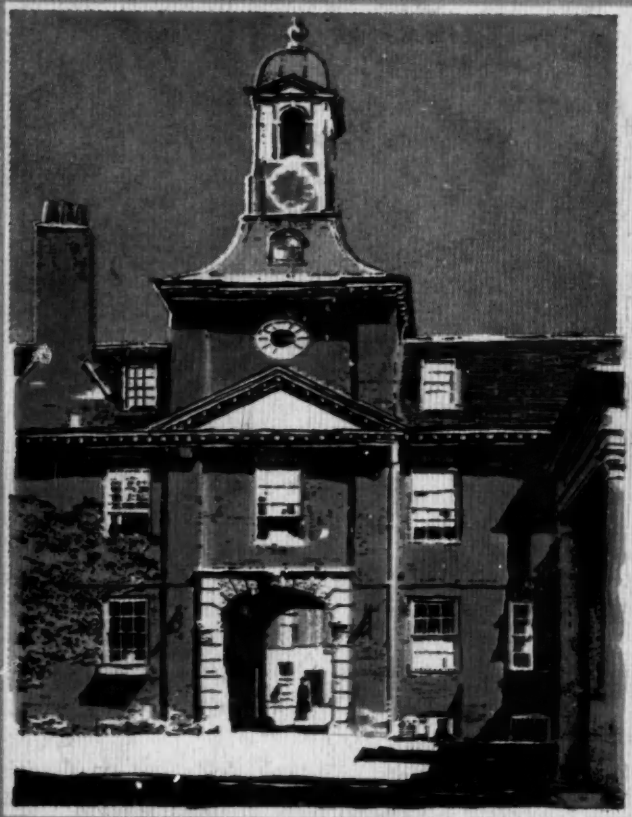
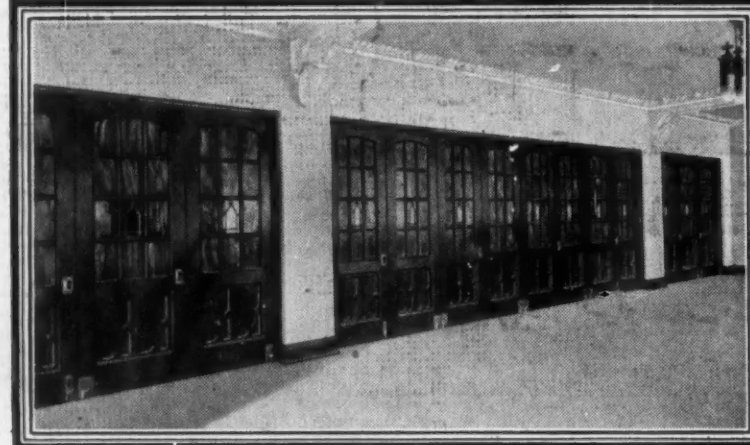
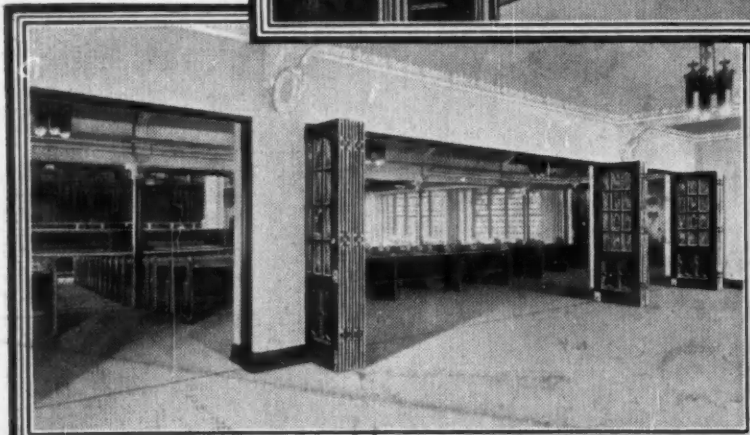
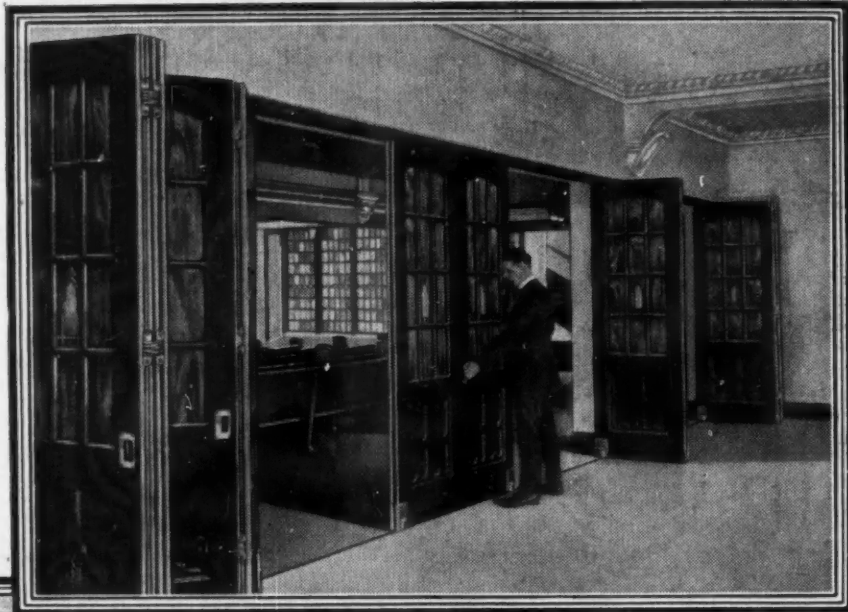


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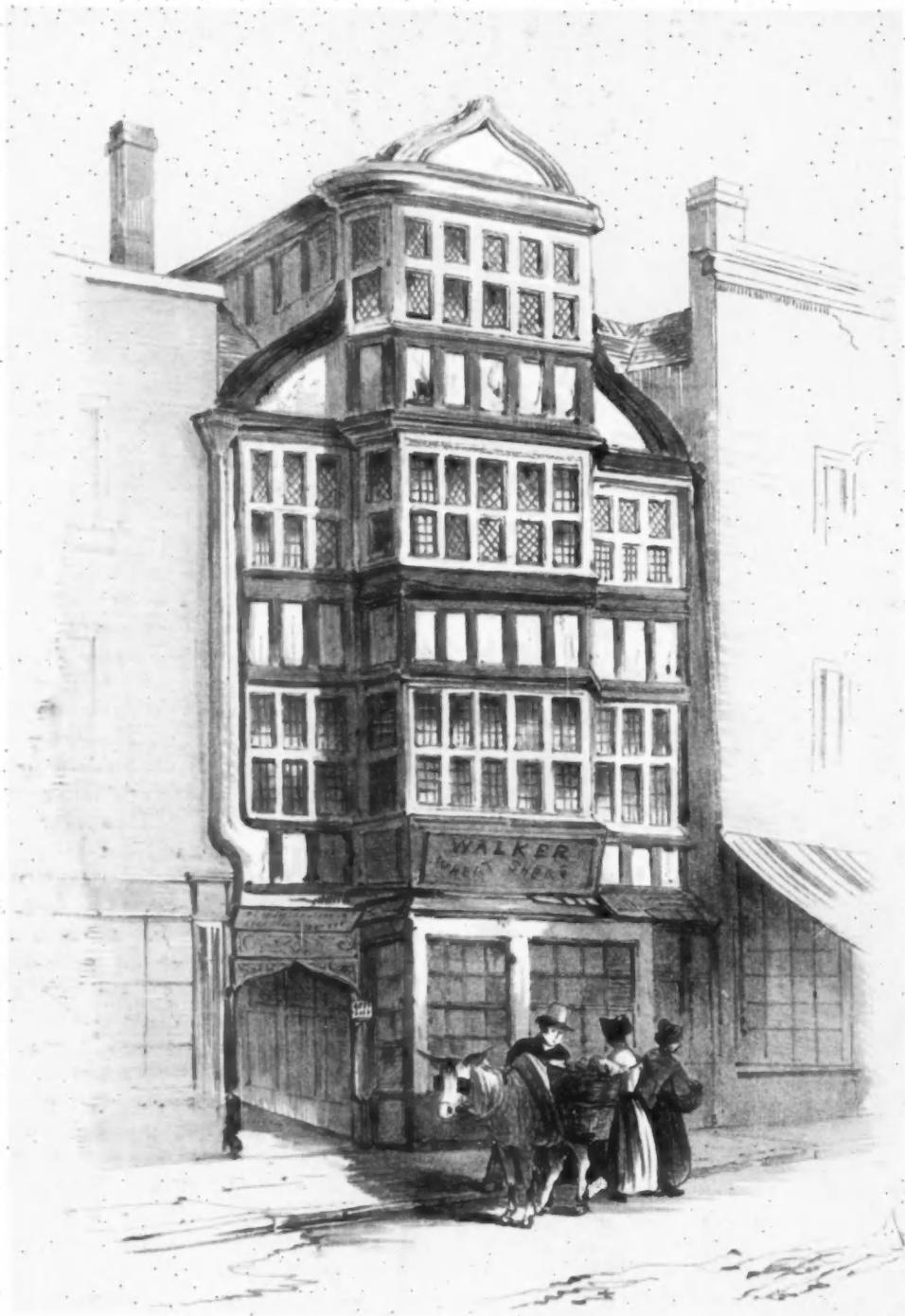
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The ARCHITECTURAL FORUM

Volume XLV

JULY 1926

Number 1

Old Houses of Tewkesbury

By CLINTON D. BLAKE, JR.

ABOUT ten miles southwest of Gloucester lies one of the most interesting villages in all England. Famous in history by reason of the battle which bears its name, the town of Tewkesbury is equally worthy of fame for the charm and beauty which characterize it. It has two chief glories:—the famous abbey, which stands at its southern border, and the delightful half-timbered houses which line its fine, dignified, old-world streets.

It stands on the banks of the Avon in the beautiful valley of the Severn. One would have difficulty in finding a country more peaceful or more typical of England at its best. The rolling fields, the friendly rivers, the rich meadows and the distant Cotswold hills unite to form a delightful setting for the town. In the peace of its present it is difficult for one to realize that Tewkesbury was the scene of one of the most sanguinary and ruthless battles of England's civil wars. The abbey walls, which look out upon such peaceful scenes today, saw far different sights on that decisive Saturday in 1471, when the forces of York triumphed, and the House of Lancaster went down in final defeat. The slaughter was not confined to the battlefield, but was carried into the limits of the town and even within the very walls of the abbey itself.

The "Abbey," so-called, is an inseparable part of the charm and atmosphere of Tewkesbury. It dominates the town, but does so in a friendly and not at all in a domineering way. It and the old timbered houses supplement one another, as it were. The houses would lose much of the charm of their setting without the abbey, while the abbey would stand in very lonely beauty, without the atmosphere of Old England which radiates from oak timbering, carved details and stone-covered roofs. The church, of cathedral-like dignity and proportions, is of pure Norman architecture and dates from 1087. There is a mellowness in its deep cream colored stonework and a sheer beauty in its simple but beautifully proportioned exterior and interior which make it vastly more appealing than many a cathedral far more pretentious and much more famous. It is at once impressive and friendly, noble and simple. We must not linger too long within

its walls, however, if we are to enjoy the other offerings of Tewkesbury. The old houses await us on the village streets without. An hour within the abbey has put us in such a frame of mind that we can enjoy them to the full, and we shall do well to seek them out at once, to revel in their charm.

The seeking out is not a difficult matter. As we come out of the abbey gate, the famous "Bell Inn" lies directly in front of us. Originally it was included in the abbey grounds, and it stands as sturdily today as if it had not watched over the southern gateway to Tewkesbury for many hundreds of years. To our right is the main street of the town, on which the most famous and the more elaborate of the old houses of Tewkesbury are situated. It will be worth our while, however, to first stroll down the street immediately in front of us,—a street to delight the eye and the imagination of anyone! A stone's throw only in length, it is lined with ancient buildings and is without one incongruous or jarring modern note. On the left, as we walk toward the river, is the "Bell Inn." On the right are a number of very humble houses of extreme simplicity of design and construction, but with a charm that is all their own. Neat and trim in outward appearance, the interiors, of which we catch glimpses as we stroll by, are as cozy as one could wish. The timbering is practically all of oak, and many of the roofs are covered with stone. The stucco walls with black oaken timbers and the warm tones of the roofing stones blend perfectly. At the end of the street we come to the Avon and to the ancient mill which has stood here for generations. Here we can cross the little river and, looking back, enjoy one of the most attractive vistas in all Tewkesbury. At our feet is the Avon; to our right the mill, its wheel still turning steadily; on the bank from which we have just come an old house which would make any artist or architect exclaim with joy, its beauty again reflected in the water; up the street, rising above and beyond the "Bell" and the little houses of which I have just spoken, and keeping friendly watch over all of these, the splendid Norman tower of the abbey which we visited but a few moments since. He would be a prosaic individual indeed



"HOUSE OF THE NODDING GABLES," TEWKESBURY



"CLARENCE HOUSE," TEWKESBURY

who could stand there and not feel the beauty and unique appeal of the quiet little town before him!

On our way back to the main street, we shall do well to dodge in and out among some of the alleyways near the river bank. Here many of the houses are in poor repair, and the lack of worldly goods is quite apparent. On all sides, however, are delightful examples of old timberwork and, every little while, a new glimpse of our Norman tower, still dominant and still friendly, comes into our sight.

Back again in sight of the "Bell" and the abbey gateway, we are not long in coming upon some of the old houses which are famous as bits of Elizabethan and pre-Elizabethan England. Here the houses are far more pretentious and are generally in a better state of preservation. In their construction, however, they are basically much the same as the humbler dwellings which we have just passed. All of the distinctive houses of Tewkesbury are of sturdy construction. This is notably true of those which were erected in pre-Elizabethan days. There is an interesting description of the construction of these older houses in a little book which I was fortunate enough to secure at Tewkesbury, which says:

The construction of these "oldest of the old" houses, where they have remained intact through the centuries that have passed since their erection, is of a very rough and rude kind—huge oak beams hewn in some neighboring woodland, and seemingly innocent of any further preparation than the sawing and chiseling of mortises and tenons, and the augering out of the holes to receive those strong wood pins, which when once driven home have held fast enough to defy the stormy winds and tempests of hundreds of years to break asunder the huge timbers they were employed to hold together. In the intervals or panels formed by the framework, uprights made of split branchwood were fixed close enough to keep in its place an interlacement of the twigs and leafy brush which had been stripped off the branches. This "walling" was now made solid and surfaced up with a thick coating of a sort of conglomerate called locally "wattle and dab," which proved wonderfully weather-resisting though composed of little else than red marl, of which there was an abundant supply always at hand. The erection was now ready for the rough timber lengths, tough lathing, and ponderous stone tiles from the hillside quarries of the Cotswolds that had to form the roof, and when this was on, the simple structural arrangements of the interior that remained for completion were carried out.

A fine example of one of these so aptly termed "oldest of the old" houses is the "Berkeley Arms," which is still conducted as a modest house of refreshment. The "Berkeley Arms" building proper and the adjoining structures now form two dwell-



"The Old Black Bear Tavern," Tewkesbury

ings. The arcade work on the front, restored in accordance with the original work discovered under a coating of old plaster, is especially interesting. The property is still in an excellent state of preservation. The tone of the weathered oak timbering is delightful, and the carving and detail of the front elevation are worthy of more than the passing notice which we can give to them in these paragraphs here.

Not far distant and on the same side of the street is another noteworthy old dwelling, known as "Clarence House." In the pages of the guide, to which I have referred, this brief account is given:

Some savants who have given the fabric close attention, have expressed the opinion that it had once been surmounted by a gable,—or perhaps a pair of gables of similar style to those of the ancient house standing near on the other side of the road. They have formed their opinion from the appearance of the top of the roof in front of having at some distant time undergone alterations which were completed by covering with lead a large flat space in front of a gable that is seen lying back about a dozen feet from the overhanging part of the front. A roadway (which now forms the site of a residence, with back buildings and garden on the south side) once ran through along the south side of "Clarence House" into the Oldbury Fields, and the lights (blocked up) which opened into it are visible in the side wall. Features for particular remark in the front are the window details,—the center portion of the

lights of the first floor being constructed for use as opening doors; the quaint lights of the top story; and the curious head to the spouting at the north corner. A beautiful ornament of the interior is a Queen Anne ceiling in the first floor front room, which is said to be one of the best of the kind in England.

The present occupant of the premises is proud of this ceiling and of the house as a whole. He gladly piloted me up the stairway, when I called, and takes a real pleasure in allowing one to examine the old beamwork and the mediæval construction of the house. This pride of the townspeople of Tewkesbury in the old houses which they have inherited is one of the most pleasant things about the place. It is a fortunate thing also,—fortunate for the town itself, and fortunate for the lover of beauty and of old English architecture. Instead of scrapping their old buildings or allowing them to decay and fall into disuse, the Tewkesburyites cherish them and do all that they can, apparently, to preserve them unspoiled and to properly restore them where restoration work is necessary. The town is especially indebted to the architectural profession as represented by an English architect, Thomas Collins. Mr. Collins was long a resident



On the Main Street, Tewkesbury



Overhanging Upper Stories Are Often Found in Old Tewkesbury

of Tewkesbury. To his careful research, public spirit, trained ability and general sense of the fitness of things are due in very large measure the preservation and restoration of many of its choicest landmarks. Mr. Collins had for his residence for many years the old mansion or town house situated at what is known as the "Cross" at the intersection of two of the main thoroughfares. Tradition has it that this house may have been the town house of the lords of Tewkesbury. Both without and within it shows evidences of the most careful workmanship and of a care and lavishness in construction and in detail which are notable among the other houses of the town. Fine paneling, interesting plasterwork and fresco paintings and generosity in its general conception and design make the house one of Tewkesbury's treasures. Mr. Collins' activities were not confined to his own house by any means. The townspeople will tell you that to him is due the beauty of many of the fine old landmarks which we admire today, in the restoration work on the abbey itself, and in the general planning of the town. Marks of his taste and discrimination are many.

A very famous old house, apparently substantially unchanged and intensely interesting in its design and by reason of its perfect preservation, is the "Wheat Sheaf Inn." This also is situated on the main street, and only a short distance from the other houses



View Up Church Street from "The Bell"

which we have visited in this very interesting town.

On the west side of High Street are some other splendid examples of interesting design and fine craftsmanship. Notable among them is the so-called "House with the Nodding Gables." In pre-Elizabethan days this was the office for the coaches which connected Tewkesbury with the outside world. Within and without the house is intensely interesting in its design and workmanship. The small windows in the upper story, the supporting brackets on the front, and the unusual gables give the house a unique and quite distinguished effect. Seen either from a distance, as its gables stand out from the neighboring buildings, or at short range from across the street, it commands instant interest and attention. One cannot find, even in this town of splendid old-world houses, a more worthy representative and reminder of the England of other days, and of its architecture.

Directly next door to the house with the gables is the "Swan Hotel." This is an ancient building which is still serving its purpose as an inn. The brick front is not as interesting as the half-timbered fronts of the other buildings, but the property has long been a landmark in Tewkesbury and was noted as a stopping point on the old stage coach route. "Academy House" is another splendid Elizabethan building, notable for its carved oak within and without and for its general appearance of spaciousness



A Very Old House at "The Cross," Tewkesbury



Among the Oldest Buildings Is "The Berkeley Arms," Still Used as an Inn



"The Wheat Sheaf Inn," Tewkesbury

and dignity. Some of the carving and paneling in the interior is of special interest,—notably the carved oak mantelpiece bearing the royal arms of the Jacobean time, when the old chimneypiece was built.

At the northerly end of the village street stands the "Black Bear Tavern." It is a splendid example of the old English tavern. Its oak timbering and beamwork are notable, and one cannot but be impressed by the sturdiness of its construction and its general old-time charm. Tewkesbury is indeed fortunate in possessing two such unspoiled examples of the roadside hostelries of other days as the "Bell" and the "Black Bear," not to mention a number of other inns within its limits, some of which, such as the "Wheat Sheaf," the "Berkeley Arms" and the "Swan," we have already noted. The "Bell," the "Black Bear" and many of the others are noteworthy for their splendid half-timber and interior timberwork. They are noteworthy also for the atmosphere of true friendliness with which they greet the traveler who seeks refreshment or shelter at their doors, a friendliness which is truly English.

The interiors of the old houses of Tewkesbury are fully as interesting as the exteriors. Oak, of course, played a leading part in interior trim and construction, as it did in the outside timbering and in the



"King John's Bridge," Tewkesbury

general construction work of all of these houses. Much of the carving is very fine. The oak wainscoting and mantels especially, with the patina which their use for hundreds of years has given to them, are unusually attractive and possessed of rare beauty.

We have glanced at only a few of the older landmarks of Tewkesbury and have visited only a few of her streets. Wherever one turns, however, in the town, one will find similar examples of Tudor and of even earlier workmanship. The humble cottages in the poorer sections of the town and the homes of former Tewkesbury aristocrats will be found equally sturdy in their construction and equal sharers in the general beauty which attaches to all of these old houses and to the town itself, full as it is of charm.

The old houses of Chester have long been famous. Those of Tewkesbury are comparatively little known, but they have nothing to fear, certainly, from a comparison. With her abbey, her houses, and her appreciation of their worth, Tewkesbury may welcome any visitor—be he ever so fastidious—with confident anticipation of his approval. He would be a poor sort indeed who would not respond to her historical appeal and to the beauty which she has cherished and preserved with so much care and good judgment. Tewkesbury is a bit of Old England.

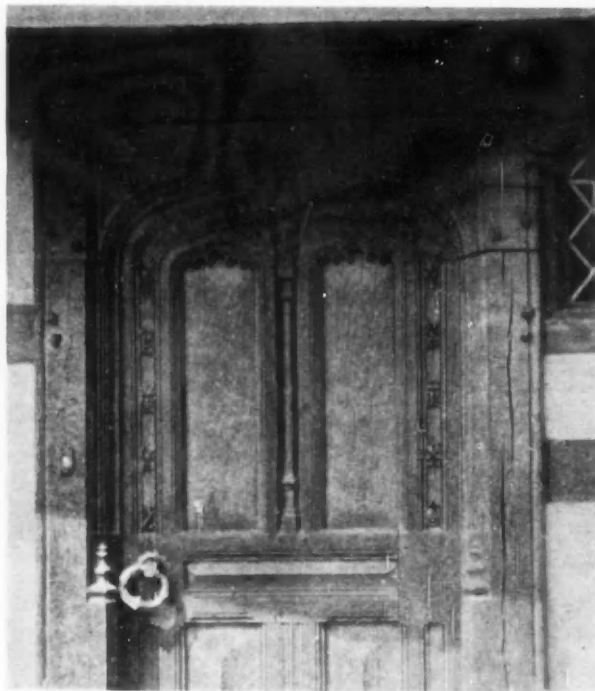


Old Gateway, Tewkesbury



Across the Avon, Tewkesbury; Abbey Tower in Distance

A great deal is being said and written of the gradual disappearance of much which renders England charming. Particularly since the war, owners of landed property have been taxed to the point where many old estates have had to be sold. The removal of their old owners, trained for generations in careful observance of the obligations which inherited social standing in England involves, and the coming in many instances of new owners who know nothing of such obligations are affecting many of the traditions which have done so much to the building up of English customs,—and in the process many harmful changes are wrought. Probably the places which are most fully protected from being submerged by these changes are those quiet country towns rather off the beaten track so well traveled by tourists,—

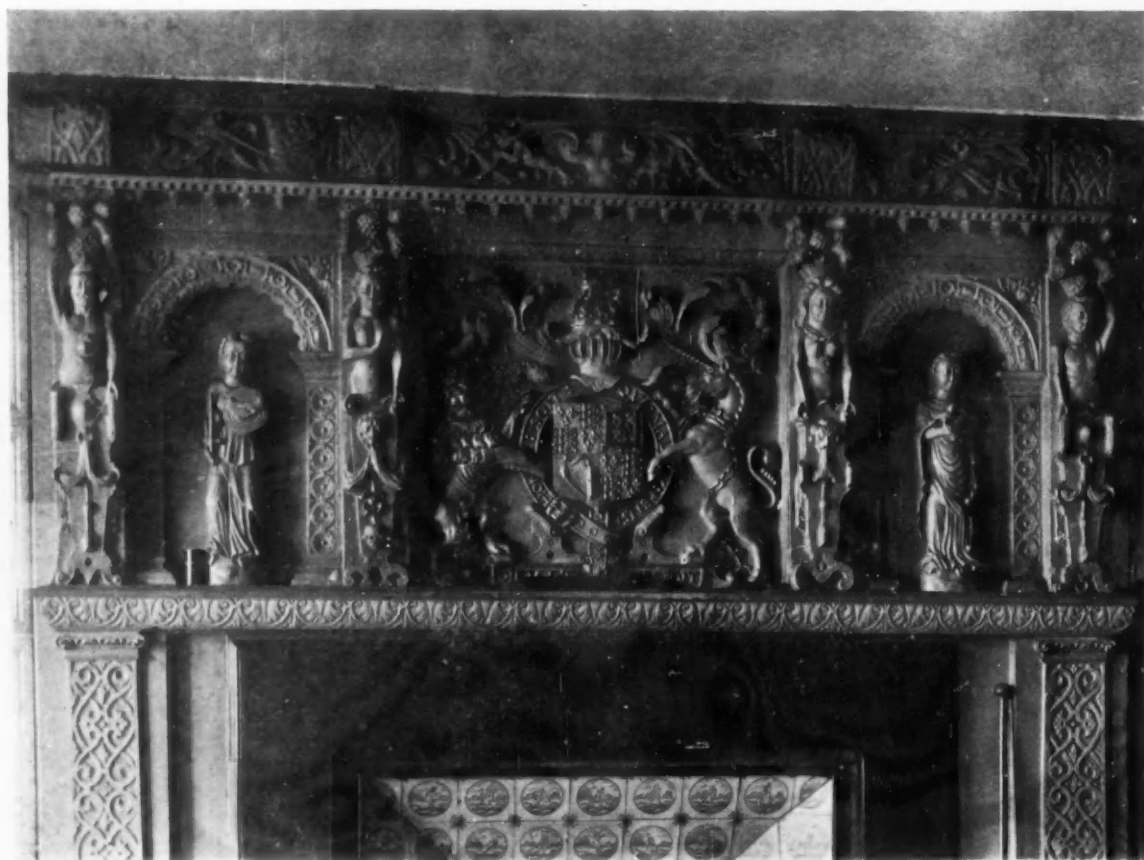


Detail of Old Carved Doorway, Tewkesbury

and of such is Tewkesbury. Long may the town continue to retain the simplicity and beauty which render it so wholly satisfying and charming!

To the architect who travels through the English shires these old towns are an inspiration. Here there exist, in all their glory, those old buildings of which we try so earnestly in America to make "copies," and seeing the old may (and doubtless will) aid in making the new more true to life, even though the development of the world since the originals were built has been at such a pace that the spirit of which the old buildings are an expression has ceased to exist.

It has left us, however, a precious legacy in such old towns as Tewkesbury. Particularly to a visitor from a land as new as America, these old English towns possess all the qualities and the glamour of romance.



A Beautifully Carved Oak Mantel in an Old Tewkesbury House

Some Features of the Library Building of Cleveland

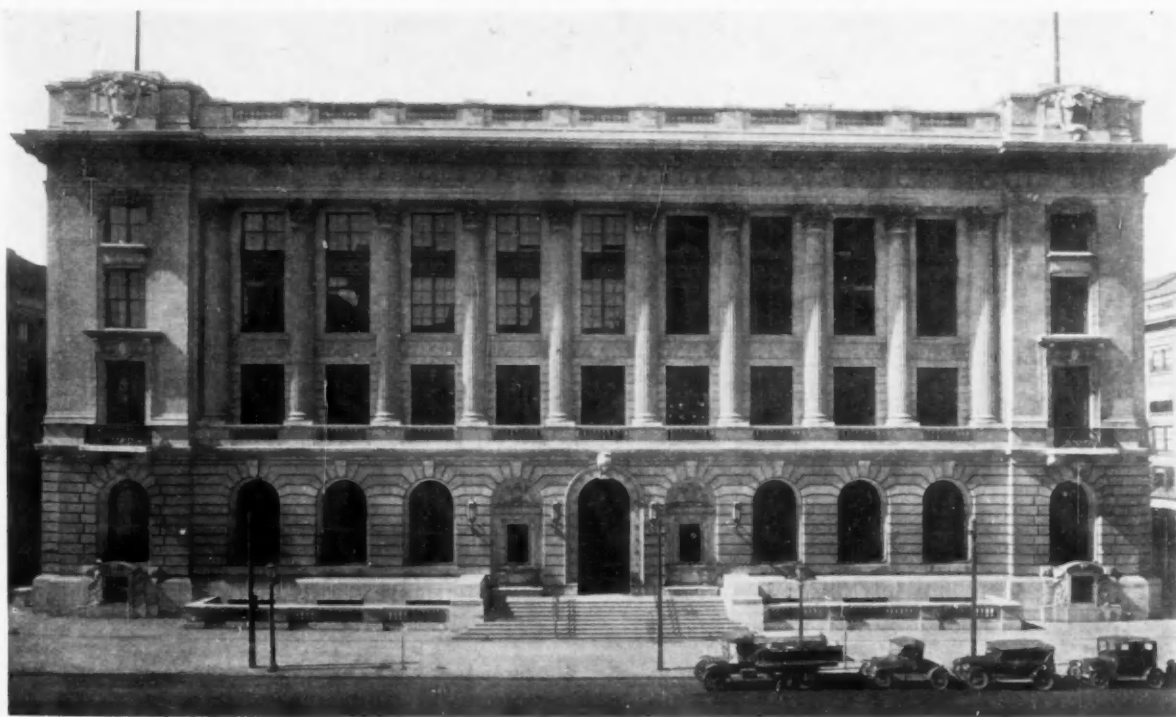
By LINDA A. EASTMAN
Librarian, Cleveland Public Library

ANY description of the new main building of the Cleveland Public Library should be prefaced by the statement that it forms one unit of a group of public buildings which is in slow process of construction; this is a dominating fact, explaining the whys and wherefores of many features of the building. The relations of this structure to the Federal Building, its companion at the south end of the mall, have determined its ground area, shape, height, general architectural style, and the materials of the structure. When the group is completed, the old commercial buildings to the north will be replaced by additional public buildings and a park 600 feet wide, and the Library will then have its proper setting.

The building has a frontage of 219 feet, and is 197½ feet deep. There are six floors including the basement or ground floor, each of a height to carry two tiers of stacks, while the main floor has three tiers, making 13 different tier levels of stacks. Above the second floor there is an inner court, 78 by 114 feet, from the four corners of which smaller courts extend down to the basement floor level, carrying light and air to all floors. The stacks are built around the court, receiving light and ventilation from it, and the reading rooms with large exterior windows, adjoin and surround the stacks.

