

THE ARCHITECTURAL RECORD

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DETAIL OF ENTRANCE—RESIDENCE OF
MR. F. ZIMMERMAN, LAKEWOOD, OHIO.
BOHNARD & PARSSON, ARCHITECTS.

THE ARCHITECTURAL RECORD

VOLUME XLIV



NUMBER III

SEPTEMBER, 1918

The SMALL HOUSE

ILLUSTRATED WITH EXAMPLES OF
THE WORK OF BOHNARD & PARSSON



BY I. T. FRARY

THE problems encountered in designing the small house, though they may seem of minor importance, are in a way even more vital than those of the costly one; for although the sums involved are less, they may represent the entire capital of the owner, which necessitates the most careful consideration of every item of expense.

In planning the small house the question of cost is often paramount, but it should not be forgotten that initial investment is not the only factor to be considered. In a business plant the factor of maintenance is the important one, and the most serious thought is given to the problems which have to do with minimizing operating expense and cutting down waste. In considering the arrangement of a house, the same thing should be borne in mind; for the home is the plant in which the greatest of all

business is carried on—the business of living.

While the large house, with its corps of servants, may be planned with some disregard for convenience in carrying on menial tasks, the case is very different in the small home, where all the housework may fall upon the shoulders of the housewife or be shared with not more than one maid. Here the elimination of a half-dozen steps between kitchen and dining room means the saving of miles of walking in the course of a year.

The large kitchen, with various separate pantries and cupboards, which is essential where several servants must work simultaneously, is a great drain on the strength of the woman who does her own work. Her efficiency is wonderfully increased by having a small kitchen, with its cupboards so planned as to minimize the steps involved in preparing a



RESIDENCE OF MR. F. ZIMMERMAN, LAKEWOOD, OHIO.
Bohnard & Parsson, Architects.

meal or clearing up after one. Economy of space and of the housewife's strength should be the controlling factor in planning the small house; artistic effect should be considered of secondary importance, in spite of the fact that this is the feature which we are apt to consider first and is the feature by which the architect's skill is largely judged. A lesson in saving and efficiency may be drawn from the ugly eight and ten room houses with which so many miles of streets are being built up in our cities and towns. They are built four-square, with hall, living room, dining room and kitchen on the first floor, three or four bedrooms and a bath on the second floor and perhaps a room or two under the roof. Not an inch of space is wasted and the compactness of plan cuts down housework and the cost of heating and lighting to the last degree.

Contrasted with these frankly ugly, but efficient little housekeeping plants, we see many pitiful attempts by young architects and amateurs to build houses of small cost which shall produce an effect

of opulence. The result, all too often, is a waste of space in crazy hallways and useless corners; a waste of fuel because of the sprawling plan with its excessive area of outside walls; and a hopeless waste of nervous and physical strength on the part of the woman whose unhappy lot it is to take care of it and who finds too late that she is condemned to hard labor for life.

Of the houses that are shown here as illustrations of what can be accomplished in the way of good taste in design added to intelligent planning, four conform to the simple four-square plan, the porches and sun rooms on the Wightman, Newcomb and Thornton houses forming no part of the house proper, although they are so designed as to tie into the main structure, increasing its apparent size without affecting the simplicity of plan. It is interesting to note that although the general plan of these three houses is practically identical, entirely different exteriors have been produced, not only because of the styles adopted, but also by the treatment of porches and the addi-



VIEW IN GARDEN—RESIDENCE OF MR. M. B. VILLAS, CLEVELAND, OHIO.
Bohnard & Parsson, Architects.

tion of a two-story bay to one of them. The Lemperly house, although considerably larger than the others, has the effect in the photograph of being smaller because of the simplicity of its lines and the absence of porches to increase its apparent size.

An important feature which is often overlooked in planning rooms is the relation of wall spaces and openings to furniture. It is not uncommon, even in houses of the better class, to find that no thought has been given to the placing of furnishings; bedrooms are built, in which there is no place for a bed; dressers have to stand in front of windows; and the piano fills the room. The writer has known of several instances where the prospective occupant of a new home has ordered a large, comfortable sofa to minister to future hours of ease, only to find upon its delivery that not a door or window was large enough to permit of its entry into the family circle.

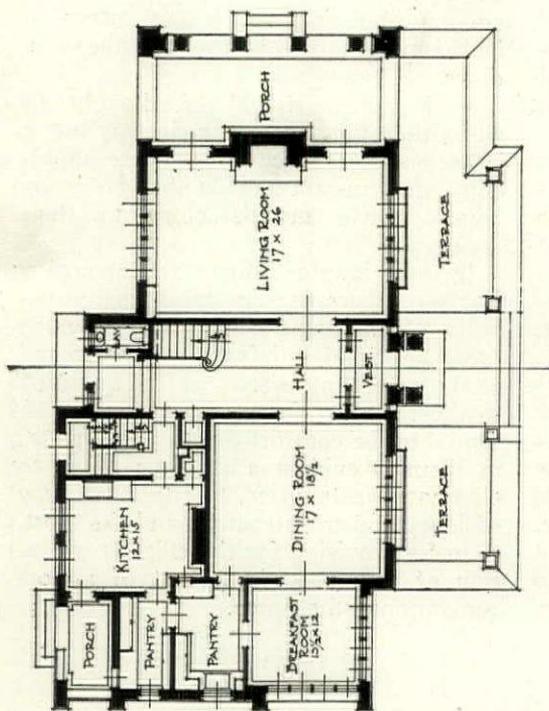
It is not at all uncommon to find stairways so narrow and crooked as to necessitate hoisting the larger pieces of bedroom furniture in through the windows.

Such things should be thought of when the plans are being drawn, and it is because of inattention to these apparently insignificant details that so many houses prove unsatisfactory to their occupants.

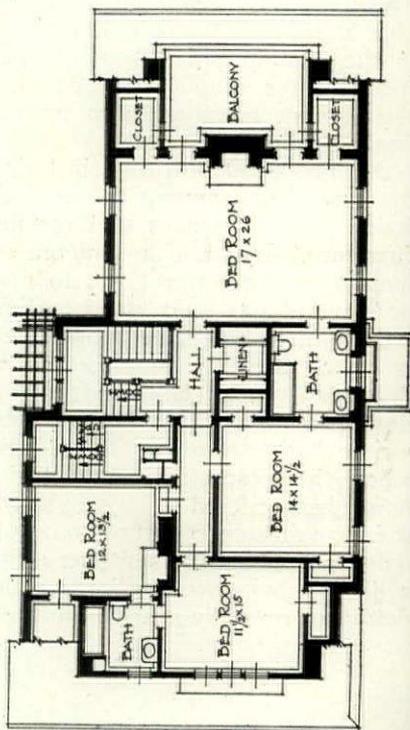
In this group of houses by Bohnard & Parsson, there is illustrated the possibility of designing small houses which are artistic and satisfying to the eye and at the same time show careful attention to the practical features that are so essential to the comfort of their occupants; in them is evident a studious effort to eliminate waste space, to effect economy of labor and maintenance, and, in short, to make provision for the efficient operation of that most important of all organizations—the home.



RESIDENCE OF MR. M. B. VILLAS, CLEVELAND, OHIO.
Bohnard & Parsson, Architects.



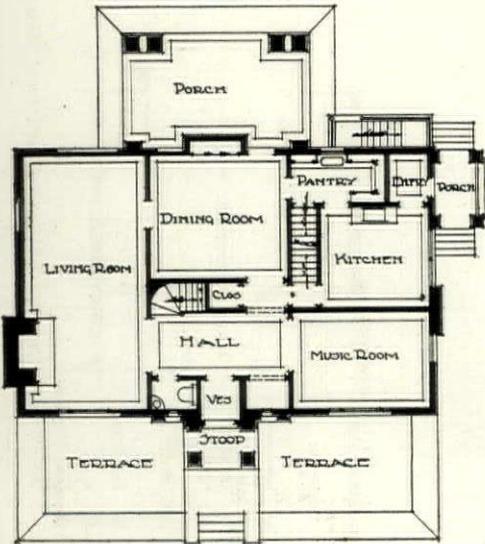
FIRST FLOOR PLAN.



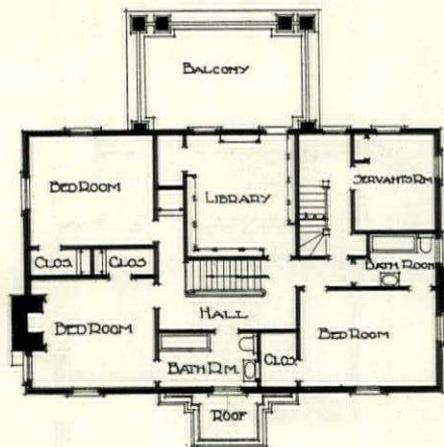
SECOND FLOOR PLAN.



RESIDENCE OF MR. PAUL LEMPERLY, LAKEWOOD, OHIO.
Bohnard & Parsson, Architects.



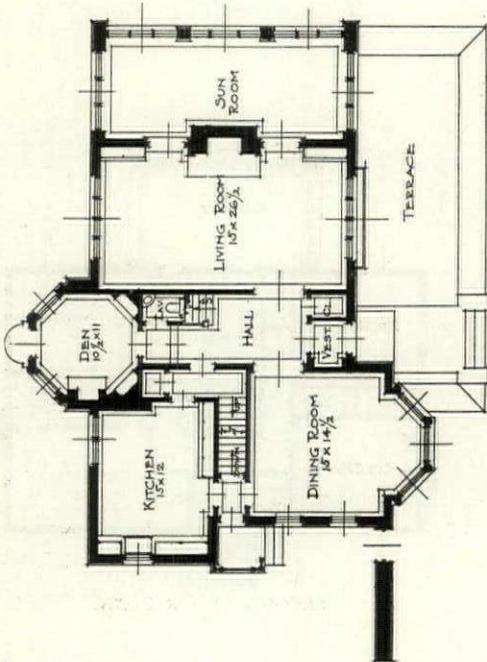
FIRST FLOOR PLAN.



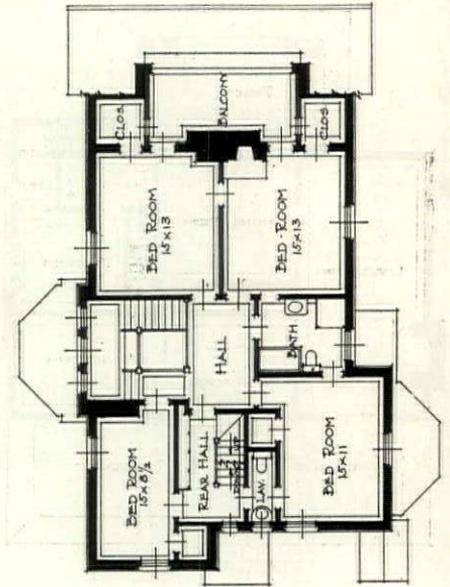
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RESIDENCE OF MR. C. J. RAINEY, LAKEWOOD, OHIO.
Bohnard & Parsson, Architects.



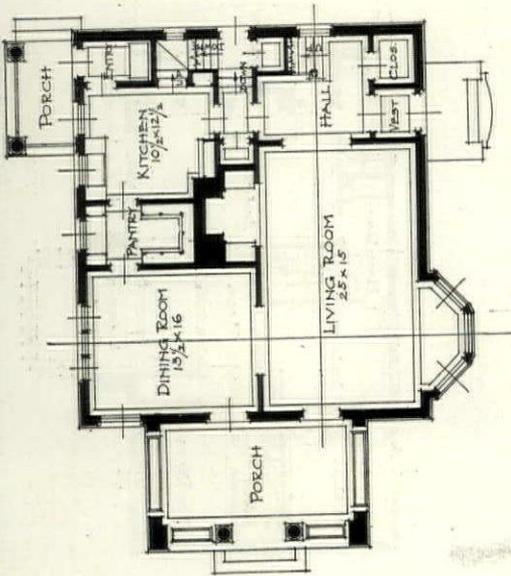
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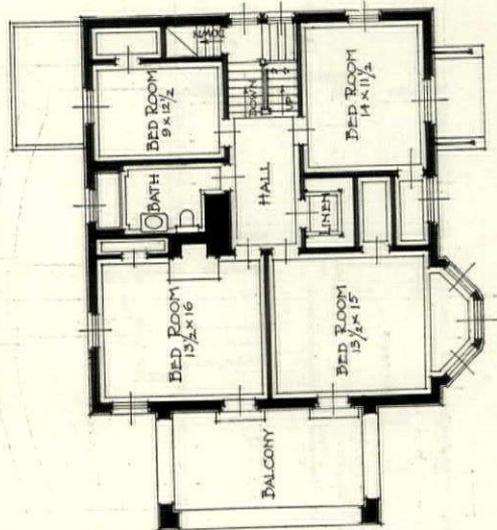
SECOND FLOOR PLAN.



RESIDENCE OF MR. F. C. THORNTON, EAST CLEVELAND, OHIO.
Bohnard & Parsson, Architects.



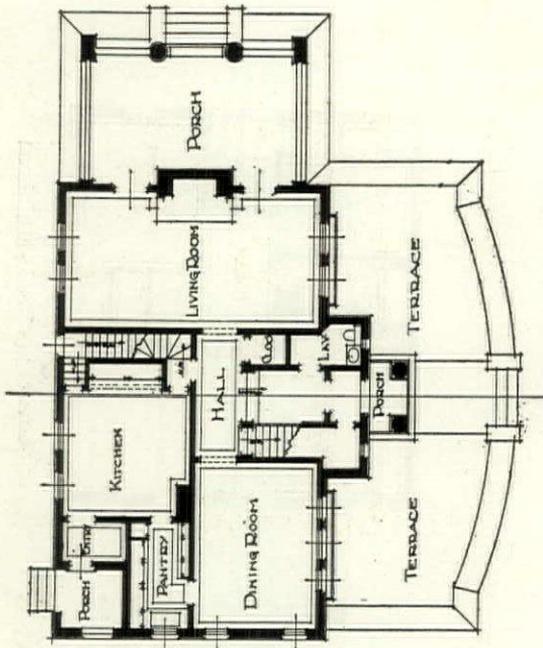
FIRST FLOOR PLAN.



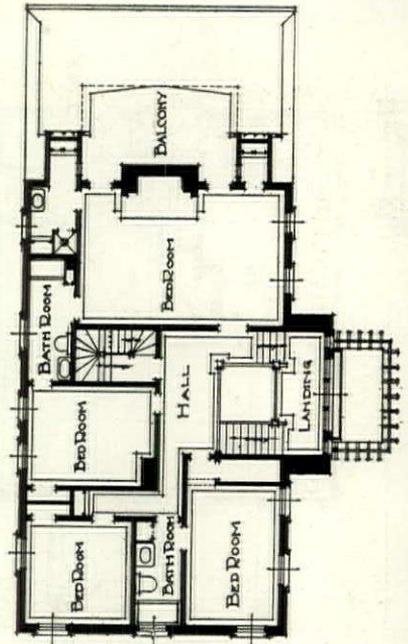
SECOND FLOOR PLAN.



RESIDENCE OF MR. C. E. STAMP, CLEVELAND, OHIO.
Bohnard & Parsson, Architects.



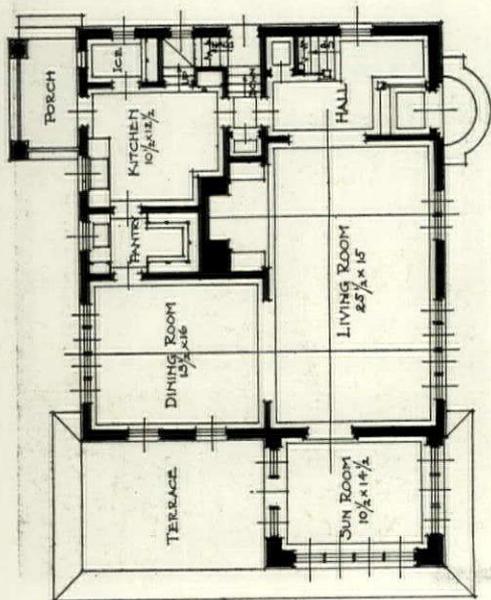
FIRST FLOOR PLAN.



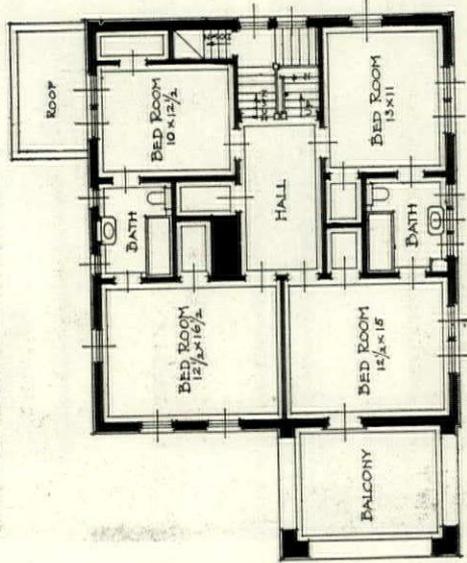
SECOND FLOOR PLAN.



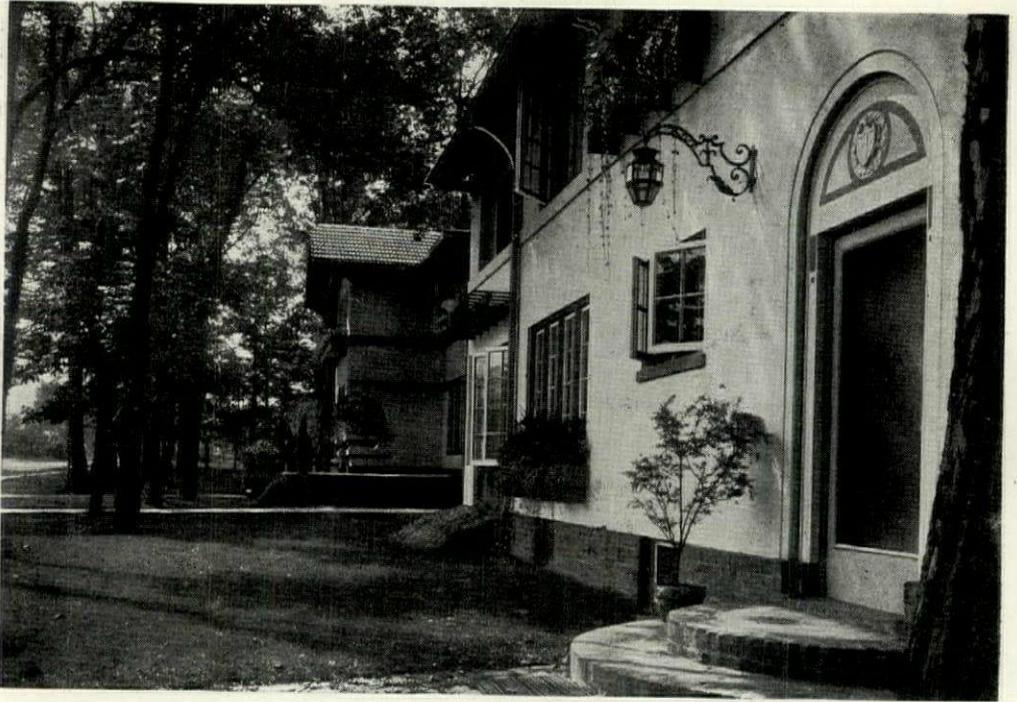
RESIDENCE OF MR. W. P. WIGHTMAN, CLEVELAND, OHIO.
 Bohnard & Parsson, Architects.



FIRST FLOOR PLAN.



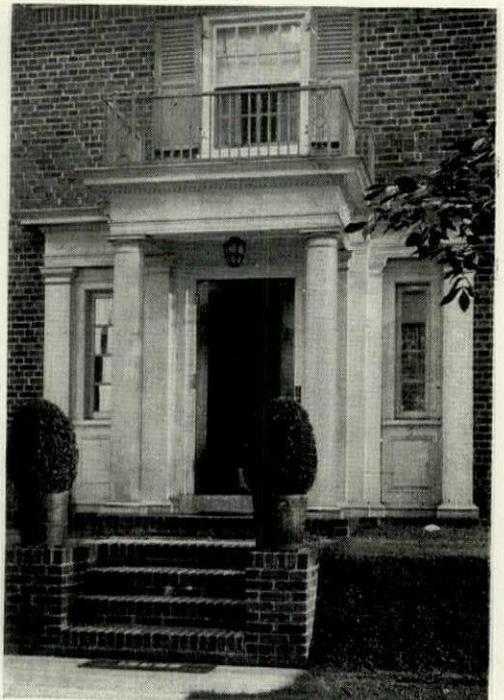
SECOND FLOOR PLAN.



RESIDENCE OF MR. W. P. WIGHTMAN, CLEVELAND, OHIO.
Bohnard & Parsson, Architects.



DETAIL OF ENTRANCE—RESIDENCE OF MR.
C. E. STAMP, CLEVELAND, OHIO.
Bohnard & Parsson, Architects.



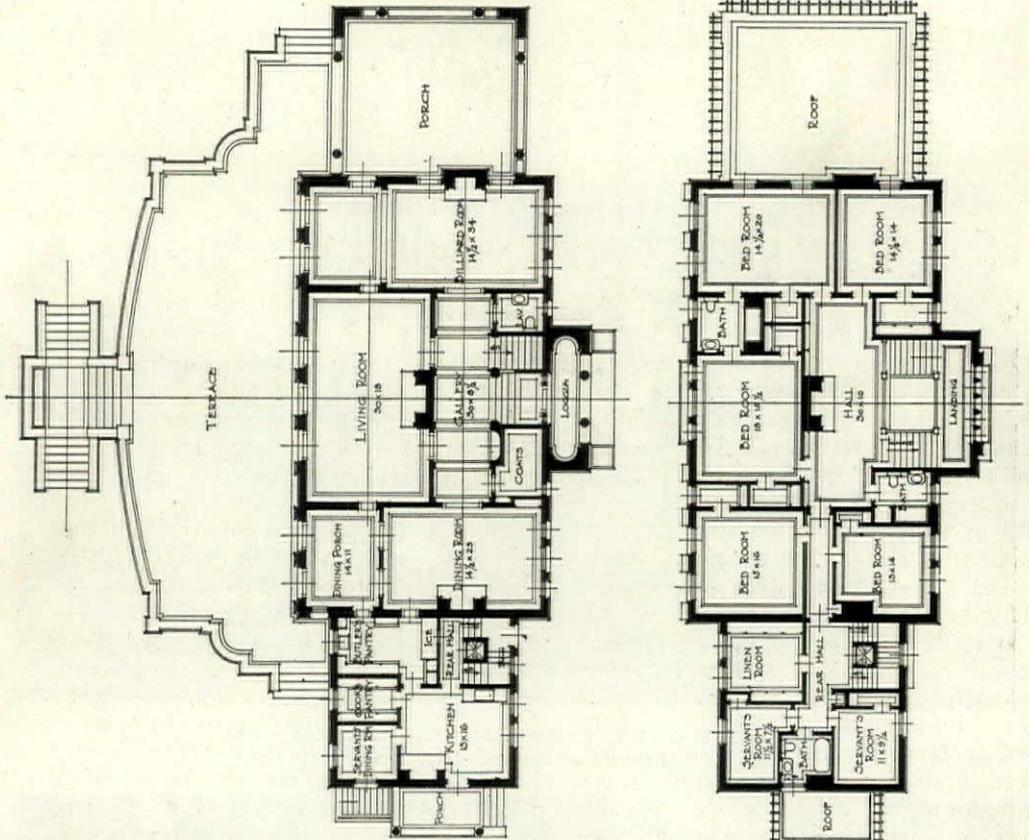
DETAIL OF ENTRANCE—RESIDENCE OF MR.
PAUL LEMPERLY, LAKEWOOD, OHIO.
Bohnard & Parsson, Architects.



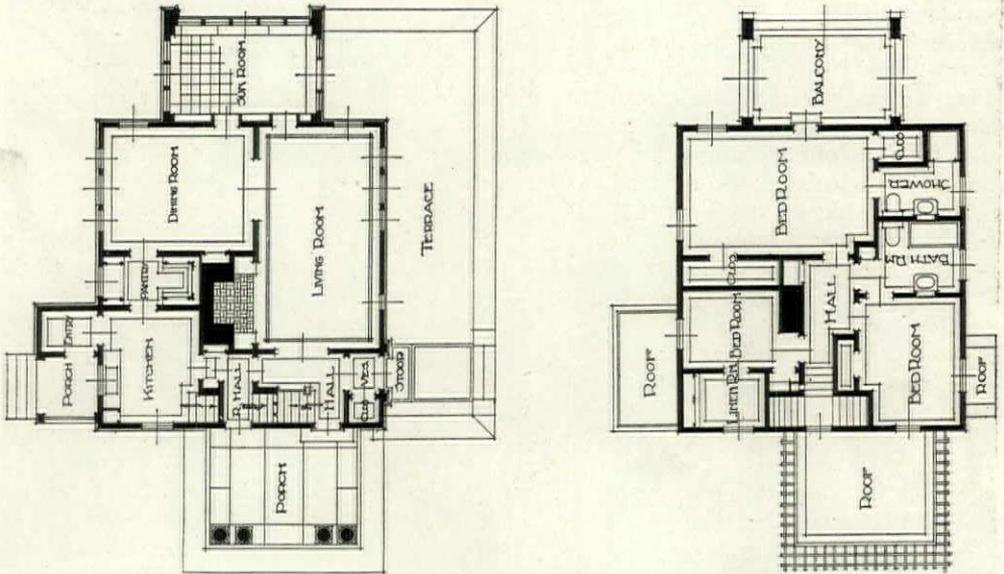
RESIDENCE OF MR. F. ZIMMERMAN, LAKEWOOD, OHIO.
Bohnard & Parsson, Architects.



RESIDENCE OF MR. C. G. NEWCOMB, LAKEWOOD, OHIO.
Bohnard & Parsson, Architects.



FIRST AND SECOND FLOOR PLANS—RESIDENCE OF MR. F. ZIMMERMAN, LAKEWOOD, OHIO.
Bohnard & Parsson, Architects.



FIRST AND SECOND FLOOR PLANS—RESIDENCE OF MR. C. G. NEWCOMB, LAKEWOOD, OHIO.
Bohnard & Parsson, Architects.

THE OFFICE BUILDING OF THE DEPARTMENT *of the* INTERIOR AT WASHINGTON, D. C.



CHARLES BUTLER, ARCHITECT



By Charles Butler

THE erection of an office building for the Department of the Interior represents the first successful attempt of a department of the Government to build for itself a home planned out to meet its very definite needs.

When Congress authorized the construction of the building considerable opposition was aroused by the site selected and by the type of building proposed, but the event has proved the good judgment of those responsible. It must be borne in mind that the Department of the Interior comprises many divisions whose work is largely technical in character. No such building as those planned in the competitions of 1910 for the Departments of Justice and State could have met the requirements of the various branches of the department for which space was needed.

Even such a building as the Bureau of Engraving and Printing is not, in the judgment of ex-Director Ralph, planned for the greatest degree of efficiency, while the handsome colonnade along the west front notably diminishes the light in the offices on that side of the building. It was felt by those most interested, that by placing the Interior Department Office Building on the site selected, entirely outside the Mall group, it would be possible to design a building which should meet in every detail the practical requirements of the Department without detracting from the monumental ensemble proposed for the Mall.

The legislation authorizing the erection of the building stipulated that it be an office building of modern type and be designed in the office of the Supervising Architect, who was authorized to call on

an outside architect for assistance. As a result, the author was employed by the Treasury Department to design the building and authorized to organize an independent office force for this particular work.

The various sketches for this building had been prepared in the office of the Supervising Architect during the five or six years preceding, and the various divisions to be housed had crystallized their requirements, so that it was possible to design the building—which in its available floor space is said to be the second largest in the country, only being exceeded by the Equitable Building in New York—with all its complicated requirements, in the short space of nine months, from the commencement of the first sketches to the completion of working drawings.

The plot is about 400 feet square, with streets on all sides. The general plan takes the form of the letter E, with the back to the north on F street and the arms stretching south. This plan permits of opening the two courts to the south, an arrangement which experience has proved to be best in the climate of Washington.

