

# THE ARCHITECTURAL RECORD



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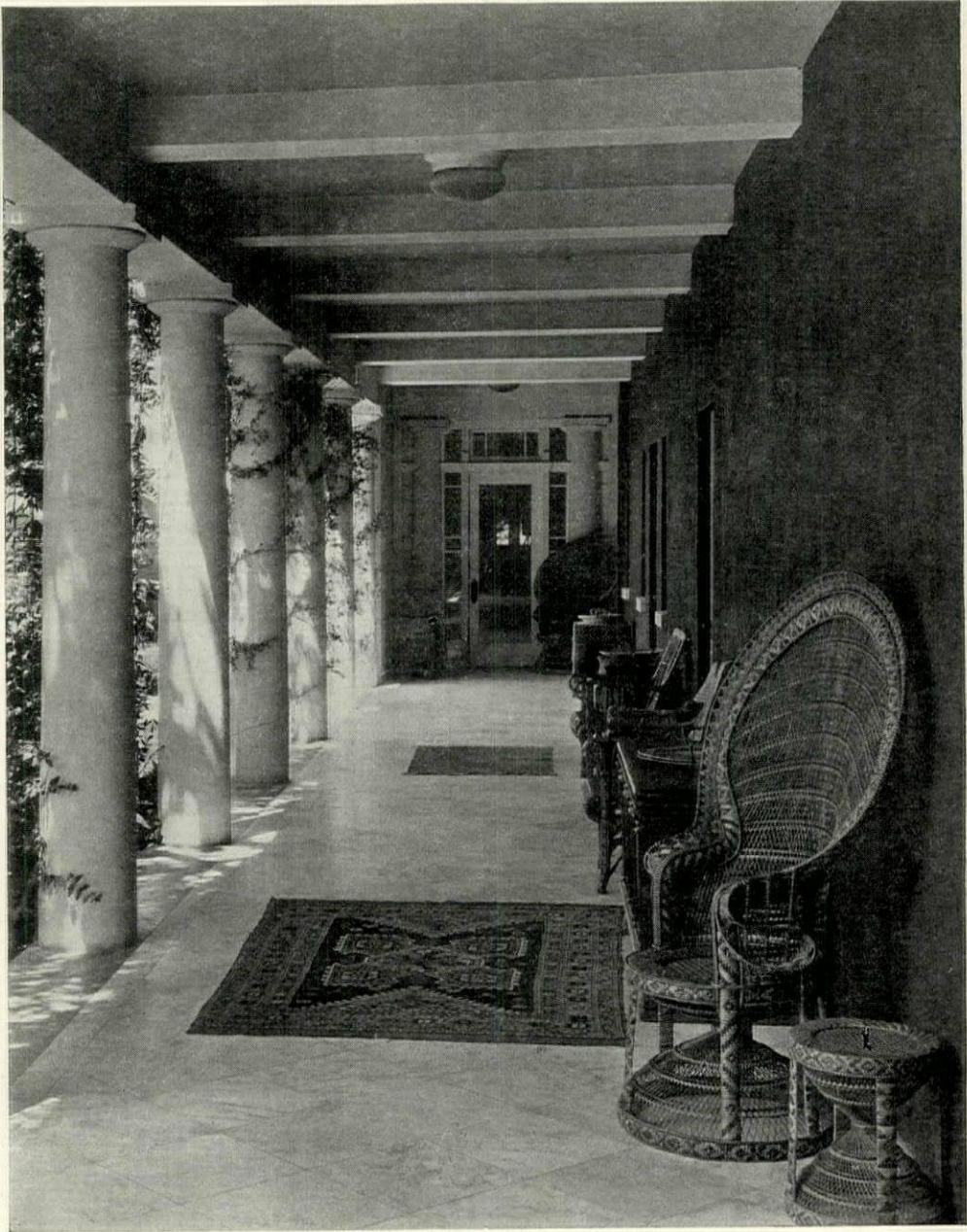
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Photographs by Frances Benjamin Johnston.

GALLERY—RESIDENCE OF F. F. PEABODY, ESQ., MONTECITO, CAL.  
FRANCIS T. UNDERHILL, ARCHITECT.

# THE ARCHITECTURAL RECORD

VOLUME XLIII



NUMBER V

MAY, 1918

*The* RESIDENCE OF F. F. PEABODY, *Esq.*  
MONTECITO, CALIFORNIA  
FRANCIS T. UNDERHILL, ARCHITECT

THERE has always been a small minority of architectural students who hoped that domestic building in California would adopt Spanish precedents as its point of departure. They admitted, of course, the impropriety of Spanish models for all the cheaper grades of houses, which would inevitably be built of wood, and which would naturally assume freer, more varied, and more idiomatic forms. But in the case of more expensive houses built in the warmer parts of the State, where the land could be highly cultivated, there were many reasons for urging a deliberate attempt on the part of the California architect to domesticate and mould to the uses of modern American life the Spanish type of residence.

Such residences already existed in sufficient numbers to be more or less familiar to Californians. They had been

built by the earlier settlers with Spanish blood in their veins and they connected California with a fascinating and romantic period of its history. They were adapted to the needs of the people who enjoyed a mild and temperate climate and who during certain parts of the year could live as much out of doors as indoors. They combined an almost classic severity in essentials with the opportunity for lively picturesqueness of effect in certain parts, such as the treatment of the roof, and in certain details of ornamentation. For all their simplicity they had the advantage of forming an adaptable model, which had already proved its availability in Spanish-American countries, and which could be modified, without being perverted, to meet the more complicated practical needs of a modern American household.

Notwithstanding, however, the many



MAIN ENTRANCE—RESIDENCE OF F. F. PEABODY, ESQ., MONTECITO, CAL.  
Francis T. Underhill, Architect.

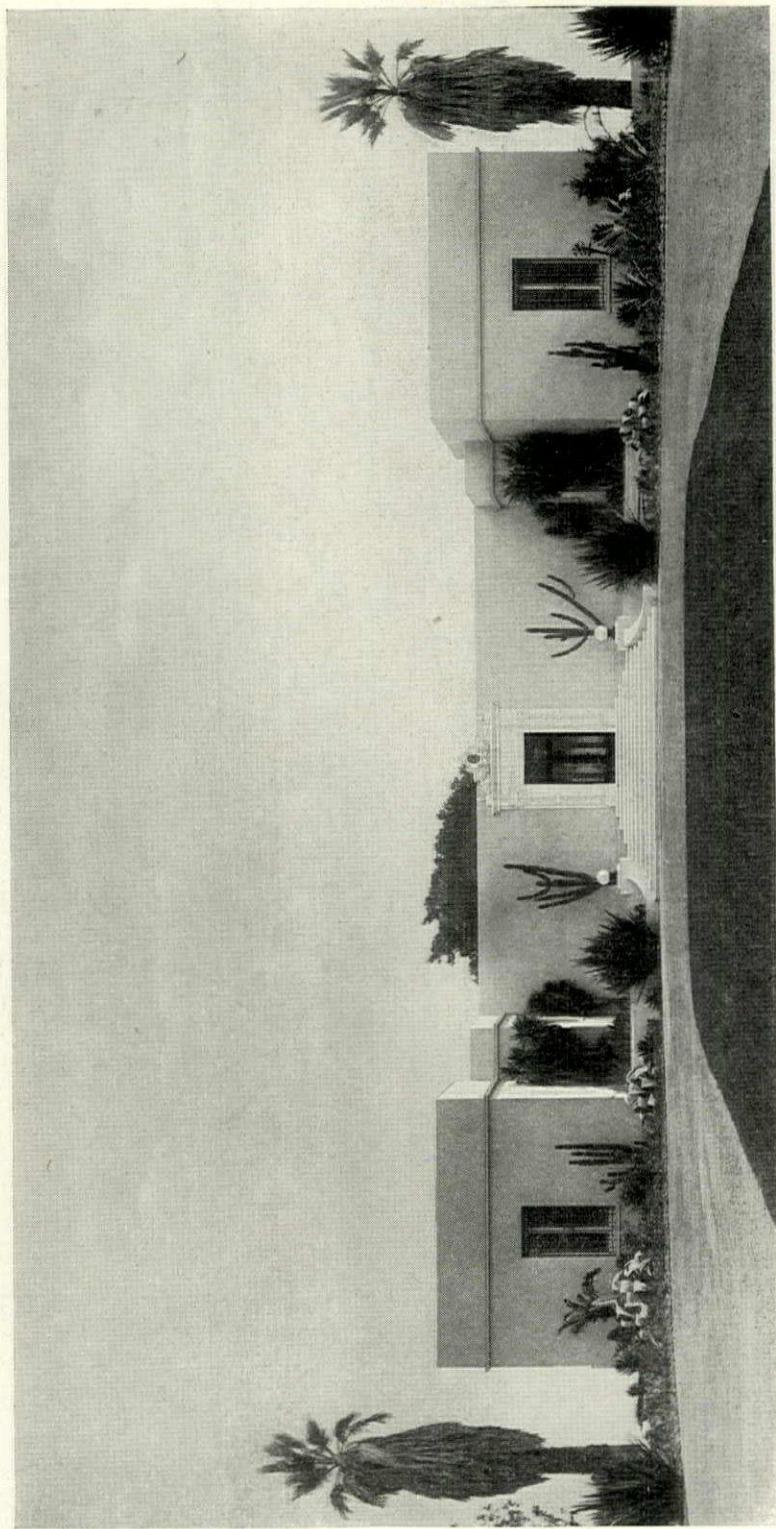
reasons which could be urged in favor of giving to the domestic architecture of California a dominant flavor of this kind, no deliberate or general attempt was made to adapt Spanish models. A good many houses which were supposed to be derived from the Mission churches and their out-buildings have been erected, but for the most part they are cheap, ignorant, tasteless and frivolous travesties of the earlier Mission forms. On the other hand, very few attempts have been made to recreate for contemporary use the long, low Spanish houses, which still survive in Monterey and elsewhere, and which must appeal to any one with architectural imagination as one of the great popular permanent and satisfactory types of domestic building.

There have been individuals, however, who have appreciated what could be done to domesticate Spanish residential forms in California. One of the most successful attempts to elaborate the general model into a modern American country residence is the Gillespie house in Santa Barbara, which was built more than ten

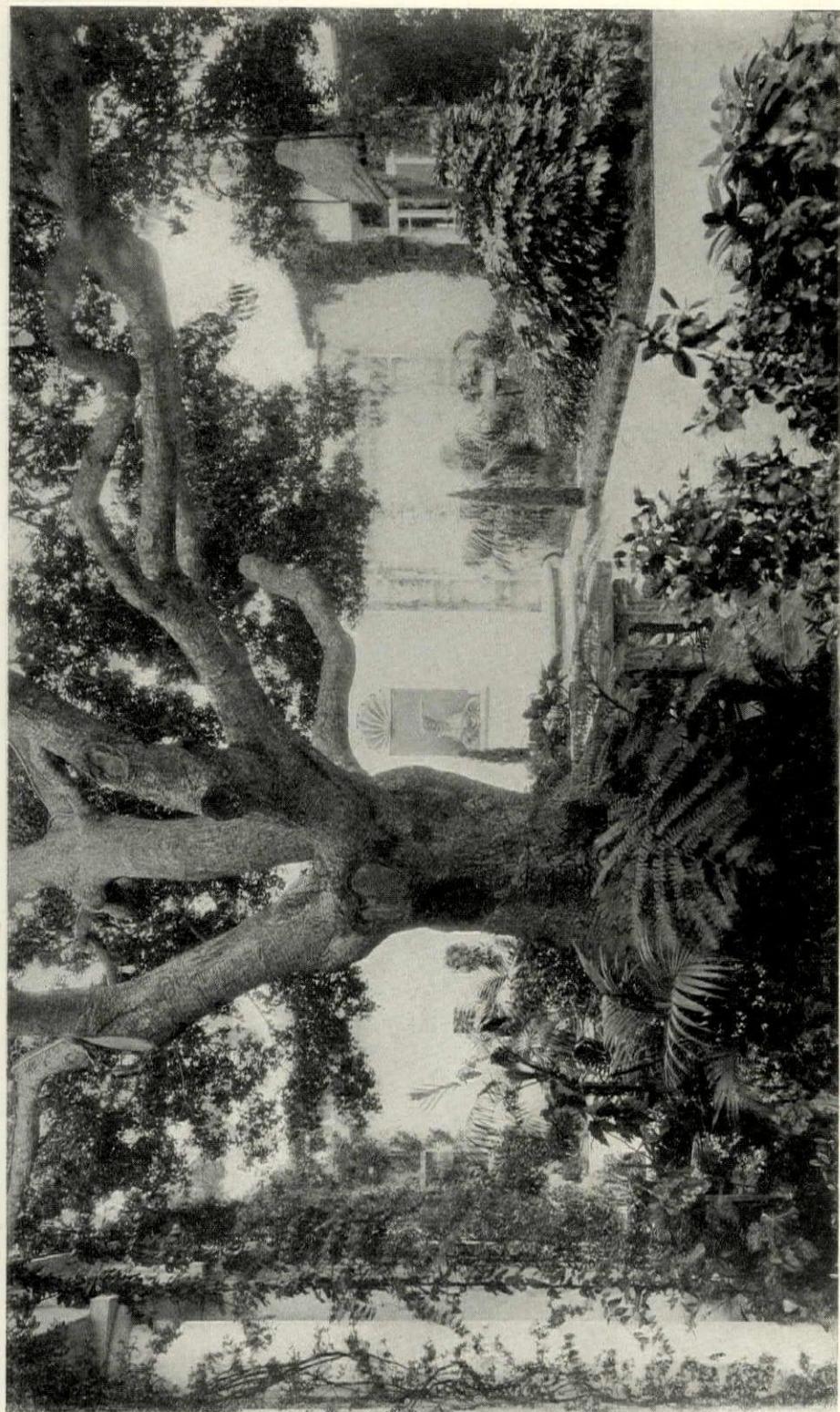
years ago. Another attempt, no less interesting, is illustrated herewith and is also situated on the outskirts of Santa Barbara. It is the residence of F. F. Peabody, Esq., and was designed by Francis T. Underhill.

Mr. Peabody's house consists of a quadrangle of one-story buildings, outlining the four sides of a court or patio, which becomes, of course, a surrounded but not enclosed outdoor living room. A plan of this kind, which would be expensive and inconvenient in the case of a residence in a northern climate, is better adapted both to the climate of California and the needs of its inhabitants. It has the advantage of associating the life which is led within the house with outdoor sights and occupation, and that is a wonderful advantage in a country where the "out doors" is at once so beautiful and so genial as it is in Santa Barbara and other similar parts of the State. The occupant of such a house is far less separated from the countryside than he would be in a house two or more stories high, in which it was more possible to