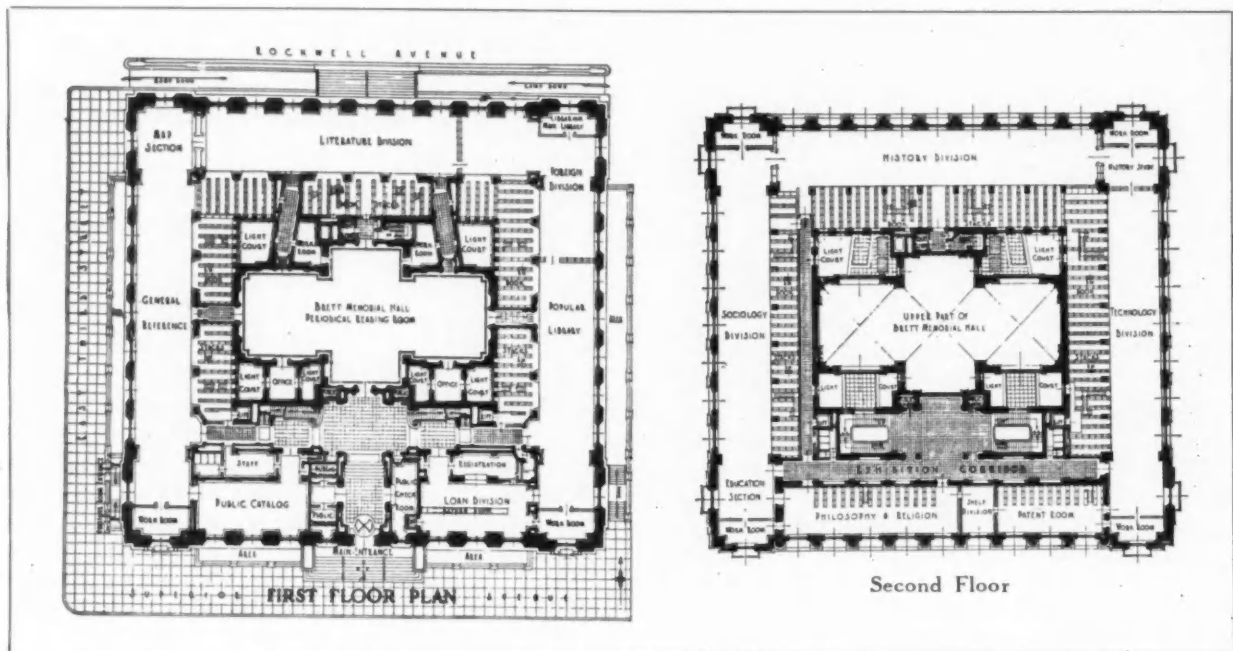
The main floor contains those divisions affording the most popular service and meeting the greatest number of quick service calls. Those divisions de-

voted to scholarly uses are placed as far as possible in the quieter parts of the building. The further provision of numerous small study rooms and cubicles for students, research and literary workers, is already proving a source of great satisfaction. The breaking up of the book stacks, giving each division two or three tiers of stacks, immediately adjacent, with additional storage stacks either above or below it and accessible to it by electric book lifts, is another feature designed to bring into the closest juxtaposition the books on a given subject and the readers who are interested in them. Wall shelving also covers all available space in the reading rooms. All book stacks and shelves are made of steel. Unusual details of the bookstacks are the extended bases which give to the books on the bottom shelves adequate protection from splashing in cleaning floors; the fitting of the stack floors in a manner which permits of ventilation but which prevents the possibility of books falling through; gate bars at the ends of lower tiers of stacks adjoining reading rooms, which will permit the closing off of any section of the stack from public access, if this is desirable; glazed doors with locks on certain sections of the stacks for choice books which should be protected from dust and from casual handling; and movable working desks or extension shelves to attach to the shelves and the balcony railings. A bronze mop-board protects the stacks at the floor-line. The stack lighting was given special attention, the re-



Photos, Ernst-Eidman Co.

Cleveland Public Library
Walker & Weeks, Architects

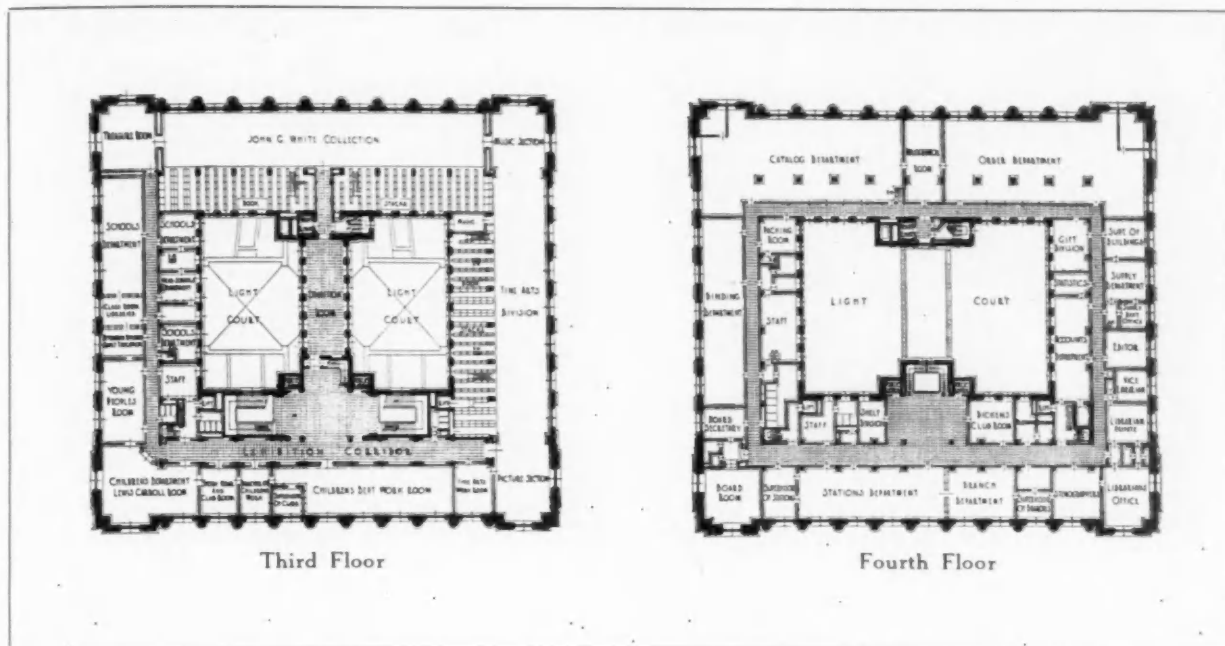


flectors being shaped to screen the light from readers' eyes as far as possible. The spacing of structural columns of the building necessitated stack aisles narrower, for the most part, than those considered desirable for stack construction, but this is not a serious fault in this broken-up stack area, in which compactness for each division is rather desirable. To obviate trucking the returned books across the reading room floors, they are sent by an electric elevator to the balcony of the return room, sorted and trucked up a ramp to the main floor stack, from which they are distributed to their proper stacks.

Windows are so planned that nearly all rooms have exceptional natural light, and the Venetian blinds shut out the sun's rays while admitting 85 per cent of the light and air. To insure adequate artificial lighting, ceiling lights are supplemented by desk and table lamps. The latter are worked out to an original design studied to throw the light on the reader's page and to avoid reflections and direct glare. On individual tables and desks they are placed near the front, at the left of the reader. They are made of bronze; the electric light bulbs are locked in, and are not removable without keys.



The John G. White Reading Room



The public rooms, including the general offices, were equipped throughout with new furniture, specially designed. To fit the spaces and the requirements of the different rooms and the comfort of various readers, there is quite a variety in the sizes, shapes and designs of the reading tables, the lengths of which vary from 15 feet to 30 inches, the latter being the length of individual tables, which many readers prefer, and which have been quite generously provided in many of the rooms. Seats, too, have been planned with a view to comfort; the "Windsor," "Bank of England" and straight-backed

chairs have been modified to combine graceful lines with strength and durability, while other seats and benches of varying designs here and there invite the visitor to sit for a few moments and enjoy the nearest books or magazines. Tables carefully designed for the indices to periodicals and public documents are located at the end of the General Reference Division adjoining the Public Catalog Room, thus making it easy to inquire into the general resources of the Library on any subject. The departments devoted to business service, dictionaries and directories have also been provided for, with



The Brett Memorial Hall



Main Corridor, Third Floor

tables planned to make their consultation easy. Nearly ten thousand new catalog trays were installed, and most of the old cabinets were also brought to the building. The new cabinets are of oak. Some of the other card files are metal, as are the vertical files for pamphlets, clippings and illustrations. In the registration files the trays pull both ways, so that the filing can be done from the rear, out of

sight of the public. A tube index, opening like a book on a lectern, is most convenient for those consulting the current periodicals which are kept on file.

The utilization of the corridors for display purposes is a very important detail. Exhibition cases have been built into the walls of the main corridor on the ground floor and on the second and third floors, and in addition glass display cases on floor standards were built in the broad corridor spaces between the stairheads and in the attractive little exhibition corridor which gives access to the gallery holding the John G. White Collection. These standards, together with the bulletin board frames and standards for the corridors, are of beautifully wrought metal, and the lighting, ventilation and fittings of the cases have been carefully planned in minute detail. Display racks of several types and sizes have been worked out to feature books in the divisions, and there are many bulletin boards. Two display windows in the front of the building's exterior at the street level have been successfully designed by the architects, a difficult feat in a structure of monumental type. The book displays in these windows at the moment of writing are accompanied by posters, one bearing the inscription, "Borrow Books from the Public Library—Free," and the other carrying this quotation from President Coolidge: "It is always well to consult the library for information about courses of reading and the best books and authorities on any subject under consideration."

Guards at the entrances, an information desk in the main corridor for a Library hostess, bulletin board directories and floor diagrams, together with



The Main Entrance

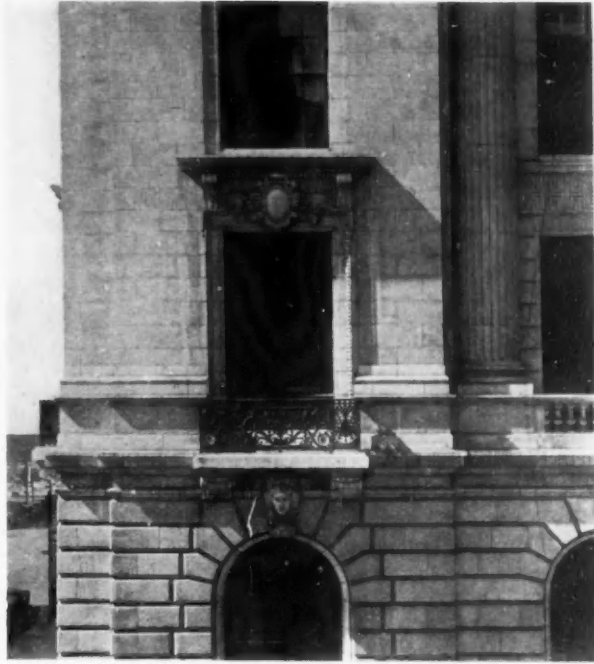


Lobby and East Grand Staircase

a printed guide to the building, all aid in directing visitors unacquainted with it. It is hoped to inaugurate soon a regular docent service, a valuable feature in informing citizens regarding the resources, the varied activities, and the needs of the Library.

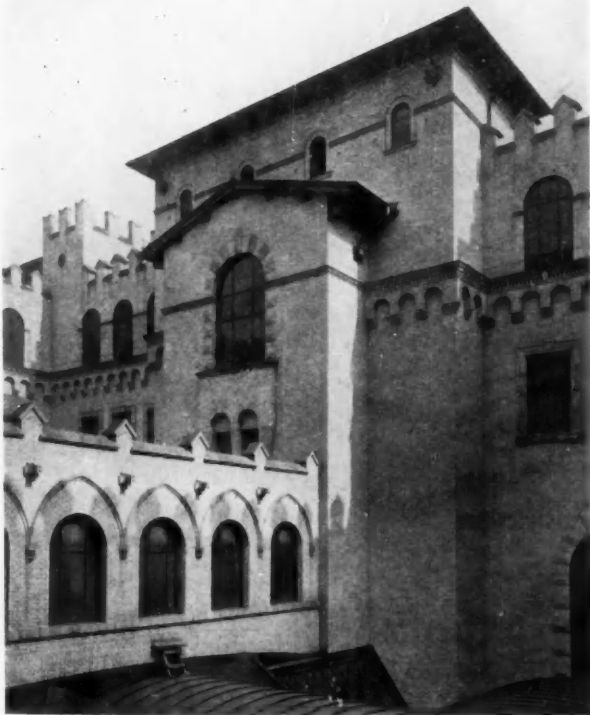
There are 57 telephone stations and 16 extensions, with 16 outside trunk lines, 93 automatic house telephones, seven telautograph stations, and a system of buzzers to summon pages and assistants. The clocks are electrically synchronized. A metal baseboard throughout the building carries cables in order to simplify installations of lights, telephones, etc.

The placing of the children's room (named the "Lewis Carroll Room"), on the third floor causes no inconvenience, as this room is more a room for work with parents and teachers than for use of the children themselves, who, because of traffic dangers, are not encouraged to come down town to the Main Library unaccompanied, and who are served for the most part through the branch and school libraries. It is, however, a happy hunting ground for children living near, and for those whom fathers or mothers leave here while doing their own shopping or business errands. In the new "Stevenson Room for Young People" it is hoped to work out some of the vexed problems of the reading public. The name of this room was chosen as a result of suggestions made by the public in English classes in the high schools, consulted for the purpose of learning what name would make an appeal to their interests. This room, it is hoped, will be much used by the young people themselves, as well as by their elders who are concerned with their reading. Offices for the Reader's Adviser, off Brett Hall,



Detail, Corner Superior Avenue Facade

and for the Extension Division of Adult Education in the School Department, are planned to further the staff's efforts in the movement for the education of adults. The name of the future Treasure Room was given with the hope and belief that it will attract treasures unto itself. The placing of the donors' tablets on the stair walls was a happy inspiration of the architect, also valuable for its cumu-



Inner Light Court



Entrance, Brett Hall

lative suggestion of further gifts. Two small rooms have soundproofed ceilings,—one being the staff rest room, and the other the room for the piano off the Music Section of the Fine Arts Division.

The need for adequate working space for the staff can hardly be over-emphasized, as most librarians know. Insistence has been placed on it in planning this building, and the non-public departments have been laid out with care, with a view to the most economical routing of the various processes of work, while the small workrooms provided for the public divisions meet a long felt want. Although the old furniture used in many of the workrooms suffers by comparison with the fine equipment of the public rooms, the pieces are very comfortably adapted to their various highly practical purposes.

The top floor of the building has much space devoted to staff activities and staff welfare. The Assembly Room and Class Room will be used for public meetings as well as by the staff, but they were planned and equipped with many possibilities in mind, and it is hoped that much "library spirit" will be developed within their walls as younger workers meet with older men and women in apprentice classes, staff meetings, and staff parties; wonderful facilities for social functions are afforded on this floor, where the two rooms just mentioned open up together and on into the Women's Staff Lounge, as well as out upon the promenade which extends all around the building. Here, also, are the Men's Lounge, comfortably equipped; the Cafeteria, which is expected to be opened in a few months; the Committee Lunch Room, where the library board or staff committees can "lunch and labor" when time presses; and adjoining the latter is the Grill, equipped

with range, refrigerator, sink, cupboards and dishes for those who wish to prepare their own luncheons. Judging from comments of many different types of visitors, the attempt to make the building inviting and attractive has been successful. Cleveland seems to be thoroughly enjoying the possession of a real main library building at last, and it has immediately taken its place as one of the principal "points of interest" in the city, always pointed out to visitors.

Any librarian who is bemoaning delays in the starting of a library building may find solace in certain facts relating to the Cleveland Library. The plans for the building were all made and the structure about to be begun in 1917, when the war and the resulting high building costs made it impossible to proceed. Had the building been built at that time, it would now be sadly inadequate to present needs, nor could it have been remodeled to its present plan, since the building as then proposed was less elastic in many ways than it now is. At that time it was thought that the ground floor, first, second and third floors would furnish ample space for the Library for at least 20 years, and the fourth and fifth floors were to be left either unbuilt or unfinished, or else leased to some outside organization for a term of years. Either plan would have found the Library in a hopeless situation today.

Most aptly to library buildings, as indeed to library administration in general, does that wise admonition of the architect, Daniel H. Burnham apply: "Make no little plans. They have no magic to stir man's blood, and probably themselves will never be realized. Make big plans, aim high, . . . remembering that a noble, logical design once recorded will never die." This has been Cleveland's wise course.



Display Window in Superior Avenue Facade



BEFORE ALTERATIONS

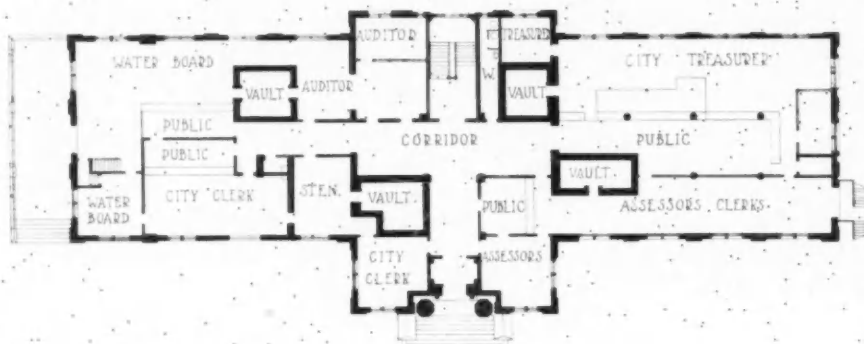


CITY HALL, SOMERVILLE, MASS. (AFTER ALTERATIONS)
RITCHIE, PARSONS & TAYLOR, ARCHITECTS

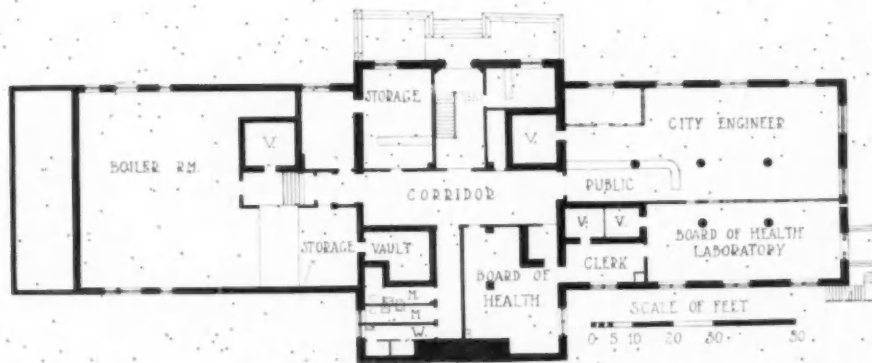
Plans on Back



SECOND FLOOR



FIRST FLOOR



BASEMENT

PLANS, ALTERATIONS AND ADDITIONS, CITY HALL, SOMERVILLE, MASS.

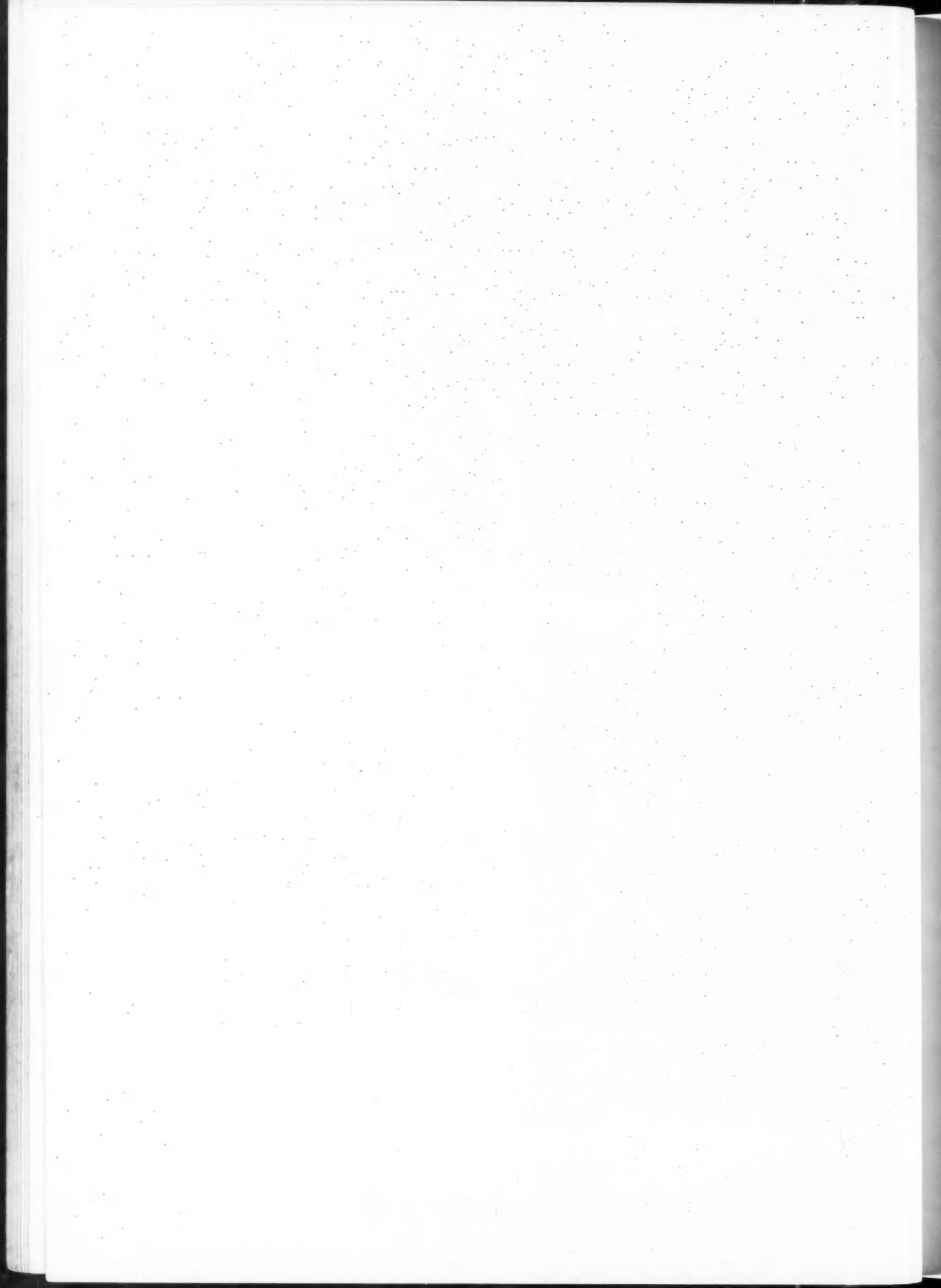
RITCHIE, PARSONS & TAYLOR, ARCHITECTS



BEFORE ALTERATIONS



SCHOOL STREET FACADE, CITY HALL, SOMERVILLE, MASS. (AFTER ALTERATIONS)
RITCHIE, PARSONS & TAYLOR, ARCHITECTS





DETAIL, MAIN ENTRANCE, CITY HALL, SOMERVILLE, MASS.
RITCHIE, PARSONS & TAYLOR, ARCHITECTS

Measured Detail on Back



• ELEVATION •

• SECTION •

ALTERATIONS & ADDITIONS TO
 SOMERVILLE CITY HALL
 SOMERVILLE, MASSACHUSETTS
 RITCHIE, PARSONS & TAYLOR, ARCHTS., BOSTON

JULY
 1926

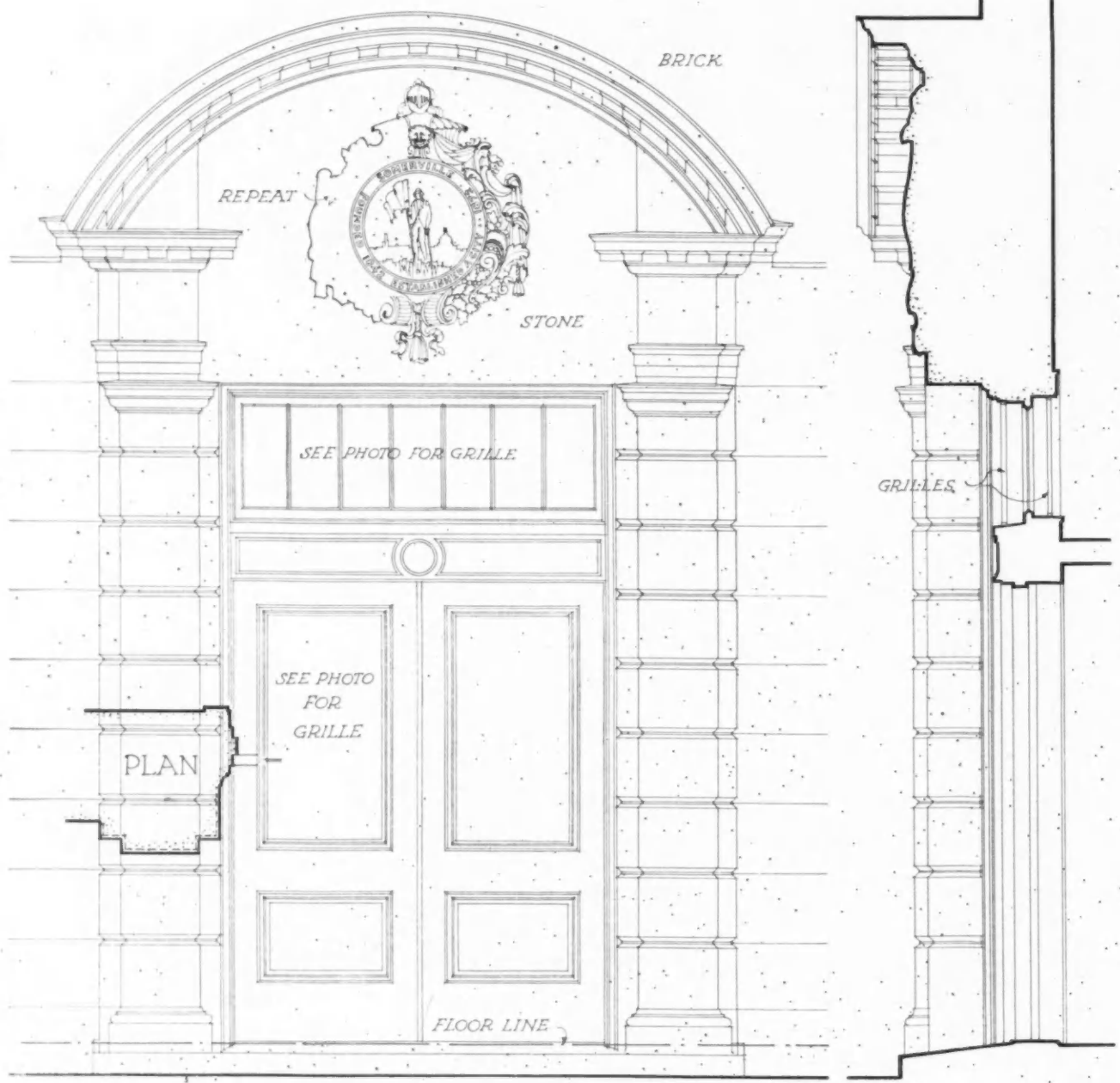
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The ARCHITECTURAL FORUM DETAILS



Measured Detail on Back

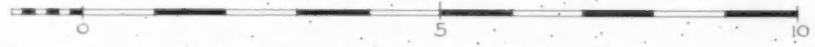
DETAIL, SCHOOL STREET ENTRANCE, CITY HALL, SOMERVILLE, MASS.
RITCHIE, PARSONS & TAYLOR, ARCHITECTS



ELEVATION

SECTION

SCALE IN FEET



ALTERATIONS & ADDITIONS TO
 SOMERVILLE CITY HALL
 SOMERVILLE, MASSACHUSETTS
 RITCHIE, PARSONS & TAYLOR ARCHTS, BOSTON

JULY
 1926.