The height of the building, determined by the District of Columbia regulations for residence streets, is six stories on the principal (F street) front, which is increased to seven stories on E street by the drop in the grade toward the south.

The three pavilions forming the elevation on E street are connected by two-story links, which mask the service courts from the street, but permit the free entrance of light and air above the level of the first floor.

On the E street front, midway between





18TH STREET ELEVATION, THE OCTAGON IN THE FOREGROUND.

the wings are entrance driveways leading down to the two great courts, the pavement of which is at the basement level, so that the court elevations show eight stories above ground.

In the southern part of the eastern court, at the basement level, is the pressroom containing the great color presses of the map-making division of the Geological Survey, with the stores of paper and the lithographic stones; in the upper part of this wing, above the pressroom, is the photographic section of the Survey.

The general arrangement of the plan presented an interesting problem. The existing street car lines and the distribution of population determined the placing of the principal entrances on F street, and the divided occupancy determined their distribution.

Of the six tenants of the building the largest is the Geological Survey, which occupies almost the entire F street front, together with the central wing, the pressroom wing and about half of each of the two-story southern links.

The next tenant in point of area occupied, the General Land Office, takes the

entire west wing, except the top floor, with the lower story devoted to its great filing service.

The Reclamation Service has the top floor of the west wing, while in the east wing the lower stories are occupied by the Bureau of Mines, which also has half of the easterly of the two south links. The third and fourth floors of the north wing are occupied by the Bureau of Indian Affairs, and the fifth and sixth floors by the offices of the Secretary, whose public office is at the southern extremity of the wing, with an extended view of the east, south and west from the Capitol to Arlington.

The question of handling the tenants of the building is slightly different from that presented by the ordinary office building, for all employes arrive at and leave the building at the same hours, and the luncheon hour is the same for all. The necessity for surveillance of its own employes by each division is apparent, and as this would have been defeated by free circulation on each floor, it was determined to place on the F street front three entrances, each corresponding to a wing



PRESSROOM WHERE GEOLOGICAL SURVEY MAPS ARE PRINTED.
In the Distance Is the Great Five-Color Press.

of the building and to a group of stairs and elevators. The employees of each division are thus sorted on their entrance into the building, and the same system applies to visitors, who are directed on entering to the elevator leading to the division they wish to reach.

In effect, the public portion of the building is limited to the three entrances on F street, the broad corridor connecting them, and the Assembly Hall and Library to which this corridor gives access.

At the south end of each wing is a secondary entrance reached from the ground floor level, with staircase and one passenger elevator in each wing, and freight elevators accessible from the court at the basement level in the eastern and central wings.

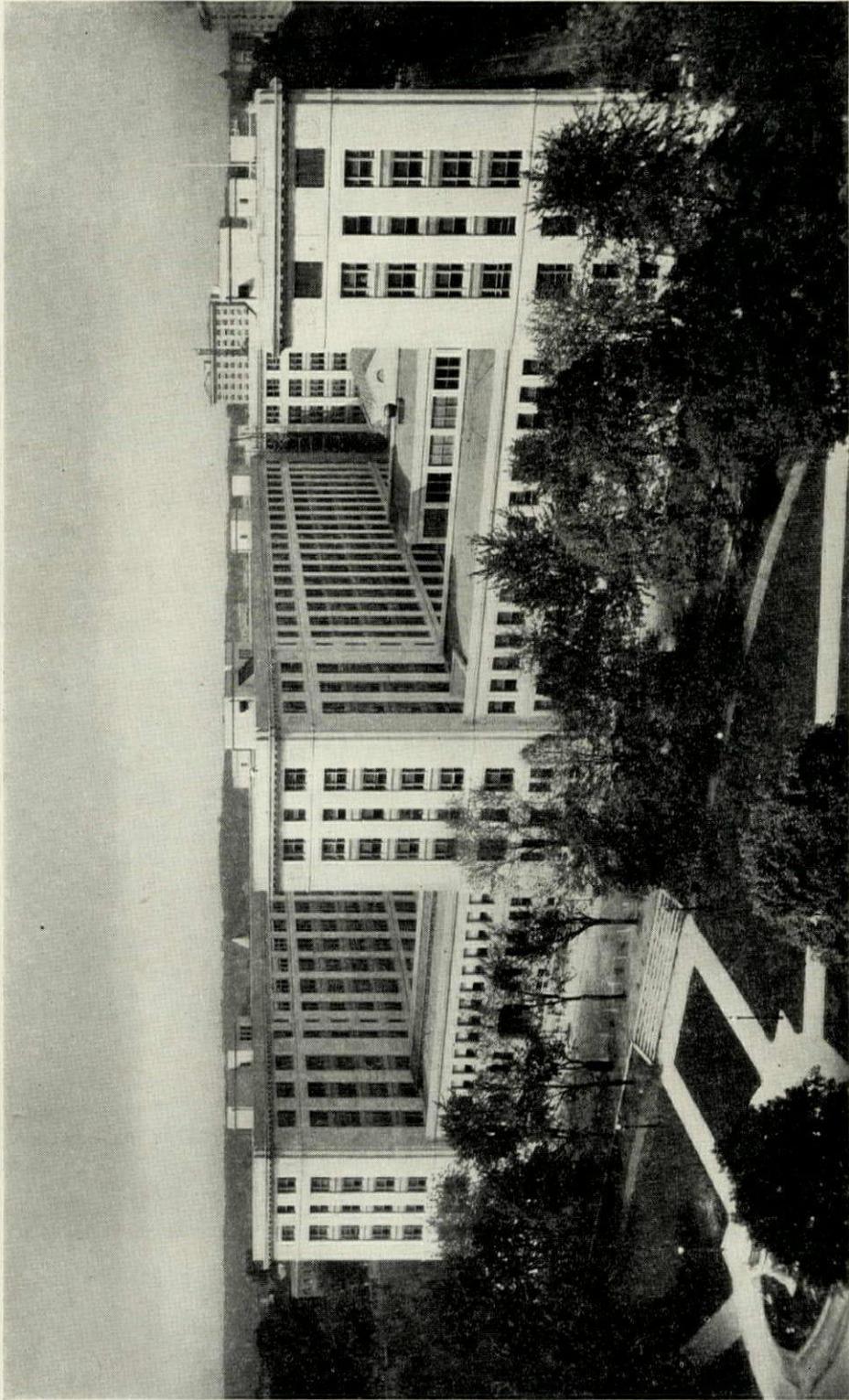
An entrance with driveway and marquise is provided on the east side near the south end of the Eighteenth street wing for the use of the Secretary or any other visitor who may desire to drive up under cover.

The stairways adjacent to each elevator group are carried from basement to roof.

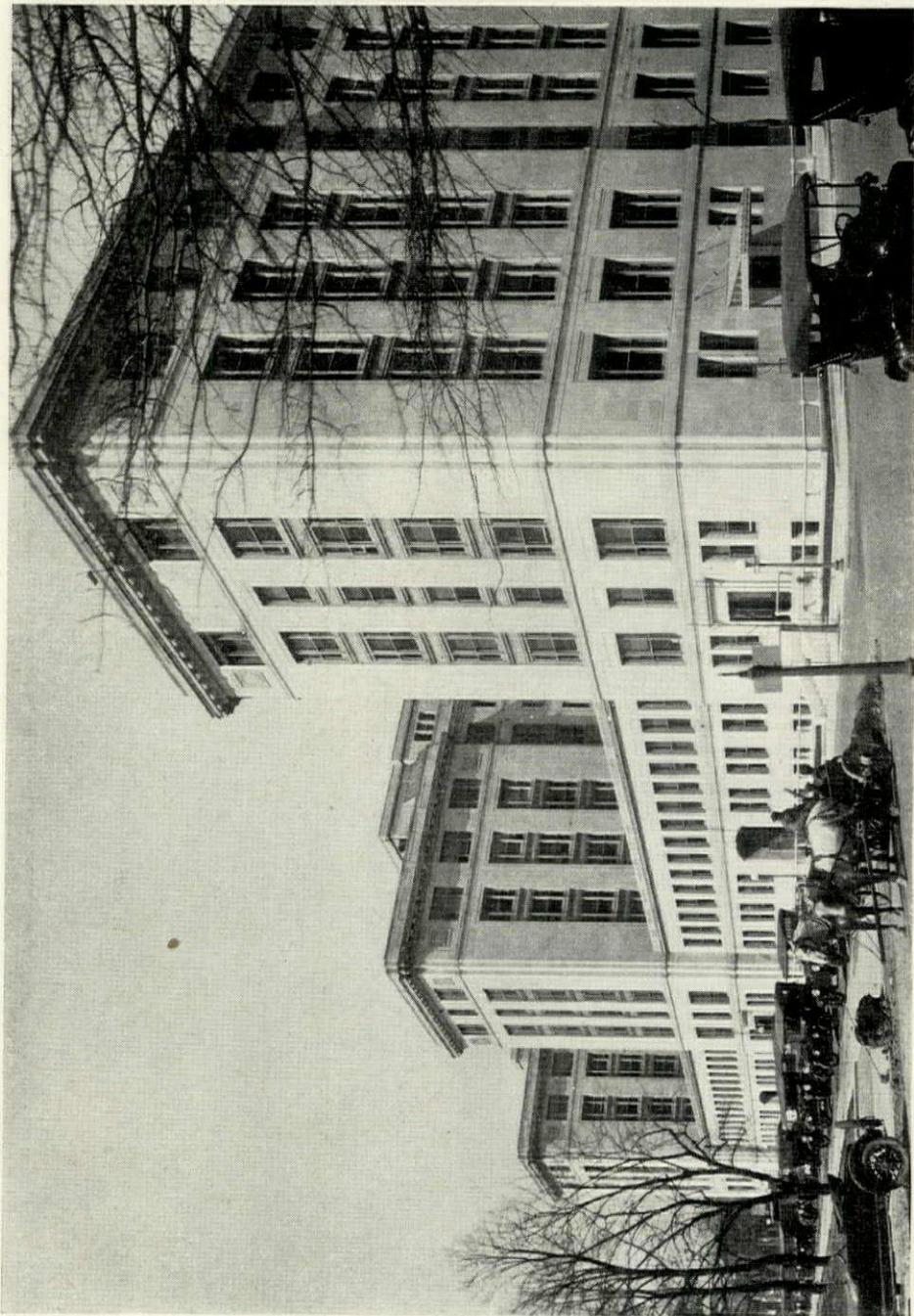
Before proceeding with the design of the building a careful study was made of the best existing office buildings in New York by the Supervising Architect, Mr. Wenderoth, Director George Otis Smith of the Geological Survey, Chairman of the Building Committee, and the writer. This survey showed that a large amount of space in even the most modern of these buildings was to all intents and purposes wasted because of bad lighting. In order to avoid this common defect the standard depth of twenty feet was adopted for all rooms in the building.

The central corridors are eight feet in width, and where corridor and rooms are thrown into one, as in the Land Office File Room, the full inside width of the wing is forty-nine feet. The shallow room depth permitted the reduction of floor heights to twelve feet from floor to floor, a very distinct advantage, in view of the height restriction imposed by the District regulation.

A very large proportion of the smaller offices are occupied by two men engaged on scientific work requiring ample nat-



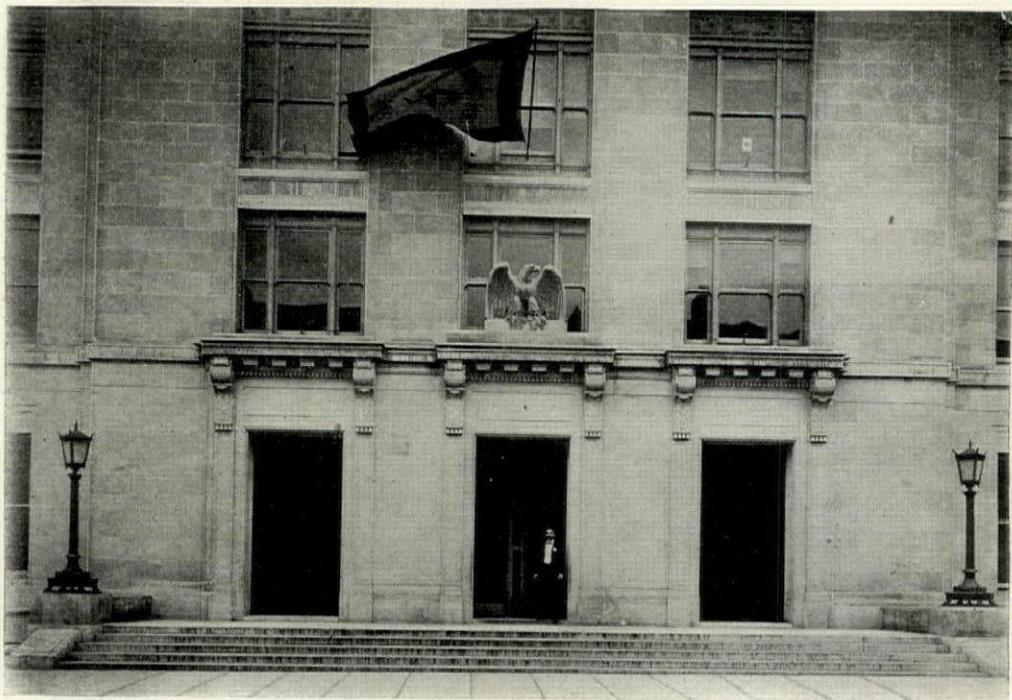
ELEVATION (REAR) ON THE PARK
FORMED BY THE INTERSECTION OF
E. STREET AND NEW YORK AVENUE.



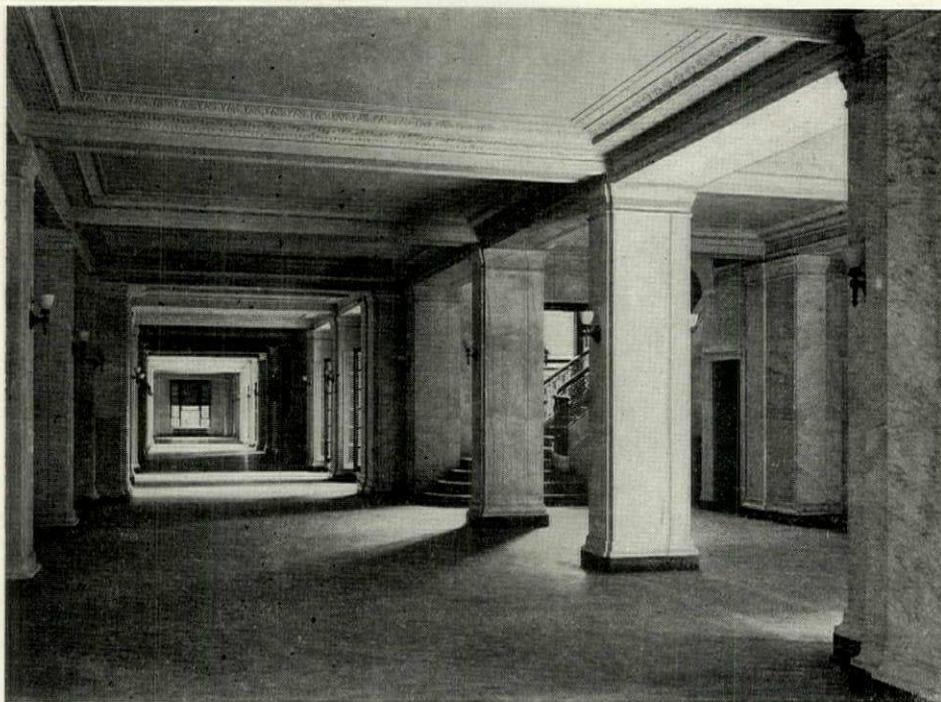
ELEVATION CORNER OF E AND 18TH
STREETS, FACING ON SMALL PARK.



ELEVATION (REAR) ON THE PARK,
SHOWING SIZE OF INTERIOR COURTS.



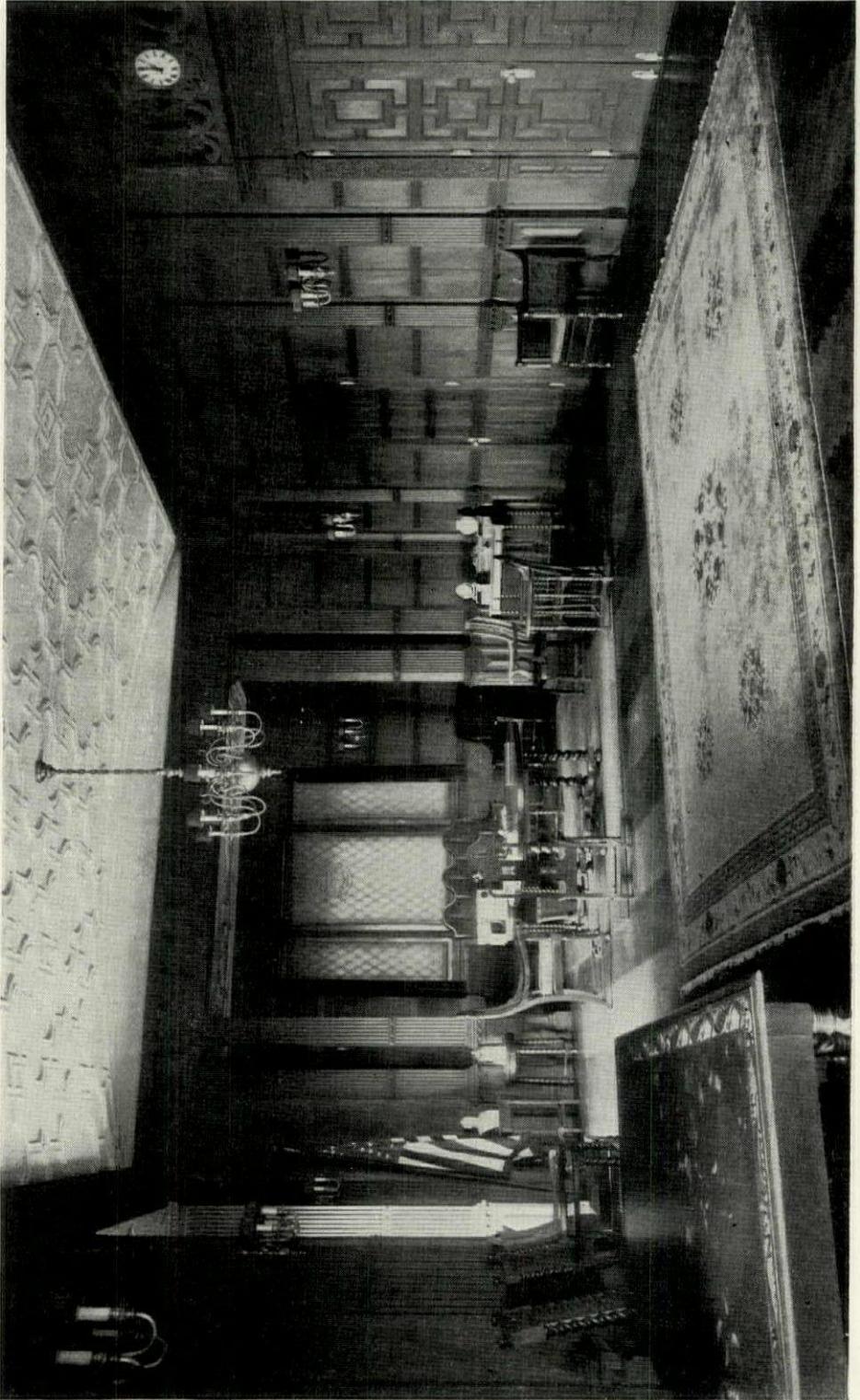
DETAIL OF MAIN ENTRANCE ON F STREET.



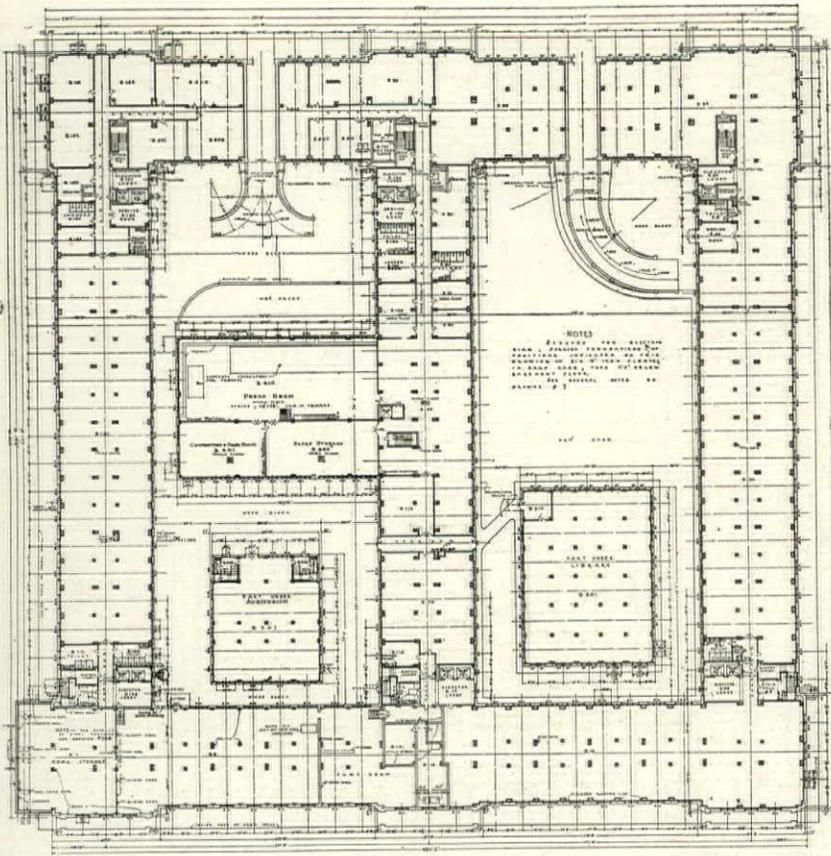
MAIN PUBLIC CORRIDOR, FIRST FLOOR.



START OF MAIN STAIRWAY.



PUBLIC OFFICE OF THE
SECRETARY OF THE INTERIOR.



BASEMENT FLOOR PLAN.

ural light. This type of occupancy led to the adoption of the standard column spacing of 14' 4", which was most economical in distribution of steel.

In the effort to give ample light to these offices a masonry opening of 7' 5½" was adopted for outside walls and on the courts this was increased to 10' 0". In other words, in the street elevations the openings are over 50% of the total wall space—the voids are greater than the solids, and on the courts they occupy 70% of the total surface. As a result the building has not an inch of badly lighted space, in either interior or exterior offices.

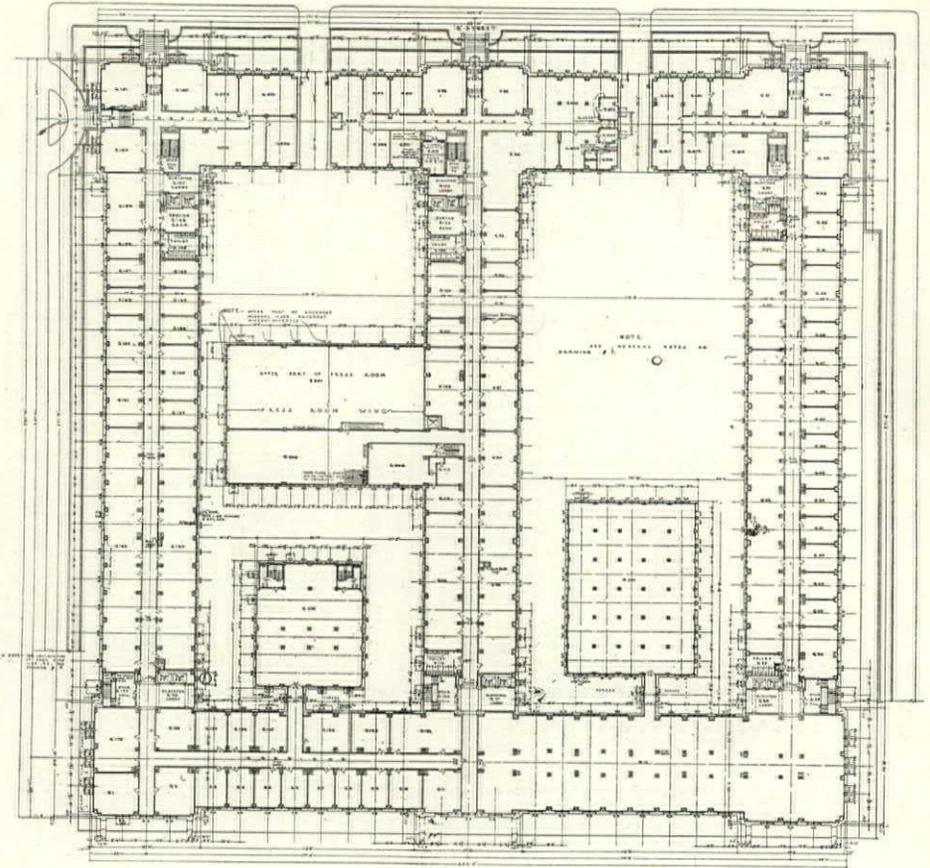
With the exception of the Secretary's wing on the sixth floor, the long north and south corridors are carried through unobstructed from end to end, with outside light at the extremities; in addition, all office doors are glazed, with the result

that notwithstanding their great length, 400 feet, these 8-foot corridors give the impression of ample width and lighting.

Among the interesting features of the building are the map printing and photographic divisions, to which reference has been made, the laboratories of the Geological Survey and the Bureau of Mines, and the copper plate engravers' studios, where the men work in couples, each with his own window, so that he can control his own lighting.

The Library and Auditorium are separate buildings, projecting into the courts, accessible from the public corridor on the first floor and with two lower floors for storage.

The Auditorium, with a seating capacity of about 300, is especially arranged for motion pictures, but has ample natural lighting as well.



GROUND FLOOR PLAN.

The Library of the Geological Survey is planned to house the largest collection of the sort in the world. To the ordinary stacks are added special map cases, all grouped near the entrance, while the reading and working space is at the south end of the building, on the court, or in separate rooms. The remaining room of special interest is the Secretary's public office. This room is wainscoted from floor to ceiling in paneled English oak, with a molded rib plaster ceiling, recessed windows and a simple Tudor manel, with paneled oak overmantel. Adjoining is the Secretary's private office, with paneled walls and ornamental plaster ceiling.

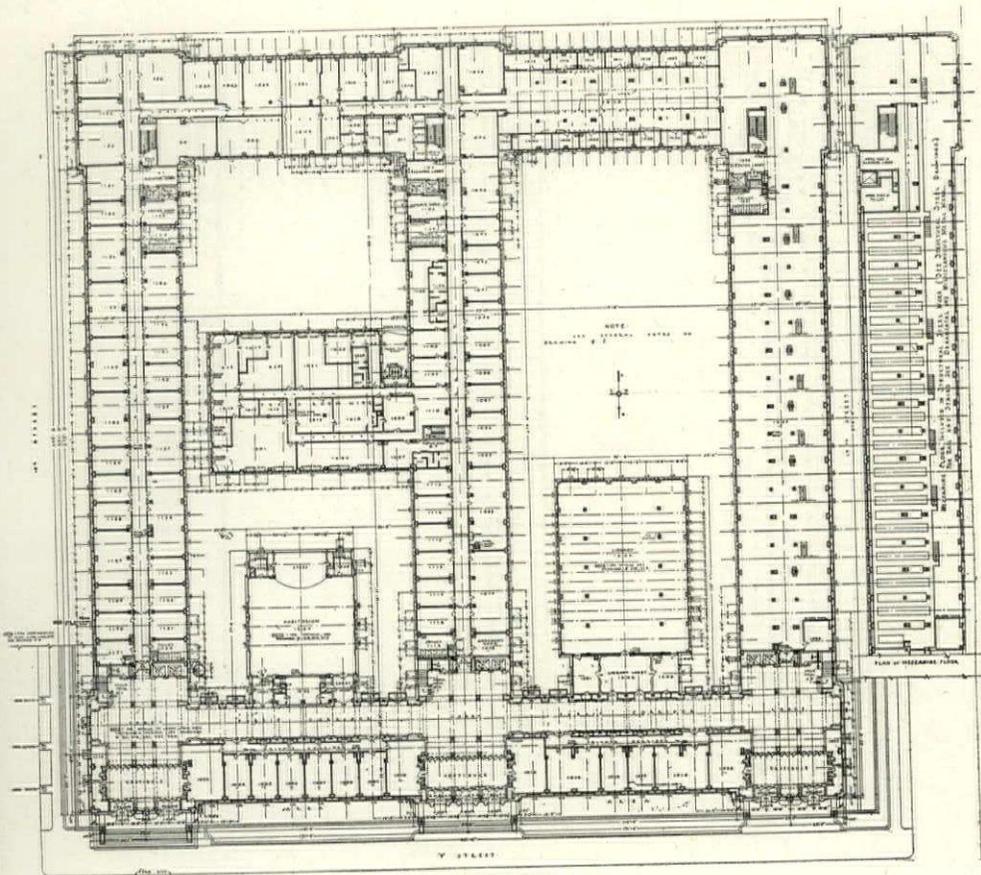
In connection with the detail plans Col. J. Hollis Wells was called in as an expert in office buildings and their mechanical equipment, and his long experience was

of great assistance in solving the many problems which had to be met.