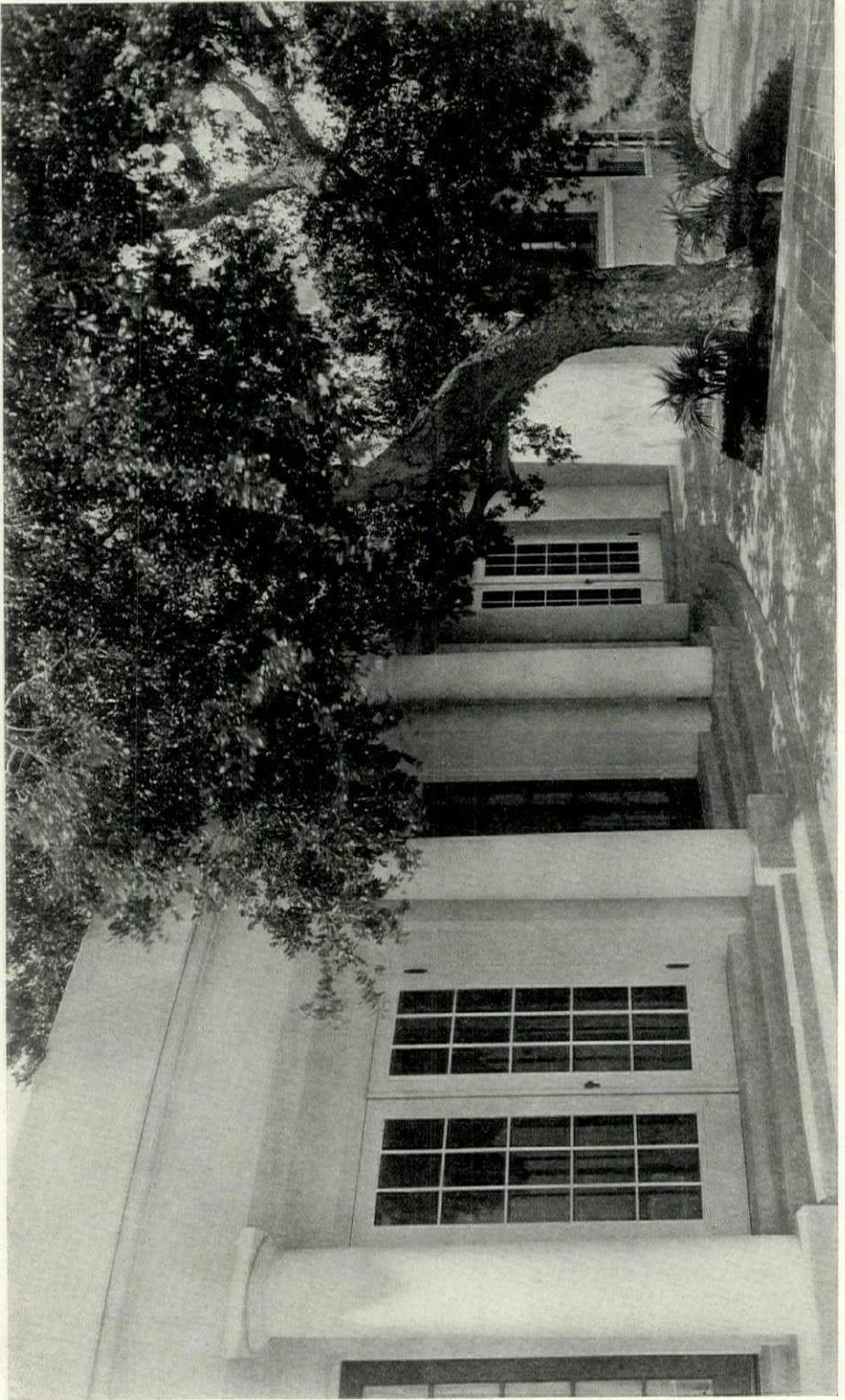




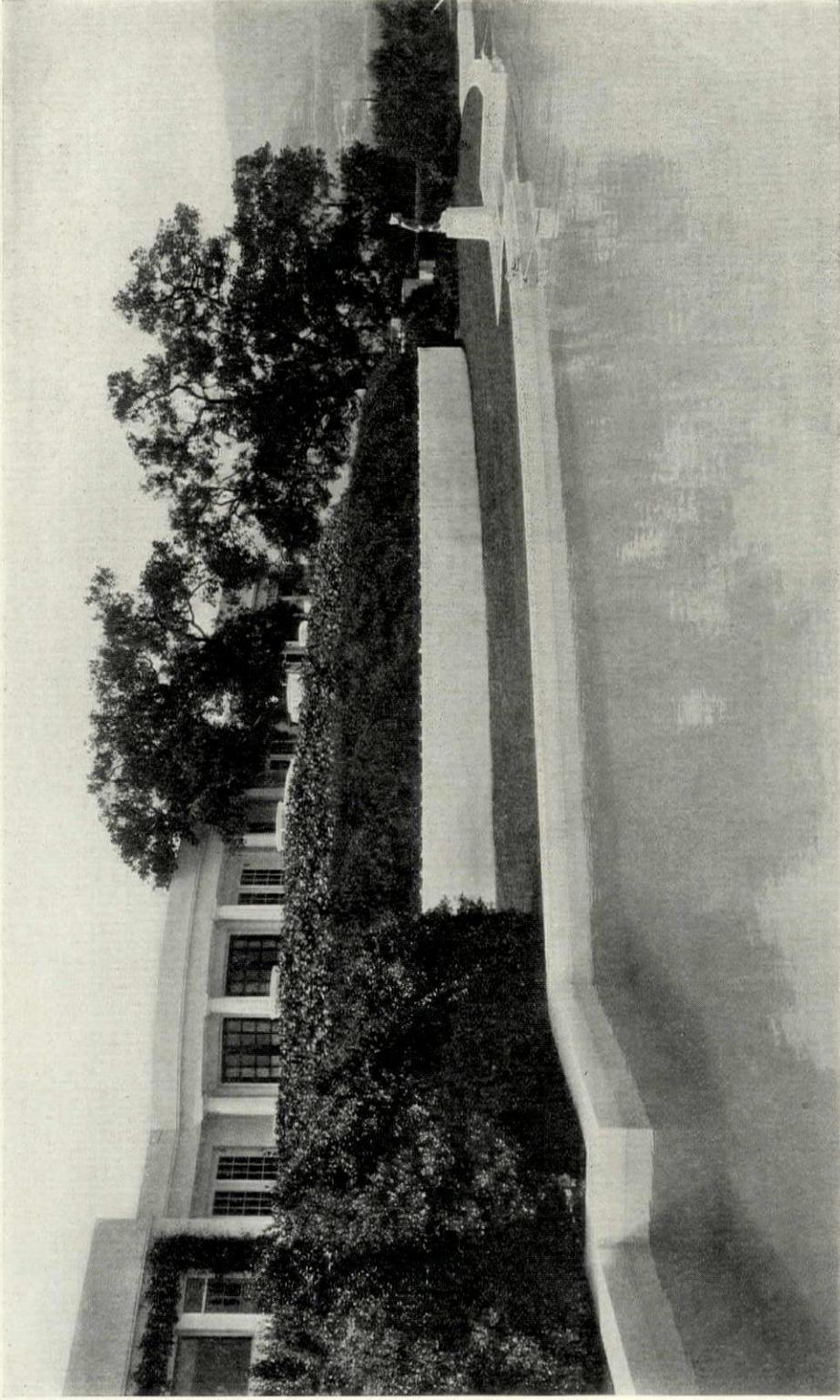
RESIDENCE OF F. F. PEABODY, ESQ., MONTECITO, CAL. FRANCIS T. UNDERHILL, ARCHITECT.



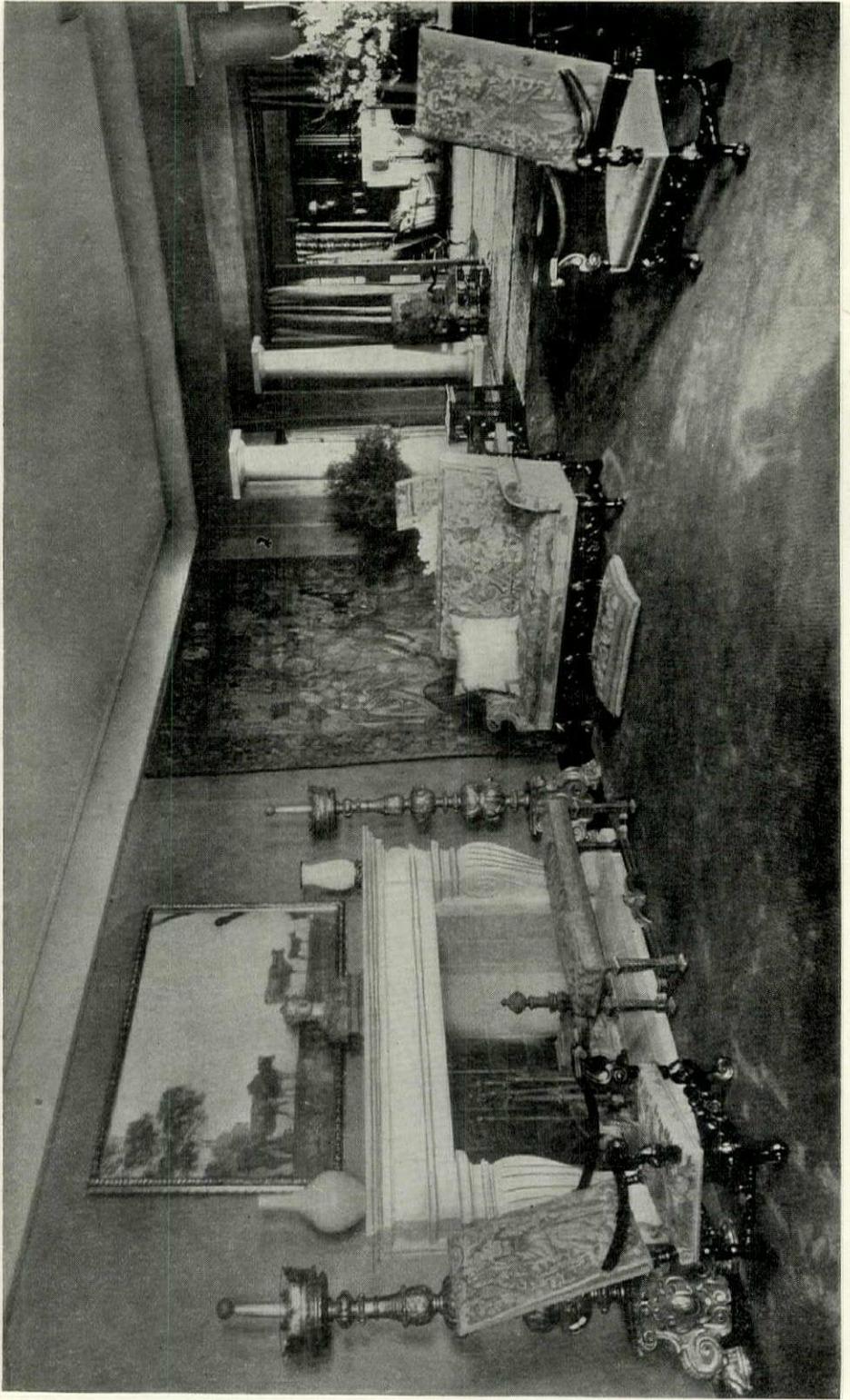
PATIO—RESIDENCE OF F. F. PEABODY, ESQ., MONTECITO, CAL. FRANCIS T. UNDERHILL, ARCHITECT.



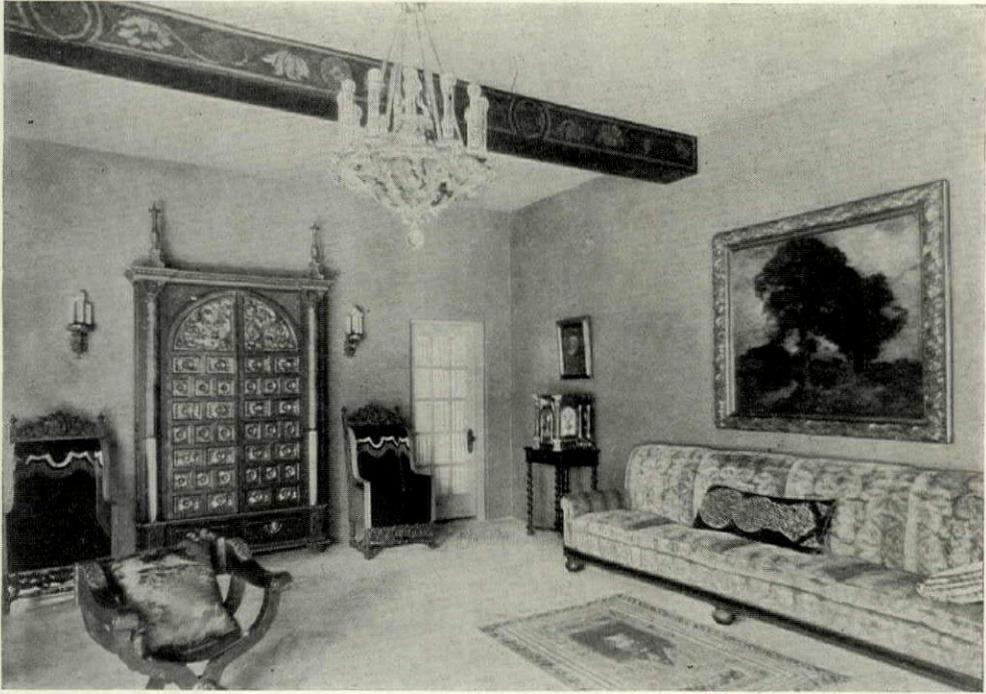
EAST TERRACE, OVERLOOKING SWIMMING POOL—  
RESIDENCE OF F. F. PEABODY, ESQ., MONTE-  
CITO, CALIF.—FRANCIS T. UNDERHILL, ARCHITECT



EAST ELEVATION, WITH SWIMMING POOL.—  
RESIDENCE OF F. F. PEABODY, ESQ., MONTE-  
CITO, CAL. FRANCIS T. UNDERHILL, ARCHITECT.



LIVING ROOM—RESIDENCE OF F. F. PEABODY, ESQ.,  
MONTECITO, CAL. FRANCIS T. UNDERHILL, ARCHITECT.

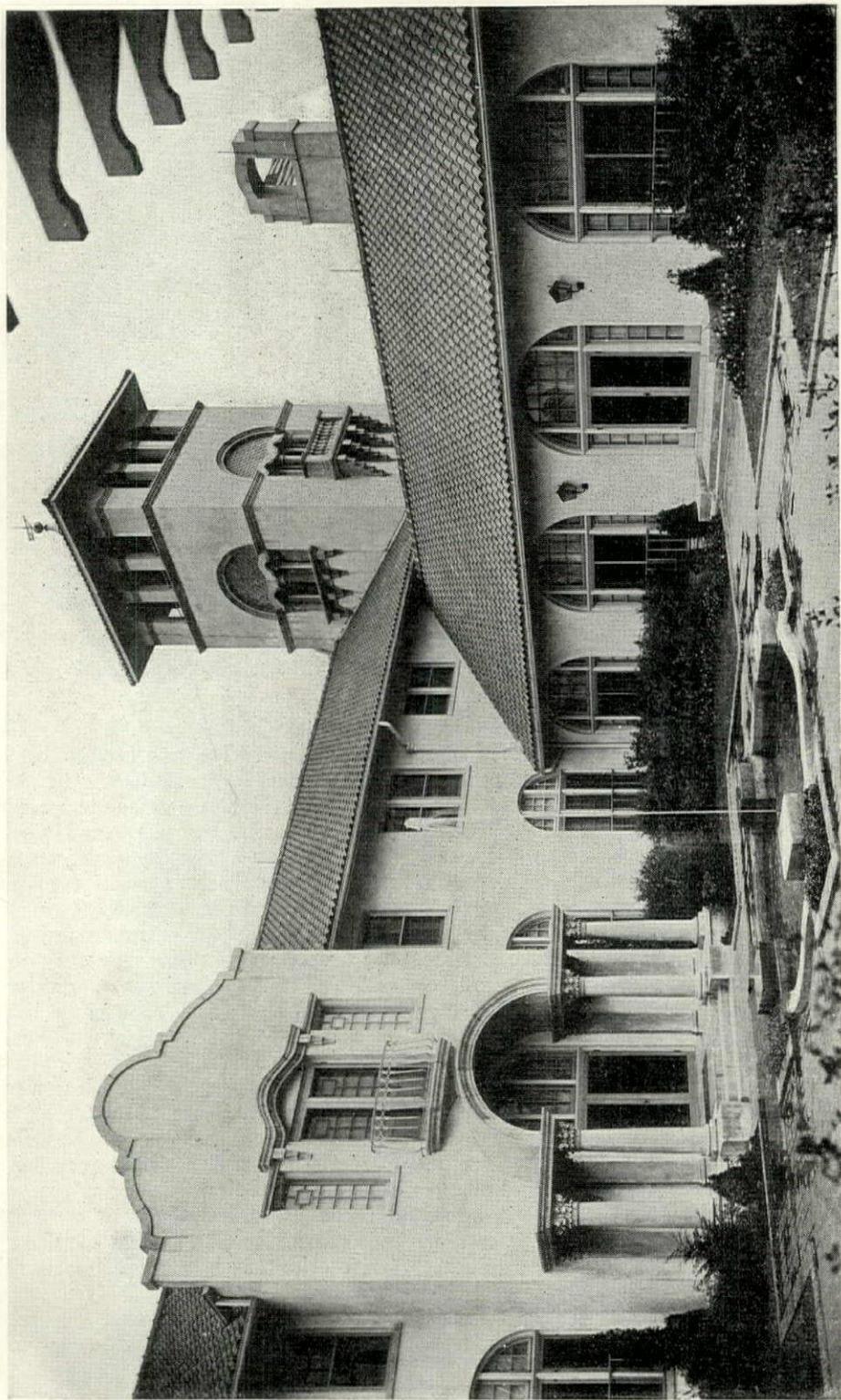


DINING ROOM—RESIDENCE OF F. F. PEABODY, ESQ., MONTECITO, CAL.  
Francis T. Underhill, Architect.

forget the seductive natural surroundings. This house of Mr. Peabody gives one a very and unusual sense of having been designed and built into the landscape. In examining the photographs the reader will remark how insistently and ingeniously the success of the plan depends upon the relations with the natural environment or contributions made by it. The patio or court, for instance, is designed around and made by a superb live oak. One is always looking beyond the building to distant hills. Even the entrance, which follows the Spanish tradition in presenting a wall of masonry, very economically ornamented, and broken by the fewest possible openings, loses much of its severity by the planting of exotic shrubs and trees against and alongside of its plain surfaces. It is a home designed by a man who is possessed, perhaps almost obsessed, by the California landscape, trees and atmosphere.

In his adaptation of the traditional Spanish type to the needs of a modern American household Mr. Underhill is

as far as possible from being pedantic or archaistic. He has broken his wall spaces whenever convenience of the occupants of the house demanded. Indeed, the rear of the building is all windows and doors, and, taken by itself, would not encourage an observer to suspect a Spanish rather than a French origin. But the treatment of the entrance façade, the court and the interiors possess to the full the mixture of substantiality and severity with urbanity which is a peculiar characteristic of the Spanish domestic architecture in America. Of particular interest in this respect is the design of the dining room and the living room. The walls of these interiors are almost devoid of mouldings and wooden veneering, and depend for their effect upon plain wall surfaces, unrelieved except with hangings, furniture and a few pictures. In the interiors, as in the other parts of the building, Mr. Underhill is to be congratulated upon the sincere feeling and the distinction which he brings to his work.



PATO—RAVISLOE COUNTRY CLUB, HOMEWOOD,  
AL.—GEORGE C. NICHAMONS & CO., ARCHITECTS

THE  
RAVISLOE COUNTRY CLUB  
HOMWOOD, ILLINOIS

GEORGE C. NIMMONS & CO., ARCHITECTS



By  
PETER B. WIGHT



THE new buildings of the Ravisloe Country Club were completed last spring from the plans of George C. Nimmons & Co., of Chicago. The Club grounds are at Homewood, twenty-three miles south of Chicago, where the prairie has an undulating surface and was once considerably wooded. They have been sixteen years in cultivation and the turf is, for the most part, in splendid condition, but is still being improved, because this is essentially a golf club. The new buildings harmonize excellently with the landscape. In their general appearance they strike the visitor as being decidedly Californian; and that does not necessarily mean that they are modeled either on Mission or Spanish precedents, for they are strikingly original, and, whatever impression they give, a close inspection shows that they have no copied ornaments, and, altogether very few, displayed only at the several entrances and on the tower.

One reason for the Californian impression is the material used, which has been more extensively employed on the Pacific Coast than in the Middle West; namely, hollow building tiles with rough stucco finish. It is true, the greater number of the California "Mission" buildings are not made of such a permanent, substantial and fireproof material as hollow burned clay tiles. For the earliest of them were but flimsy imitations of the adobe buildings erected by the padres and their Indian converts; they were executed with plastered wire lath on wooden frames, just as we in the East build inside partitions. This could be done with safety where there was no danger from frost and where it was only necessary to provide against rain and the hot summer temperatures. How-

ever, the Californians were quick to discover that the hollow building tiles, plastered with Portland cement, were most appropriate for use in the best class of buildings, and they were the leaders in the study of various methods of using the cements for external finish, and gave us the "pebble dash," of which there are several kinds, and which has proved the best method for finishing off the exteriors of hollow tile construction.

The Ravisloe Country Club is entirely constructed, both as to its exterior and interior walls, with hollow building tile, and no improvement could be suggested in the white cement finish of its outside walls. It is said that crushed white marble has been mostly used as the aggregate. Thus the building is very safe against fire, the floors being of concrete and tile with standard reinforcement. The roofs only are of wood and, except over the surrounding porches, are visibly trussed and covered with heavy planking, without suspended ceilings, and covered with red Spanish tiles. The overhanging eaves are without ornament or attempt to make them show as cornices and are edged with simple half-circle metal gutters. All gables are carried up above the roofs and coped with solid concrete blocks. The entrances are all decorated with solid cast concrete and are excellent examples of that kind of work. All of this ornamental work is in solid blocks and set in place—not "stuck on." The same may be said of all window sills, cornices, and string courses. They are made with smooth surfaces and sharp arrises, with a cement which gives a slight rose color, contrasting with the rough finish on the walls.

The entire interior of the building is finished with a simplicity of good taste

which is often missed in such buildings. There is no cellar, and all of the floors are finished with concrete.

As we approach the building from the railway station we first see the old building, which has been used for many years, behind a picturesque revetment of loose rocks. Then we pass around to the left and soon have a view of the whole group of new buildings, the tower being the central feature. Then, still continuing around to the left, we have a near view of the tower from the southeast. There is no planting on the south side of the clubhouse, because it is desired to preserve a full view of the golf course from the south and west windows and porches; nothing except a few of the original trees which are too high to obstruct the view. But it is expected that the exterior walls will be enriched by climbing vines, which are already planted. Another view of the entire group is to be had from the northwest. A garden occupies the space between the main building and the old building, which is used for the men's and boys' lockers, baths and dressing rooms, with other conveniences for the male sex, including a buffet. This will be used in winter, for the golf fans will not forego the privilege to play in the snow. The pergola, shown on the ground plan, connecting the main building with the men's building, has not yet been erected. A double row of Lombardy poplars has been planted on both sides of it, and, if they answer the purpose of protection to the walk, the pergola may not be necessary. The swimming pool in the garden has been only partially excavated and was planted with flowers during the past summer. It is designed for outdoor swimming and is handily reached from the dressing rooms and lockers for men, women and children in both buildings.