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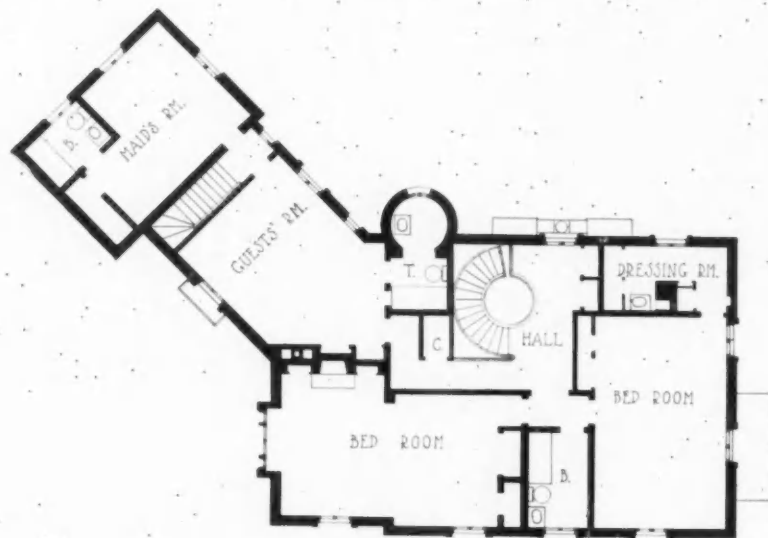
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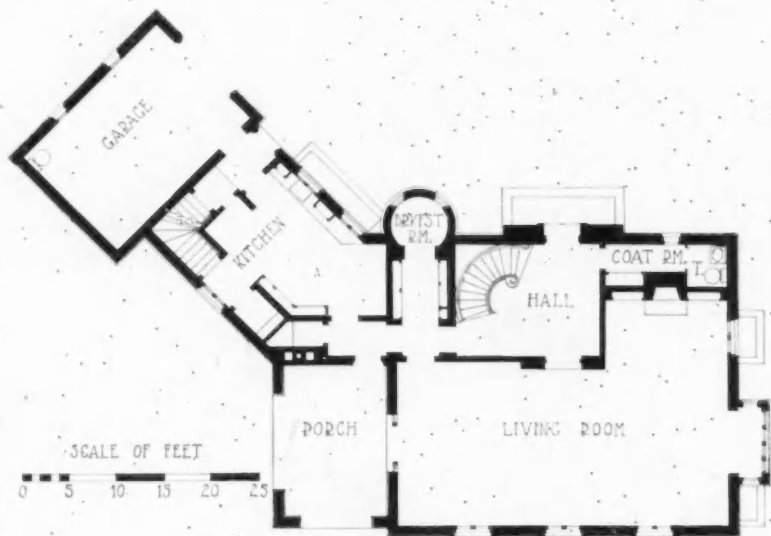
Plans on Back

HOUSE OF CARL E. MILLER, ESQ., INDIAN HILL, ILL.
HERBERT HUGH RIDDLE, ARCHITECT

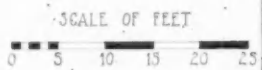
Photos, Trotsbridge



SECOND FLOOR



FIRST FLOOR



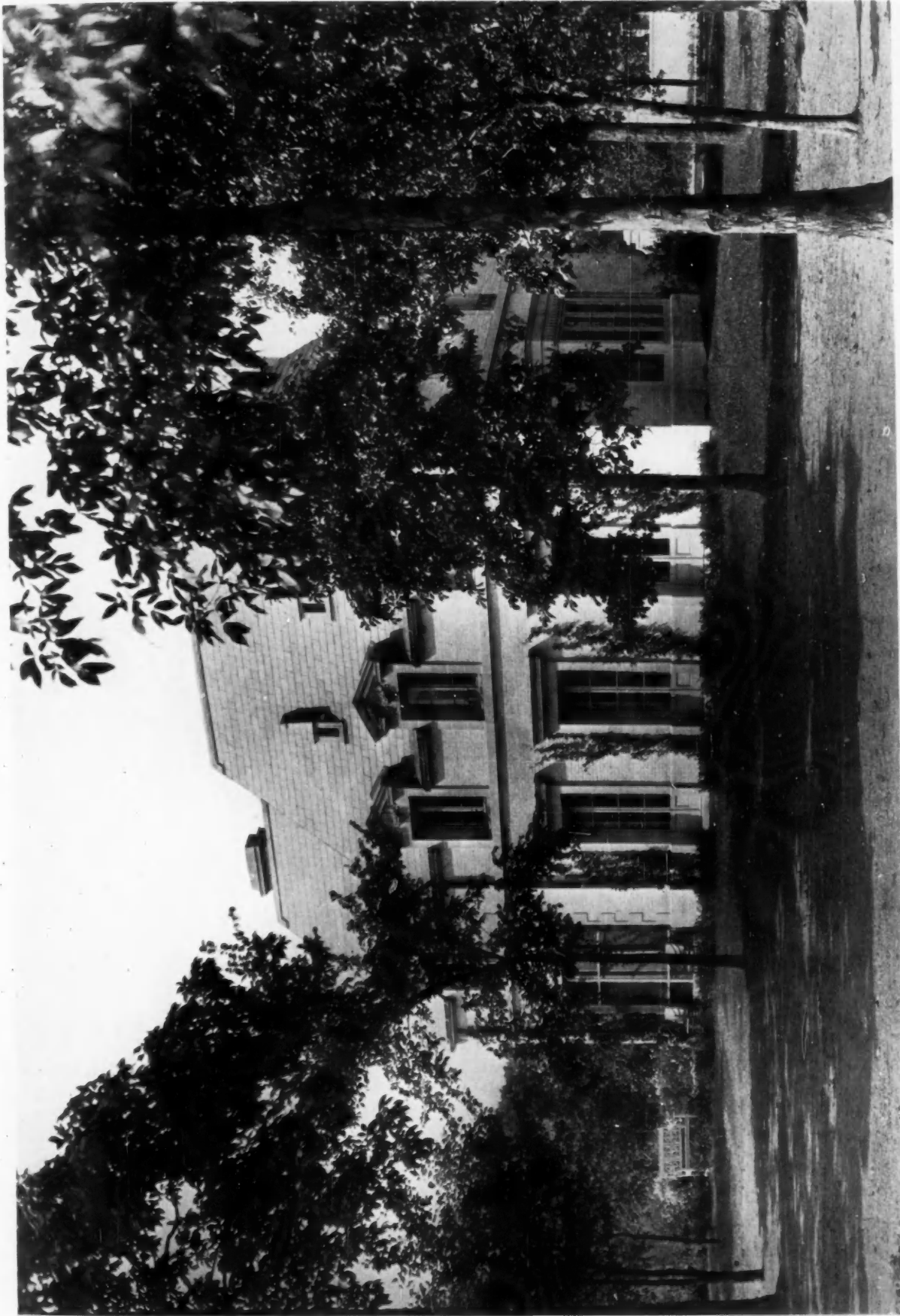
PLANS, HOUSE OF CARL E. MILLER, ESQ., INDIAN HILL, ILL.

HERBERT HUGH RIDDLE, ARCHITECT



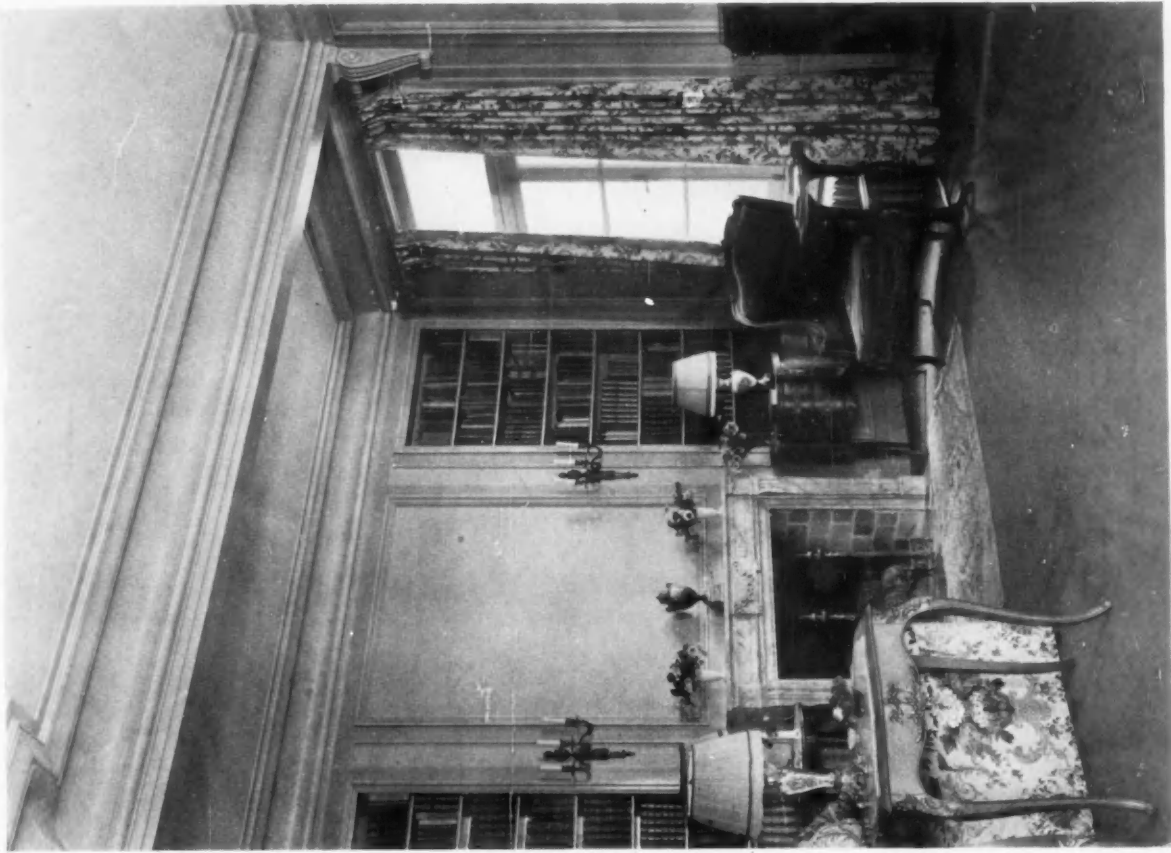
ENTRANCE, HOUSE OF CARL E. MILLER, ESQ., INDIAN HILL, ILL.
HERBERT HUGH RIDDLE, ARCHITECT





GARDEN FACADE, HOUSE OF CARL E. MILLER, ESQ., INDIAN HILL, ILL.
HERBERT HUGH RIDDLE, ARCHITECT





FIREPLACE END OF LIVING ROOM



THE HALL AND STAIRWAY

INTERIORS, HOUSE OF CARL E. MILLER, ESQ., INDIAN HILL, ILL.
HERBERT, HUGH RIDDLE, ARCHITECT



French Precedent for the Small American House

By HAROLD DONALDSON EBERLEIN

INTELLIGENT eclecticism, open mindedness on the part of the American architect, and ready susceptibility to apt suggestion, from whatever source it may come, have been in large measure responsible for the amazing development of domestic architecture in America within the past 20 or 30 years. Good judgment and disciplined selective faculty have completed the equipment by which American domestic architecture has risen to a position of unquestionable preëminence above the modern domestic architecture of other countries. In a great many instances, modern domestic architecture in England is suffering from the hampering influence of too much insularity and a disposition to intensive inbreeding of style,—a condition, be it noted, wholly without precedent in the rich annals of British architecture since Saxon times. Almost without exception, modern domestic architecture in France and Italy exhibits such meager results that the less said about it the better. And so it generally goes in other countries as well. In Sweden, Holland and Germany, it is true, there have been indications of considerable virility and initiative, but the American mind is too timid in artistic matters to be attracted by the radical spirit of their design. So far as modern Germany is concerned, indeed, it seems that she cannot get away from a heaviness or clumsiness repellent to us and teaching us but little.

The foregoing observations are merely a statement of fact. They are made without any desire or intent either to glorify conditions in America and gloss over the many imperfections and sore spots of which any impartial observer must be keenly conscious, or, on the other hand, to asperse mercilessly the collective contemporary work on the other side of the water. The fact of the matter is that America, having passed through her period of stagnation, from 1840 or 1845 to about the end of the nineteenth century, is now forging ahead in a most encouraging fashion, while the other countries mentioned are just now more or less in a state of architectural experiment, a state from which they will doubtless satisfactorily emerge in due time. All the aspects of the phenomenon are perfectly clear to anyone.

It is the habit with a certain type of purists to decry the presence in America of every archi-

tectural influence that was not naturalized and thoroughly assimilated before 1820 or 1830. The negative, or worse than negative, manifestations of the mid-nineteenth century, which in more than one instance can be plainly traced to a foreign origin, they swallow with composure; the positive and good types that have been absorbed, adapted and employed within the past five and twenty years they unreservedly condemn as unsuitable and exotic. French farmhouses, Italian villas, Spanish *haciendas* and Tudor halls are all equally anathema and are set down as pretentious affectations. They are unwilling to concede that adaptations can be made from all sorts of sources with perfect propriety and incorporated in the body of that "American tradition" of which they are the jealous, self-constituted guardians, so long as common sense and selective discernment are exercised in the process. Such adaptation is the very essence of wholesome growth, and without it we should fall into the same sort of stagnation with which so much contemporary domestic architecture in England is afflicted. Excellent as the American Georgian and Colonial traditions may be, and still capable of unlimited fresh and vital interpretation when not cramped by the ignorance and unworthy conceptions of those who pretend to be their champions, it would be stupid and futile to attempt to jacket the whole country in a monotonous garb of architectural uniformity. After all, modern America is a cosmopolitan country,—we may as well face that fact squarely and not try to delude ourselves about it,—and it is altogether proper that domestic architecture should reasonably reflect this cosmopolitan quality. There are parts of the country, indeed, where Spanish and French traditions are of centuries' standing and ought to be regarded as truly naturalized. In other parts of the land, however,

there is abundant room for the modes of foreign derivation to flourish side by side with the Georgian and Colonial types of prior implanting. If houses are to suit the characters of the people who dwell in them, and reflect their personal tastes and habits, such cosmopolitan diversities, indeed, are necessary. Certain sorts of people who might find an Italian villa a suitable personal environment would be like fishes out of water if obliged to live in an



Small Town House of Early Eighteenth Century
No. 16 Rue d'Anjouleme, Versailles



FORECOURT, ST. VIGOR, VIROFLAY, (NEAR VERSAILLES)
GUEST HOUSE ACROSS THE COURT



MASTER'S DWELLING, LA LANTERNE, VERSAILLES
BUILT LATTER HALF EIGHTEENTH CENTURY



Doorway, Guest House, St. Vigor, Viroflay,
(Near Versailles)

early Connecticut farmhouse or a Georgian mansion. For a person accustomed to the sophisticated simplicity and refinement of a Regence drawing room, and temperamentally attached to them, it would be positively irritating and even painful to be forced to sit before a bungalow fireplace of cobble stones or rough brick with crossed snowshoes above as a chimneypiece decoration, very appropriate sometimes.

One type of foreign domestic architecture that has taken a strong hold upon American imagination, because of its ready adaptability to American conditions, is the type exemplified by the medium-sized and small French houses of the late seventeenth, eighteenth and early nineteenth centuries, of the formal sort found in considerable number in and near Versailles, and scattered less frequently here and there in other parts of France. This type has not only made a direct appeal to popular taste, but it has also visibly influenced the design of a number of houses built within the past five years, several of which have been published in the pages of THE ARCHITECTURAL FORUM. Although these houses display wide diversity in design and each has its own marked individuality, all of them, nevertheless, have certain well defined characteristics in common, and



Early Nineteenth Century House, St. Nom-le-Breteche, Seine et Oise

all bear a kind of family resemblance which makes it possible to consider them as a class and subject them to a more or less uniform analysis or examination.

Not a few of the Versailles houses were built and occupied by personages attached to the court. They were near enough to the palace to enable their owners to discharge all their court duties of attendance upon the king, but they also ensured them the boon of domestic privacy not to be hoped for under the royal roof. The privilege of being at court, with a right to living quarters in the palace, was most jealously esteemed, but the burdensome exactions of court etiquette and the mean attics often assigned even to very great people made continuous residence in the royal household almost unbearable. The relief of domestic life and the seclusion of an environment that was all their own, establishments they could order as they pleased without anyone to consult but themselves, and places where they could employ their leisure as they liked, all these the courtiers found in their own independent houses that were designed with all the suavity and delicate refinement of an exquisite and eminently polished epoch. Designed for a simplified though elegant mode of house-keeping, the number of servants necessary for their



Detail, Kitchen Door, St. Vigor, Viroflay,
(Near Versailles)



Gateway and End of One Wing, La Lanterne, Versailles



Gate Lodge, Villa Trianon, Versailles
Built About 1740

proper maintenance was minimized, and it was possible to live in dignity and comfort without great expense. All of these houses, and some of them are quite small, possess a distinguished and thoroughly individual aspect, and all of them, whether set in spacious grounds or within the bounds of narrow plots, disclose dignity and amplitude of a sort commonly associated with structures of far greater extent and pretension. Furthermore, they are small enough to have a pleasing, intimate domestic quality.

When we come to analyze their common characteristics, we find that the dwellings and all of their dependencies are considered as complete compositions. There are no detached elements that have no particular places in the schemes and might readily be eliminated. Each dependency, stable, coach house, dairy, or whatever it may be, is an integral and essential part of the design. Consequently, these establishments have an air of self-contained completeness that is peculiarly satisfying. It need scarcely be added that there is always carefully calculated balance of composition, whether the arrangement be absolutely symmetrical or not,—and often it is not.

Again, the garden, whether it be large or small,—and several of the gardens can only be described as



La Pavillon de Madame, Versailles

"tiny,"—is invariably considered as an indispensable feature of the plan. Such a thing as planning the house and not providing for the garden at the same time, as its requisite setting, would have been absolutely unthinkable. A gardenless composition, or a composition with the garden space left for future fortuitous development at some convenient season—in the way it so often happens in America—would have been an utter anomaly, and such a course would have appeared just about as reasonable as it would have been to complete the walls of a house and then stop short without putting on the roof. Moreover, these houses all possess real privacy, and that too without producing outside a forbidding air of rough, hostile exclusion, and without sacrificing either grace or cheerfulness of aspect inside the enclosure. What the architects did in this respect, and the way in which they did it, ought to give abundant food for thought, especially in places where the amenity of domestic privacy has hitherto been too little appreciated or considered, and where it might well be fostered with great benefit to all concerned. The method of planning ensured the desired privacy. The house was set squarely on or very near the road and walled in, and back of it was the garden with all its attractive-



A Minor Building, St. Nom-le-Breteche
Nineteenth Century



La Ranchere, St. Nom-le-Breteche, Seine et Oise

ness fully visible from the windows. Or, again, there was a small, high-walled forecourt in front of the house, the garden, also enclosed by high walls, lying behind the dwelling. In any event, thorough privacy was assured, even in the midst of the city, without seeming to ungraciously rebuff the world.

The Versailles houses, and those more or less resembling them in other parts of France, exhibited all the earmarks of the styles peculiar to the periods in which they were erected, but there is no occasion to label and discuss the historic differences of style. They are quite evident enough in the illustrations. But apart from the fact that with their dependencies and gardens they represent well coördinated compositions, it is very much to the point to call attention to their style in the abstract and to note the means by which that style was secured or attained.

Very few of these houses themselves are large, and none of those here illustrated are. On the contrary, several of them are very small, such as the house at St. Nom le-Breteche, the house called the "House of Madame de Pompadour," and the tiny Directoire house at Number 16 Rue d'Anjouleme. One house, indeed, stands on a plot 38 feet wide, and most of the rooms (which are not many) are so small that photographing them is exceedingly difficult. The fact that they occasionally look large and imposing is due to the scheme of arrangement, and every feature, however insignificant, is made the most of as an essential element of the composition. The establishments,—that is to say, the dwellings together with all their immediate surroundings,—are formal, in the sense of having definitely articulate and balanced form, perfectly coherent, logical, and suited to the purposes in view; they are not

formal in the sense which so many people dread, the sense of being ostentatious, rigid and forbidding. There is a vast difference between the formality of well regulated order and skillfully calculated form and the formality of cold and inflexible pomp.

In every instance the design of the house itself shows the utmost reserve in the use of detail. Such details as appear are scrupulously studied, and only enough are used to give accent. Reliance for beauty is chiefly on composition. Furthermore, the compositions are the very embodiments of the severely logical French point of view and are characterized by directness and simplicity. Everywhere the scale of all the parts is so subtly calculated, and the disposition of wall spaces and voids is so just that the houses exhibit an air of thorough repose, dignity and certitude, an aspect emphasized by the general outlines of their masses. There are no superfluous elements anywhere to mar the studied simplicity and conciseness of style. While some of these houses are built of a native limestone ashlar,—a material of engaging color and texture,—the majority of them are built of limestone rubble, coated with stucco and painted pale cream color, gray or white.

The combination of qualities manifested by these small and comfortably formal Versailles dwellings has commended them as sources of adaptation for houses in America. It so happens that a number of the American adaptations have been more or less important creations, but there is no good reason why adaptations for small and inexpensive houses should not be made with equally happy results, since so many of these prospective prototypes are themselves of extremely modest sizes, besides being readily adaptable to life as it is being lived in America today.



House of Madame de Pompadour, Canton Sud, Versailles

THE BUILDING SITUATION

A MONTHLY REVIEW OF COSTS AND CONDITIONS

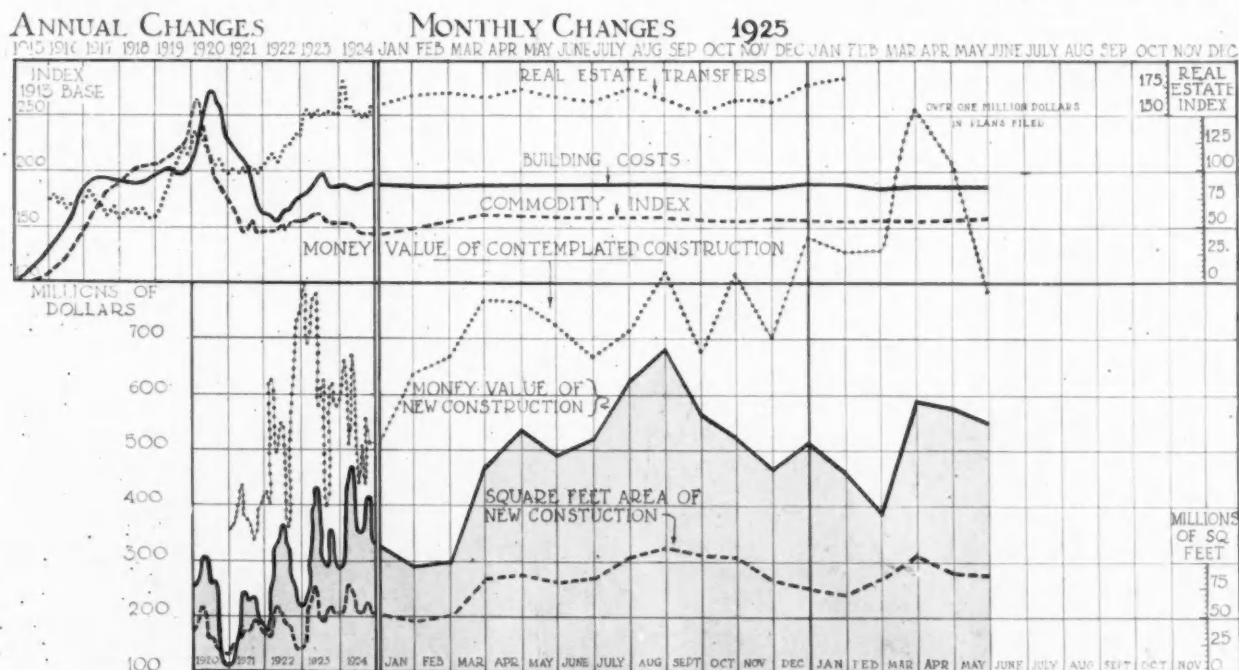
AN examination of the chart given here will show a comparison of building activity this year as compared with that of the year 1925. According to the figures of the F. W. Dodge Corporation, the value of building contemplated and actual contracts awarded during the first five months of this year have amounted to over two and one-half billion dollars, representing an increase of 17 per cent over that of the corresponding period of 1925.

The usual seasonal decline in contract letting is indicated in the months of April and May, which show a decrease compared with the March figures. It is to be noted with interest, however, that the largest volume of contract letting last year occurred in July, August, September and October. An examination of the line showing the money value of contemplated construction indicates that the plans filed during the first five months of this year promise a considerably greater expenditure than plans filed in a similar period last year. It may well be, therefore, that the late summer and fall months of 1926 will show a repetition of the increase in contracts awarded, and it is predicted that the year 1926 will

show a considerably greater volume of building than any previous year in the entire history of construction.

There is no reason to believe that the average relative percentage of values of plans filed and actual contracts let will show any great decrease, because there are no obvious reasons for any sudden loss of confidence on the part of investors, who, by the filing of plans, have indicated their intentions of building. Therefore, as the plan filing has been greater, it is anticipated that many delayed projects will come into the market to bring up the line indicating the money value of new construction. This is entirely probable.

Real estate activity continues unabated, and, since many transactions represent the purchase of sites for building, this indicator also promises considerable late summer and fall building activity. The building labor situation has its occasional flurries, but the general condition seems to be fairly stable, and there are no outstanding situations which seem to halt the progress of building momentum. Financing for building projects continues to be liberal, and there is no sign of any restriction in this quarter or of any loss of public confidence in this type of investment.



THESSE various important factors of change in the building situation are recorded in the chart given here: (1) *Building Costs*. This includes the cost of labor and materials; the index point is a composite of all available reports in basic materials and labor costs under national averages. (2) *Commodity Index*. Index figure determined by the United States Department of Labor. (3) *Money Value of Contemplated Construction*. Value of building for which plans have been filed based on reports of the United States Chamber of Commerce, F. W. Dodge Corp., and *Engineering News-Record*. (4) *Money Value of New Construction*. Total valuation of all contracts actually let. The dollar scale is at the left of the chart in millions. (5) *Square Foot Area of New Construction*. The measured volume of new buildings. The square foot measure is at the right of the chart. The variation of distances between the value and volume lines represents a square foot cost which is determined, first by the trend of building costs, and second, by the quality of construction.

Self-sustaining and Guyed Steel Stacks

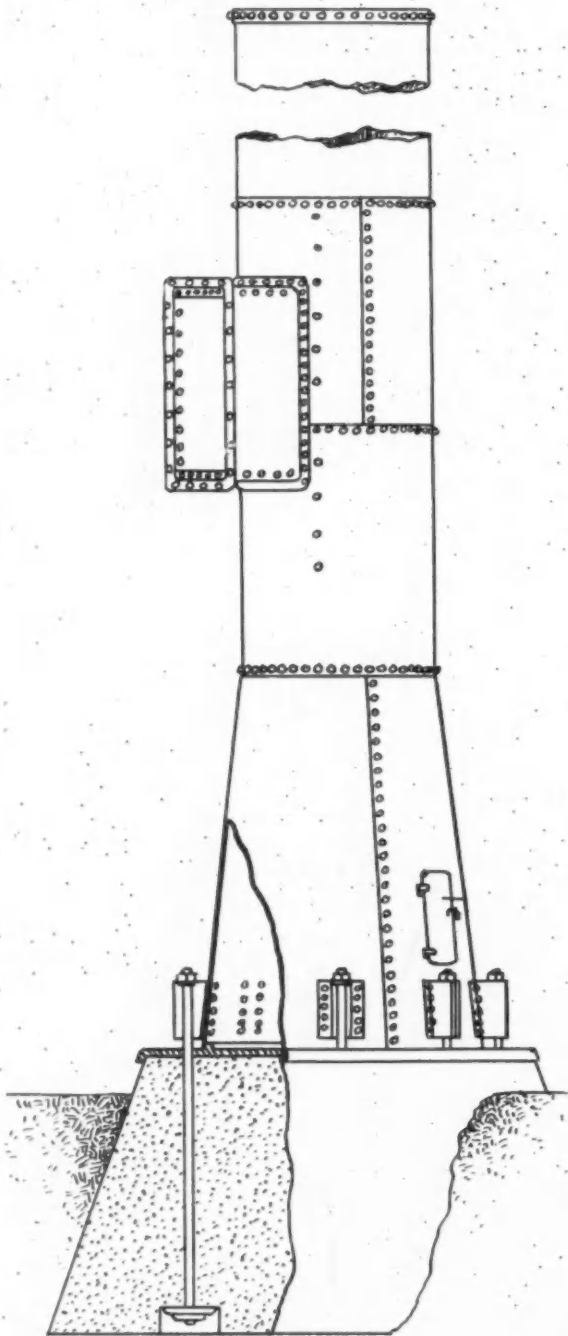


Fig. 50

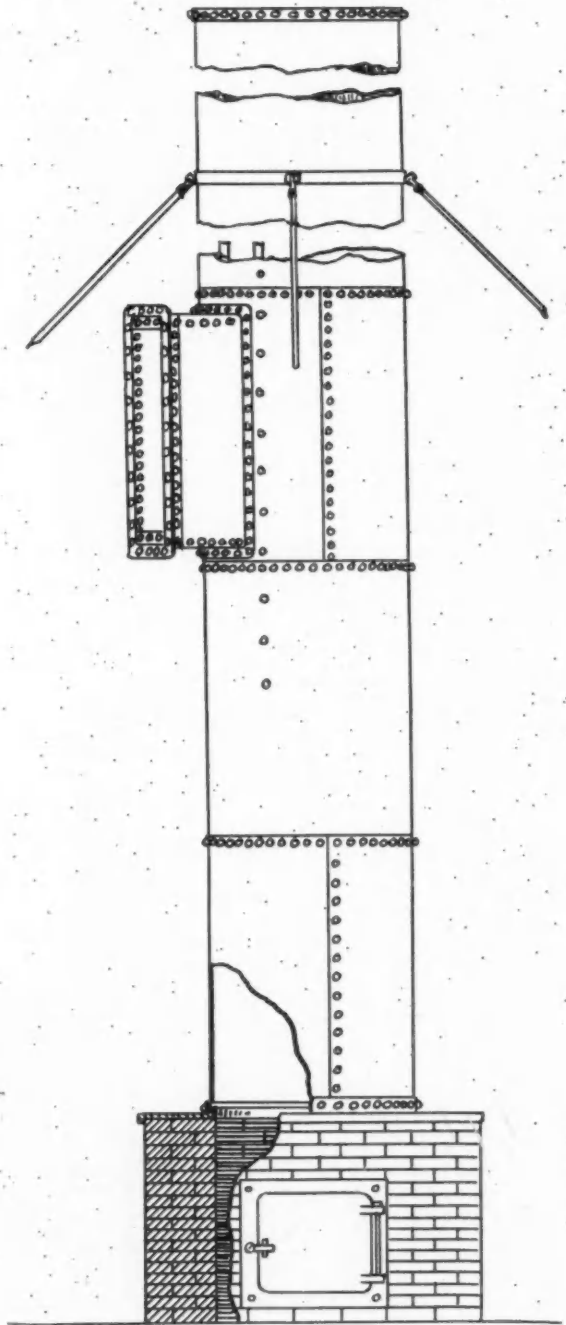


Fig. 51

ENGINEERING DEPARTMENT

Power and Heating Plants

SMOKESTACKS

By J. J. COSGROVE

EDITOR'S NOTE: These articles were begun in THE FORUM for April, 1925 and continued in the issues for August, October and November of that year and in the issue for May, 1926. The present paper concludes the series.

IN these articles consideration has been given to the more important parts of power and heating plants. The usefulness of such a plant is dependent upon the choice of a correct type of each of these details and upon correct sizing of each part.

Brick and Concrete Stacks. Brick and concrete smokestacks are so nearly equal in cost that they may be considered here under one heading as "masonry stacks." Concrete stacks decrease in cost per horsepower as the size of the plant increases, the cost being just slightly higher than the cost of a brick stack for the same size of plant above 500 rated horsepower. Brick stacks decrease in cost per horsepower as the size of the plant increases, the same as concrete stacks but not in the same proportion, the decrease being greater and the cost slightly less than the cost of concrete stacks for the same size of plant above 500 horsepower and more than the cost of concrete when below 500 horsepower. Maintenance and depreciation average $2\frac{1}{2}$ per cent of the total cost of concrete stacks per year, and 3 per cent for brick stacks.

To insure a stable smokestack the parts must be proportioned for the various stresses they must withstand, chief among which are the bearing capacity of the soil, wind pressure, sun sway, and the ratio of diameter to height. It is customary for the designer to figure the stability of the stack at every 10 feet of height. There is a simple empirical rule that a smokestack to be stable must have a diameter at its base of from one-tenth to one-twelfth its height. If in an open and exposed place subject to strong winds, or on a floating foundation on poor soil, a diameter of one-tenth would probably be required; if, on the other hand, the footing rests on bed rock, hard pan or other good bearing, and if the stack is partly sheltered from strong winds, it could be narrower at the base, perhaps one-twelfth of the height being sufficient. Floating foundations for stacks, either masonry or steel plate, are so proportioned that the soil pressure is limited to not over 2 or 3 tons per square foot, the exact limit being determined by the character of the soil.

Smokestacks are not made in uniform diameters throughout their entire heights. They are built with a slope or "batter" toward the center. This batter

gives them greater stability and decreases the amount of surface exposed to wind pressure as they increase in height. The batter of tall smokestacks is generally about .3 inch to each foot in height. Thus in a stack 100 feet high, the batter at all sides would be $2\frac{1}{2}$ feet, making the top diameter of the stack 5 feet narrower than that at the base. Common practice is to make the upper 25 feet of a brick smokestack that is less than $4\frac{1}{2}$ feet in diameter at the top, 8 inches thick, and to increase 4 inches in thickness for each 25 feet toward the base. Smokestacks over $4\frac{1}{2}$ feet in diameter at the top are made 12 inches thick for the top 25 feet, and are increased in thickness 4 inches for every additional 25 feet toward the base. According to this rule, a stack 175 feet high and over $4\frac{1}{2}$ feet in diameter at the top would have walls 36 inches thick from the foundation to 25 feet above ground level.