During the progress of the preparation of working drawings, careful approximate estimates were procured by Col. Wells from Messrs. Thompson & Starrett. The building has the standard equipment of a high class office building, with wash basins in each office, ample public and private toilet rooms on each floor, ice water in hallways, telephone and fire alarm equipment throughout.

In addition provision is made for the special requirements of the laboratories, such as earthenware wastes where acids are employed, high pressure steam, electric power feeders, etc.

In order to avoid the possibility that the low bid might exceed the appropriation of \$2,500,000, which in the case of Government work means readvertising



FIRST FLOOR PLAN.

for bids and the consequent delay, it was determined to design the building in brick, with stone basement and stone cornice.

Owing to the fact that the final estimates were taken when the market was about at its lowest point, the low bid was far below the amount of the appropriation.

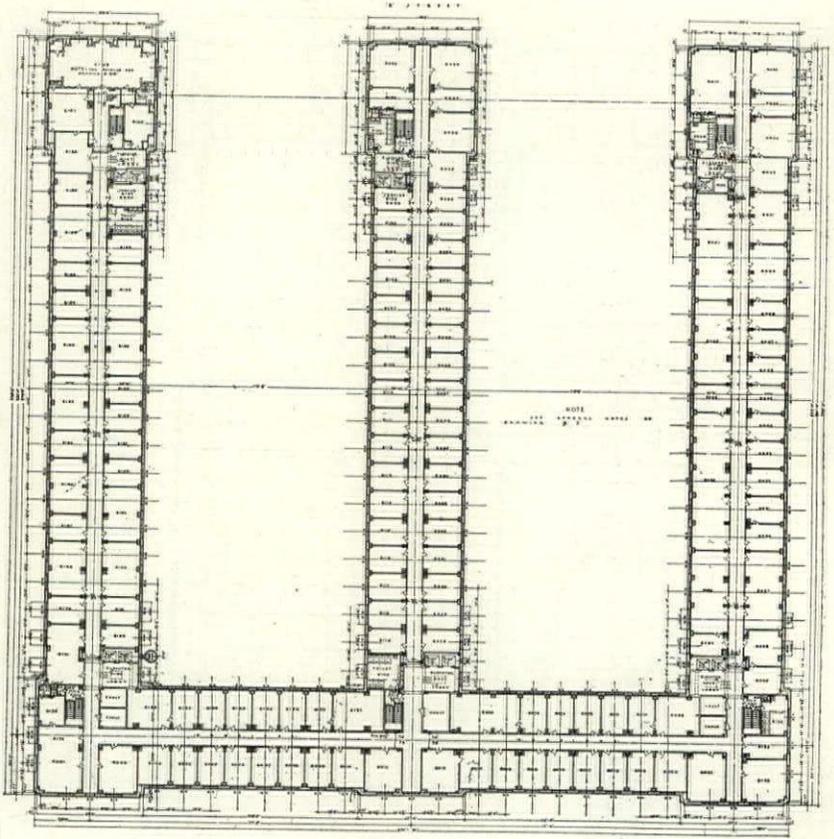
Secretary Lane, who had throughout the preparation of the plans followed the work with great interest and sympathy, was able to persuade the Treasury Department that it was proper to expend the remainder of the appropriation in securing the best possible building. It was therefore decided to face the entire building, both the street and court fronts, with limestone. As the writer had left for France immediately on the completion of the working drawings, the re-study necessary for the change from brick

to limestone was carried out by Mr. Charles Morris, Chief Designer of the Supervising Architect's office.

The principal modifications are on the F street front, where the entrances were simplified by the omission of columns, while the dimensions of openings and details of cast iron window fills are unchanged. One of the most interesting items in Mr. Morris' work is the very low relief which he has adopted for sunk frames around windows, belt cornices, etc., in some cases not exceeding one-quarter inch.

Since the completion of the building Secretary Lane has utilized a portion of the unexpected funds for the erection on the roof of a restaurant and roof garden for the benefit of the many employees of the department.

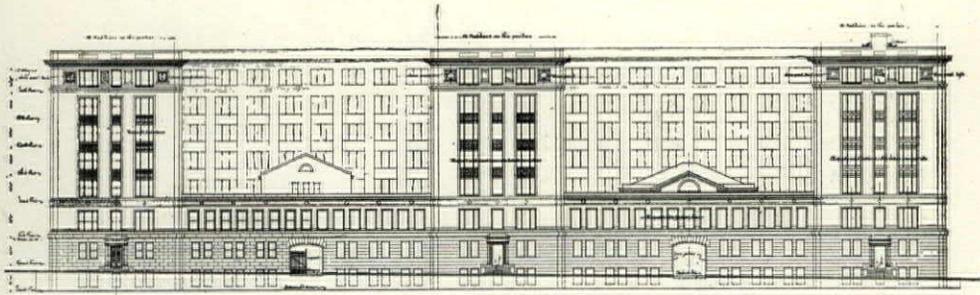
With the completion of this work, the



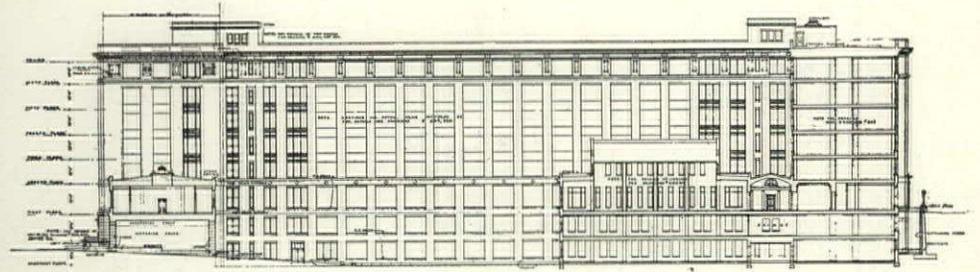
SIXTH FLOOR PLAN.



"F" STREET ELEVATION.

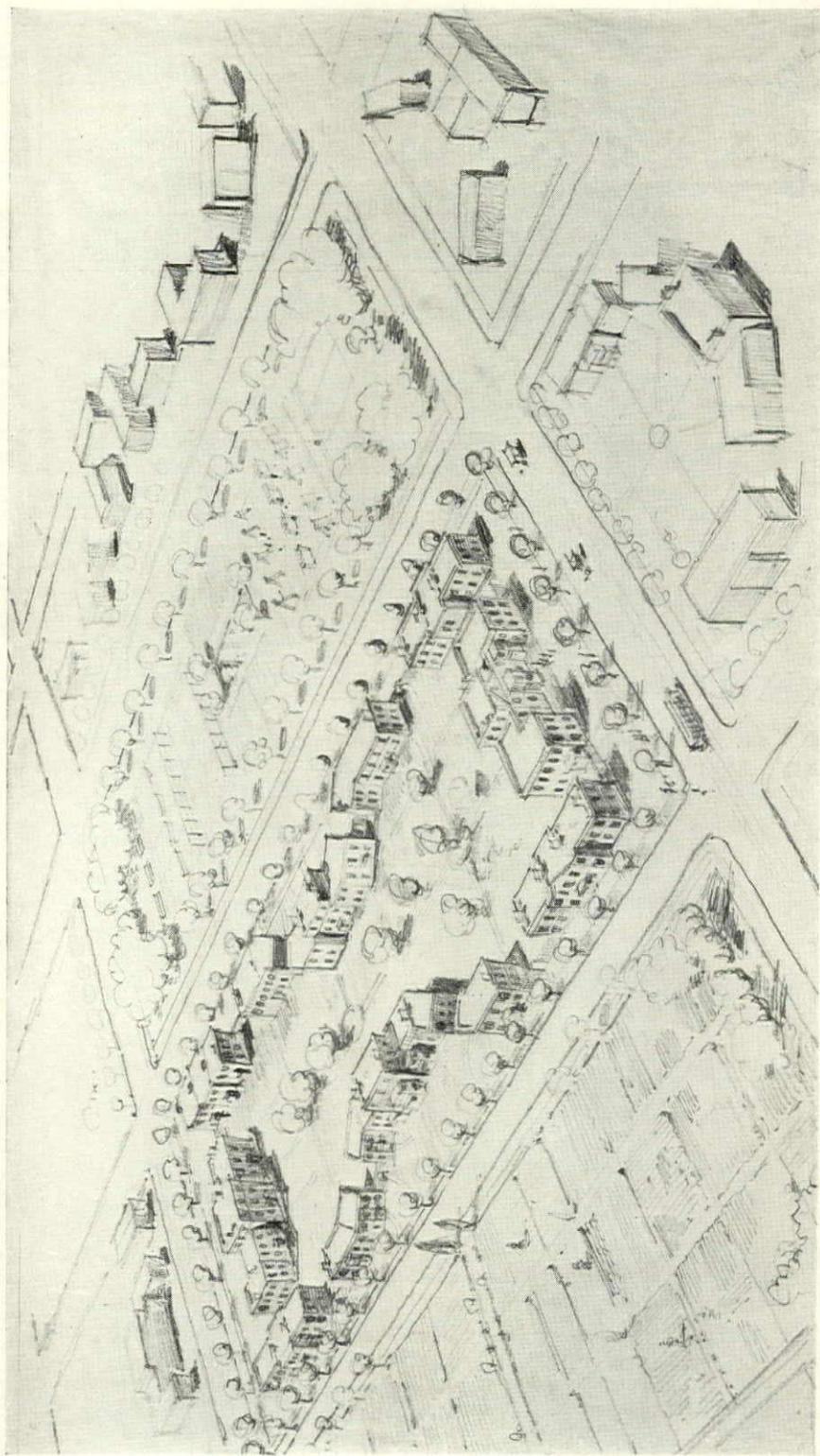


ELEVATION TO "E" STREET.



SECTION THROUGH WEST COURT LOOKING WEST TOWARD 19TH STREET.

Interior Department will have a home equipped with every detail for convenience, and planned to produce efficient work. While its purpose is utilitarian, by its very simplicity the huge building gains a charm and dignity which is not always vouchsafed to more pretentious structures.



VIEW OF ONE BLOCK OF PROPOSED APARTMENT ARRANGEMENT.

HOMES *for* WARTIME WORKERS



By Alfred C. Bossom

THE very high plane established by the United States Shipping Board, Emergency Fleet Corporations, Housing Department, entitles the members to the enduring gratitude of workers and of the entire architectural profession.

This work might have been handled in a way that would have been a detriment to the entire future of housing in America; but the amount of study and hard gauge attitude that they have maintained in the face of the driving goal of speed, results have developed fresh views and modified old ones for those of us who have made a detailed study of this subject extending over many years.

The Government's reason for undertaking housing work is, first, to aid in winning the war, which is to be accomplished by providing for workers homes where they either did not exist at all or only in insufficient quantities; and, secondly, to make these workers happy and contented, and thus increase their efficiency to the very utmost by eliminating the disconcerting influences of unsatisfactory living conditions.

This freedom from worry is of vast importance, for the actual number of available workers today is many millions less than when the war started, due to the enlargement of the army and navy, the returning of foreigners to their native lands and lack of immigration.

This, therefore, means that, to maintain the standard necessary to enable the war to be carried forward with the utmost despatch and success, each member of this vast army behind the army must be trained and cared for as workers have never been cared for before.

In endeavoring to produce this physical and mental attitude among the workers, the requirements of tomorrow must not be entirely lost sight of, for either the Government or some delegated authority will have to maintain these homes or dispose of them after the war, which will not last forever.

Each undertaking must be judged on its merits to determine how much of the work shall be temporary and how much permanent; and when a satisfactory decision on this point is arrived at, the problem is as to what form the permanent housing shall take.

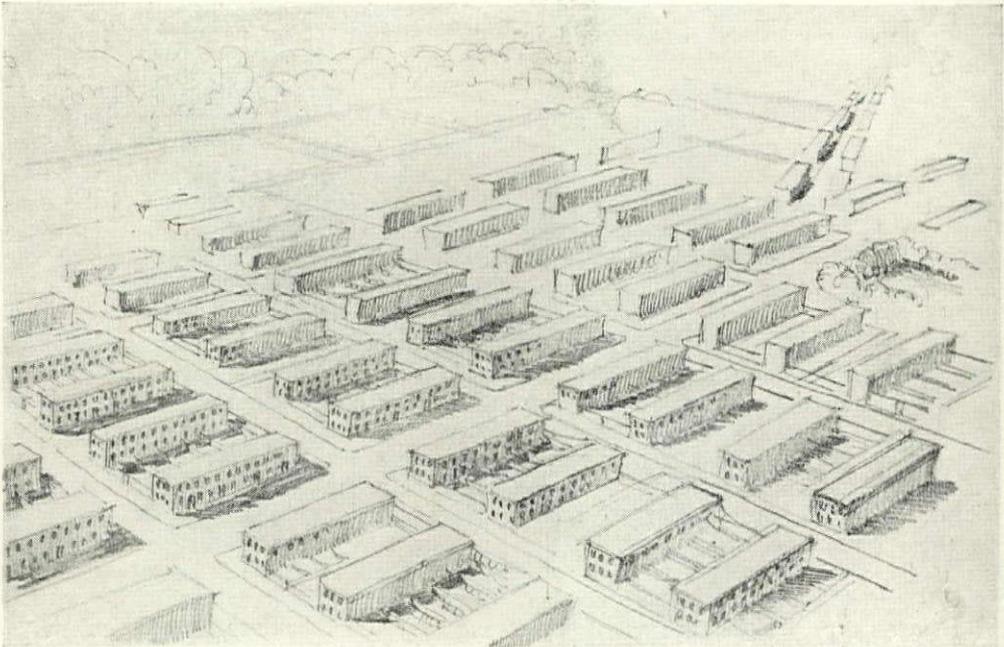
In this article no effort will be made to deal with the various forms of temporary accommodation, but only with that proposed for permanent improvement.

Twenty years ago the author was in the Architectural Department of the London County Council, Housing Section, where we were designing and building homes for the workers, and the general type of the improvement in those days in suburban locations was of the one and the two-family houses and of a form quite similar to the majority of those being built in this country today.

If a thorough examination be made of the large improvements that have been effected in England since the war started, under conditions similar to those that are now being undertaken over here, it is practically impossible to find an individual or even a two-family house. The great Well Hall development at Woolwich (the great naval ordnance works, etc., on the Thames) has not a single one-family house shown in the plans. The entire project consists of houses, or



REAR OR ORNAMENTAL GARDEN FOR THE PROPOSED APARTMENT HOUSE ARRANGEMENT
SHOWING LARGE OPEN SPACE, FREE OF ALL ANNOYANCE.



BIRD'S-EYE VIEW OF PHILADELPHIA ROW TYPE OF HOUSES WITH BACK ALLEYS.

apartments, if you wish to call them, grouped in irregular combinations.

Thus they have reduced the proposition to very much of an intensive housing type on certain plots with many large open spaces in close proximity. The average land value of a housing improvement, here in the United States, varies as a rule from five per cent. of the cost of the entire improvement, and therefore the land, as such, does not cut such a great figure, as it is very often given credit for, so much so, for by a judicious arrangement of the housing units double the area of land could be used and still make the total expenditure upon the entire project less than if using some different arrangement.

For the sake of clearness, the term "housing unit" here used signifies a habitation for one family, consisting of 4, or 5, or 6 rooms, as the case may be, complete with bathroom, kitchen, etc., and for the sake of comparison of the different methods of housing, a typical block of 600x200 is assumed, but this regular plan is not recommended for consideration, though some such definite basis must be used to obtain a ready comparison of the different methods possible.

The three forms of housing that are prevalent in this country today are:

First, the regular New York row type, consisting of continuous straight blocks extending around the full perimeter of the plot and creating probably one of the most unsatisfactory arrangements in permanent housing that has been evolved.

Next, and equally unsatisfactory, though allowing a little more apparent ventilation, is the Philadelphia cross-road type of house with the back alleys.

Then there is the arrangement of cottages in rows, varied, of course, as one-family or two-family houses and interspersed with some few grouped structures; also houses joined together side by side, making different arrangements and artistic combinations, giving each man his own private establishment, his own little garden, his own furnace for heating the house in winter, his own range for cooking, etc.; in fact, a complete self-contained unit, and this has been looked

upon as the highest type of housing improvement. But, is it so?

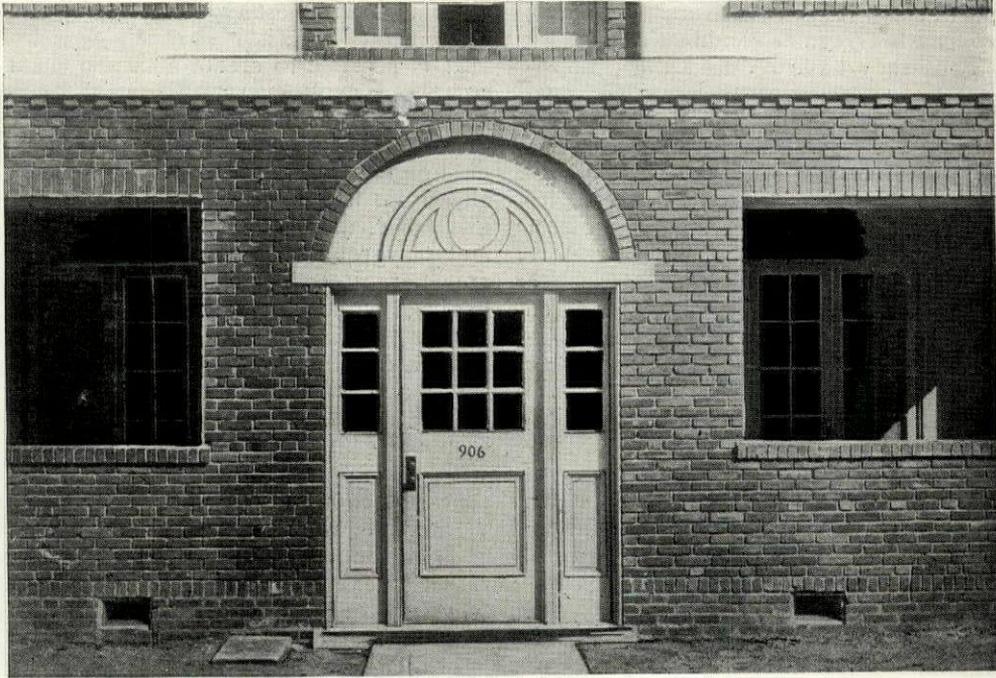
It is possible to create a development complying with every esthetic and hygienic requirement, possessing far more satisfactory living conditions and providing greater benefits to the inhabitants, and to do it with less building material, less labor, more open space for garden and playgrounds, and with a saving of anywhere up to 20 per cent. of the total financial outlay.

It is possible to house, by a different method equally advantageous in most respects and infinitely better in others to a cottage scheme, six families at the cost of housing five and obtaining this result with possibly between a 10 or 15 per cent. reduction in the number of building workers required to construct the same.

This sounds as though it might be rather an exaggeration; but if it is not so, why has the principle not been adopted most extensively?

In the first place, the principle has been adopted by the great majority of those with the ability to do in practically all of the larger cities. How many people today, for instance in New York, live in houses when they can live in apartments? The household servant question is much reduced, the furnace man and his attendant idiosyncrasies are avoided. Here is a known paid annual rent and expense charge and a sense of security that exists due to the congregation of many people at one point and a latent freedom from care and simplification of living, difficult to reduce to words.

All these advantages accrue with great force to the very small household where the husband and wife have to do all the work themselves. Therefore, why not take advantage of this in Government housing? Why should not the ship-worker or munition worker have such living conditions that, when he gets home tired and dirty, he knows hot water will be awaiting him irrespective of whether his wife stayed at home to keep the range going or not? Why on the cold days, when none wishes to go down and tend to a furnace the last thing at night and the first thing in the morning, should he not have the advantage of a central heating



AUTHOR'S FIRST STEP IN THE DEVELOPMENT OF THE LOGGIA TREATMENT AVOIDS PORCH AND YET GETS ADVANTAGE OF THE SAME AT BRIDGEPORT, CONN.

plant that the apartment house dweller has?

There is no reason why these advantages should not be given to the worker, provided at the same time he is given all of the privacy that a house would give him and all of the advantages that a house would have with none of its disadvantages, at no greater or perhaps at a less cost. This can all be furnished.

For instance, upon a typical plot 600x200 it is possible to arrange on forty-foot lots thirty two-family houses, which is practically the maximum number of families that could be placed on such a piece of land with the cottage form of housing. But by using small apartment houses, only two or at the most three stories high in a few places for the sake of artistic value, that is, with only the same number of stairs as in the cottage, it is possible to provide 104 family units equally large and complete on this same ground area of 600x200.

Assuming an arrangement such as follows, which would embody the nearest to the ideal living conditions consistent with

the requirements: First, a block of small apartments; next, a block 600x150 given up to allotment gardens; then another block 600x200 given up to apartment houses; next to this, again a plot 600x150 given up to children's playgrounds, etc., and so on, so that between every row of houses there will be free of all construction a block of over 200 feet from front to front. In the rear, these apartments would have exactly the same space that the very best arrangement of the cottages could give.

The roofs of these small apartments should be used as a drying yard for the clothes, thus leaving the entire space between the houses for ornamental gardens, a place of quiet and repose. Each apartment or flat should have its own private entrance, the same as a house would have. Within the space of each apartment should be provided a loggia, which, in effect, is a protected exterior room, having all the advantages of a porch, so that when the wife wishes to go out she could leave her child on this in the fresh air and with a sense of absolute



VIEW OF A STREET IN A HIGH GRADE DEVELOPMENT AT BRIDGEPORT SHOWING THE SPACE IN FRONT IN SUCH AN ARRANGEMENT.

security, knowing that no harm would come to the little one, as is possible on an ordinary open porch. This loggia could be used as sleeping porch, as it would not have the undue conspicuousness of the ordinary porch, also none of the habitable rooms would be darkened by being under the shadow of a porch.

Such an arrangement of buildings as that here illustrated lends itself readily to this treatment, as there are so many exterior angles, all very suitable for these porches, with allotment gardens as here contemplated. All the storage space needed can easily be arranged in the basement, and the advantages that the rich man has in his Fifth avenue apartment can be extended to the worker at a cost less to him per family unit than is now being expended today in providing him with lesser benefits in the individual cottage.

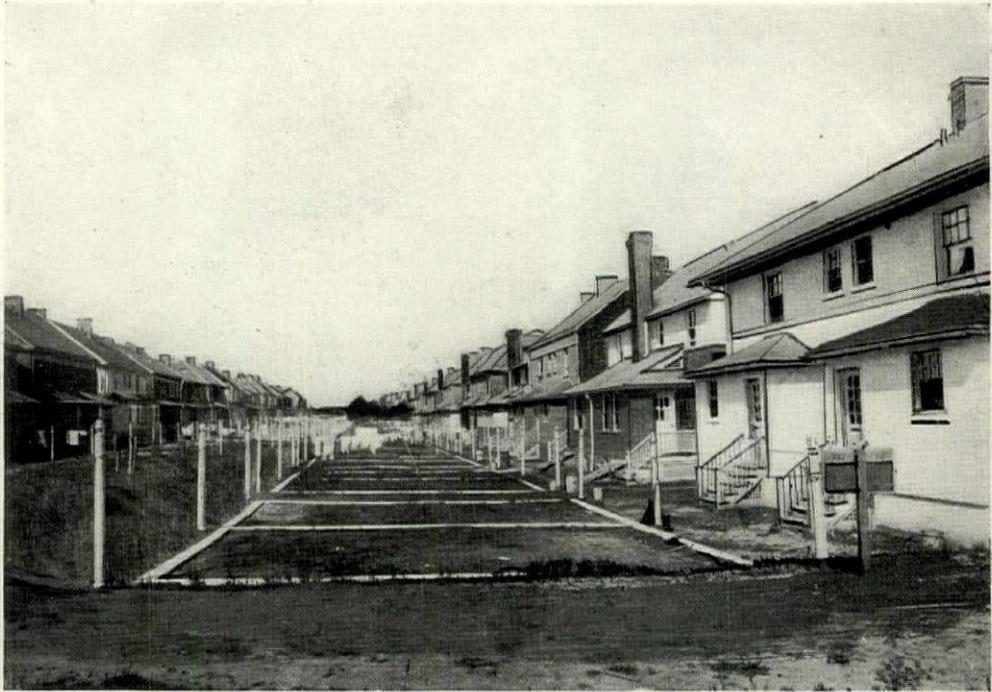
Community garages could be equipped at the end of the allotment gardens without in any way interrupting this arrangement, and with these gardens as here contemplated any active spirit can go out

and take all of the exercise he wishes and at the same time the children can play in the grounds in safety, an absolutely impossible condition if each house was built upon its individual lot.

The workers who prefer to rest after their day's work can sit in the ornamental garden in the centre of the house away both from the allotment gardens and playgrounds, without having the annoyance of hearing a neighbor's drying clothes flapping continuously nearby.

By artistically arranging these small apartments into either two, four, six, eight or ten units or groups as desired for effect, all of the variety and esthetic arrangements possible with the most expensive type can be achieved.

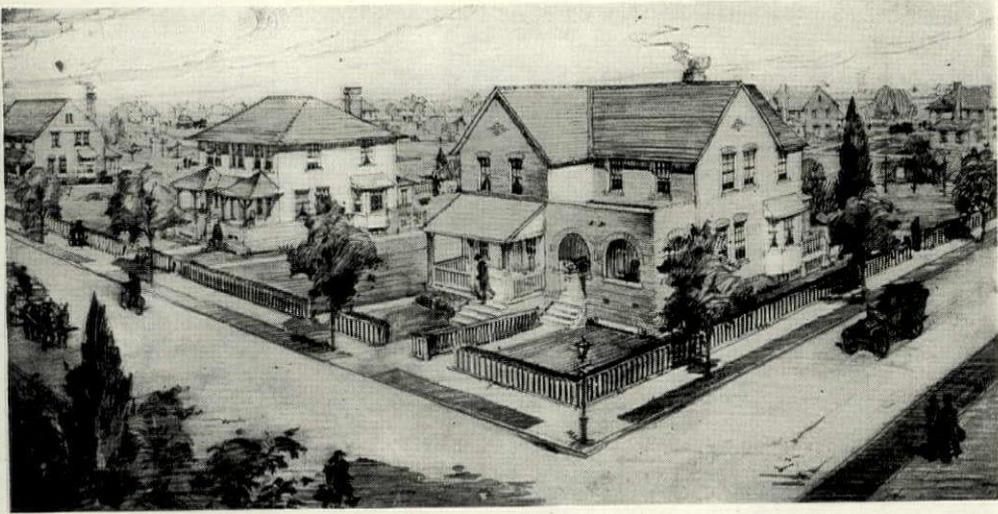
The cost of installing and maintaining what may be termed equipments, for gas, electricity, water and sewerage, would be immensely reduced in the apartment house plan over that of the cottage plan; also a very great saving would be brought about by the use in these apartments of common exterior walls, the simplification of construction, as regards roofs, floors,



REAR VIEW OF TYPICAL HIGH GRADE COTTAGE DEVELOPMENT SHOWING THE GARDENS GIVEN UP TO CLOTHES-DRYING, ETC., AT BRIDGEPORT, CONN.



