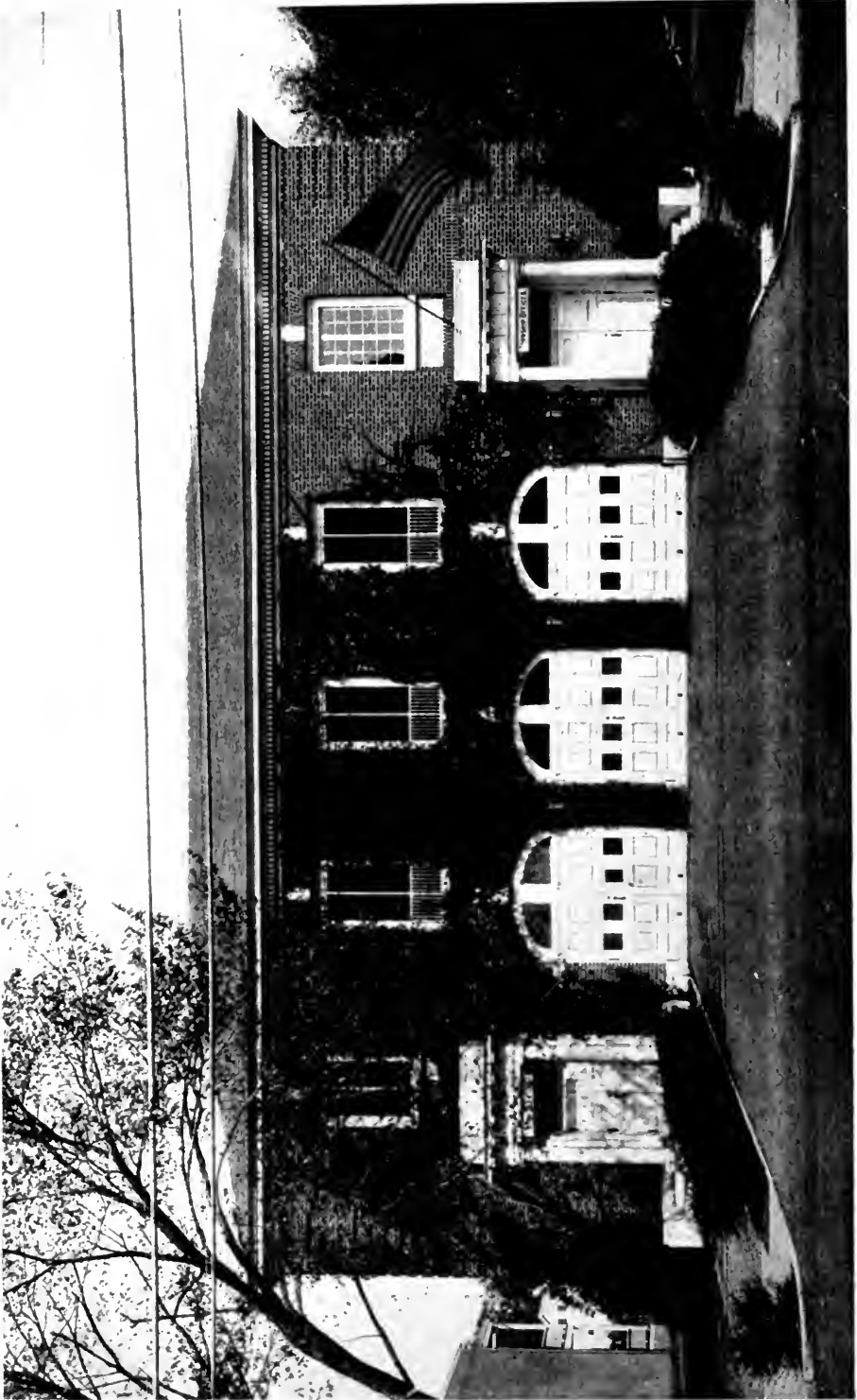
In the Roselle edifice the housing of this most valuable department was

subordinated cleverly to the dignity of the structure. This building, so admirably adapted to a fairly limited frontage, takes its inspiration from the beautiful old State House in Boston. Rarely can a small city of such rapid and recent growth boast so fair and stately a public building. It has all the charms of Colonial America at her best and, apart from that, a special appeal of its own that the formal approach greatly enhances.

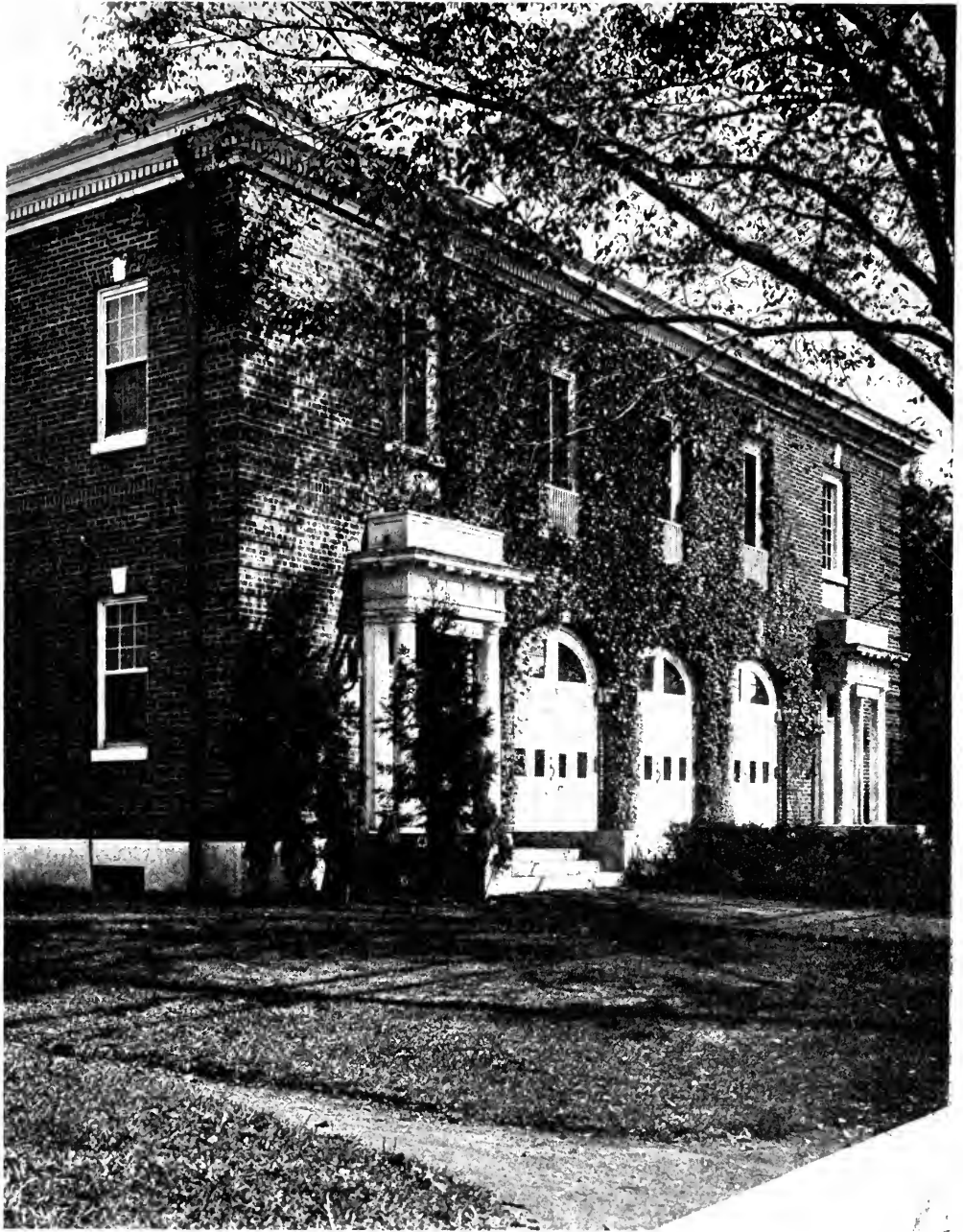
Of restful red brick in mellow and varied tones, widely jointed in cream mortar, with its deep cream trim, from the wide esplanade of concrete flecked with tree shadow to the green capped cupola of weathering copper, the effect is arresting and noteworthy. Especially deserving of comment in detail are the front Palladian window and the cleverly proportioned series of windows at the sides with their wrought iron balconies; unusual and remarkable is the care given even to the designing of the flagstaff support. Mantled in vines, as the building is this fall, and judiciously planted with privet clumps and hedges, it stands a rare gem set in a little town



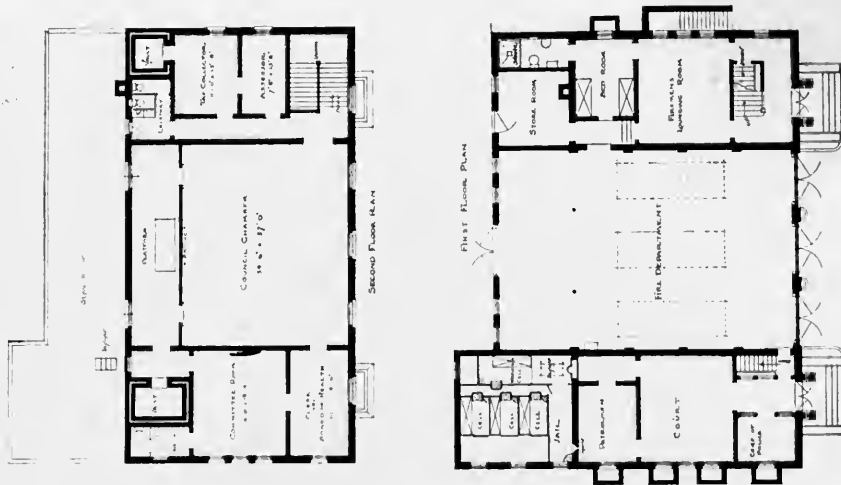
TOWN HALL,
MILLBURN, N.J.
HORATIO W. OLCOTT, ARCHT.



FRONT VIEW—TOWN HALL, MILLBURN,
N. J. HORATIO W. OLCOTT, ARCHITECT.



VIEW FROM THE SOUTHWEST—TOWN HALL, MILL-
BURN, N. J. HORATIO W. OLCOTT, ARCHITECT.



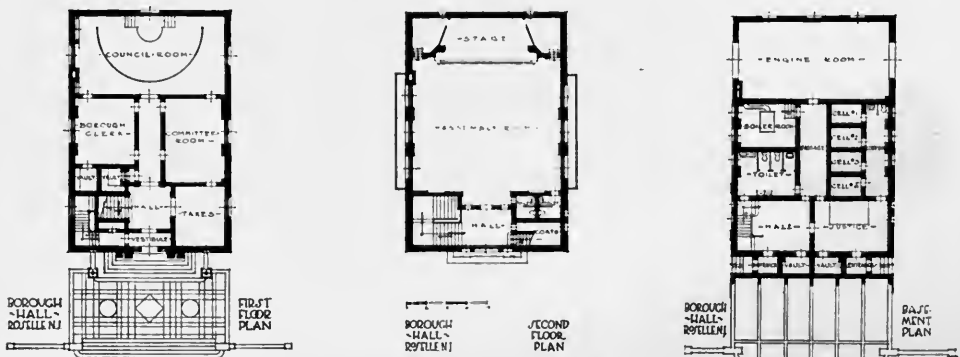
FLOOR PLANS, TOWN HALL, MILLBURN, N. J.
Horatio W. Olcott, Architect.

at present decidedly in the throes of hasty reconstruction; and it is most prayerfully to be hoped that it may serve as a pattern and a standard for future building in that pretty little tree-shaded borough. In this building the architect, Mr. Warrington Lawrence, has designed himself a monument of permanent beauty.

In the Millburn township building the simplicity of design is of itself noteworthy—yet the detail is excellent. Practical, economical and extraordinarily pleasing, the clear shining white trim and deep red brick walls embroidered in green vines, give a serene workmanlike appearance, and a well-scrubbed look of spotless efficiency, aside from the matter of true proportion and agreeable spacing of doors

and windows. With its gray-green roof, the dark verdure of the simple planting and the variety lent to the brickwork by the Flemish bond coursing and the quoin treatment at the corners, the building has no lack of interest in its straightforward appeal.

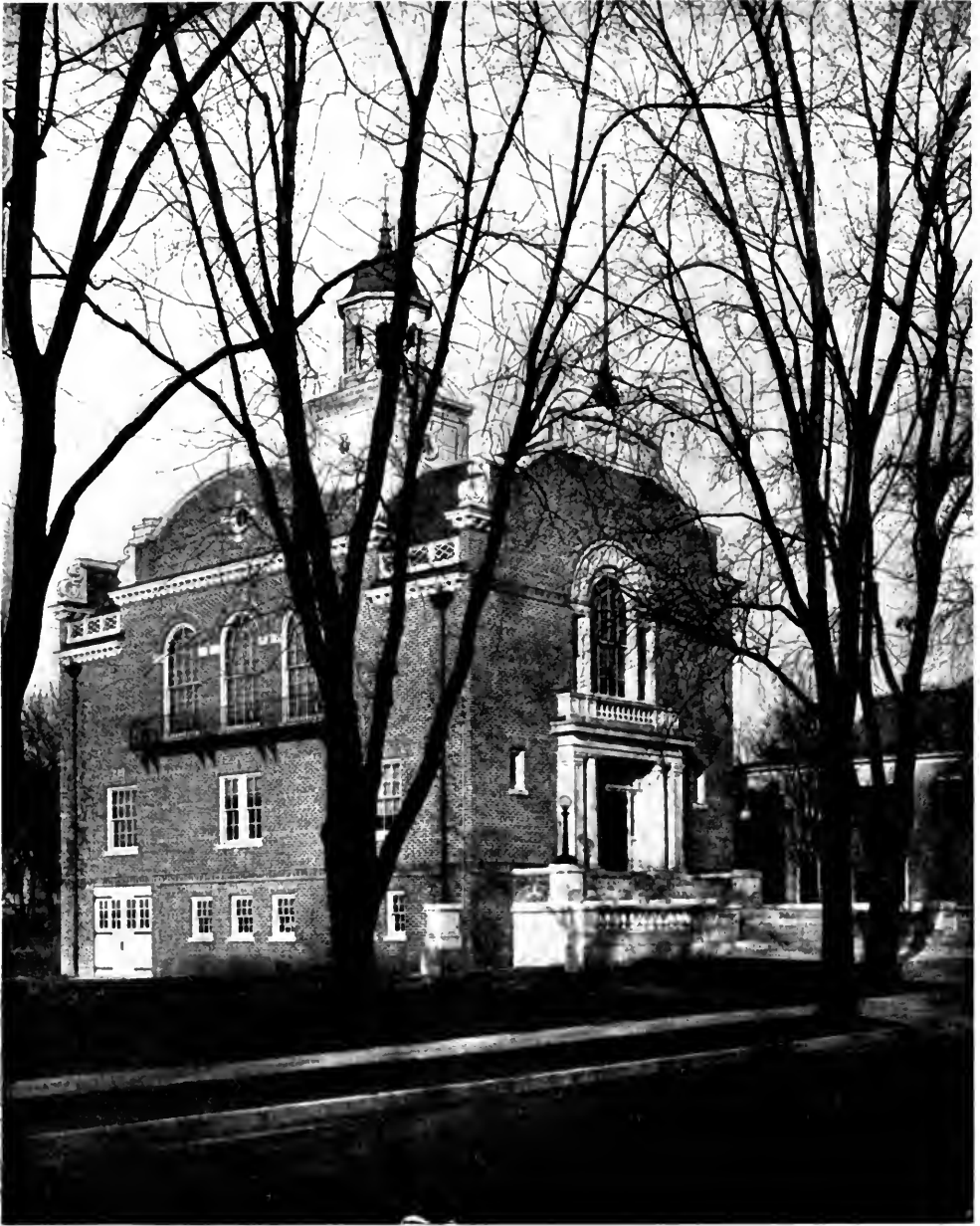
The floor plans are models of conserved space and workability. With the fire department occupying the greater part of the ground floor, the police department distinct and separate on one side, and the entrance to the township offices, which occupy the entire upper floor, on the other, a balance is preserved. An adequate jail which complies with all sanitary and humanitarian requirements, runs out from the police department into a



FLOOR PLANS, BOROUGH HALL, ROSELLE, N. J.
Warrington G. Lawrence, Architect.



FRONT VIEW—BOROUGH HALL, ROSELLE, N. J.
WARRINGTON G. LAWRENCE, ARCHITECT.



SOUTHEAST VIEW—BOROUGH HALL, ROSELLE,
N. J. WARRINGTON G. LAWRENCE, ARCHITECT.



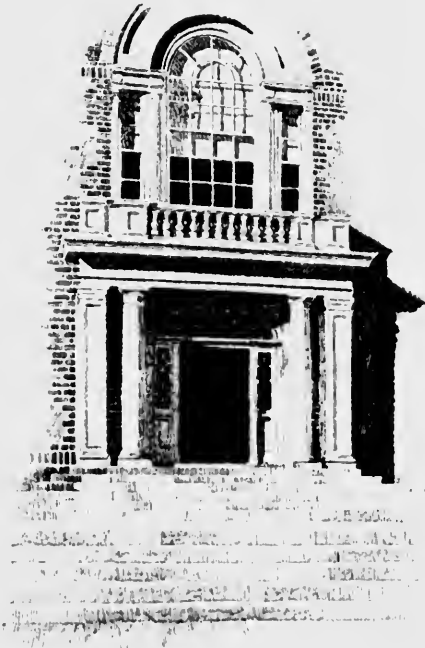
REAR VIEW—BOROUGH HALL, ROSELLE, N. J.
WARRINGTON G. LAWRENCE, ARCHITECT.

one-story extension. The remainder of the police department space consists of a small court room, a patrolmen's room and an office for the chief. The fire department, evidently a prized and much appreciated township adjunct, is very attractively housed. Besides its large cement-floored garage for three strictly modern motor apparatus, bright with polished brass and spotlessly clean, the firemen have a store room, a bed room and a lounging room with shower and

lavatory. The second floor space is devoted to a hall and corridor, a large council chamber with railed off platform, the tax collector's office, the assessor's office, the office of the clerk of the board of health, a committee room and two lavatories and two vaults.

In considering the plan of the Roselle building, we find the large and high-ceilinged basement devoted to engine room, court room, jail, boiler room, vault space and toilets. The first floor, besides containing a pleasant council chamber, has a committee room, a borough clerk's room and a room for the tax department. Up a rather wide and well-lighted stair, is a large assembly room with a stage where municipal motion pictures have been given regularly and many public gatherings are held.

Strictest economy has been observed in



MAIN ENTRANCE—BOROUGH HALL,
ROSELLE, N. J.

the interior treatment of both buildings and no attempt is made for impressive or elaborate finish. Wearable brown stain for the woodwork and buff-tinted plaster for the walls prevail in Roselle, while gray-white plaster and dark fumed oak stained woodwork have been used in the Millburn Building.

Unfortunately, town halls—if we may so call them—of the calibre of these buildings are too rarely found among the towns and boroughs of our growing suburbs. Very few buildings of

historical interest and early American charm have been preserved to us as city or borough halls, and those erected in the later years have shown little permanence of design.

Only of recent years, perhaps, has there developed a feeling for civic buildings that do justice to the community in which they stand. We are, with the help of sincere and high-minded architects, securing a few municipal buildings here and there of undoubted merit. Fine schools we have, and churches, libraries, private dwellings and attractive inns, and, lately, memorial community halls that add much to a towns' allure. When we house offices of the community's body politic in buildings such as these, we have made big strides toward inculcating efficiency among our public servants and civic pride among our citizens.