A smokestack has a second wall within the outer wall. This is a circular flue of firebrick of uniform diameter and cross section, and is the real flue, the outer shaft being the superstructure which gives strength and rigidity to the whole. This inner flue lining is built into the outer wall for the first 25 feet in height. Above that level for a distance of about one-half the height of the chimney the outer and inner walls are separate, but are tied together with from four to six radial ribs running vertically and built into the inner and outer walls.

Floating foundations for smokestacks are liberally proportioned, due consideration being given the height and weight of the stack and the character of the soil, so that the weight imposed on a unit area of the soil will be well within safe limits. In compact sand and hard clay the footing or foundation for a stack would have a diameter of about one-seventh the height of the stack and a batter of about 1 inch in 5 from the top of the bottom of the footing.

Steel Stacks and Self-sustaining Stacks. There is no infiltration of air to steel stacks, and therefore they can be made slightly smaller in diameter than a brick stack. Then, too, they are of much less weight than masonry stacks, and are much safer than a heavier construction on poor bearing soil. For small plants the first cost is much lower than that of other types of stacks, but the cost gradually approaches that of brick or concrete as the size of the plant increases. Steel stacks increase in cost directly in proportion to the boiler capacity of the

plant, this being due to the duplication of stacks for the larger plants. The cost for maintenance and depreciation of steel stacks runs very high, averaging about 16 per cent per annum. A self-supporting steel stack is shown in Fig. 50. The bottom of the stack rests on a cast iron bed plate, and the stack is anchored to a concrete foundation by means of anchor bolts, the diameters of the bolts depending on the diameter and the height of the stack. In the table on this page can be found the sizes of the most commonly used self-sustaining stacks, giving not only the dimensions but also figures regarding the foundations and other important details of the stacks.

DIMENSIONS OF SELF-SUSTAINING STACKS

100-FOOT STACKS									
Diam. of Stack	Inside Diam. of Stack at Base Plate	Diam. of Top of Foundation	Diam. of Bottom of Foundation	Depth of Foundation	No. of Foundation Bolts	Diam. of Foundation Bolts	Height of Cone	No. of Cubic Feet in Foundation	
Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	In.	In.	Ft. In.		
4 0	6 0	8 0	12 6	6 0	8	2	8 0		519
4 6	8 0	10 0	15 0	7 0	8	2	9 0		895
5 0	8 0	10 0	15 0	7 0	8	2	10 0		895
5 6	9 0	11 0	16 0	7 0	8	2	11 0		1,040
6 0	9 0	11 0	16 6	8 0	8	2	12 0		1,240
6 6	10 0	12 0	17 6	8 0	8	2	13 0		1,415
125-FOOT STACKS									
Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	In.	In.	Ft. In.	No. of Cubic Feet in Foundation	
4 0	6 0	8 0	13 0	7 0	8	2 1/4	8 0		640
4 6	8 0	10 0	15 6	8 0	8	2 1/4	9 0		1,070
5 0	8 0	10 0	15 6	8 0	8	2 1/4	10 0		1,070
5 6	9 0	11 0	16 6	8 0	8	2 1/4	11 0		1,240
6 0	9 0	11 0	17 6	9 0	8	2 1/4	12 0		1,507
6 6	10 0	12 0	18 6	9 0	8	2 1/4	13 0		1,719
7 0	12 0	15 0	22 0	9 6	8	2 1/4	14 0		2,650
8 0	12 0	15 0	22 0	9 6	8	2 1/4	16 0		2,650
9 0	14 0	17 0	24 0	9 6	8	2 1/4	18 0		3,210
10 0	15 0	18 0	25 6	10 0	8	2 1/4	20 0		3,820
150-FOOT STACKS									
Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	In.	In.	Ft. In.	No. of Cubic Feet in Foundation	
6 0	9 0	11 0	18 6	10 0	10	2 1/2	12 0		1,820
6 6	10 0	12 0	19 6	10 0	10	2 1/2	13 0		2,060
7 0	12 0	15 0	22 6	10 6	10	2 1/2	14 0		3,000
8 0	12 0	15 0	22 6	10 6	10	2 1/2	16 0		3,000
9 0	14 0	17 0	24 6	10 6	10	2 1/2	18 0		3,660
10 0	15 0	18 0	26 0	11 0	10	2 1/2	20 0		4,300

It is an open question whether self-supporting steel stacks should be lined. When lining is decided upon there is built inside the steel stack a double course of firebrick making a wall 8 inches thick for a height of from 25 to 50 feet above the breeching inlet. From that level to the top of the stack a single course of common red brick 4 inches thick is used. In tall office buildings interior steel stacks are sometimes unlined, and in other cases they are lined with a heat-insulating or refractory material of

some kind. The objections to lining a steel stack are that the brick lining does not add to the strength of the chimney, although often the stack must carry it. Generally, however, the lining is made self-supporting and is built as an inner core or flue with an air space between the brickwork and the steel stack. It is sometimes objected that moisture might collect in the air space and promote corrosion. Lining a steel stack with brickwork reduces the loss by radiation and protects the steel from corrosive action of gas. The benefits are positive while the objections are more or less unfounded, and the better practice among engineers seems to be to line steel stacks.

Wind Pressure on Stacks. The area of wind pressure on a stack may be taken as a surface one-half the diameter of the stack and its full height. That surface may then be considered a flat surface facing the wind. Pressure requires careful consideration.

The plate dimensions for self-supporting stacks can be found in the table at the bottom of this page.

Guyed Steel Stacks. A guyed steel stack is shown in Fig. 51. A painter's ring is provided near the top of such a steel stack. This is a circular metal track with trolley and block from which to swing a bo'swain's chair. A ladder is also provided so that the top of the stack can be reached at any time. Guyed stacks do not require heavy foundations because they are much lighter than self-supporting stacks. Sometimes instead of resting on a foundation (as shown in the illustration) they are riveted to the smoke breeching or else are connected with the smoke uptake and with the boiler setting. Guyed stacks are not lined with brickwork, and therefore the plates need not be as thick as for self-supporting stacks of the same size. The thickness of plate is determined largely by the degree of permanence required. Corrosive action of the flue gases and the weather gradually reduces the thickness of the sheets until the stack is no longer safe. The thickness of plates for guyed stacks is generally within the limits given in this table, which is the result of experience.

DIMENSIONS OF GUYED STEEL STACKS

Diameter of Stack in Inches	Thickness of Plate	
	Maximum	Minimum
30	No. 8 gauge	No. 10 gauge
36	5/8-inch	No. 10 gauge
42	1/4-inch	No. 10 gauge
48	1/4-inch	No. 8 gauge
54	5/8-inch	5/8-inch
60	5/8-inch	5/8-inch

Guy wires are from 1/2- to 3/4-inch in diameter. They are fastened to a guy ring as shown in the illustration, or secured by means of eyebolts. Each guy is provided with a turnbuckle to take up the

PLATE DIMENSIONS FOR SELF-SUPPORTING STEEL STACKS

Diameter Inches	Total Height Ft.	Bottom Section, Including Flare		2nd Section		3rd Section		4th Section		5th Section	
		Height Feet	Plate Inches	Height Feet	Plate Inches	Height Feet	Plate Inches	Height Feet	Plate Inches	Height Feet	Plate Inches
54	100	40	5/8	30	1/4	30	5/8	..	..	..	..
66	165	30	3/8	50	5/8	45	1/2	40	5/8	..	..
78	185	65	3/8	60	5/8	60	1/4	..	..	..	..
120	200	50	3/8	60	5/8	90	1/4	..	..	..	..
132	225	85	5/8	20	3/8	25	5/8	95	1	..	..
144	250	80	1/2	30	5/8	30	3/8	30	5/8	80	1/4

slack and to equalize tautness. The guy ring is the stronger construction when new, but moisture gets back of it, and the resultant corrosion seems to injure the support more than is the case with eyebolts. The number of guys and their arrangement depend on the height of the stack. Low stacks (up to 50 or 60 feet in height) have single sets of three or four guys; over 60 feet there are two sets of guys of four wires each, and stacks over 125 feet in height have three sets of guys of four wires each. The upper or single set is attached to the stack about 12 feet from the top. When there are two sets of guys the lower set is attached about two-thirds the distance from the ground to the upper set. When there are three sets of guys, the upper set is attached 12 feet from the top, the lower set at about half the height of the upper set, and the middle set about half way between the other two. Guys are usually anchored at a distance from the base equal to the height of the guy band so that they are stretched at an angle of 54 degrees. When two or three sets of guys are used, the upper set may be arranged to form an angle of only 60 degrees with the vertical. The guys are fastened at the base to "dead men" or to adjoining structures, where any are available.

Chimneys for House-heating Boilers. In the table given here will be found the sizes of chimney recommended by the Furnace and Boiler Manufacturing Association as suitable for producing proper draft for heating equipment of different kinds and various sizes when coke or coal is the fuel used for firing.

A round flue will give better draft than a square or other rectangular shape having the same cross-sectional area. Round flues are recommended where it is practical to obtain them, but when round flue linings are placed inside rectangular chimney walls, care must be exercised to insure complete filling of the corner spaces, since otherwise there is likely to be air leakage into the vacant spaces, which injures the draft and often materially increases the fire hazard.

Stack temperatures in low-pressure boiler plants seldom exceed 450° Fahr. at average rates of oper-

ation. In the better plants it does not exceed 300°. When domestic boilers are operated at capacity, the stack temperature will range from 500° to 600° Fahr. There is no great difference in stack temperature between coal firing and oil firing of the boilers.

Smokestacks, like all other details of construction, particularly in industrial buildings, have passed through various stages of evolution from the small square-section chimney of a blacksmith's forge to the largest chimney or smokestack ever built. The tallest stack in the world is in a New York building. The largest stack in the world is in the plant of the Boston & Montana Consolidated Copper and Silver Mining Company at Great Falls, Montana. This stack is 506 feet tall, and has an inside diameter at the top of 50 feet. The height of this smokestack is not so impressive as its diameter. At the top the stack has an area of 1963 square feet. Through this vast opening, which has a diameter equal to the width of two standard-sized city lots, five-story apartment houses could be discharged with the flue gases, much as sparks are discharged from an ordinary chimney, without any part of the buildings touching the smoke stack; assuming, of course, that the draft was sufficient to lift the structures. When the volume of gases discharged from a smokestack equals or exceeds 1,330,000 pounds per hour, 45 to 50 feet per second is considered an economical velocity. At that rate of discharge, the stack of the Boston & Montana Consolidated Copper and Silver Mining Company would pour forth from 88,335 to 98,150 cubic feet of gas per second, or 352,800,000 cubic feet of gas per hour. That would make a cube of over 700 feet, which would cover nine city blocks, including the streets, and would be more than 700 feet high. The dimensions of the stack are colossal.

There is a large step down from the largest smokestack in the world to the next largest. Germany enjoys the distinction of being second in line. The smokestack of the Halsbrucke Foundry, at Freiberg, Saxony, is 460 feet tall, but of only 8 feet inside diameter at the top, a diameter comparatively modest.

MINIMUM CHIMNEY FLUE SIZES AND HEIGHTS RECOMMENDED FOR FURNACES AND LOW-PRESSURE STEAM AND HOT WATER BOILERS

Area dimensions given are inside measurements of the masonry walls of the chimney.

Warm Air Furnace Capacity In Leader Pipe Sq. In.	BOILER CAPACITY				NUMBER OF HEATERS ATTACHED TO FLUE					
	Hot Water Rating Sq. Ft.	Steam (Direct) Rating Sq. Ft.	1		2		3		4	
			Dimensions Inches	Height Feet	Dimensions Inches	Height Feet	Dimensions Inches	Height Feet	Dimensions Inches	Height Feet
To 450	To 700	To 450								
800	900	600	8x12	35						
1000	1100	700	8x12	40						
	1500	1000	12x12	35						
	2500	1500	12x12	40	12x16	45	16x20	50	20x20	55
	4000	2500	12x16	40	16x20	50	20x24	55	24x24	60
	5800	3600	16x16	45	20x24	55	24x28	60	28x28	65
	7300	4500	16x20	50	24x24	60	28x32	65	30x30	70
	8700	5400	20x20	55	24x28	65	30x30	70	30x36	80
	10000	6400	20x24	60	28x28	70	30x32	80	30x36	90
	12000	7400	24x24	65	30x30	75	32x32	85	36x36	90
	14000	8400	24x28	65	32x32	75	30x36	85	36x42	100
	15000	9400	28x28	70	30x36	80	36x36	90	42x42	100
	17000	10400	28x32	70	30x36	80	36x42	90	42x48	100
	19000	11400	30x30	70	36x36	80	42x42	90	48x48	100

Where round tile flue lining is used in place of rectangular, the nearest corresponding area shall be taken.



Photos, Thomas Ellison

BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS

The Buhl Building, Detroit

SMITH, HINCHMAN & GRYLLES, Architects

THE Buhl Building, one of the structures recently built in Detroit, forms a striking contribution to the city's architecture as well as to its skyline, owing to the originality and dignity of its design as well as to its height. Located at the corner of Congress and Griswold Streets, it covers a plot 120 by 180 feet, open on three sides and adjoining a 7-story building on one of the short ends. It is 26 stories high, and in its finish and arrangements is among the finest office buildings in Detroit. The lower three floors of the building cover the entire plot. At the fourth floor the plan assumes the shape of a cross,—a rather unusual arrangement, but the result of much study of this particular site. After considering over 30 schemes of varying shapes, such as "L," "H," "I," "O," "U," "T" and others, it was found that this particular plan has all of the advantages of the other plans and none of their disadvantages.

A study of this plan will show that it has a minimum perimeter for a lot of this shape. Courts are eliminated, and all offices become outside offices. The street and alley widths are automatically increased from 60 feet to 90 feet on Congress Street, and from 20 to 50 feet on the alley side, thereby providing better light and air not only to the tenants of the buildings, but to the street and entire neighborhood as well. It also provides more corner offices and group offices at the ends of the wings, producing thereby a greater average revenue. Likewise, all the area is "Class A" space, since all the dark areas have been eliminated from the rental space. No plan could be better.

At the crossing is located all the service in a very compact yet flexible form. It is possible to have as many as eight tenants on a floor without building any additional corridor space, or else a single tenant may use an entire



Buhl Building, Detroit



Lobby, Buhl Building

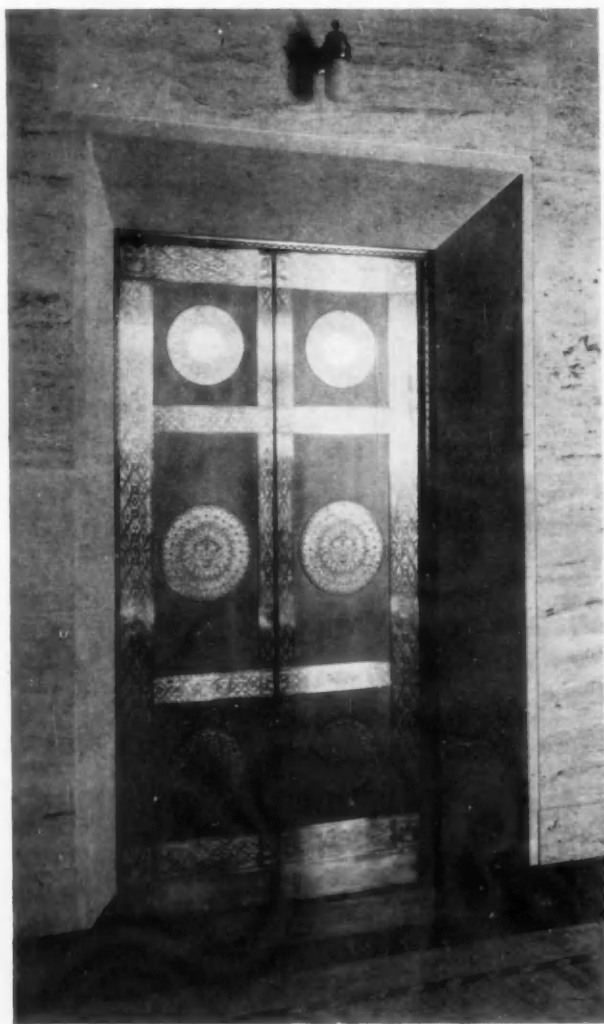
floor with the elevator lobby for a reception room and the four outside spaces as a unit, since they are connected around the service units. The service unit contains 12 high speed passenger elevators arranged in groups of six for local and express; also two fire towers, extending throughout the building; toilet rooms for both men and women; janitor's closets; hose cabinets; meter rooms; mail chutes; fire alarm boxes; etc. With all of these services centralized in this manner, tenant changes do not interfere in any way with the utilities.

The structure rests on caisson foundations, carried down through about 70 feet of hard blue clay, the superstructure being of steel with a combination steel and concrete slab floor. The exterior walls are faced with a specially finished terra cotta laid in blocks of random sizes, with a granite base at the street level. The typical office is approximately 18 by 25 feet,—somewhat larger than usual, but a desirable size. The floors are of cement, and the walls are of plaster on tile, with a slate base. The windows are metal, double-hung type. The doors and trim are of metal, the doors having a full-length single panel of glass and transom, but no side lights.

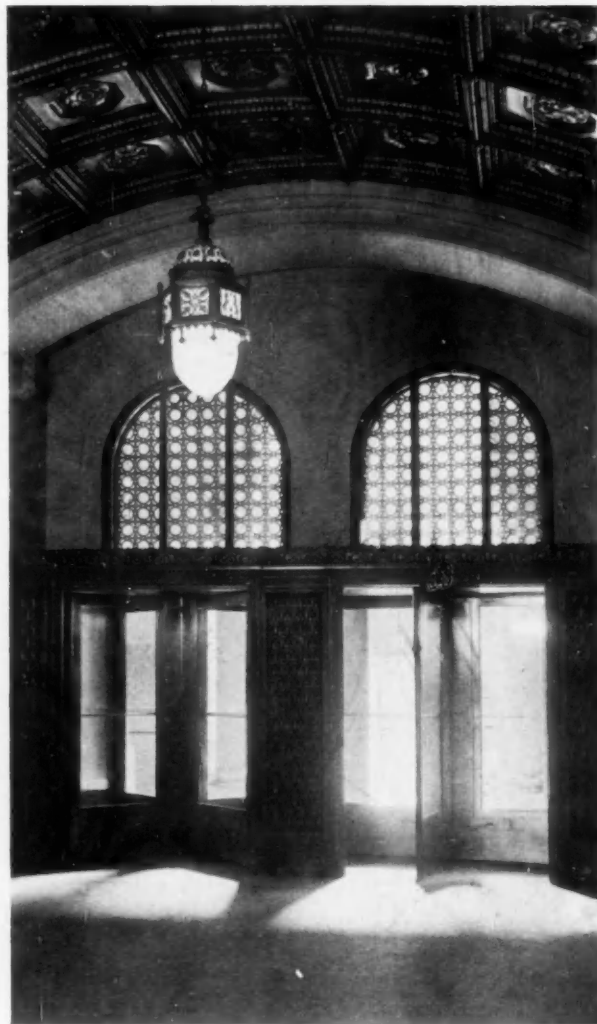
All woodwork in the building has been eliminated.

The elevator lobby and halls in the upper floors are finished with marble floors and a 7-foot marble wainscot; the first floor of the building has an "L" shaped corridor with entrances from both streets, the entrances being recessed and decorated with ornamental iron and vaulted ceilings of mosaic. The rental area of the first floor is arranged to provide for brokers' offices and banks. The public corridor is finished in travertine with an ornamental vaulted ceiling, the elevator doors and office entrances being of bronze. In the basement are located the various service departments, with the exception of a heating plant, since central heat is available.

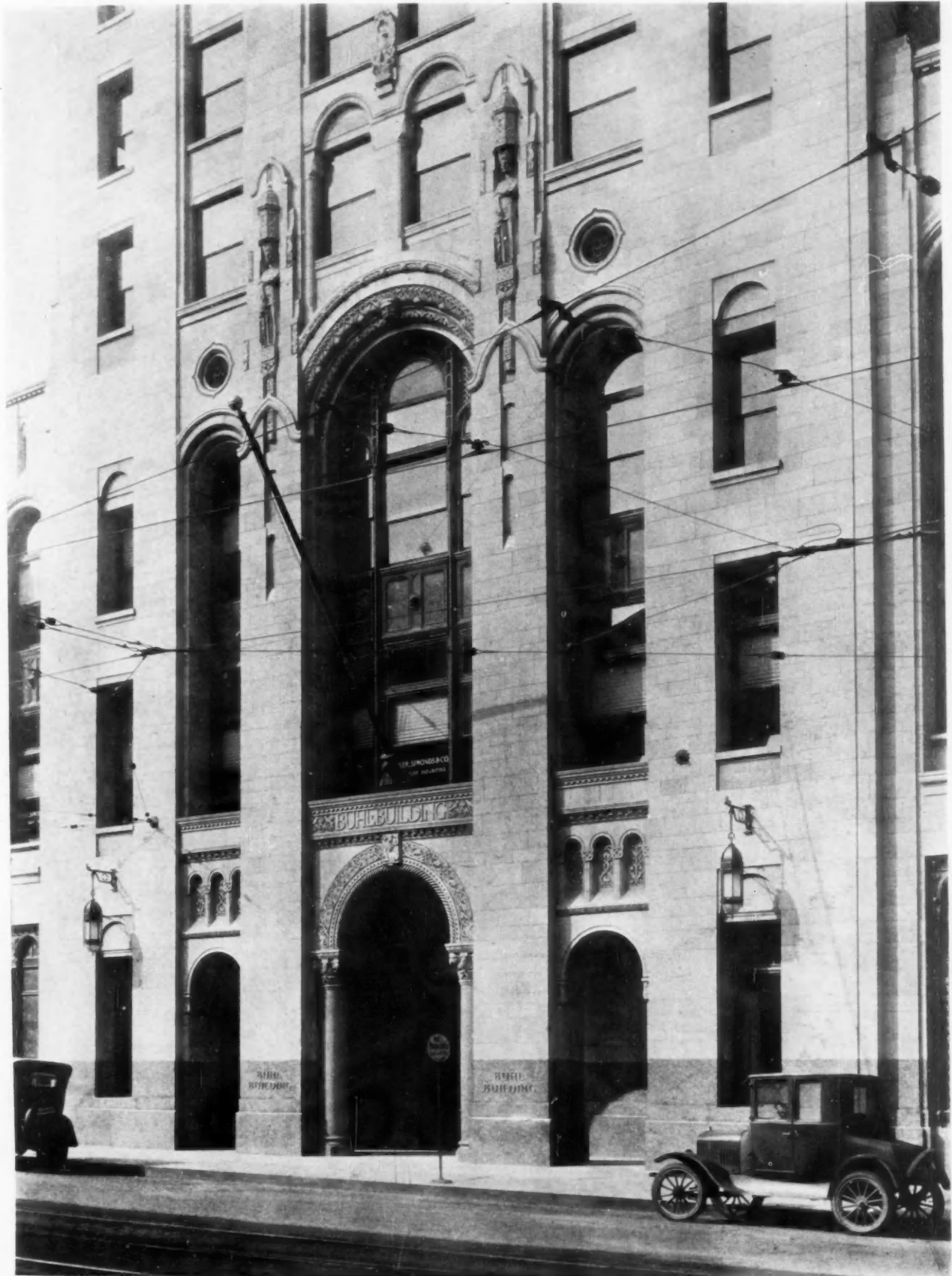
Surrounded as it is to a great extent by low structures, the Buhl Building dominates Detroit's financial district with all the dignity of its 26 stories, the effect of its height being increased by reason of the strong emphasis which the architects have placed upon the vertical details of its design; and like all the newer buildings everywhere, particularly those given the "tower" form, the structure presents an orderly and finished appearance from all points of view, for there are no walls of raw, uncouth brick to mar its beauty and to spoil its symmetry, conspicuous because of its great height.



Elevator Door, Main Lobby



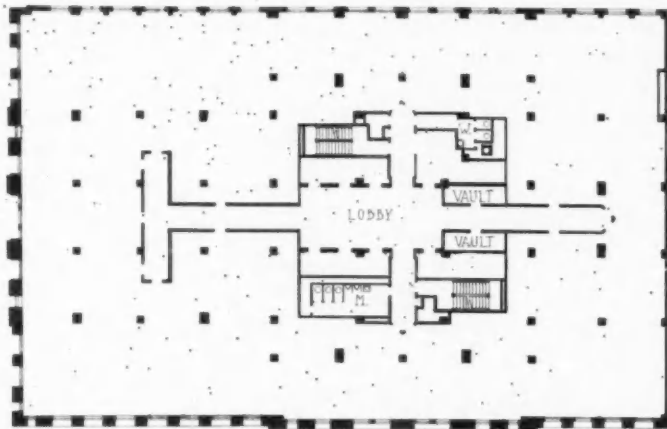
Main Entrance from Lobby



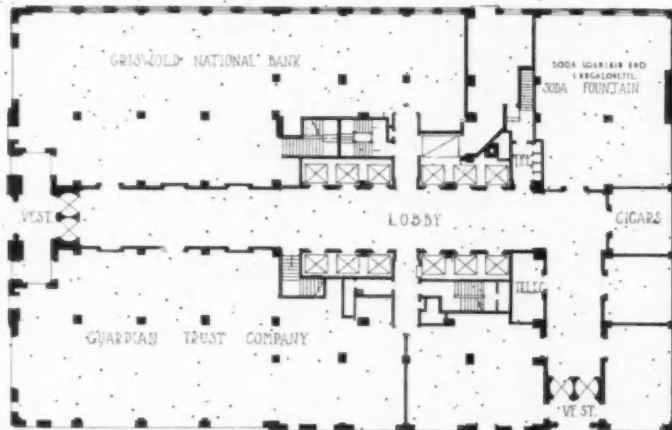
Photos, Thomas Ellison

Plans on Back

DETAIL OF FACADE, BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS



SECOND AND THIRD FLOORS



SCALE OF FEET
0 5 10 20 30

MAIN FLOOR



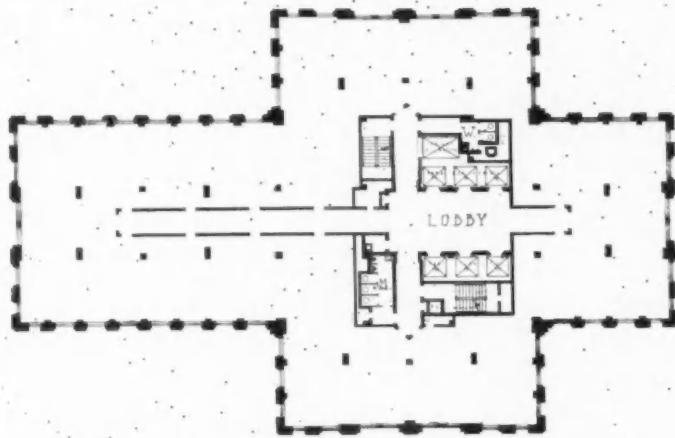
BASÉMENT

PLANS, BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS

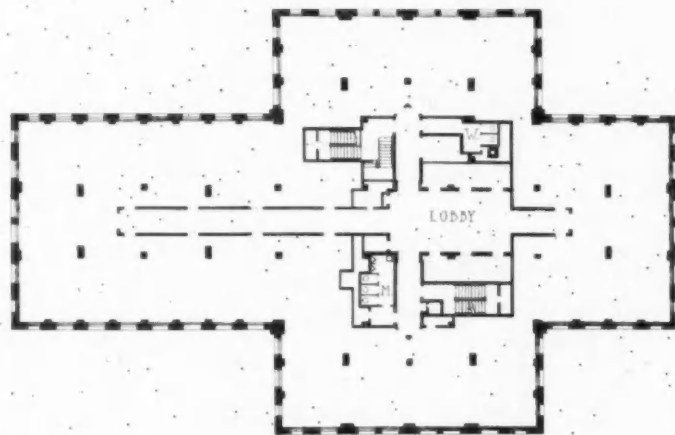


Plans on Back

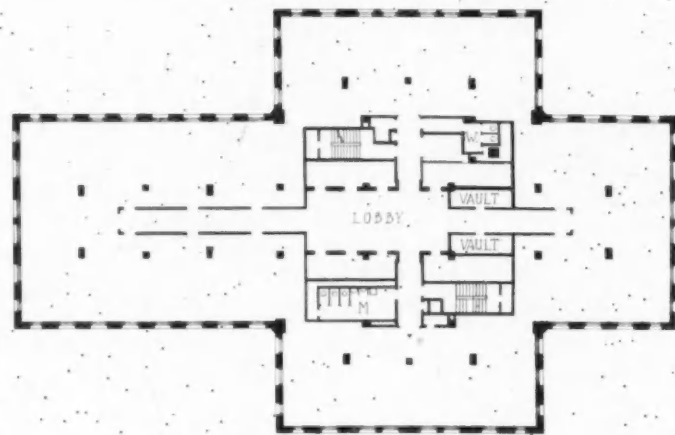
MAIN ENTRANCE LOGGIA, BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS



TYPICAL FLOORS, 20th to 26th



19th FLOOR



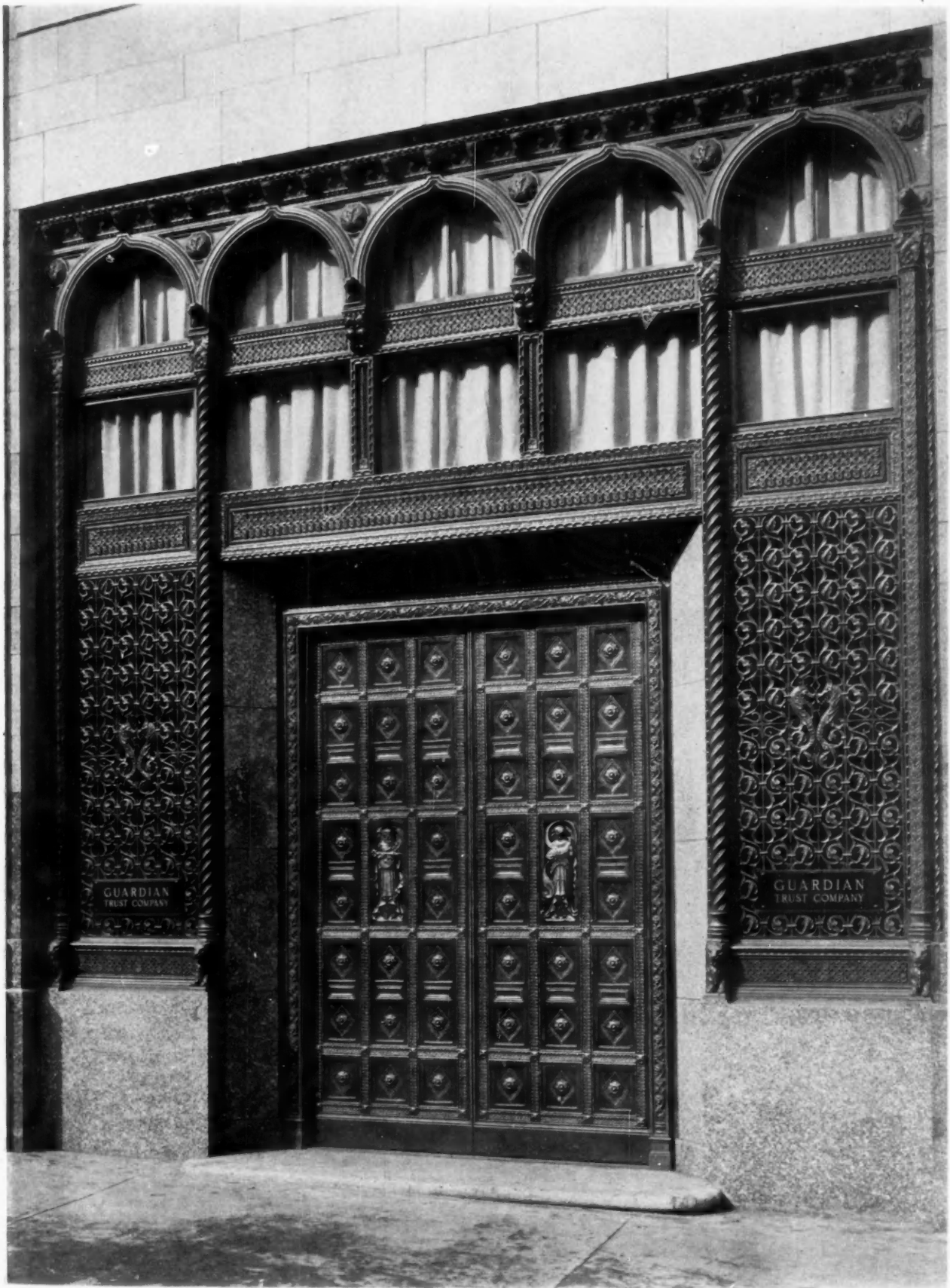
TYPICAL FLOORS, 4th to 16th

PLANS, BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS



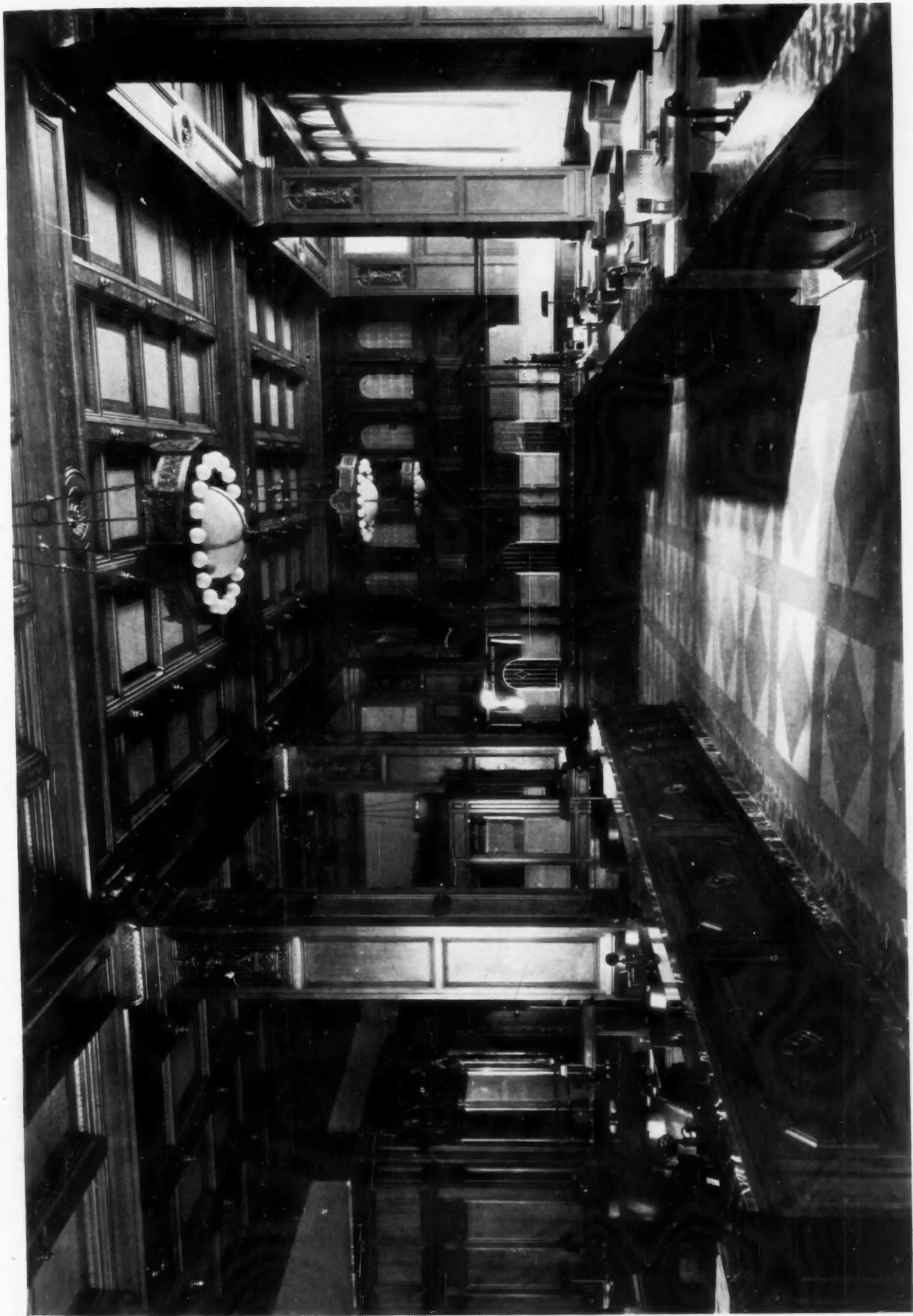
CONGRESS STREET ENTRANCE, BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS





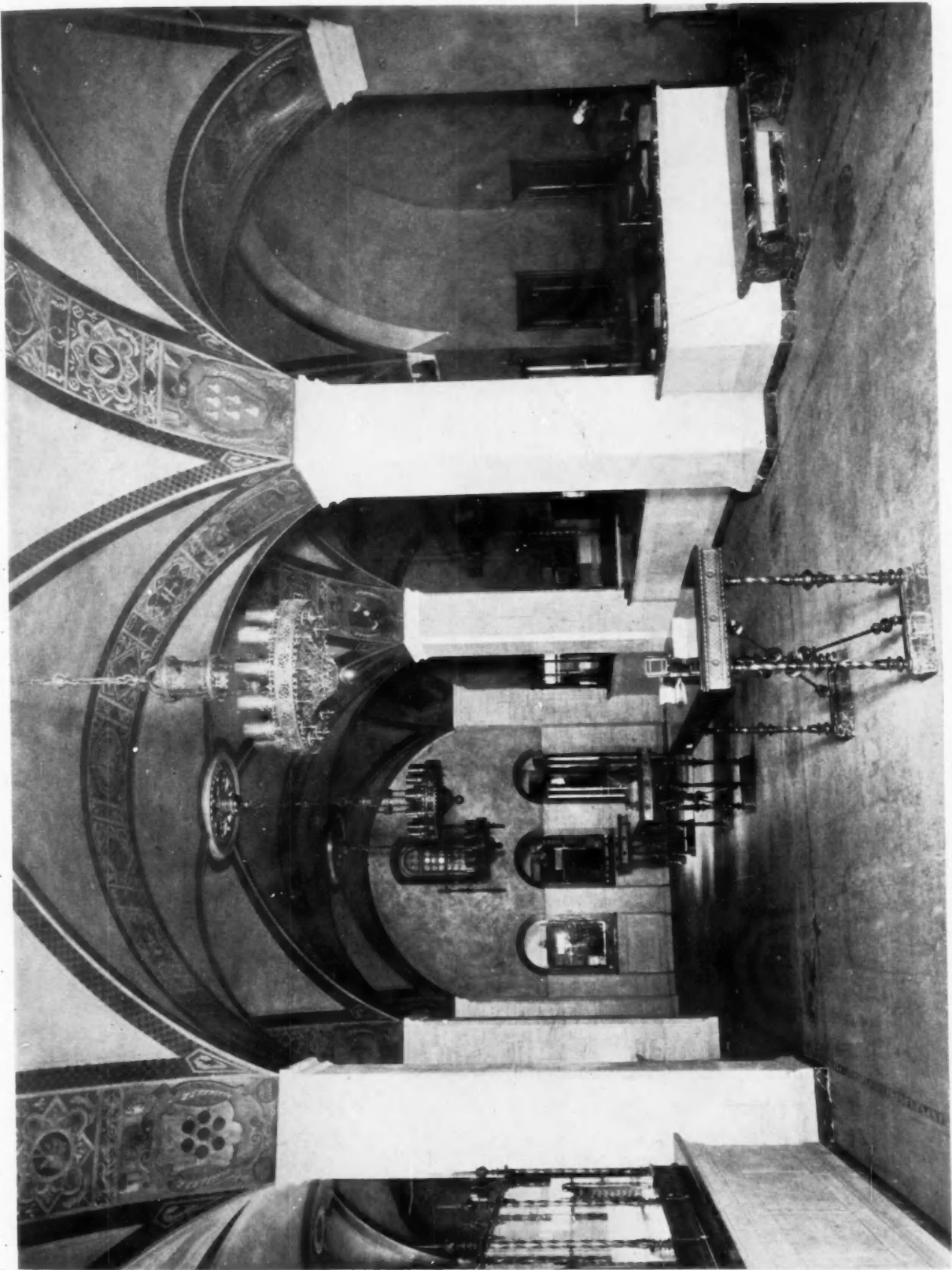
ENTRANCE, GUARDIAN TRUST CO., BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS





MAIN BANKING ROOM, GUARDIAN TRUST CO., BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS





INTERIOR, THE GRISWOLD BANK, BUHL BUILDING, DETROIT
SMITH, HINCHMAN & GRYLLS, ARCHITECTS





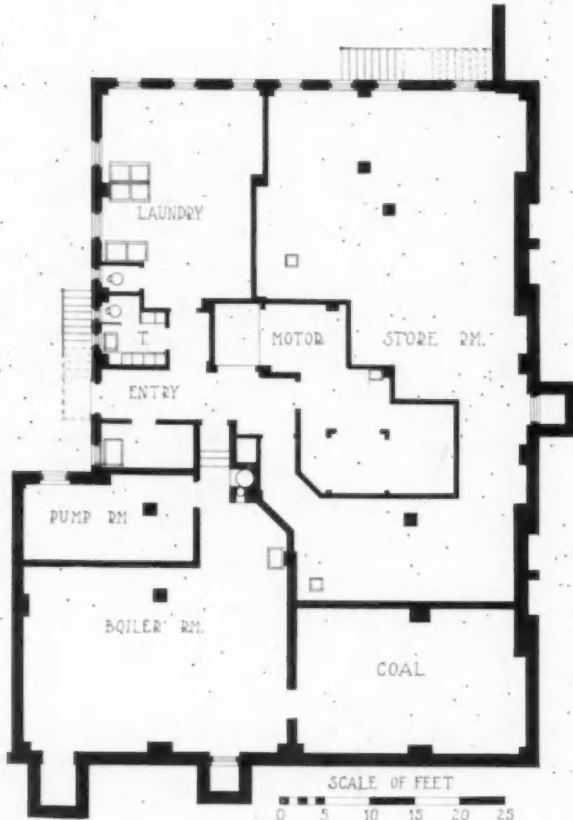
Photos. George H. Van Anda

APARTMENT HOUSE, 126 EAST 40TH STREET, NEW YORK
LAURENCE F. PECK, ARCHITECT

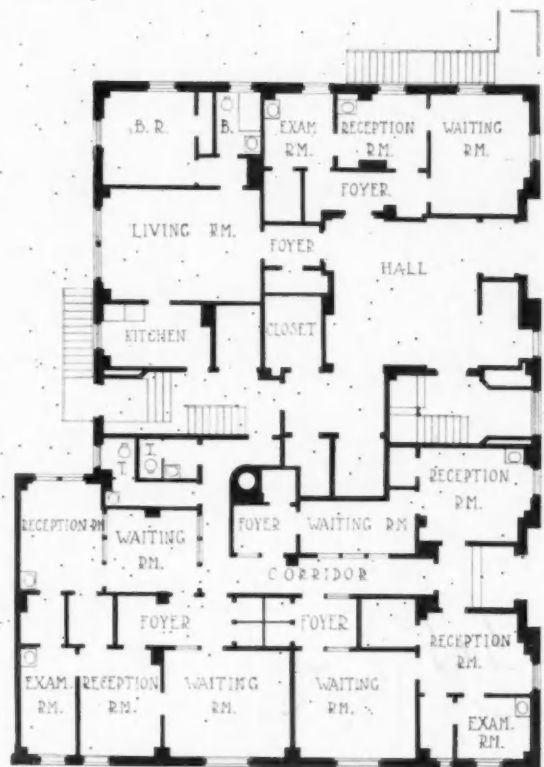
Plans on Back



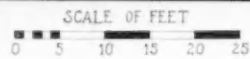
TYPICAL FLOOR



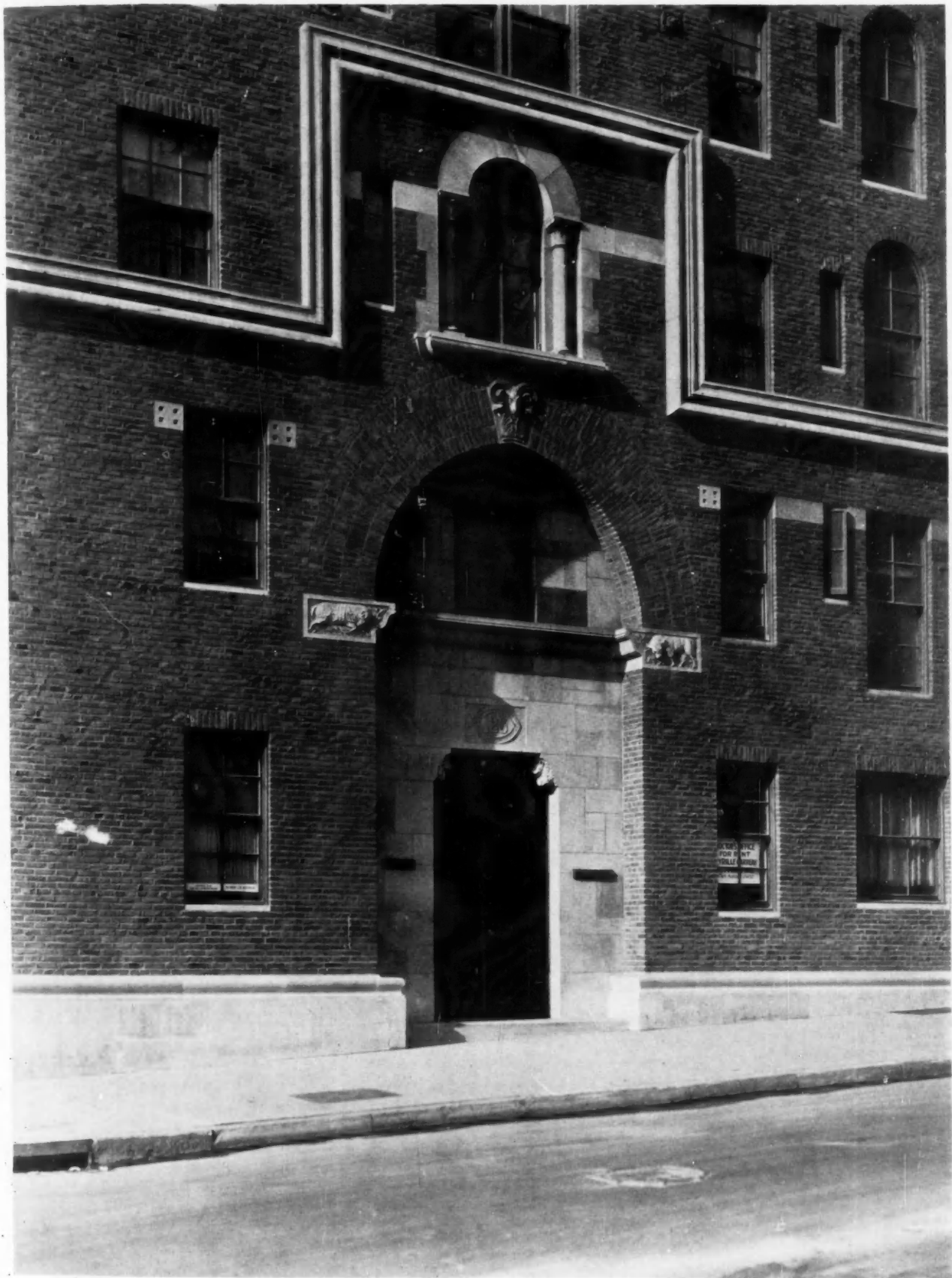
BASEMENT



FIRST FLOOR



PLANS, APARTMENT HOUSE, 126 EAST 40TH STREET, NEW YORK
LAURENCE F. PECK, ARCHITECT



ENTRANCE, APARTMENT HOUSE, 126 EAST 40TH STREET, NEW YORK
LAURENCE F. PECK, ARCHITECT

SMALL BUILDINGS

The Automobile Service Station

By ALEXANDER G. GUTH
of Buemming & Guth, Architects

SOMEONE once said that the little red schoolhouse has become the symbol of the poet and of the politician. Much the same might well be said of practically all other types and kinds of buildings. But, as in all comparisons and deductions, there are exceptions to this statement. The exception in this particular case is the automobile service station. This type of building is of such recent "invention" that it has no background and consequently nothing to inspire either the sentimentalist or the politician,—which the traditional schoolhouse has, and which strengthens its popular appeal.

The development of the automobile has likewise been the *raison d'être* for the development of many and varied types and kinds of structures, and among the most necessary and practically indispensable are the service stations. On narrow lanes and on wide, important boulevards these structures are to be found, sometimes wedged in between pretentious buildings, but sometimes placed on important corners with plenty of elbow room. There will be found, ready for the most fastidious automobilists, Chinese pagodas, Mohammedan mosques, Norman castles and Flemish towers. Keen rivalry and business competition have, however, brought about a vast change. Oil and gas operating companies have begun to realize that an attractive building brings trade, and in consequence thereof the oil service stations have taken on better lines of architecture. Some of these establishments are little better than mere dry goods boxes, while others are most pretentious, ornate and ambitious. One might well call them an æsthetic expression of a practical condition. But above all these first efforts are but glowing examples of the fact that we are slaves to haste and imitation. Mostly haste in this particular case, because it is one of the prime requirements of this particular type of building that it be erected in the least possible time.

Building it has developed into a sad case of not the best that has been said and done in the mechanically doing something of a stock market, and mostly without rhyme or reason.

As we settle down to think and to honestly believe that we have created something worth while.

The very first consideration in the planning of the service station is the item of traffic flow. Means of ingress and egress are of paramount importance. Traffic rules and regulations, such as left and right hand turns and stops, must be heeded. Local ordin-

ances will take a hand in these determining factors, so this all-important matter will be passed along, with the warning, however, that familiarity with local statutes becomes part of the architect's stock in trade. With all his trials and tribulations he must not only be the clearing house of ideas but of laws and regulations as well! It seems part of his function.

Traffic flow and lot size will determine the placing of the building on the plot of ground. Two problems, however, present themselves immediately. First, whether the building shall be placed near to the street, with traffic directed around it; and second, whether the building shall be placed at the rear of the lot with full prominence given to the pumps. It is a question whether the number of pumps shall advertise the service and the product, or the building shall attract the customer. The consensus of opinion seems to be quite in favor of the former plan. If the building occupies a corner lot, as is generally the case, and if the size of the lot permits, it will be found most practical to plan two traffic lanes, one going and one coming, so to say, or an entrance and an exit (see Fig. 6). This arrangement has been found to be the most practical from observations that have extended over a long period of time. The plan seems to be most elastic and simplifies the coming and going from and to both streets. With this arrangement the pump islands may be placed between the traffic lanes and thus serve also as traffic guides, which are always useful.

The placing of the pumps is the next step. Granted that the oil operating company has determined upon the number of pumps to be installed, the placing of them so that both lanes of traffic may be conveniently served is important. This can best be accomplished by placing the pumps on the traffic islands, as already suggested, or by having two sets of pumps, one for each lane of traffic. A combination of both of these schemes will make it possible to handle many grades of gas, which may be an important factor. The type of pumps and the various technical points in connection with them are of no consequence in this discussion. For general protection, the pumps are best placed on concrete islands. The pumps have rather delicate mechanism, and are expensive, so it is necessary to afford them every means of protection. No hard and fast rule has been evolved for the spacing of oil pumps. A study of them has brought out the fact that they

are placed anywhere from 4 to 9 feet on centers, depending on local conditions. The ideal spacing plan seems to be to allow enough room so that two attendants may work back to back at adjoining pumps without interfering with each other when using them.

The proximity of the tanks to the pumps is of no consequence at all. With the modern type of pump this matter is handled so well mechanically that it need not give the planner any concern. The location of the tanks should, however, be duly considered when it gets to the problem of filling them. It is well to bear in mind that the ideal layout is one in which the tanks may be filled in such a manner that the oil delivery truck does not interfere with patrons coming and going. In other words, the filling pipe should be located in a place other than a traffic lane. Otherwise the tanks may be placed anywhere on the premises without regard to the rest of the arrangement. The usually accepted size of tank is of 1000-gallon capacity. The most practical method is to place the tanks side by side with approximately 1 foot of space between them. There seems to be a difference of opinion as to whether the tanks should be permanently covered by the cement drive, or whether they should merely be placed below a grass plot so that they may be more easily gotten at and with less trouble and expense. In some of the illustrations the tanks have been placed below the driveways in a sort of a basement, and access to them is gained by means of manholes placed in the drives.

In this manner all of the piping to and from the tanks and pumps is readily accessible, as are likewise the connections at the bases of the pumps. This is an important matter, since it is frequently necessary to make adjustments at these points of connection.

Drain pits should be provided for the modern service station, and these likewise should be placed below the grade. The resorting to elevated platforms or tracks is an unsightly, messy, makeshift method. The danger of derailing a car and thereby causing possible damage to both man and machine is always present. If the pits are placed adjacent to the building, one stair may be planned to serve both the basement and the pits. The number of pits is optional, though two or three are usually the number. It is wise to provide a curb around the pavement opening to the pits. If this is done it is essential that the outside line of curbing be of such gauge that it will fit in easily between the inside lines of the tires. Thus the cars will be brought immediately over the pits without the automobile drivers' having to do any maneuvering back and forth. This curbing likewise keeps the cars from running into the pits. The equipment of the pits consists of a sort of swinging platform which is arranged so that it may be raised and lowered to suit the fancy or stature of the attendant. A ladder is placed at one end of each pit so as to allow easy access to the pit should the attendant find it more convenient to get into the pit this way than by way of the stairway in the building. An

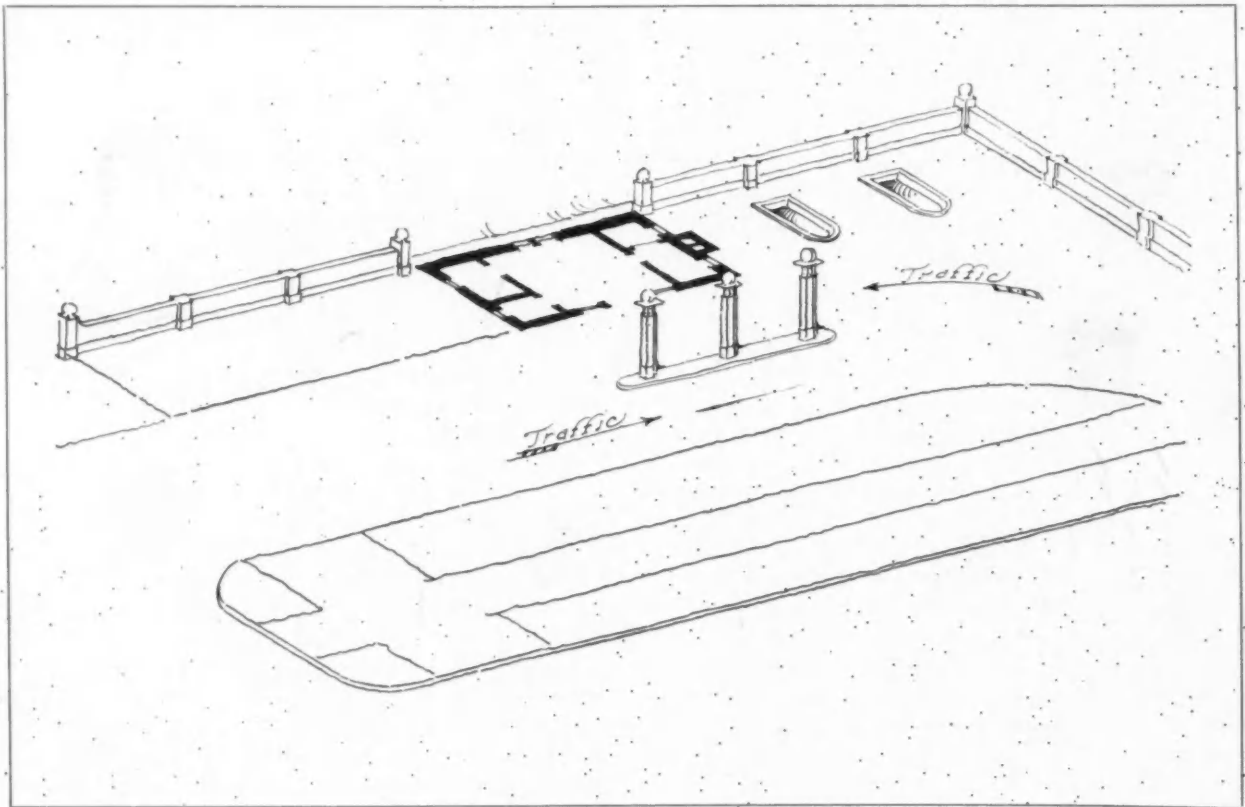


Fig. 6. Plot Plan Showing Good Arrangement for Corner Location. Easy Access to Pumps, Pits, and Service Building and Ample Two-way Traffic Spaces Are Provided

ingenious method of handling the oil that has been drained from the machines is to equip each opening with a set of tracks. These should be placed on the inside of the curbs around the openings. A good sized funnel equipped with rollers is then placed so that the rollers rest on the tracks. This arrangement will permit of the funnel's being moved at will to either end of the car. To the lower end of the funnel is attached a rubber hose which is extended to the receptacle that receives the oil. The various lines of piping to and from the pumps form rather a complex arrangement. It is of some importance that this entire arrangement and the planning for it be done before the work above the ground has advanced very far. It is almost impossible to make any changes in this underground work after it has been covered up by the finished, completed driveway.

And while the underground work is being discussed, it should not be overlooked that much other underground piping must still be installed to make the service station a really modern plant, a station that will successfully cope with its competitors. No service station is complete unless it offers convenient means for the inflating of tires and the filling of radiators. The proper location for the air compressor is the basement, and enough space must be allowed for an outfit consisting of tank, motor and compressor. One outfit of this kind is usually enough for the average station. Water connections should likewise be placed near at hand for the con-

venience of the automobilist. The usual arrangement for this service is to install a hydrant or a controlled fixture near the pumps and to equip this with a hose that is of ample length to reach the radiator filling valve. With the great amount of concrete around a service station it is well to provide also a number of taps for lawn sprinklers, so that with a 25-foot hose it will be possible to reach all parts of the premises. It will be necessary to extend all of the piping mentioned from the basement of the building where the meter is located; likewise it is important that this piping be installed in such a way that it may be drained to the basement when cold weather demands taking this measure of safety.

Now as to the building proper. In this brief paper it will be well to avoid that in the way of building which was done at the very beginning. The latest development, or rather that which has been done most recently, is what should interest us at the present time. The logical means of approach will be to divide service stations into these groups: (1) Those that are just large enough to house the attendant and to provide for his simple wants. (2) Those of a somewhat similar character but that also provide shelter for the patron and his car. (3) Those that are of greater size and have rest room accommodations for both sexes. (4) The type that provides all of the details mentioned, and which at the same time is of such size and arrangement as to permit of the carrying and displaying of a stock of

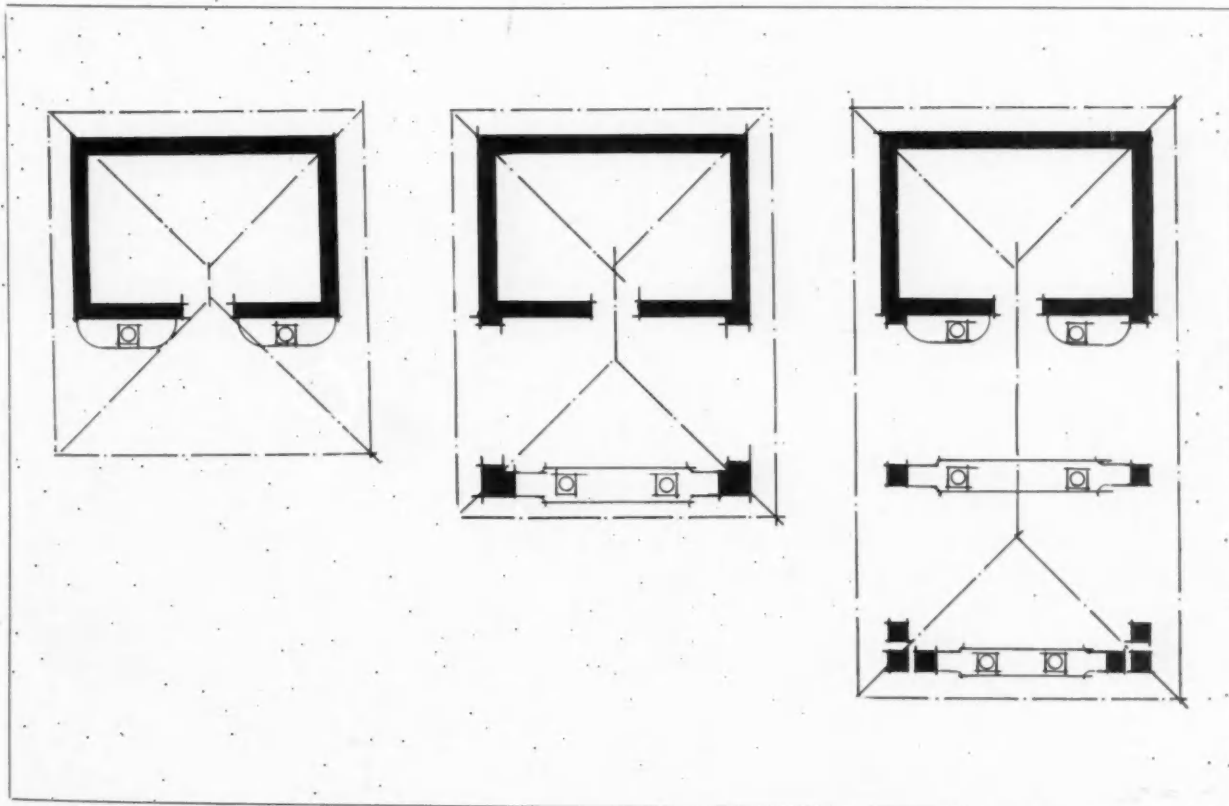


Fig. 2. Plot Size Often Will Determine the Location and Number of Pumps and the Dimensions of the Canopy to Be Erected, Even Though the Service Building Be the Same, as Is Shown Here



SERVICE AND FILLING STATION, BARKHAUSEN OIL CO., GREEN BAY, WIS.
CLARENCE O. JAHN, DESIGNER.