DETAIL SHOWING HOW THE AUTHOR WORKED OUT THE LOGGIA IDEA AVOIDING PORCHES IN A DEVELOPMENT AT BRIDGEPORT, CONN.



A COTTAGE ARRANGEMENT WITH THE LARGE AIR SPACING SHOWING EVEN WITH THIS WIDE TREATMENT THERE IS NOT THE FREEDOM THAT THE APARTMENTS HAVE. THIS IS THE VIEW OF A DEVELOPMENT BY THE AUTHOR IN CONNECTICUT.

staircases, piping, etc.; in fact, they would be substantially similar to a fabricated boat, and yet have all of the variety and every advantage for health and good living that can be desired.

In the course of the author's practice, he has talked with workers and their families in most of the States extending from Texas to the Canadian border and there seems to exist no great desire among the workers for the individual house that has so long been assumed. A very marked majority and all who have apparently thought about the matter, with any seriousness, express a decided preference to living in reasonable proximity to each other, provided they have all the privacy of a house, and have the allotment gardens, children's playgrounds, with its swimming pools, tennis courts, sand piles, swings, etc., and also their general private garden for ordinary use. These additional attractions to the worker's mind far exceed the attractiveness of the small individual house on its own lot.

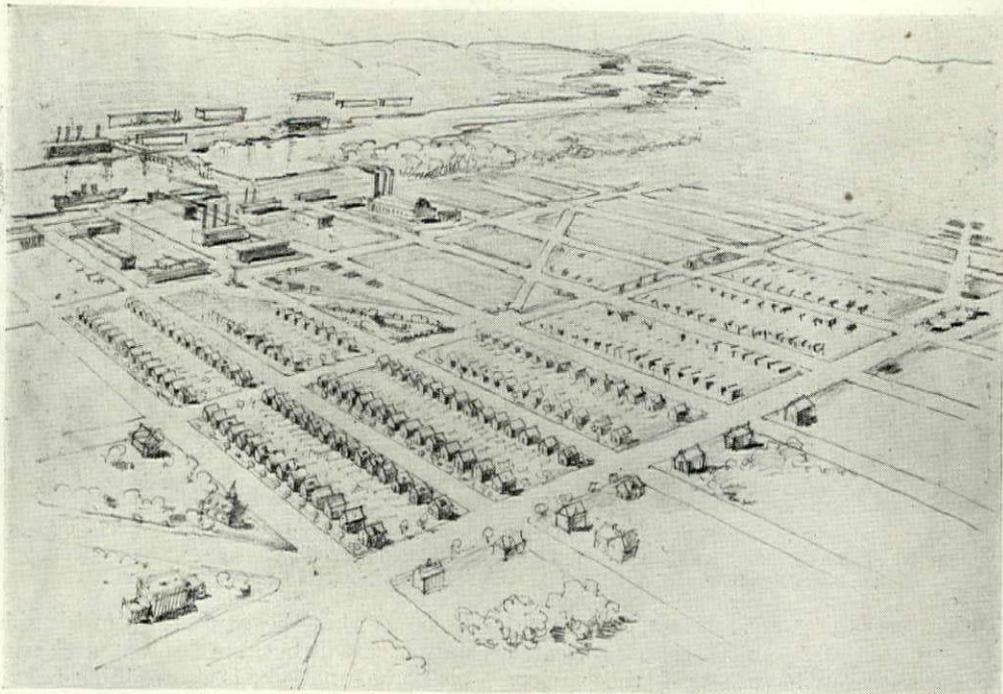
Of course, the viewpoints of the worker and the employer are very different when it comes to the disposing of these houses. The employer feels that if he can get his workers to purchase houses in a certain location, they will be, comparatively speaking, tied to the spot and he will thereby stabilize his labor

turnover; but the worker, from his side, naturally will hesitate before purchasing his home, unless he is assured that he will always be able to get employment in this locality, and this assurance is impossible, seeing that every one of the houses being built by the Government was not required in normal times—that is, before the war started.

The American public, as represented by the Government, should look upon housing at this stage as a war expenditure—to create a greater efficiency in labor and to produce munitions and ships with dispatch—and any scheme predicated upon the purchase of homes by the workers is foredoomed to failure.

In the regular routine of living today, unattached men and women are assumed as living as boarders, and are, so to speak, transients, able to move to where work is offered; so is it fair to ask the married man, who has already assumed the serious responsibility of providing for a family, to agree to tie himself up permanently by purchasing a house without having any corresponding assurance that he will be able to get continued employment to enable him to pay for the same, and within a reasonable radius of the location of the house itself?

When the world has become stabilized again after the war, there is no reason



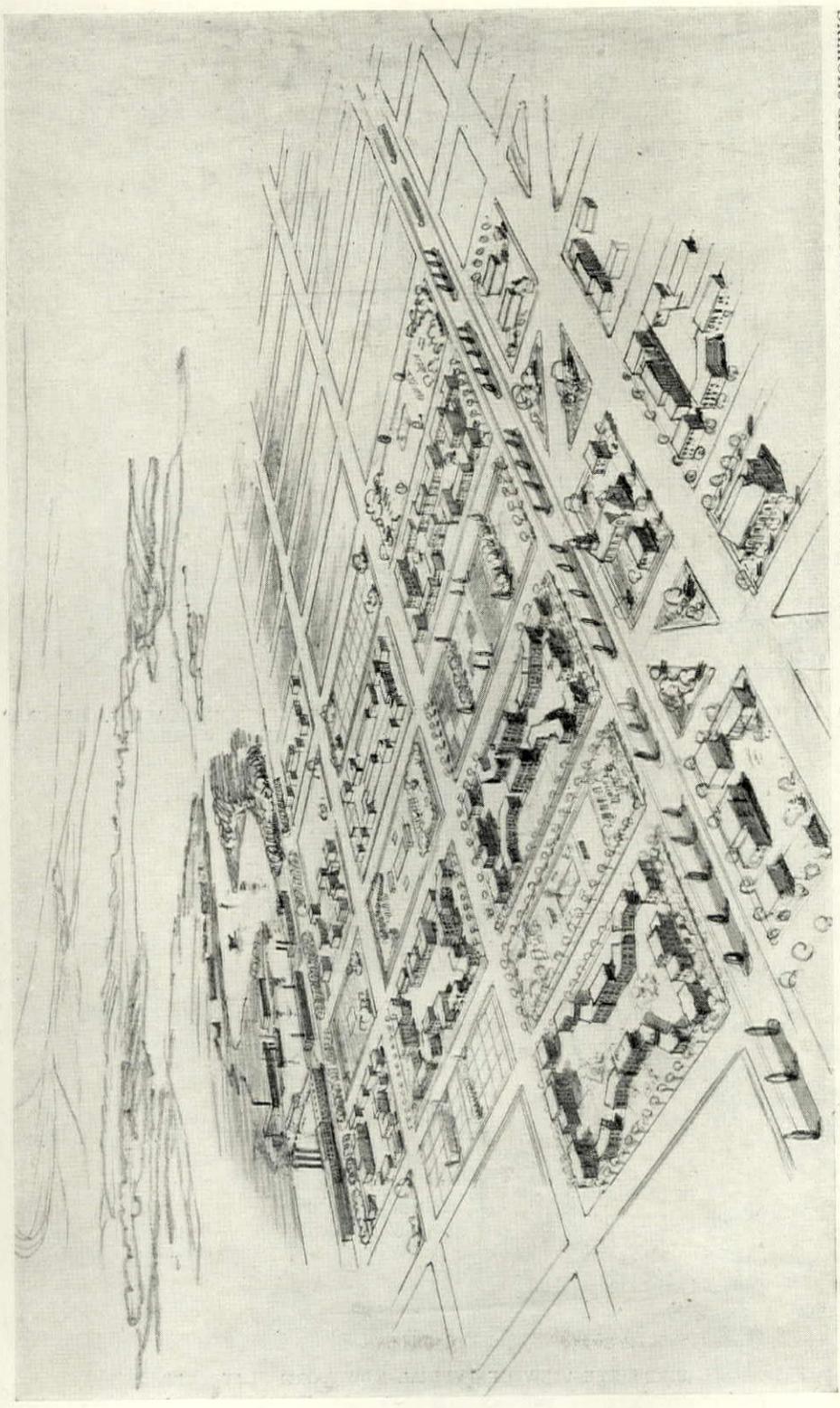
BIRD'S-EYE VIEW (CONVENTIONALIZED FOR COMPARISON) OF A TYPICAL COTTAGE DEVELOPMENT SHOWING THE LIMITED AIR SPACE AND GARDEN SPACE OBTAINED BY SUCH A LAYOUT.

why workers should not purchase the houses no matter of what type, if the local industries should justify; but it must be remembered that the worker today has to bear his proportion of the war's direct and indirect tax, shoulder to shoulder with all the rest of us, so we cannot assume that he will invest his savings now in a house which quite possibly might be in an unsatisfactory location for him and consequently result in a loss to him.

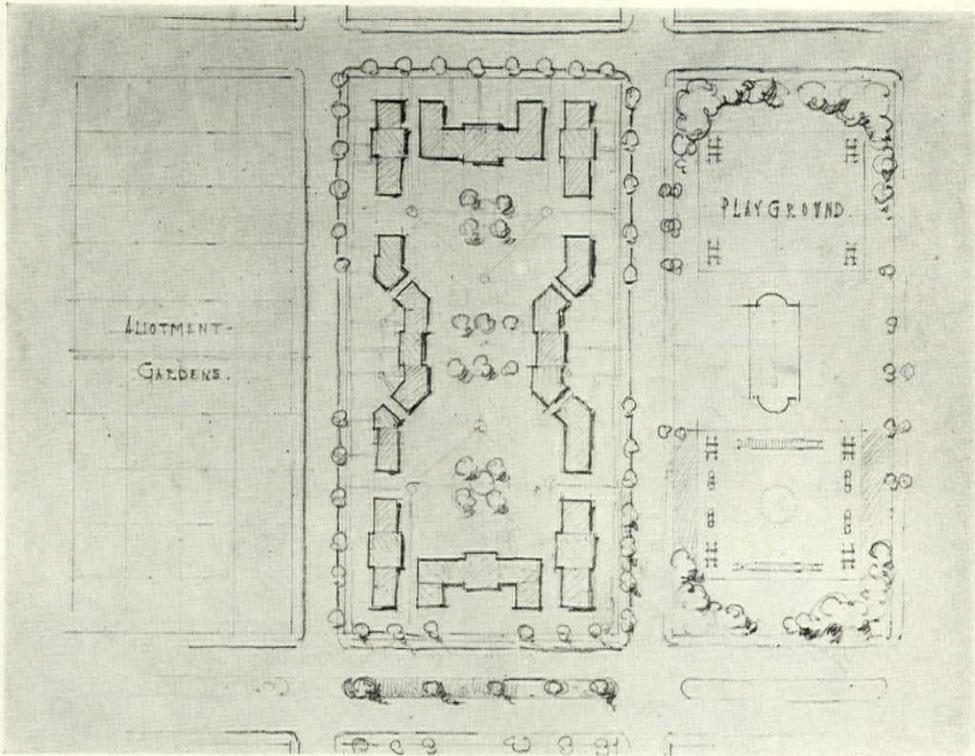
Where corporations are, or ultimately become, responsible for the cost of the workers' homes constructed during the war, they naturally will select a type of house that the large insurance companies and savings banks prefer to loan on. And it can safely be stated that an apartment house type would look much more inviting for a mortgage than an individual house scheme. Considering the large amount of land given up to allotment gardens and all the additional attractions, should the locality need some special accommodation, this can be provided right in the midst of the development and not

somewhere a long way off. The unquestioned and demonstrated advantage of the apartment house type of accommodation is so marked, not only as to original cost, rapidity of construction, economy of building material and skilled labor needed in the actual building so vitally important at this time, and also in maintenance or upkeep cost, that it supplies not only what the worker actually wants himself, but what is precisely the best for him from every angle.

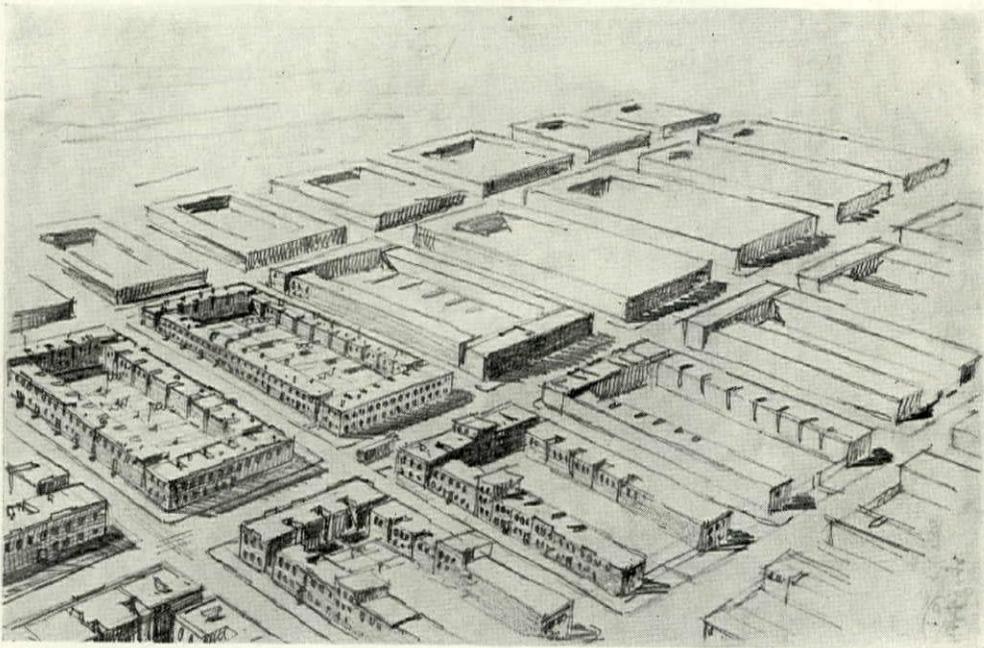
England has definitely learned the lesson and is providing the workers with homes of the collected or intensive type. So, knowing the difference of the temperaments and requirements between the workers here, why not make some use of the knowledge we possess and face the problem squarely and logically by providing housing of the low apartment type, heated and cared for from a central station, with ample playground and garden space all around, and rent them to the workers with the definite understanding that there may be some readjustment as to ownership after the war is over?



BIRD'S-EYE VIEW OF LARGE DEVELOPMENT PROPOSED SHOWING TWO-STORY APARTMENT PLAYGROUND, ALLOTMENT GARDENS, CONSTITUTING A COMPLETE HOUSING COMMUNITY TREATMENT.



A TYPICAL PLAN OF ONE BLOCK OF TWO-STORY APARTMENTS INDICATING THE GREAT AIR SPACE PROVIDED BY THE METHOD OF HOUSING WORKERS.



BIRD'S-EYE VIEW OF TYPICAL NEW YORK FLAT TYPE.

Two NEW ENGLAND - LIBRARIES -



By Charles Over Cornelius

FROM the very beginnings of our government, popular education has been recognized as of prime importance in the development of those ideals for which our country was founded. The necessity, broadly speaking, has been met by the three following types of organization under which are included the various and manifold subdivisions of modern education—the great public school system with its continuation into higher and specialized fields of study, the free public libraries, and the museums of many types. The museums and libraries in the most genuine interpretation of their mission are necessary complements of the school system while serving at the same time the larger general public whose interest is indispensable to their support. As the church points the way for the spiritual growth of man, so does this system of education lead his intellectual development by familiarizing him with all that our present civilization owes to the past in literature, science and art, thus enabling him to build upon established foundations a present and a future which are essential outgrowths of the development of the centuries. It is but natural that such vital institutions as these should find appropriate and general expression in contemporary architecture, and many of the most interesting competitions of recent years have centered around one of these three problems.

Some one has rightly said that "a great library, like a temple or cathedral, is one of the rarest commissions that can come to an architect." Equally true it is that the smaller library of a less pretentious community should take equal rank with the parish church as a point of lo-

cal pride and interest, and should typify the intellectual heritage of its town in as great a degree as the churches of that town embody visibly its spirituality.

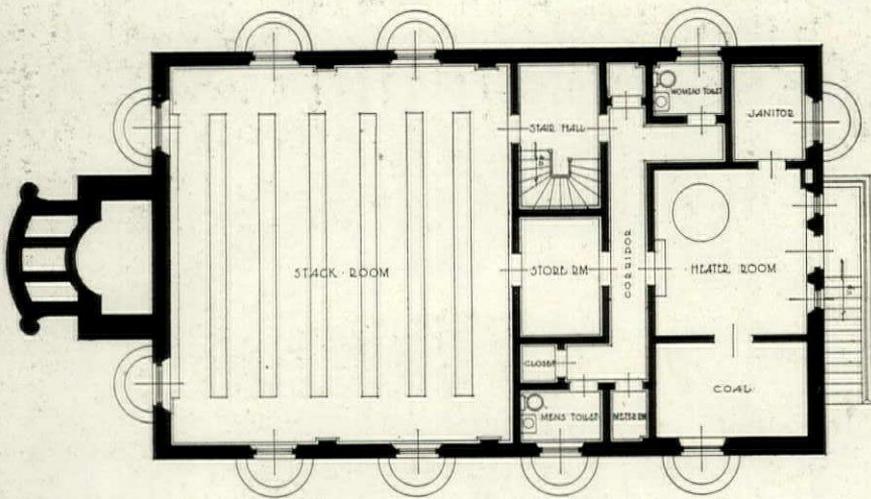
Two modest libraries of representative New England towns are presented by the accompanying photographs, and they should be considered in relation to the great general scheme of public education as well as in their purely local and individual aspects. The problems of both hold certain points in common: the relatively small public which each has to serve, the necessity for economy in construction as well as reduction of overhead in administration, a reasonable allowance for future growth in book space, and a common heritage of architectural character from a New England ancestry. The individual solutions are interesting in showing to what an extent two problems, the majority of whose basic requirements are the same, take on an individual character as a result of purely local conditions.

In the Dailey Memorial Public Library, at Medfield, Massachusetts, William G. Perry, architect, there are present all the usual demands of a small town library. There is also the requirement of an appropriate room for the local Historical Society, where documents and other objects of historical interest may be exhibited and consulted. The building thus partakes to some extent of the qualities of both a museum and a library; while the hours when the library is open—from four until nine o'clock—fit in well with its usefulness to the schools of the community.

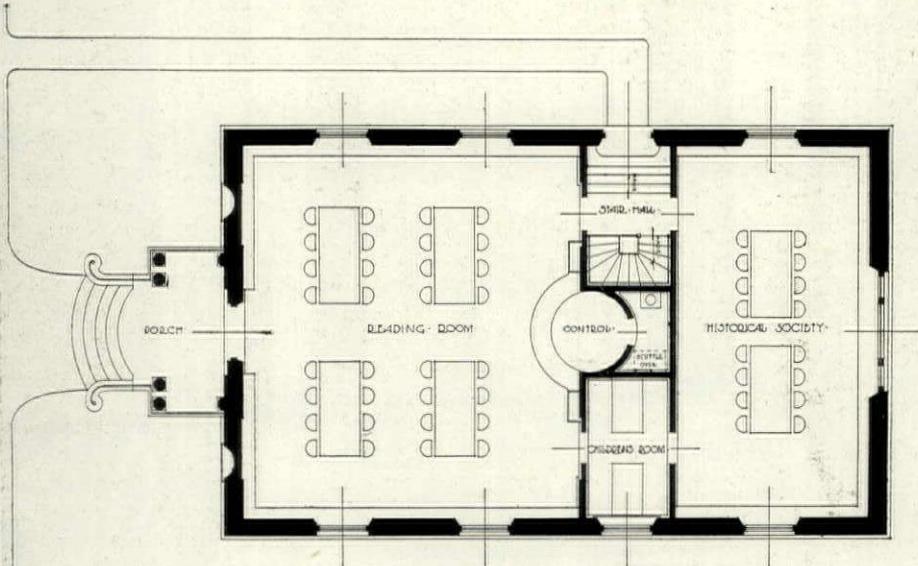
The plan of the building, which faces northwest, is a simple rectangular one,



DAILEY MEMORIAL PUBLIC LIBRARY, MEDFIELD,
MASS. WILLIAM G. PERRY, ARCHITECT.

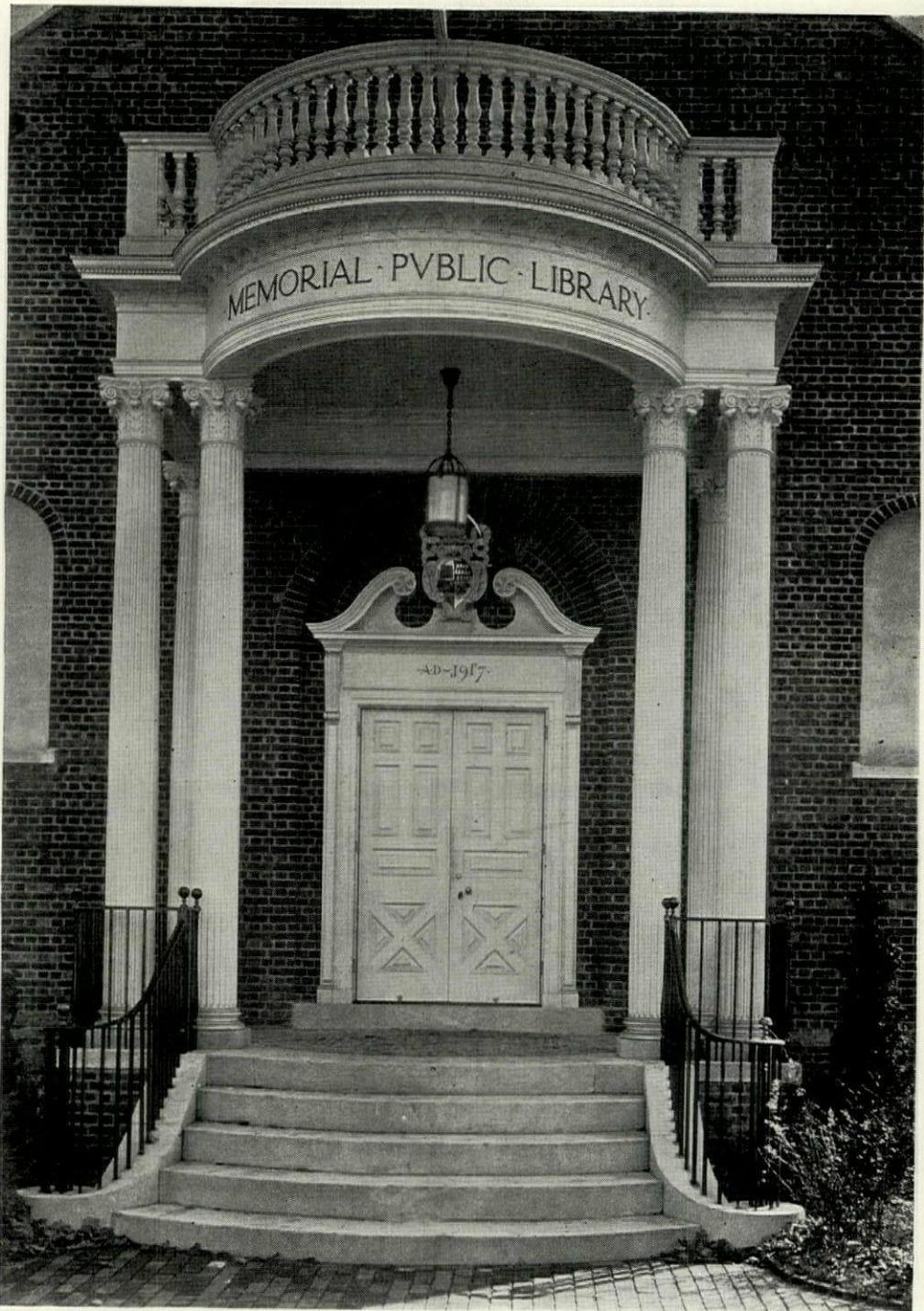


· BASEMENT PLAN ·



· FIRST FLOOR PLAN ·

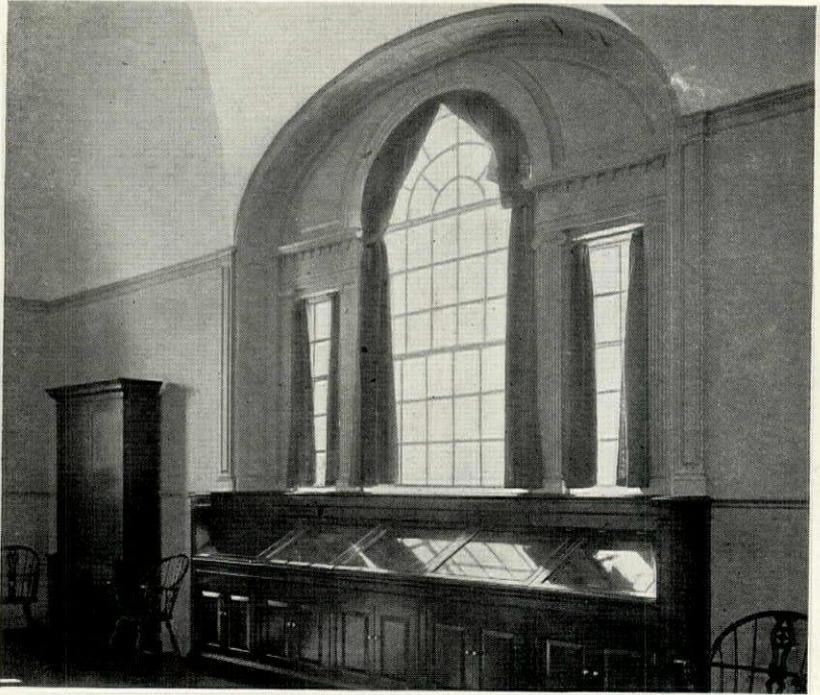
GROUND FLOOR AND BASEMENT PLANS—DAILEY MEMORIAL PUBLIC LIBRARY,
MEDFIELD, MASS.
William G. Perry, Architect.



ENTRANCE—DAILEY MEMORIAL PUBLIC LIBRARY,
MEDFIELD, MASS. WILLIAM G. PERRY, ARCHITECT.



DAILEY MEMORIAL PUBLIC LIBRARY, MEDFIELD
MASS. WILLIAM G. PERRY, ARCHITECT.



HISTORICAL SOCIETY ROOM.

MAIN READING ROOM—DAILEY MEMORIAL PUBLIC LIBRARY, MEDFIELD, MASS.
William G. Perry, Architect.

in which the main reading room occupies the major part of the floor space, with the control placed to advantage directly opposite the entrance. The fenestration of this room is most happy, introducing light from only two directions, and those from either side of the readers at the tables. The narrow space which girds the middle of the building is utilized on one side for the private entrance to the Historical Society, with the necessary stairway to the basement stack room and services, and on the other side for the children's reading room, which is thus lighted from the southwest. The remaining space on this floor is taken up by the well-proportioned room of the Historical Society. The chief criticism of this floor plan lies in the placing of the children's room where it is not in direct vision of the control desk. The necessity of having every nook and corner of the section devoted to the children in plain sight of the control desk at all times has been discovered from the past experience of librarians; yet the psychological gain to the children from the removal of this restraint of supervision may more than compensate for any injury to the books which might result from careless or willful mishandling.

In the basement a very generous allotment of space has been made for the stack room—as yet not in use—and conveniently placed service dependencies are so arranged as to receive adequate light, while the heater room may be reached by a special entrance from the outside.