TENDENCIES IN APARTMENT HOUSE DESIGN

PART VI—"OPEN COURT" TYPES



By FRANK CHOUTEAU BROWN

QUITE a number of years ago apartment house plans first began to develop into the "Court" type, with the court opening upon the street and becoming an important part of the esthetic treatment of the exterior. Previously these courts had been merely a necessary part of the plan, devised only to secure light and ventilation for the interior and rear rooms, and had always opened to the rear of the structure—or had been narrow restricted slits, completely enclosed between the narrow deep plans that were then the customary and indeed inevitable apartment house scheme for the crowded city block.

As a matter of fact, it was in the suburbs that these "open court" plans were first attempted. The solution seemed then a possible one for the lower cost suburban land, especially when the lot areas to be developed were fairly large, and too deep to readily carry the older-fashioned conventional plan, without leaving a great deal of property still unused in the rear of the structure.

Where a piece of land was, let us say, two hundred feet deep, and a hundred and twenty-five or fifty feet front upon the street, it was at once obvious to the trained architectural planner that it was economically poor policy to build only upon the front half of the property, at the most obtaining only six to eight of the old fashioned narrow-plan "railroad" type of apartments. The trouble up to that time had been, of course, that this sort of problem had rarely come into the architect's office at all. Most of the early apartment buildings had been the product of the speculative builder and

the contractor, who had merely gone along unthinkingly reproducing the conventional and commonplace type.

With the proportions of this deep and wide lot upon his drawing board, it became apparent that a far more economical and complete development of the land area could be undertaken by building around the three outer sides of the square and leaving the front central portion, opening upon the street, as the common property of all the tenants, across which they could all obtain some advantage of the street outlook and frontage. Such an arrangement of the plan, once worked out in detail, proved it possible to accommodate by this means up to 50 per cent. more families upon the same piece of property, each possessing as much, if not more, of a street outlook than before.

It was, however, at once discovered that, with a lot of land of these approximate proportions, it was both desirable and necessary to change the plan of the individual apartment from the long narrow deep scheme to a wider, shallower, more compact arrangement, such as we have already traced in its development in previous articles. This proportionately reduced the number of apartments that could benefit from the street outlook around the interior of the court, at the same time making the interior arrangement of the apartments themselves more convenient and desirable.

Even with this change in arrangement, however, it was still possible to increase the number of families to be accommodated around the court by about 20 per cent. over those that could have been housed directly upon the street frontage

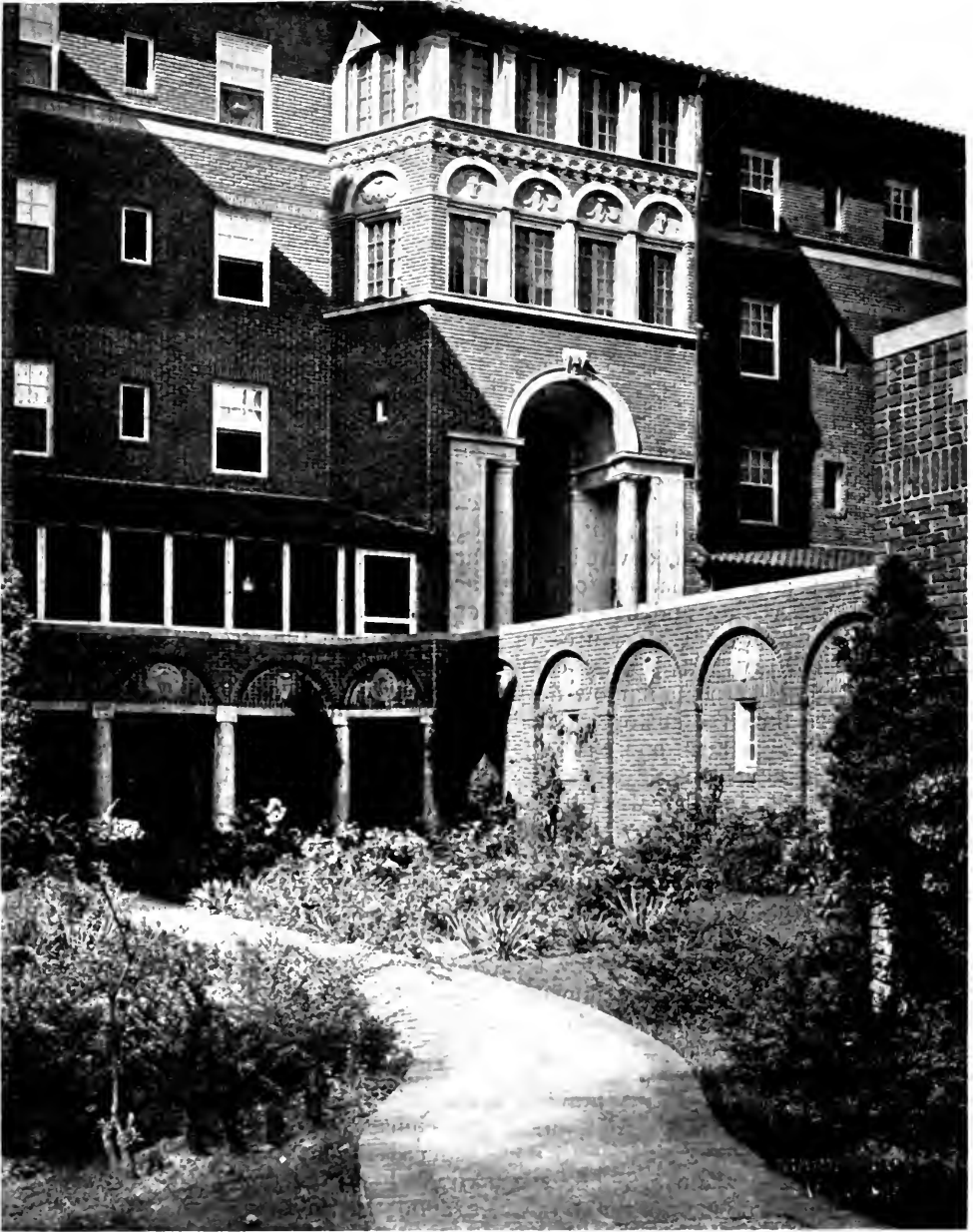


FIG. 64. TUSCANY APARTMENT HOUSE, BALTIMORE, MD. CLYDE N. FRIZ, ARCHITECT.

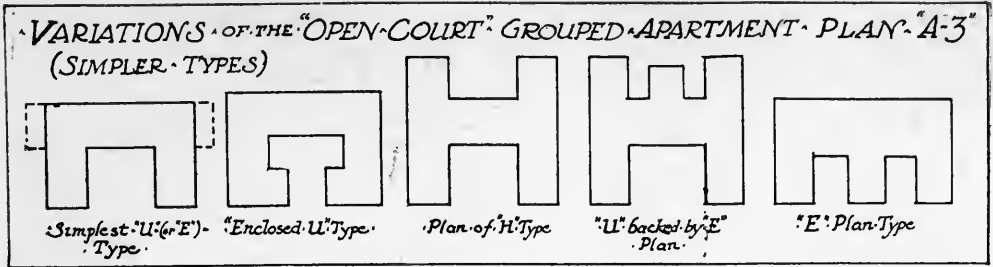


FIG. 65. THE SIMPLER TYPE OF "OPEN COURT" APARTMENT PLANS.

of the property—and in much more conveniently planned and more desirable apartments. This courtyard once obtained, it was apparent that it provided an opportunity for attractive planting, that actually doubled its value to the tenants and was of advantage to the owner as a drawing power in keeping his apartments full and his rents high, at one and the same time.

Among the very first buildings of this type to be constructed was "Richmond Court," built about twenty years ago, near Boston in Brookline, facing on Beacon street, by Cram, Goodhue and Ferguson, on a spaciouly large frontage (nearly two hundred and fifty feet) and a rather deep lot, to which this general type of plan arrangement is so particularly well adapted. At very nearly the same time two other buildings were built in Boston and in Cambridge, "Trinity Court" and "Riverbank Court," carried out in a similar style of architectural treatment, employing English Tudor motives—with its obvious advantages in providing appropriate "bays" supplying outlook to right and left, all advances over the then prevalent types of apartment houses, both in design and construction. All three groups were widely illustrated and should have exerted more of an effect upon contemporaneous architecture the country over than seems to have been the actual case, as all proved to be unusually successful—from a purely financial as well as from a merely architectural point of view.

The outline plans of all were different. "Richmond Court" follows a fully open "U" type, "Riverbank Court" is clearly

developed from the "H" shaped plan, and "Trinity Court" was built entirely around a rather narrow courtyard. In the case of "Riverbank Court" particularly, there was a very good reason for the plan. It enabled a large part of the occupants to benefit from the river views afforded by the location of the building on the Charles River at the Cambridge end of the Harvard Bridge. "Trinity Court," had, on the other hand, as good a reason for its closed-in square. It was built directly alongside of the Trinity Place station on the Boston & Albany, and consequently there was every reason to protect the occupants as much as possible from the noise, dust and smoke of the trains.

All these plans suffered in detail from the fact that the suites were composed of rooms too small in size. "Richmond Court," built around a courtyard about ninety feet wide by eighty feet deep, had small living apartments, principally of four and five rooms, entered from staircases serving sections of the whole plan, which was thus divided among a number of small "Halls"—a fairly economical method so far as eliminating long public corridors was concerned. It also allowed the apartments to extend entirely through the structure, from front to back, thus ensuring cross ventilation—a very important matter if the buildings are to be comfortably occupied in summertime.

"Trinity Court" is also arranged as a series of sections, each a separate portion of the structure, with individual staircase and, in this case, an elevator, as well, the building being of six stories height, with studios arranged upon the



FIG. 66. TUSCANY APARTMENT HOUSE, BALTIMORE, MD.
Clyde N. Friz, Architect.

upper floors. The economy of this method of planning now becomes more debatable, as it incurs a constant running expense in the maintenance of so many separate elevators, where one or two would otherwise have served the whole structure, if there had been circulating corridors around the court on each floor. The apartments in this building are mostly of two and three rooms, and again run through the structure from its outside face to the interior court, so that the matter of cross ventilation is thoroughly provided for. The narrow width of the court and relatively greater height of the walls surrounding it, made it impossible for much use to be made of shrubbery, in this instance. It nevertheless provides grateful space for air and sun, and helps make the small apartments desirable and comfortable for their occupants.

In "Riverbank Court," a quite different

type of plan has been developed. The entire lot to be built upon was much larger than in the last example—somewhat wider, as a matter of fact, than in the case of "Richmond Court" in Brookline—and the apartments were all to be non-house-keeping apartments, again mostly of two and three-room units, and many as small as the one room and alcove and bath type. The arms of the letter "H" were also thick enough to allow of a wide central corridor being used, with rooms facing out on each side. The result was that, except in the apartments located on the outer corners of these arms, no cross draft was possible—except through the public corridors. Advantage was taken of this opportunity by equipping the apartments with "blind" slat doors opening outward into the corridors, so that the tenants had the option on hot summer nights of leaving the inner doors ajar and securing a certain amount of air

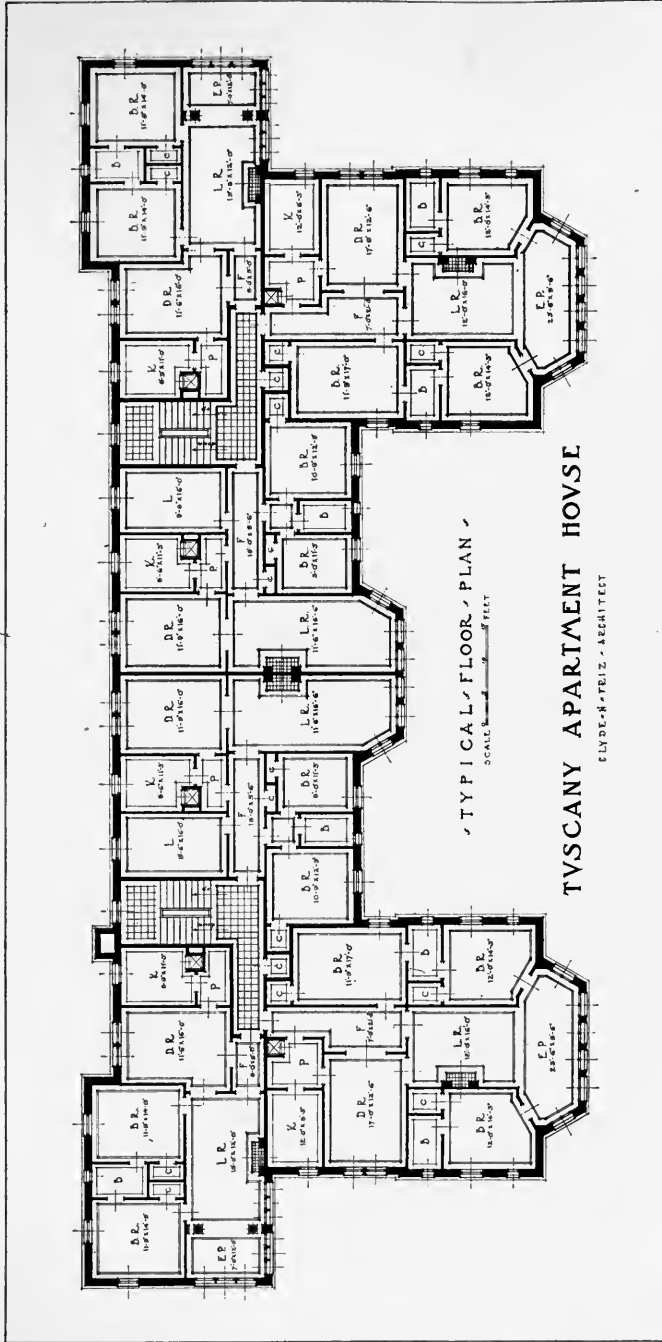
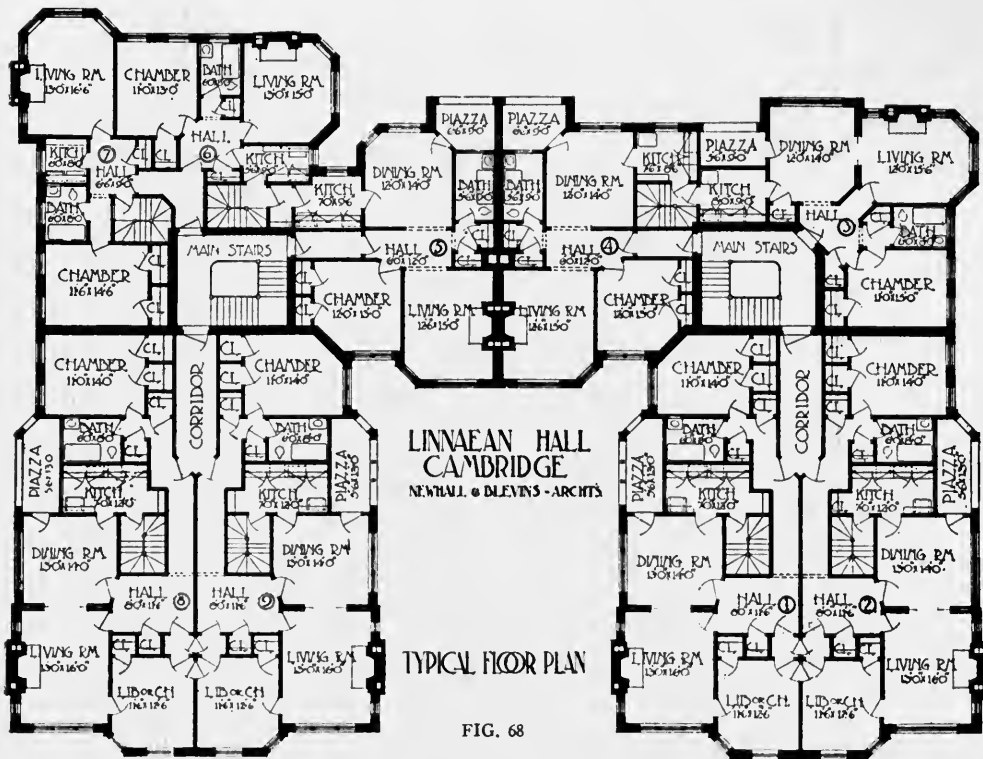


FIG. 67. TUSCANY APARTMENT HOUSE, BALTIMORE, MD. CLYDE N. FRIZ, ARCHITECT.



drawing across between door and window—not always, of course, of the purest or coolest quality, but nevertheless air. Two batteries of elevators, one at each side of the central cross corridor connecting the two long ranges of the “H”, were provided to serve all tenants. Both here and in “Trinity” a public dining room was provided, although it was not important in the latter case, as the building was near a central business section, where many nearby restaurants were available for the use of the tenants.

All of these ventures were so devised that they provided a small unit apartment, with over-small rooms—a basis upon which too much of this class of apartment development has since been predicated.

Within a very few years it was discovered that these courtyards possessed still another advantage, the true value of which was not perhaps suspected at the time they were first adopted. This lay in the comparative quiet and increased

cleanliness of the more retired apartments, which became so much the more desirable than the ones upon the streets, once the automobile began to come into as wide general use as began to be the case a few years after the first large apartment house groups of this kind were built in some of our principal city suburbs.

It was also discovered that they were not only a desirable type for the suburb of the large city, but a profitable and desirable type for even the more expensive and crowded portions of these large cities themselves, as will be well illustrated by some of the examples reproduced in this and the succeeding article. Not only that, but whereas this type was, in the first instance, invented for application only to the very deep piece of land, it has recently been found an economically desirable type of construction to go upon the comparatively shallow lot, once its length upon the street and its proportions have been found available for even



FIG. 69. LINNAEAN HALL, CAMBRIDGE, MASS. NEWHALL & BLEVINS, ARCHITECTS.

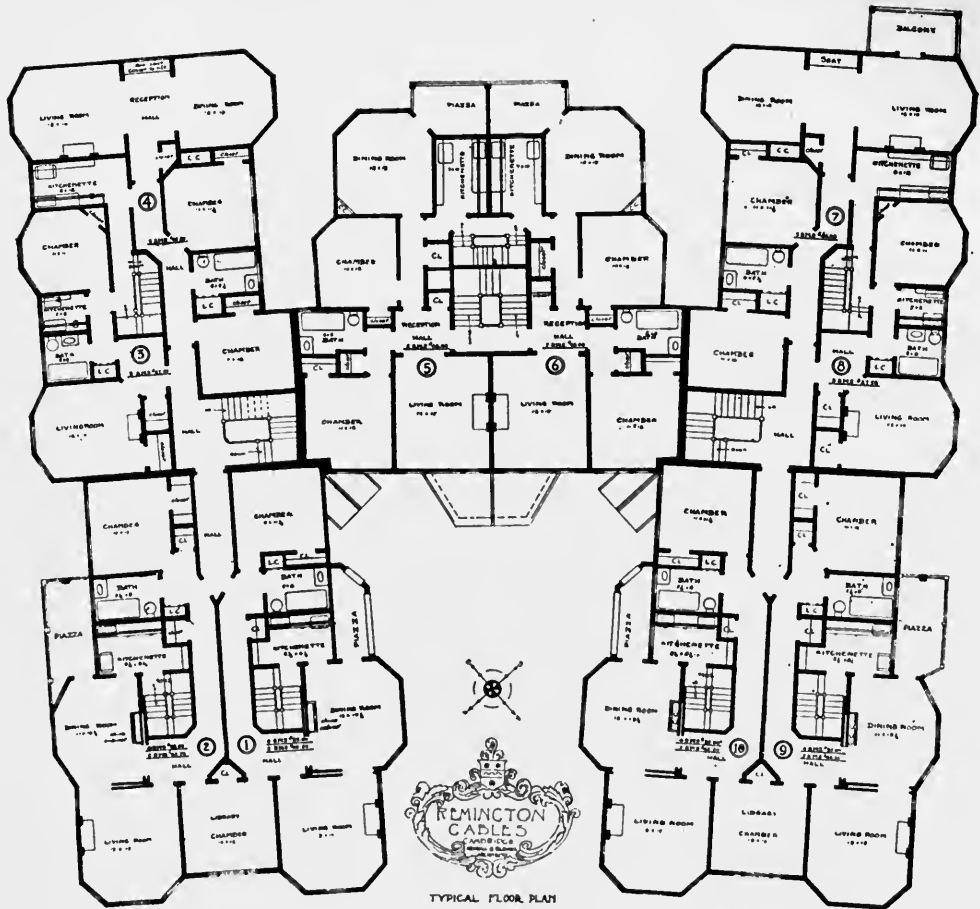


FIG. 70. TYPICAL FLOOR PLAN, REMINGTON GABLES, CAMBRIDGE, MASS.
Newhall & Blevins, Architects.

the shallow depth court. In this relation we can undertake to continue the development of this idea from where we left it in the last article, for it is at once evident that a piece of property capable of being improved with a range of double rooms along the street frontage and carrying short ells out to the rear for service portions, is just as well adapted to building the range of major rooms nearer the rear lot line and advancing other principal rooms toward the street line, thus obtaining more outlook up and down the fronting street. This is an arrangement that has particular advantages when it would be by these means possible to obtain for these principal rooms a better exposure for sun or air, as well

as an improvement of the outlook, as already mentioned.