A view of the patio from the northwest is reproduced. Here the west entrance to the corridor is seen. It is built of solid concrete blocks, the roof consisting of two slabs, each supported by two columns and two pilasters, and a central arch built of blocks not covered with any protection from the weather. It will furnish a severe test of the utility of concrete blocks during a winter exposure,

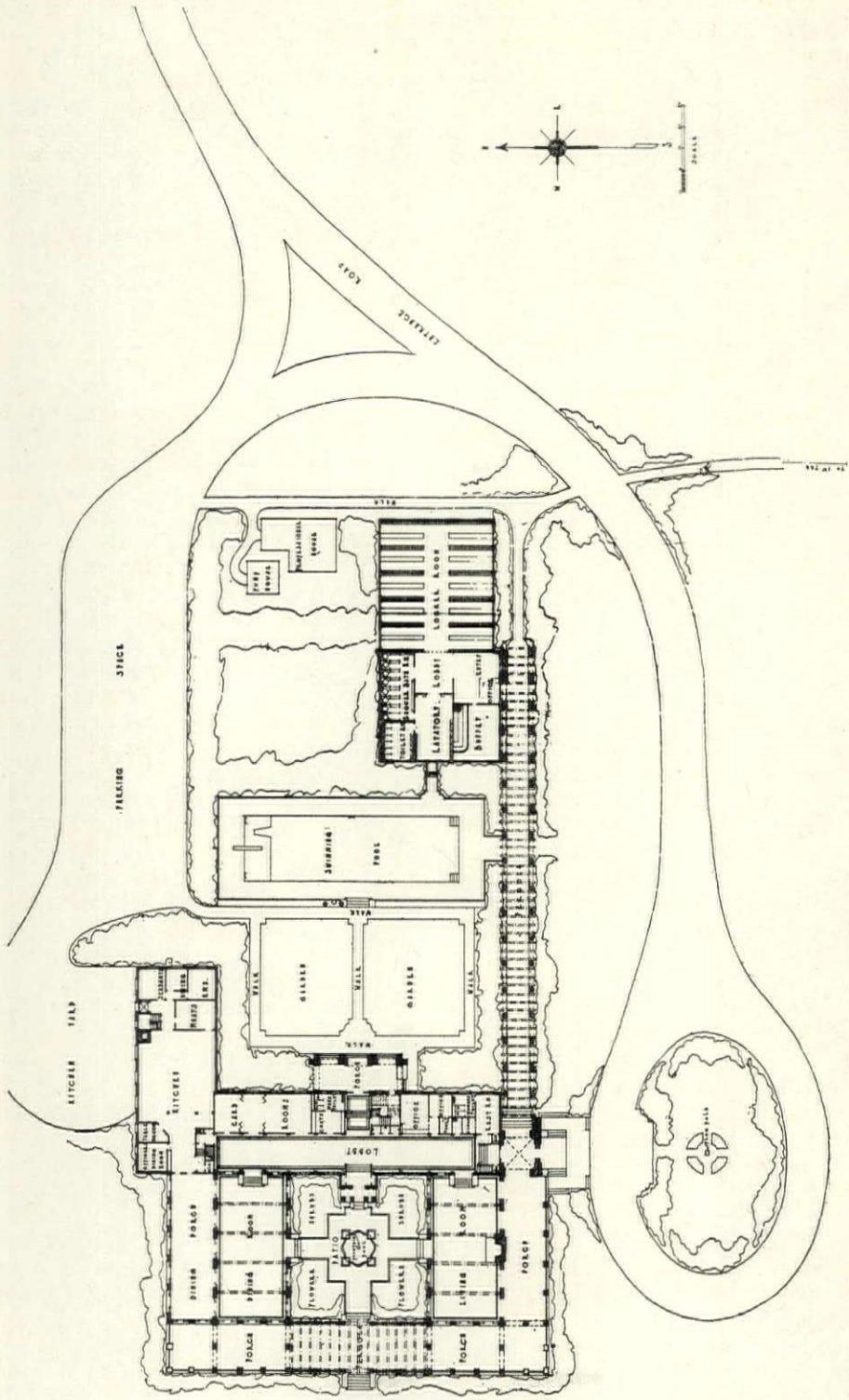
and its success will be watched with interest.

The principal requirements for the main building of the Ravisloe Club consisted of a living room or lounge, a dining room, porches, a lobby, offices, cloak-rooms, toilet rooms, cardrooms, private dining rooms, and a kitchen on the ground floor, and a complete locker department for women and girls in the second story. The long lobby serves to connect the farthest rooms on the adjacent sides of the court. This lobby is very desirable for practical reasons: it not only furnishes an attractive promenade and assembly space for the members, but it also gives opportunity to get good outside light and ventilation for the offices, coatrooms, toilet and other appointments needed. The low ceiling is formed in the shape of groined arched vaulting, with iron burring plastered.

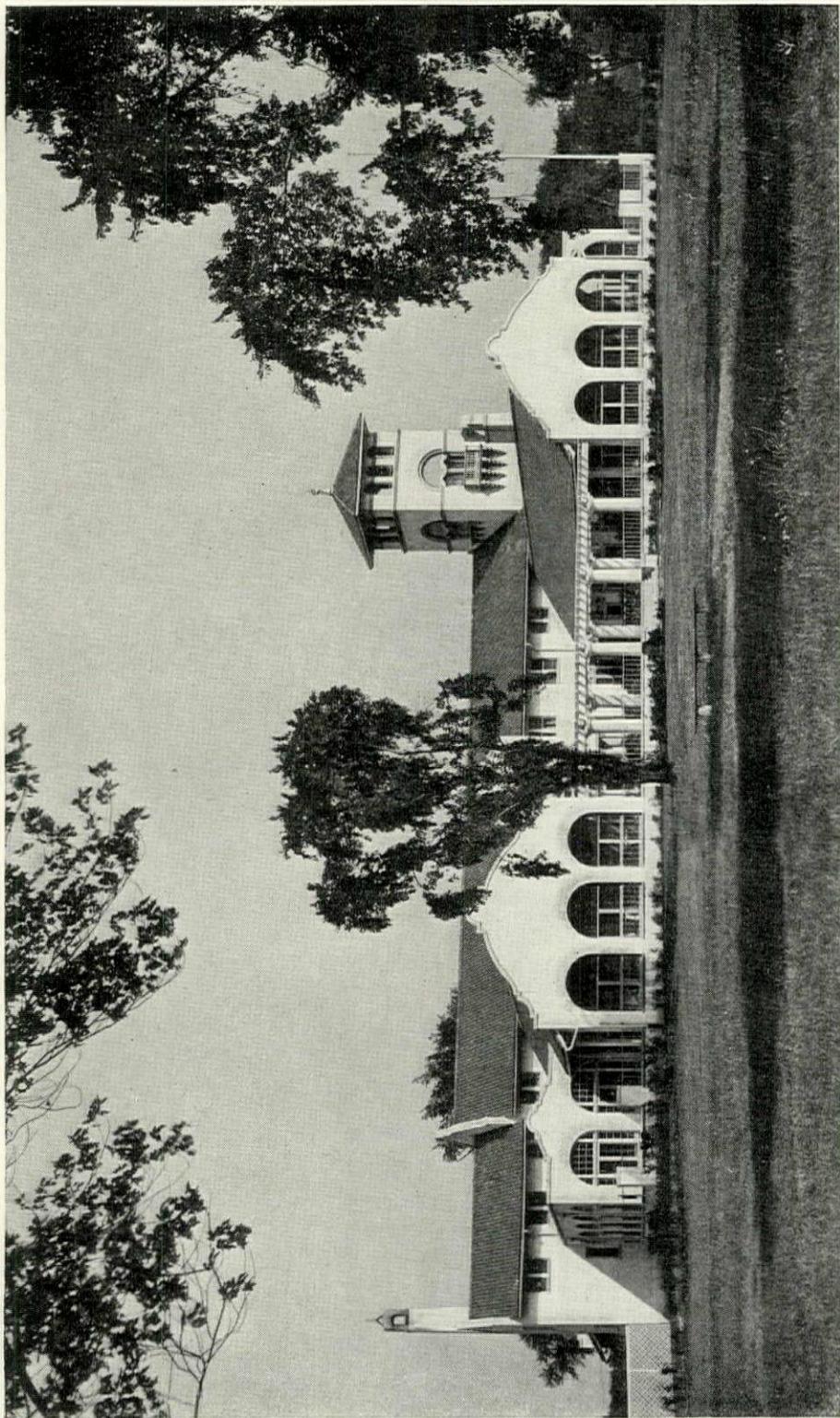
The lounge, or living room as it is called in the plan, is placed along the south side of the patio and has next to it two cloister approaches commanding a view of the golf course; that is, of the first tee, or starting off place and the eighteen green or finishing hole of the course. These two features of the golf course are always the most important ones and should always be in direct view of the verandas of the clubhouse.

The main dining rooms, with their dining porches, are on the opposite side of the patio and have access to the kitchen service, which is drawn back to the rear of the building and forms a part of a second large open garden court. The kitchen service building is large in proportion to the size of the dining room, but the demands for service are occasionally so great that extra space and provision in the kitchen are absolutely essential.

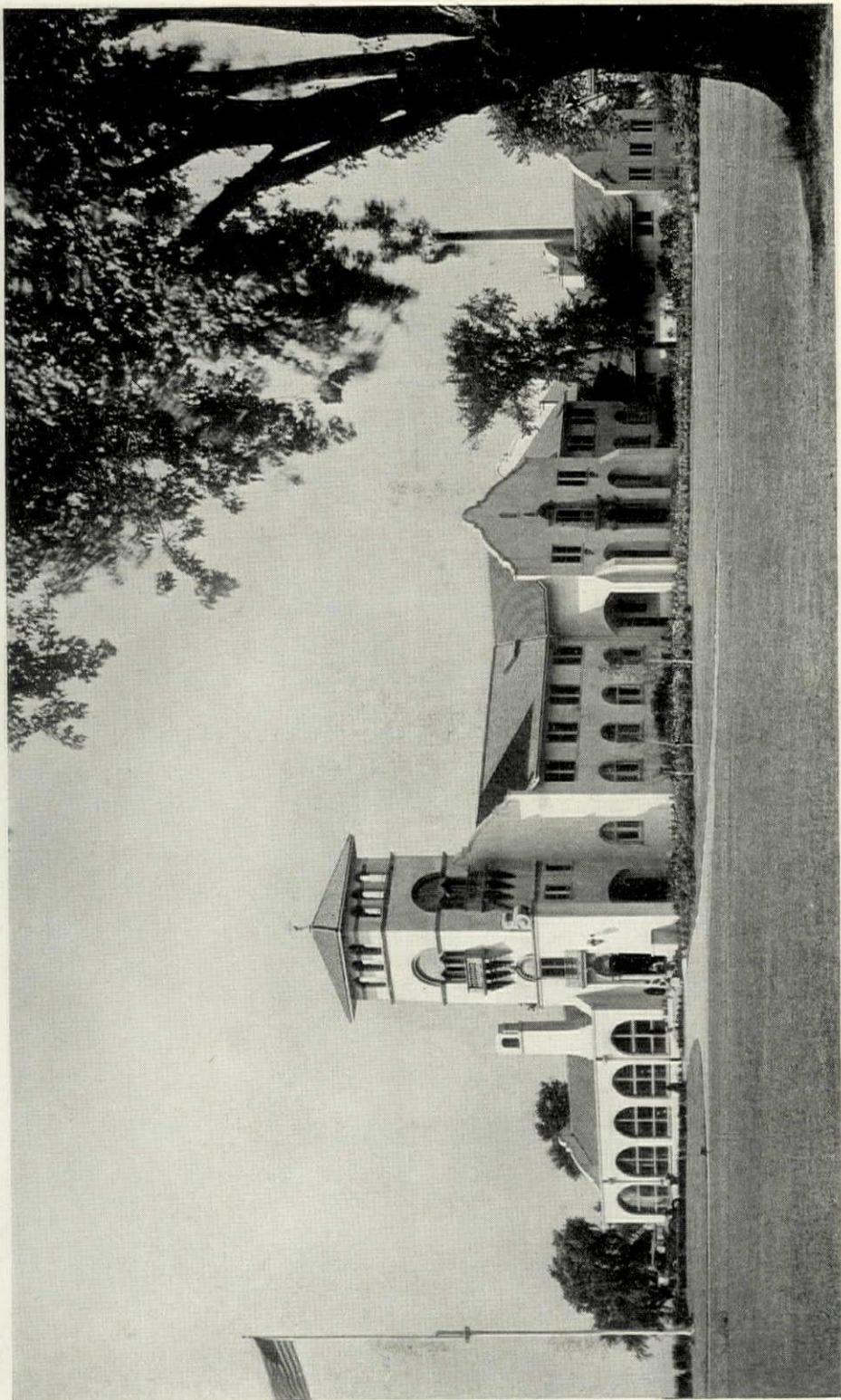
The second story part of the main clubhouse is given over entirely to the women and girls' locker department. The lockers are of steel, arranged in alcoves, and there are provided all sorts of accommodations in the way of shower and tub baths, dressing rooms, restroom, etc. The manager of the club has his apartment over the front end of the kitchen service building.



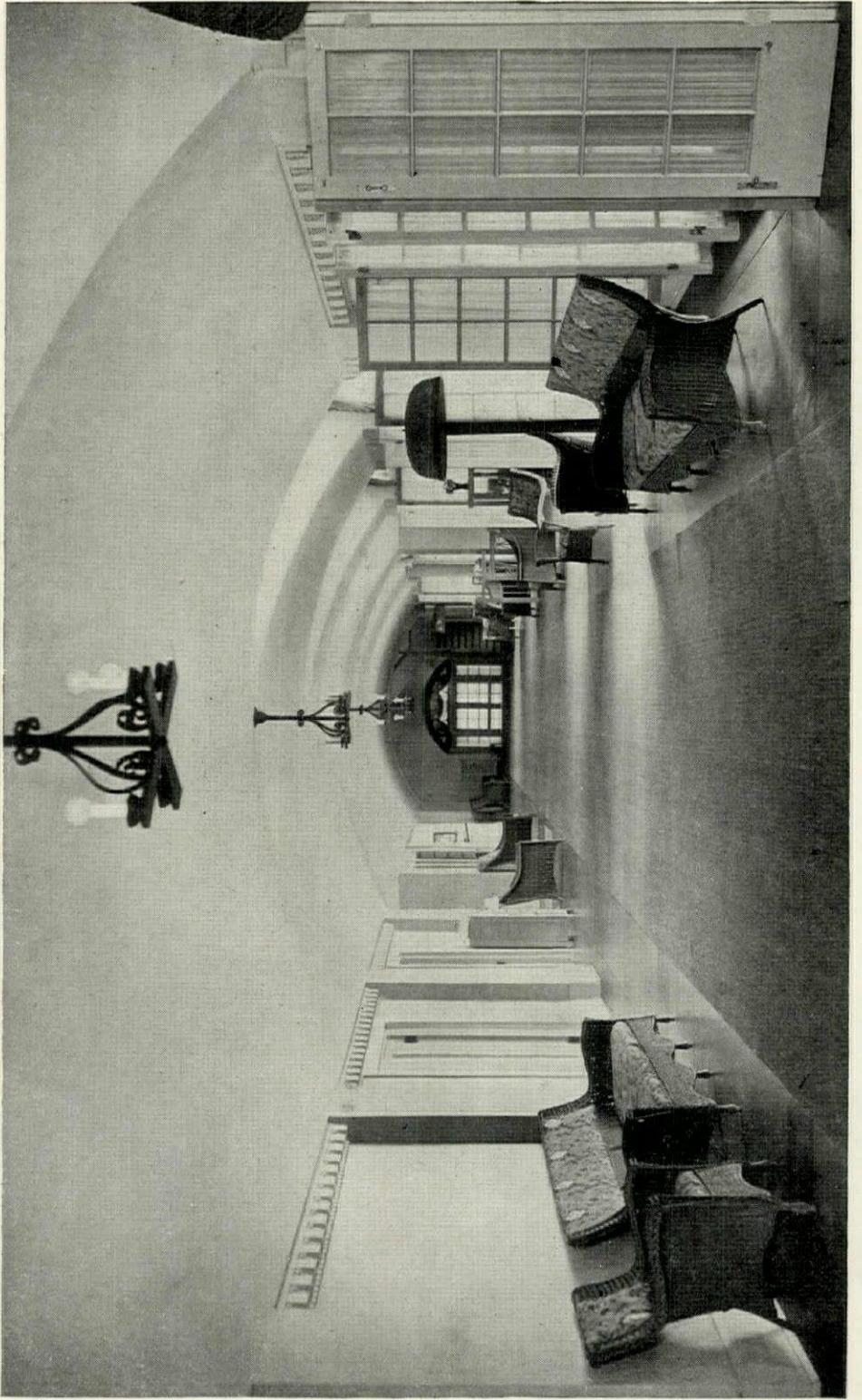
GROUND PLAN—RAVISLOE COUNTRY CLUB, HOME-  
WOOD, ILL. GEORGE C. NIMMONS & CO., ARCHITECTS.