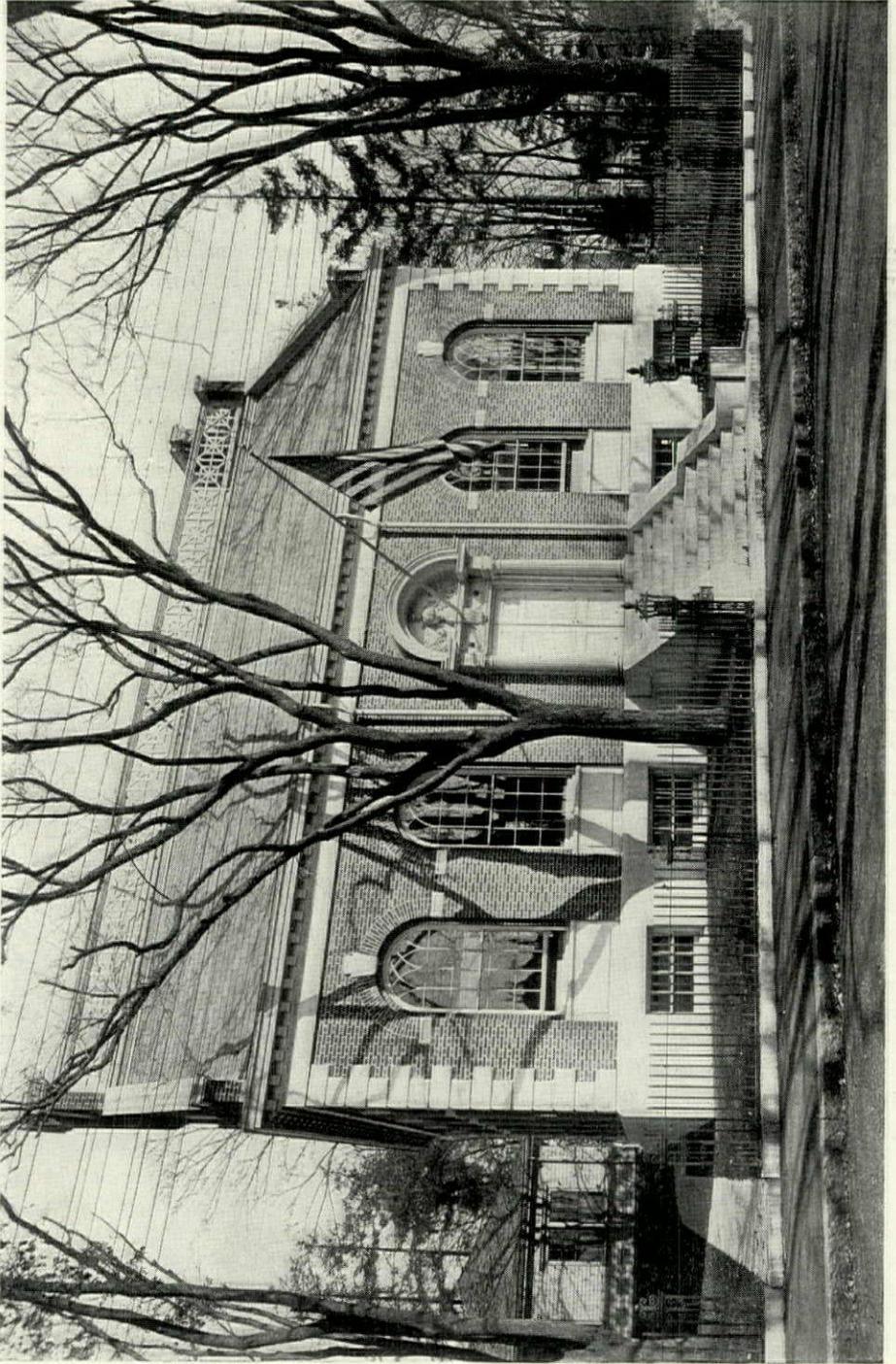
This straightforward plan is frankly expressed on the exterior by the four straight walls and simple hip roof. The most striking innovation, and the one most worthy of note, has been the placing of the building on the lot with its narrow gable end toward the street, making this elevation the entrance front. The result imparts a distinct flavor harking back into the past. This elevation has been simply and boldly treated, the whole interest being concentrated in the entrance porch whose form is happily chosen, while the flat niches relieve the plain wall spaces on either side. The silhouettes, both of the whole elevation

against the sky and of the porch against and darker wall, are very pleasing. A certain dignity and impressiveness has resulted from the treatment of the portico beyond that which would have come from a more delicate handling of the same composition, although the surmounting balustrade might have been heightened in its effect by a wider spacing of the balusters and a greater lightness in their form. The brick arch above the entrance door forms a pleasing and in-obvious contrast to the other adjacent curves, while the iron railings and sparse evergreens supply the requisite accents and add to the very inviting aspect of the entrance.

The side elevations are simply treated with symmetrically spaced window openings, and on the rear elevation a large Palladian window admits ample light to the Historical Society room, marking its special use. The materials of the exterior are soft-hued red brick, limestone and painted wood. The brick is laid with alternating rows of headers, in the early American manner, giving an interesting texture.

The main reading room is entered directly from the street. The general wall treatment in this room follows closely Colonial precedent, the three wall arches with the central semi-dome and its memorial tablet supplying that dignity demanded by an interior, part of whose function is to express its memorial quality. The entrance doorway is interesting, with the splayed jamb and soffit of the large arch and the heightening of the carved decoration of the doorhead by gilding. The color in this room is light French gray in varying tones, resulting in a cool and reposeful atmosphere in which the silk-shaded lamps form an intimate note. The catalogue cases have been conveniently placed at right and left of the desk, obviating any disturbance to readers in the selection and obtaining of books, while bookcases continue the line around the room and form an integral part of the decorative layout.

The staff of the library consists of a librarian and one assistant, who do not exercise any control over the Historical Society room.

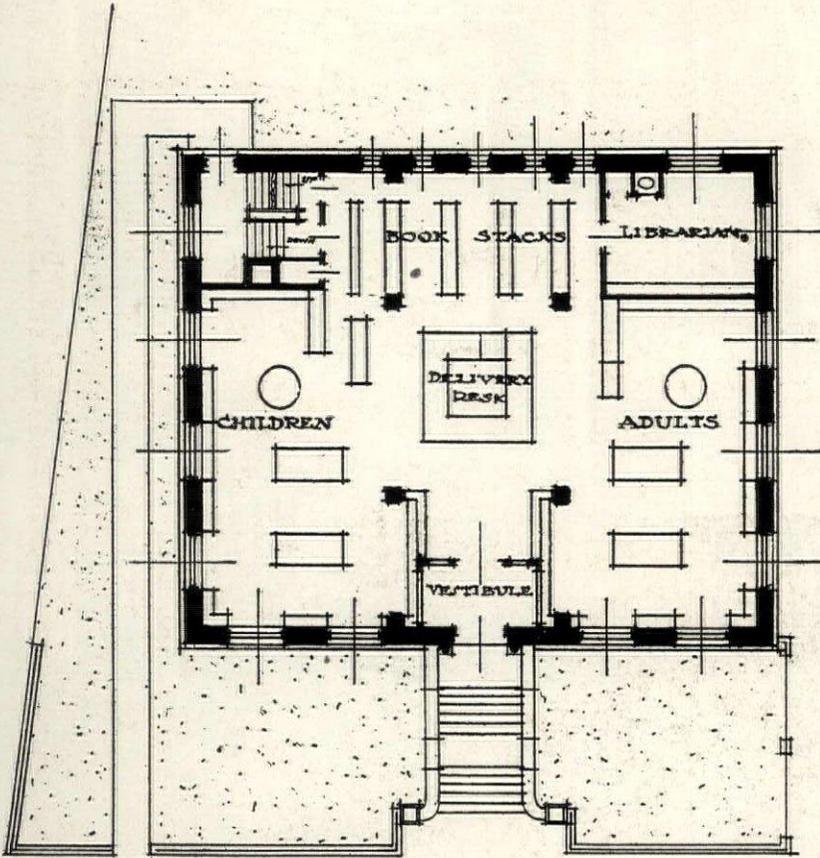


SWAMPSCOTT (MASS.) PUBLIC LIBRARY.
KELLEY & GRAVES, ARCHITECTS.

• SWAMPSCOTT - PUBLIC - LIBRARY •

• SWAMPSCOTT • MASS •

• KELLEY & GRAVES ARCHITECTS - 57 MIVERNON ST •
BOSTON • MASS •



GROUND FLOOR PLAN •

012345 10 15 20 25 30

GROUND FLOOR PLAN—SWAMPSCOTT (MASS.)
PUBLIC LIBRARY. KELLEY & GRAVES, ARCHITECTS.



ENTRANCE—SWAMPSCOTT (MASS.) PUBLIC LIBRARY. KELLEY & GRAVES, ARCHITECTS.

The second building illustrated is the Swampscott Public Library, of Swampscott, Massachusetts, Kelley and Graves, architects. Here the physical obstacles have been greater than those encountered in the Dailey Memorial Library, and a proportionate praise should be given to the thoughtful and effective manner in which the various difficulties have been overcome by the architects.

It was first necessary to place the building agreeably upon the lot, which, being quite narrow, and with its side boundaries converging sharply toward the rear, led to the location of the structure close to the front lot line in order to obtain the fullest advantage from such frontage as was available. A further economy of space is observed in the mounting of the wrought iron fence on its granite curb and continuing it back to the building along the lot line.

The general plan is rectangular, almost square, and its arrangement is greatly to be commended. A small entrance vestibule admits directly into the main reading room, which forms practically the whole of the public space. The control desk is placed far enough out in the centre of the floor to make possible direct supervision by one person of all parts of both the children's and adults' reading rooms. The public, entering by the main door, has access immediately to practically all of the building except those parts reserved for the administration.

In the basement, which has its special service entrance at the rear, provision has been made for a future newspaper and periodical reading room, while the remaining space is taken up with the usual lavatories and toilets, workroom, storage and general service. In the second story, space has been arranged which may be utilized at some future time as a lecture room or exhibition gallery.

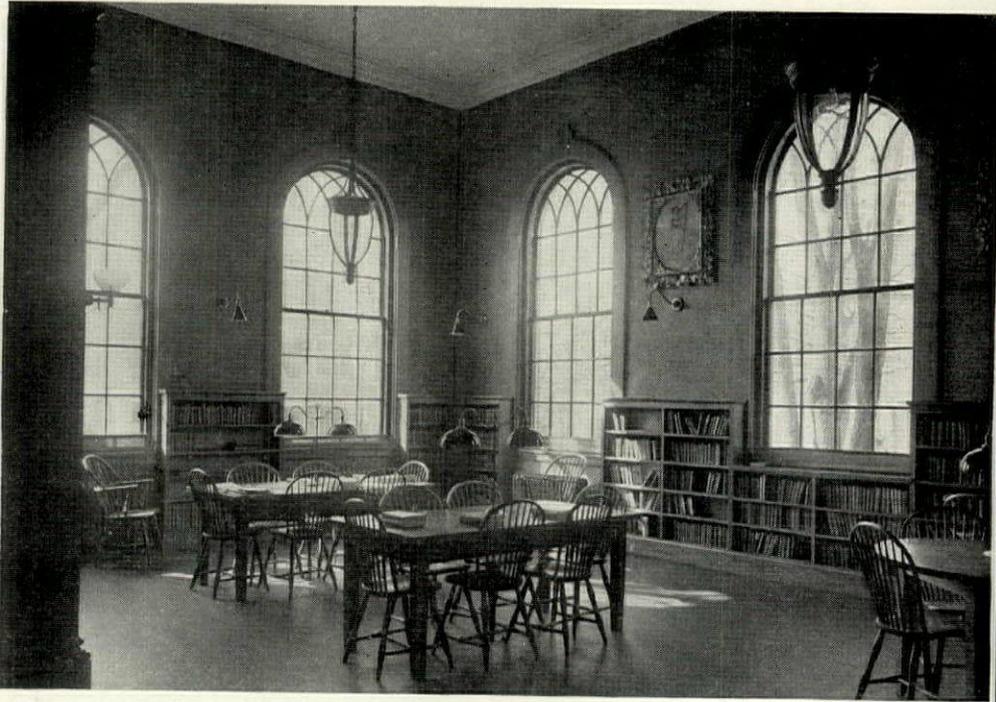
The longer side of the building faces the street, with the roof ridge running parallel to this line. The composition of this façade presents few unusual features, its four symmetrically spaced windows and central entrance typifying an arrangement of wall spaces and openings which has become almost synonymous with library. The principal variation of

the theme lies in the heightening of the basement course in order to admit ample windows, and in the long, graceful flight of steps which adds to the dignity of the whole. The entrance doorway is a free rendering of a conventional type and would not have suffered from a greater refinement in certain detail—notably in the Georgian substitute for the dentil course of the order. There is a slight overemphasis upon the verticals, which are insistent in the lines of the windows, the corner coins, the columns of the doorway and the water leaders; while the contrast in the materials of the building and the related ironwork do not quite compensate for the lack of light and shade. The urns at the foot of the ramp, however, are delightful and add tremendously to the effect of focusing the interest in the centre of the composition.

In the finish of the main reading room all elements which might tend to distract have been carefully eliminated, and the result is a quiet and harmonious atmosphere so essential to a library. The woodwork throughout is simply treated gumwood stained to a soft brown, while the walls are in warm russets that harmonize well with the tone of the wood. Bookcases line the walls to a convenient height and, with the metal stacks, newspaper and periodical files, give a shelf capacity for about twenty thousand volumes. The ample windows flood the room with light by day, and at night the hanging lamps, wall lights and table lamps furnish adequate illumination both concentrated and diffused.

The genuine success of this building lies in its thoughtful and well-studied planning, which demonstrates noteworthy that in proper hands a very moderately sized building may be rendered adequate for the needs of a fairly large community. If the exterior has suffered somewhat from the necessity of enclosing so many varied units in three stories, the result in the interior has more than justified such slight sacrifice as has been made.

These two libraries may be considered representative of a large group of buildings rising throughout the country in the



SWAMPSCOTT (MASS.) PUBLIC LIBRARY.
Kelley & Graves, Architects.

wake of a more widespread popular education. Ample provision has been made in the planning of each for the children who, it is hoped, will use the building constantly, and the easy access to the book and periodical collections should encourage their use by the general public. The employment of monumental

materials, the careful observance of taste and study in the design and decoration, and the adoption of an historical style that is associated with the New England town all contribute to a dignity commensurate with the position which the free library, whether great or small, holds in the public estimation.

English Architectural Decoration

Text and Measured Drawings
by Albert E. Bullock

Part IX.—a

IN all periods the chimneypiece forms the main feature of an apartment and is usually centralized on one side of the room or, as in the Hampton Court Palace state rooms, in the angle. The variations in design are numerous and it would take many articles to exhaust even the typical ones. I therefore propose to deal with a few representative examples, in order to illustrate the methods of building up of the several designs and the general treatment of detail in the periods selected.

It should be mentioned that the style or character of a chimneypiece is not necessarily any criterion directing one to date the room, as in very many instances they are of earlier or later introduction unless designed expressly for the position they occupy.

It does, however, frequently occur that the whole room is *en suite*, and in such cases I have invariably endeavored hitherto to give the whole side of the room.

The materials employed in the Elizabethan or Tudor period for the mantel and overmantel were usually stone; and in the Jacobean era, oak, stone and marble, having carved figures, niches, columns, arabesques, etc., with some exceptions where painting formed the chief decorative medium, as in the case of the Kidderminster library attached to Langley Church, in which deal groundwork appears to have been employed. The general wall paneling in this instance is colored chocolate and white for muntins, stiles, rails, etc., surrounding grisailles and painted panels of local scenes and celebrities. The chimneypiece contains a painted frieze bed-mold to the mantel-shelf, with large oval panel over with the four seasons painted in the four corners formed by the square panel and its oval centre. The raised portions of moldings

are gilt to emphasize their features, and the whole is very rich in coloring.

At Bampfylde House, Exeter, the chimneypiece is restored and the central coat of arms emblazoned in its original hues of heraldic color.

At Mersea there is a simple and interesting example of Jacobean period chimneypiece, with triple columns over the mantel-shelf and curious moldings forming the square and diamond-shaped panels.

Many Jacobean chimneypieces exist in London and vicinity, of various types, as at the Charterhouse, Canonbury Towers, and formerly old Bromley-by-Bow Palace, not to speak of the famous country mansions, as Blickley Hall, Hatfield House, Bolsover, Knole, Hampton Court Palace, etc. These nearly all followed one main principle of design, having columns below and above the mantel-shelf and a large convex carved or inlaid bed-mold to the shelf, often with brackets or key blocks after the manner adopted by masons. Many are very richly ornamented with carving and figures; black, white and colored marbles were freely introduced. They were lofty in design and structure and somewhat heavily molded and corniced, especially the overmantels. Inlays and insets of special, rare marbles were not infrequent, as the Irish blue-john and lapis lazuli, etc., set in jewel formation and polished.

Various designs in arabesque fretwork patterns are found in the friezes, and columns are extant, having a scroll inlay of thin papier-mâché or wood shavings. De Vries quaint strapwork was vented extensively and occupied most of the available spaces for such decoration or ornament. The surmountings of bedsteads and monuments were similarly adorned, and it became a typical cult of that era of architecture.

The truer expression of the Renaissance was introduced by Inigo Jones, who put aside the Flemish models in favor of pure Palladian principles. He combined marble with wood painted and gilt for his chimneypieces in some very elegant designs. In lieu of carving he adopted a species of composition for pendants, festoons and figures, usually colored white and gold, as at Wilton House, Greenwich, Rainham and Coles-hill.

The chimneypieces illustrated from the Queen's House, Greenwich, which was a work of Inigo Jones in 1639 for Henrietta Maria, would on examination appear to be a later addition, probably when the transomed windows were replaced with double-hung sashes. It is probably of the Chippendale period or mid-eighteenth century, according to the nature of the carving.

During the first half of the seventeenth century a very extensive trade was carried on in London in the manufacture of chimneypieces by masons for delivery to the various country and provincial seats in course of erection, as well as garden ornaments and sculpture. Our predecessors were evidently as fastidious as to the niceties of these things then as we profess to be today and great care was taken in their execution.

The surveyor or architect would prepare the design, or "draft" as it was then called, which was full-sized, on boards for the mason's employees to work from in the atelier. But as often as not a contract was entered into as to cost for a certain number of chimneypieces, and discretionary powers were conferred upon the mason, if he was of well known ability, as Nicholas Stone and his sons were. These masons worked also in wood and iron and contracted for wainscoting and fencing with armorial bearings and paintings, etc. Stone himself employed Eustace Le Sueur and Cibber in their early years, and his son John is said to have had dealings with Grinling Gibbons when a young man. There was a carver of the name of Gibbons employed by Inigo Jones on staircases, but I have been unable to trace any relationship between the two. Stone's

relatives, Bernard Janssens and Gabriel Staces, collaborated with him in many works, the latter chiefly acting as agent for his jobs in the Oxfordshire district.

Within a few decades the chimneypiece—always maintaining its supremacy as a decorative feature—became the all absorbing object when oak and limewood carving were lavishly disposed about the overmantel, as at Hampton Court Palace, Chatsworth, Belton and a host of the Wren period examples, where Grinling Gibbons, Samuel Watson, Selden, Quellin and others vied their skill and ability at inventiveness in the cult of the chisel.

The deep undercutting nearly exceeded the strength of the wood used for carving to the point of utmost frailty in order to obtain delicate naturalistic effect and a true rendering of the various objects portrayed from land, sea and air.

One of the finest pieces of carving at Belton is the cock on the left of the dining room overmantel, and nearly comes up to the game and cravat Gibbons carved for Chatsworth, as evidence of the master mind among so much competitive enrichment by a clever rival. The cock, by the way, has for generations been the ambition of the carver to depict in its varied phases, as instance a remarkable Jacobean example in an obscure church at Bredon, Worcester-shire, which terminates a lofty monument dedicated to George Reed, and the many church vanes which have for generations been ornamented with a weathercock in all the glory of its flowing lines—the head erect, beak open in attitude of crowing, and the magnificent curl of the tail of this superior bird, all of which fascinated the minds of the craftsmen; but at Belton the tables are turned—there is no action, the cock is dead. The sculptor depicts the stillness of death with the dishevelled feathers, comb awry, but withal a prize cock. When seen, one cannot suppress the expression, "What a fine bird!" Such was the genius of Gibbons; but at Chatsworth the visitor is shown a quill pen carved in wood by Watson and a violin painted on the door below by Verrio as the masterpieces of these men. When I saw these I thought

of that other famous instance of skill, by the madman Wiertz at his museum at Brussels, of a dog in its kennel painted on the wall in the most speaking likeness of the subject.

Undoubtedly there was keen rivalry in skill between the artists of those days in the several crafts; and while there was more boldness of execution and undercutting than had previously obtained, the designs remained original and effective.

The work of Samuel Watson and his compeers at Chatsworth followed the type of Grinling Gibbons at Petworth, Holme Lacy, Belton and Hampton Court Palace, except that the parquetry work is more in evidence, showing the fine art to which joinery had attained; while the carved panels over marble architraves to the chimneypieces give an added interest and finish to the general scheme.

So sumptuous are the rooms in their completeness of design and execution, that they excel, to my mind, anything in England of the period or after it.

With the age of William Kent, Ripley, Colin Campbell, Payne and others, of the Lord Burlington school of architects, the overmantel was ornamented and emphasized in a marked degree, as at the Board of Trade Offices, Whitehall, and at Chiswick House, Holkham Hall and elsewhere; but at Moor Park, Leoni has designed this feature of more Italian type with marble amorini and other evidences of sculptural skill.

With the Adams period more attention was centred upon the mantel proper—the overmantel frequently taking an in-

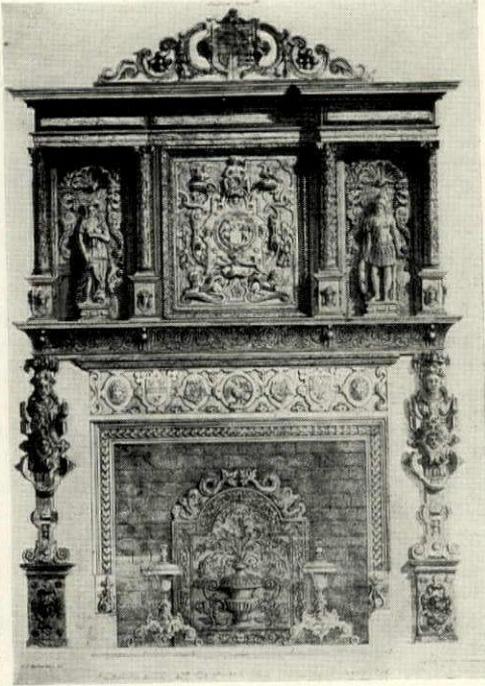
dependent design, holding a mirror or other paneled feature of specially designed furniture. In these cases marble was the chief medium, with plaques having classic subjects modeled or carved in slight relief, usually upon a heliotrope ground, or inlays of colored marbles. Fine-grained and rare marbles were

much sought after—white statuary, pink, green and other tones that would harmonize with the color scheme of the apartment.

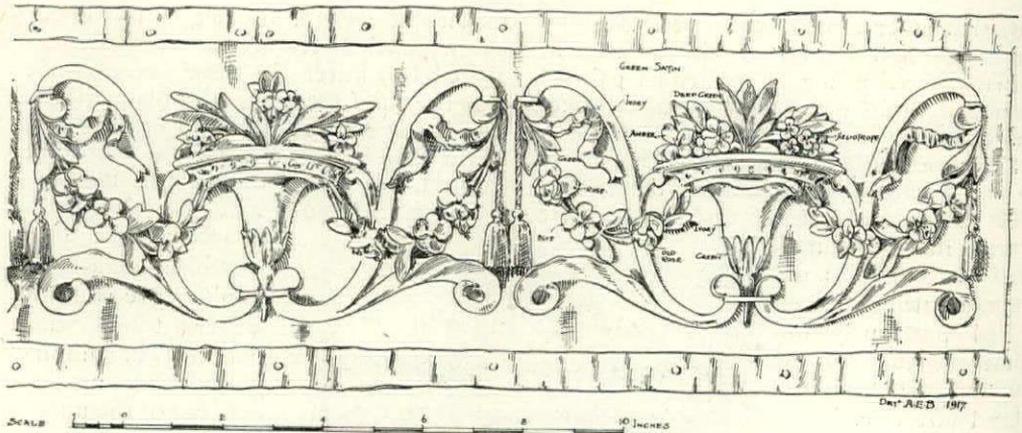
The period known as English Empire was synonymous with Adam work, but was chiefly confined to objects of art as the blue and black jasperware of Wedgwood fame and certain candelabra with gilt composition ornament upon a royal red or deep green ground. The motifs were pure Greek detail, of a delicate nature and refined design, the general forms being very graceful.

Wedgwood was a contemporary of Adam, Robert Adam being born in 1728 and Wedgwood in 1731. Sir William Chambers was another contemporary architect, some two years older than Adam. One of the chief modelers employed by Robert Adams in bas-relief was Giuseppe Geracchi, who came to England in 1773, returning in 1801, some nine years after the death of the elder Adam, to Paris, whence he hailed.

Sir John Taylor practiced in the Italian and Sir John Soane in the Greek manner; the latter embraced in his collection of casts a number of examples of the work of John Flaxman, R. A. Both the civic and ecclesiastical work of



JACOBEOAN CHIMNEYPICE AND FIREPLACE,
CANONBURY HOUSE, ISLINGTON.



CARVED MID-ADAM PERIOD FRIEZE (COLORED).

In Possession of J. A. Bennett, Esq.

Soane were of classic design, but with Sir Charles Barry the two were distinctive. He practiced Gothic work for his churches and the Italian manner for his clubhouses and mansions. The chimneypiece in the hall of Bridgewater House is an instance of the simple, solid nature of the designs adopted by Barry. That in the hall of the Surgeons' College is an earlier example brought from the old War Office and inserted there. It savors of the type practiced by William Kent.

The fireplaces of the later Georgian era were of little interest. Those designed by Sir John Soane were of stereotyped design, of headed moldings blocked at angles in lieu of mitring. With Sir Charles Barry a more varied type is noticeable, especially at the Travellers' Club, Pall Mall, where in the library there exists a more florid example than was usual with him.

The designs of silver and electroplated Sheffield ware hardly come within the province of these articles; but some very interesting designs were executed for candlesticks, urns, cups and vases in the early Georgian and Adam periods, in keeping with the designs of the age. In Adam times the ram's head was a favorite motif at salient angles, and convex fluting was frequently resorted to. The work of William Young is particularly notable in this connection; he was a famous silversmith of the latter half of the eighteenth century.

It has previously been shown that the early years of the nineteenth century were void of lasting originality or artistic taste in ornament. Toward the middle of the century the work of the late Alfred Stevens became noted. He designed among other things a chimneypiece in marble for Dorchester House, Park Lane, of which the original full-sized model exists in the Victoria and Albert Museum, London. This shows a careful studying of parts and grouping far in advance of contemporary art.

More modern chimneypieces either followed the dictates of French design or of one of the preceding English periods, of which the William and Mary and Adam periods were preferred, with two notable exceptions in the work of George Devey and Norman Shaw, who exhibited considerable ingenuity in their designs of this feature.

Some of the photographs here given illustrate modern examples, as that from Lindsey House, Chelsea, which is a good Grinling Gibbons copy, and the French type from Hill Street of Louis Sieze period.

I propose to give also a recent country-house type from a residence at Boxmoor, Herts, designed on Georgian lines, with metal interior specially cast and an oak inglenook with settees. It will be seen by comparison what a vast field of design and building up is covered by this one central decorative feature, the variations of which are unlimited, except by

the expenditure and labor involved in their execution.

Since the fireplace is the centre of interest, it can make or mar a room by its harmony or incongruity with local environment. It therefore behooves one to make very careful selection in dealing with this important feature, especially when the chimneypiece is an importation and not part of the originally designed scheme.