Before resuming the trend of this progress from the point where it was discontinued let us first consider for a moment some of the different possibilities available from a more complete utilization of the "open court" idea. And although almost every point will be illustrated by the individual plans, it will be more definitely comprehended by the comparative plan outlines that not only possess the advantage of immediate juxtaposition, but also, by elimination of the fussy details of the plans themselves, more clearly illustrate the main "courtyard" idea.

Such a grouping of plan outlines—

STRATFORD HALL CAMBRIDGE
20-20^o PRESCOTT ST.

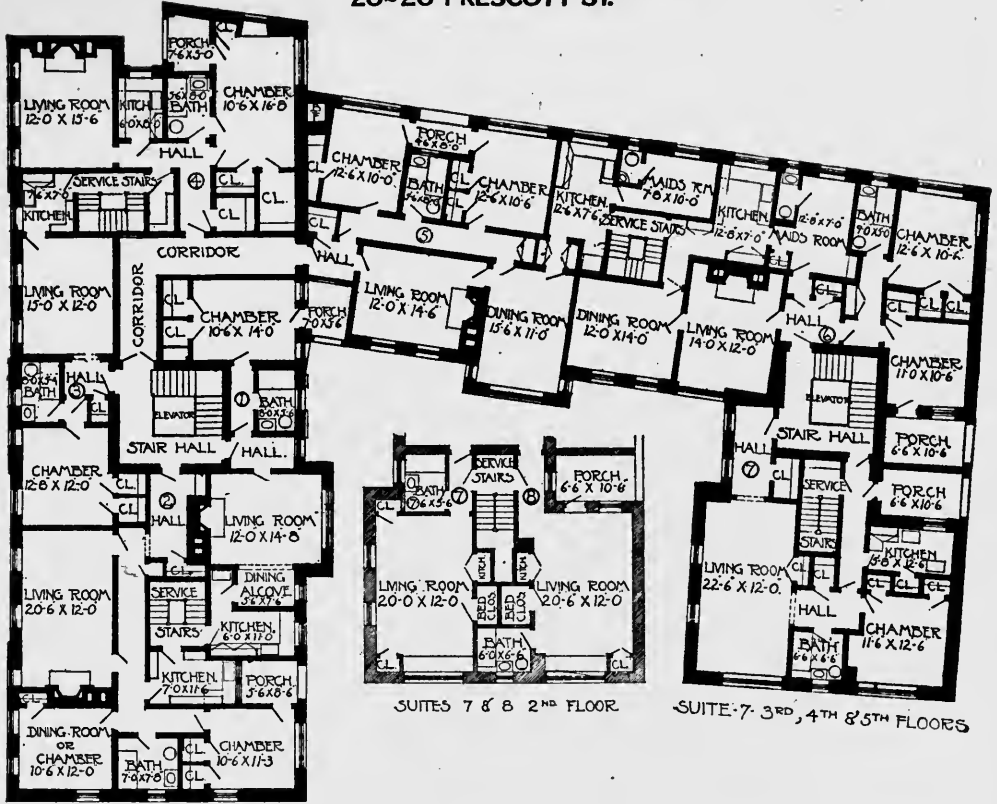


FIG. 71. TYPICAL FLOOR PLANS, CAMBRIDGE, MASS.
Goodell & Root, Architects.

so far as they apply to the structures illustrated in this article—is shown as Fig. 65. They are all some minor development of the plan-type that was shown as "A-3," Fig. 36 in Part IV, published in the September issue. The first group shows these "court plans" as they most easily apply to the proportions of the shallow lot. A second group will show how certain other modifications are better adapted to provide more desirable apartments when the same type of plan is adapted to meet the conditions of the narrower and deeper shaped lot of land. A certain number are, of course, available—with some obvious minor modifications—to both shallow and deep plots of land.

Perhaps the best example of the wide

and shallow lot treatment is provided in Fig. 67, where the building itself covers a plot about two hundred feet long by eighty feet deep, with, of course, some additional space to provide the occupants with light and air upon all sides. Not only is this an excellent example of the "E" type of plan, to which it fully conforms, even to the small central bay, but it also illustrates a still further development in length, in the two smaller end courts obtained by bringing the two principal projecting ells in from the extreme ends of the plan and leaving a considerable section of the major range of the building extending out beyond these forward projecting ells at each end. The advantage of securing the full benefits of the exposure in the two wings is obvious,

quite aside from the particular and individual utilization of the idea that is made in this plan. Each floor of this building obtains six apartments, all possessing spacious rooms, and the plan repeats itself on each side of the centre line. The building is only four stories in height and no elevator is used. Space in the public halls is saved by having two staircases and entrances, each serving one-half the building, and each apartment requires only a very short interior hallway. No separate rear staircase is provided; the different ranges of kitchens being very efficiently served by dumbwait-

ers reached from the basement story.

The plan is of the suburban type, four of the apartments on each floor containing a sunroom or "porch," and full advantage has been taken of the very attractive surroundings to make the exterior of the structure attractive and pleasing in both an architectural and a popular manner, as is well illustrated by Figs. 64 and 66. Even the difference in the grades, complicated as it is by the great length of the building, has been most ingeniously utilized by the designer to add attraction and interest to his structure.

The type of arrangement around a long



FIG. 72. STRATFORD HALL, CAMBRIDGE, MASS.
Goodell & Root, Architects.



FIG. 73. COURTYARD—STRATFORD HALL, CAMBRIDGE, MASS. GOODELL & ROOT, ARCHITECTS.



FIG. 74. GOLD MEDAL APARTMENT HOUSE, CORNER OF GRAND CONCOURSE AND 167TH ST., NEW YORK CITY.

Springsteen & Goldhammer, Architects.

shallow court next shown in the key-plan group will be better illustrated in detail in a later article. It shows the beginning or the tendency to "close in" the courtyard by adding sections to the inner sides of the projecting wings or ells, so working toward the "enclosed courtyard" type of plan.

In Fig. 68 we have a plan of more nearly square proportions. The width of the building over all is about one hundred and forty feet, the depth upon the left hand side about one hundred and six feet and upon the shallower side of the lot about ninety feet. The courtyard itself is about thirty feet wide by fifty feet deep.

This plan illustrates a very compact use of the "open court" idea; perhaps as compact as is possible, except that further saving could be made by narrowing the width of the two wings on the street to the point where they would contain only one apartment on their face, instead of the two in each wing that are here secured. In that event, however, the width of the wing upon the street would probably be as much as the three-room

width shown in the previous example, so saving only the difference between about fifty-four to forty feet, or only thirty feet in the width of the entire lot—at the most it would not exceed the thirty-two or thirty-three feet shown in the width of these same ells in Fig. 71.

Fig. 68 again, as is indeed true of most of these plans, is repeated practically on each side of the centre of the court. Eight apartments are obtained on each floor, four on each side of the centre party wall, and these apartments are, by very ingenious planning, all served by a single flight of front stairs, and a small amount of public corridor. One rear stairs also suffices for both the two rear apartments, but each of the two apartments in the front of each ell requires its own rear staircase, connecting directly with the kitchen upon each floor.

The plan is also "suburban" in type, insofar as it provides the tenants with "piazzas" or sun or sleeping rooms; and these are located, it should be noted, with no loss of actual exposure, where the kitchens or bathrooms of the apartments would otherwise have come to the



FIG. 75. TYPICAL FLOOR PLAN—GOLD MEDAL APARTMENT HOUSE, CORNER OF GRAND CONCOURSE AND 167TH STREET, NEW YORK CITY.
Springsteen & Goldhammer, Architects.

face of the outer wall. In other words, by keeping these rooms somewhat recessed from the outer face of the building, it was possible to insert a shallow "porch" outside these rooms without either theoretically depriving them of light and air, or conflicting with the strict laws providing for their ventilation to the outer air. Of course, one cannot be expected to foresee what may happen when the individual tenants have fully furnished, screened (and even, possibly, glazed) these spaces to suit their own conveniences and requirements.

Of the eight apartments on each floor of this building six are of five rooms, including the "kitchenette," and two of four rooms. The piazzas are omitted from this computation. The plan last shown had two apartments of five and four of six rooms to the floor—also omitting the porches. But, of course, the apartments now being considered (Fig. 68) have far smaller rooms, and the whole structure was necessarily compacted to fit a far smaller lot area, and to meet a different class of rental conditions.

In Fig. 70 we have an illustration of the type of plan that on the street face

conforms to the typical "E" or "U" shape around an open court and has an outline on the rear, or opposite face, that conforms to the "E" shape. The plan arrangement, particularly of the suites in the projecting wings toward the street, is very similar in many ways to the plan last illustrated. The wings are narrower, and in place of the two center rooms, one belonging to each apartment of the previous plan, this arrangement shows a single room in this location, so disposed that it can be connected with and rented as a part of either apartment.

The wing immediately behind, projecting toward the rear, contains a six-room and a three-room apartment, both served—as also are the two front apartments—from one front hall and stairs.

The central section of this group plan, fronting on the street court as it does, and extending toward the rear in the shape of the letter "T," possessing its own front and rear stairs, contains two apartments of five rooms each on each floor. It is, to all intents and purposes, a separate apartment building. It has no contact with the two wings except in the common party or fire walls, and has no physical

connection with them. It possesses the common frontage on the court, however, and serves to fill in the rear of the same, thus utilizing the frontage that it provides. The whole group contains ten apartments to the floor, and is the product of ingenious planning, utilizing every possibility of a somewhat over-small lot, the size of which is responsible for the somewhat cramped aspect of the arrangement that results. It should also be noted that both these plans provide the tenants as much cross draft and exposure as they could expect to secure in a private house.

Before going on to the next most nearly allied example, and showing a plan with the extension of three wings or ells to the street, thus dividing the large central court into two smaller courtyards (as was the case in the rear of the plan last shown) let us first consider an arrangement that suggests many possibilities that we have as yet not often found utilized in our many examples of apartment house plans. The reference is to a building outline that conforms exactly to the "open court" type, as it is illustrated, for instance, in Fig. 68—with the single—but important—exception that we now find the court does not open on or front upon the street, but to one side of the lot, leaving a solid façade upon the street front, actually the "side" elevation of one of the wings or ells.

An example of this unusual type of plan is shown in Fig. 71. The conceivable reasons for its existence might actually be many. It might be that a courtyard so opened would best conform to the exposure, or provide the best and most pleasant view. It might be that the owners have in prospect the later acquisition of more land at the right of the plan, and so would eventually go on to complete the enclosure of a square courtyard by their structure—or it might be, as seems to have been the case here, that the proportions of the lot were merely such that the courtyard could be more spaciouly provided upon this dimension than upon the front—coupled with the advantages of the better exposure thus obtained for the tenants.

As a matter of fact, the actual building

itself occupies a frontage of about one hundred feet, and a depth of about one hundred and thirty-five feet. The plan contains seven suites to the floor shown, and eight on the second floor. Of these suites five are served by the front principal elevator, and two by the elevator in the rear. Four service staircases are required to reach all the suites. Four suites are of two rooms, bath and kitchenette; one of four rooms and bath, and two apartments of six rooms and bath are shown upon the floor plan reproduced. The exterior of the building is illustrated in Fig. 72 as it appears on the street, with just a glimpse of the rear ell appearing at the right, while a second view (Fig. 73) is added to prove how pleasant, and comparatively retired, the apartments grouped around the side courtyard can be. As a matter of fact, it should be obvious that this example indicates a direction in which we might expect to find considerable additional development in the apartment house plans of the immediate future. It also suggests some possibilities of the better orientation of these plans, an aspect that has been in the past, altogether too often ignored.

Figs. 74 and 75 illustrate the "double open court" type that was referred to a few paragraphs ago, also contained upon a lot of exactly one hundred and fifty feet length. The courts are each eighteen feet wide and of a depth of thirty-three and thirty-seven feet, respectively. The lot is also irregular in shape, the depth at one end being ninety and at the other only sixty feet. It has, however, the great advantage of facing upon streets on three sides, so that it was possible for the owner to build entirely over the land purchased, except at the places where he decided to locate the double courts.

It has already been stated that the type of "open court" plan was originally a growth in the suburb, where its apparently wasteful and reckless use of space paid for by the owner as open land, was not so important a matter, because of the low original cost of the area thus left unutilized. But just as the advertiser has come gradually to realize that sometimes a dexterous use of white space will give him

far better returns than an area carefully filled with type, so has the owner of real estate come gradually to appreciate that it is after all a pretty good investment for him to leave a certain portion of his property uncovered by floor area.

New York City has long illustrated the wide prevalence of the "open court" idea, even when applied to the very costly land values that exist in that city. From the big "Hendrick Hudson" apartments overlooking Riverside Drive, to the most insignificant and unnamed of the "walk-up" apartments that have been building on the many numbered side streets of that city during recent years, there has been ample illustration, on the part of both occupants and tenants, that the "open court" plan is accepted—in theory, at least. It is true that, in its practical application, it still often leaves much to be desired. These courts are still too narrow and too deep to provide light to more than the one or two upper stories. They may, or may not, be more efficacious in the matter of air supply, depending upon their exposure and the internal arrangement of the apartment plans—more probably a matter of accidents than of design on the part of the owners or builders. The very existence of any architect whatsoever in connection with the greater majority of the buildings is not often to be discovered by even their closest and most ardent students.

One of the first of the new apartment buildings to be undertaken and completed in New York since the war illustrates the double court idea and, despite the small size of the lot, the courts are of sufficiently wide dimension for their height and depth, to serve not only a practical but also an artistic purpose—as is well shown by the photograph of the exterior printed herewith. The design is not only notable for the fact that the areas contained in these two courts are well in excess of the minimum required by the Tenement House Law (taken in itself, a most encouraging sign) but the plans also

indicate that they are far more generous in the sizes of the rooms provided the tenants than has most generally been the case in the past. This, too, is a lesson that we must by now very generally have learned. Formerly, far too many of the class of apartments especially shown in this month's article have been too crowded in arrangement and in the dimensions of the rooms. This particular example, as well as others that have been seen but have not been used for the purposes of illustration, would seem to indicate that the general tendency in this particular has at last somewhat changed its direction, and the newer buildings of this class are going to provide better and larger rooms. The tendency is also apparent in the plan shown in Fig. 71. It certainly indicates a healthier future—even if a more expensive one for the occupants.

The building shown in Figs. 74 and 75 has been given the 1920 Medal of Honor by the Architectural League of New York in the non-fireproof class of multi-family house architecture, and its owner has also been awarded a certificate of merit. This recognition should both do honor to the League itself, and react to help materially the progress of the cheaper class of apartments of New York City toward a more improved type, and to cause more architectural designers to be concerned with the product of this class of work in the future. Both are tendencies much to be encouraged and desired.

This building itself indicates how a very simple and straightforward architectural design may add good proportion and dignity to the material most commonly in use for this class of building, without adding unnecessary detail and expense to the result. For certainly it would be difficult to find anywhere among our apartment house façades, a structure using less embellishment, and depending so much upon good proportions and an intelligent use of brickwork for the success and interest of its appeal.

The BUILDING PROSPECT



*By Willford I. King, Ph.D. of The
National Bureau of Economic Research, Inc.*

THE most casual consideration is sufficient to convince one that the building industry does not stand in isolation but, on the contrary, is affected by the various forces that govern business activity in general. True, there are always some factors which are especially strong in their influence upon the field of construction; but, in general, those forces which make for prosperity or depression in other lines at the same time cause the building industry to flourish or become stagnant. It naturally follows, therefore, that the volume of construction tends to fluctuate in unison with the other phenomena which serve as indicators of the progress of the business cycle.

Not many years ago most business men, and many economists, scoffed at the idea that such a thing as an economic cycle actually existed. Today, while few economists of repute have the temerity to claim that they really understand the nature of the motivating forces underlying the economic waves, they are practically a unit in affirming that a cyclical oscillation pervades nearly every type of business activity. Most progressive business men are also convinced by this time that the business cycle is no figment of the imagination. Since the existence of the phenomenon is so well established, future discussions concerning it are likely to be confined more and more to the nature of and the causes giving rise to the cyclical movements.

Although the most advanced students of the subject are willing to admit that none of the numerous hypotheses concerning the origin of the cycle have as yet been thoroughly established as facts, their care-

ful research has nevertheless made clear some of the outstanding characteristics of the cycle. It is, for instance, known that business activities go in waves having an interval between their crests (or their troughs) of approximately three and one-half years. Unfortunately for the would-be prophet, these wave lengths are not entirely uniform and, worse still, the waves vary greatly in size. Thus far apparently no one is sure as to what causes such differences in altitude; hence the probable height of the next boom or depth of the next depression remains largely a matter of conjecture.

A conclusion about which there is little doubt is that the same wave usually passes over the whole civilized world, though its crest may not reach every locality at exactly the same date. This world-wide nature of the wave motion makes it appear highly improbable that cycles are the product of the actions of some national administration or are caused by some event of outstanding local interest. In fact, the most remarkable thing about these waves of prosperity and depression is their wide scope and striking persistence under varying political conditions. Presidential elections, new legislation, labor disturbances—all such things seem scarcely to ripple the surfaces of the cycle waves, and even the World War proved insufficient to prevent the economic cycle from proceeding in practically normal fashion, at least in the United States. The man who studies the cyclical records of the past is certain to be forced to the conclusion that the idea of a normal plane of activity to which we may sometimes return, and upon which we shall remain

for a long period, is wholly a myth; and when he observes the seemingly inexorable sweep of the economic waves he is likely to direct his efforts toward utilizing each wave for his gain, without wasting energy in moralizing or in vain effort to modify or to combat the wave motion. It is indeed possible that stabilization of business may some day be brought about; but, if so, it will be accomplished through drastic measures, national or possibly world-wide in scope, and not by the isolated actions of individuals or by hastily conceived political panaceas.

In order properly to adjust his affairs, the business man finds it essential, therefore, to procure as accurate, continuous information as possible concerning the successive phases of the wave through which business is passing; and he is entitled to expect help from professional economists. It is in an effort to render such assistance that this series of articles has been published.

It was pointed out in the January number of *The Architectural Record* that the decline in wholesale prices would probably continue for some months. In the April issue it was suggested that the bottom of the trough was not yet quite reached. As a matter of fact, average wholesale prices, as shown by the reports of the United States Bureau of Labor Statistics, apparently were at their lowest about midsummer, and are at present slowly turning upward again. The indications are now quite definite that most lines of business are distinctly on the up-grade.

There seems to be little doubt that business recovery is influenced by the psychology of entrepreneurs and of the public, as well as by physical forces. As soon as either business men or consumers become convinced that prices are going up, they begin buying for cash or placing orders for goods. The entering of such orders in turn contributes to the rise of prices, and hence the movement accumulates momentum as it continues. One of the best indications that the present slight upturn in prices is not merely an irregularity in the curve is the fact that a relatively optimistic spirit is appearing among business men of all classes.