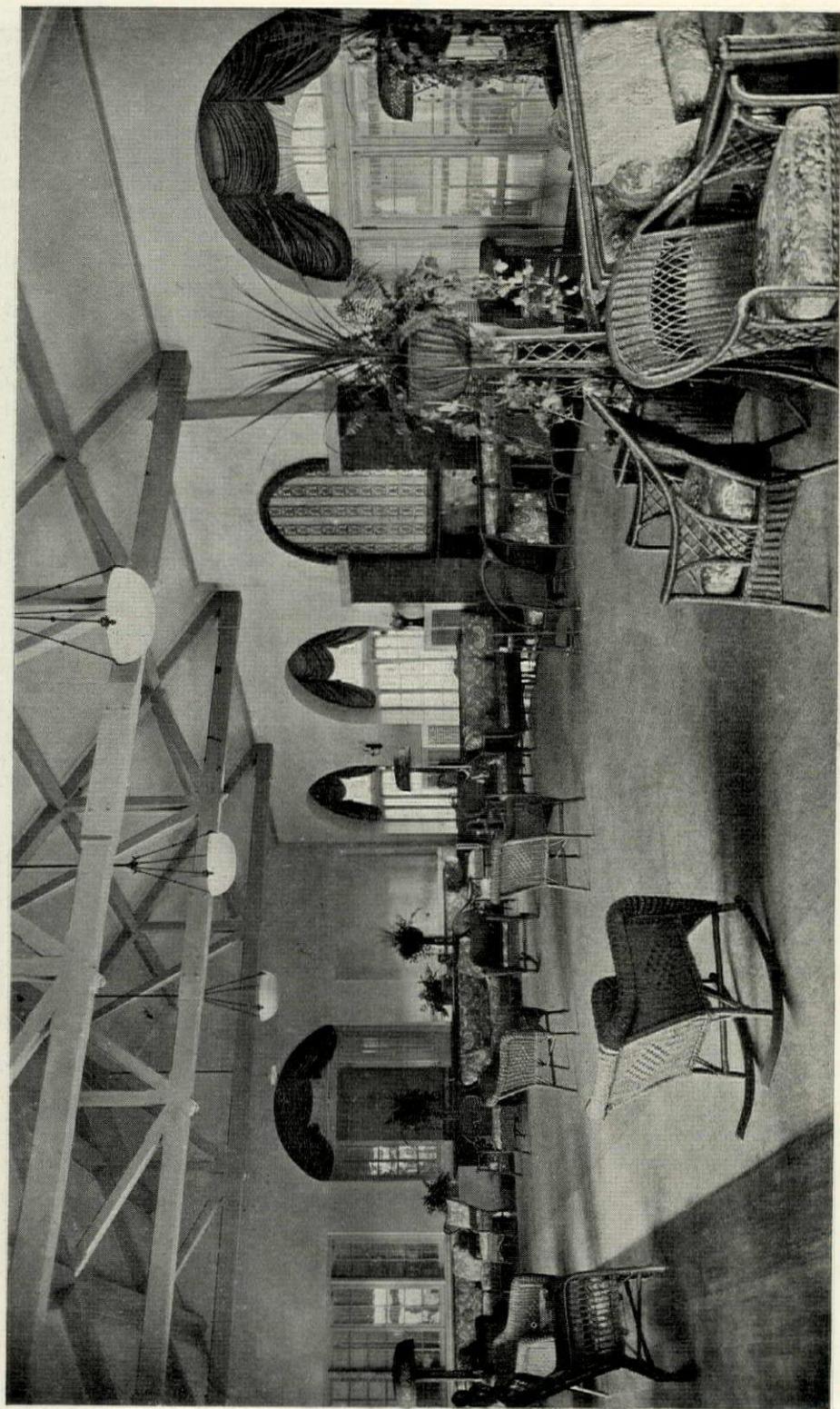
VIEW FROM THE NORTHWEST—RAVISLOE COUNTRY CLUB,  
HOMEWOOD, ILL. GEORGE C. NIMMONS & CO., ARCHITECTS.



VIEW FROM THE SOUTHWEST-RAVISLOE COUNTRY CLUB,  
HOMEWOOD, ILL. GEORGE C. NIMMONS & CO., ARCHITECTS.



LOBBY—RAVISLOE COUNTRY CLUB, HOMEWOOD,  
BY GEORGE C. WILSON & ARCHITECTS



LIVING ROOM—RAVISLOE COUNTRY CLUB, HOME-  
WOOD, ILL. GEORGE C. NIMMONS & CO., ARCHITECTS.

In the tower are a children's playroom, a restroom and an observation room at the top. This provides a cool and attractive place where members may go to get a commanding view of the entire grounds.

Mr. Nimmons has had a large experience both as a clubman and as architect for country clubs, in their management and construction. In a recent conversation on this subject he expressed himself as follows:

"When golf took hold of the men of this country it did not at first interest the women or children in an equal degree, because there was nothing for them to do if they did not care to play golf, and there were no particular attractions or adequate accommodations at the clubhouse for them. The result was that many a young family experienced domestic difficulties, sometimes of a serious nature, when the head of the house made a custom of spending his holidays and Sundays playing golf. All that is changed now. It has become a well recognized fact that no country club can attain any substantial degree of success unless it adopts and carries out the broad policy of providing entertainment and attractions for the entire family.

"The game of golf has entered into the life of the American people as no other sport or recreation, because beyond question it has done more to improve health than anything else yet discovered in the way of amusement or recreation. There are now over a million people playing golf regularly in this country.

"The architectural problem of the clubhouse has therefore become a most interesting one to architects. The progress made in its solution has not yet gone very far when one considers the extent to which country club life may be developed. Apparently every nation developed some form of sport or recreation to a marked degree. Rome had its baths and Greece its Olympic games. It looks as if the country club, with golf as the principal sport, is to be a highly developed and characteristic institution in America."

The country club of today, he concluded, must not only provide for all the necessities and requirements of going into the country to play golf and practice other outdoor sports, but it must provide also for the entertainment and social life of all members of the family, including the younger children.

*The* PHI DELTA THETA  
CHAPTER HOUSE AT THE  
UNIVERSITY OF CALIFORNIA  
JOHN REID JR., ARCHITECT

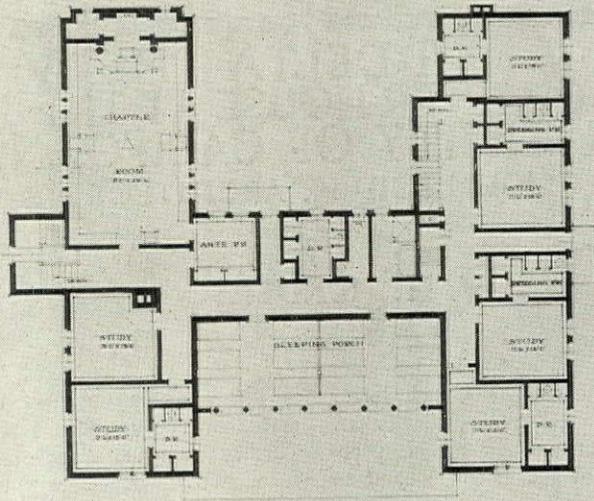
By  
V. H. HENDERSON

**E**ACH year one of the Greek letter fraternities at the University of California turns over its chapter-house to the football squad to be used as a training house for the weeks before the "Big Game." When the new chapter-house designed by John Reid, Jr., the San Francisco architect, for the University of California Chapter of Phi Delta Theta was completed it was picked out by the football players as their temporary home, because they regarded it as far more conveniently and agreeably arranged for student life than any other of the houses possessed by the seventy different fraternities and house-clubs at the University of California.

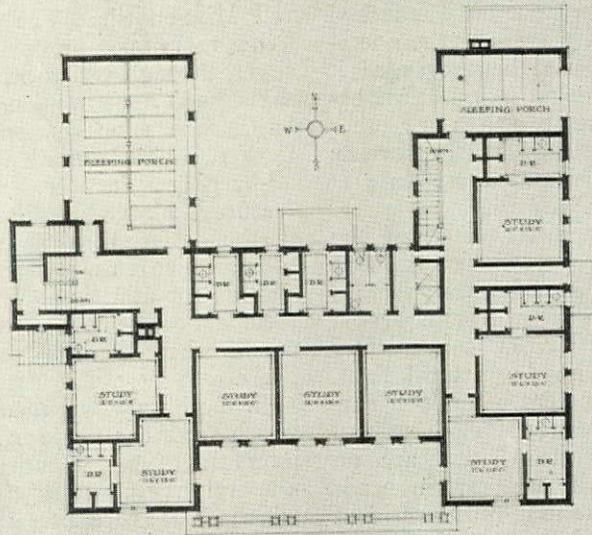
The particularly novel detail of the planning of this chapterhouse is that each pair of men share between them a study and an adjoining dressing room with washstand, mirrors conveniently arranged for shaving by natural light, and an ample equipment of built-in furniture for the keeping of clothing and other personal effects. There are no bedrooms—the entire chapter, in peace times normally of about thirty resident men, sleeping out-of-doors on one or the other of four different sleeping porches. These sleeping porches are used summer and winter, rain or shine, the whole year round, to the very great advantage in health, comfort and contentment of the members of the chapter.

The chapterhouse is picturesquely situated on rising ground north of the University campus, and looking out into a fine grove of eucalyptus trees, past "Founders' Rock," and toward the Sather Campanile. It has also a very beautiful view of the whole San Francisco Bay region. The house is of cement plaster and is roofed with heavy red Mission tile. The library and the living room open on one side into a long foyer, through which access is gained to the dining room; and on the other side by French windows, on a broad, tiled terrace. The building is heated by an oil-burning furnace. A convenient feature is a large locker room and shower in the basement, adjoining the billiard room, which furnish dressing accommodations for athletic or other purposes to members of the chapter who live at home or elsewhere than in the chapterhouse itself.

In the library is a memorial tablet, on which record is made in gold letters, at intervals of six months, of the class numeral of the class the members of which in the chapter made the best record in scholarship during the previous half-year. This has proved a stimulus to good scholarship, since men without particular ambition for scholarly distinction for themselves will struggle manfully for the glory of the class of which they are members.

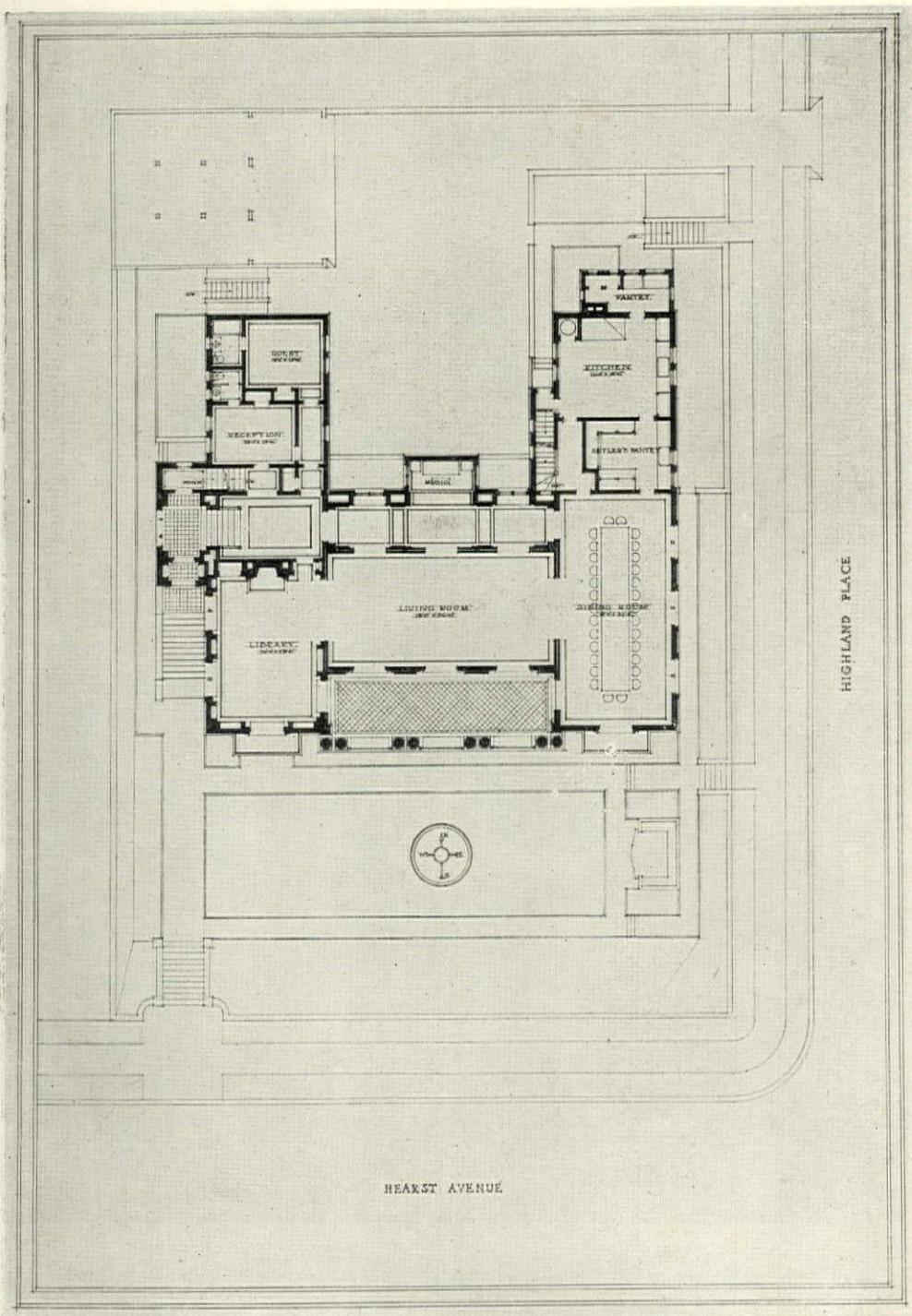


THIRD FLOOR PLAN



SECOND FLOOR PLAN

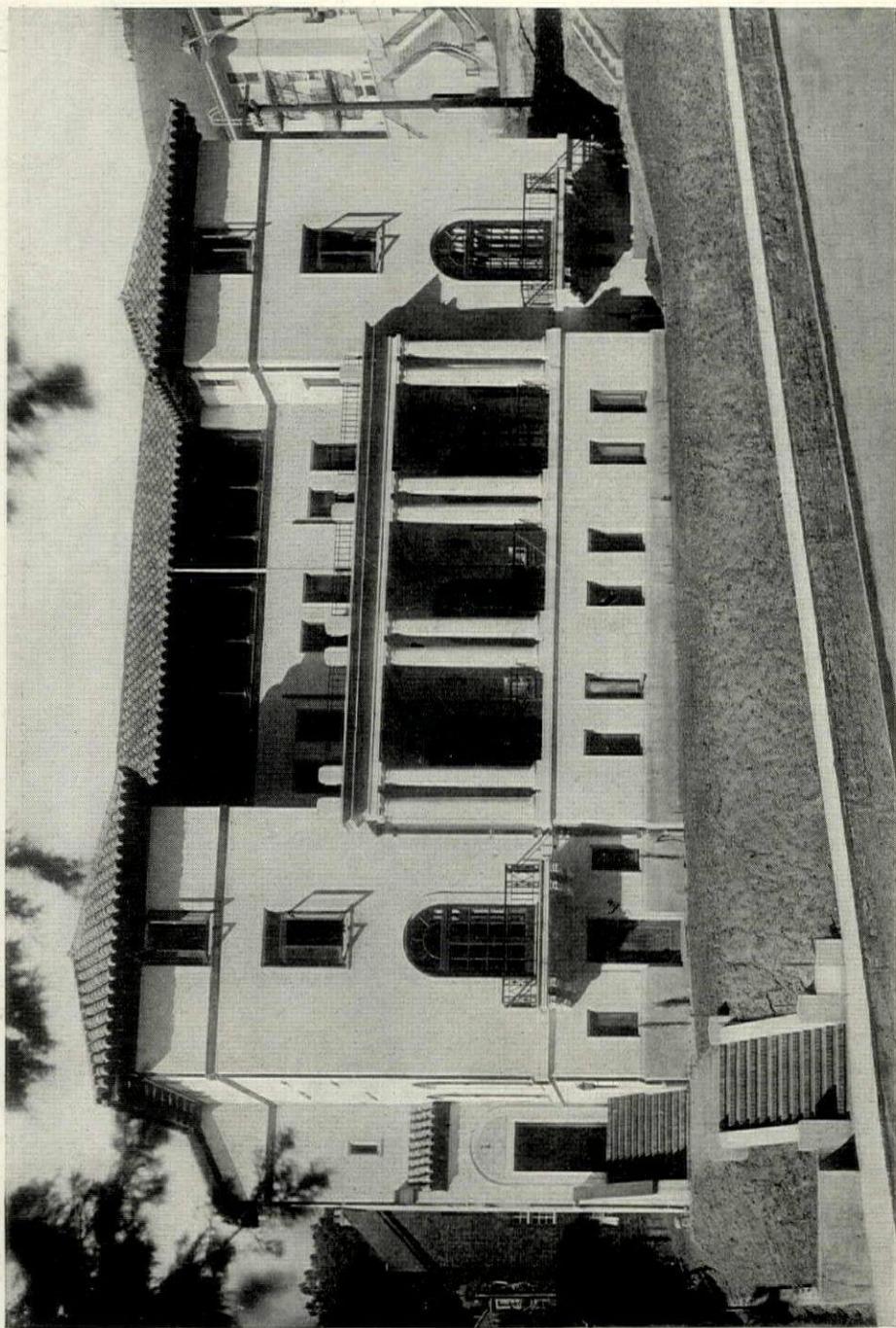
SECOND AND THIRD FLOOR PLANS—PHI DELTA THETA CHAPTER HOUSE, UNIVERSITY OF CALIFORNIA. JOHN REID, JR., ARCHITECT.



GROUND FLOOR PLAN—PHI DELTA THETA CHAPTER HOUSE, UNIVERSITY OF CALIFORNIA. JOHN REID, JR., ARCHITECT.



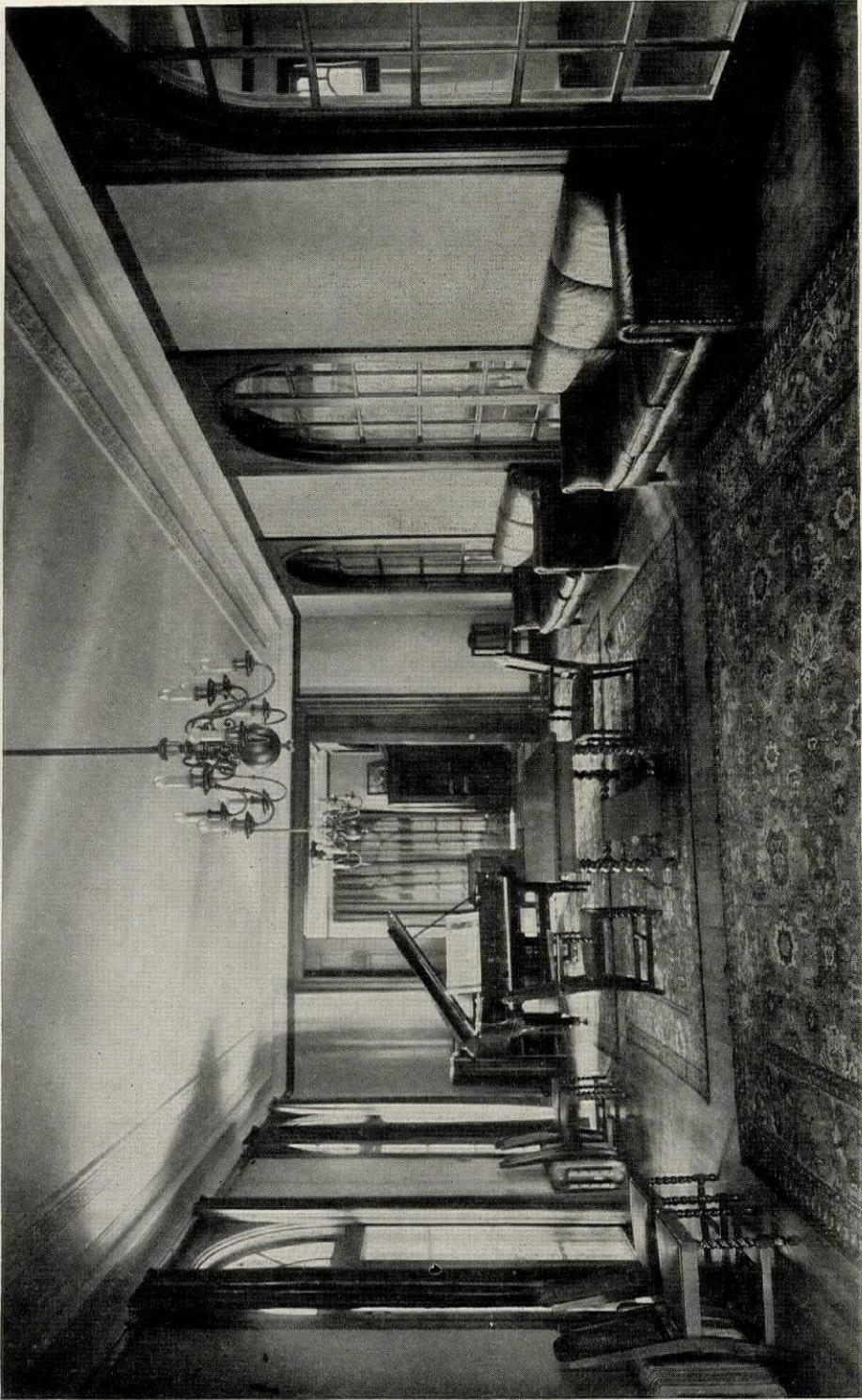
FOYER—PHI DELTA THETA CHAPTER HOUSE, UNIVERSITY OF CALIFORNIA. JOHN REID, JR., ARCHITECT.