There is in America at the moment a special danger of this hybridization, from the fact that England is the main source of supply of many of the chimneypieces imported there in recent years, which, although excellent in themselves, require a special knowledge of the correct surroundings to satisfactorily adapt. Most

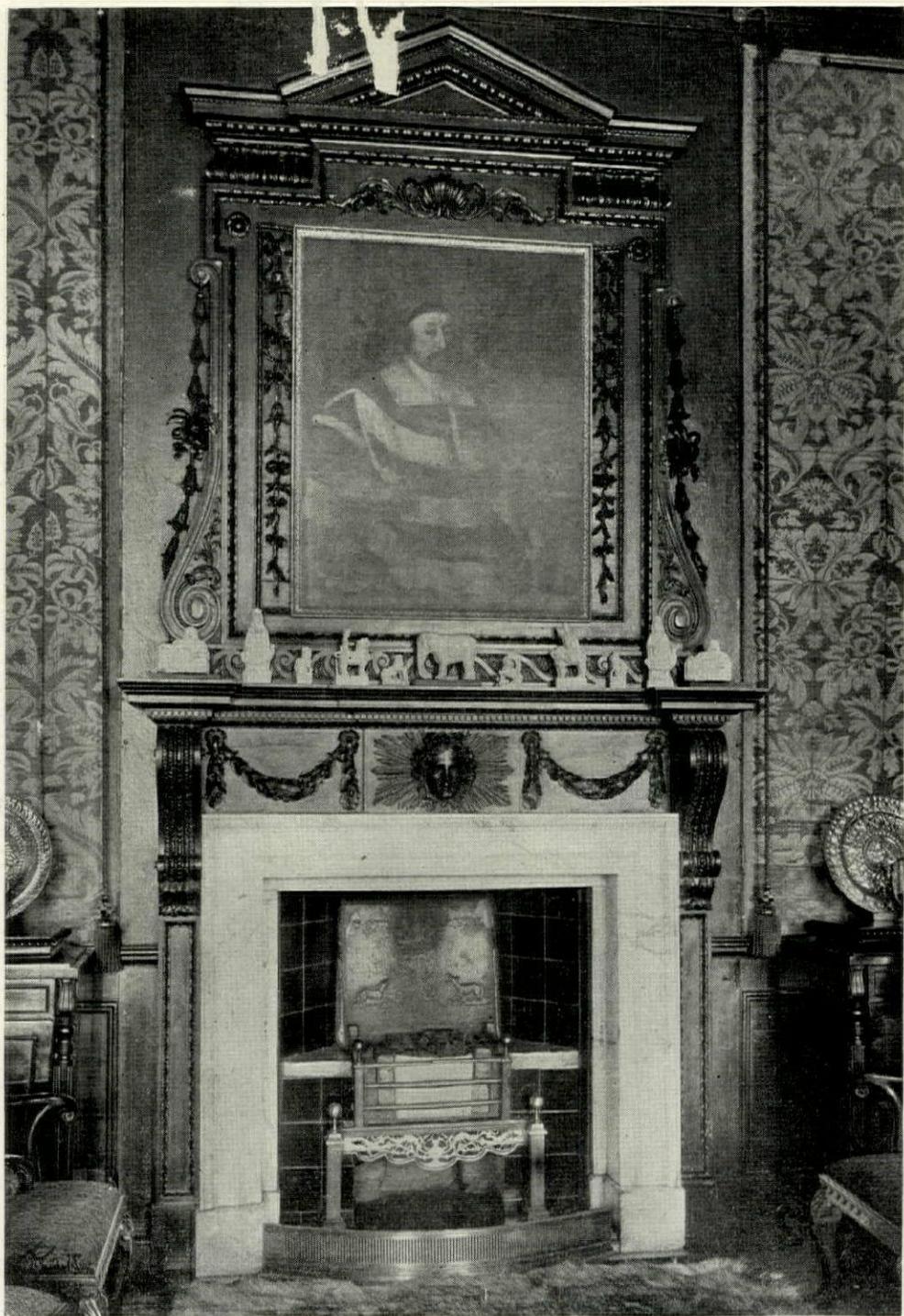
of these imported fireplaces are of Adam or Georgian design in marble or carved wood; many are copies from original examples in famous houses and in consequence the artists' hands are tied to one or two periods in adapting the feature if they would avoid transgressing against the canons of good taste.

In presenting this chapter of my articles, I trust the sketches and photographs here given will be found useful, and would draw special attention to the angle chimneypieces from Hampton Court Palace, which render the exhibition of china and works of art a matter of original simplicity.

N. B.—As it is not possible to give the whole of illustrations mentioned here they will form a second part, IX—b.



ADAM PERIOD CEILING—BEDROOM AT THE PYNES, DEVON.



BRYMPTON D'EVERCY, CHIMNEYPIECE,
CHAMBERS PERIOD, OR LATE CHARLES I.



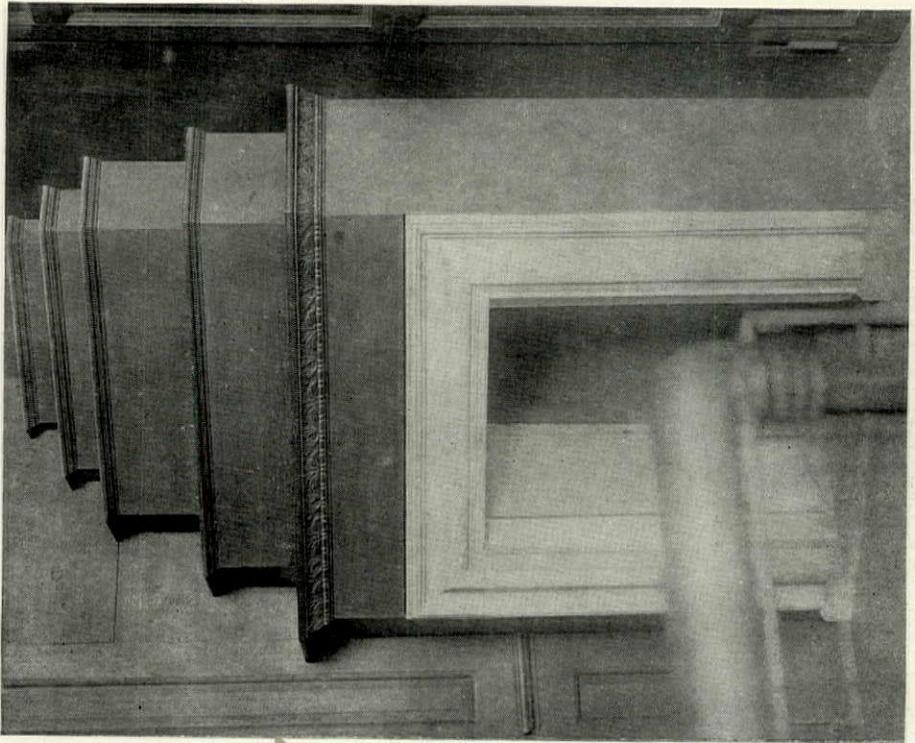
RESTORED CHIMNEYPiece FROM LINDSAY
HOUSE, CHELSEA, WILLIAM AND MARY PERIOD.



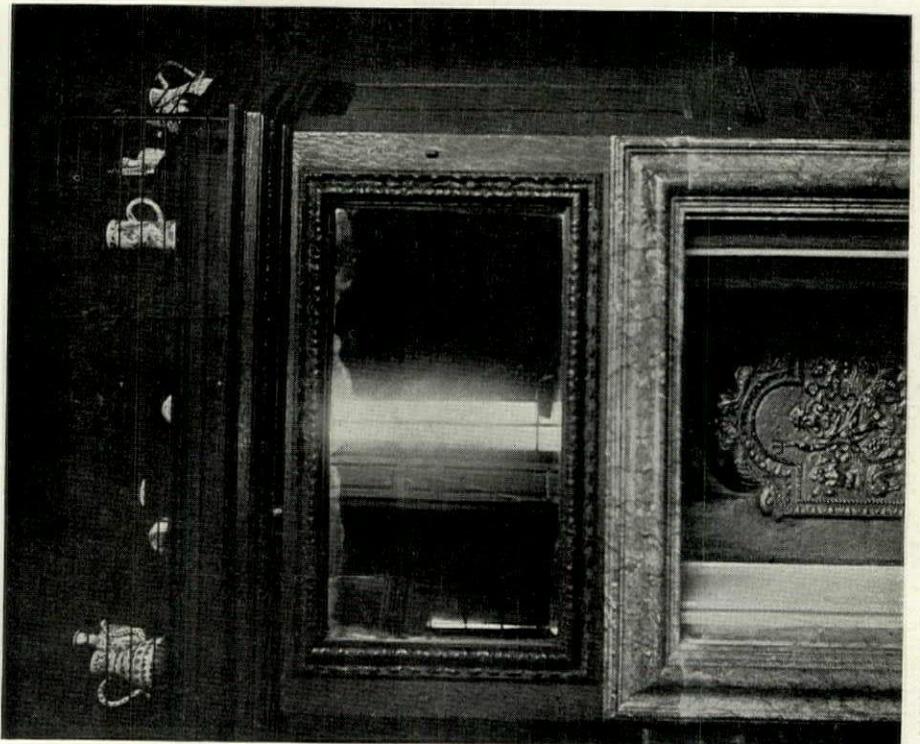
TUDOR CHIMNEYPIECE—THE RED LODGE, PARK ROAD, BRISTOL.



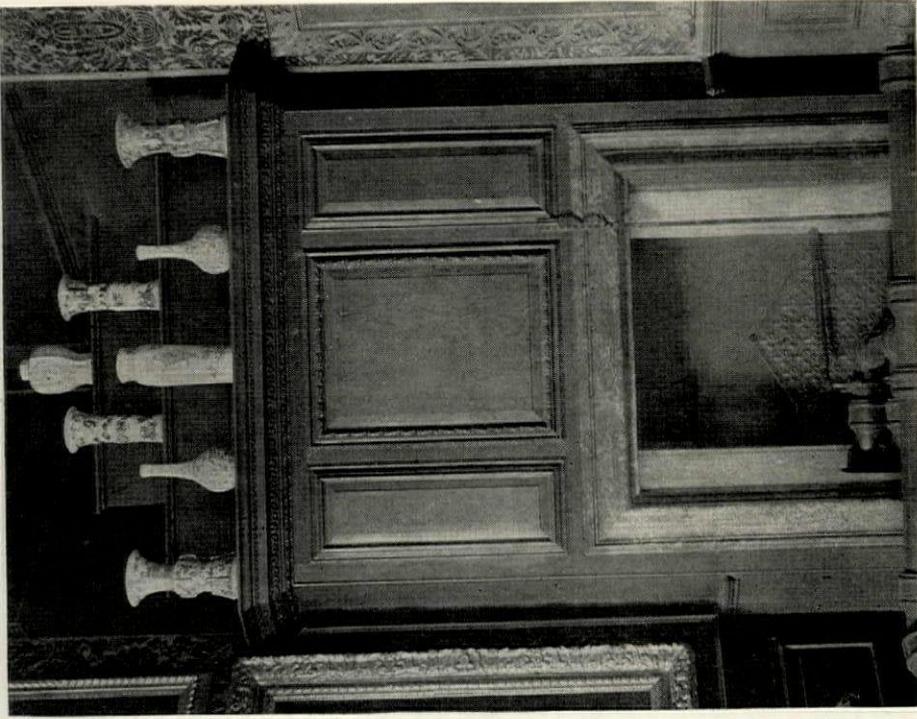
CARVED OVERMANTEL—DINING ROOM,
BELTON HOUSE, NEAR GRANTHAM.



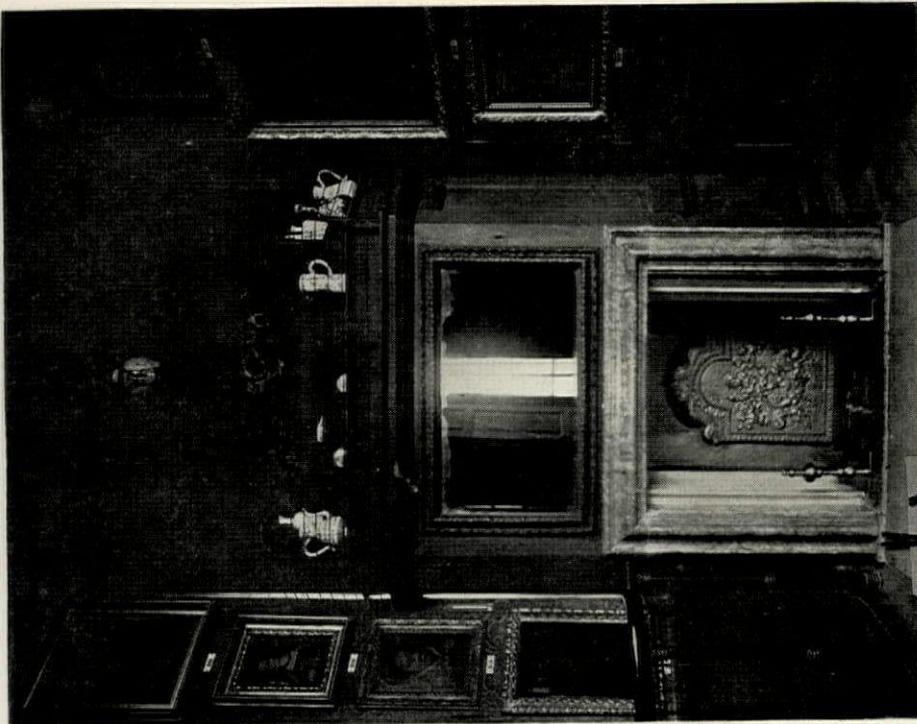
ANGLE CHIMNEYPIECE—HAMPTON COURT PALACE. WILLIAM AND MARY PERIOD.



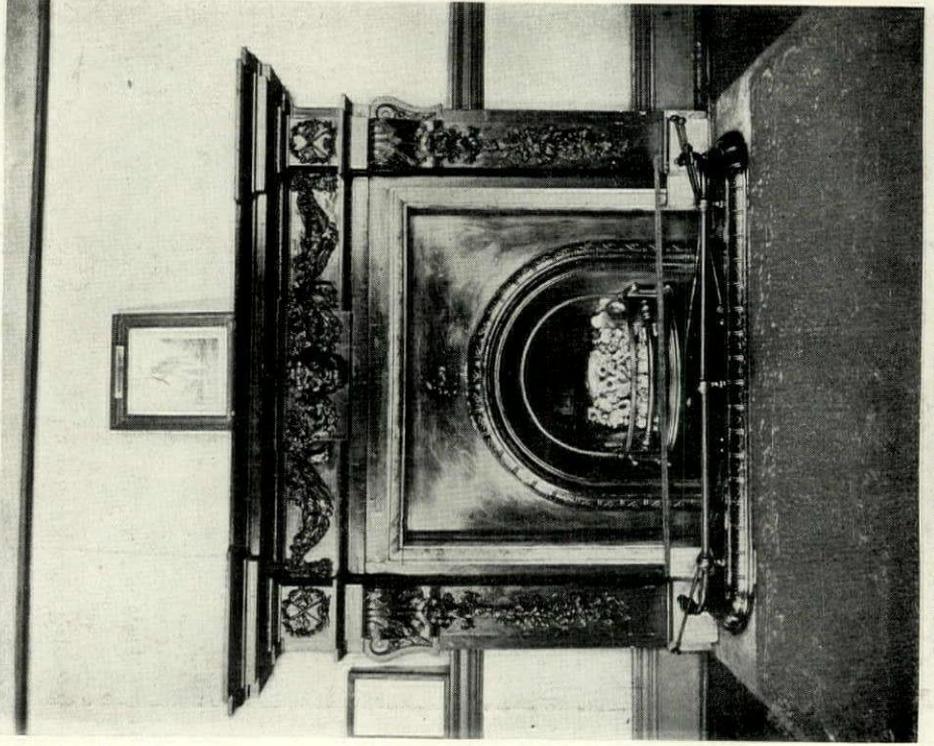
ANGLE CHIMNEYPIECE—HAMPTON COURT PALACE. WILLIAM AND MARY PERIOD.



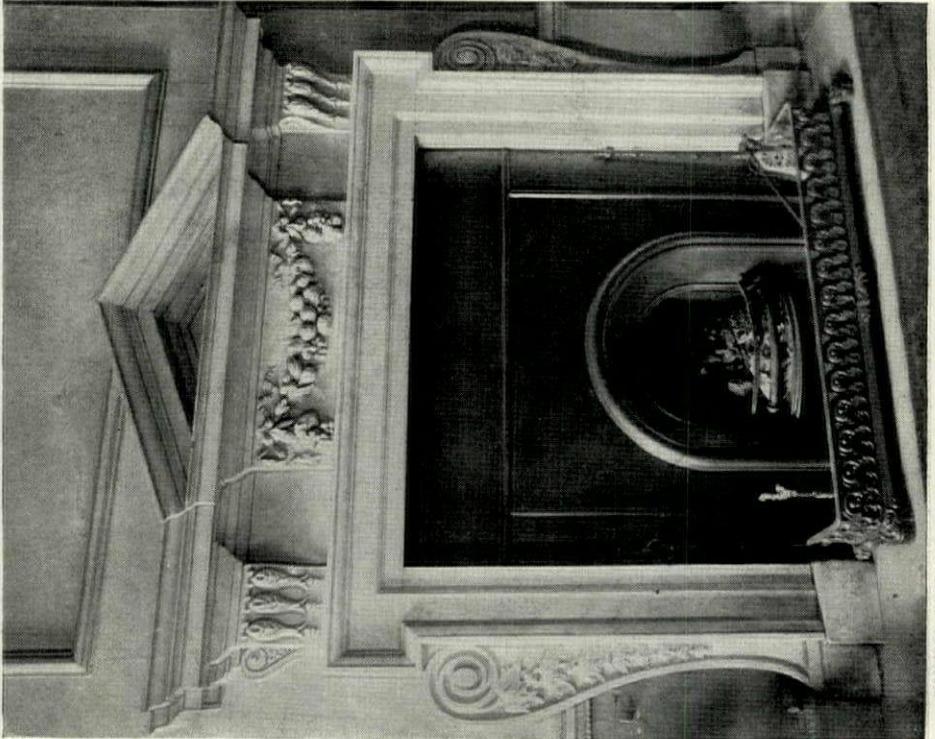
ANGLE CHIMNEYPIECE—HAMPTON COURT PALACE. WILLIAM AND MARY PERIOD.



ANGLE CHIMNEYPIECE—HAMPTON COURT PALACE. WILLIAM AND MARY PERIOD.

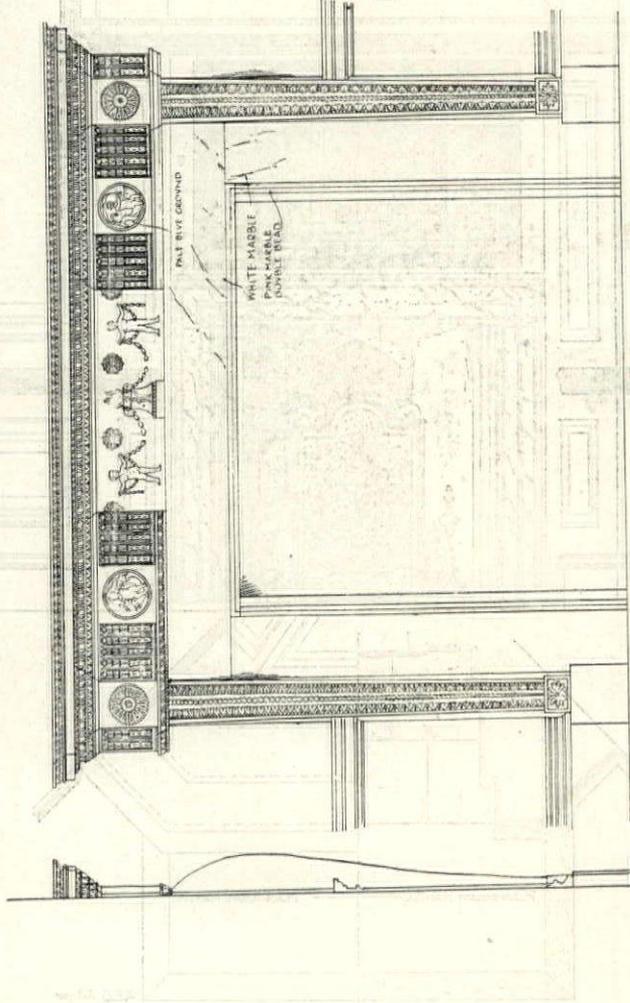


CHIMNEYPIECE FROM QUEEN'S HOUSE, GREENWICH.



FIREPLACE IN TREASURY OFFICE—WHITEHALL, LONDON.

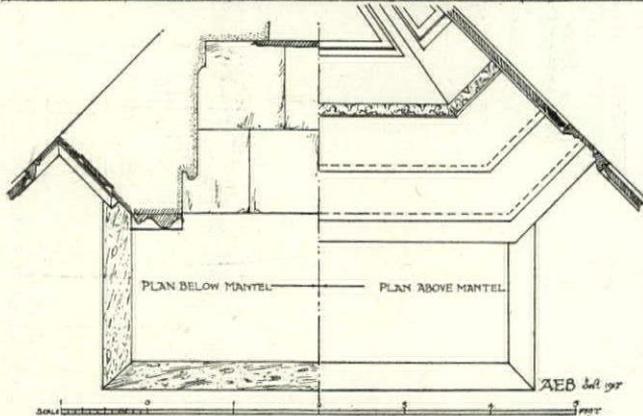
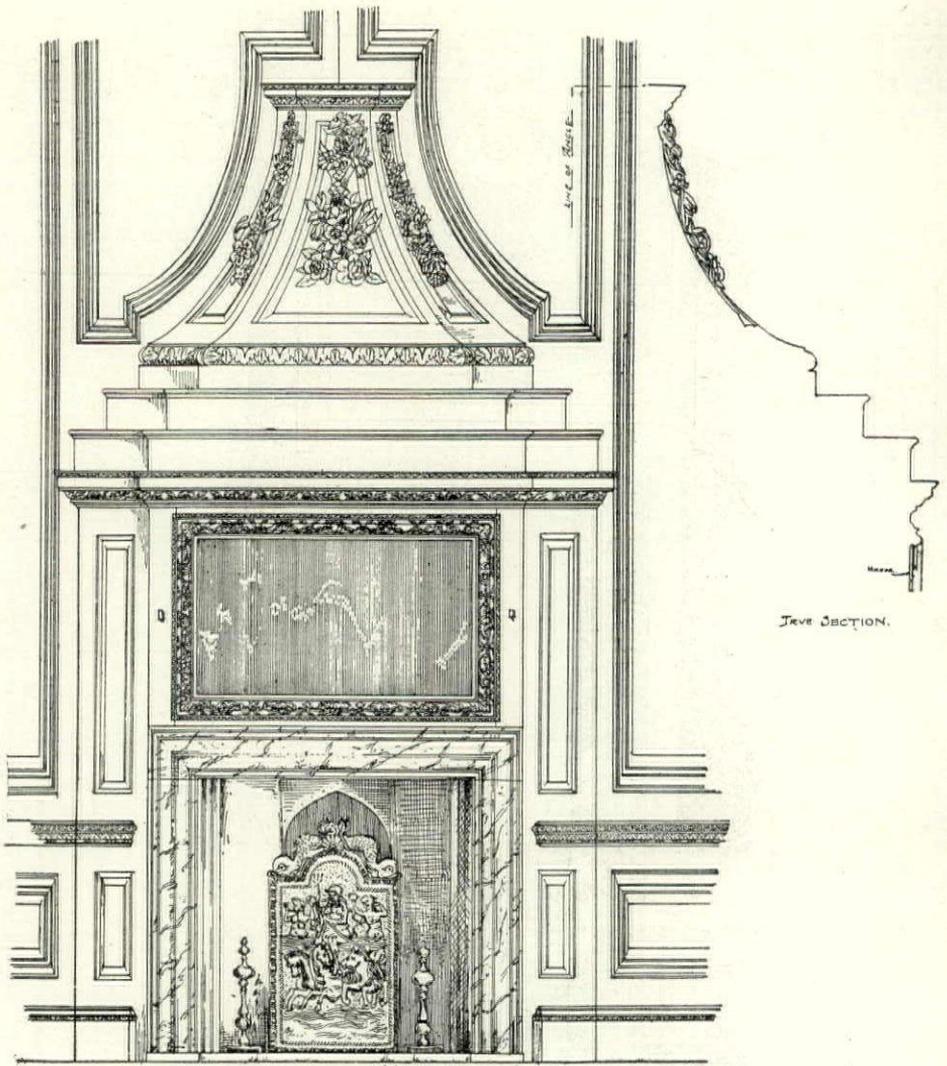
FORDE ABBEY.



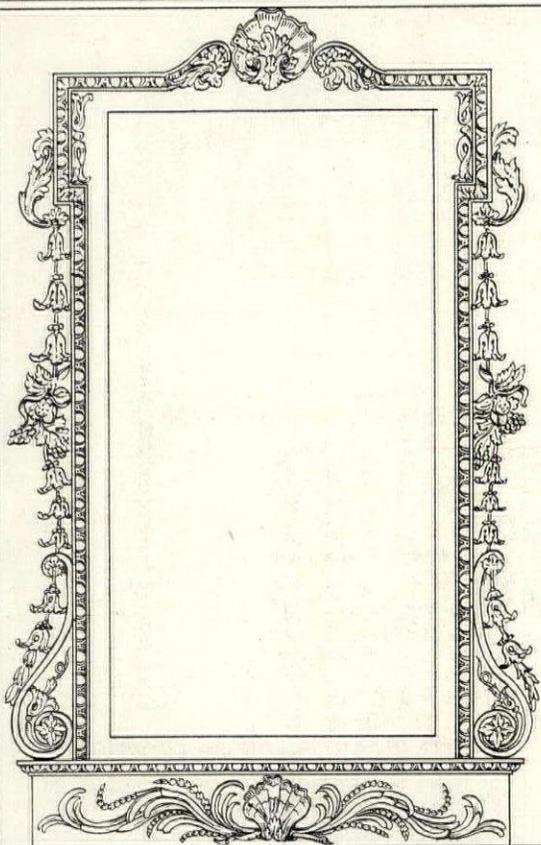
DETAIL

ELEVATION of ADAM PERIOD MANTEL
IN SMALL DRAWING ROOM c 1790.

THE ROOM DRAWING ROOM, ENGLAND.
DRAWN BY WILLIAM H. STUBBS.

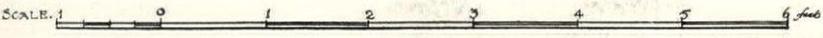


ANGLE CHIMNEY-PIECE TO WILLIAM III.
ANTE ROOM HAMPTON COURT PALACE.



THIN MARBLE

GUEST CHAMBER : MANOR OF CHRISTCHVRCH IPSWICH.



2507



STUDIO APARTMENT AT 200 WEST
FIFTY-SEVENTH ST., NEW YORK.



ARCHITECTURE and DEMOCRACY



*Before, During and
After the War --*

By CLAUDE BRACDON, FAIA.

III AFTER THE WAR

*When the old world is sterile
And the ages are effete,
He will from wrecks and sediment
The fairer world complete.
"The World-Soul"—Emerson.*

HE whom the World-Soul "forbids to despair" cannot but hope; and he who hopes tries ever to imagine that "fairer world" yearning at birth beyond this interval of blood and tears. Prophecy, to all but the anointed, is dangerous and uncertain; but even so, the author cannot forbear attempting some prevision of the architecture likely to arise from the wrecks and sediment left by the war.

As a basis for this forecast it is necessary, first of all, briefly to analyze the expression of the building impulse from what may be called the psychological point of view.

Broadly speaking, there are not five orders of architecture—nor fifty—but only two: *Arranged* and *Organic*. These correspond to the two terms of that "inevitable duality" which bisects life. Talent and genius, reason and intuition, bromide and sulphite are some of the names we know them by.

Arranged architecture is reasoned and artificial; produced by talent, governed by taste. Organic architecture, on the other hand, is the product of some obscure inner necessity for self-expression which is sub-conscious. It is as though

Nature herself, through some human organ of her activity, had addressed herself to the service of the sons and daughters of men.