The question which many persons are asking today is whether the recovery will be slow or rapid. To this query it is, unfortunately, not possible at present to give a definite answer, for the evidence available is somewhat conflicting in its nature.

First let us consider the signs which indicate that the depression will not be over for some time. An important feature is that the stock market still shows little buoyancy. This apparently is caused by the fact that many concerns have not as yet paid their pressing debts and hence are not in shape to expand their operations. The fact that the number of failures continues to increase also leads to the conclusion that liquidation is not yet complete. Recent bank reports indicate that a considerable volume of credits remains "frozen." It is perhaps due to such financial handicaps that unemployment still continues to be so extensive—and this continuance of a large body of men out of work does not augur a boom in the near future.

But not all of the signs on the economic horizon are unfavorable. Bond prices have been climbing slowly since May. As before stated, commodity prices have risen slightly. On the railways, the number of idle cars has greatly diminished, and gross earnings are increasing. Iron production is growing larger. Interest rates are falling and bank reserves are increasing. The evidence, when summed up, seems to indicate that recovery in general business is likely to be rather slow but that activity will be increasing throughout 1922 at a continually accelerating rate of speed.

The most important reason for anticipating a rather sharp rise in prices lies in the immense gold reserves accumulated by the Federal Reserve Banks. The Federal Reserve Board has thus far shown no tendency to limit rediscounting up to the time when the legal limit of forty per cent. has seemed to be in danger. If this policy is followed in the future, it means that the great supply of gold in the present reserves provides the possibility of an enormous expansion of bank credit. As optimism increases it is not

unlikely that business will call for all this credit. If so, deposit currency will increase proportionately, and with its increase, prices will necessarily "sky rocket," as they always do in periods of inflation.

It may of course happen that no large price rise will occur. European industry may recover suddenly and our gold may flow abroad to pay for a great mass of imports. The Federal Reserve Board may protect its reserves by an early and sharp increase in the rediscount rates. Some unforeseen but powerful counter-acting force may arise. Such occurrences are, however, rather possibilities than probabilities. Europe will probably be slow in recovering from its monetary debauch and the Federal Reserve Board is unlikely to resist the pressure for new loans. The most probable outlook, therefore, is for sharply rising prices during the latter part of 1922.

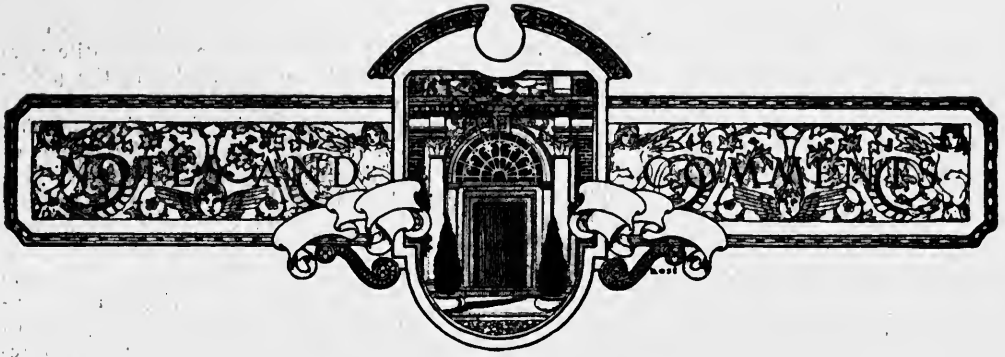
Thus far we have discussed only business conditions in general. Just how are these related to the building industry? It was pointed out in the Architectural Record for June that the extent of building for the past few years had been abnormally low and that a considerable deficit of construction, as compared to the usual requirements, had thus accumulated. Building activity has increased during 1921, but it has apparently not wiped out any considerable share of the shortage just mentioned. Construction costs, including the prices of both materials and labor, have fallen steadily as building activity has increased. Material prices appear to have reached bottom, but it is not improbable that the strength of the labor unions has thus far prevented wages from declining to the full extent which might be expected to occur in a depression so severe as the present one.

Unemployment is always a result of the fact that the price at which laborers hold their labor is above the market price. The natural effect of unemployment is to impoverish the laborers and hence to reduce the subjective values which they

place upon their labor. The present continuance of unemployment in many lines may, therefore, drive laborers from other industries to the construction field and thus tend to cause some further decline in the wages of building laborers before the present depression is over. It must be admitted, however, that any noticeable drop is by no means certain to occur, for while unemployment in other industries is a force tending to lower wages in the building trades, it may prove of little moment because of the strongly entrenched position of the unions in this field.

Furthermore, there is an offsetting force which tends to maintain or even to increase wages of building workers as well as all other construction costs. As predicted in the May number of this magazine, rents have almost continued to hold their own in spite of declining prices in other lines, and, at present, their movement seems to be slowly upward in harmony with the course of the general price level. If this rise continues, as it probably will, building is likely to be stimulated to such a degree as to cause construction costs soon to start upward again. Inasmuch, however, as these costs are still relatively high as compared to prices in general, it scarcely appears probable that the early part of the year 1922 will be marked by any sharp increases in either building trade wages or prices of materials.

The present prospect is, therefore, that the spring of 1922 will furnish an unusual opportunity for profit to the builder. Interest rates, wages, and material prices will all presumably be relatively low, while the rise in rentals will tend constantly to enhance the value of completed buildings. Both 1922 and 1923 will probably be years of more than normal building activity, but the chances are that the man who builds in 1922 will stand a much better chance of making a profitable venture than will the one who postpones construction work until 1923.



The editor of THE ARCHITECTURAL RECORD takes pleasure in announcing that Mr. Russell F. Whitehead has joined its staff as a consulting and contributing editor. Mr. Whitehead, like Mr. Herbert Croly, is a former editor of THE ARCHITECTURAL RECORD. Both of them—Mr. Croly as editor of The New Republic and Mr. Whitehead as a practicing architect and an officer of the Architectural League of New York—are in contact with the sources of news and of critical opinion in architecture and its allied arts, and have, in addition, a wide personal acquaintance among the men whose current work constitutes the news that is presented and appraised in THE ARCHITECTURAL RECORD.

MICHAEL A. MIKKELSEN.

The recent discovery of a part of the working library of Samuel Rhoads, master builder and the designer of the excellent monument of early Pennsylvania architecture, the Pennsylvania Hospital, is of considerable interest. Our knowledge of the identity of the colonial carpenter-builders is meagre and our understanding of how these craftsmen undertook their tasks is indeed hazy and incomplete. Anyone who has delved into the mass of writings and documents of the seventeenth and eighteenth centuries will be impressed with the reluctance of these records to offer sidelights on building history and the personalities of architecture.

Three treatises on building were found at Milton, Pennsylvania, each with the faded and flourishing signature on the title-page, "Samuel Rhoads, Carpinter Builder, His Book." The oldest of the volumes is dated 1724 and presents the claim of being but "a tract" on "Practical Architecture, or a Sure-Guide to the True Working According to the Rules of that Science; Representing the Five Orders, with their several Doors & Windows taken from Inigo Jones and other Celebrated Architects." "Very useful," the title page continues, "Very useful to all true Lovers of Architecture, but particularly so to those who are engaged in ye Noble Art of Building." The book

was written by William Halfpenny and published by J. Bowles "aganst Stocks Market," London.

The entire book, including preface, explanatory notes, as well as the plates, is "neatly & distinctly engraved on copper and brought into such a size as without burthen may be carryed in the Pocket, and be always ready for use."

The second volume is the well-known issue of Batty and T. Langley,—"The Builder's Jewel; or, the Youth's Remembrancer. Explaining Short and Easy Rules, Made familiar to the meanest Capacity." It was printed in London in 1754 and sold for the price of 4s.6d. This book was intended to instil courage in the breast of the most timorous, amateur and apprentice. Thomas Langley sets forth in the introduction his lofty purpose and accomplishment. "I have therefore at the Request of many good Workmen, and for the Sake of young Students, compiled this Work; wherein I have reduced the whole to such short and easy Rules, that the Workmen may, not only at the first View renew his Memory, as Occasions may require, but Apprentices, who may be absolutely unacquainted with this noble Art, and are so unfortunate as many have been, and are, to be bound to Jobbing Masters, *who know but little*; may without the Help of any, by assiduous Application at their leisure Hours, in Evenings when the Business of Days is over, Ec. make themselves such Masters herein, that few Masters are

able or willing to make them. And indeed I must own that 'tis a Pleasure to me to see the Spirit of Emulation so powerful among young Builders at this Time; *when every one of Sense* is endeavoring to become the most excellent in his Way, and thereby make himself the most useful both to himself and his Country."

The third volume is of "pot-folio" size and is similarly boastful of intentions. It is known as "The British Carpenter: or a Treatise on Carpentry. Containing the most Concise and Authentick Rules of that Art, in a more Useful and Extensive Method than has been made Publick." The author is Francis Prices, "Late Surveyor to the Cathedral Church of Salisbury." The work was printed for J. Williams, in Skinner-Row, Dublin, 1768.

The three books present a similarity of plan. They first offer elementary problems in geometry, after which are included plates of the "orders" and in addition, details of construction and such architectural elements as windows, doors and mantels. There is a total absence of concrete suggestions for plan arrangement or complete façade design, which probably implies that the responsibility for the design of an ensemble rested with the individual to whose capacity these handbooks were a "remembrancer."

The knowledge of the ownership of these books on architecture by Samuel Rhoads (one of the most widely known and justly famed carpenter-builders of the eighteenth century) is important, for it strengthens our conviction that these hand-books were generally within arm's reach of the amateur designer. A careful examination of these works would seem to indicate that they were not such complete guides as to leave no need for creative ability on the part of the individual who used them. They were, with rare exceptions, merely books of "the orders" and were not manuals of English architectural practice, nor did they include (as a rule) drawings of extant buildings of the British Isles. Therefore our early architecture was not molded by buildings of the mother country so much as by the engraved specimens of the Italian Renaissance and Roman orders; or, rather, by the spirit of classic proportion.

Much has been written regarding the life and works of Samuel Rhoads because of his prominence in the early annals of Pennsylvania. His chief interest to the student of architectural history rests with the records of his capabilities as an

amateur architect. Besides his attainments in building, the wide interests of the man led him to enter upon mercantile pursuits and to become a leader in the public affairs of the colony. He was selected as a representative of the first National Assembly in 1761 and was made the Mayor of Philadelphia in 1774, which position prevented him from being chosen as a delegate to the Second Continental Congress of 1775.

Samuel Rhoads acquired the trade of carpenter and builder by serving an apprenticeship until he was twenty-five years of age, in accordance with the usual practice of the day in learning a useful occupation. He soon became a member of "The Carpenter's Company," in the ranks of which society he advanced to the position of "Master Builder" and for a time served as its treasurer. From 1780 until his death he was the president or "master" of the company.

Rhoads is referred to as a "mechanician" and at one time was associated with Benjamin Franklin in a project for making a certain kind of lime, which, it was thought, would render the houses of Philadelphia fireproof. In 1751, by an act of the Assembly of March 14th, 1761, he was chosen as the commissioner "for cleaning, scouring, and rendering the Schuylkill navigable."

Upon the founding of the Pennsylvania Hospital, he was made the Director of Works for the undertaking. After the acquisition of a site, "a complete plan of the buildings was directed to be so prepared that a part might be erected, which could be occupied the ensuing season (1755). Samuel Rhoads, one of the managers, was very zealous in the work and, after consulting the physicians in regard to the situation of the cells and other conveniences, presented a design of the whole building in such form that one-third might first alone be erected with tolerable symmetry."

The building of the hospital continued under the guiding direction of Rhoads, who remained as one of the managers of the hospital from the founding in 1751 until 1781.

The character of the man is summed up in the statement of a contemporary, William Rawles, who in 1774 said that Samuel Rhoads "was a respectable merchant of Philadelphia, belonging to the Society of Friends—without the talent of

speaking in public, he possessed much acuteness of mind, his judgment was sound, and his practical information extensive."

A. LAWRENCE KOCHER.

Notes on a Detail of Tuberculosis Sanatorium Planning

It is the purpose of these notes to offer suggestions on some methods of meeting the demands of tuberculosis sanatorium superintendents for an important detail of the institutional routine; namely, the collection and disposal of infective discharges in the form of the sputum of sufferers from pulmonary forms of the disease.

A patient in a tuberculosis sanatorium is usually placed in one of three categories: (a) infirmary, or bed cases; (b) semi-ambulant cases, and (c) ambulant cases.

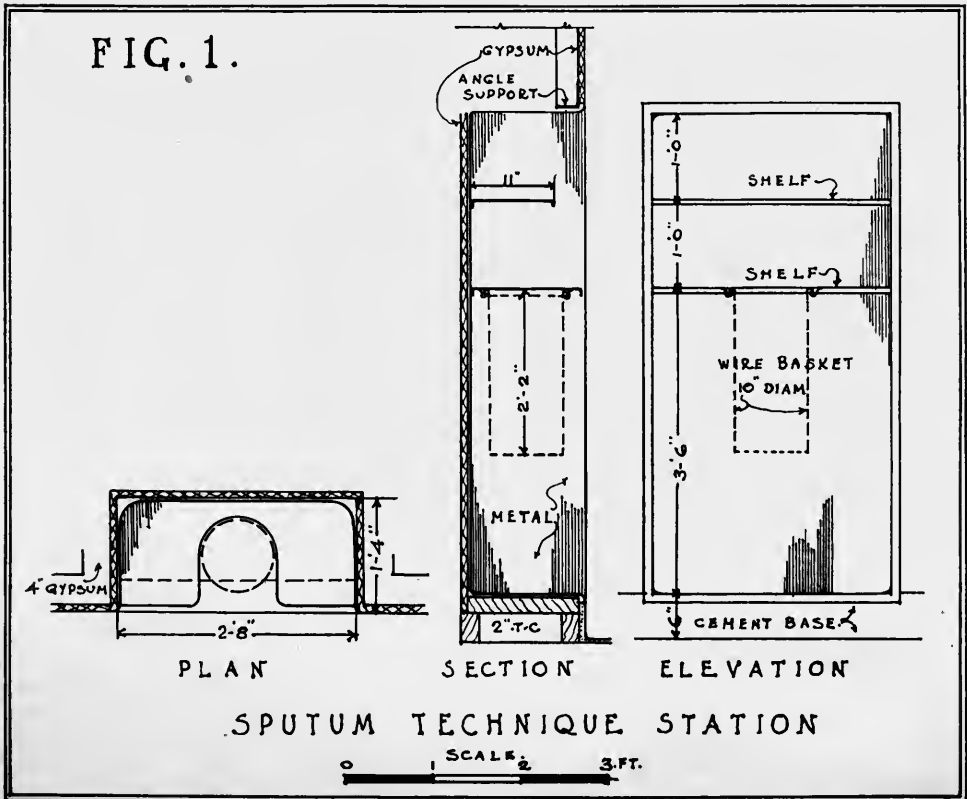
For bed cases, two methods of collecting a patient's sputum are in use. Formerly, the most common was to provide a special cup in which the patient spits; the cup being taken away at intervals by an attendant; who leaves a clean cup in its place. Generally, a metal cup with a

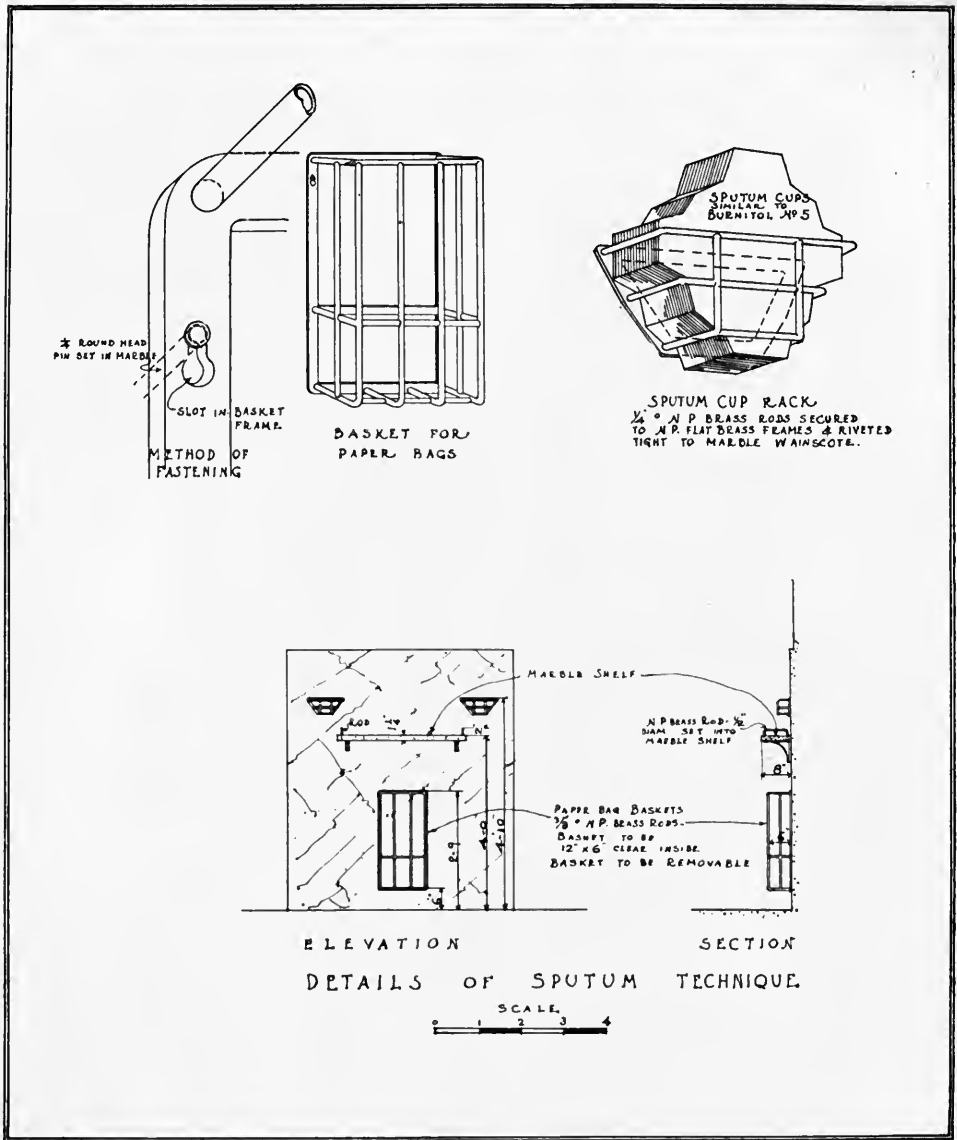
stout paper lining, or "re-fill," is used; but it is not at all uncommon to find an ordinary enamelled cup being utilized for the purpose.

But, whatever kind of cup be used, the attendant must carry it to the utility room, empty it, and sterilize it at frequent intervals in a simple instrument sterilizer, which should always form a part of the fixed equipment for the utility room of the infirmary section of a sanatorium.

In a great many sanatoria today, however, the paper napkin is replacing the sputum cup for bed patients. Where paper napkins are used, the patient is given a generous supply and after expectorating into one, rolls it up and drops it into a paper bag at the bedside. At suitable intervals the bag is collected by an attendant and taken away; a fresh bag being, of course, substituted.

The usual method for keeping the paper bag in a position convenient for the patient is to pin it with a safety pin to the bedclothes at the side of the mattress. A much better plan is to provide a small wire basket, of the size of the bag, and to hang it either on the bedside table or on the side rail of the bedstead. The





basket should be of galvanized wire, so that it can be sterilized occasionally.

For the final disposal of the used paper refills and the paper bags containing the used paper napkins, two methods are available. Either they are placed in a covered receptacle of the garbage pan type (an enameled vessel is better than a galvanized iron one), which stands in the utility room and is taken once or twice a day to a central incinerator; or, the used refills and paper bags are placed directly into a local incinerator built into the wall of

the corridor near the utility room. There are arguments in favor of each method, but the writer is inclined to favor the local incinerator.