SERVICE AND FILLING STATION, WAUPUN OIL CO., WAUPUN, WIS.
CLARENCE O. JAHN, DESIGNER



BLUE MOUND FILLING STATION, BARTLES-MaGUIRE OIL CO., MILWAUKEE
BUEMMING & GUTH, ARCHITECTS



FILLING STATION, BARTLES-MaGUIRE OIL CO., MILWAUKEE
BUEMMING & GUTH, ARCHITECTS

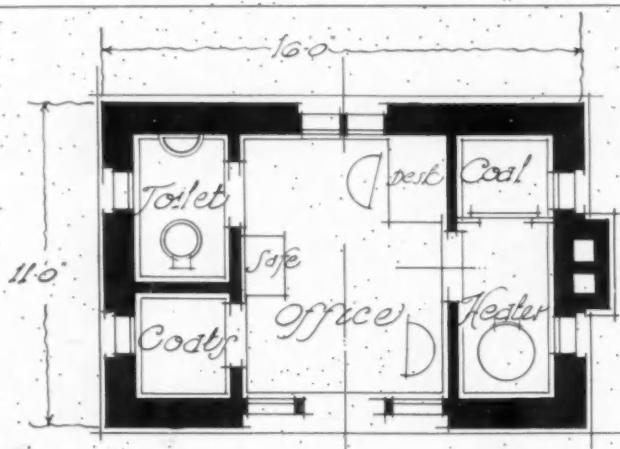


Fig. 1. Simplest Type of Service Station, Providing for Attendant Only

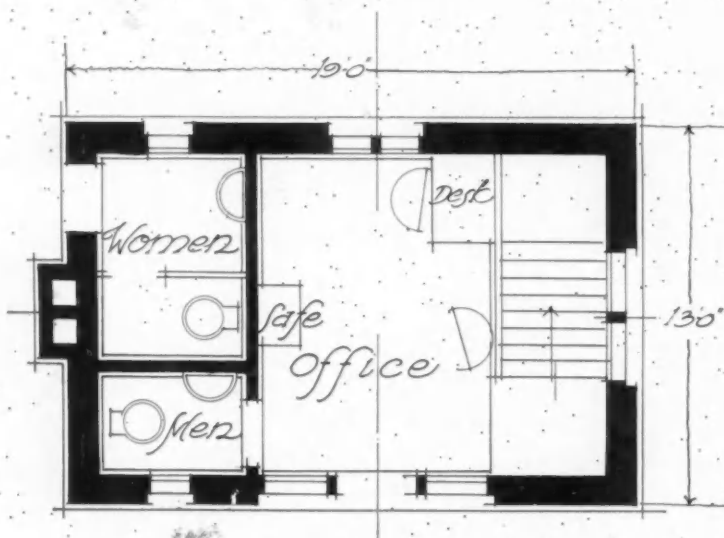


Fig. 3. Slightly More Accommodation for the Patron is Provided in This Service Station

automobile merchandise for sale to passing motorists.

Of the first group, Fig. 1 illustrates a typical example. It will be observed that the space is just large enough for one attendant, or rather for a desk, a safe and a chair space. The cash register is placed on the safe. A compact type of heater or a stove is necessary for this type of building, because economy demands that the structure be set right on the ground without a foundation. This is the type of station that is the most practical and quickly erected. It likewise represents the minimum expenditure, which is one of the essentials when building a service station. This type of building likewise adapts itself to a lot of almost any size or shape as well as to any location, as far as that is concerned.

Passing from this purely utilitarian type to the next stage of development (Fig. 2), we find the type of station which has some provision or shelter for the patron's comfort. As with almost all features connected with buildings in certain regions, certain types persist. This expression of localism expresses itself very strongly with regard to canopies. The

need or advisability of this is a much-discussed subject, and it usually resolves itself into a case of "what monkey sees, monkey does." One competitor merely follows in the footsteps of another, with the intention of attracting the trade from the other fellow. The erection of these canopies is likewise a matter of considerable expense. Because they should be of enough width to cover two lanes of traffic, it becomes necessary to make them of considerable strength, and consequently the initial cost for the constructive members alone is great. To make the canopies practical it becomes necessary to elevate them so that the tallest truck, as for instance a furniture van, may be accommodated. This alone makes them unsightly objects because of the stilted effect. The consensus of opinion is that the canopies are unsightly and are most difficult to handle as far as appearance is concerned. There is no argument but that in inclement weather they serve a really useful purpose, and that the comfort and convenience of the patron are of the utmost importance, besides being the greatest agency for the getting and keeping of patronage.

As has been said before, the patron's comfort comes first. With this in mind the next type of building (Fig. 3) is that which contains rest rooms for both sexes. Access to the women's room is usually by way of a door placed on an inconspicuous side of the building, while the men's room is accessible from the inside of the structure. This makes this latter room likewise convenient for the attendant. The "powder puff" room for the women may be developed into more than an ordinary comfort station. One even runs across rooms that are splendidly decorated and furnished and with women attendants on hand to look after the comfort of patrons. With the advent of these rooms it becomes necessary to provide basements, and heating plants must be of greater proportions so as to make all of the rooms comfortable. Most service stations that have these accommodations will need at least two or three attendants. Necessary lockers for their clothes must be provided, since all first class stations are more and more demanding that their attendants be uniformed, and this changing to and from uniforms daily means that provision must

be made for a dressing room equipped with lockers. The room can also be placed in the basement. The carrying of a stock of accessories is a great accommodation to the automobilist. It is, however, a side line that many oil operating companies do not care to take on, but for the individual who owns his station it is a most remunerative side line. Fig. 4 shows a plan for a station in which has been incorporated a room for the storing and displaying of accessories.

The storage of oils has not been touched upon heretofore. The oil is kept in barrels or small tanks. These are generally conveniently placed upon low platforms so that the receptacles for receiving the oil may be placed below the spigots. A supply of at least three barrels should be provided for. These barrels measure about 2 feet, 6 inches in diameter, so that they may be taken through a door of average width. Placed side by side they take up about 8 feet (lineal). So then,

with heating plant, coal, storage space, lockers, oil storage and the air compressor and motor, the architect will have his hands full providing space for all of these requirements in a basement of the size that it is possible to place below a service station. More often he will be compelled to excavate below the driveway to gain additional room. Fig. 5 illustrates a plan that includes an oil room in the first story. This room contains three pumps, and they are placed along one of the inside walls. The oil is in tanks which are located in the basement. It has been found very convenient to open this room up as much as possible when weather conditions permit it. Consequently, the folding doors have helped to solve this problem in a satisfactory way, giving, as they do, wide open area.

Night illumination of the station and its surroundings is something that should be given due consideration; not, however, with the purpose of getting the same effect at night as in the daytime, because there is no joy in competing with nature in this respect. There are many methods and combinations that may be employed to obtain the desired

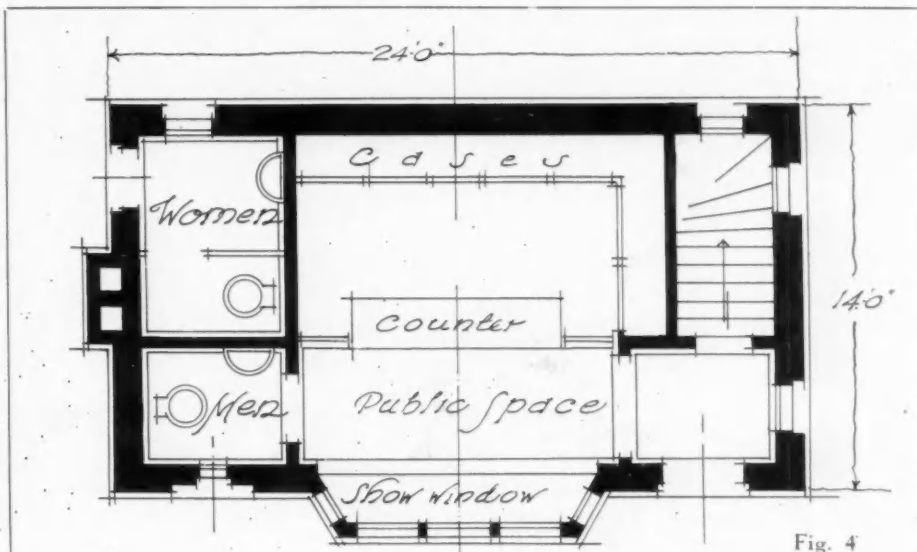


Fig. 4

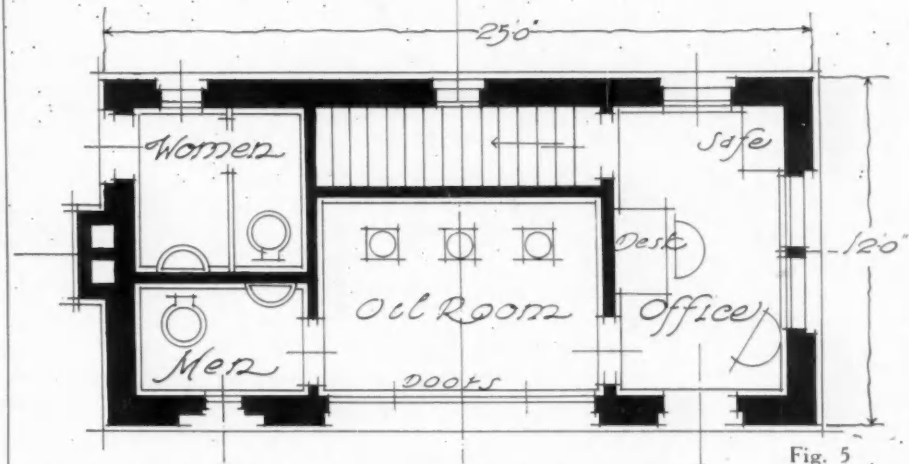


Fig. 5

Figs. 4 and 5 Show Typical Plans for Service Stations Where, in One, Supplies and Accessories Are Handled, and, in the Other, an Oil Room with Three Pumps is Provided

effects. All in all, this night lighting presents a most interesting problem, and in its solution there are no limits to the number of effects that may be arrived at. Ornamental poles placed at the entrances to the traffic lanes are always in good order. Lighting standards give a better scale to the general effect of the buildings than any other motif about the premises, and they also add a decorative note that can hardly be obtained otherwise. Many of our cities have very complete and efficient lighting systems. For the sake of harmony and effectiveness, the lighting that may be already installed near or in front of the premises should be taken into consideration. Floodlighting seems to be one system that particularly adapts itself to the service station. The value of night lighting, of course, is measured mostly in terms of advertising to motor patrons.

Other accessories that will add materially to the complete picture may be placed on the premises. It is well to give the enclosing fence, if one is necessary or required, some thought, since something really worth while may be worked out with this.

Nothing sets a building off to greater advantage than a well designed fence or wall. These may be developed in such a way that the signs may be incorporated with them. As is already known, signs (yes, more and larger signs!) are essential to the success (at least from the operating company's point of view) of all service stations. It is a long step in the right direction to find that the ugly signs of yesterday that were pasted literally over all of the nearby posts, buildings and fences

have been succeeded by well designed, dignified signboards, often having decided decorative value.

Much can be done to make the grounds and approaches attractive. There is seldom need or occasion for the entire premises being covered with cement; grass plots should be placed with the same thought and care given to many of the more essential details. Judicious placing of flower boxes and even of flower beds will add materially to the attractiveness of the entire place. One finds bird houses, flag poles with ornamental bases, fountains and many other adjuncts placed with due thought and care, adding greatly to the stations' interest.

Certain features of the building are very necessary from the oil company's point of view, and these also have very much to do with the style and architecture. Among these are ample windows, so as to permit the man inside to be at the instant bidding of the patron. It is not human nature for the busy business man to want to wait for the attendant to see him. So ample windows should be provided so as to permit the attendant to view as much of the approach to his station as possible.

It will be found to be wise economy to construct the building of fireproof materials. In most cities this will be found to be mandatory. Hollow tile walls lend themselves admirably to the construction of these buildings. This tile can in turn be plastered or veneered with brick to suit the fancy of the designer or the wishes of the client. If the right thought and consideration are given to all the minor details it will be found quite possible to design these buildings with practically no woodwork whatever, except for the doors. The floors are most practical if of cement. This material can well be turned up at the walls, thus forming an integral base and likewise a splendid protection for the walls.

The problem of the service station is unique in the annals of building. The planning of the structure proper has reached a state of development



Service and Filling Station, Penn Oil Co., Madison, Wis.
Clarence O. Jahn, Designer

where one may well say that it is of an accepted type. So it resolves itself into the planning of the entire ensemble, and this indeed offers as large a field of opportunity as almost any other problem that confronts the architect of today. Architects, moreover, are just beginning to analyze this species of building to the fullest extent, and since these stations have taken their places everywhere, it is the architects' problem, yes duty, to lavish their sense of good taste for form, beauty and proportion on them. These buildings will then be satisfactory in themselves because they will be regarded as of an acceptable architectural type. And, finally, should not the fact be registered that the time is here when we can truthfully say that the service station should be appropriate to its environment? Local building materials and local architectural traditions, more than anything else, should determine the style of these buildings, and this coupled with good taste, proper scale and proportion is bound to produce pleasing results. This, as a matter of fact, is being done already, and in literally every part of the country.

As is invariably the case when a structure fills a popular demand, patrons are asking and expecting far more of service stations than the supplying of fuel oils; the inflating of tires, and the other details which it is their function to give. This need not mean that a station must necessarily render all the details of service which large department and dry-goods stores offer their patrons, but it is likely to include toilet rooms, reasonably adequate telephone facilities, and one or two other conveniences. And the same demand which has led to the evolution from the primitive oil tank under a shed to structures of the type described and illustrated in this issue of THE ARCHITECTURAL FORUM is almost sure to lead to further development, for as competition becomes keener and stronger and the public is offered a wider choice of places of service, it is to be supposed that the most attractive stations will be given the most profitable patronage. So it may be reasonably expected that the service station as it exists today, even in its most complete form, is still in a state of progress; its final and ultimate form has not yet been reached, and it is not improbable that in ten years' time the station will possess an attractiveness and offer a type of service far beyond anything which obtains today, even in its most advanced form. Such has been the development of railroad stations and other buildings catering to a popular demand,

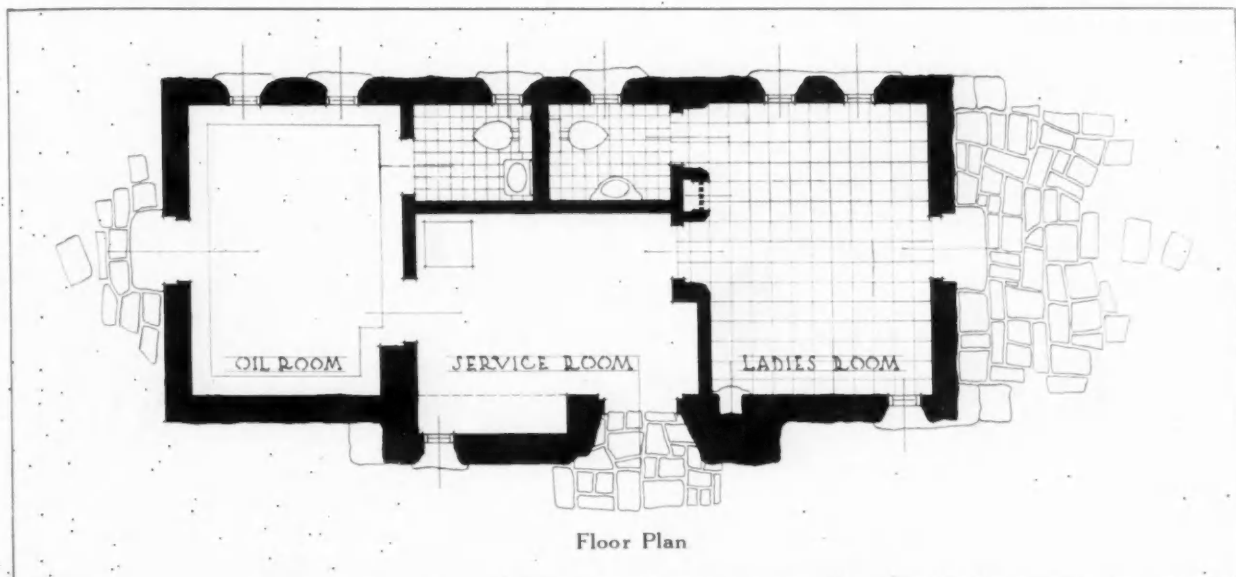


SPINDLER FILLING AND SERVICE STATION, MANITOWOC, WIS.

CHARLES CLARK REYNOLDS, ARCHITECT

WERE it not for the tall, whip-like pumps shown in this illustration, this amusing little building, designed to shelter the dispenser of gas and oil, as well as to provide a rest room for women travelers, would seem to be a bit of stage setting from the "Wizard of Oz" or the "Gingerbread Man." The pleasing quaintness and the irregularity of the design strike a new note in the way of service station building, a type which is so new that no definitely

appropriate style of architectural expression has yet been developed for this kind of shop structure. That service stations in the suburbs or the country should possess charm and style appropriate to indicate the purpose of the buildings is both reasonable and logical. Just what architectural form of expression should be followed is hard to definitely determine or designate. Apparently thus far no two architects have had the same idea as to the solution



FORUM SPECIFICATION AND DATA SHEET—120

Spindler Filling and Service Station, Manitowoc, Wis.; Charles Clark Reynolds, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Fireproof.

EXTERIOR MATERIALS:

Wood, stucco, brick and copper.

ROOF:

Shingles, laid with random exposures.

WINDOWS:

Wood sash, fixed and casements. Leaded glass.

FLOORS:

Tile and cement.

HEATING:

Steam.

PLUMBING:

Two toilets, fully equipped.

ELECTRICAL EQUIPMENT:

Interior and exterior floodlighting.

INTERIOR MILL WORK:

Hand-worked oak, left natural and waxed.

INTERIOR WALL FINISH:

Textured plaster.

DECORATIVE TREATMENT:

Exposed stone sills. Decorative plaster inserts. Plank doors. Hand-wrought hardware and lighting fixtures. Rest room in old English, open to oak rafters, hand-adzed.

NUMBER OF PUMPS AND TANKS:

7 pumps, and 3 tanks of 15,000 gallons capacity.

APPROXIMATE CUBIC FOOTAGE:

6,000.

COST PER CUBIC FOOT:

\$1.33.

DATE OF COMPLETION:

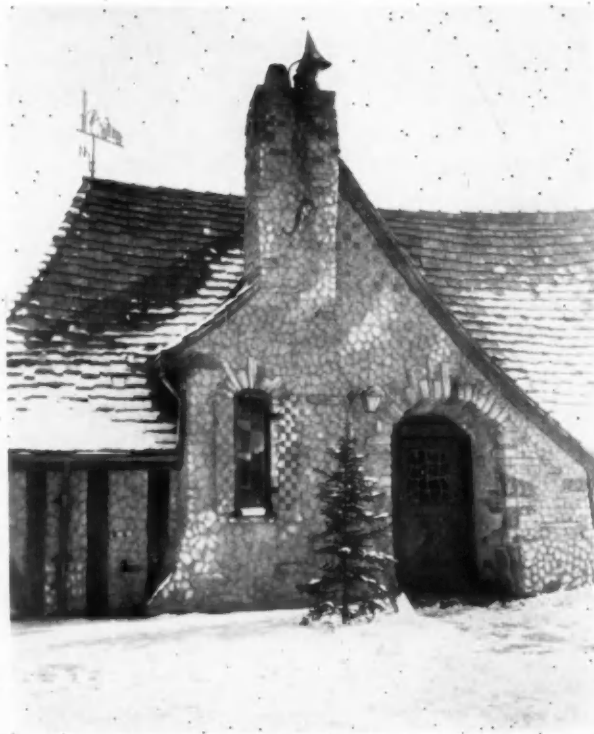
August, 1925.

of this problem. In the case of this building no red or green painted oil pump on the edge of the sidewalk is needed to catch the eye of the motorist. No one passing by at less than 40 miles an hour could fail to notice this unusual bit of architecture. The high pitched roof with its uneven ridgepole and irregular shingles (to say nothing of the unusual texture of the stucco, which the architect says is out of scale and not at all what he wanted), all contribute to the unusual charm of this building. Another interesting detail, not noticed in the daytime, are the concealed lights which flood and illuminate the entire building at night. The architect calls attention

to the bird house effect at the top of the south gable, which in reality serves as a mask for an electric reflector. All the other elevations are flooded by lights under the eaves, and the roof is illuminated by a light on the top of the chimney. These floodlights must give this service station at night an effect more theatrical even than that in the daytime. Everything possible has been done to give this little building unusual charm and distinction,—even the quaint weathervane, which reminds one of the sign posts on entering New Rochelle, showing in caricature an automobile receiving gas, extremely appropriate, of course, for use as a sign for a business of this kind.



End and Rear View



The Entrance Facade

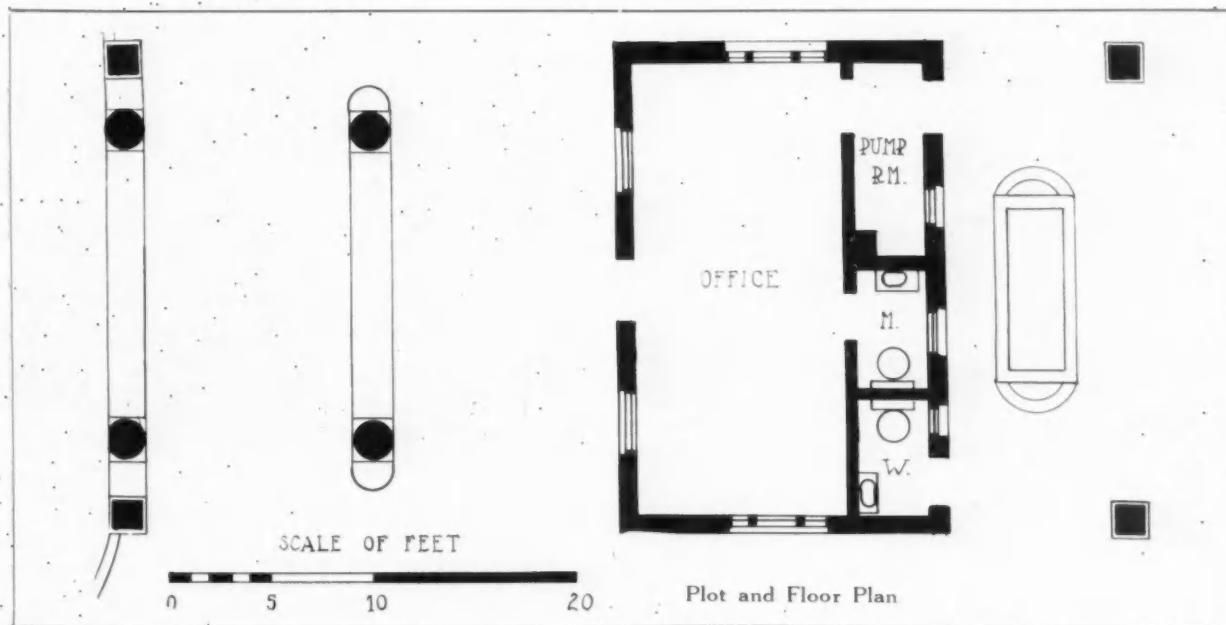


WITTS' FILLING AND SERVICE STATION, LEXINGTON, KY.

FRANK L. SMITH, ARCHITECT

THE Colonial style of architecture has been used as a precedent for the windows and doors of this practically planned service station. Otherwise no special style can be attributed to the architecture of this building with its Spanish tile roof and simple bracketed cornice and plain entablature. Buff brick is used for the walls and piers, while the windows

and door openings have been enframed with and emphasized by the use of red brick. The plan of the building with its double covered drive is convenient and direct. It is an excellent idea to have the oil pumps and drives, where cars must stand while being filled, covered with some sort of roof. Whether this roof should be a part of and continuation of the



FORUM SPECIFICATION AND DATA SHEET—121

Witts' Filling Station, Lexington, Ky.; Frank L. Smith, Architect

OUTLINE SPECIFICATIONS

EXTERIOR MATERIALS:

Stone base; brick walls, buff texture with red texture arches; stone sills, post caps, etc.
Cement concrete foundation.

ROOF:

Green tile.

WINDOWS:

Wood frames and sash; clear glass.

FLOORS:

All cement.

HEATING:

Natural gas.

PLUMBING:

Closets and lavatories for men and women.

ELECTRICAL EQUIPMENT:

Interior floodlighting, 9-155-watt ceiling lights

in porch; 53-15-watt lights in soffit of cornice, arranged in three circuits.

INTERIOR MILL WORK:

Pine; painted.

INTERIOR WALL FINISH:

Plaster.

DECORATIVE TREATMENT:

Porch has steel ceiling.

NUMBER OF PUMPS AND TANKS:

3 pumps; 2 tanks, one of 1,750, and one of 1,000 gallons.

APPROXIMATE CUBIC FOOTAGE:

11,504; taking the porch at one-half its footage.

COST PER CUBIC FOOT:

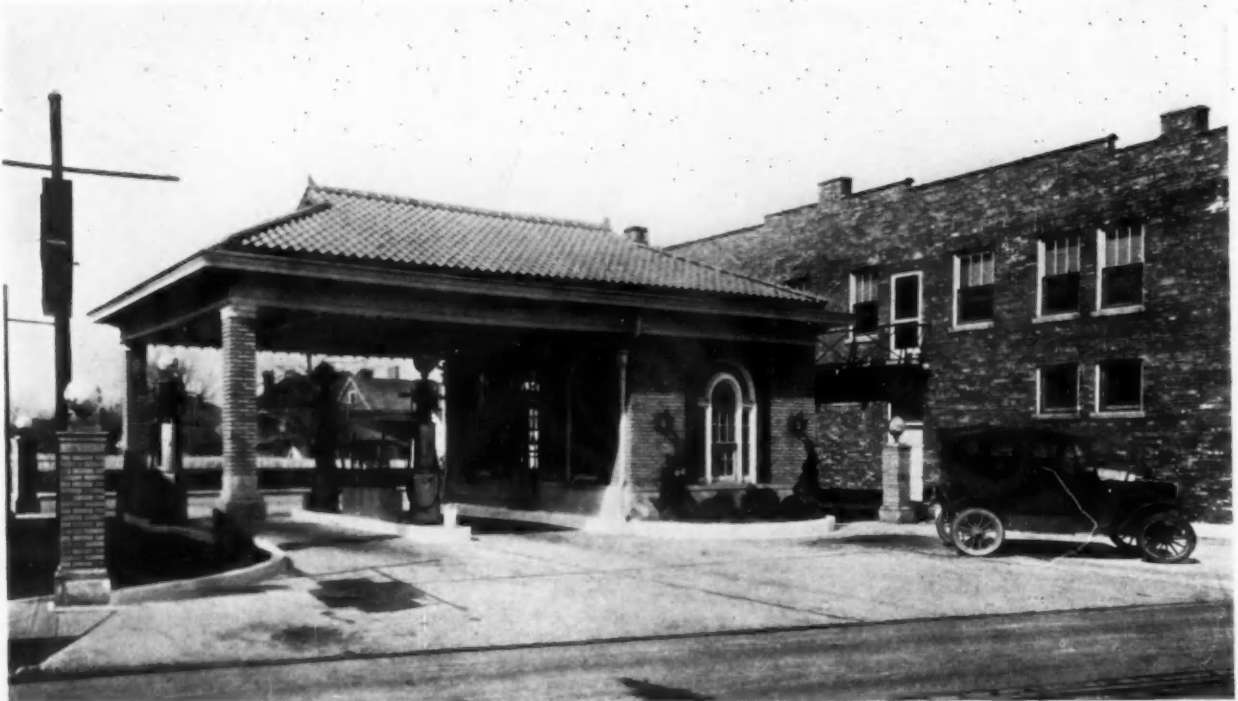
Total cost, including pumps, tanks, etc., approximately \$11,263, practically \$1 per cubic foot.