Arranged architecture in its finest manifestations is the product of a pride, a knowledge, a competence, a confidence staggering to behold. It seems to say of the works of Nature, "I'll show you a trick worth two of that." For the subtlety of Nature's geometry, and for her infinite variety and unexpectedness, Arranged architecture substitutes a Euclidian system of straight lines and (for the most part) circular curves, assembled and arranged according to a definite logic of its own. It is created, but not creative; it is imagined, but not imaginative. Organic architecture is both creative and imaginative. It is non-Euclidian, in the sense that it is higher-dimensional—that is, it suggests extension in directions and into regions where the spirit finds itself at home, but of which the senses gives no report to the brain.

To make the whole thing clearer it may be said that Arranged and Organic architecture bear much the same relation to each other that a piano bears to a violin. A piano is an instrument that does not

give forth discords if one follows the rules. A violin requires absolutely an ear—an inner rectitude. It has a way of betraying the man of talent and glorifying the genius, becoming one with his body and his soul.

Of course it stands to reason that there is not always a hard and fast differentiation between these two orders of architecture, but there is one sure way by which each may be recognized and known. If the function appears to have created the form, and if everywhere the form follows the function, changing as that changes, the building is Organic; if, on the contrary, "the house confines the spirit," if the building presents not a face but however beautiful a mask, it is an example of Arranged architecture.

The Gothic cathedrals of the "Heart of Europe"—now the place of Armageddon—represent the most perfect and powerful incarnation of the Organic spirit in architecture. After the decadence of Medieval Feudalism—synchronous with that of Monasticism—the Arranged architecture of the Renaissance acquired the ascendant; this was coincident with the rise of Humanism, when life became increasingly secular. During the post-Renaissance, or Scientific period, of which the war probably marks the close, there has been a confusion of tongues; architecture has spoken only alien or dead languages, learned by rote.

But in so far as it is anything at all, esthetically, our architecture is Arranged, so if only by the operation of the law of opposites, or alternation, we might reasonably expect the next manifestation to be Organic. There are other and better reasons, however, for such expectancy.

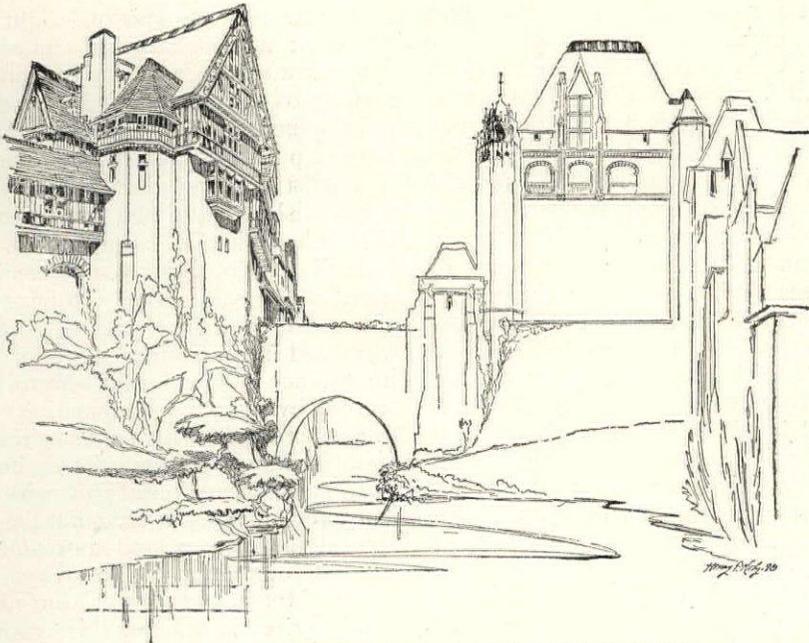
Organic architecture is ever a flower of the religious spirit. When the soul draws near to the surface of life, as it did in the two mystic centuries of the Middle Ages, it *organizes* life; and architecture, along with the other arts, becomes truly creative. The informing force comes not so much *from* man as *through* him. After the war that spirit of brotherhood, born in the camps (as Christ was born in a manger) and bred on the battlefields and in the trenches of Europe, is likely to take on all the attributes of a

new religion of humanity, prompting men to such heroisms and renunciations, exciting in them such psychic sublimations, as have characterized the great religious renewals of times past.

If this happens, it is bound to write itself on space in an architecture beautiful and new; one which "takes its shape and sun-color" not from the niggardly mind, but from the opulent heart. This architecture will of necessity be organic; the product not of self-assertive personalities, but the work of the "Patient Daemon" organizing the nation into a spiritual democracy.

The author is aware that in this point of view there is little of the "scientific spirit"; but science fails to reckon with the soul. Science advances facing backward, so what can it pre-visualize of a miraculous and divinely inspired future; or, for the matter of that, of any future at all? The old methods and categories will no longer answer; the orderly course of evolution has been violently interrupted by the earthquake of the war. Igneous action has superseded aqueous action. The casements of the human mind look out no longer upon familiar hills and valleys, but on a stark, strange devastated landscape, the plowed land of some future harvest of the years. It is the End of the Age, the *Kali Yuga*—the completion of a major cycle; but all cycles follow the same sequence: after winter—spring; after the Iron Age—the Golden.

The specific features of this organic, divinely inspired architecture of the Golden Age cannot, of course, be discerned by anyone, any more than the manner in which the Great Mystery will present itself anew to consciousness. The most imaginative artist can imagine only in terms of the already existent; he can speak only the language he has learned. If that language has been derived from medievalism, he will let his fancy soar after the manner of Henry Kirby, in his *Imaginative Sketches*; if on the contrary he has learned to think in terms of the Classic vernacular, Otto Rieth's *Architektur-Skizzen* will suggest the sort of thing that he is likely to produce. Both results will be as remote as possible from future reality, for the reason that they



ONE OF HENRY P. KIRBY'S IMAGINATIVE SKETCHES.

are so near to present reality. And yet some germs of the future must be enfolded even in the present moment; the course of wisdom is to seek them neither in the old romance nor in the new rationalism, but in the subtle and ever-changing spirit of the times.

The most modern note yet sounded in business, in diplomacy, in social life, is expressed by the phrase, "Live openly!" From every quarter, in regard to every manner of human activity, has come the cry, "Let in the light!" By a physical correspondence, not the result of coincidence but of the operation of an occult law, we have, in a very real sense, let in the light. In buildings of the latest type devoted to large uses there has been a general abandonment of that "cellular system" of many partitions which produced the pepper-box exterior, in favor of great rooms serving diverse functions lighted by vast areas of glass. Although an increase of efficiency has dictated and determined these changes, this breaking down of barriers between human beings and their common sharing of the light of day in fuller measure is a symbol of the growth of brotherhood, and the search, by the soul, for spiritual light.

Now if this fellowship and this quest gain volume and intensity, its physical symbols are bound to multiply and find ever more perfect forms of manifestation. So, both as a practical necessity and as a symbol the most pregnant and profound, we are likely to witness in architecture the development of the House of Light, particularly as human ingenuity has made this increasingly practicable.

Glass is a product still undergoing development, as are also those devices of metal for holding it in position and making the joints weathertight. The accident and fire hazard has been largely overcome by protecting the structural parts by the use of wire-glass and by other ingenious devices. The author has been informed on good authority that shortly before the outbreak of the war a glass had been invented abroad, and made commercially practicable, which shut out the heat rays, but admitted the light. The use of this glass would overcome the last difficulty—the equalization of temperatures; and might easily result in buildings of an entirely novel type, the approach to which is seen in the "pier and grille" style of exterior. This is being adopted not only for commercial build-

ings, but for others of widely different function, on account of its manifest advantages. Cass Gilbert's admirable studio apartment at 200 West Fifty-seventh Street, New York, is a building of this type.

In this seeking for sunlight in our cities we will come to live on the roofs more and more—in summer in the free air, in winter under variformed shelters of glass. This tendency is already manifesting itself in those newest hotels, whose roofs are gardens, convertible into skating ponds, with glazed belvederes for eating in all weathers. Nothing but ignorance and inanition stand in the way of the utilization of waste roof spaces. People have lived on the roofs in the past often enough, and will again.

By shouldering ever upward for air and light, we have too often made of the down town districts cliff-bound canyons—"granite deeps opening into granite deeps." This has been the result of no inherent necessity, but of that competitive greed whose Nemesis is ever to miss the very thing it seeks. By intelligent co-operation, backed by legislation, the roads and sidewalks might be made to share the sunlight with the roofs.

This could be achieved in two ways: by stepping back the façades in successive stages—giving top lighting, terraces, and wonderful incidental effects of light and shade; or by adjusting the height of the buildings to the width of their interspaces, making rows of tall buildings alternate with rows of low ones, with occasional fully isolated tower-like skyscrapers, giving variety to the skyline.

These and similar problems of city planning have been worked out theoretically with much minuteness of detail, and are known to every student of the science of cities; but very little of it all has been realized in a practical way—certainly not on this side of the water, where individual rights are held so sacred that a property owner may commit any kind of an architectural nuisance so long as he confines it to his own front yard. The strength of *is*, the weakness of *should be*, conflicting interests and legislative cowardice are responsible for the highly irrational manner in which our cities have grown great.

The search for spiritual light in the midst of materialism finds unconscious symbolization in a way other than this seeking of the sun. It is in the amazing development of artificial illumination. From a purely utilitarian standpoint there is almost nothing that cannot now be accomplished with light, short of making the ether itself luminiferous. The esthetic development of this field, however, can be said scarcely to have begun. The so recent San Francisco Exposition witnessed the first successful effort of any importance to enhance the effect of architecture by artificial illumination, and to use colored light with a view to its purely pictorial value. Though certain buildings have since been illuminated with excellent effect, it remains true that the corset, chewing-gum, beer and automobile sky signs of our Great White Ways are an index of the height to which our imagination has risen in utilizing this Promethean gift in any but necessary ways. Interior lighting, except negatively, has not been dealt with from the standpoint of beauty, but of efficiency; the engineer has pre-empted this field to the exclusion of the artist.

All this is the result of the atrophy of that faculty to worship and wonder which alone induces the mood from which the creation of beauty springs. Light we regard only as a convenience "to see things by," instead of as the power and glory that it inherently is. Its intense and potent vibrations and the rainbow glory of its color beat at the door of consciousness in vain. When we awaken to these things we shall organize light into a language of spontaneous emotion, just as from sound music was organized.

It is beside the purpose of this essay to attempt to trace the evolution of this new art form, made possible by modern invention, to indicate what phases it is likely to pass through on the way to what perfections, but that it is bound to add a new glory to architecture is sure. This will come about in two ways: directly, by giving color, quality, subtlety to outdoor and indoor lighting; and indirectly, by educating the eye to color values, as the ear has been educated to music; thus creating a need for more color everywhere.



ONE OF OTTO RIETH'S "ARCHITECTUR-SKIZZEN."

As light is the visible symbol of an inner radiance, so is color the sign manual of happiness, of joy. Our cities are so dull and drab in their outward aspects by reason of the weight of care that burdens us down. We decry the happy irresponsibility of the savage, and the patient contentment of the Oriental with his lot, but both are able to achieve marvels of color in their environment beyond the compass of civilized man. The glory of medieval cathedral windows is a still living confutation of the belief that in those far-off times the human heart was sad. Architecture is the index of the inner life of those who produced it, and whenever it

is colorful that inner life contains an inner joy.

In the coming Golden Age life will be joyous; and if it is joyous, color will come into architecture again. Our psychological state alone even now prevents it, for we are rich in materials and methods to make such polychromy possible. In an article in a recent number of this magazine Mr. Leon V. Solon, writing from an entirely different point of view, divines this tendency, and expresses the opinion that color is again renascent. This tendency is so marked, and this opinion is so shared, that we may look with confidence toward a color evolution in architectural art.

The question of the character of what may be called the ornamental mode of the architecture of the New Age is of all questions the most obscure. Evolution along the lines of the already existent does not help us here, for we are utterly without any ornamental mode from which a new and better might conceivably evolve. Nothing so betrays the spiritual bankruptcy of the end of the Iron Age as this.

The only light on this problem which we shall find dwells in the realm of metaphysics rather than in the world of material reality. Ornament, more than any other element of architecture, is deeply psychological; it is an externalization of an inner life. So true is this that any time-worn fragment out of the past when art was a language, can usually be assigned to its place and its period, so eloquent is it of a particular people and a particular time. Could we therefore detect and understand the obscure movement of consciousness in the modern world, it might give some clue to the language it would later find.

It is clear that consciousness is moving away from its absorption in materiality, because it is losing faith in materialism. Clairvoyance, psychicism, the recrudescence of mysticism, of occultism—these signs of the times are straws which show which way the wind now sets, and indicate that the modern mind is beginning to find itself at home in what is called *the fourth dimension*. The phrase is used here in a different sense from that in which the mathematician uses it, but oddly enough four-dimensional geometry provides the symbols by which some of these occult and mystical ideas may be realized by the rational mind. One of the most engaging and inspiring of these ideas is that the personal self is a *projection* on the plane of materiality of a metaphysical self, or soul, to which the personal self is related as is the shadow of an object to the object itself. Now this coincides remarkably with the idea, implicit in all higher-space speculation, that the figures of solid geometry are projections on a space of three dimensions, of corresponding four dimensional forms.

All ornament is in its last analysis geometrical—sometimes directly so, as in the system developed by the Moors. Will the psychology of the new dispensation find expression through some adaptation of four-dimensional geometry? The idea is far from absurd, by reason of the decorative quality inherent in many of the regular hypersolids of four-dimensional space when projected upon solid and plane space.

If this suggestion seems too fanciful, there is still recourse to the law of analogy in finding the thing we seek. Every fresh religious impulse has always developed a symbology through which its truths are expressed and handed down. These symbols, woven into the very texture of the life of the people, are embodied by them in their ornamental mode. The sculpture of a Greek temple is a pic-

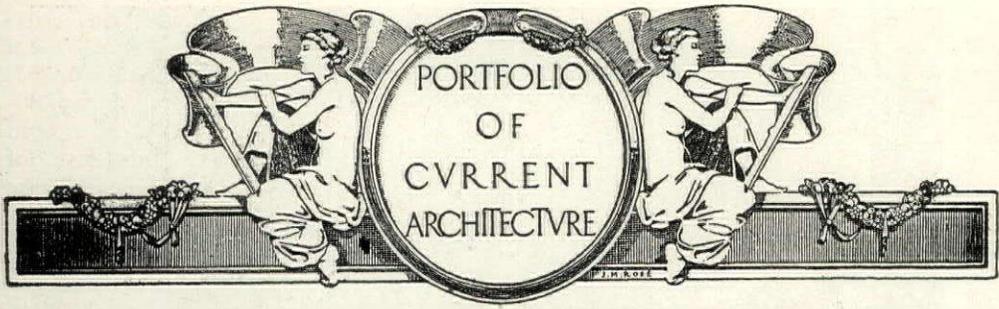
ture-book of Greek religion; the ornamentation of a Gothic cathedral is a veritable bible of the Christian faith. Almost all of the most beautiful and enduring ornaments have first been sacred symbols: the swastika, the "Eye of Buddha," the "Shield of David," the wheel, the lotus and the cross.

Now that "twilight of the world" following the war perhaps will witness an *Avatara*—the coming of a World-Teacher who will rebuild, on the one broad and ancient foundation, that Temple of Truth which the folly and ignorance of man is ever tearing down. A material counterpart of that temple will in that case afterward rise. Thus will be born the architecture of the future; and the ornament of that architecture will tell, in a new set of symbols, the story of the rejuvenation of the world.

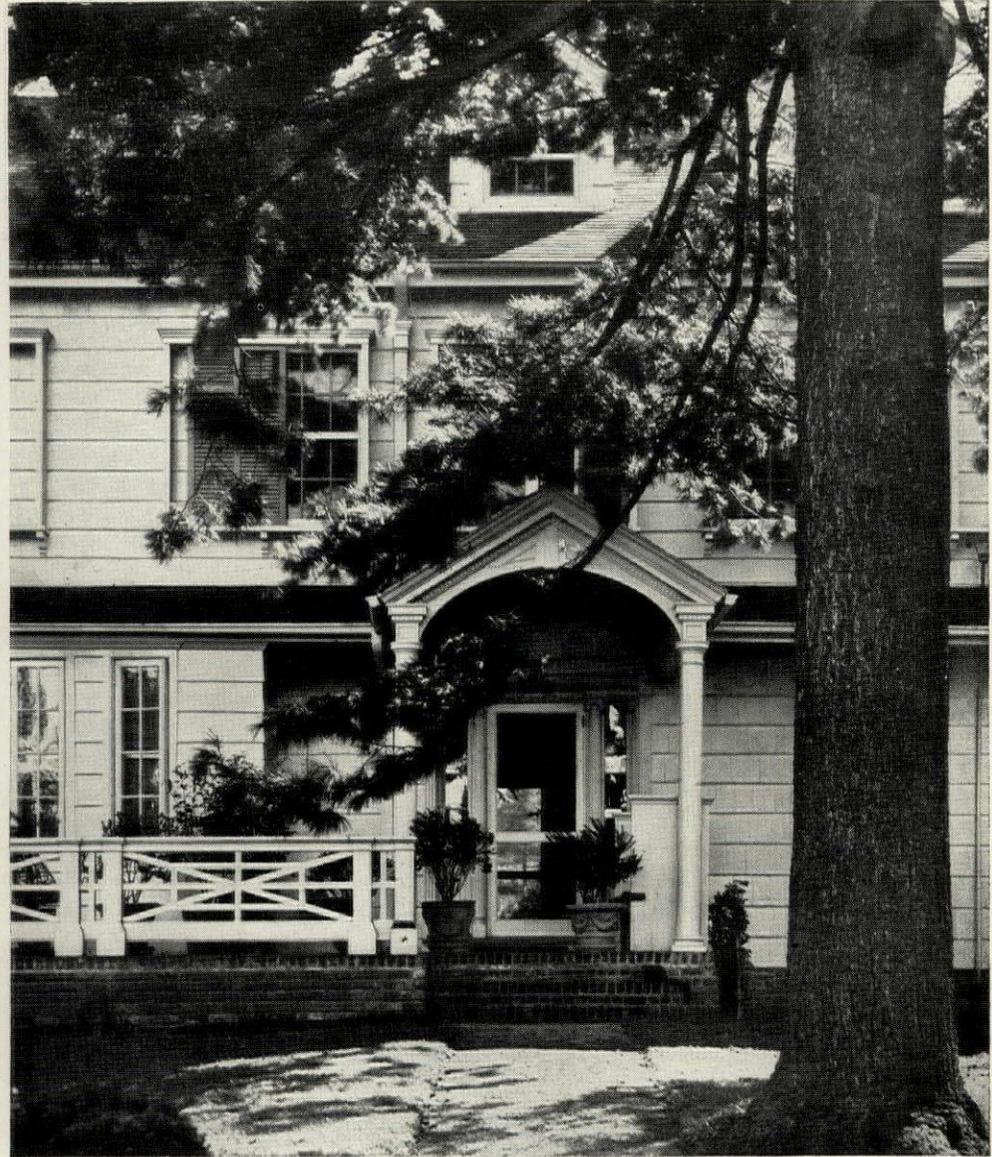
In this previsioning of architecture after the war the author must not be understood to mean that these things will be realized *directly* after. Architecture, from its very nature, is the most sluggish of all the arts to respond to the natural magic of the quick-moving mind—it is Caliban, not Ariel. Following the war the nation will be for a time depleted of man-power, burdened with debt, prostrate, exhausted. But in this time of reckoning will come reflection, penitence.

"And I'll be wise hereafter,
And seek for grace. What a thrice-
double ass
Was I, to take this drunkard for a god,
And worship this dull fool."

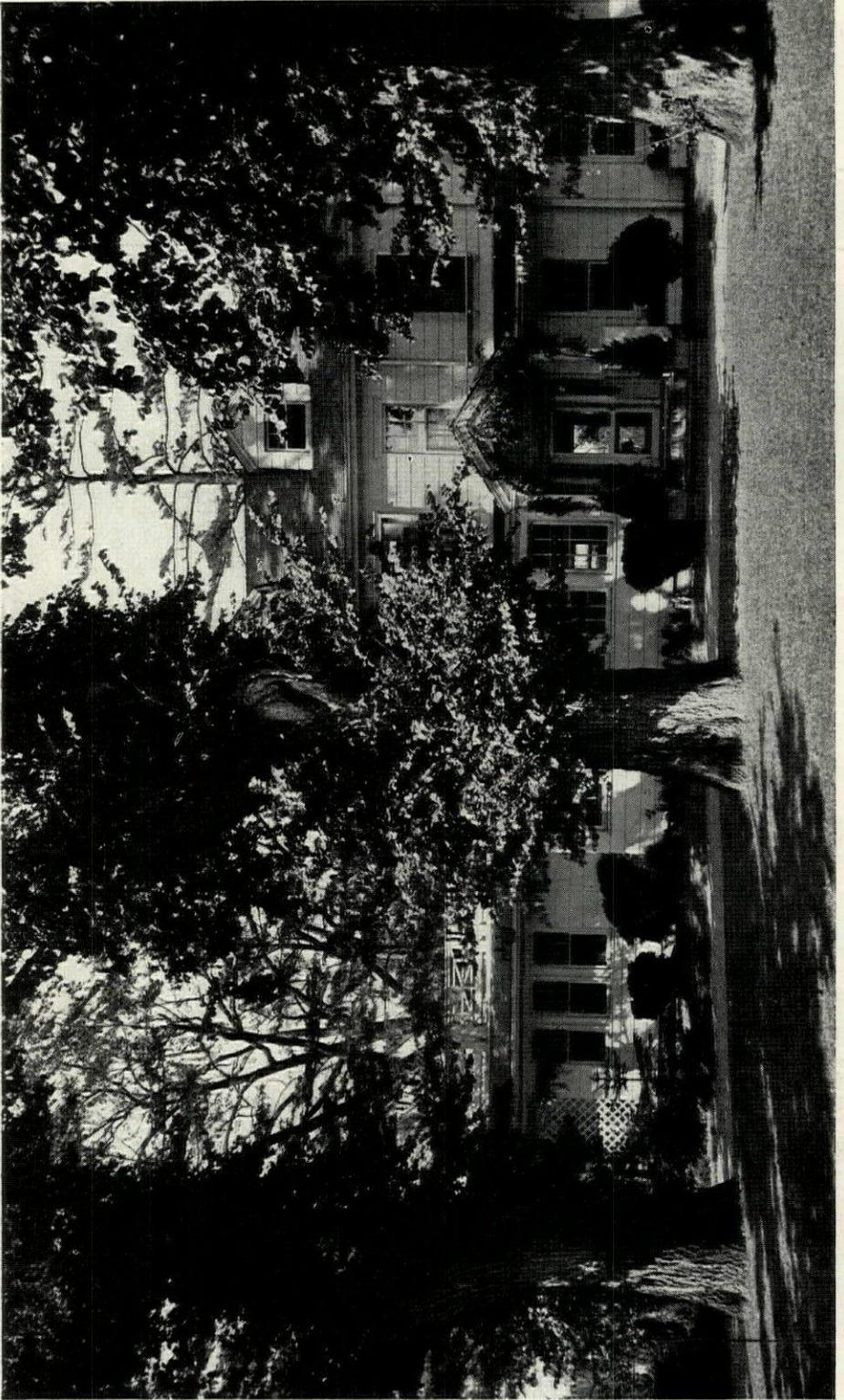
With some such epilogue the curtain will descend on the great drama now approaching a close. It will be for the younger generations, the reincarnate souls of those who fell in battle, to inaugurate the work of giving expression, in deathless forms of art, to the vision of that "fairer world" glimpsed now only as by lightning, in a dream.



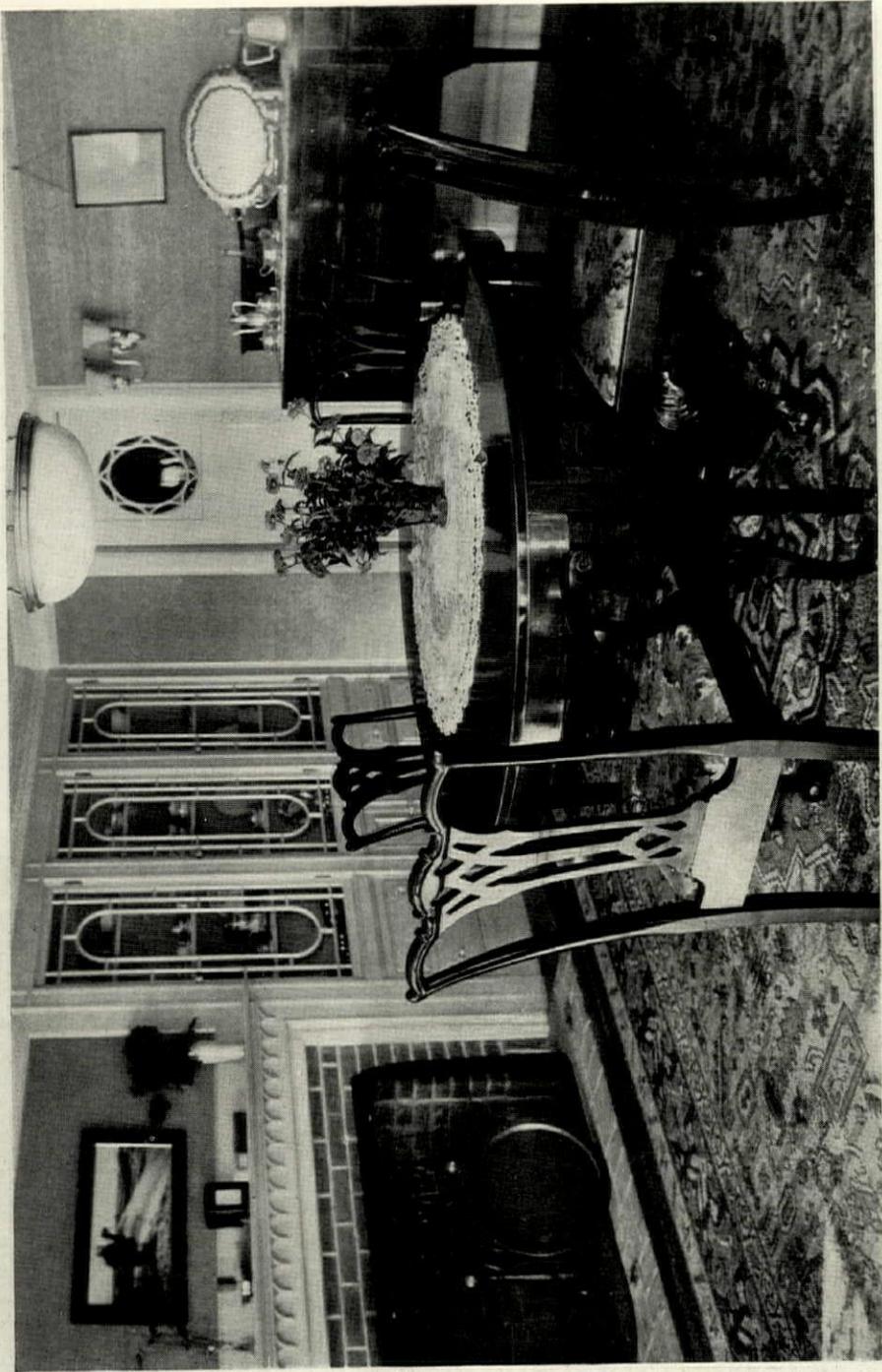
PORTFOLIO
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CURRENT
ARCHITECTURE



ENTRANCE—RESIDENCE OF MR. FRANK BAILEY, LOCUST VALLEY, L. I. H. CRAIG SEVERANCE, ARCHITECT.