PHI DELTA THETA CHAPTER HOUSE, UNIVERSITY OF CALIFORNIA. JOHN REID, JR., ARCHITECT.



LIBRARY—PHI DELTA THETA CHAPTER HOUSE, UNIVERSITY OF CALIFORNIA. JOHN REID, JR., ARCHITECT.



LIVING ROOM—PHI DELTA THETA CHAPTER HOUSE, UNIVERSITY OF CALIFORNIA. JOHN REID, JR., ARCHITECT.



DRAWING BY OTTO R. EGGERS.

# OTTO R. EGGERS

*Architectural Renderer & Designer*



By

JOHN TAYLOR BOYD, JR.

**T**HOUGH the architectural profession is mainly interested in the craftsmanship of those of its members who maintain their own offices and whose work appears under their own names, it may occasionally take note of that of some of the younger architects who, acting as assistants in the larger offices, do so much to interpret the ideas of their chiefs in the successful execution of designs. One of this group of younger men is Mr. Otto R. Eggers, six of whose water colors are being used as covers for the *Architectural Record*; the first of the series having appeared in the January issue.

His associates know Mr. Eggers as the assistant of Mr. John Russell Pope—ably supporting him in upholding that distinctive personal style and that very high standard of good taste achieved through a period of years by Mr. Pope. In fact, not only has Mr. Pope developed his striking style, but it might almost be said that he has developed Mr. Eggers to help him carry out his style. Most of Mr. Eggers' practical training in design has been received in Mr. Pope's office, and he has naturally arrived at a rare sympathy and understanding of the latter's architectural desires. Mr. Pope seems to have solved most fortunately that hard problem of a busy architect—to find a workable office system. He has placed Mr. Eggers in entire charge of the design in the drafting room. All questions of the drafting room come through Mr. Eggers to Mr. Pope, who does not criticize directly the work of the various draftsmen. The principles of this method of organization, including business management, are explained in a series of articles written by Mr. Daniel Paul Higgins on the "Business of Archi-

ecture" in the *Architectural Review* of 1916 and 1918. It may be pertinent to call attention here to an important feature of this organization—the supervising architect. He is the one who oversees the construction itself and who makes sure that the designs are properly rendered in materials and colors and textures, replacing thus a group of superintendents or clerks-of-the-work, who are too often unsympathetic or uneducated in the refinements of design, and who may lose much of the artistic quality of an architect's conception when they execute it in the materials of building.

Mr. Eggers had shown marked ability as a young draftsman before he came to Mr. Pope. His first training was in the atelier of Mr. Hornbostel, where he came into contact with the vigorous, fundamental conceptions of architecture of this well-known teacher. He then spent some further time in office work under Mr. Egerton Swartwout, one of the ablest draftsmen in the United States; after which he went into Mr. Pope's employ. Meanwhile he had won second place twice in the Paris prize, and in Mr. Pope's office he won the Le Brun scholarship. It was on a trip south from Paris as holder of this scholarship that Mr. Eggers painted the water colors now appearing on the *Architectural Record* covers.

It will be seen that Mr. Eggers has been rarely fortunate in his training. It is in Mr. Pope's office that he has done most of his work, and he has matured in the latter's style, with which he shows so complete and so apt a sympathy. As each new project comes into the office it is the custom of Mr. Pope, after a careful study of the needs of the client, to outline his ideas orally

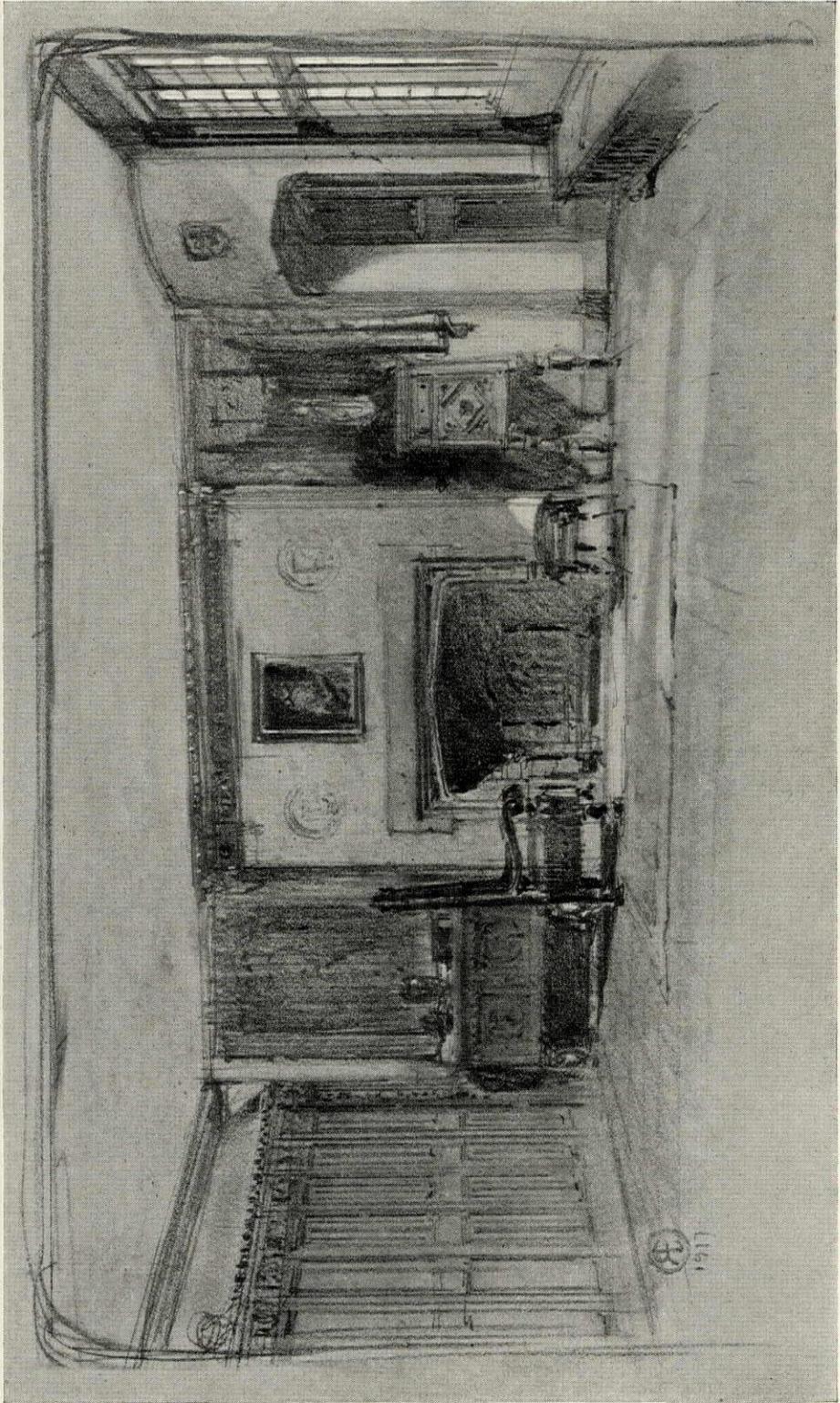
and with sketches to Mr. Eggers, who gives them more completely definite form in a finished perspective sketch—a "sketch" so thoroughly and so realistically conceived that it might almost be taken for a photograph of the finished work. These preliminary sketches are thus entirely different from the too usual vaguely rendered drawing of a design that is itself not fully worked out in the architect's mind. This method of Mr. Pope and Mr. Eggers is not absolutely superior to all others, but it certainly facilitates the progress of the design, and it must prove comforting to those for whom the building is projected, as they are never in doubt as to just how the structure will look. When one is told that in one or two instances preliminary one-eighth inch scale drawings made by Mr. Eggers have actually been used for working drawings, one will derive some conception of the fidelity of their execution. Besides these carefully prepared perspectives of exteriors, Mr. Eggers is accustomed to draw up many sketches of interiors, carefully rendered in pencil.

A few of his sketches are shown in these pages. Their freedom and ease of delineation will surprise those who are familiar with only the more precisely executed renderings in color by Mr. Eggers. It is unusual to find a draftsman who is at once master of a technique of most painstaking mechanical delineation—for a special purpose, as we have seen—and of the free, sympathetic way of the artist. Mr. Eggers has executed a number of large formal renderings for other architects. Of these the best known are his remarkable perspectives of the Washington Memorial by Mr. Swartwout, and the Lincoln Memorial by Mr. Pope—huge perspectives in bold masses of color, yet with a delineation of trees and building so minute that they will not suffer when seen a few inches away.

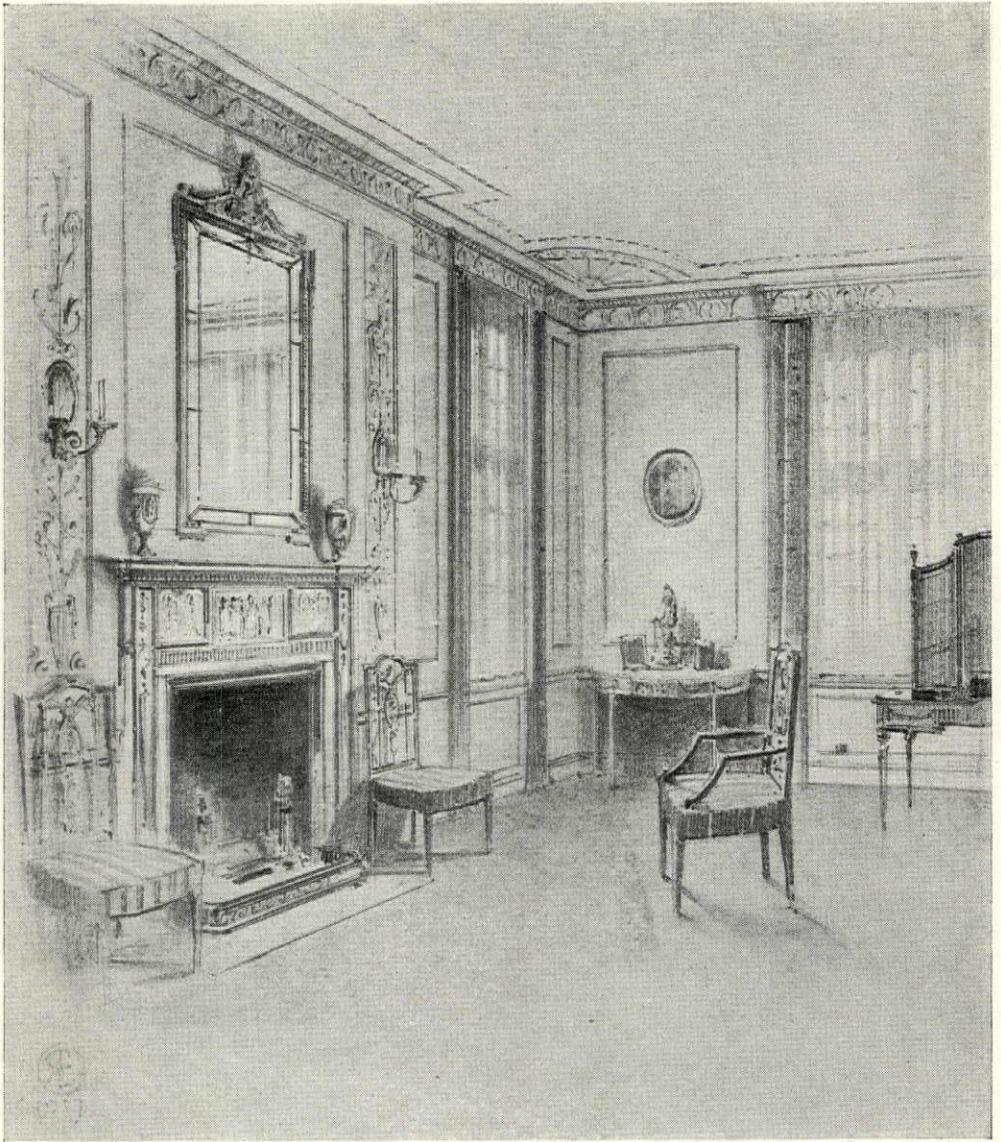
A word remains for the particular water colors that appear as the Architectural Record covers during the first half of the current year. They bring to mind the difference between the attitude of the painter and the architect towards

water color drawings. Whenever an architect undertakes painting, he must decide whether he will render the general impression of mass and form and especially of light and atmosphere and color, sacrificing and subordinating details to this strong unity of effect. This is the viewpoint of the painter. Or he may prefer to give accurate, even minute, description of details, some of which he may not even see but which his technical knowledge of architecture tells him are there. It should not be difficult to agree that this distinction between the painter's and the architect's way of painting is really an imaginary one, except in special cases. The painter's is the artist's, and the photographic paintings made by some architects are simply a method of showing clients graphically what they are to expect in their proposed buildings. They are a by-product of painting. In point of fact, it would be well if the architects would give themselves over completely to the artist's attitude, for, no matter how hard they may try, it is never likely that they will err on the side of John S. Sargent and be too neglectful of detail. Even in their own field architects too often lose themselves in contemplation of detail. In the present day designs it is often too evident that the author has been so afraid that his work will not be correct and well-mannered and smooth and perfected that he has allowed it to turn out dry and thin and overworked. Where is to-day the vigorous modeling, the splendid light and shade, the bold proportions of the front of the Boston Public Library in monumental buildings? Have we really gone ahead in the last ten years? A better understanding of the painter's breadth of view would correct many of the faults of contemporary architecture.

What is true of painting as a whole is particularly true of water color. Here many painters as well as architects have missed the point. Water color is a technical process that must be done quickly, in a few minutes, with the finished results obtained as directly as possible in one wash, and with the least amount of working over the wash in the drawing of details. When there are a succession



DRAWING BY OTTO R. EGGERS.



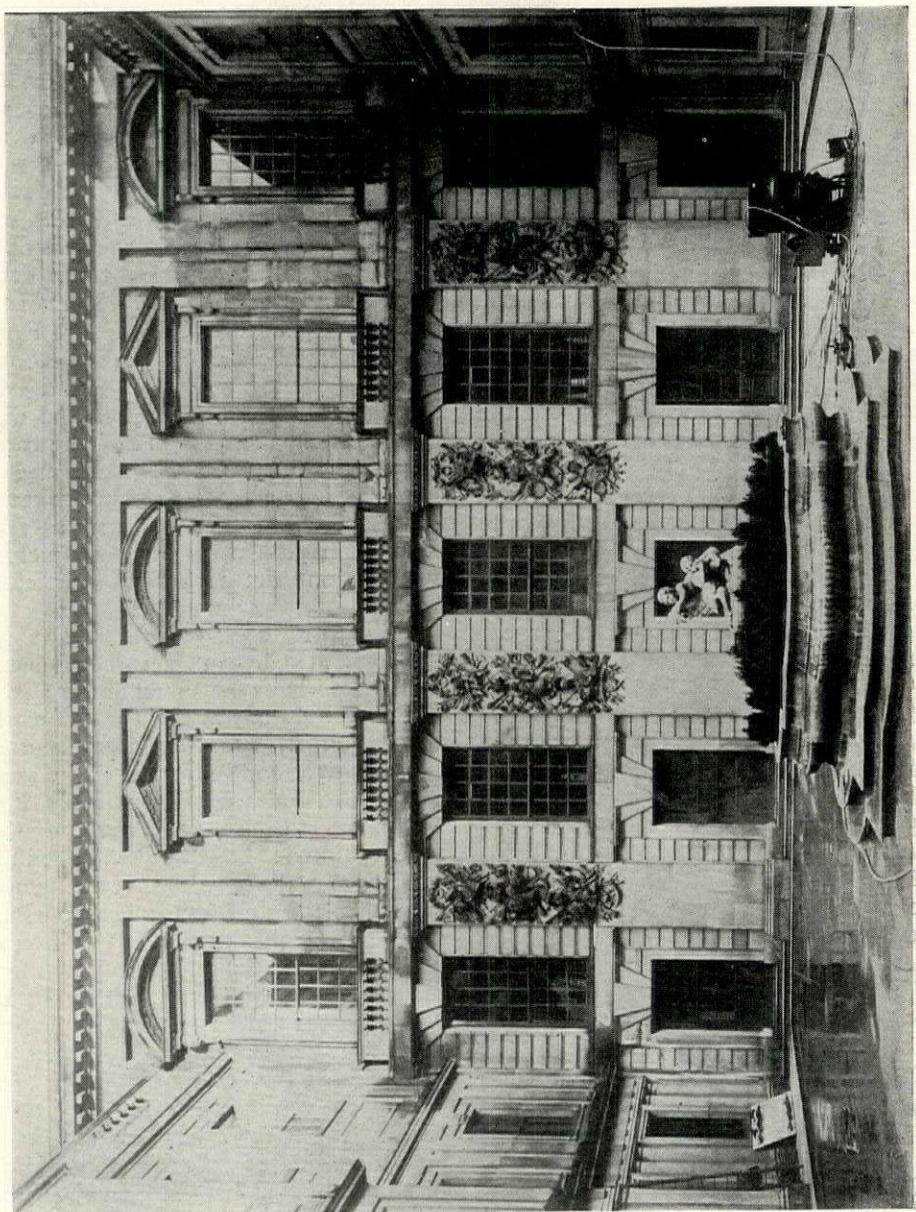
DRAWING BY OTTO R. EGGERS.

of washes and much stippling and brushing in of details all the virtues peculiar to water color are lost—I mean the transparency, the clearness, the brilliancy of color, and the striking unity of impression. Nevertheless, in any of the exhibitions, especially in the Water Color Society, one may see countless painfully and fussily made drawings, worked over, sometimes in Chinese white used as body color, until all their freshness has been lost. In short, painters have attempted to make water colors as much like finished oil paintings as possible. They recall the remark of Ruskin's about the nineteenth century painting of our present enemy—"the muddy struggles of the Germans." Up to a very recent time water color was rather in bad repute among the painters—along with color and imagination, be it said—but its value is coming to be appreciated again. The French understand it best, but in Sargent America quite holds her own. A Boston artist, Mr. Dodge MacKnight, has pushed the medium of pure water color as far as it can go, employing pure tube colors in great bold washes, big brush strokes used in the sweeping, instinctively expressive way of the Japanese—all in the most vivid renderings of light, on sea, on the snow, in the tropics. Among American architects, a small number use water colors excellently. To speak at random, the work of Mr. Edgar I. Williams, as a student at the Rome Academy a few years ago, attracted much attention. It was said of his work that it should have been hung in the painters' section of the exhibitions, and that some of the painters' work should be transferred to the architects' section. The covers used on the Architectural Record last November, painted by Mr. Leon V. Solon, and in September, painted by Arthur Byne, are fine examples of the proper conception of water color drawing.