DATE OF COMPLETION:

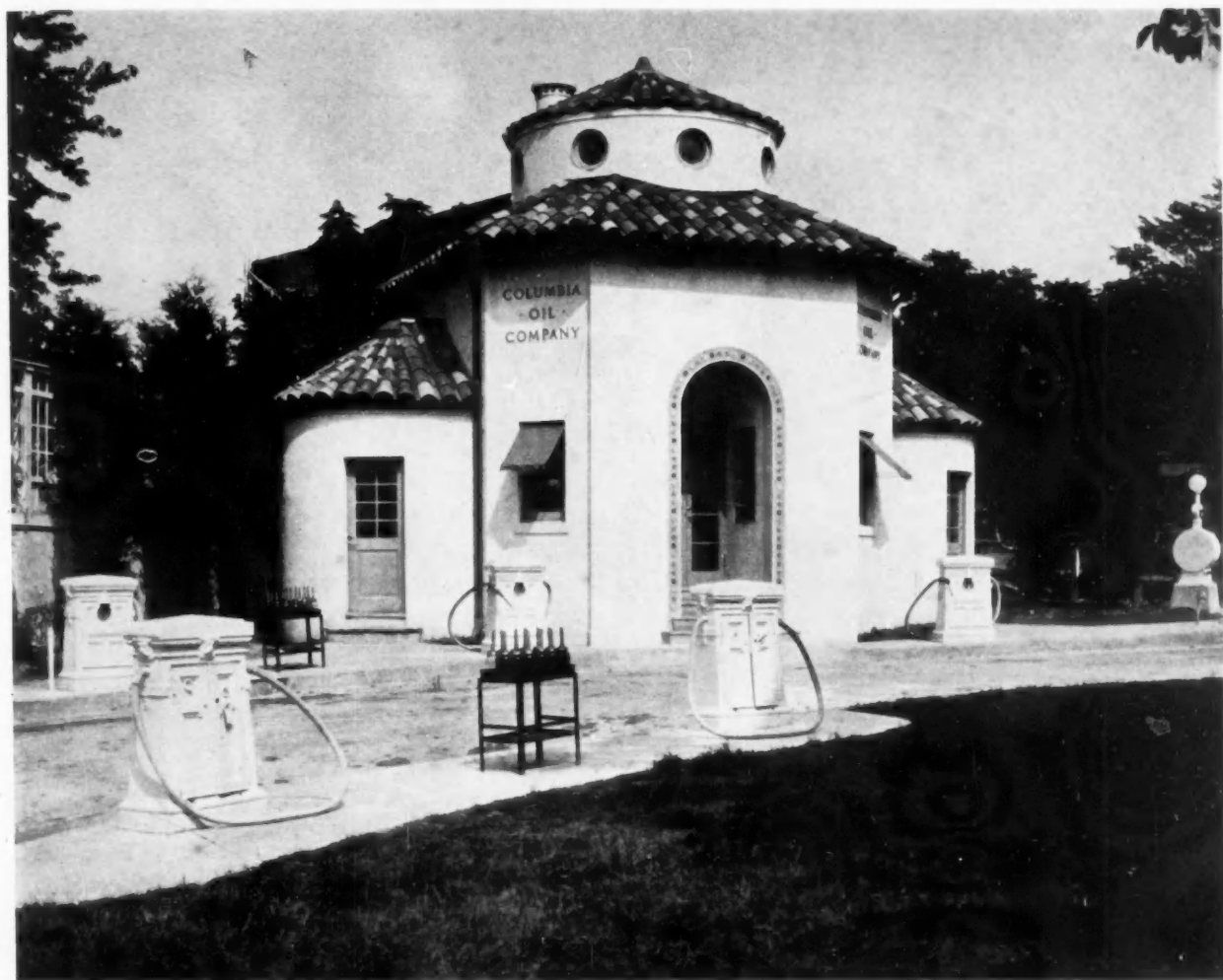
Fall of 1924.

roof of the service building itself or whether it should be a separate roof just wide enough to cover pumps and double roadway is entirely a question of preference on the part of owner and architect. The windows are pleasing in scale and design, and are sufficiently large to give the impression that the structure is designed for public rather than for private use. The building has rather the air of a small railway station with one large waiting room. After all, this type of building is intended to serve the public in a capacity quite similar to that of the railway station, a place at which to stop en route. Therefore the plan should provide rest rooms and

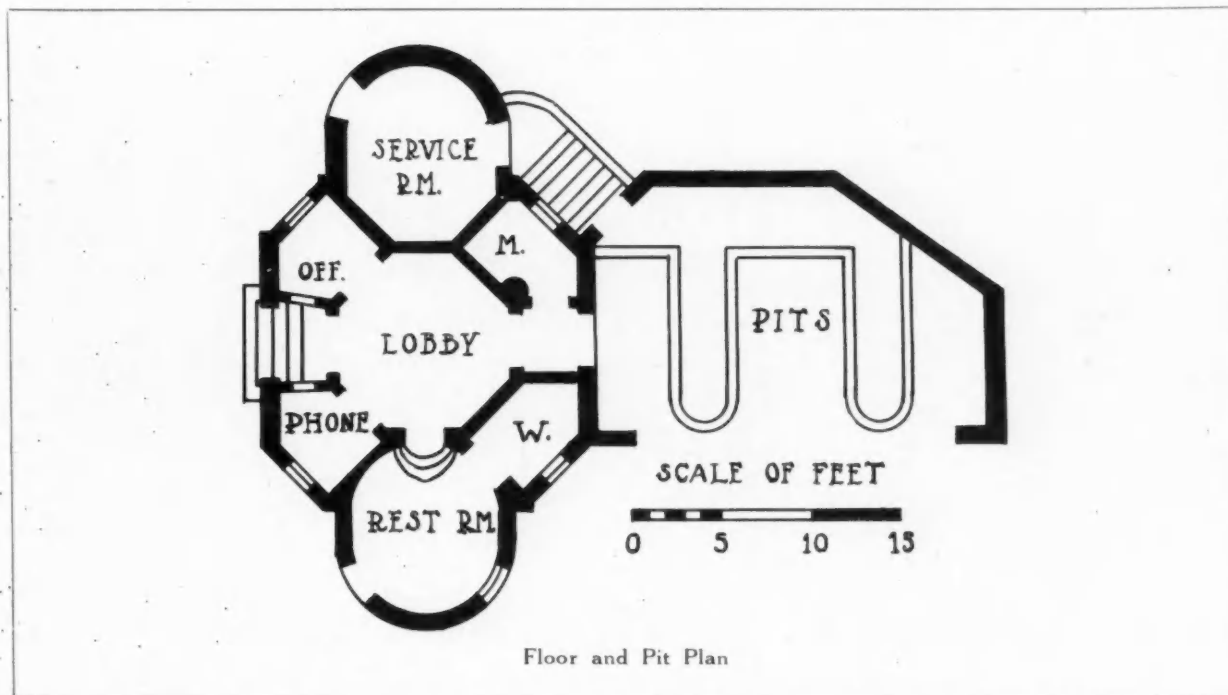
toilets for both men and women, besides sufficient storage space for gas and oil and a small office for the proprietor or service man. The plan of this station follows quite closely this suggested layout. As there is no room set aside particularly for women in this plan, the women's toilet, in order to secure greater privacy, opens outdoors at the rear of the building instead of into the main waiting or service room. Night illumination, which seems to be considered such an important feature in the up-to-date service station, is obtained by rows of electric bulbs set into the soffit of the entablature which supports the roof above the pumps and the double driveway.



Another View, Witts' Filling Station



COLUMBIA OIL STATION, WASHINGTON
HORACE W. PEASLEE, ARCHITECT



Floor and Pit Plan

FORUM SPECIFICATION AND DATA SHEET—122
Columbia Oil Station, Washington; Horace W. Peaslee, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Brick and concrete; gypsum; wooden roof framing.

EXTERIOR MATERIALS:

Stucco and wood.

ROOF:

Mission tile.

WINDOWS:

Wood casements.

FLOORS:

Cement and tile.

HEATING:

Hot water.

PLUMBING:

Enameled iron fixtures.

ELECTRICAL EQUIPMENT:

Interior. Floodlighting. Concealed fixtures. Lights in soffit, at corners, and floodlights.

INTERIOR MILL WORK:

Birch.

INTERIOR WALL FINISH:

Rough textured plaster; light mauve in color.

DECORATIVE TREATMENT:

Finished in walnut.

NUMBER OF PUMPS AND TANKS:

Seven.

COMPLETED COST:

\$15,000.

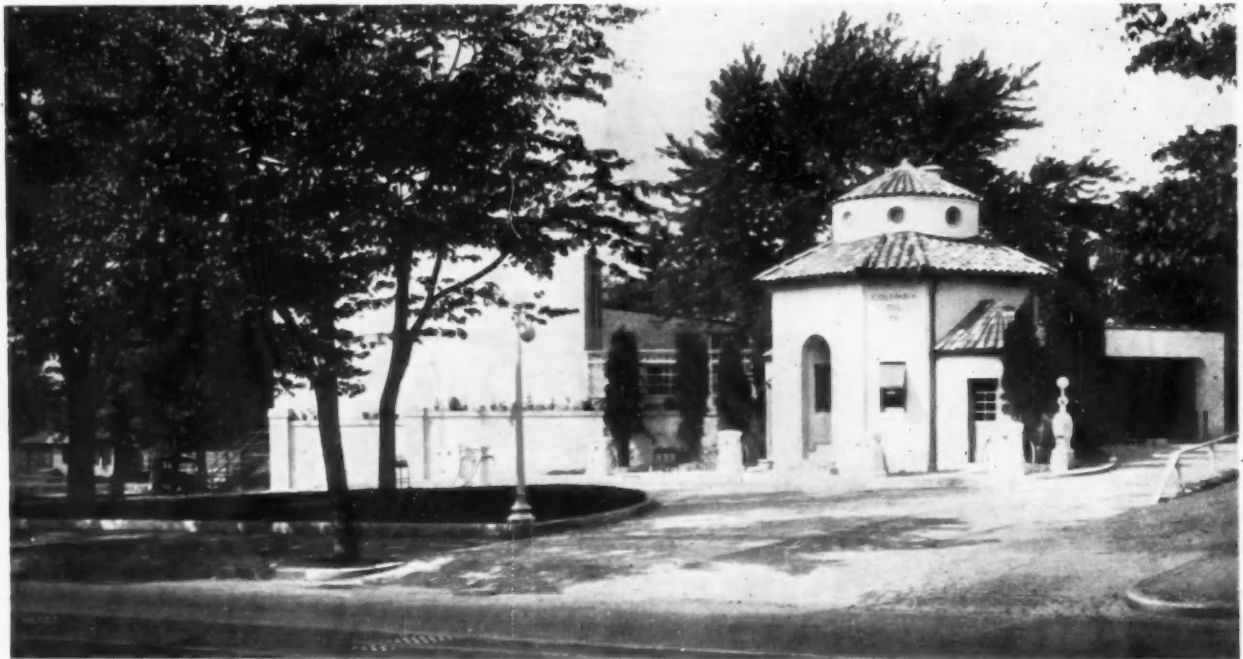
YEAR OF COMPLETION:

1924.

ALTHOUGH much more consistent than most buildings designed for service stations in its adherence to a definite architectural style, this service station, like most of them, shows incongruity in the type of architectural expression chosen. Architecturally this building is good. Its scale and proportions are successfully worked out. The tall, narrow, arched opening through which steps lead to the entrance door is enriched with decoration in color. The plainness of the stucco walls is relieved by the warm tones of the mission tile used on roofs.

The overhanging cornice conceals electric bulbs which at night flood with light the walls of the building. Even the pump stands themselves are given a pleasing and original architectural treatment. It will be noted that adjoining buildings are somewhat

obscured by a high wall and lattice work, as well as by the successful use of cedars on either side of the service station. Octagonal in plan, the interior arrangement is unusually complete and convenient. The small circular wing at the left contains the service or pump room, while that at the right is occupied by a women's rest room with toilet adjoining. Off the main lobby are small telephone and director's rooms on the front, and a toilet for men at the rear. The walls of the lobbies are decorated with maps of the adjacent country. At the rear of the building a sizeable shed protects two automobile pits for the use of cars needing repairs. The design of the building as a whole is unusually attractive and well thought out, and it is probably quite as appropriate for a service station as those in any of the other styles.

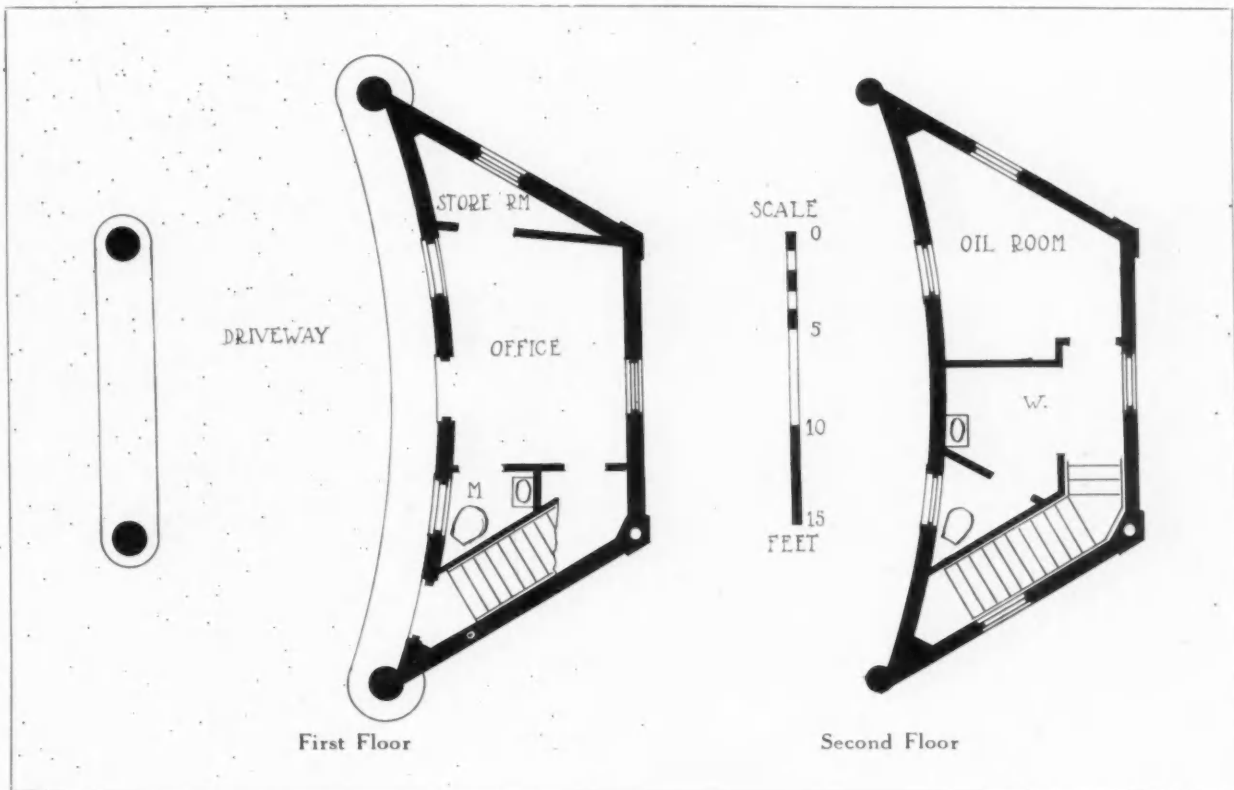


General View of Station and Grounds



Photos. Paul J. Weber

COLONIAL FILLING STATION, NO. 27, DORCHESTER, MASS.



FORUM SPECIFICATION AND DATA SHEET—123

Colonial Filling Station, No. 27, Dorchester, Mass.

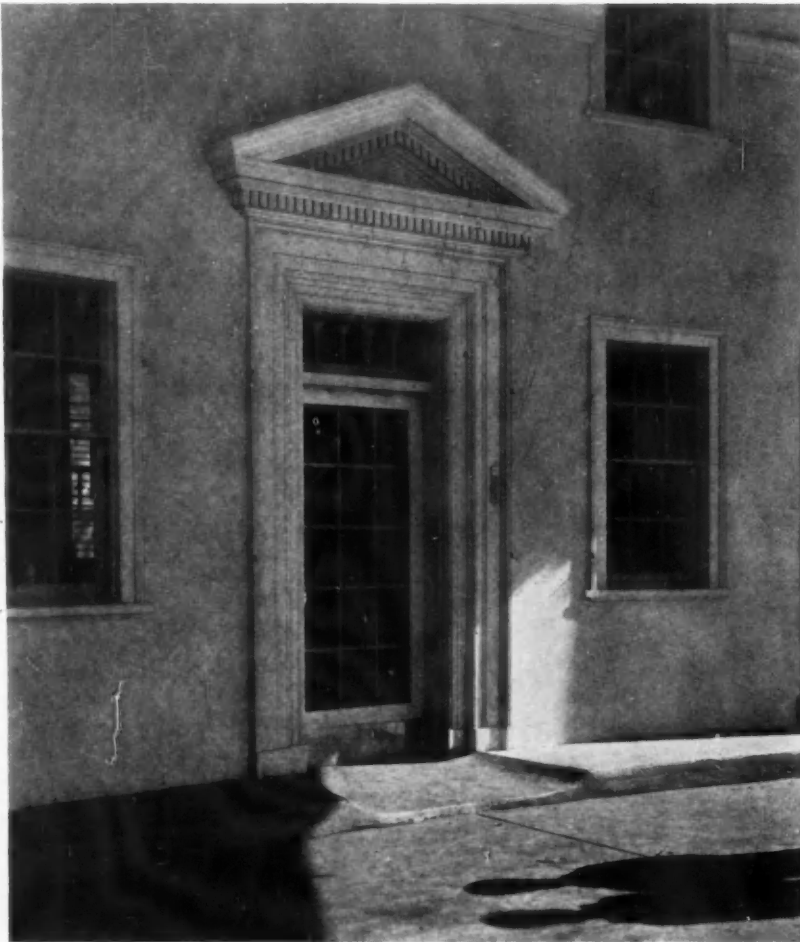
OUTLINE SPECIFICATIONS

EXTERIOR MATERIALS:
Wood.FLOORS:
Concrete.HEATING:
Hot water.PLUMBING:
Toilets on both floors.ELECTRICAL EQUIPMENT:
Overhead lighting.INTERIOR MILL WORK:
Door frames, sash, etc.INTERIOR WALL FINISH:
Plaster on fire brick.DECORATIVE TREATMENT:
Plain.NUMBER OF PUMPS AND TANKS:
3 pumps; 2 tanks, 2,000-gallon capacity.APPROXIMATE SQUARE FOOTAGE:
450.COST PER CUBIC FOOT:
\$2.25, approximately.DATE OF COMPLETION:
June, 1923.

AMONG the many filling stations scattered throughout New England in which Colonial details have been used to make the buildings more consistent architecturally with their environment or more suggestive of the names of the companies owning them, we find this bizarre little building at Dor-

chester, Mass. The simple Colonial front, appearing under the heavy projecting two-story porch; suggests a piece of well designed stage setting. The proportions of the window and door openings are excellent, and the simple Colonial detail good. But had the plan and use of this building permitted it, eight

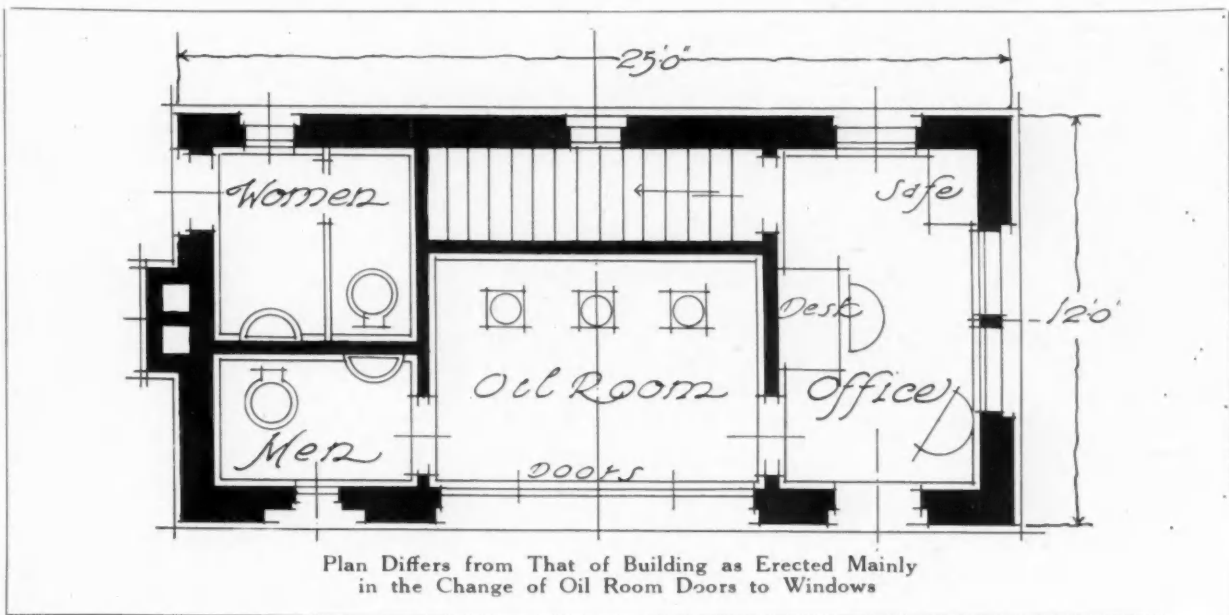
lighter, more graceful columns and a balustrade more distinctly Colonial in character would have improved the design as a whole. The domical roof, surmounted by a finial, which vaguely suggests a Colonial lantern, hardly seems the appropriate type for a structure which is partly closed and partly open. Had the entire building been an open pavilion, this type of roof would have seemed to be logical and appropriate, as many of the octagonal garden and tea houses of the English Renaissance period were roofed in this interesting manner. The use of larger glazed openings in the treatment of this inner partition or front would perhaps have been more in keeping with the pavilion-like character of the building as a whole. However, as an example of filling station architecture this structure has sufficient interest and merit to warrant its publication; it is far above the average example of this specialized type of architecture, and shows how much individuality and spectacular appeal may be put into the design of this particular sort of commercial building. Most of the plan is taken up by the driveway and the wide platform.



Detail of Entrance



FILLING STATION, BARTLES-MaGUIRE OIL CO., MILWAUKEE
BUEMMING & GUTH, ARCHITECTS



Plan Differs from That of Building as Erected Mainly
in the Change of Oil Room Doors to Windows

FORUM SPECIFICATION AND DATA SHEET—124
 Filling and Service Station, Bartles-MaGuire Oil Company, Milwaukee
 Buemming & Guth, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Fireproof.

EXTERIOR MATERIALS:

Red brick and stucco.

ROOF:

Rough tile of variegated colors.

WINDOWS:

Steel sash.

FLOORS:

Concrete.

HEATING:

Furnace.

PLUMBING:

Enameled fixtures.

ELECTRICAL EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

Birch.

INTERIOR WALL FINISH:

Paint.

DECORATIVE TREATMENT:

Walls painted.

NUMBER OF PUMPS AND TANKS:

10.

SQUARE FOOTAGE OF PLOT:

7,200.

CUBIC FOOTAGE OF BUILDING:

6,500.

YEAR OF COMPLETION:

1925.

THE pains and ingenuity often taken to give to the design of a filling and service station picturesque quaintness and charm are well evidenced in this building in Milwaukee. Although time is needed to soften and discolor the stucco and brickwork, the building shows in its sagging ridgepole and overhanging eaves much of the spirit which distinguishes

the English cottage design. The tall, wide windows, which break the front and the end elevations, serve the practical purpose of well lighting the oil room and office. Architecturally, these windows would have been improved by the use of heavy wood mullions which are so characteristic of Tudor architecture. The door with its ten glass panes also detracts

from the English spirit of the design. The tall gable over the main front window, with its well placed clock and half-timber, is one of the striking and successful features of this design. One has the feeling that better balance and greater picturesqueness would have been secured to the design had the end chimney been carried up considerably higher above the line of the ridgepole, giving an added height to this part of the design. The chimney as built is sufficiently solid and massive up to the ridgepole, where it is weakened in design by the coping of slate or tile which follows the same slope as the roof. To protect one of the oil pumps, a structure resembling a roofed-over well curb is used, which probably is no more inconsistent for the purpose than is the picturesque English cottage design itself. The plan is simple and balanced. At one end is the office with a door opening directly onto the driveway. This office opens into the oil room, which is indicated on the front elevation by the large casement window. Beyond it is a men's room with the usual fittings.



End View, Bartles-MaGuire Oil Station



BAY SERVICE, LTD., FILLING STATION, BAY STREET, TORONTO

JOCELYN DAVIDSON, ARCHITECT

THE chief architectural merit of this service station lies in the straightforward simplicity of its design. Practically no decorative effect has been attempted other than in the combination of brick and stucco for the exterior walls. Here red brick is used for a high base course, the lintels of the windows and doors, and, as a crowning feature, of the two substantial looking piers which support the projection of the roof over the open drive. Much is to be said in favor of the plan of this building, which provides for a spacious covered runway, at the center of which are located the oil pumps. A large plate glass window emphasizes the location of the office and gives a proper commercial character to the partition enclosing the business portion of the building. A small door at the left of the plate glass window, balancing the door at the right leading into the office, gives access to a women's toilet. In the office itself a stairway leads down to the basement, where there is adequate space for the storage of oil.

The simplicity of the design of this building is

satisfying and pleasing on account of the particular commercial purpose for which it is intended. Attempts to design filling stations in definite styles, such as English, Colonial or Spanish, seem rather futile, although, of course, the appeal to the eye of something architecturally out of the ordinary undoubtedly has advertising and, perhaps, business value. Good taste, as well as cost of building, would seem to dictate that a simple, straightforward style of architecture should be followed in the design of so commercial a structure as a filling and service station. It does not seem important or even advisable that any definite architectural style should be followed. Rather, the plan should be carefully studied with the idea of working out an arrangement of office, rest room, oil storage room and toilets best suited to the convenience of owners and travelers. All filling stations situated in rural districts should be considered as comfort stations, and should always have toilets for both men and women. The covered driveway is also an important feature to be pro-

FORUM SPECIFICATION AND DATA SHEET—125

Bay Service Ltd., Station, Bay Street, Toronto; Jocelyn Davidson, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Brick walls; wood framing.

EXTERIOR MATERIALS:

Buff colored stucco over brick. Red brick trim.

ROOF:

Dark red asbestos.

WINDOWS:

Double-hung, pine.

FLOORS:

Birch.

HEATING:

Hot water.

PLUMBING:

Enameled iron fixtures in two toilets.

ELECTRICAL EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

Pine, stained.

INTERIOR WALL FINISH:

Painted brick.

DECORATIVE TREATMENT:

Dark brown floors and trim; buff walls.

NUMBER OF PUMPS AND TANKS:

2 pumps and 3 tanks.

SQUARE FOOTAGE OF PLOT:

3,200.

APPROXIMATE COST PER CUBIC FOOT:

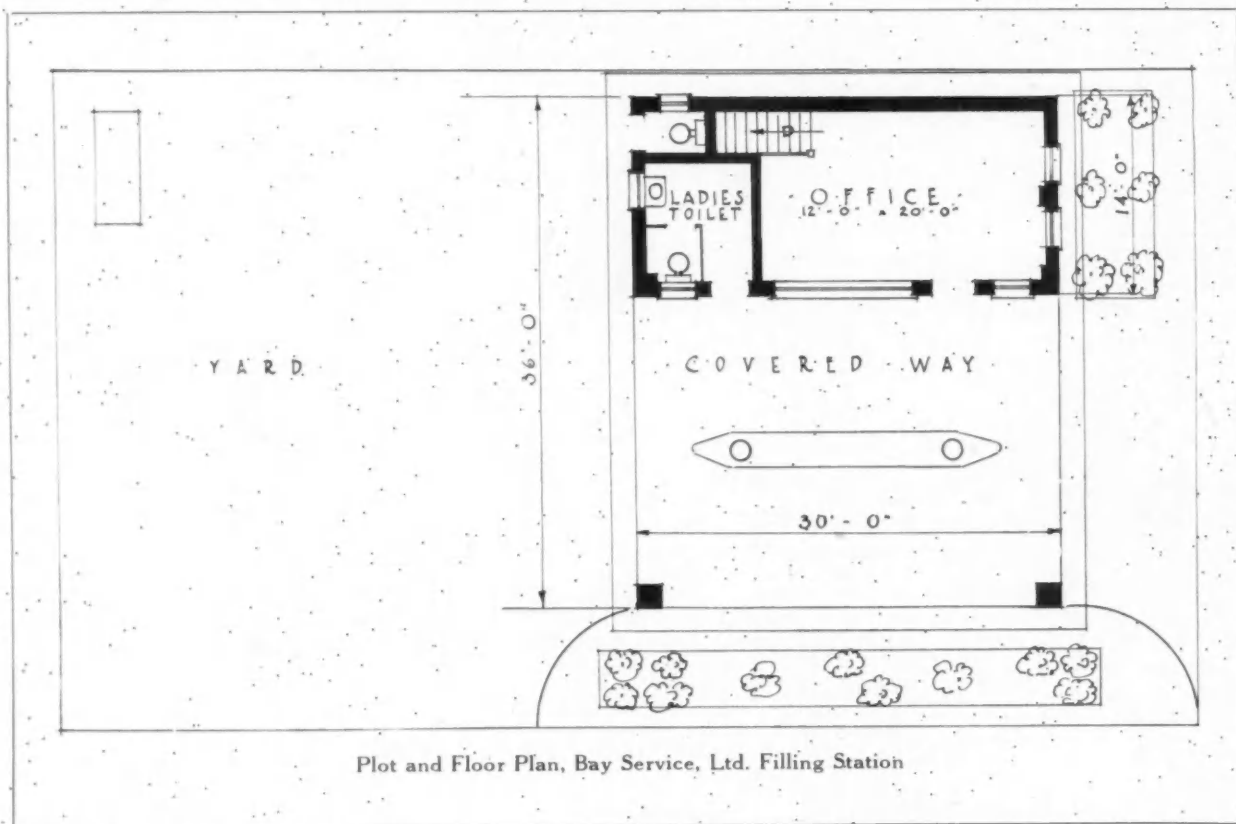
50 cents, including concrete yard.

DATE OF COMPLETION:

May, 1924.

vided. In case of rain such protection is of benefit not only to travelers stopping at the filling and service station, but also to the station employees. As far as architectural design is concerned, the important points to be considered and worked out in the design are the proportions and sizes of the door and window openings, their relation to the wall spaces between them, and the relative size of the building

proper as compared with the width of the driveway included under the same roof as the enclosed building itself. If these few points are carefully considered and studied, it makes little difference whether the building is faced with brick, stucco or clapboards. If scale and proportions are right, the material used for the exterior walls and trim makes little difference. This rule applies to large and small buildings.

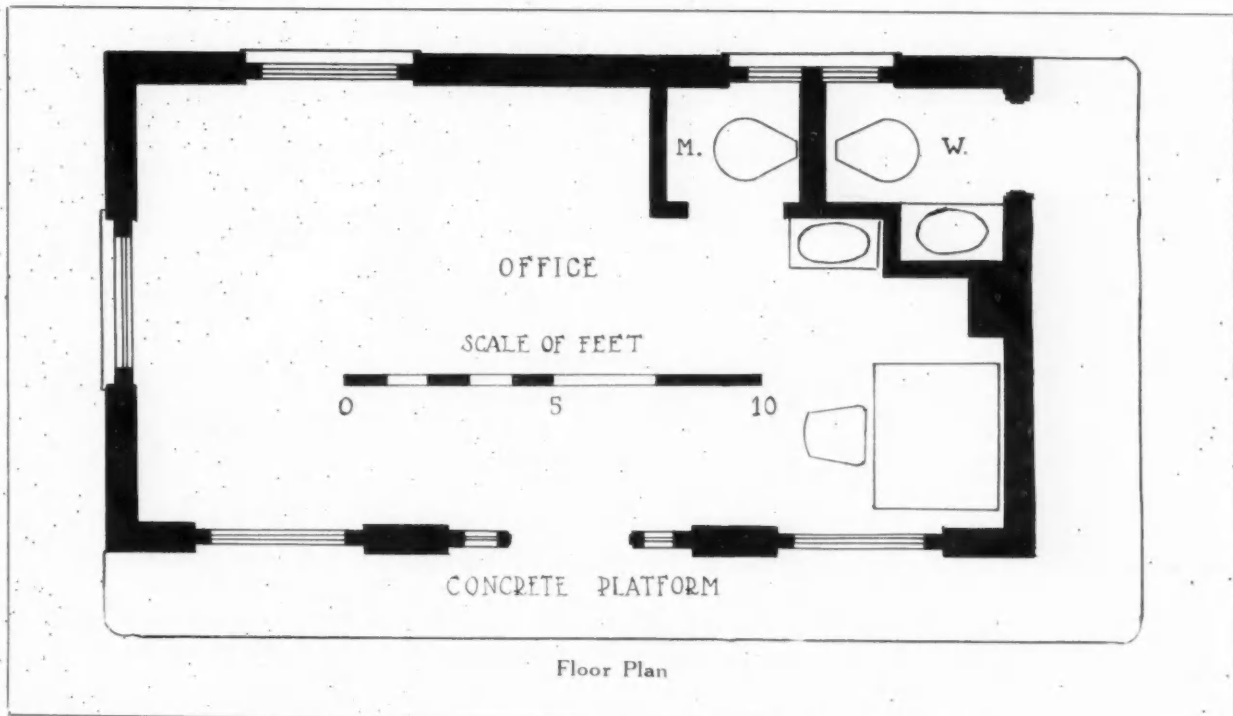


Plot and Floor Plan, Bay Service, Ltd. Filling Station



Photos. Paul J. Weber

COLONIAL FILLING STATION, NO. 54, DORCHESTER, MASS.