For semi-ambulant and ambulant patients, the use of the paper lined metal sputum cup is almost universal. It may be well to explain that a patient is usually classed as "semi-ambulant" when he (or she) is able to dress and walk to the bath room and the dining room. Later on, as the patient's condition improves, he is able to take more and more exercise and becomes an "ambulant" case.

It is necessary, then, to provide at some convenient point a place where the patients in these categories can take out the used paper lining of their metal cups and replace it with a clean one. It is usual to arrange that this sputum technique station be close to the entrance, or perhaps in the entry itself, of the water section, so that the patient may wash his hands after changing the cup lining. (Of course, the metallic cup itself should be turned in every few days for sterilization.)

Fig. 1 of the accompanying illustration shows the method of providing for sputum technique adopted by the Supervising Architect of the Treasury Department of the United States, in some of the Government sanatoria now under construction. It will be noted that a recess sixteen inches deep and five feet six inches high is formed in the wall; the bottom of the recess being six inches above the floor line. The shelves shown should be of some impervious material, such as slate, marble or glass, and the recess should be lined with metal.

The lower shelf is shaped and prepared to receive a wire basket in which a paper bag is placed. An inch or two of dry sawdust is placed in the bottom of the paper bag and the used sputum cups are deposited in it. The procedure is that a patient deposits his metal cup on the shelf at the side of the basket, takes out the paper lining and then takes from the upper shelf a clean paper refill.

At intervals, an attendant takes away the paper bag and replaces it with a clean one.

Of course, if a local, built-in incinerator is provided, no arrangement for holding the large paper collecting bag is necessary, but merely a shelf on which the cups can be deposited and a shelf above it to hold the clean refills.

Fig. 2 shows another method of providing for sputum technique and was designed by Messrs. Schenck & Williams, architects, Dayton, Ohio, for the new tuberculosis unit to be erected on the grounds of the Central Branch of the National Home for Disabled Volunteer Soldiers in that city. As Mr. H. I. Schenck is the Supervising Architect for the Board of Managers for the National Home, this detail will be followed in the tuberculosis units to be erected at the Branch Homes at Marion, Indiana; Leavenworth, Kansas; Milwaukee, Wisconsin; Battle Mountain, South Dakota, etc.

In this case a square metal basket (nickel plated on brass), is hung on the wall by a slotted hole which enables it to be lifted off and taken away occasionally for sterilization. This metal basket is made to receive a standard paper bag of the kind furnished by hospital supply houses for this purpose. The glass shelf above is for the patient to rest his metal cup upon

while changing the paper lining. The metal container hung diamond wise on the wall above the shelf is made to fit a standard paper lining, which is creased and cut so that a patient may fold it into the shape in which it will fit into the metal cup. As in the type of sputum technique station shown in Fig. 1, the paper bag has sawdust placed in the bottom of it and is taken away at intervals by an attendant.

It will be obvious that the actual details of a sputum technique station are susceptible of many variations; the main point to remember is that the station should not be in a dark corner, but in a well-lighted place. One of the aims of treatment in a sanatorium is to inculcate habits of personal hygiene with the object in view that, when a patient is restored to usefulness after a period of treatment, it has become habitual with him so to conduct himself that he is not a menace to his fellows.

In this connection it may be interesting to note that in going over some plans which were submitted recently by a Sanatorium Superintendent to the Institutional Construction Advisory Service maintained by the National Tuberculosis Association for the benefit of architects and sanatorium authorities, it was pointed out that a sputum technique station had not been provided, the superintendent decided to locate it in the main corridor. It appears that the institution (a city sanatorium) makes a feature of health talks to friends of the patients who are allowed to visit the institution on Sunday afternoons and the superintendent deemed that this evidence of the great care taken in disposing of the sputum of the patients would form a valuable object lesson to the visitors.

[The foregoing article, prepared by T. B. Kidner, was contributed by the Institutional Construction Advisory Service of the National Tuberculosis Association, which is the national headquarters of the fight against tuberculosis in this country. From Thanksgiving Day until Christmas there will be conducted the annual Christmas Seal Sale, which provides the funds for the local, state and national educational work which is slowly but surely ridding the United States of the "Great White Plague."]

**Hygienic
Exposition
at Strasbourg
in 1923.**

In 1923 it will be one hundred years since the French chemist, Louis Pasteur, was born. It is planned to organize, under the auspices of the Institut Pasteur of Paris, the University of Strasbourg, and the city of Strasbourg, an International Hygienic Exposition at Strasbourg in memory of the famous scientist

at the place where he was professor of chemistry from 1849 to 1854. A feature of this exposition, which will last from May to October, 1923, will be its division on Hygienic Towns, presided over by Vice-Mayor Keppi of Strasbourg. The division will show the latest achievements in the general planning of towns and streets, laborers' gardens, drainage, street-cleaning, removing of garbage, building of houses, arranging of flats and furniture, providing of air, heat, light and water, public and private bathing, the care of the body, how to dress properly, funerals, cemeteries, etc.

Individuals, firms, associations, societies, etc., desiring to secure stands or being otherwise interested in this fair but not having received any personal invitation are asked to apply to the following address:

Exposition Interalliée d'Hygiène,
Strasbourg 1923,
Section: Hygiène Urbaine,
1, Quai Lezai-Marnésia, Strasbourg.

**French Architects
to Teach Design
in America.**

Two distinguished French architects, Albert Ferran and Jean Jacques Haffner, both of them winners of the Grand Prix de Rome, have accepted invitations to come to this country to teach. Mr. Ferran will have charge of design at the Massachusetts Institute of Technology, while Mr. Haffner will hold the corresponding professorship at the School of Architecture at Harvard. The departments at Harvard and the Massachusetts Institute of Technology engage in "conjunctive problems" in architecture, which will give Mr. Ferran and Mr. Haffner a chance to work together. They speak English fluently and are close friends.

Albert Ferran was born at San Francisco in 1886 of French parents, entered the Ecole des Beaux Arts in 1904, took his degree in 1910, and won the Grand Prix de Rome in 1914. He was a pupil of Victor Laloux, and spent a large part of the five years of war at Salonica with the French troops. While there he made measured drawings of the Monastery Laura at Mount Athos, and from these he is now doing the principal work for his "Envois de Rome."

Jean Jacques Haffner is an Alsatian, born in Stuttgart some 36 years ago; and from 1907 to 1913 studied at the Beaux Arts. He was Logiste for the Grand Prix on two separate occasions, and won first prize in three competitions in the Beaux Arts. Like Ferran, he was a pupil of Victor Laloux. He served dur-

ing the war for four years and was severely wounded. At the end of the war he was awarded the vacancy in the Villa Medici at Rome to replace one of the holders of the Grand Prix de Rome who had died during the war. By virtue of this position, which gives him the status of a Grand Prix winner, he holds the honorary position as government architect for the French town of Albert. He is now practicing architecture in Paris.

**Fourth Annual
Own Your Home
Exposition.**

The executive committee of the Fourth Annual Own Your Home Exposition announces that the show will be held in the 69th Regiment Armory, New York City, Lexington Avenue and Twenty-fifth Street, from April 22 to 30. The committee is composed of John A. Baldwin, representing the real estate interests; Arthur E. Lane, of the Arthur E. Lane Lumber Corporation; William D. Carter, president of the Metropolitan League of Savings and Loans Associations; Milton Dana Morrill, representing the architectural interests; David E. Breinig, of Breinig Brothers, and Carl B. Eimer, of the Amsterdam Development and Sales Company.

Sub-committees are being formed on architecture, building and finance, building materials, clay products, concrete house and cement products, household economics, heating and ventilating, houses and home sites, interior decorating, landscape architecture, lumber and wood products, publicity, sanitation, and savings and thrift.

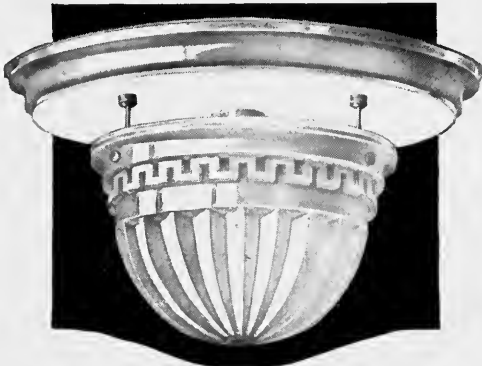
The sub-committees are to aid in directing the policy of the exposition, and will pass on all exhibits. Every phase of home planning, financing, building, equipping, furnishing and landscaping will be shown in an effort to encourage building and to increase the membership of savings and loans societies.

At the 1921 exhibition of the American Institute of Architects two houses were shown by Reginald D. Johnson that were generally admired. These were the residence of J. P. Jefferson, at Montecito, Cal., which was awarded the blue ribbon; and the residence of C. F. Paxton, at Pasadena, Cal. The latter was published in our October issue with the erroneous statement that it was the house premiated by the Institute. The Jefferson residence will be published in an early number of THE ARCHITECTURAL RECORD.

BRASCOLITE

PATENTED AND TRADE MARK REGISTERED

The Ideal Light for Every Purpose



TYPE A.F.

Type A.F.—With wide, all white glazed porcelain enameled reflector and bowl of heavy pressed white glass of low absorption.
 Type A.F.B.—Same, with reflector band finished in leather bronze.

Permits Wiring Building for 1320 Watts for Each 13-Outlet Circuit

Saves cost of running wires for extra circuits.

According to the Underwriter's Laboratories the capacity of a circuit intended for lighting is limited to 13 outlets with a total capacity of 660 watts with the proviso that, where the circuit wires enter the sockets, or wires of equivalent size to the circuit wires lead to the sockets, the wattage capacity of the circuit may be made 1320 watts rather than 660, the limitation as to outlets per circuit remaining at 13.

In view of the fact that BRASCOLITES are arranged for either direct connection to the circuit wires or wire of No. 14 B. & S. size furnished for the wiring, it is permissible when using BRASCOLITES, to arrange circuits with an allowable capacity of 1320 watts, thus materially reducing the number of circuits for the lighting of any area.

The same wiring arrangements are permissible with Elites and Aglites. It should be understood, however, that this 1320-watt capacity is not permitted where fixture wire of a size smaller than No. 14 is used.

Brascolite's efficiency and economy have made it the largest selling lighting fixture in the world. Under present-day building conditions it is the light to specify for economy as well as for service.

Made in a wide range of sizes and designs, harmonizing with any architectural design or period, Brascolite is the ideal light for every purpose.

Our catalogue No. 8 pictures and describes the Standard Brascolite line. May we send you a copy? Our Engineering Department is at your service for any special requirements.

Prepared to estimate on and produce materials of manufacture in

- Metal Stampings
- Porcelain Enameling
- Machining and Spinning
- Brass and Aluminum Founding
- Electroplating and Polishing

THE BRASCOLITE COMPANY

Division of the St. Louis Brass Manufacturing Company, St. Louis, Mo.

BRANCH OFFICES:
Sales and Service

Atlanta Boston Chicago Cincinnati Detroit Kansas City
 Los Angeles Minneapolis New Orleans New York
 Oklahoma City Omaha Philadelphia



Canadian Distributor: *Northern Electric Company*
 LIMITED

Montreal



Flows easily from the brush

Three points to consider— when you specify paint for ceilings and walls

1. Will it turn yellow—or remain white?
2. Will it flake off—or stay on?
3. Will it collect dirt—or stay clean?

ANY white paint looks well when first applied—but how long will it stand up under actual service conditions? How will it look after it has been on the walls for six months or a year?

These are the questions you have got to answer before you choose the paint for industrial buildings, kitchens, restaurants, or any interiors where light and cleanliness are desirable.

A flat or egg-shell finish paint has a rough, porous surface that is bound to collect dust and dirt. Once soiled it can never be properly cleaned. Washing or brushing merely drives the dirt still deeper into the thousands of little pores and crevices.

In many paints, particularly flat paints, there is not enough non-volatile liquid, or "binder," to get a proper grip on the wall. Such

paints chip off and scale, giving added expense instead of service.

Ordinary gloss surface paints soon turn yellow, thus robbing you of light and necessitating frequent repainting.

By our exclusive process we have produced a paint which avoids all these dangers—a lustrous paint of intense and lasting whiteness.

Remains white longest

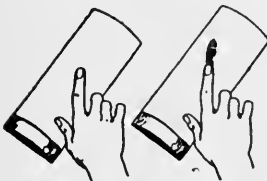
We guarantee that Barreled Sunlight—the Rice Process White—will remain white longer than any gloss paint or enamel, domestic or foreign, applied at the same time, under the same conditions. Its smooth, lustrous surface is highly resistant to all forms of dust and dirt, and may be washed clean, like tile.

May be applied by brush or spray method. Sold in barrels, also in cans.

Write for specifications.

Barreled Sunlight

Flat or egg-shell finish paint



Try this test yourself

Rub your finger over the smooth, lustrous surface of Barreled Sunlight. It will not leave a mark. Then note the smudge your finger leaves on the porous surface of flat or egg-shell finish paint.

U. S. GUTTA PERCHA PAINT CO.
22 Dudley Street, Providence, R. I.

See our catalog in Sweet's pages 1092-1093

Barreled Sunlight



The Rice Process White



Why Our Colonial Forefathers Prized Mahogany

PERHAPS no possessions of the American Colonists were as much prized as their Genuine Mahogany. Its possession indicated the "solid citizen"—just as it does today. John Hancock used interior trim of Mahogany in his home as early as 1755 and exquisite newel posts, balusters and railings became fairly universal.

This Mahogany is even more beautiful today than it was eight generations back. The years seem but to accentuate the deep ruddy tones and mellow the lustre of Genuine Mahogany. There is no wood more suited to the exacting demands of the architect and decorator. Once seasoned, Genuine Mahogany never warps nor checks.

The beauty of grain and color of Genuine Mahogany never wearies. Its quiet elegance forms an appropriate architectural setting for the most beautiful furnishings. And while other woods come and go with changing fancies of Fashion, Genuine Mahogany is ever in style—ever in good taste.

Genuine Mahogany is plentiful and for that reason is *not* expensive. If one considers its years of service it becomes one of the very cheapest of building woods.

The Secretary of the Mahogany Association, 347 Madison Avenue, will be glad to furnish information relative to the securing of Genuine Mahogany.

After all—there's nothing like

MAHOGANY

MAHOGANY ASSOCIATION, 347 Madison Avenue, NEW YORK



RITZ CARLTON HOTEL,
ATLANTIC CITY, N. J.
SHOWING ONE OF THE
CRANE EQUIPPED
BATHROOMS

WARREN & WETMORE,
ARCH., N. Y. C.
WELLS & NEWTON CO.,
PLG. CONT.

IN the appointments of the guest chambers of modern hotels, the bathroom equipment is an item of first importance.

CRANE

HOTEL PLUMBING FIXTURES

embody all the essential qualities of comfort and satisfactory service, and can be installed in a comparatively small space.

You are cordially invited when in Atlantic City to make the Crane Exhibit Rooms (1105-1107 Boardwalk) your headquarters. We will be glad to receive any mail addressed to you in our care.

1855

CRANE CO.

1921

836 South Michigan Avenue, Chicago

Branches in 65 leading cities

Works—Chicago and Bridgeport



Entrance Gates and Vestibule Enclosure
The National State Bank, Elizabeth, New Jersey
Dennison & Hiron, Architects

ILLUSTRATED IN THIS ISSUE

HECLA IRON WORKS 118 North 11th Street
BROOKLYN, NEW YORK



U. S. SOLDIERS' HOME HOSPITAL, N.H.D.V.S.
SAWTELLE, CALIF.

W. A. O. Munsell, Supervising Architect, Los Angeles

Hoffman Casements

The sash are hinged together at the meeting stiles and may be opened several inches at this point in a wide V shape before losing contact at the jambs, thus permitting ventilation by air circulation only and effectually breaking direct draft.

When fully opened the sash fold into small space and may be placed at either side of the opening for the deflection of air into the room or at any intermediate point between the jambs for regulating the amount of air so deflected.

This feature is particularly valuable for hospitals and desirable for all buildings. Our illustrated booklet (free upon request) fully describes many other features which should be considered by home builders.



Pp. 1202-5

Complete catalog of details and information for architects upon request—*free*

Andrew Hoffman Mfg Co.

Hoffman Casement Window

901 STEGER BUILDING, CHICAGO

MASTERPIECES IN MARBLE



A series of advertisements showing practical uses of Appalachian Marble.



Number Four, Peoples Savings Bank, Akron, O. Nachtgall Mfg. Co., Grand Rapids, Mich., Designers and Contractors.

In planning the interior trim for buildings in which you are especially interested, you will unquestionably wish to have those plans executed in something better than ordinary marble.

Appalachian Roseal Marble, with its exquisite finish and variegated beauty, has a richness and

quality of coloring surpassing in beauty many of the most famous imported marbles.

It takes a high polish and will unquestionably satisfy the most exacting requirements.

Write for samples of this and the other high quality marbles which we produce. Address Dept. B.

APPALACHIAN MARBLE COMPANY
KNOXVILLE - TENNESSEE

THORP HOSPITAL DOORS



A Pair of Corridor Doors in Hall of Hillman Hospital, Birmingham, Ala. Harry B. Wheelock, Architect.



Corridor Doors to Staircase Halls, Administration Building, New General Hospital, Cincinnati. Samuel Hannaford & Sons, Architects.

Architects and contractors in increasing number are urging that the way to insure positive safety against hospital fires is to make trim, doors, frames, casing, etc.—all fireproof. The Thorp Door is the pioneer in this class of work and is unexcelled in appearance, construction and durability. It will stand as long as the building stands.

The **Thorp Flush Door** hung in a sanitary jamb accomplishes at once perfect fireproofing, and gives a feeling of positive safety and perfect sanitation. The last is a feature to which physicians and surgeons of hospitals, asylums and sanitariums are giving more and more attention.

Thorp Reference Book of Fireproof Doors sent upon request to Architects.

See our catalogue in Sweet's, pages 692-4.

THORP FIREPROOF DOOR CO.
MINNEAPOLIS, MINN.

See our
catalogue
in "Sweet's"

16th Edition

Pages 1954
and 1955





Linoleum, yes, but not the kitchen variety. A plain gray, waxed and polished, to set off the fabric rug and blend with the paneled walls.

Investing Quiet Charm with a Touch of Unusualness

WHY intrude upon the quiet charm of soft gray walls the discordant yellow tones of ordinary floors? With a floor of Armstrong's Plain Gray Linoleum you can not only have complete color harmony, but a touch of restrained unusualness and a background that will bring out all the beauty of fabric rugs. Moreover, a linoleum floor is quiet, non-slippery and never requires expensive refinishing. When cemented down over felt paper, it is smooth, water-tight and will last for years.

Armstrong Cork Co. Linoleum Department Lancaster, Pa.

Armstrong's Linoleum
CIRCLE A TRADE MARK **A** READ US & PAY OFF
 for Every Floor in the House

R55

A portfolio of colorplates showing some unusually charming interiors built on appropriate linoleum floors will be sent without cost or obligation. Ask for the Architect's edition of "Speaking of Floors."

Aiding the Architect to Solve Vertical Conveying Problems

Dumb-waiters and hand power elevators are today extensively used for many domestic, industrial, commercial, and institutional service requirements.

The machine selected must be so designed and constructed as to

1. Completely and economically satisfy the requirements of the service to which it is to be applied.
2. Facilitate installation of the outfit and its fittings with regard to the structural characteristics of the building at the point where the dumb-waiter or elevator is to be located.

The Architect is responsible for the selection of a machine capable of adequately meeting these requirements and conditions. By specifying

SEDGWICK Hand Power Elevators and Dumb-waiters

Architects may shift the burden of that responsibility to an organization which for more than a quarter century has exclusively specialized on building this class of equipment.

For every class of general service for which hand power elevators and dumb-waiters are adapted, there is a SEDGWICK outfit, which through 30 years of experience has been developed to satisfy perfectly the requirements it is designed to serve.