The drawings of Mr. Eggers on the Architectural Record covers are highly

capable examples of correct methods. At first sight it may seem that they are too detailed, but their realistic drawing is due to extreme accuracy, and closer examination will prove that much more is suggested than is drawn out. The one on the January cover, the famous Della Salute in Venice, recalls the work of the English water color school of the late eighteenth century, when details were more carefully suggested than they are now. This drawing of Mr. Eggers is one of the best, especially in color and in its sparkling effect of light. The reflections of the buildings in the water are excellently rendered; and the throwing of the foreground, palace and the gondolas into a strong shade broken up by the light on the mooring posts evidences an unusual grasp of pictorial composition in a young scholarship holder.

The water color of the Temple of Concord at Girgenti, on the February cover, is perhaps the surest and the freest of the series, done in great broad washes at one effort, with the barest possible working over for delineation. The scenes of the two Paris bridges, the old Pont-Neuf and the Pont Marie, are skillfully painted; how skillfully, will be realized by those who have attempted to render the dull atmosphere of Paris, devoid of bright color, but full of subtle, misty, colorful light. The painting of the sky of the Gothic church of St. Servan, Paris, is a most successful picturing of this evanescent light of France. As examples of the early work of an architect, even yet in the early part of his career, these drawings cannot be too highly considered. It seems hardly fair to point out that here and there in them may be bits that are too much worked up; for to-day, as many of his pencil sketches show, Mr. Eggers has attained to the freedom that comes of experience, and, if he were doing them now, he would doubtless do them even better—except the one of the Della Salute.



VIEW OF COURTYARD AT CHATSWORTH.  
WILLIAM TALMAN, ARCHITECT. 1680.

# English Architectural Decoration

*Text and Measured Drawings*  
by Albert E. Bullock

## Part VI.

ARCHITECTURAL expression is not only the realization of the ideal of the designer, but a species of grafting certain forms in varied dispositions, based upon the principles dictated by previous experience. In this respect it is not unlike the practice of grafting adopted in horticulture, the results being more or less satisfactory in accordance to the degree of proportion and taste displayed in the development of the salient and essential features. The elimination of ornament or its chaste distribution contribute largely to the success of a scheme, whether it be external or internal work; and failures are frequently the result of inexperience in the use of the correct proportions for a given area. Take, for instance, the Vandyck or double cube room at Wilton. It may be thought to be over-ornamented because of the florid composition pendants; but these are subordinated to the immense size of the room and to the quiet color scheme of white and gold of the ornamentation, which has as its central feature a finely carved marble mantelpiece with superimposed figures in the composition of the overmantel. Moreover, the ornament, although similar in design, differs frequently in detail, giving an added interest.

In all the early periods of carved woodwork this variation of design in the ornament or carving is the charm of the subject. At Wilton, the eye travels round the paneled walls, seeing enrichment up to the cornice, and above a plain cove to an enriched ceiling of beam formation. (See inset drawing opposite page 488.)

There is a truthful expression in the ceilings designed by Inigo Jones, the construction being made obvious by the emphasis given to the main corniced beams. This is especially noticeable in the rooms at the Queen's House, Greenwich, and

in the hall where the chief lines of the ceiling are reflected or correspond to the lines of the marble paving below. It is one of the essentials of successful interior decoration that the principal divisions of one wall should be adopted in the others; the horizontal moldings should carry the eye without break around the room, except where a columnar treatment is adopted, when the main cornice serves this purpose.

Good effects can be obtained by bold projections where a heavy style is adopted. Any indecision or bad modeling is immediately observable if the spirit of this principle is lost.

In lighter vein, for drawing rooms and bedrooms, any projections should be carefully studied, emphasis being confined to doors, windows and chimney-pieces.

The work of Wren was always of bold character. Plastering was modeled in full relief, giving deep shadows; the carving being frequently very undercut with much variety in the design of the sculptural features which have the fullest possible projection. The better carvers were faithful to nature, portraying the finest detail and exhibiting a profound knowledge of anatomy.

The board room, or withdrawing room as it is sometimes called, of the offices of the New River Company, is one of the most notable of the Wren rooms in London, having very few modern additions and retaining much of its original character. The carving is the authentic work of Grinling Gibbons, and in masterly style, the chimneypiece being an exceptionally fine feature of the room. The ceiling is interesting in having the ornament colored in accordance with each particular object represented; while the purpose of the room is clearly indicated by small panels modeled to represent scenes on the New River, whence the

supply of water to London is obtained. The whole theme with its varied subjects is a unique example of studied and inventive design and consequently reflects great credit upon the originators.

The drawings which illustrate this room (see insets opposite page 392 of April issue) were kindly lent to the author by Mr. Frank Green, A.R.I.B.A., who made careful measurements in 1902 to 1906. It is an oblong room, lit at one end, being paneled in oak with the carved Royal Arms incorporated in the design of the chimney-piece, having in the ceiling plaques containing the arms of Alderman Greene and Sir Hugh Middleton, two of the founders. The work was executed in 1693 or late in the seventeenth century. The large oval in the ceiling contains the portrait of Middleton, being crowned by a seraphic subject in the manner of Verrio.

Painting had not attained a high degree of excellence at this time, the best work being done by Robert Streater, a disciple of Du Moulin, at the Sheldonian Theatre, Oxford. Streater was followed by Antonio Verrio, whose work at Chatsworth and elsewhere is familiar to many. The most notable painters that followed in their wake were Laguerre, Ricard and Sir James Thornhill, who were for the most part keen rivals, and of whom Thornhill was the most popular court painter, judging from the amount of work he executed. The paintings at Moor Park, Hertfordshire, were executed by Thornhill in company with Sleker and Amiconi for Sir B. H. Styles during the first half of the eighteenth century, the architecture being by Leoni, an Italian, who came to this country at the instance of the Earl of Burlington.

Streater, however, was contemporary with Wren and much employed by him. He painted the ceilings of the chapel at All Souls College and the New Theatre at Oxford, and in London the ceiling of the Banqueting House, Whitehall, St. Michael's, Cornhill, and much work at Kensington Palace, the latter being executed in 1692 at a cost of £3,599.

Streater was very extensively employed by the nobility, and is famous for his work of the Gyants War executed

for Sir Robert Clayton, which subject was subsequently removed to Marsden, near Godstone, Surrey.

Painting entered largely into ceiling design especially in Renaissance churches. The vestry of St. Lawrence Jewry, in the City of London, has a fine ceiling of the Wren period, and there are numerous examples all over the British Isles.

At Exeter there are several good Renaissance ceilings, most of which are earlier than the Wren period. Until quite recently there existed a fine ceiling with festooned surround at the old "Half Moon Inn," in High street, Exeter. The Customs House possesses two or three Charles II ceilings, and a large rich ceiling exists at Messrs. Green's premises in High street.

Ceilings of the period at Edinburgh were of a very high degree of finish and equal to those at Belton, much work being done in this locality by the Milne family, who for many generations held official positions as Supervisors and Clerks of Works to the City.

In Ireland there are several good instances of Wren period ceilings, especially in Dublin and Belfast. The Chapel ceiling of the Royal Military Hospital, Kilmainham, was erected in 1680 from designs by Wren and executed by Cipriani. Owing to the decay of the supporting timbers it was taken down at the beginning of the present century by George Jackson & Son, who faithfully reproduced the design, incorporating much of the original work. Parts of the original ceiling are preserved in the Technical Museum, Dublin.

In the Wren period the panels were large and the moldings bold, usually of bolection section for paneled work. In order to obtain this exceptional size for panels the boards were carefully jointed together, and the joints can be detected in most of the work of the time. There were two reasons for this, apart from the desire to obtain massive appearance: one was due to the difficulty of getting timber of a sufficient size without shakes, and the other on account of shrinkage.

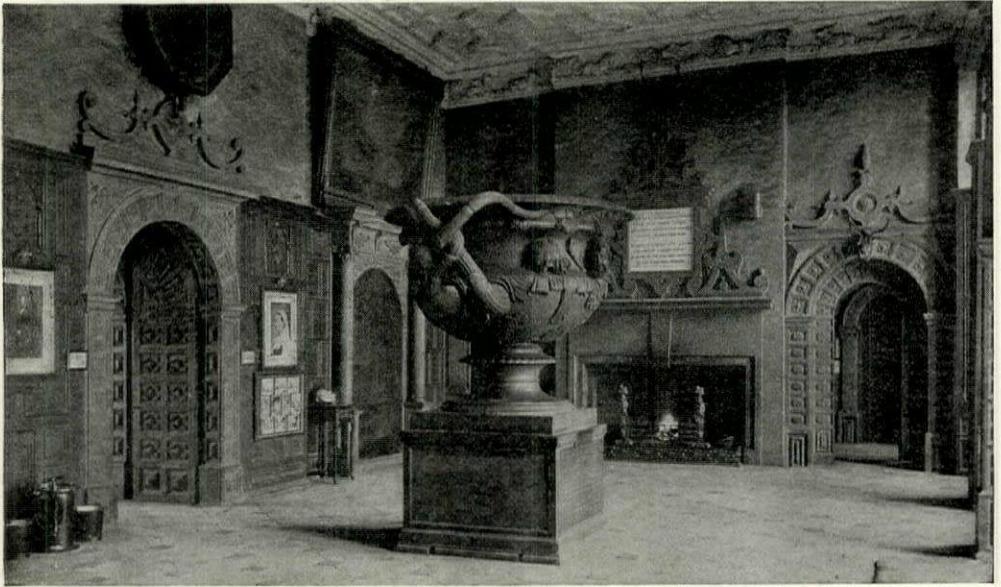
This eventually led to the habit of changing the grain for effect; then to



CHAPEL SCREEN—FORDE ABBEY.



TAPESTRY ROOM—FORDE ABBEY.



JACOBEOAN ENTRANCE HALL—ASTON HALL, BIRMINGHAM.

quartering with pollarded and cross-grained cutting of hard woods; and finally to parquetry, which was a system of treating ornamental woods by inlaying sections as practiced in France by Boule, and subsequently in England by furniture joiners. The Chatsworth paneling is very rich in this method of pattern inlay, and there are many similar examples at Hampton Court Palace and elsewhere. Staircases reverted to the baluster form of handrail, but they were thicker and bolder in profile than adopted earlier in the century. Wrought iron handrailing and ornamental gates were used freely, fine examples of which exist at Belton and Hampton Court Palace. The original gates by Tijou are still preserved at Hampton Court, although they have suffered many vicissitudes. Staircase handrails became lighter during the early years of the eighteenth century, of which there are many instances extant.

The Great House, Leyton, was built during the first quarter of the century for Sir Fisher Tench, Bart., having nicely molded balusters, two to a tread, with carved brackets to the cut string of more than ordinary projection. This house was demolished in 1904; but a monograph of it was previously made by the London Survey Committee, and is the

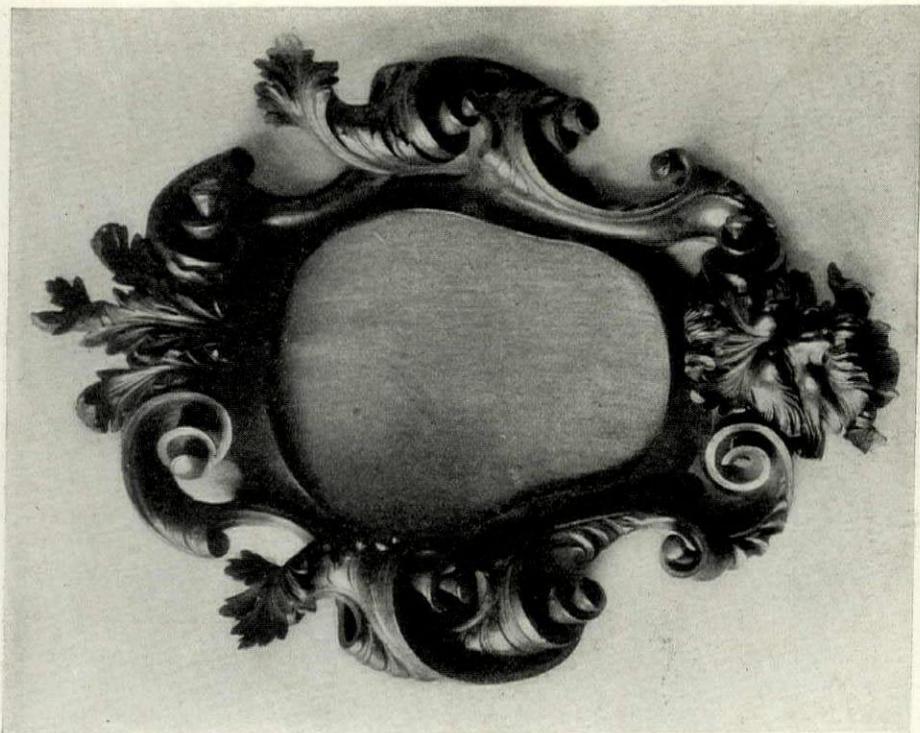
fourth monograph of their publications. Incidentally it may be mentioned that the withdrawing room and dining room were of Adam period design, the other rooms being of the period mentioned above.

The old Ward School, Love Lane, is typical of the Wren treatment; the balusters are thick and bottle-shaped and the doorways on the landings pedimented with plain moldings.

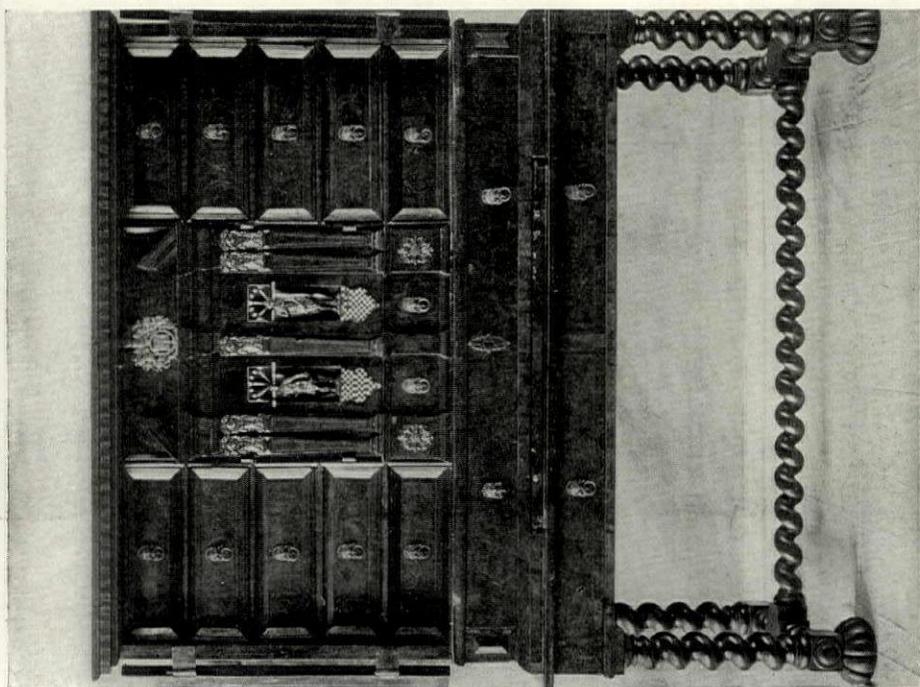
About the middle of the eighteenth century a latticed form of handrail balustrading was adopted, based upon the principles of the Chinese vogue introduced at the time of Chippendale and Chambers. There is such a staircase extant at No. 5 John street, Bedford Row.

The light balusters occurred again towards the end of the century and presented a more delicate form during the Adam period. A house adjoining the Church of St. Mary in Abchurch Lane, City of London, had balusters of this period, and two of the rooms were decorated with Chippendale scroll-forms and early Adam ornament to ceilings and walls respectively.

Mitering three ways to the top angles of doors obtained from the early seventeenth century, and was practiced at Wilton and later in chimneypieces. In the Gibbs period the projection was orna-



MAHOGANY CARTOUCHE MIRROR FRAME OF THE EIGHTEENTH CENTURY (IN VICTORIA AND ALBERT MUSEUM).



KING CHARLES' CABINET—ASTON HALL.



BILLIARD ROOM—OLD HALF MOON  
INN, EXETER, DEVON. PULLED  
DOWN, 1912, FOR LLOYDS BANK, LTD.



JACOBEOAN COURT CUPBOARD.



CAST IRON FIRE DOGS.



FIREPLACE WITH CAST IRON FIRE DOGS.

mented by pendant husks, giving an interesting finish to the example.

Ornament cast in composition or modeled gave way to bold and daring carving in oak and limewood, which, owing to its delicacy in the stalks and similar parts, have in many instances been much damaged by time. Holme Lacy, Hereford and Penshurst Place possess famous carvings of the Wren period by Grinling Gibbons.

The wrought iron handrailing at Pembroke House, Whitehall Gardens, is of simple design, and about the period of William Kent or Chambers. Illustrations of the anteroom were given in a recent number of this journal, concerning the authorship of which there is some controversy. Chambers is reputed to have executed the board room adjoining, but it is possible the anteroom is somewhat earlier. William Kent was responsible for much work there, as also at the Treasury Offices in Whitehall.

To fully fathom the authorship of many of the examples of decoration in London public buildings is no light task, as very indifferent records are kept in most instances.

Inigo Jones's Banqueting Hall, for example, was refaced by Wren, Sir John Soane and Sir Charles Barry; the Treasury Buildings received the attentions of William Kent, Soane and Barry; the Admiralty is of two distinct periods, and many similar buildings suffered like vicissitudes.

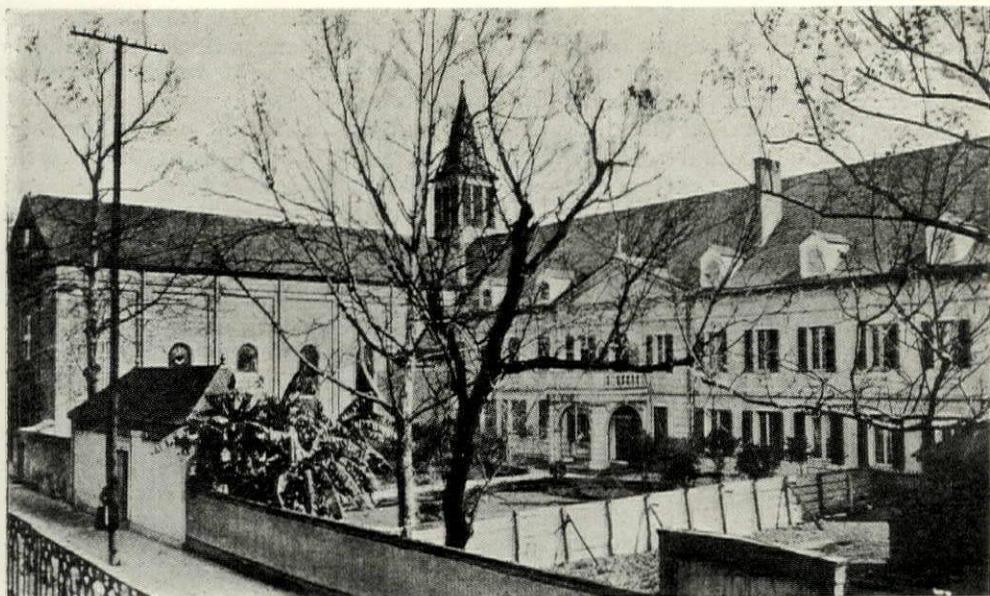
Furniture is one of the most interest-

ing studies connected with the history of interior decoration, but is so vast a subject that it can hardly be dealt with in short articles. It must suffice to refer to the chief differences which are to be noticed in the periods concerned.