Floor Plan

FORUM SPECIFICATION AND DATA SHEET—126

Colonial Filling Station, No. 54, Dorchester, Mass.

OUTLINE SPECIFICATIONS

EXTERIOR MATERIALS:

Brick.

ROOF:

Slate.

WINDOWS:

Wood.

FLOORS:

Concrete.

HEATING:

Hot water.

PLUMBING:

Two toilets.

ELECTRICAL EQUIPMENT:

Overhead lighting.

INTERIOR MILL WORK:

Door frames, sash, etc.

INTERIOR WALL FINISH:

White brick tile.

DECORATIVE TREATMENT:

Plaster, tile and brick.

NUMBER OF PUMPS AND TANKS:

2 pumps and 2 tanks; 2,000 gallons.

SQUARE FOOTAGE OF BUILDING:

330.

COST PER CUBIC FOOT:

\$1.73, approximately.

DATE OF COMPLETION:

July, 1924.

HERE is another example of the use of Colonial detail and precedent in the design of a small filling and service station. Although built by the Colonial Filling Stations, Inc., the character of the

work indicates that someone possessing a certain amount of architectural training and experience must have designed this little building. The windows are excellently proportioned, and the design of the panes

is Colonial in scale and character. The simple cornice supporting the overhanging roof and concealed gutter also shows an appreciation of this style. The introduction of a short balustrade on the ridge-pole, the center pier of which supports a weathervane of old fashioned design, is a rather pleasing method of adding a decorative feature to the roof of so small a building as this. Although this balustrade serves no practical purpose, it does add height to the building as a whole. The fanlight transom and side-lights of the entrance door show Colonial precedent in the design of the muntins, although the side lights are carried down almost to the level of the door-sill, a treatment seldom found in doorways of the Georgian period. Had the door itself in this design been solid, divided into six panels as the style requires, the entire front elevation of the building would have gained definite and greater consistency in design. Undoubtedly the two large arched windows failed to supply sufficient light for the office, hence the glass panes in the door, lighting the interior.

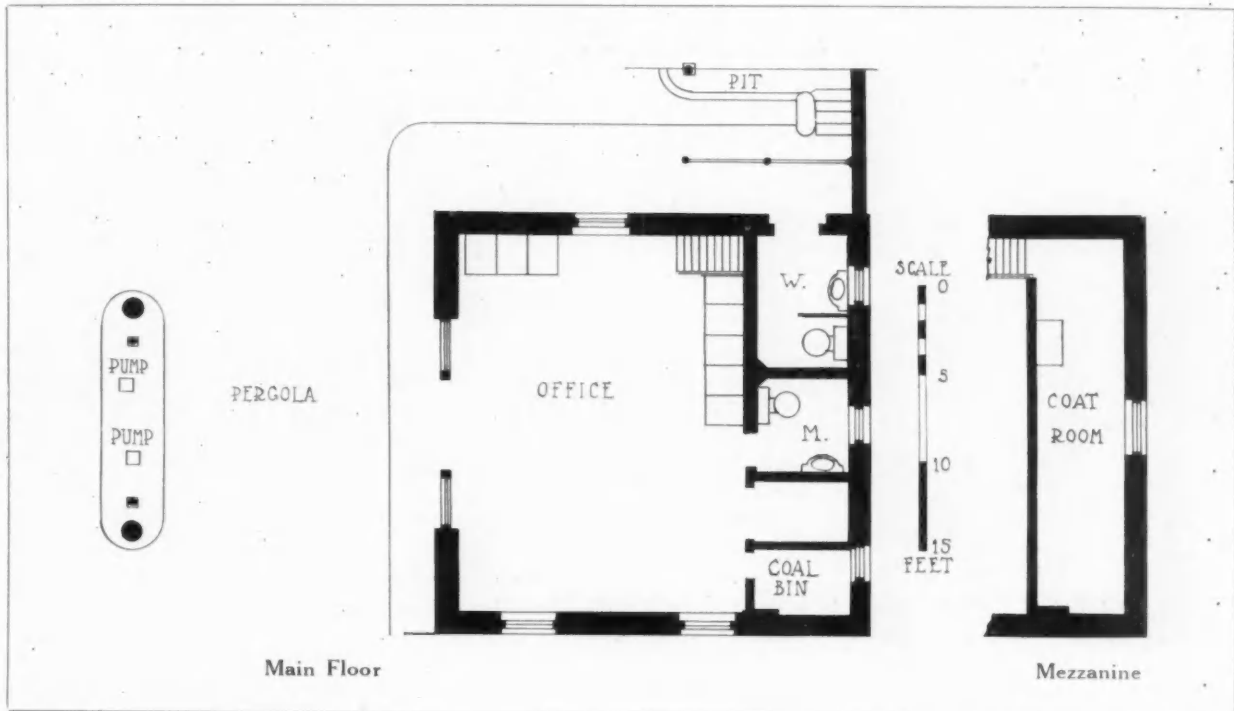


The Entrance Doorway



Photos, Paul J. Weber

JENNEY GASOLENE STATION, KENMORE SQUARE, BOSTON
PARSONS & WAIT, ARCHITECTS



FORUM SPECIFICATION AND DATA SHEET—127

Jenney Gasolene Station, Boston; Parsons & Wait, Architects

OUTLINE SPECIFICATIONS

EXTERIOR MATERIALS:

Waterstruck brick. Clock face in colored tile.

ROOF:

Copper shingles.

HEATING:

Hot water.

PLUMBING:

Two toilets; enameled fixtures.

INTERIOR MILL WORK:

Pine and plaster.

DECORATIVE TREATMENT:

Painted.

NUMBER OF PUMPS:

4 gasolene.

APPROXIMATE COST:

\$25,000.

YEAR OF COMPLETION:

May, 1924.

SUGGESTING, perhaps, a Dutch fire engine house, this unusual little building, designed as a service station for the Jenney Mfg. Company, at least shows originality. The high roof and second story, broken by only one window in the rear gable, shows an unusual treatment which is bound to attract the notice of the passerby. The treatment of the covering of the roadway as a sort of *portecachere* projecting from the building and not as a part of the roof of the structure itself, is one of the excellent features of this design. The smallest details of this building have been carefully thought out and specially drawn. The posts supporting the covering over the runway, as well as the decorative ironwork which ornaments the top of it, show a careful consideration for details. The single window in the front elevation above the entrance door is filled in with a clock face of colored tile. Gaily decorated shutters flank this false window. Although the introduction of a clock as a part of the exterior design of a filling station is both practical and admirable, it would seem more logical to have placed the clock on an unbroken wall surface. As it is, the clock has the appearance of being an afterthought placed in the upper front window instead of in a more appropriate location. The painted shutters decorated with heavy hardware detract much from the simple dignity of the interesting tile clock face. The little belfry, which is well designed, raises the question of its appropriateness. It would seem that the roof is sufficiently high and heavy to require no final feature to give added height and importance. Although the belfry is graceful and quaint, its *raison d'être* is open to question. The treatment of the glass screen with center doors and with the combination of light painted mullions and dark painted trim is very effective. Two small round windows, which for some reason do not show on the plan, add interest.

The plan is simple and direct. The greater part of the main floor is occupied by a large office, at the

rear of which are toilets for men and women, a small compressor room, and a coal bin. Above these rooms is a mezzanine, reached from the main floor of the office by a short flight of stairs. This long, narrow space is used as a wash and coat room for the employes of the station. Although the canopy covering the driveway is of proper size and proportion, and sufficiently light in detail not to detract from the building, it must be admitted that a roof sufficiently large to protect a double rather than a single driveway would be preferable, especially for a filling station located at a point where motor traffic is heavy.



Jenney Gasolene Station, Boston

DECORATION & FURNITURE

The Elaborate and the Simple in Design

By CARROLL BILL

THE writer of these paragraphs is in no sense a keen advocate of the much-abused cult of simplicity, neither holds he any brief for over-elaboration of any of the phases of artistic expression; but when all is said and done, it is from the simpler and less elaborate types of furniture and architectural detail that we really derive our more lasting pleasure and satisfaction. This statement may be open to challenge, and we admit to any degree of inspired exaltation from the intricacy of East Indian stone detail, the flamboyancy of French Gothic, or the studied freedom of Louis XV carving; but why is it when we have before us some bit of a turned leg table, brown and smooth with age, or a wide, low-seated chair of maple in its own golden honey color, or even the gray silver of a pewter platter, severe to the last degree, why, I ask, do we feel that quiet thrill of satisfied content that goes with open fires and wide board floors and many-paned windows with snow drifted in their corners, showing white triangles against the black of outside night? It is perhaps due to that latent urge that we all have toward the early home life and its associations with the primitive aspect of all manner of things, and in this particular case the artistic expression is shown by simple people in creating simple things for their own simple needs in their homes.

It is, however, the versatile mind and skilled hand working together to create some elaboration of design that command different degrees of our admir-

ing respect and that make us wonder how it all happened; and how, for example, there came into being the crisp luxury of Chambord, the brown cascade of a certain *retablo* in the Azores Islands, 70 feet high, of rippling carved walnut, or the finely balanced detail of a Louis XIV table, all dull gold foliage and intricate mouldings. All of which, while admittedly an acknowledgement of the fitness of these elaborate things of the world to their own environment, is no admission of their artistic superiority, and no claim is made for the opposite extreme, and no excuse offered for the existence of such degrees of simplicity as that exemplified by modern "Mission" furniture or by any other unintelligent economy of artistic expression. What we shall try to show by studying contrasting examples of the same kinds is how the simpler things give us a quieter and more enduring, more complete satisfaction.

In the illustrations of this comparative discussion we have chosen in most cases not the extremes of either type, but rather a happy selection of average examples such as one might come across in any well balanced collection, public or private, and the first contrasting group which is offered shows two French tables in Figures 1 and 2. The Louis XIV example is not as elaborate as some others of its period, but it shows in its curving legs and florid center ornament a degree of unrest that does not harmonize with the apparent weight of its marble top, requiring, as it does, the extra support of two iron rods



Fig. 2. Simple French Table. Contrast with That of Fig. 1, on Page 59



Fig. 10. Early English Gothic Draw-top Table. Contrast with That of Fig. 9 on Page 58



Fig. 9. Elaborate French Renaissance Table. See Also Fig. 10 on Page 57

which may be seen under the table. The grotesque faces carved on the legs and frame would, we know, follow their owner with their sardonic leer and make its possession a source of unrest! The earlier and simpler type of French table shown in Figure 2 has, to a remarkable degree, a feeling of sturdy strength, and its legs, although eight in number, do not seem too many for the design, because of their finely

turned slimness and proportions. The mouldings of the top and frame are clean-cut and well profiled, and the little touches of crudely carved detail contrast well with the severity of their frames, in fact emphasizing the severity.

In Figure 3 we show a Louis XIV mirror frame, quite elaborate, well designed, and true to the style of the florid luxury of the period of its conception. Its flowing foliated detail is grouped with little regard to repose, and it climbs by the aid of broken curving mouldings to the crowning feature of a large shell ornament at its top. The base is hardly adequate to the weight of the upper part, but as a whole it may be taken as a good example of its kind, typical of its period.

Contrast with this the Italian Renaissance mirror frame in Figure 4. It is sturdily built around a rectangular

opening, which is in itself a restful feature, and the square and straight line are everywhere noticeable. The curves of the broken pediment with its center feature are vigorous and inspiring, and the lower carved member fills the space between the two squares very nicely. The carved detail so sparingly used is of a delightfully crisp type of cutting, and the two caryatid figures at the sides, which could



Fig. 4. Sturdily Built Italian Renaissance Mirror Frame



Fig. 3. A Well Designed Louis XIV Mirror Frame

have been very bad, fulfill their function of support in a delightful way.

We now come to what is perhaps the most extravagant example of florid license in our assortment. The Venetian armchair in Figure 5 to be plausible should be draped with the scarlet of a cardinal's robes and shown against the painted stucco of a palace interior on the Grand Canal, and I doubt if any of our modern Italian interiors could for long suppress its riot of aggressive movement. It writhes and curves from base to seat, but in spite of all this we cannot examine its whole without a sense of fascinated wonder as to how it came to be so. And notwithstanding its bumptiousness, the curving lines flow into one another with a certain feeling of growth that is almost satisfying,—until we see the Florentine chair in Figure 6. This armchair could hold its own in precisely the same sort of environment as that just studied and be quite as appropriate to an atmosphere of gilded ceilings, silken hose and beautiful women waiting in their bowers for the lovers, who almost always



Fig. 1. Contrast This Louis XIV Table with That of Fig. 2 on Page 57

came. This Italian armchair is built in the most logically structural way possible,—vertical supports for the seat, arms and back, relieved by small turned members, and the back frames crowned by carved and gilded leaves,—the only bits of decoration used,



Fig. 5. Extremely Florid Venetian Armchair



Fig. 6. A Simple Florentine Armchair

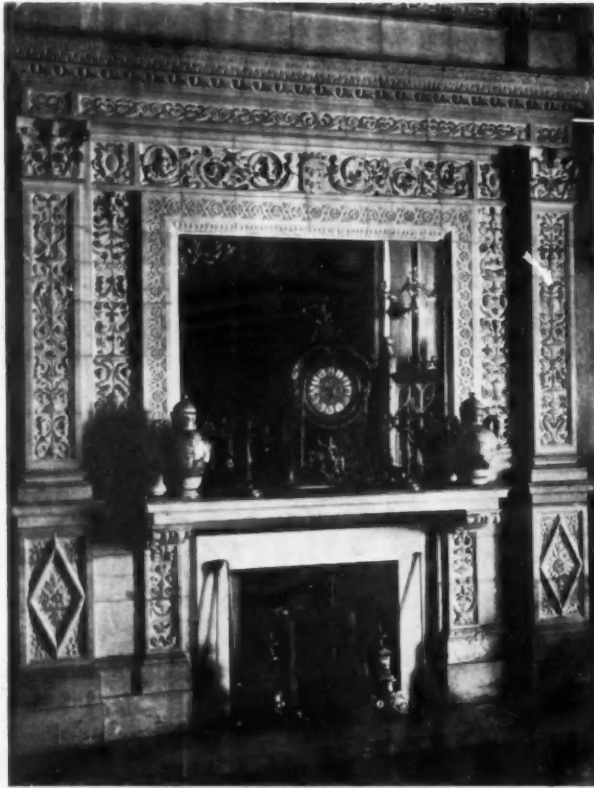


Fig. 7. French Renaissance Mantel. Contrast with That of Fig. 8

unless we include the tooling and gilding of the leather seat and back. This leather back is fastened up the sides with large nails. At the risk of self-contradiction I confess I should have preferred a more elaborate and gilded nail head. They would have looked well against the rich brown of the old leather. However, this Florentine chair is so satisfying that we cannot criticize so small a detail, and it is easily preferable as a fireside companion to the elaborate Venetian example which was just studied.

For variety's sake we show, to further make our point in favor of simplicity, two chimneypieces. Now the chimneypiece, or mantel, whichever you may care to call it, is a most intimate item of our home life. It is where we assemble our household, or, lacking one, where we ensconce ourselves in whatever degree of comfort our furnishings permit. Let us assume, for illustration, that we can ease ourselves into a deep winged grandfather's chair that keeps the cold from our backs and gathers the genial glow of the fire where it does the most good. Could you imagine for a moment any sensation of comfort or thrill of cosy satisfaction if confronted with the oppressive elaboration and over-use of ornament of the French Renaissance mantel shown in Figure 7? Its exquisite detail is worthy of study, its massing and grouping of pilasters are agreeable, and the crisp execution of the arabesque motifs is quite lovely; but we doubt if one could have from it the joy of the home feeling and comfort of living that is so very evident in the Georgian mantel in Figure 8, with every suggestion of English luxury.

And to be fair to the other side, this example is by no means as simple as might have been chosen, with its delicate relief ornament and pleasing thinness of moulding and paneled pilasters. It was the chief ornamental feature of a room of stately proportions, with moulded wainscot and base and in all probability deeply splayed windows with paneled shutters and mahogany doors. But moderately elaborate as it is, it answers our purpose of affording favorable contrast with the first mentioned assembly of sculptural detail and excess of intricate ornament.

In Figures 9 and 10, two tables are shown. The first is an elaborate and very fine example of the French Renaissance, designed under Italian influence and probably carved by Italians. The whole table has a tremendously vigorous feeling, and the detail has a freshness or swing to it that is a joy to behold. The mass of the ends is adequate in outline, and its base functions properly in holding up the well disguised weight of the top. Altogether it is a masterpiece of design and execution, a fine piece of its period. It is bold, vigorous and well handled as to scale.

In contrast as divergent as could well be imagined is shown the crude early English Gothic draw-top table, the charming simplicity of which could not be bettered from the viewpoint of homely, livable desirability. It is a board about which you would delight to gather your friends and rim your pewter tankards and spill your ale (if you had any) and scatter pipe ashes regardless of finely finished wood, and its clever scheme of extending its top to welcome more guests adds to its air of convivial hospitality. This table has a lowly relation in the shape of a bench, which also has all the attributes just mentioned, and the two make a group of furniture that well agrees with the livable atmosphere of a livable home. And for some reason this last mentioned contrasting pair seem to more clearly illustrate our contention in favor of simplicity than any of the other pieces and make us feel quite content in that our point is well made, and that the fair-minded reader will agree that for home environment and intimate enjoyment the simple things are best.



Fig. 8. A Delicately Pleasing Georgian Mantel

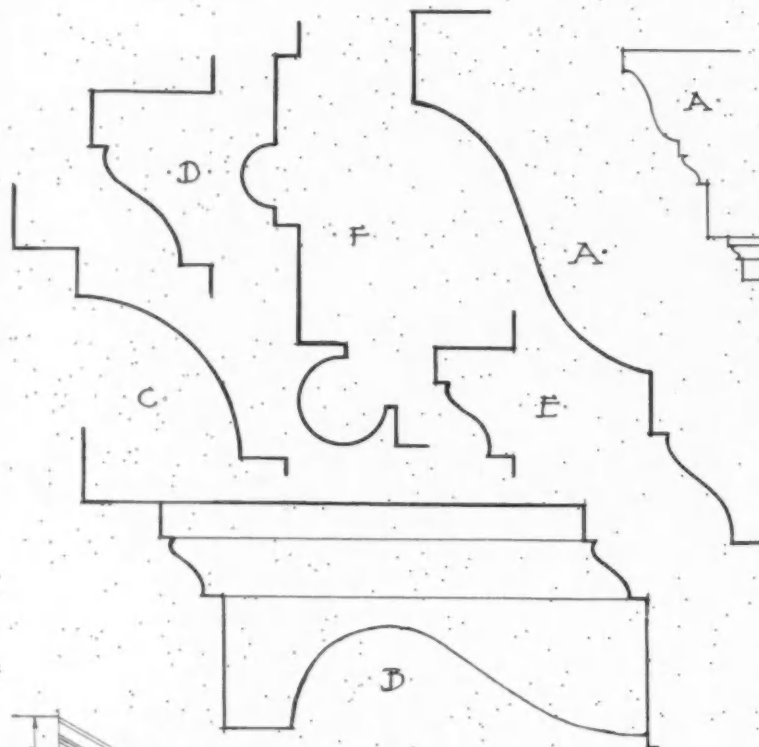


SPRING HOUSE, GOODLOE-HARPER ESTATE, ROLAND PARK, BALTIMORE
BUILT ABOUT 1790. ARCHITECT UNKNOWN

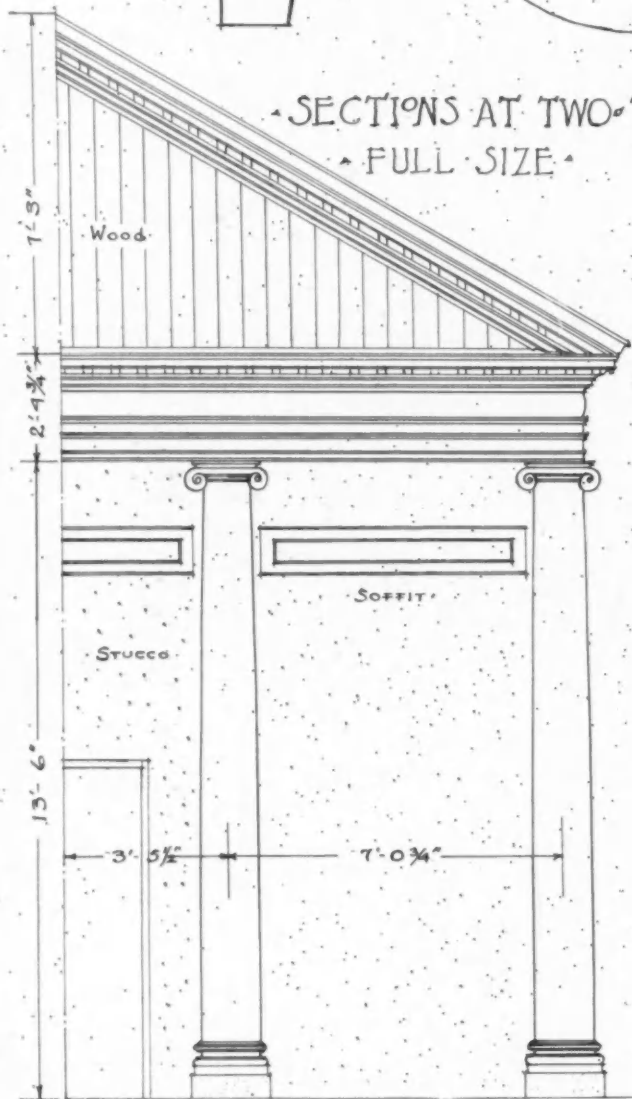
THIS charming old spring house stands on what was formerly the Goodloe-Harper estate, now a part of Roland Park. The manor house was destroyed by fire a number of years ago, and this small out-building is the sole reminder of what was in colonial times one of the show places of Mary-

land. The spring house stands alone, wholly deserted.

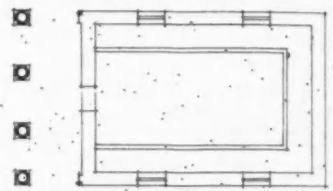
The proportions and detail show great refinement, and the carved capitals are very well executed. The tympanum was undoubtedly originally stuccoed, but no effort has been made to keep the building in repair, and it is gradually falling a prey to the elements.



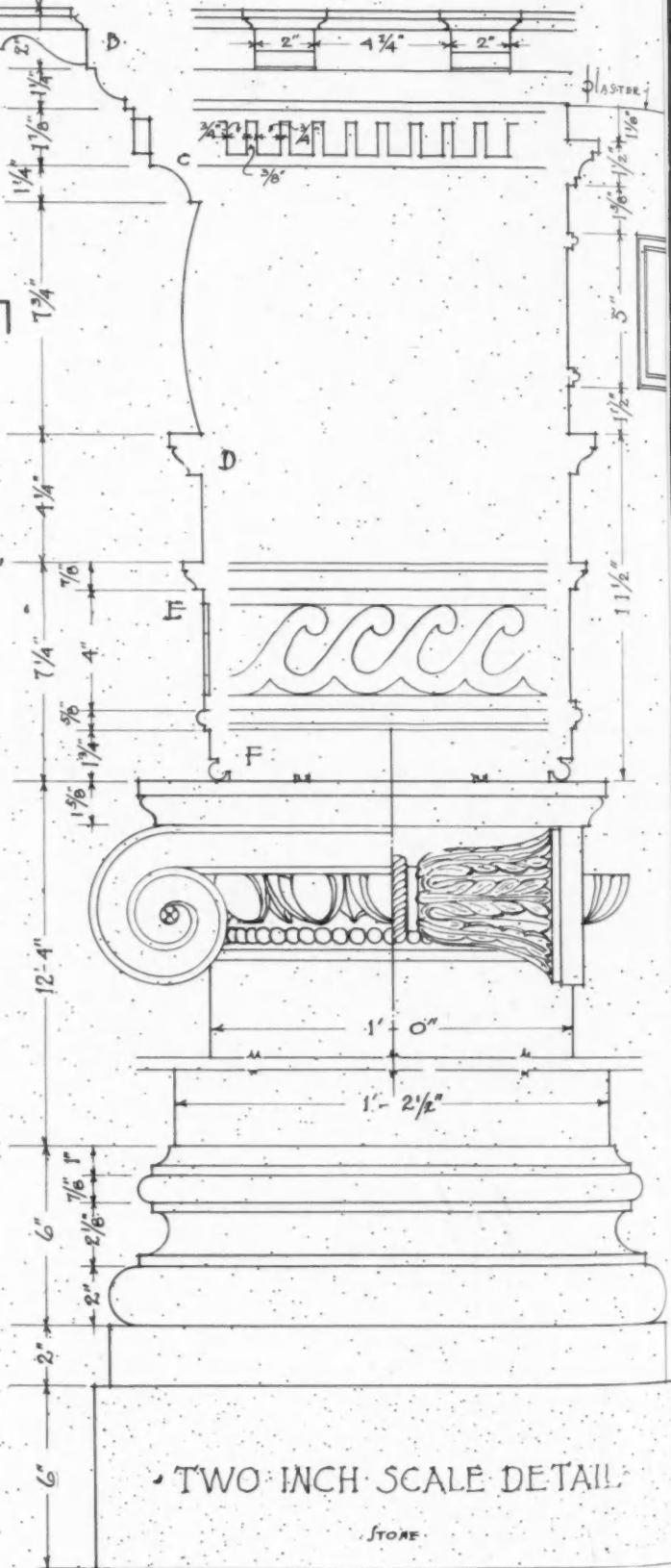
SECTIONS AT TWO-THIRDS
FULL SIZE



ONE HALF INCH SCALE ELEVATION



PLAN AT ONE THIRTY-SECOND INCH SCALE



TWO INCH SCALE DETAIL

STONE

SPRING HOUSE GOODLOE HARDER ESTATE
ABOUT 1790

ARCHITECT UNKNOWN

MEASURED & DRAWN BY
DIGGIN BUCKLER

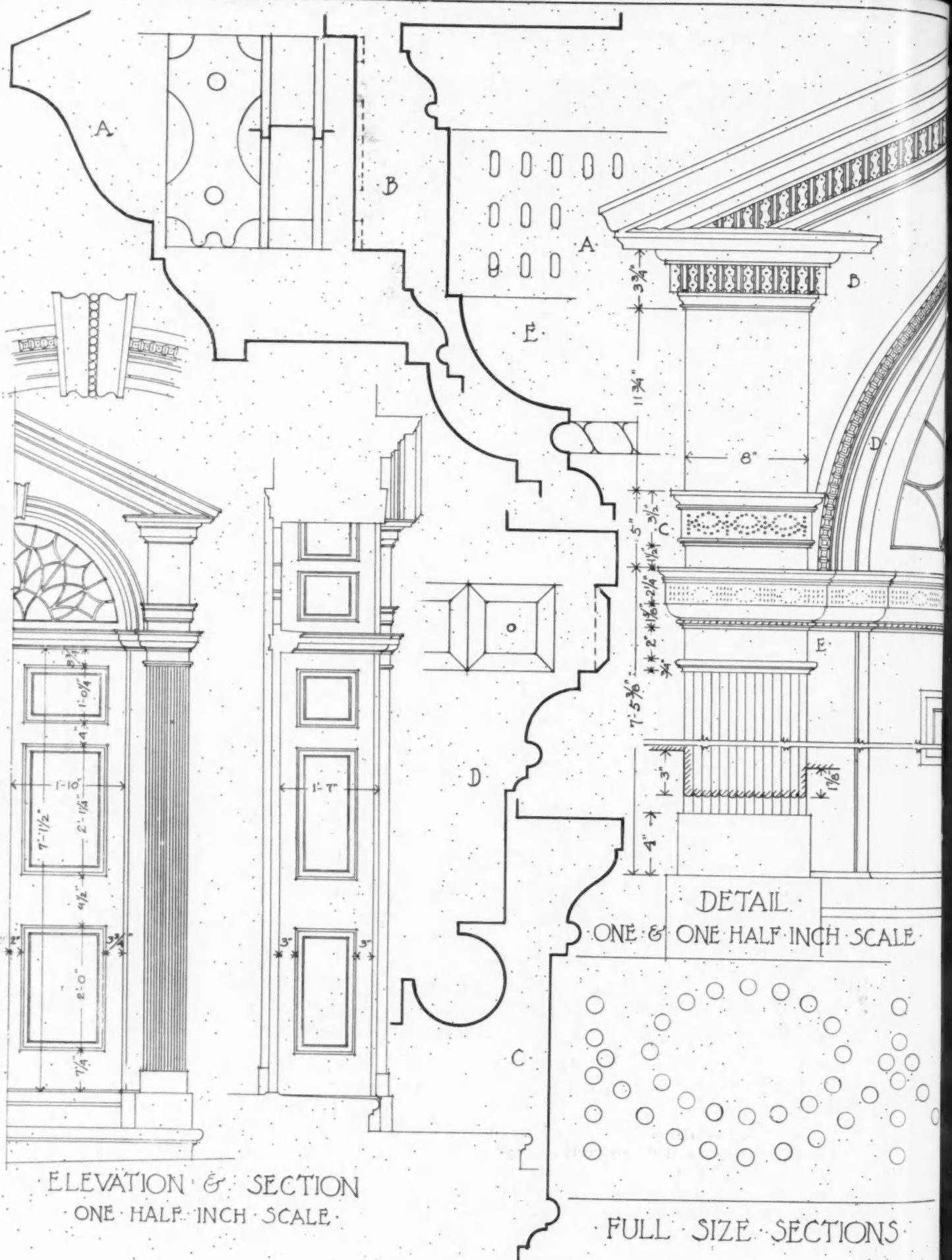


DOORWAY, THOMAS HOUSE, NEW CASTLE, DELAWARE

BUILT IN 1801 BY CHARLES THOMAS

THE doorway of the Thomas house at New Castle, Delaware, is of the conventional type of the declining Colonial style. The proportions and detail are excellent, the latter showing the same fineness of scale and minuteness of design found in the mantelpieces and interior trim of "Homewood."

The semi-circular overhead light shows a very original design carried out with wood muntins. Doorways of similar design occur on the street sides of this house, which stands on a corner. Built in 1801 by Charles Thomas of Maryland, it is now used as the parish house of the Episcopal church.



ELEVATION & SECTION
ONE HALF INCH SCALE

DETAIL
ONE & ONE HALF INCH SCALE

FULL SIZE SECTIONS

DOORWAY THOMAS HOUSE
BUILT 1801

NEW CASTLE DEL

MEASURED &
DRAWN BY
RIGGIN BUCKLER