In advertisements to follow, we shall feature various standard types of SEDGWICK Hand Power Elevators and Dumb-waiters, together with data of interest to Architects relative to the application of these respective types, and their modification to meet special requirements. Service Sheets, Specification Forms, and complete data relative to sizes, recommended uses, and space requirements, furnished on application.

See our advertisement
in Sweet's Catalogue.

Sedgwick Machine Works
148 West Fifteenth St. New York

Specialists in Dumb-waiters and Hand Power
Elevators for more than a Quarter of a Century.

120-54



*Varnish Makers
for 94 Years*

OUR PRODUCTS

have been specified by architects *continuously for ninety-four years*. What endorsement could be greater?

Esco White Enamels

Trade Mark
(Interior and Exterior)

These enamels have reached the pinnacle of perfection. Pure white, free working, elastic, brilliant, great covering properties and made of *finest materials*.

Interior "Esco" is	Exterior "Esco" is
dust free in four	free from dust in
to six hours. Can	eight to ten hours.
be rubbed to a	Can be rubbed
dead finish in	flat in a few
three days.	days.

Like all Edward Smith & Company products, which includes varnishes for every use, floor finishes, and floor sheens, Esco White Enamels are *Standard Grade*.

*Have you our booklets?
Request our finished panels.*

EDWARD SMITH & COMPANY

West Avenue, 6th and 7th Streets
Long Island City

P. O. Box 76, City Hall Station
New York City

Western Branch, 3532-34 South Morgan St.
Chicago

Compute the Dollars Actually Saved by Peelle Doors

IN buildings equipped with Peelle Freight Elevator Doors, the actual savings can easily be estimated in dollars.

Whether Regulation Type or Pass-Type, Peelle Doors are approved and labelled by the Underwriters' Laboratories, resulting in lower insurance costs on buildings equipped with these doors.

Peelle Doors assure constant operation of your freight elevators, and eliminate costly tie-ups that occur in elevator shafts equipped with inferior doors. Their ease of operation makes Peelle Doors time and labor savers. And the patented truckable feature solidly bridges the gap between elevator car and sill, and reduces upkeep cost to a minimum.

The sturdy construction of Peelle Freight Elevator Doors enables them to withstand rough handling as long as the building itself remains intact.

Write us today to have our representative call and discuss your elevator door problems.

PEELLE Freight Elevator DOORS

Counterbalanced Truckable

THE PEELE COMPANY
Brooklyn, New York

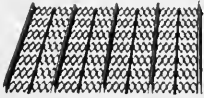
REPRESENTATIVE OFFICES

Chicago	Canada:
Philadelphia	Toronto
Boston	Montreal
Cleveland	Syracuse
	Winnipeg

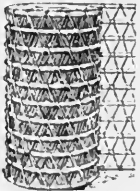
K-3 Kalamein
Paneled Door,
three solid
panels in each
half. (Labelled
by Under-
writers' and
Factory Mutu-
al Companies.)



Ceco
Expanded Metal
Reinforcing



Ceco
Rib Reinforcing



Triangle Mesh
Reinforcing



Ceco Reinforcing Bars

Everything in Reinforcing for Concrete

When you use Ceco Reinforcing Materials, you have a dependable source of supply. Delays are eliminated, for all shipments move immediately from the nearest of four warehouses. All standard styles of Reinforcing are furnished.

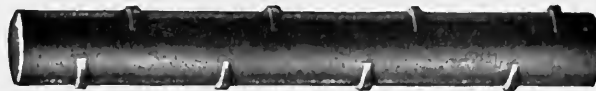
You get what you want, when you want it. Orders are cut to length and bent. Shop drawings and concrete designs are prepared.

Ceco Reinforcing Service is complete—a distinct asset to you and your work. Send for our literature.

CONCRETE ENGINEERING CO.

OMAHA

<i>Offices:</i>				<i>Warehouses:</i>	
Kansas City	Omaha	Chicago		Kansas City	Chicago
Detroit	Oklahoma City			Omaha	Youngstown
Des Moines	Milwaukee				



Ceco Reinforcing Bars



Ceco
Column Spiral

PRODUCTS
Ceco

Reinforcing Bars
Column Spirals
Round Column Forms
Mezer Steelforms
Expanded Metal
Rib Reinforcing
Metal Lath
Channels
Corner and Base Beads
Picture Moulding

A Correction:

In the Johns-Manville advertisement which appeared on page 19 of the November issue of The Architectural Record, this paragraph appeared:

“Asbestos Roofing, being all mineral, is subject to **more** of the inherent defects found in so-called ‘rag felt’ roofings.”

This statement, because of a Printer’s mistake, reverses the intended meaning, and we are glad to make this correction. This paragraph should read:

“Asbestos Roofing, being all mineral, is subject to **none** of the inherent defects found in so-called ‘rag felt’ roofings.”

zinc

LEADERS AND GUTTERS neither rust nor stain

Pure Zinc is the most economical of all materials for leaders, gutters, flashings, valleys, ridge roll, shingles, etc.

Zinc costs much less than other metals of equal durability, and very little more than commonly used materials which it outlasts five and six times. This affords a great saving in replacements, both in labor and material costs.

Ask your tinsmith to submit estimate for installing or replacing with spouting "made from Horse Head Zinc."

See that these roofing accessories are installed in accordance with specifications to be found on Page 870, Sweet's Architectural Catalog (16th Annual Edition).

Write for booklet "Building for Permanence" and for names of manufacturers.

THE NEW JERSEY ZINC COMPANY

(ESTABLISHED 1848)

160 Front Street

New York City

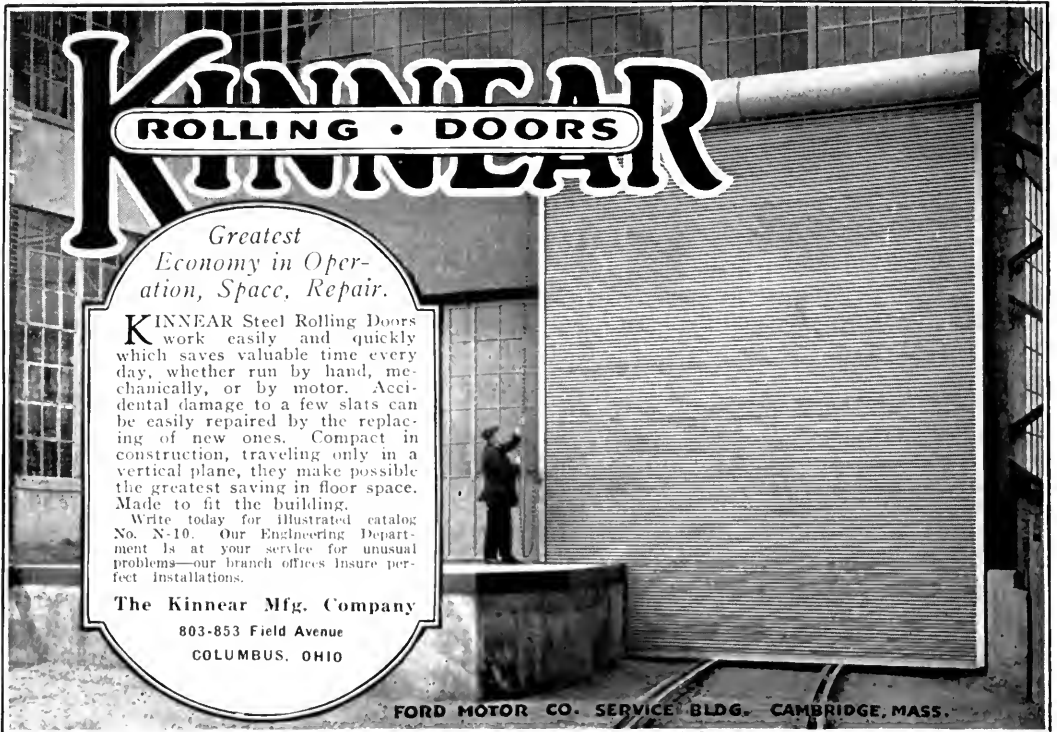
Mineral Point Zinc Company, CHICAGO: 1111 Marquette Building

PITTSBURGH:
The New Jersey Zinc Co.
(of Pa.)
1439 Oliver Building



CLEVELAND:
The New Jersey Zinc
Sales Co.
1138 Guardian Building

The World's Standard for Zinc Products



KINNEAR

ROLLING • DOORS

Greatest Economy in Operation, Space, Repair.

KINNEAR Steel Rolling Doors work easily and quickly which saves valuable time every day, whether run by hand, mechanically, or by motor. Accidental damage to a few slats can be easily repaired by the replacing of new ones. Compact in construction, traveling only in a vertical plane, they make possible the greatest saving in floor space. Made to fit the building.

Write today for illustrated catalog No. N-10. Our Engineering Department is at your service for unusual problems—our branch offices insure perfect installations.

The Kinnear Mfg. Company
803-853 Field Avenue
COLUMBUS, OHIO

FORD MOTOR CO. SERVICE BLDG. CAMBRIDGE, MASS.



INVISIBLE HINGES

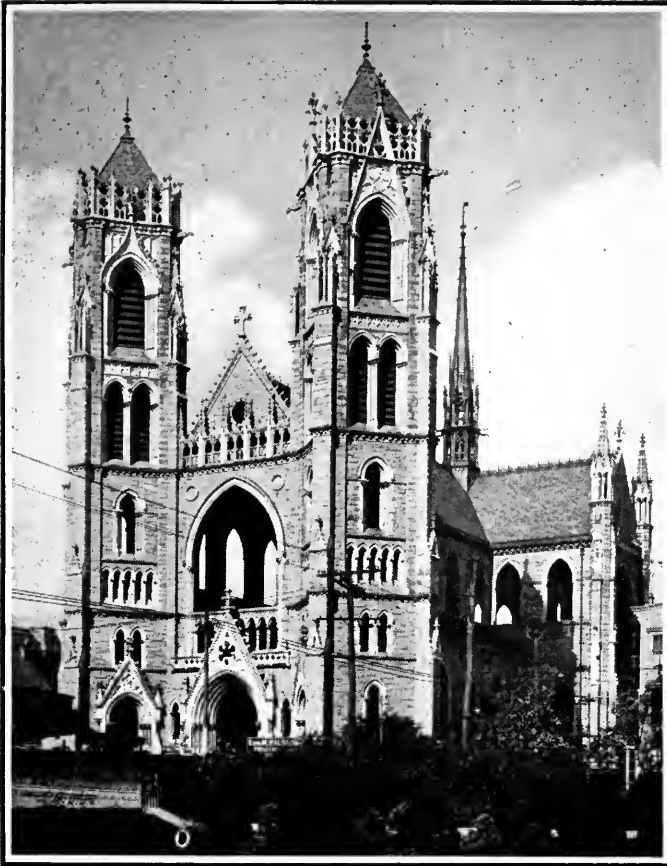
Each year **LEADING ARCHITECTS** continue to specify **SOSS INVISIBLE HINGES**. In many of the most imposing structures, where the charm of line and architectural proportion have been preserved to a nicety, Soss Invisible Hinges will be found.

They fold snugly and silently into mortises in door and jamb. They work easily and smoothly and are a constant source of satisfaction.

We will gladly send you literature showing the weights which various Soss Hinges will carry, blueprints and details on their installations.

SOSS MANUFACTURING COMPANY
774 Bergen Street
Brooklyn, N. Y.

SOSS



"The Noblest of Building Stone"

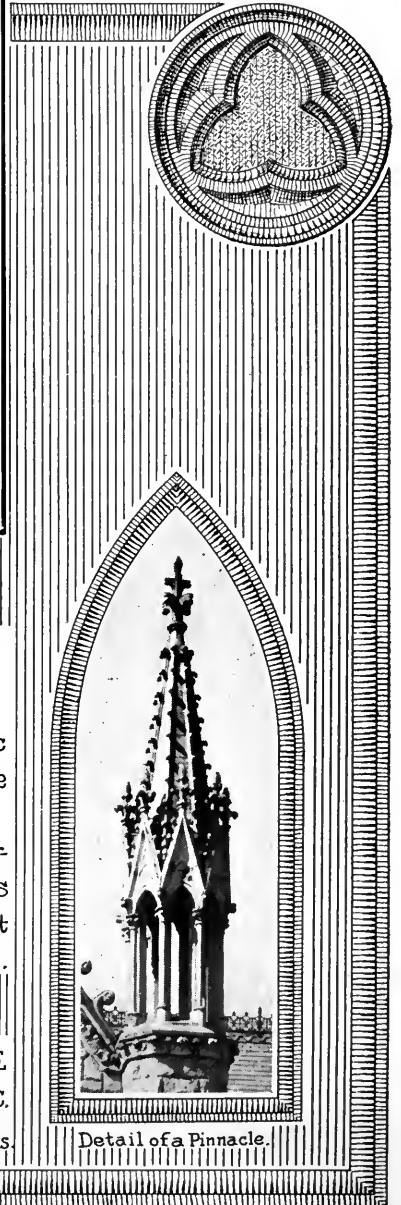
Cathedral of the Sacred Heart, Newark, N.J.
I.E. Ditmars, Architect.

For Centuries to come--

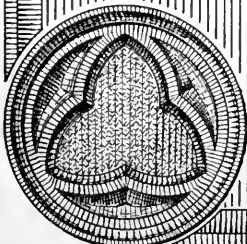
No compromise here with lesser materials. These massive walls and the intricate gothic ornament which embellish them - even to the topmost pinnacle - are of granite. Thus have its far seeing builders made certain that this noble structure, in all its architectural beauty, will successfully meet the test of centuries to come.

NATIONAL BUILDING GRANITE
QUARRIES ASSOCIATION, INC.

H.H. Sherman, Secty. 31 State St., Boston Mass.



Detail of a Pinnacle.





*Hibernia Bank and Trust Co., New Orleans, La.
Favrot & Livaudais, Ltd., Architects
George A. Fuller Co., New York
General Contractors*

RELIANCE KALAMEIN DOORS

Were chosen as a part of the construction which places the laurels for modern office building design upon the NEW HIBERNIA BANK BUILDING. In erecting this structure it was necessary that the most lasting and efficient doors be used. As a consequence the building is equipped with Kalamcin doors, jambs and trims, and all elevator doors are Kalamein above the first floor. Special Kalamein doors were designed and installed in the banking quarters. At the entrance to the building are massive copper-covered Kalamein doors. In fact, so thoroughly was this type called for in the specifications that every one of the pipe shaft and elevator cabinet doors are RELIANCE KALAMEIN DOORS.

Mail us your requirements for an estimate

"Look us up in Sweet's," pages 688 to 691.

Reliance Fireproof Door Co.

Brooklyn, N. Y.

Represented in All Principal Cities.

Several Recent Publications of Architectural Interest

are listed and briefly
described on pages 35
and 36 of the advertis-
ing section of this issue.

The Architectural Record

ROME Quality

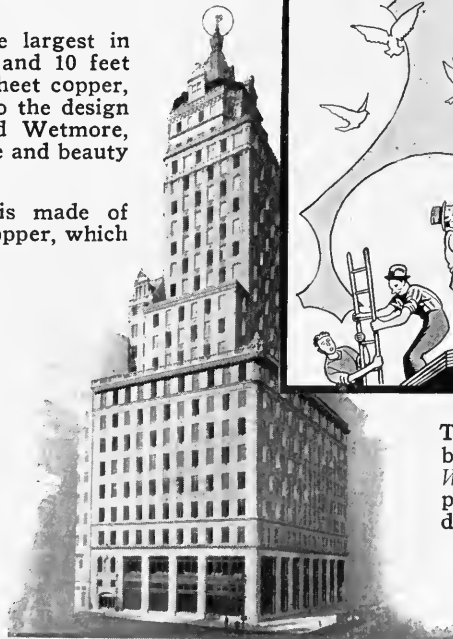
BRASS & COPPER

Striking in beauty
—supreme in service

WHICH way will he turn next? The fancy of this mighty chanticleer is as changeable as the wind, but the material of which he is made is unchanging. On top of the new Heckscher Building, this proud cock maintains a constant vigil through fair and stormy weather. He is unaffected by the elements that sweep around him, for the copper of which he is made is impervious to their attack.

This weather vane, the largest in America (13 feet high and 10 feet wide), is patterned in sheet copper, hammered into shape to the design of Messrs. Warren and Wetmore, Architects. Its eminence and beauty will be everlasting.

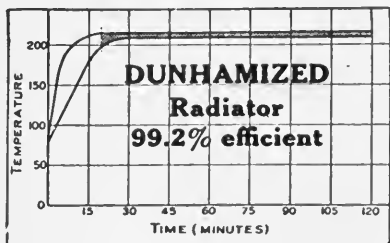
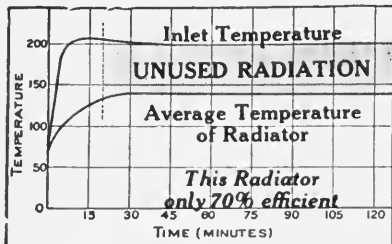
This imposing figure is made of Rome Quality Sheet Copper, which was purchased through the U. T. Hungerford Brass & Copper Company. Rome Quality Sheet Copper was selected because of its superior adaptability to shaping and the permanence which its use assures.



The above drawing is reproduced by permission of *New York World* from an illustration appearing in that newspaper under date of October 9, 1921.

ROME BRASS AND COPPER COMPANY - ROME, N.Y.

BRASS **ROME** COPPER



Unused Radiation Is Costly
Keep it down with Dunham Traps

IN the above charts, the area of "Unused Radiation" has been plotted from laboratory data. We are constantly making such tests. They tell us accurately how the Dunham Radiator Trap compares with other traps.

Your interest is ours—and that is the reduction of the "Unused Radiation" area. It will be of mutual interest for us to discuss how Dunham Radiator Traps can do this.

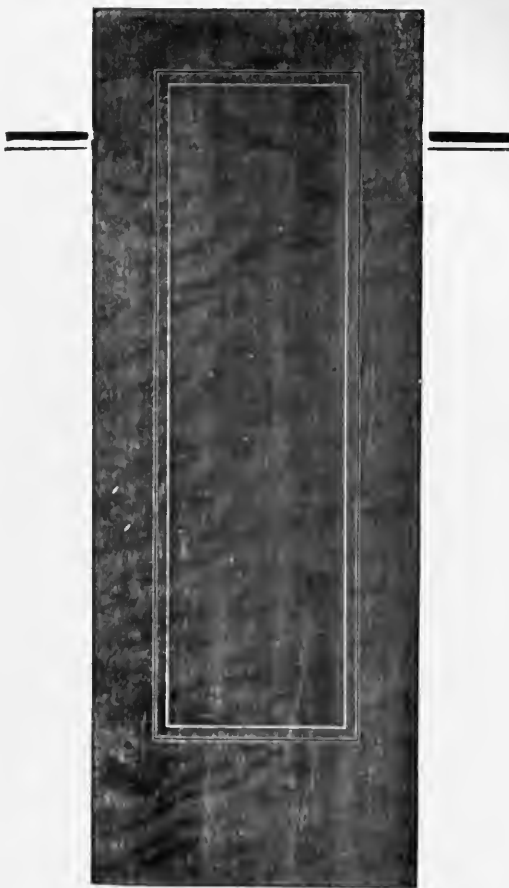
Full details of the Dunham Trap, and other Dunham Specialties, are given in Sweet's Index, and in McRae's Blue Book.

The DUNHAM HEATING SERVICE

C. A. DUNHAM COMPANY
230 East Ohio Street, CHICAGO

52 Branch and Local Sales Offices in the United States and Canada.

Foreign Sales Offices in London and Paris



RODDIS FLUSH DOORS

Bring dignity and distinction to the home, substantial construction for rugged use to the hotel, and sanitary sound-proof values for hospitals. This combination of worth backed by a quarter of century of experience and desire to produce only the best, is your protection. There is a RODDIS FLUSH DOOR for every purpose—very reasonable in cost.