The stuffed chairs of Charles I period gave way to caned seats and backs with carved strainers, etc.; in Charles II's time this practice obtained until Queen Anne's reign with slight variations, the backs in the latter period being higher. The Chippendale chairs were usually of walnut and had claw feet with open carved backs, and a lighter form was adopted in the birch painted chairs of the Adam period. Sheraton, Heppelwhite and other of the numerous joiners of the late eighteenth century varied these designs, working for the most part in mahogany.

Inlaying in mother-of-pearl and ivory was adopted in some isolated instances in chairs and tables, and veneering in spinets and organ cases and furniture obtained from the time of Sheraton onwards. Turned rails and legs to chairs became common in later times, which, however, could never attain the interest of the earlier examples. The variety of patterns in chairs alone are legion; while bureaus, consoles, mirrors and other furniture have their relative charm in the periods to which they belong.

I hope to illustrate some ceilings in my next article before passing on to the Adam and more modern decorative treatments.



THE ARCHBISHOPRIC, NEW ORLEANS, OLDEST BUILDING IN LOUISIANA.

*The*  
**CREOLE · ARCHITECTURE  
OF · OLD · NEW · ORLEANS**

By N. C. CURTIS

*With Illustrations of Wrought  
and Cast Iron from the Collection  
of Photographs at Newcomb College*

MANY discriminating persons have brought to New Orleans on their initial visit a somewhat skeptical and dubious anticipation of the unique charm that they had been told existed there. They have come prepared to be disappointed; but they have gone away carrying with them enthusiastic impressions of the city, its quaint old architecture, its cosmopolitan atmosphere, its graceful social customs, the superlative culinary achievements of its restaurants. They would then have us believe it to be one of the most distinctive and wholly delightful cities of America. And I am not one of those who would take issue with them or dispute their verdict in any particular. New Orleans is a charming

city and, moreover, is one of the few really beautiful cities of the North American continent.

In support of this conclusion we have the opinion of Mr. Birge Harrison, among others no less competent, who referred to New Orleans, Quebec and Charleston as being three cities of America where the architecture of pre-Revolutionary days has come down to us undisturbed. He believes them to be the most beautiful cities in the country, and thinks this is largely due to their having been built to meet certain social and climatic conditions which could not be overcome or avoided.

"In accepting the limitations which were thus imposed and working within

them," he says, "the old architects achieved a character, a beauty and a harmony which could have been secured in no other way." In New Orleans the architect's problem was to guard against the sun, and "the natural reply to this was found in wide flung eaves and broad verandas mounted story upon story to the very roof line." The need of railings on the upper levels led to the use of decorative ironwork. "As a result of this the piazza railings of New Orleans are unique. . . . The patterns are infinitely varied and the design almost always intricate and graceful. The strongest impression which the esthetic pilgrim carries away from New Orleans is that of a city whose houses are seen through bands of lace."

Without further introduction let us imagine ourselves within the "Vieux Carré." This interesting neighborhood, locally known as "Frenchtown," adjoins the lower side of Canal street and is only a few steps from the heart of the hotel and business section of the city. The ancient enclosure, as we know it today (see map), is bounded by Canal, Rampart and Esplanade avenues and the river, and many of its picturesque streets still bear the names of the lords and ladies of the court of Louis XIV. Unfortunately, in 1788 a great fire swept this district, completely devastating all except the waterfront of the original city. Consequently there are within the area few existing buildings of the early Spanish occupation or of the original French régime.

The earliest Convent of the Ursulines, now known as the Archbishop's Palace, on the corner of Chartres and Ursulines streets, is the sole building of importance now standing of the epoch from 1724-64. Erected in 1730, its steep roof, tall chimneys, rusticated quoins and air of quiet restraint strongly recall, externally at least, the contemporary French hotels of the early Louis XIV period. Its interior, on the other hand, by its frank disavowal of all decorative amenities, is suggestive of the simple, unpretentious life of the colonial pioneer.

In 1764 it became known that Louisiana had been ceded to Spain, and during

the following interval up to the conflagration of 1788 many interesting dwellings were erected, few of which survive to our time.

There is that quaint old building, on Chartres street opposite the Archbishopric, whose plastered walls and low-hung tiled roof are, no doubt, typical of most of the town houses of that time. Two years ago it became necessary to rat-proof this ancient relic, and had it not been for the diligent efforts of the Committee on Preservation of Historic Architecture of the Louisiana Chapter of Architects, the owners would assuredly have preferred the option of tearing it down and the city would thereby have lost almost the last remaining specimen of the architecture of that period.

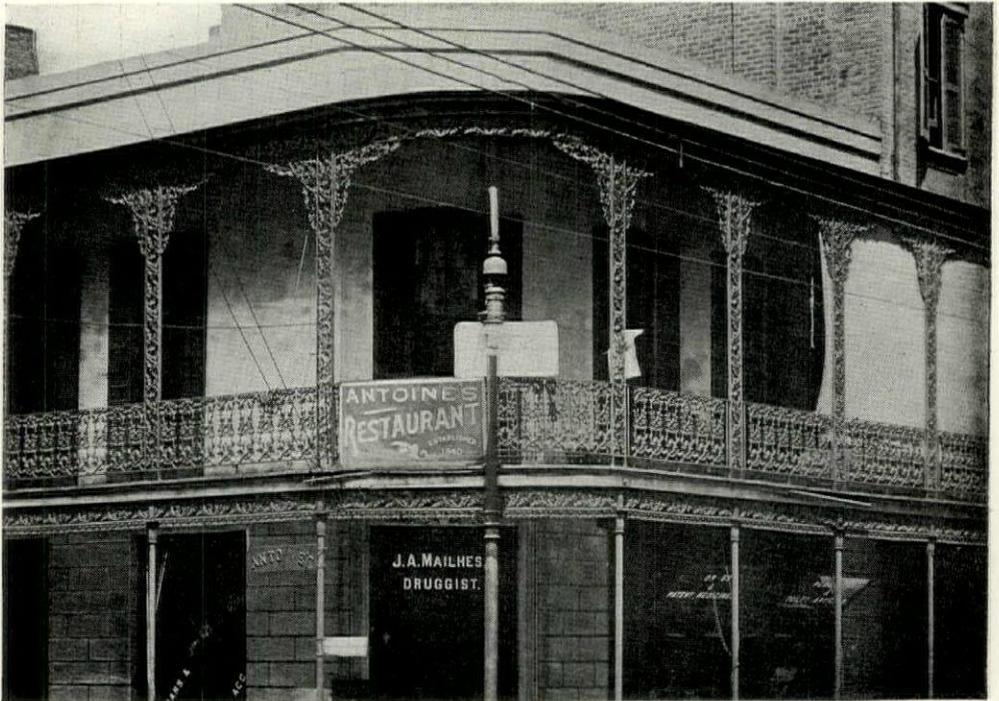
Far more interesting architecturally are the suburban plantation houses built along the Bayou St. John, and that very odd creation of the semi-plantation type on Dumaine street, known as "Madame John's." The former recall, with their wide surrounding verandas, the rural dwellings of the wealthy West Indian sugar planters, and, with the exception of certain local modifications, are of a distinctly tropical type. Several excellently preserved examples of these delightful old residences may still be seen well within the limits of the present city. Leaving the car at the end of Esplanade avenue, one has but a few blocks to saunter along the Bayou road in order to find himself carried back through only a slight stretch of the imagination to broad, sunny acres, sweet-smelling magnolias and spreading live oaks. Let him pause at the right spot, circumscribing his vision ever so little so as to shut out the encroaching array of sordid modern tenements, and he will glimpse through well-kept greenery of lawn and garden, ranges of round, white stuccoed columns, and above under the sheltering branches of the oaks a cool inviting gallery and a long stretch of overhanging eave supported by slender, molded wooden posts.

No more curious specimen of architecture exists anywhere than "Madame John's Legacy," that odd half-country, half-town house on Dumaine street, locally identified with Cable's delightful





IN THE FRENCH QUARTER. BALCONIES THAT ARE VISTAS OF LACY IRON WORK.



ANTOINE'S CORNER, OPPOSITE OLD ST. LOUIS HOTEL.

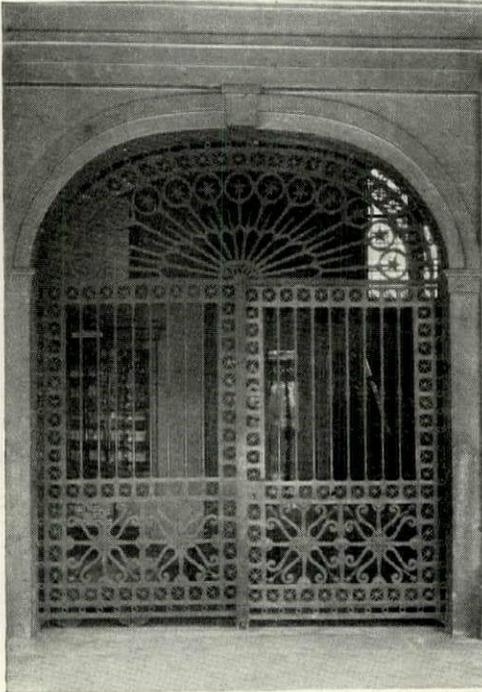


THE OLD ABSINTHE HOUSE, ON BOURBON STREET.



NAPOLEON HOUSE AND PIERRE MASPERO'S EXCHANGE, THE LATTER MUCH DEFACED.

story. It exhibits in an extreme degree what at first appears to be an irreconcilable contrast in the use of material, between the basement floor and the gallery above. It would seem that the original builder, starting out to erect a solid brick mansion, changed his mind at the first floor level and finished upward with light



THE CABILDO, AND CAST AND WROUGHT IRON GATE OF THIRTEEN STARS.

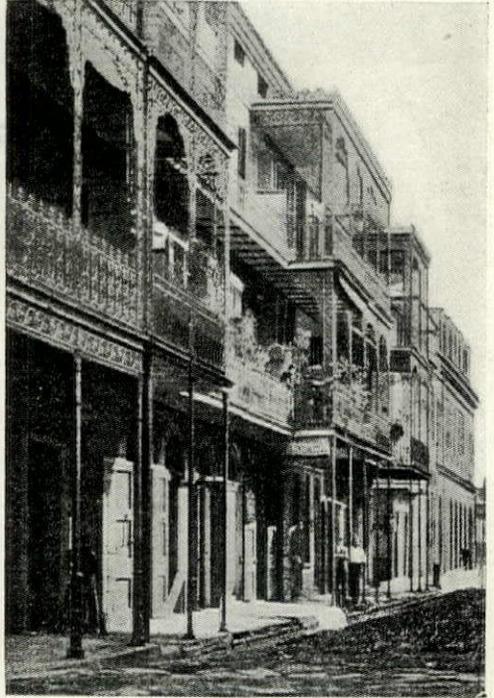
and fantastic wood construction. This practice is, however, one of the outstanding characteristics of the plantation type and may be supported by good reasons, artistic as well as practical. Madame John's has an odd double pitched roof, which is unique architecturally, so far as our observation goes.

We may mention here parenthetically that many of these interesting features of our local Colonial architecture in Louisiana have been copied and adapted by architects elsewhere in the country, who have visited this section from time to time. The fat Tuscan columns, which are an invariable accessory to the so-called Dutch Colonial style of country house, find their counterpart in the stuccoed brick pillars of our plantation type—

to mention but one salient feature as an example.

In order to summarize the characteristics of the Colonial manner, it will be sufficient for the purposes of this article to invite attention to only a few well-known examples.

The Cabildo is doubtless the most widely known relic of the ancient style and of the Spanish domination. This really imposing edifice approaches the dignity and importance of an architectural monument, and may be said to bear the same relation to our own local art history as those great buildings of the old world, which Professor Hamlin has so happily called the "Milestones of Architecture," bear to their times and ages. Certainly in its own way it is not unworthy to rank beside the famous Basilica of Palladio, concerning which



BALCONIES ON ST. PETER'S STREET.

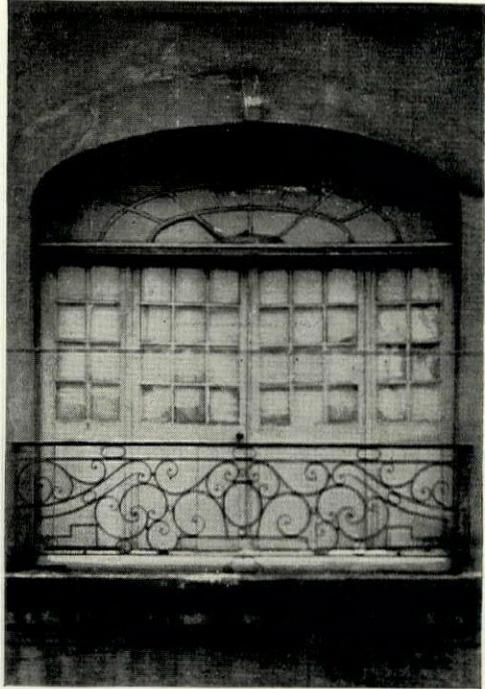
the author says with pardonable pride: "I do not question but that this fabric may be compared to the ancient edifices, and be looked upon as one of the most noble and beautiful buildings erected since the time of the ancients, as well on account of its largeness and decoration

as of its matter, which is all hewn stone, hard to the last degree, and joined and bound together with the utmost care."

While the ancient Cabildo is not "all hewn stone" by any means, but mostly common brick and stucco, it still has that largeness of manner, which even master Palladio himself, in spite of his fine words, found could be got in his later work through the medium of the less worthy materials. Indeed there are many features of the Cabildo which, in the coming age of concrete and plastic material, will be found to be worthy of study and inspiration. Not the least of these are the solidity of its proportions, its appropriate stucco moldings, and the subtle evasion throughout of all false suggestion of stony construction.

While we are in the neighborhood of the Cabildo we must not omit to call attention to the "Old Spanish Arsenal,"

sort of ideal laid down by Ruskin in his famous and oft-quoted paragraph in the "Seven Lamps of Architecture." "I do not believe," says that great critic, "that any building was ever truly great, unless it had mighty masses, vigorous and deep, of shadow mingled with its surface. And among the first habits that a young archi-



ARCH AND WINDOW TREATMENT, THE CABILDO.

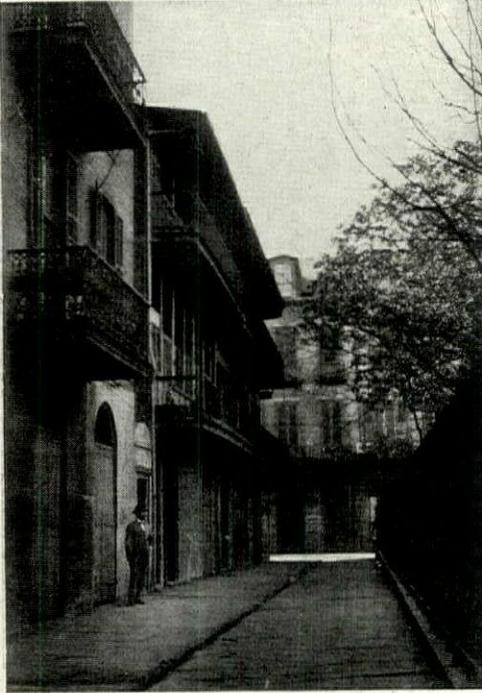


STREET IN FRENCH QUARTER.

immediately adjoining it on the rear. Who the designer of this façade was we do not know, but we confess to no little admiration for his power and artistic skill in composition. He must have been actuated to a considerable degree by the

tect should learn is that of thinking in shadow, not looking at a design in its miserable, liny skeleton; but conceiving it, as it will be, when the dawn lights it and the dusk leaves it, when its stones will be hot and its crannies cool, when the lizards will bask in the one and the birds build in the other. Let him design with the sense of cold and heat upon him; let him cut out the shadows, as men dig wells in watered plains, and lead along the lights, as a founder does his hot metal; let him keep the full command of both, and see that he knows how they fall and where they fade. His paper lines and proportions are of no value; all that he can must be done by spaces of light and darkness; and his business is to see that the one is broad and bold

enough not to be swallowed up by twilight, and the other deep enough not to be dried up like a shallow pool by a noon-day sun." In some such spirit, indeed, was the front of the "Old Arsenal" conceived; for it has not only breadth and depth of mass, but sincerity in its details, cleverly profiled moldings and iron-work of no less interest.



ST. ANTHONY ALLEY.

The prevailing custom of painting all woodwork, such as shutters, doors, trim, etc., green, gives to the old buildings of the lower city one of their most striking characteristics. Whether this is a custom or a preference I do not know, but in any case it is something to be commended, for any one with an artistic eye must feel at once how immeasurably the general color scheme is enhanced. This is not the bottle-green that is more familiar elsewhere, but a sort of arsenical viridian, due to the weathering of what the technical experts would call an inferior grade of paint. It is certainly very far from the latter's ideal of unchanging monotony, for the sun and rain have broken it up into many shades of green, blue and yellow, and if it ever had

any shine that has long since departed. When one of those delectable tropical violet shadows happens to fall next to this equally charming green, as is more apt to be the case than not, the color combination is one to make even the most casual observer take notice.

The "Old Arsenal" has recently been transformed into a "Battle Abbey," a very interesting museum of military relics, and consequently became subject to certain alterations and improvements, among which may be noted the repainting of its doors and iron grilles a funereal and jetty black, in place of the above mentioned excellent green. But the "Old Arsenal" had to be repaired in order to fit it for its new purpose; a most commendable idea and one that I would not be thought to disparage.

For it is especially true of all buildings that they should be kept in repair. We cannot go on letting them rot indefinitely for the sake of art, especially art as it appeals to the painter. It is a sad fact that dust, dirt, slime, moldy tumbled-down walls, uneven, ill-kept streets and roads, and general decay and dissolution are all very essential and appropriate elements of a picture. The architect, although he does not lack the pictorial eye, has to be something more than an artist. The exacting practical limitations of his profession demand orderliness; hence, when an architect is commissioned to alter and repair some historic building and adapt it to present-day uses, he finds it one of the most thankless and unsatisfactory tasks that could come within the range of his practice. He cannot translate its decayed beauty into new and fresh materials; and even when he tries to preserve some of the antique character of the building, the result is almost certain to be inharmonious and offensive to his own artistic sense.