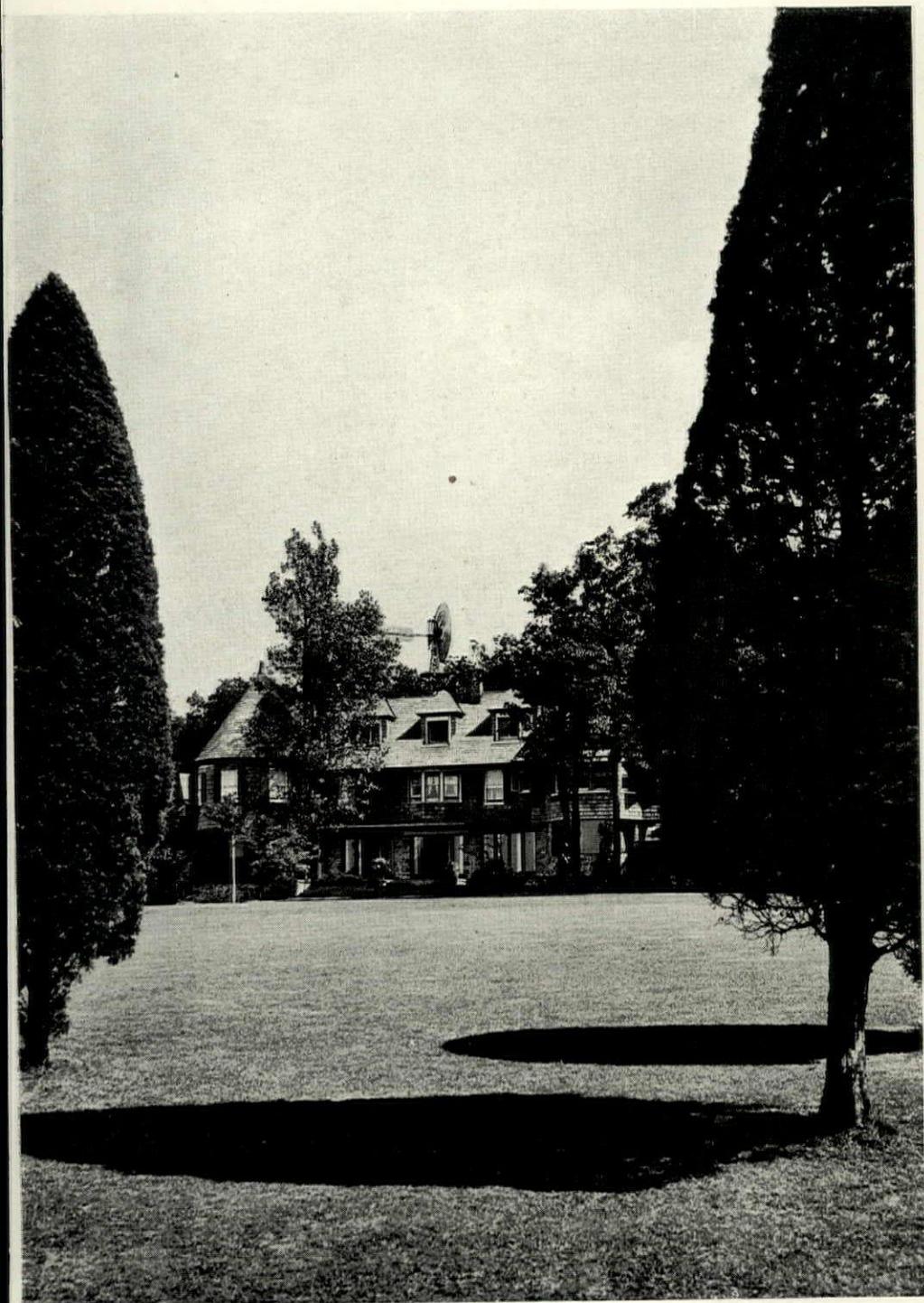
RESIDENCE OF MR. FRANK BAILEY, LOCUST



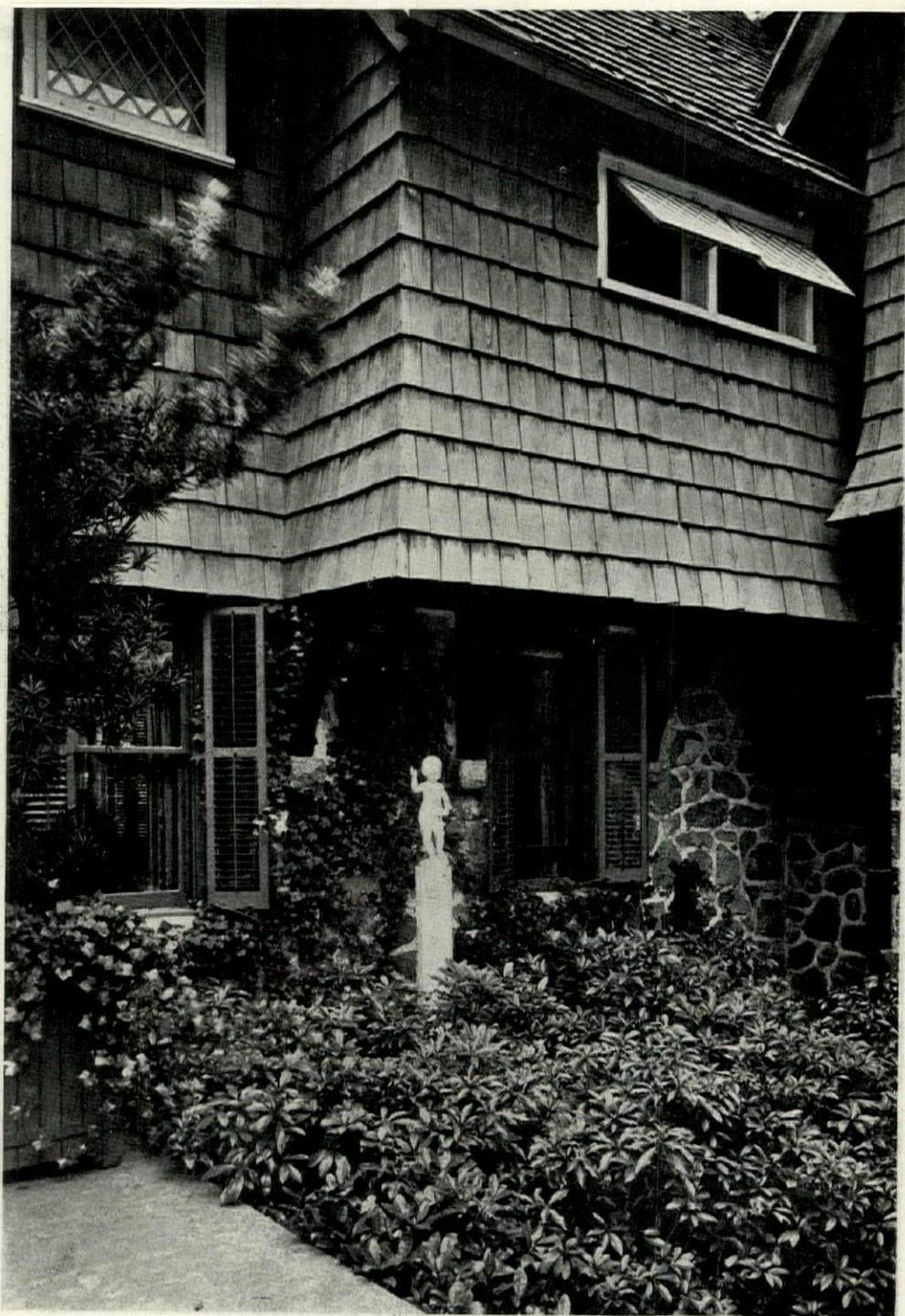
DINING ROOM—RESIDENCE OF MR. FRANK BAILEY
LOCUST VALLEY, L. I. H. CRAIG SEVERANCE, ARCHITECT.



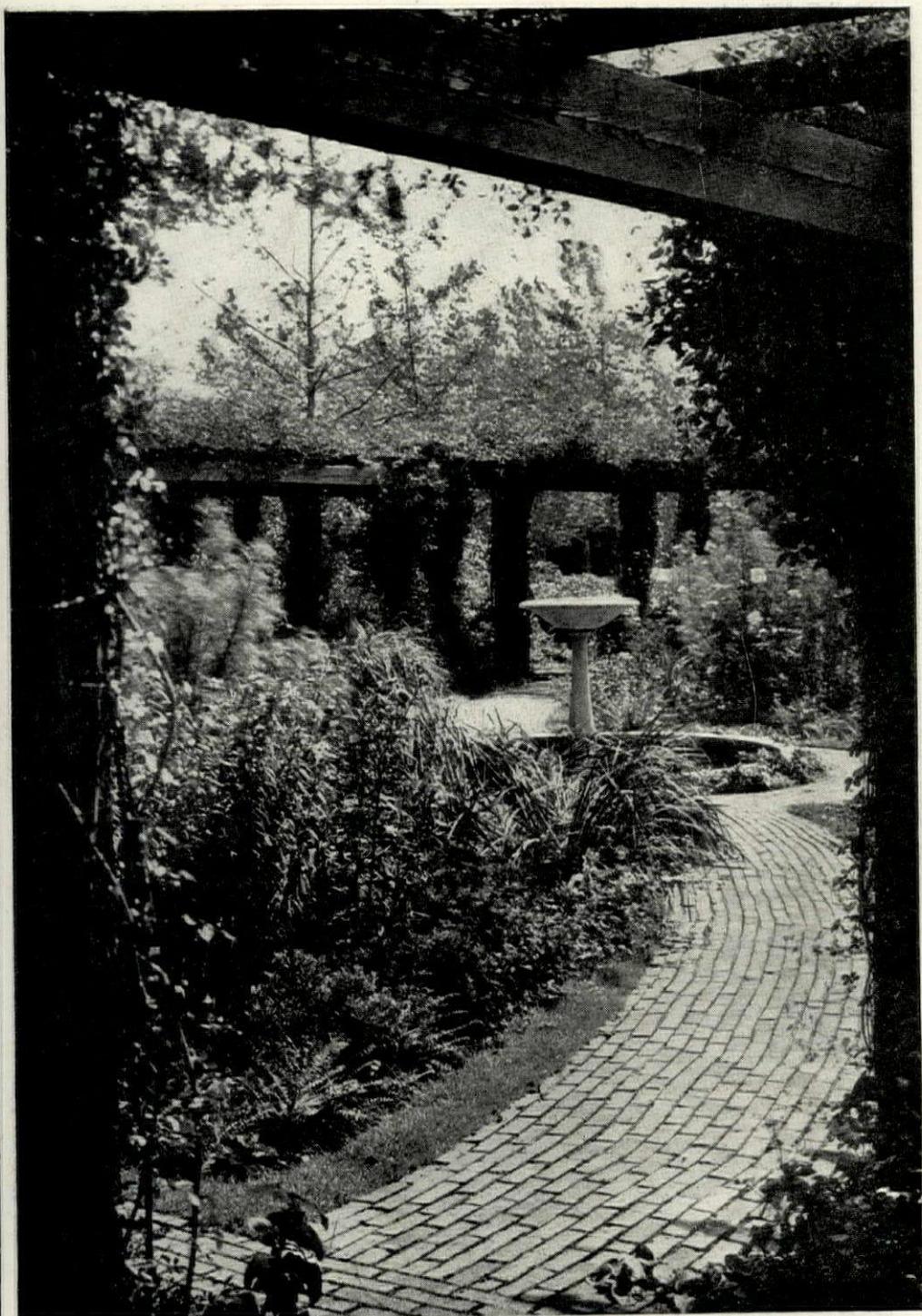
RESIDENCE OF MR. FRANK BAILEY, LOCUST
VALLEY, L. I. H. CRAIG SEVERANCE, ARCHITECT.



RESIDENCE OF MRS. R. L. STEVENS, BERNARDSVILLE, N. J. LORD & HEWLETT, ARCHITECTS.



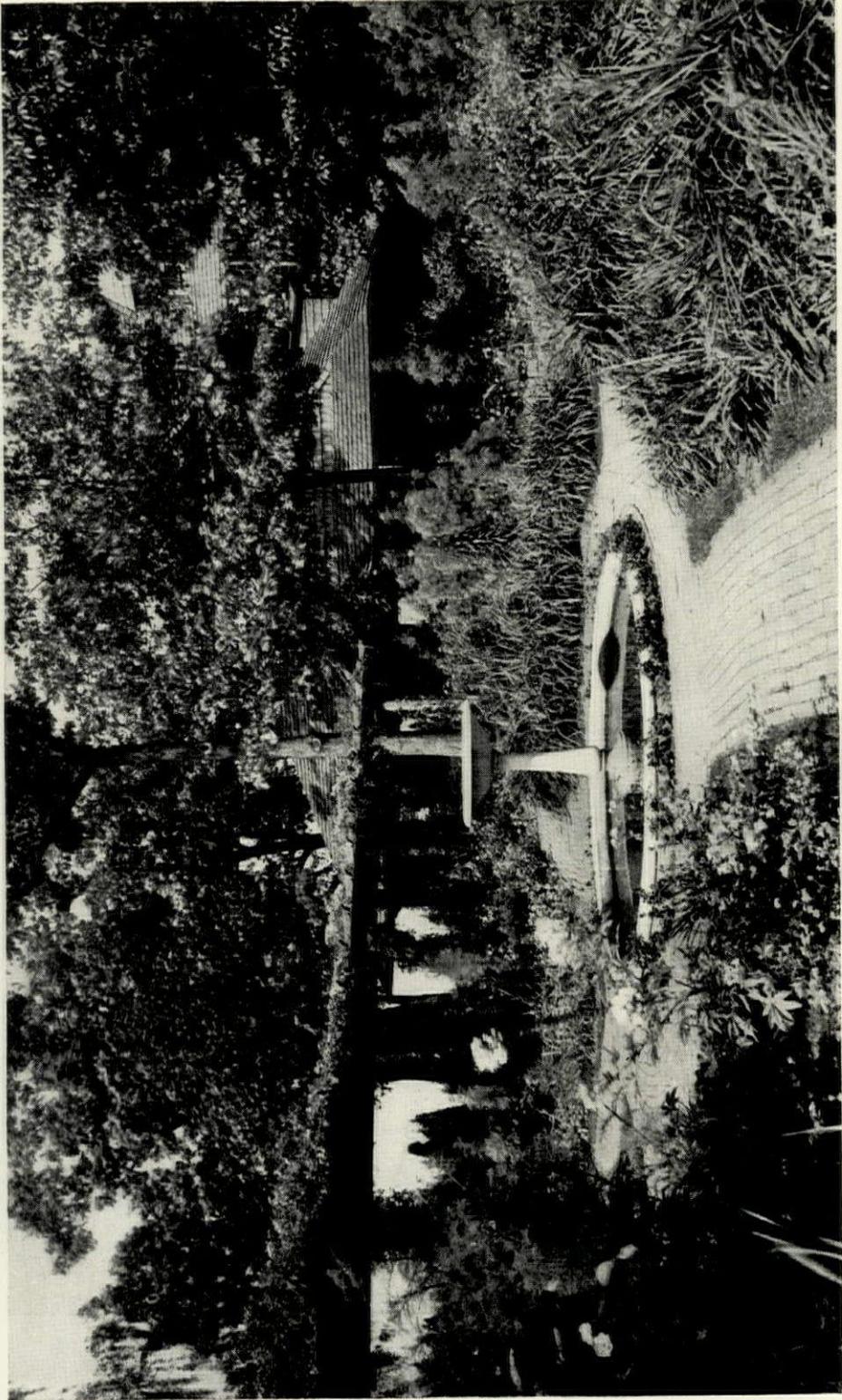
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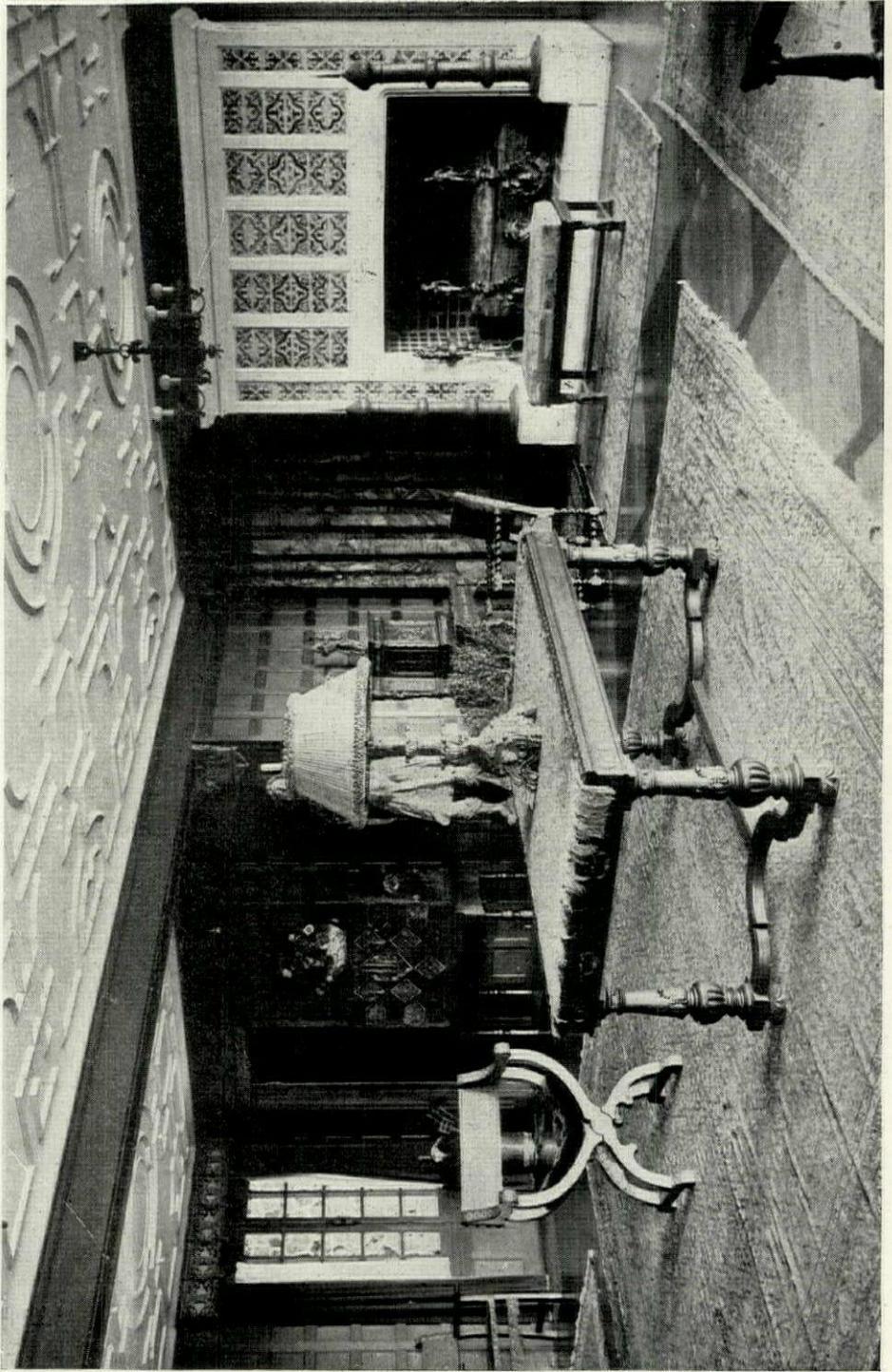
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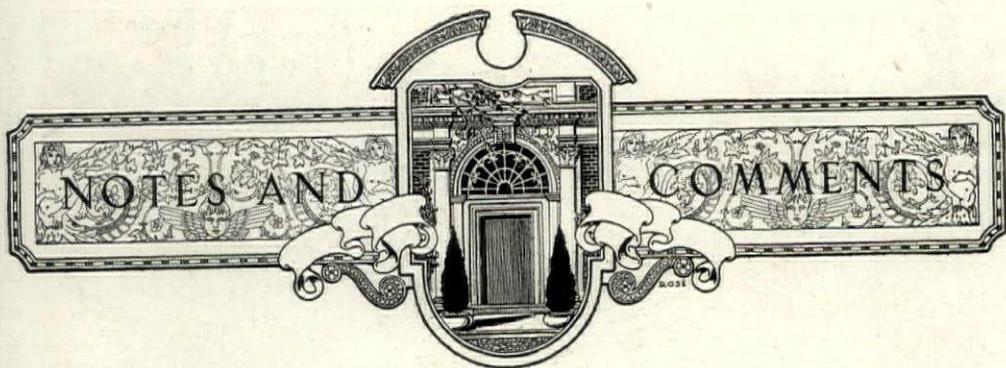
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**The Liberty
Field Hospital
Ward.**

In connection with recent efforts of many large organizations voluntarily to utilize their staffs and equipment for purposes aiding the prosecution of the war, attention should be called

at this time to the Liberty Field Hospital Ward, designed for the American Museum of Natural History by its president, Mr. Henry Fairfield Osborn, assisted by Mr. Harry F. Beers, Superintendent of Construction of the Museum. An illustrated pamphlet of the building has been issued by the Museum of Natural History, lucidly presenting plans, elevations, sections and details, with photographs of the scale model, which may be seen at the Museum in West Seventy-seventh street, where inquiries may be addressed to the Director.

Many features exhibited by the design render it noteworthy among the numerous arrangements of hospital buildings developed by the war in Europe, and those responsible for its design have incorporated into it certain of the best points found in the latest and most improved field hospitals in use by the French, English, Canadian and American military forces.

One of the dominant ideas in the Liberty Field Hospital Ward is to facilitate the ready exposure to the open air of any or all of its occupants, looking toward a greatly increased rapidity in their recovery—the beneficial effect of such treatment having been notably demonstrated when employed at the First Eastern General Hospital, Cambridge, England.

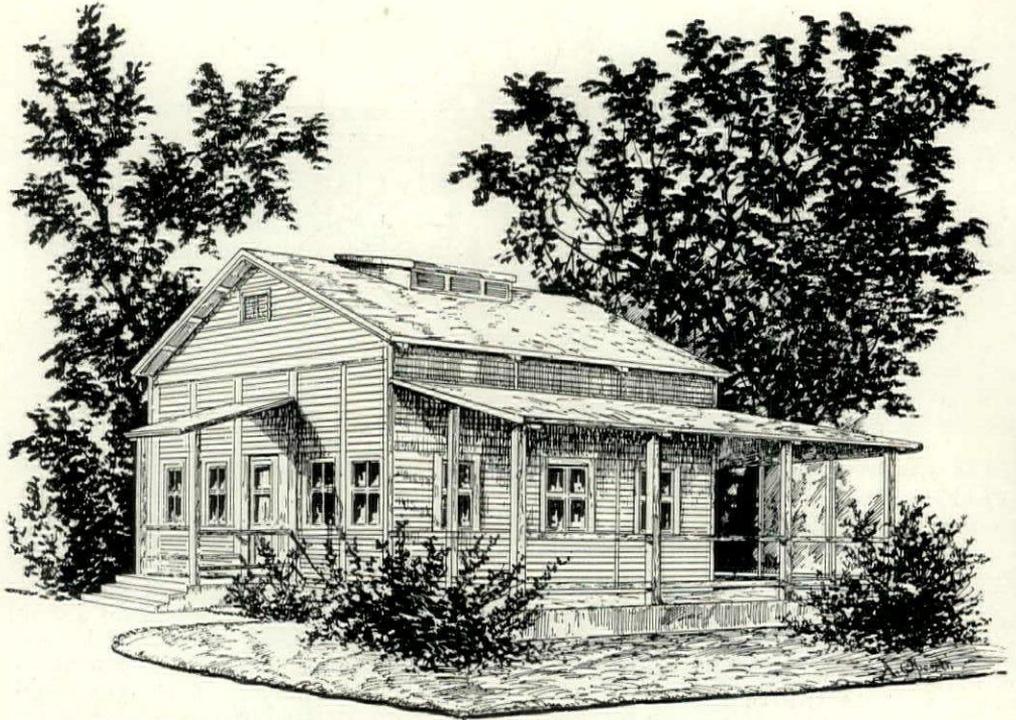
A second and equally important idea is the construction of the ward in units of five-foot lengths, each complete in itself, with the result that the units are portable and may be quickly erected; that the building is elastic and may be built to any

length desired; and last, but not least, that these units may at the close of the war be used for purposes of reconstruction in the devastated portions of the battle areas of France and Belgium. To many this last fact will appeal as of great interest, serving as an antidote for a small part of the economic waste exhibited by the utter destruction of material created to fill a temporary need. These units may be assembled into dwellings of a size adapted to individual families, and at very slight expense be rendered permanent homes for repatriated Frenchmen.

The construction is extremely simple, and with few exceptions all parts of the building are fabricated, numbered, packed and shipped ready to be set up by the hands of unskilled labor. The main sills and floor beams of the building rest upon concrete piers one foot square. Posts of sufficient strength mark each five-foot division and carry the weight of the light steel trusses.

The panels, fitted between the posts, are identical and may be pushed out onto the sliding track which runs the length of the building, and slid back one over the other in such a way that two whole bays may be opened at the same time at intervals of their length; or, if desired, the panels may all be pushed to the end of the building and stored back to face. In this way both sides of the building may be completely open to the air. The windows in these panels, since they are similarly placed, correspond when one panel is pushed back over another and no obstruction is offered to the passage of light.

In the Overseas Hospital Ward in use by the United States Government a number of bays of the side walls are so hinged as to swing outward, forming ramps to the ground. This arrangement is desirable in case of fire or other emergency when it



PERSPECTIVE OF A THREE-UNIT SECTION OF THE LIBERTY FIELD HOSPITAL WARD CONVERTED INTO A DWELLING AFTER THE WAR.

is necessary to evacuate the hospital quickly, and such a suggestion might well be incorporated into the projected Liberty Field Hospital Ward where no such provision appears.

The construction of the panels themselves is of comparative permanence. The small air space, covered on both sides with tar paper, over which are applied the exterior and interior wall finishes, provides sufficient insulation against extremes of temperature. Above the sliding panels are stationary panels of like construction fitted between the posts. The floor panels are made up in much the same manner to protect against dampness, heat and cold. The interior partitions are of pine construction, covered with compo-board.

The floors of the porch and ward are at the same level, permitting the comfortable moving of patients from one to the other.

The height of the interior from floor to hung ceiling is 11 feet 6 inches, with an air space above to the ridge of the roof six feet at its centre. Ventilating devices in the ceiling are manipulated from within by hooks and communicate with louvered openings above the roof. This ceiling

treatment would seem to be an improvement upon that of the Overseas Ward, in that the generous air space with end-to-end ventilation offers more protection against the summer heat than does the open roof of the Overseas Ward, while the double ventilators give greater protection from outside dust.

A ten-foot porch, running along the whole length of one side and across the end of the building, is covered by a canvas awning which may be rolled back in sections on the supporting rafters.

The roof truss is ingeniously arranged in three parts: the steel portion, which, economically designed in its tension and compression members, may be folded for shipment like a great jack-knife; and the two wooden rafters, which are bolted to the steel when assembled and are notched to fit properly to the top of the side walls of its centre.

The recommended size for the ward is one hundred and fifty feet by eleven feet six inches; floor to peak to roof, seventeen feet six inches. In the ward may be accommodated thirty-two beds, with an additional two in the isolation room, and one-half of this number of beds may be

placed on the open porch at one time. In the service portion, occupying one end of the building, are a diet kitchen, isolation room, nurses' room, utility room, toilet and lavatory, bath and surgical dressing room and linen room.

An important consideration in such work is the weight and transportation. The statistics with the layout give the total weight of the completed ward (150 feet in length) as 114,425 lbs. (cubage 4,484), and state that one such ward can be transported to the destination in seventeen standard United States Liberty trucks, while it is believed that a more economical method might be possible in dealing with the material in gross. The estimated cost of thirty Liberty Field Hospital Wards, with space for 1,020 beds, prices for labor and material prevailing April 10, 1918, ranges from

\$231,000 to \$292,000 complete, or about \$8,000 per ward.

The contribution of so much thought and labor on the part of the designers is significant of the unselfish aid which is being offered to the Government in its tremendous work of preparing for a vigorous and successful carrying on of the war, and it is to be hoped that prompt use will be made of the suggestions contained in the design, if such has not already been the case. To the advantages of unit construction and the fact that the units may be used so successfully for dwellings after the war are added its adaptability for use as Army Red Cross hospitals, field buildings or convalescent wards, and for Y. M. C. A. canteen work under both winter and summer climatic conditions.

CHARLES OVER CORNELIUS.