We would like to hear from you.

DOORS STAMPED



YOUR PROTECTION

Represented in Sweet's Catalogue, pages 970 and 971.

Roddis Lumber & Veneer Co.

TWENTY-SEVEN YEARS

MARSHFIELD

::

WISCONSIN



When You Plan a Garage

THE greatest advantage of McKinney Complete Garage Sets to Architects and Builders is that they promote rather than limit a wide range of design. When you plan a garage with these sets in mind, you know your plan will be followed down to the last line and your client satisfied.

These sets contain all the hardware necessary for garage doors—even the track. With drawings and directions, they are packed complete in a box—no odds and ends to buy afterward. The doors may be the swinging, sliding-folding, or, if space is particularly limited, “around-the-corner” type. There is a set for any size or any style doors you wish used.

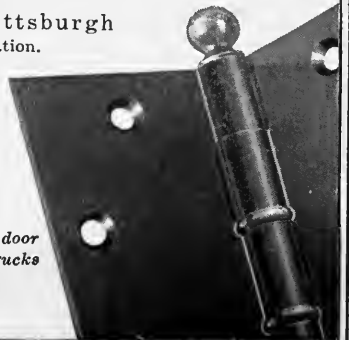
McKinney Complete Garage Sets have been given the same careful attention that is responsible for the worth and work of McKinney Hinges and Butts. Fifty years of association with the development of builders’ hardware serves advantageously in meeting the needs of the Architect and Builder.

McKinney hung garage doors are pictured and explained in book form. This book shows how easily the sets are installed and how they make better looking, stronger and more protective doors possible. It not only points a way toward lower building costs but illustrates the possibility of varied designs. This book and the McKinney Catalog will be forwarded upon request.

MCKINNEY MANUFACTURING CO., Pittsburgh
Western Office, Wrigley Bldg., Chicago. Export Representation.

MCKINNEY *Hinges and Butts*

Also manufacturers of McKinney garage and farm building door hardware, furniture hardware and McKinney One-Man Trucks



VALUE *plus*—

As a user of "Sweet's," what does this *plus* mean to you?

ALL ARCHITECTS recognize that "Sweet's" has a value to them as a conveniently arranged source of information.

SOME ARCHITECTS, through complete familiarity with the contents of "Sweet's" and daily use of its detailed data, get out of it all the value there is in it.

More than nine hundred manufacturers of more than fifty thousand articles that enter into building operations have undertaken to give the architects, in the Sixteenth Edition of "Sweet's," the character of detailed information concerning their products that architects say they want.

The Sixteenth Edition contains a greater amount of detail drawings, specification data and general practical information than any previous edition.

The scale drawings of architectural and structural details have been prepared by architectural draughtsmen of the highest ability.

Typical examples of catalogues showing structural details drawn to scale are those of the Philip Carey Company, The Fairfacts Company, Incorporated, the Richards - Wilcox Company, The Watson Manufacturing Company, Allith-Prouty Company and the Reliance Fireproof Door Company—to mention only a few. George Rackle & Sons Company show a catalogue with scale drawings of architectural details.

For thorough presentation of descriptive and specification data note the catalogue of the Kelley Island Lime and Transport Company.

Types of catalogues giving general information of the highest order are those of the Common Brick Manufacturers' Association of America and the National Building Granite Quarries Association.

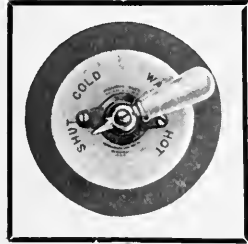
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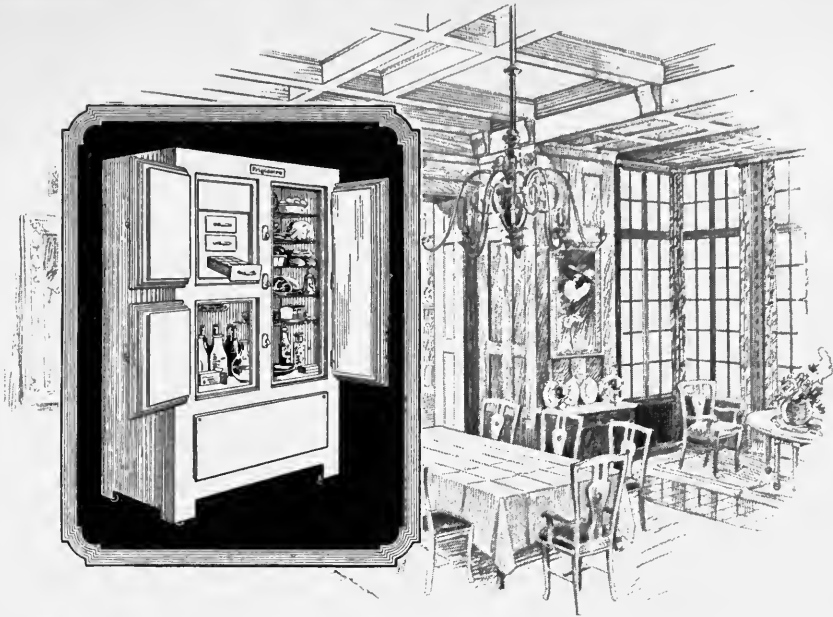


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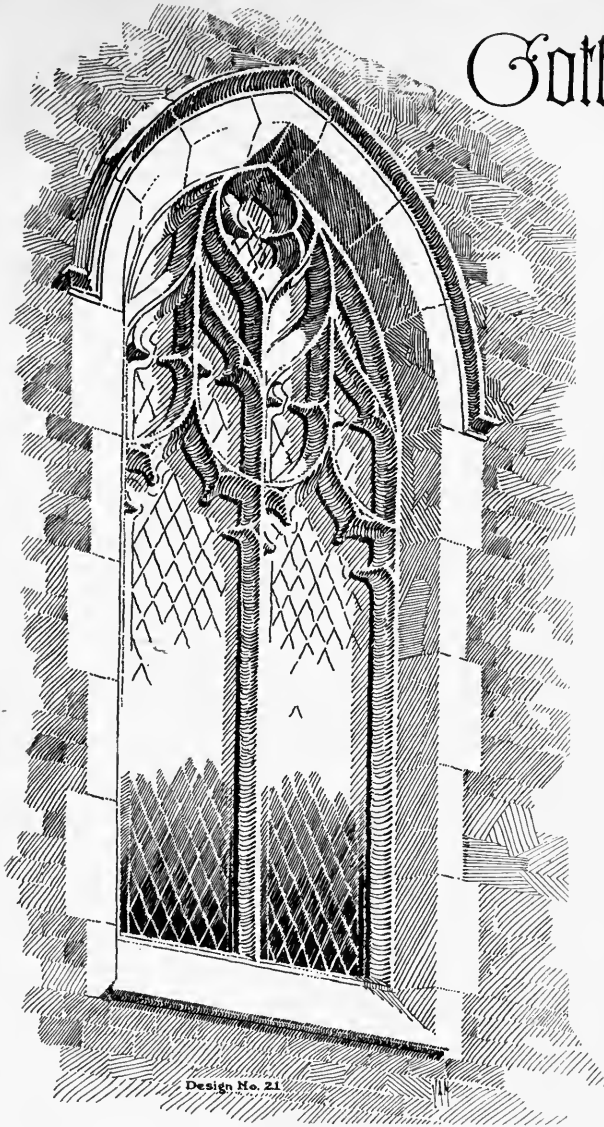
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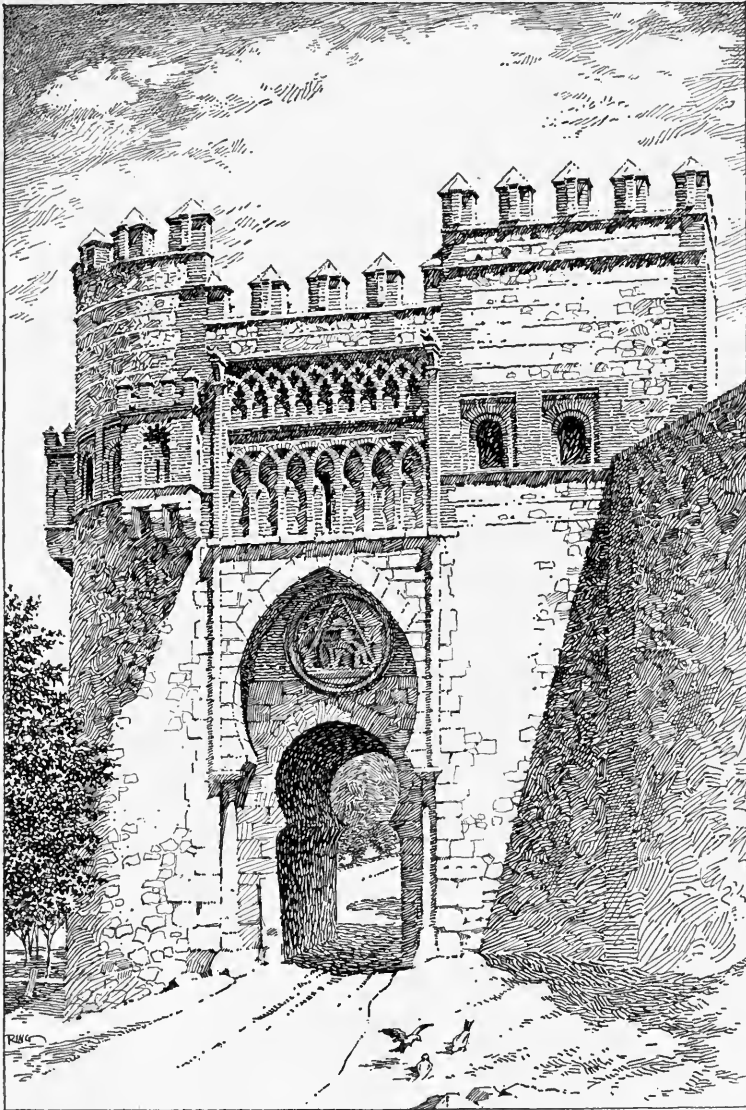
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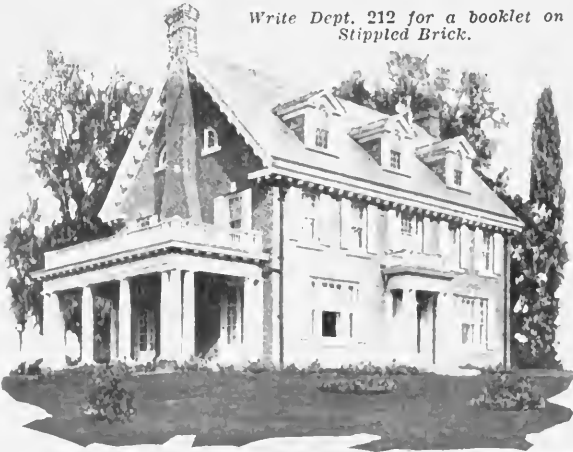
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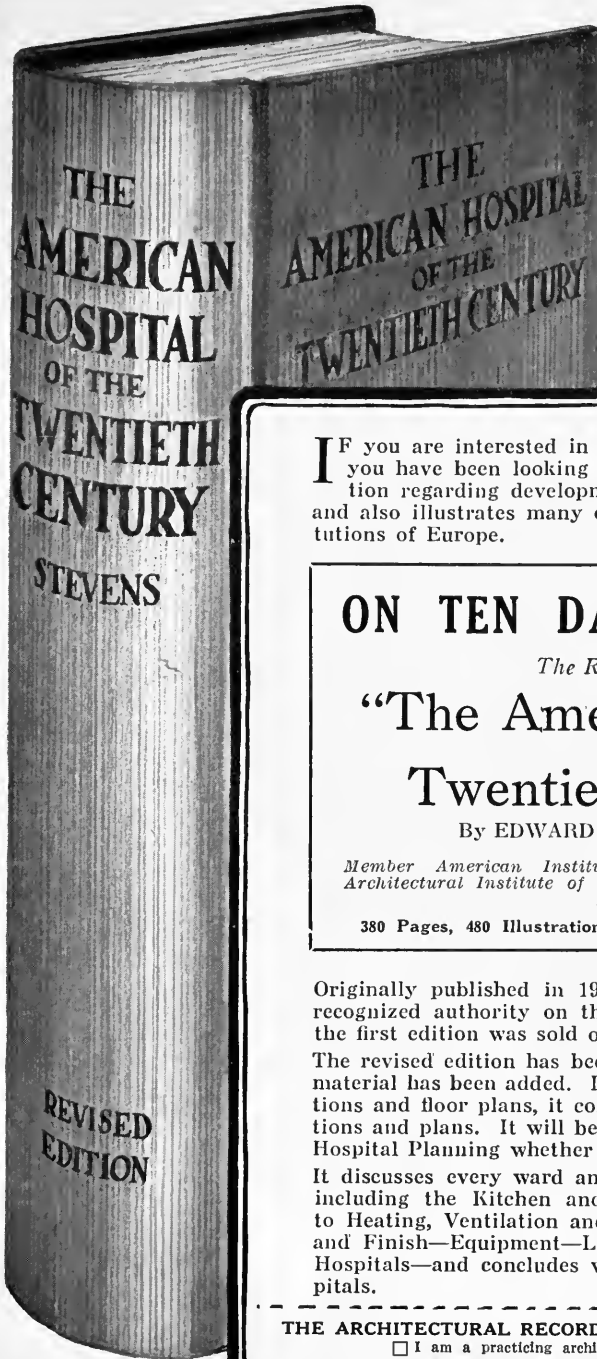
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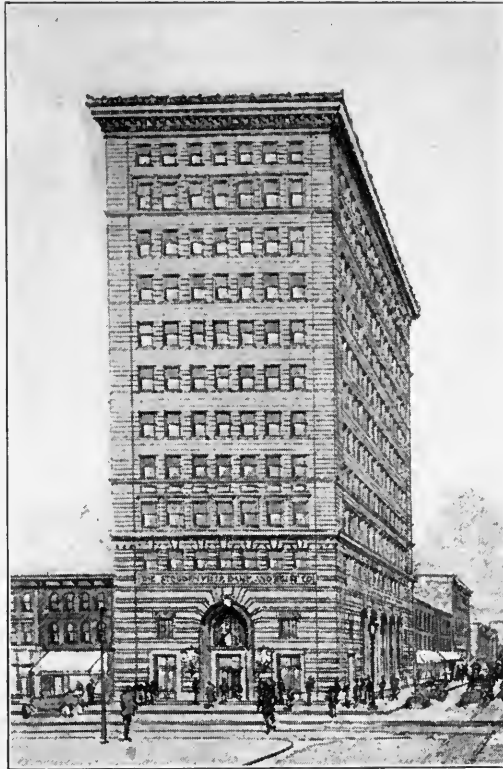
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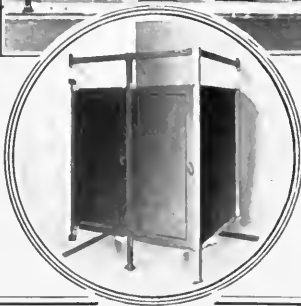
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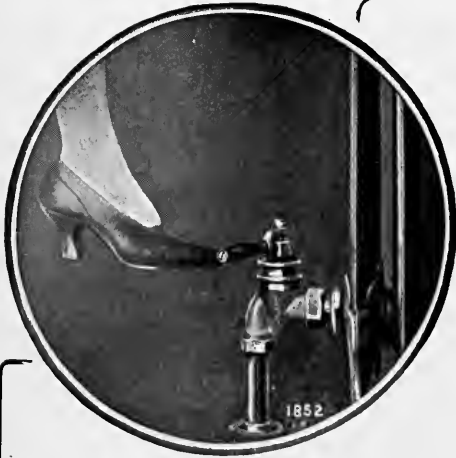
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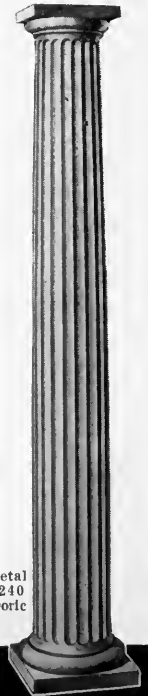
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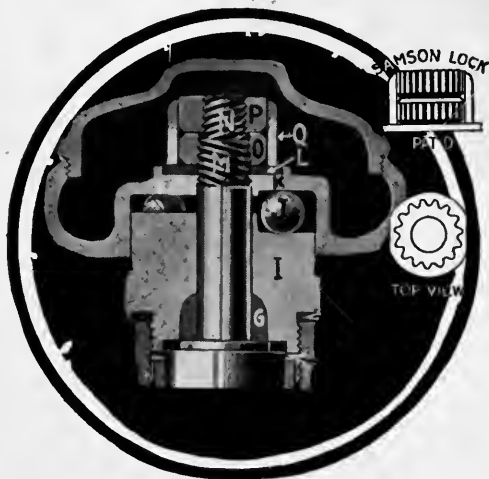
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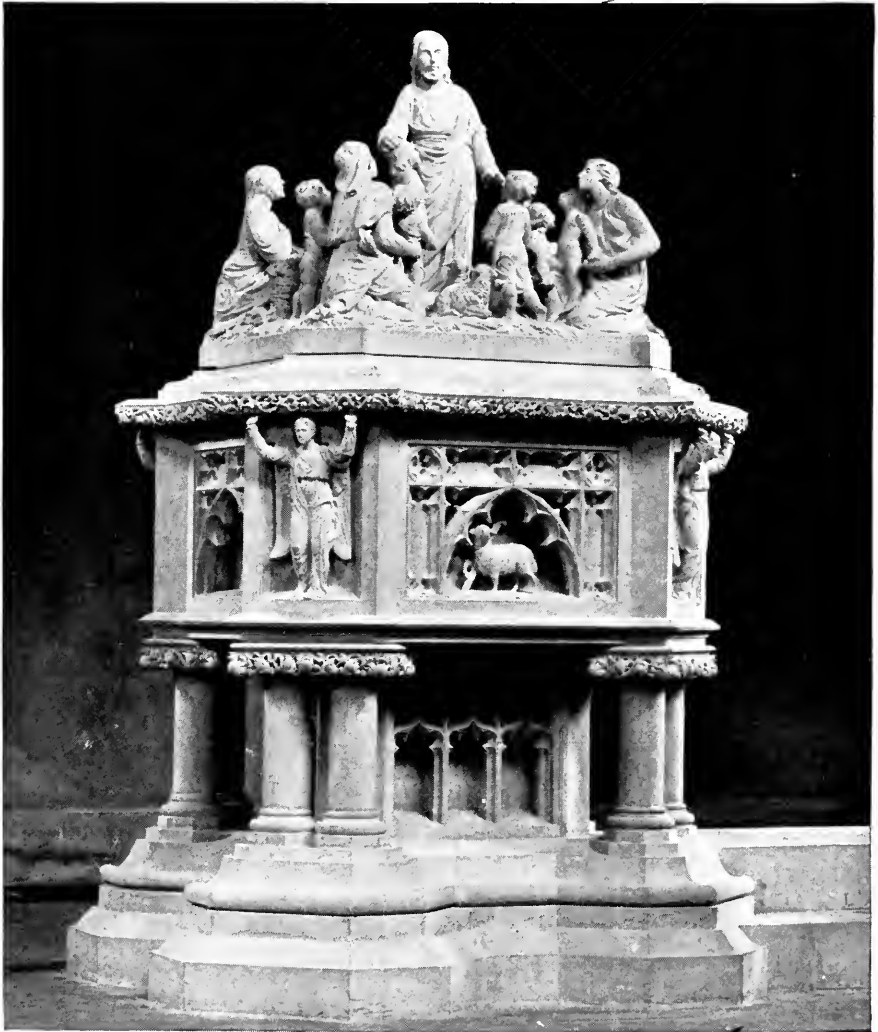
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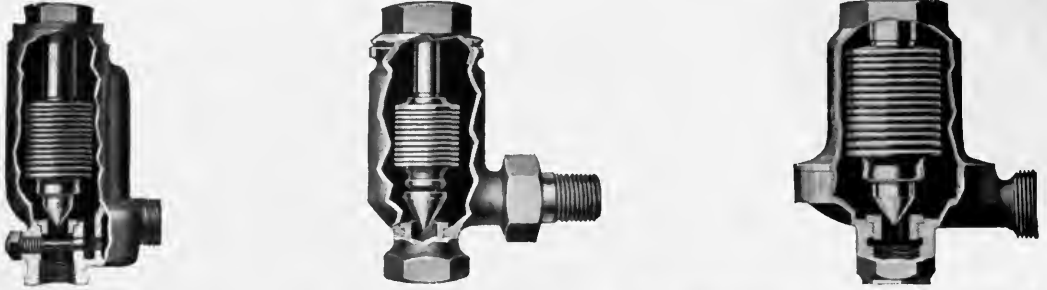
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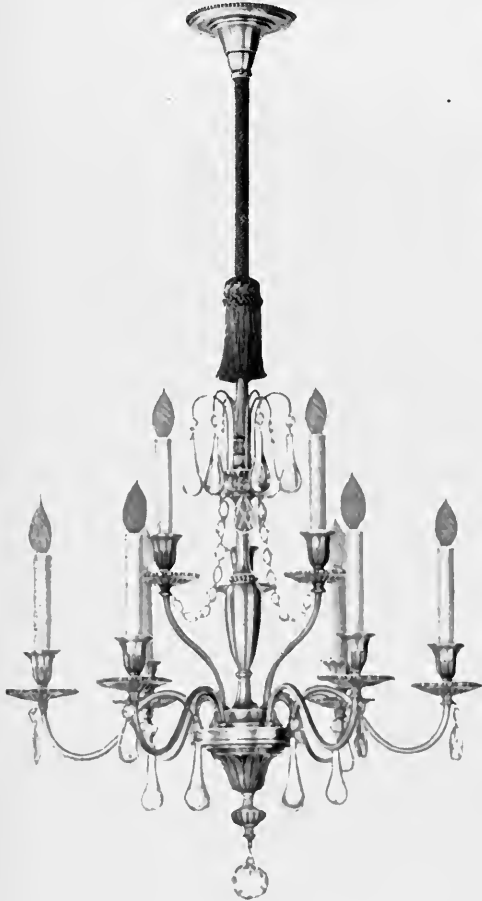
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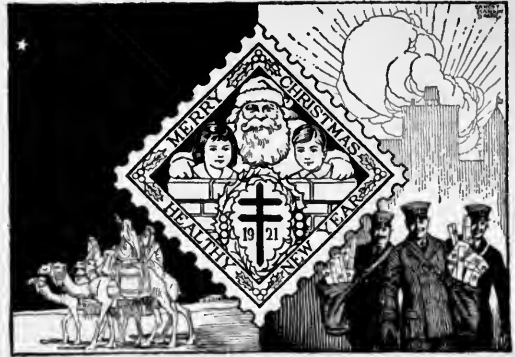
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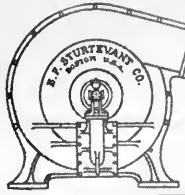
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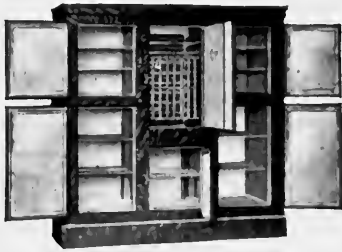
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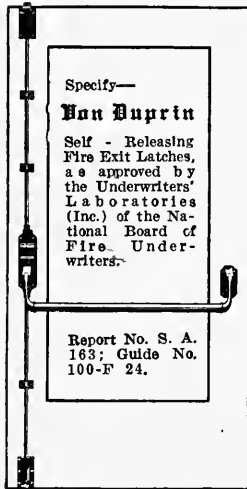
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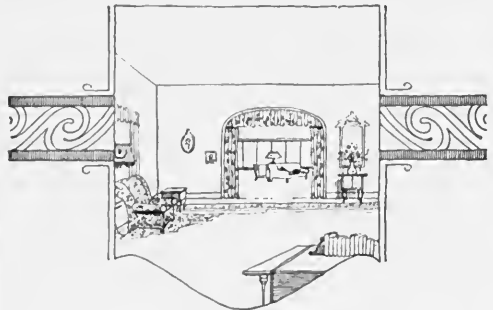
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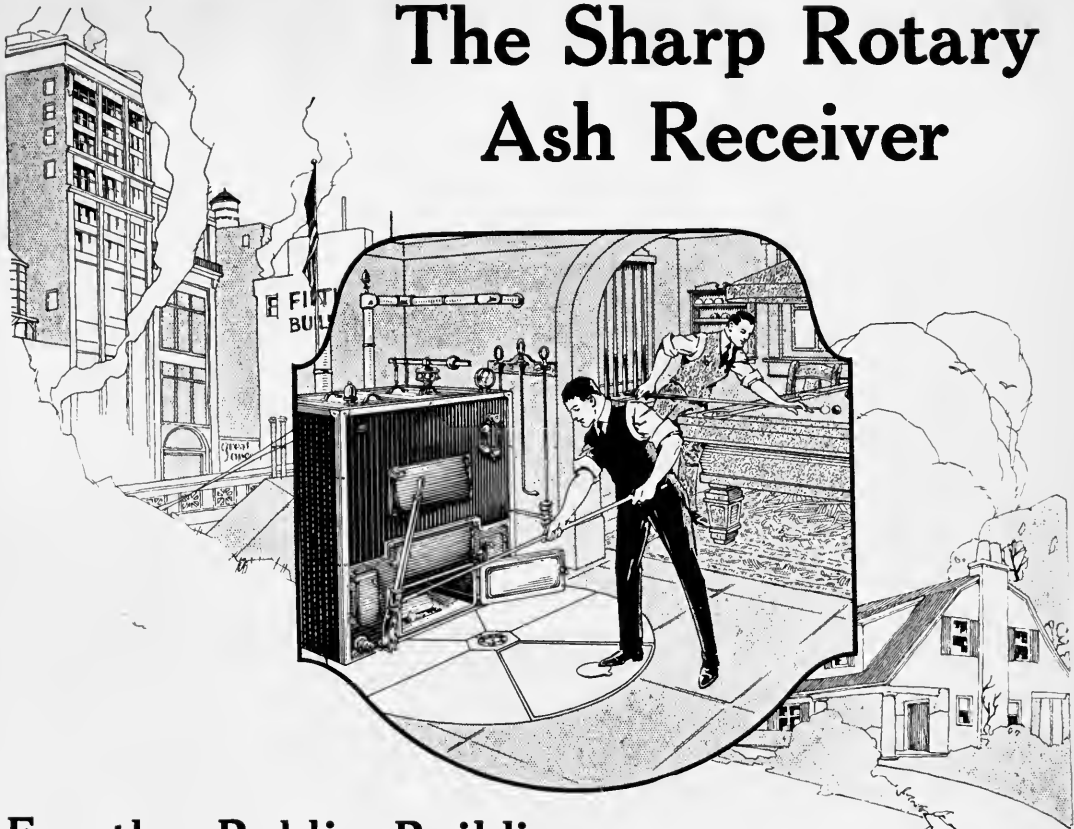


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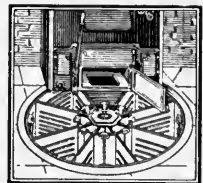
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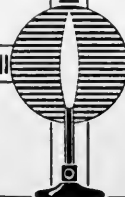
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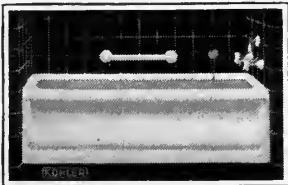
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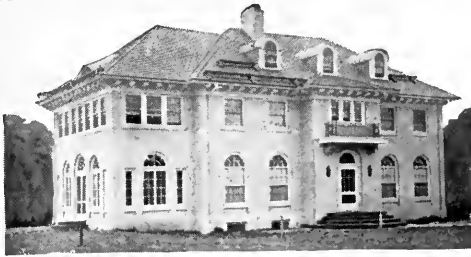
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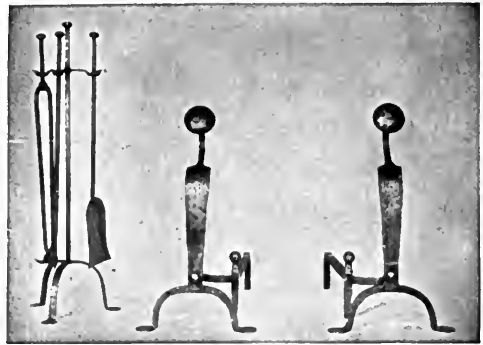
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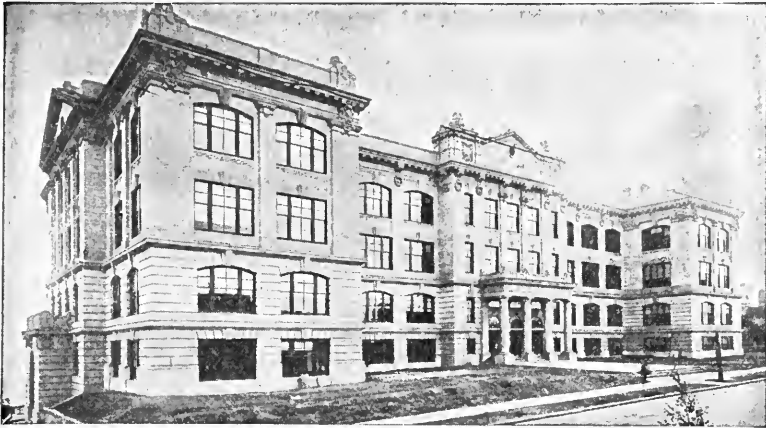
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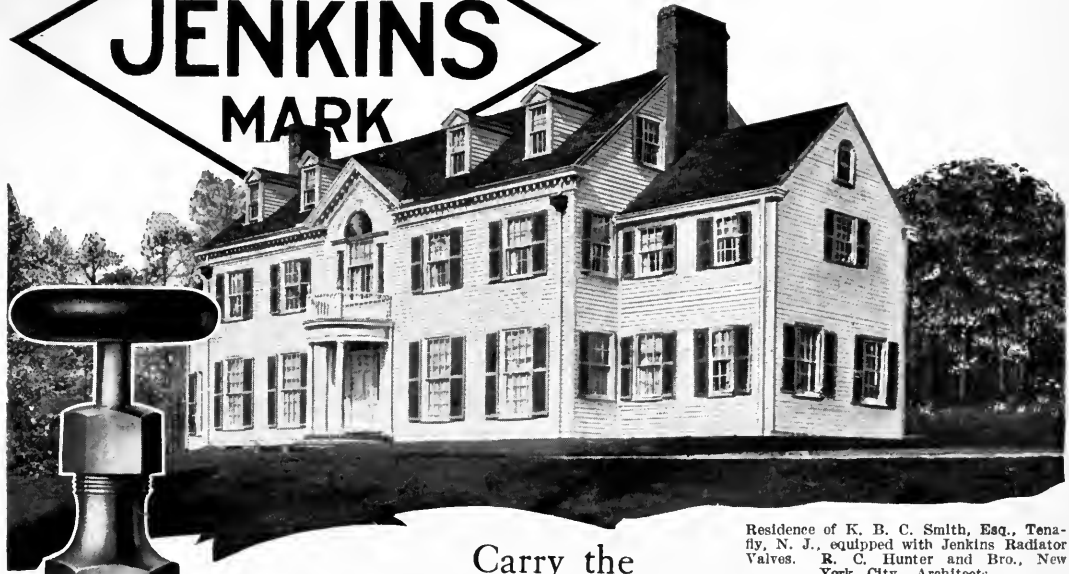


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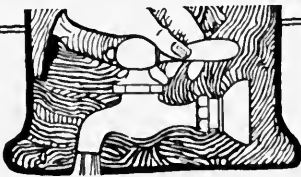




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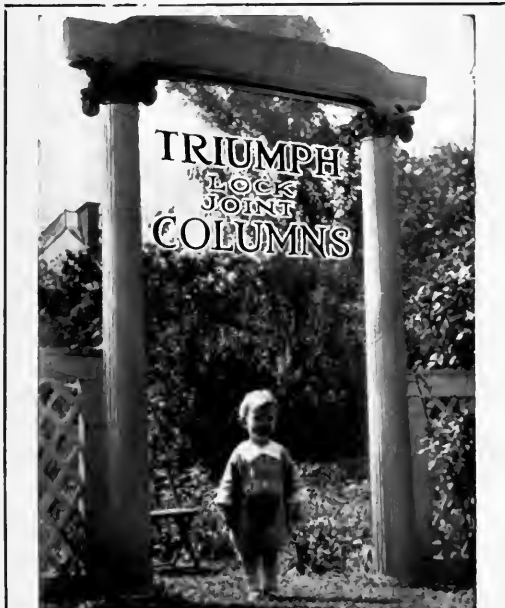
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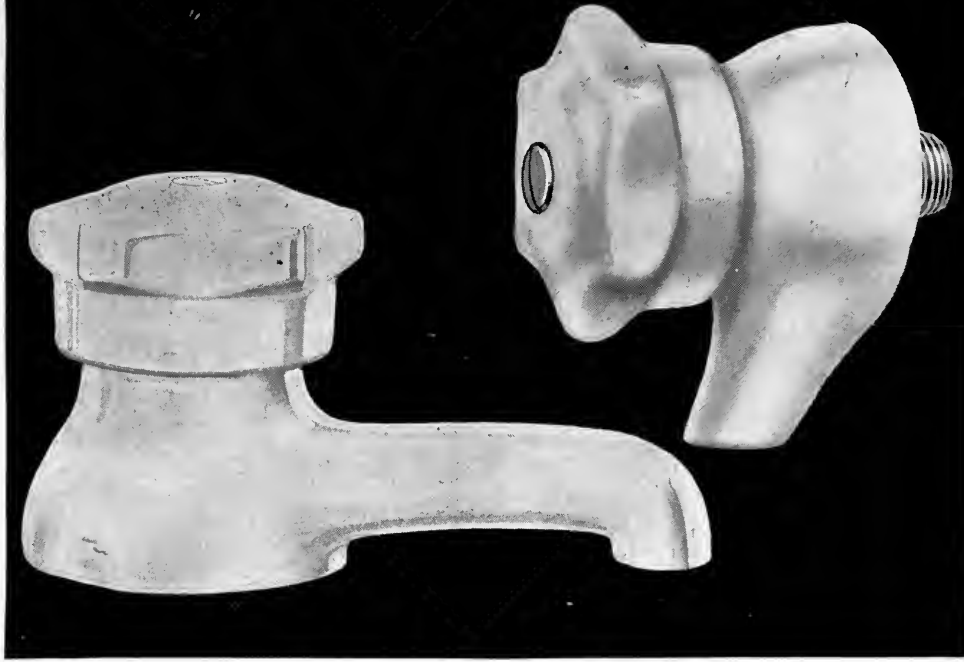
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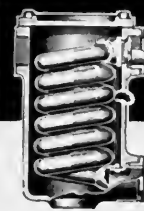
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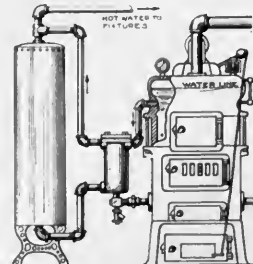
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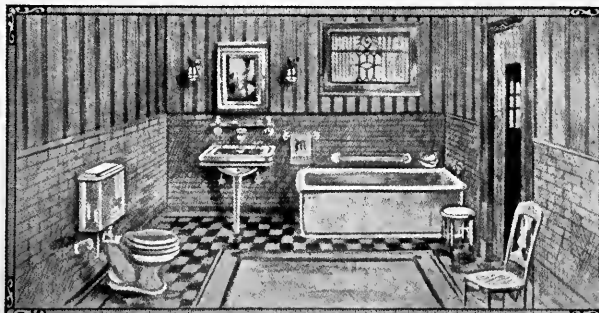
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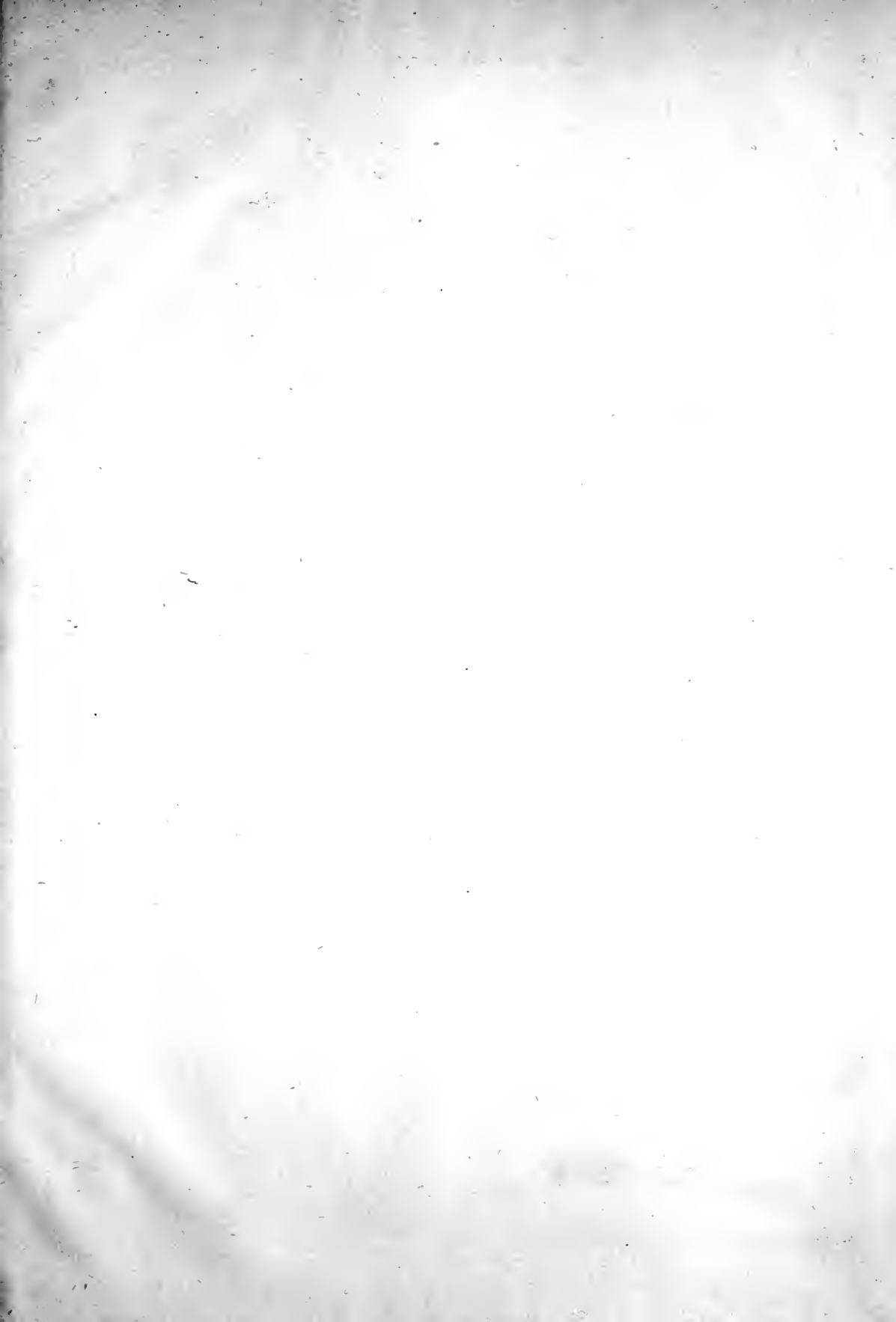
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