If it be granted that the "Vieux Carré" is worth preserving at all, its representative architecture should be treasured by its owners and by the whole city; and if alterations become necessary, they should not be lightly undertaken.

Alterations of one sort or another have been the curse of art from the earliest

times, and it would seem that in this respect, of all forms of art, architecture has received the least consideration. It too often happens that the architectural unity of a fine old building is spoiled by the heavy hand of the ruthless restorer, and so its original character is lost. If it were possible to do for buildings as is indicated would be advisable to do for other forms of art, in an old book called "The Everyday Philosopher," where alterations are contemplated, the case would not be so hopeless, to wit: "If you pretend to show us Raphael's picture, let it be exactly as Raphael left it. Call it what it is: Raphael altered and improved by Snooks. If you take a sovereign, and drill several holes in it, and fill them up with lead, you will be made to feel, should you endeavor to convey that coin into circulation, that though you may sell it for what it is worth as a sovereign plugged with lead, you had better not try to pass it off upon people as a genuine sovereign."

But my affection for my venerable friends of the "Vieux Carré" is perhaps leading me too far away from my subject, and I will therefore pass on to a brief consideration of what may be called the "Intermediate Epoch" of New Orleans architecture, culminating in the "Ante-bellum Style."

Before doing so let me urge the pilgrim to pause in front of the "Old Absinthe House," and after noting its admirable proportions and the charming effects of color in the pigment-soaked plaster of its rotting walls, to step within. Nothing could be more whimsical than the workings of the fancy of the planner of this building, and yet it is most admirably suited to its purpose. At least so, it would appear, have agreed the multitude of notable visitors who have signed its ponderous, century-old register. Turn to the right when you enter and you will find yourself in the curious court. In this small enclosure are discovered the elements of architecture assembled together in a most picturesque fashion—some arches; vaults; a ponderous Tuscan column; a heavy, blackened timber ceiling; a delicate, winding wooden stair leading to a Juliet's balcony

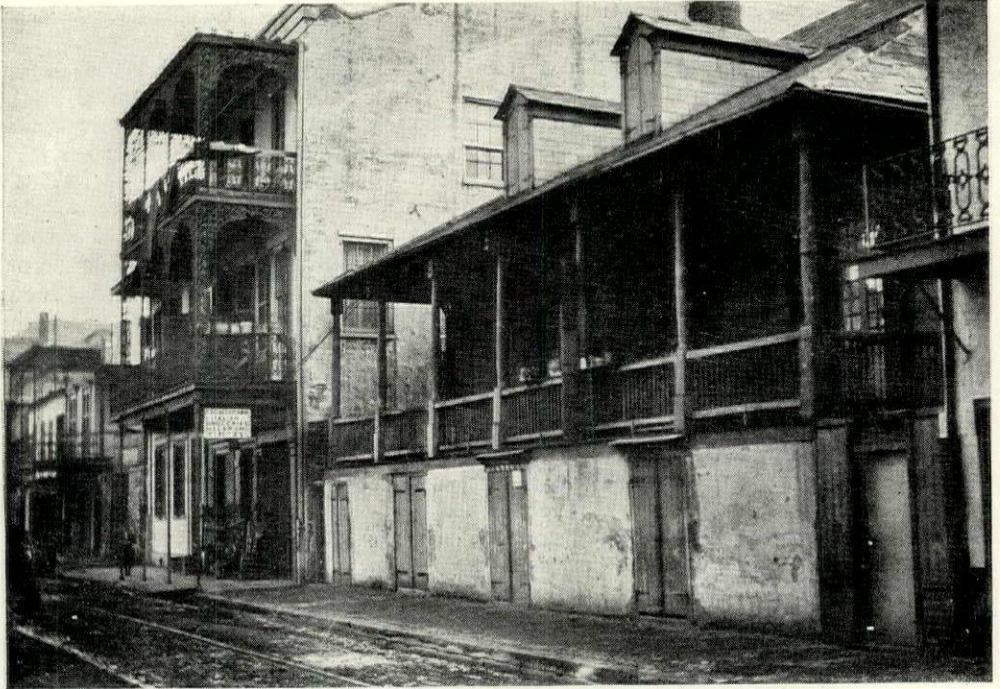
and entresol; four stuccoed walls, and a paved floor.

Other buildings worthy of note are the house said to have been built for the reception of the exiled emperor, Napoleon, and the houses immediately adjoining it on St. Louis street; Pierre Maspero's Exchange, at the corner of St. Louis and Chartres streets, a well proportioned building with an elegant cornice; and the house known as "Sieur George's" on Royal street near the Cathedral yard, and many others.



ON PRYTANIA STREET, IN THE "GARDEN DISTRICT."

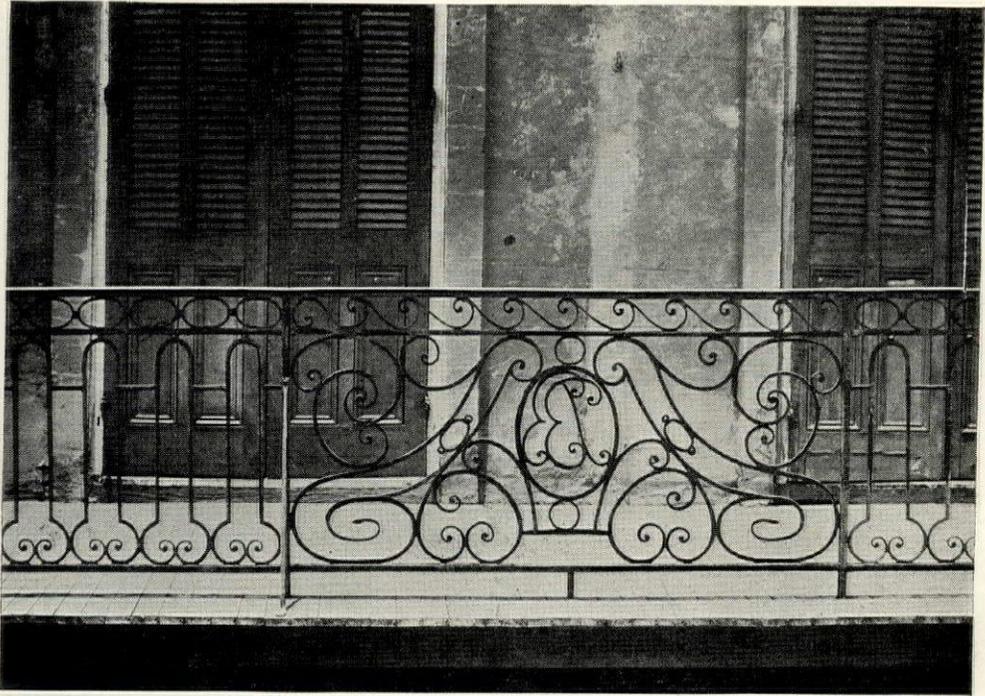
Among the interesting creations of the early part of the Intermediate Period are the courtyard houses of the "Quartier." Here we have, in a sense, real architecture, inasmuch as the style is founded upon the fundamental principles of its surrounding civilization. Social customs, climate, local materials and cultured taste, have each here contributed toward making these delightful dwellings almost personal witnesses of their contemporary environment. In plan, their arrangement was much the same as the Greeks and Latins, from the earliest



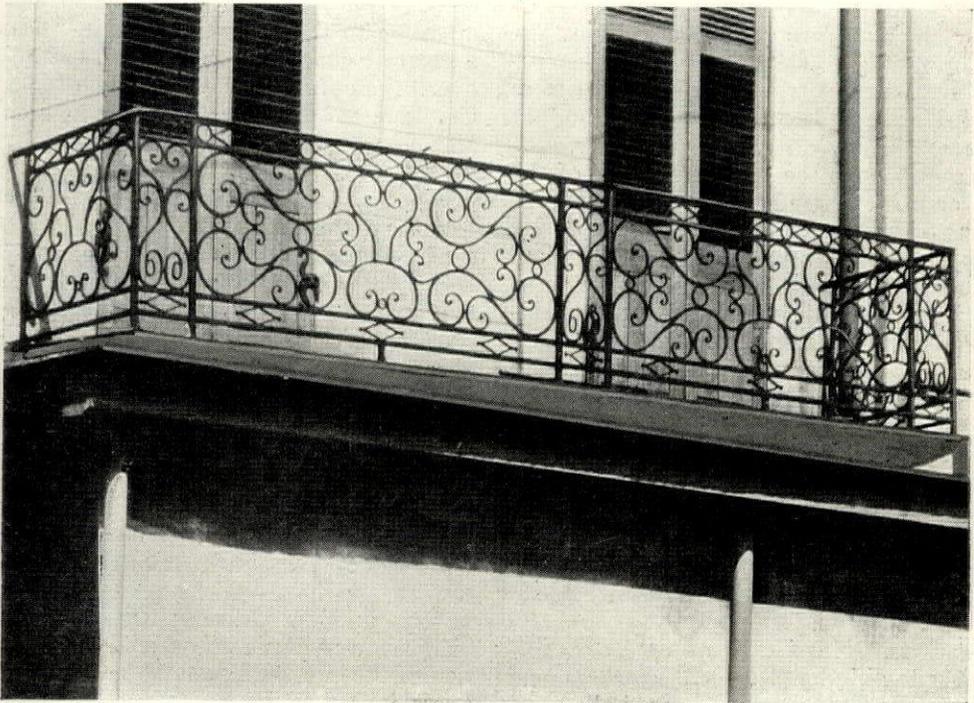
THE HOUSE KNOWN AS MADAME JOHN'S.



CAST IRON BALCONY OF ANTOINE'S FAMOUS RESTAURANT.



A CHARTRES STREET BALCONY WITH FAMILY MONOGRAM.



A WROUGHT IRON BALCONY ON ROYAL STREET.

times to the present day, have found best suited to a semi-tropic climate; and in the latitude of New Orleans, it is certain that latter-day architects have been able to devise nothing more comfortable for all seasons.

As is well known, the old houses of the French Quarter nearly all had courtyards, and these were entered from the street through a lofty arched portal and enclosed passageway leading directly to the courtyard itself. The latter was paved with bricks or stone flags, and usually was provided with a water-jet and pool and planted with flowers and shrubs. High walls on four sides made it certain that there would be shade during the greater part of a summer's day; while the rapid evaporation of moisture from the dampened flags, aided by a draft of air through the entrance corridor, reduced the temperature many degrees below that of the outside street. Such an arrangement no doubt was as near perfect an expression of local conditions when the city was small and compactly built as could have been devised, but it would be hard to adapt it to the extended area and loosely built blocks of the city's modern residence sections.

Modestly recalling, in general disposition of rooms, the Renaissance palaces of Northern Italy, there are found in these old houses, on the first floor, corresponding to the "Piano Nobile" of the Florentines, usually a few apartments of fine proportions, including a salon, dining room and stair hall; while the ground floor was given up to stables, servants' quarters, and, in many cases, the counting-room or shop of the owner who dwelt above. Many houses of this interesting type are to be found along Royal street, most of them now seized upon by dealers in antiques and petty tradesmen, but a few still occupied by the original families who have remained in their old homes. On the street façade there will be found an overhanging balcony of elegant design and craftsmanship in wrought iron, supported by graceful brackets. Massive entrance doors, furnished with hand-forged knockers and fasts, serve to close the arched alleyway, leading from "banquette" to inner court,

while a smaller door in one of the leaves of the large portal gave passage on ordinary occasions.

Houses of this type were built during the first quarter of the last century; but gradually as the city extended its bounds, they gave place to the more pretentious detached dwellings of the immediate ante-bellum period—that is to say, from about 1840 on. Fine examples of these mansions may be seen along Prytania and adjacent streets in the so-called "Garden District." During the same interval, balconies of wrought iron gave place to those wonderful galleries of cast iron, perhaps the most universally admired feature of New Orleans architecture; a feature which is not less admired in our own day and which will continue to be admired so long as the sense of artistic discrimination exists. As a unique artistic achievement in a very difficult material, its value is well known and has been properly assessed by such competent critics and writers as Woodward, Owen, Labouisse, Goldstein, Whitaker, Bailey and others.

The galleries are also a hobby of my own, and I would enjoy calling further attention to their merits; but they form a separate chapter in themselves. Moreover, these beautiful examples of the Creole taste in architecture must be seen and, if possible, lived with to be fully appreciated.

Up to the period of Reconstruction in Louisiana the vernacular manner in design produced buildings which invariably rise above the commonplace; but since that time there has hardly been a single conscious effort to revive the local style, although it is admitted by architects that in much of the old architecture of the city there is a solidity, elegance and distinction that is hardly surpassed by even the highest class modern work.

Should one of the discriminating strangers mentioned in my opening sentence be set down in the middle of Jackson Square, he would be very sure that he was in New Orleans; but drop him in the newest business or residence section of the city, and it would be a shrewd guess indeed if he could tell from the architecture around him where he was.

# INDUSTRIAL HOUSING DEVELOPMENTS IN AMERICA

By LAWRENCE VEILLER

*Secretary of the National Housing Association*

## PART III · A DEVELOPMENT of GROUP HOUSES SAWYER PARK · WILLIAMSPORT · PA.

*Geo. S. Welsh & Lewis E. Welsh, Architects*

THE architects of America are just beginning to discover the advantages of the group house. It has taken them a long time to come to it. Fashions in housing seem to be as strong as in any other phase of human activity; and not only have the architects of America, but the public also until recently, clung with great tenacity to the detached house.

So strong throughout the country has been the feeling that the detached house is the only type of house for an American, that with considerable difficulty has a hearing been had for the claims of the group house, notwithstanding its successful use in Great Britain and on the Continent for many generations.

In the first article in this series we described a development made up entirely of single-family detached houses, that of Eclipse Park, at Beloit, Wis. The present article deals with a similar development made up entirely of group houses designed for the same class of workingman, the high grade mechanic.

One reason that the group house has not been popular heretofore has been because of the fact that it has been associated in the public mind with the "terrace," as it is called in the Middle West, or long row of stereotyped houses, deadly monotonous in appearance, with little architectural style, and consequent-

ly producing a dreary, unpleasing impression.

Whenever one has spoken of group houses the average person has instinctively thought of long rows of the hideous small dwellings of Philadelphia, or of the equally hideous rows of tall New York tenements, or of New York's earlier brownstone fronts. These represent the defects of the group house, not its merits. They are not at all inherent in the type itself. It is just as possible to secure variety in group houses as it is in individual houses; and detached houses can be quite as monotonous as even the Philadelphia row or the New York brownstone front if they are all alike and do not possess beauty of design or line; witness the appearance of any of the earlier so-called "mill villages."

The public is just beginning to have its eyes opened to the fact that it is not a choice between a row of drearily monotonous group houses or of well designed, attractive detached houses. In both cases the question is whether the houses are well designed and pleasing in appearance or whether they are not. The row house of England as developed by the ordinary commercial builder is quite as monotonous and unpleasing in appearance as anything we know of in this country; but the group house of the English Garden Village, on the contrary, is,

as a rule, charming and attractive. It all boils down to a question of intelligent design and good taste.

The advantages of the group house for an industrial housing development inhere in the facts that it is easy to heat; that it costs less to build, and that because of its better proportions it is possible to utilize better design.

Sawyer Park, one of the latest and best industrial housing developments in this country, located at Williamsport, Pa., is unique in that it is a development entirely of group houses.

In the opinion of the writer it is architecturally the best thing in industrial housing that has thus far been done in this country. The houses are attractive in design, picturesque, quaint and with great charm. They are, moreover, well adapted to the needs of the community. They are essentially workingmen's houses and have been built at a cost that makes their purchase well within the means of the skilled worker for whom they have been designed.

This latest American Garden Village possesses great interest, not only for the housing reformer, but for the architectural profession, for the business men of the country and for those manufacturers who are seeking to reduce labor turnover and who are finding in improved housing a most potent means of overcoming this serious economic waste.

The development possesses unusual features of interest. It is not directly an employers' enterprise; nor is it, on the other hand, a land speculation scheme. The element of profiteering is entirely absent, as is also the element of paternalism and philanthropy. It is in every respect a citizens' movement.

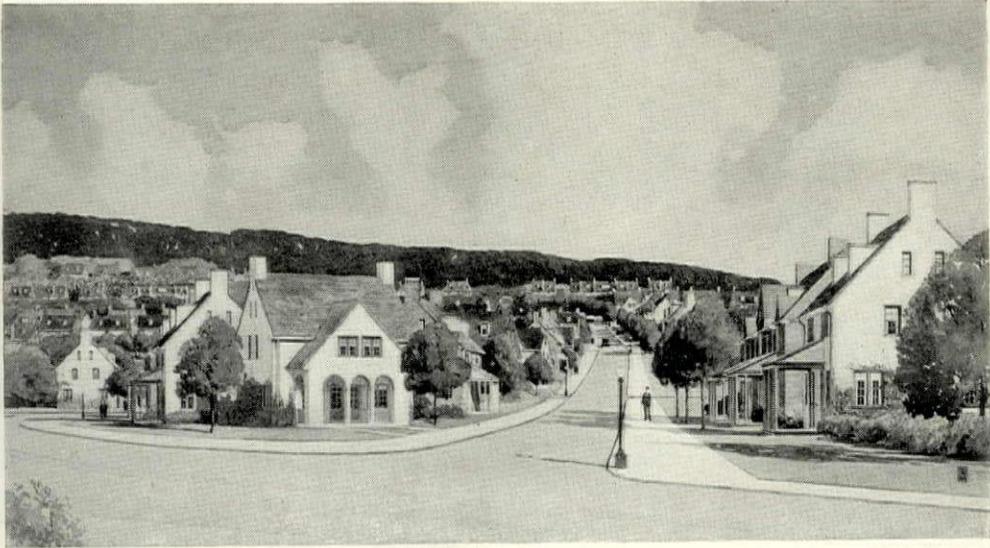
In the spring of 1917, there being not a single vacant house in Williamsport at that time, the business men of the city, acting through the Board of Trade, made an appeal to the public-spirited citizens of the community, calling their attention to the need which confronted the city and the opportunity that lay before them. As a result, the Williamsport Improvement Company was organized with an authorized capital of \$1,000,-

000, one-half of which was soon subscribed for the purchase of land and the laying out of a model residential community. Some 887 different individuals in Williamsport subscribed to the stock of the new corporation, which definitely limited its dividends to 6%.

One of the things which makes Sawyer Park especially interesting is that it illustrates the possibilities of developments of this kind in the smaller cities of America and also with comparatively small parcels of land. Williamsport is not a great metropolis. It has an estimated population of about 37,000. Nor in this case was there unlimited acreage for the development. City planners, as a rule, advise securing all the land that can be obtained and have laid down the principle that for a development of this kind there ought to be preferably 100 acres available and certainly not less than 50. In this case some 36 acres of old farming land has been utilized. The selection of the land was most fortunate; for the little colony nestles in the slope of a hill which shields the houses in winter from the northwest winds and gives to them the most desirable winds during the hot summer months. In addition, the settlement has very unusual attractions in outlook. It overlooks the river, across which there is the delightful view of Bald Eagle Mountain.

With great intelligence, the developers of the property have followed the natural contours and have utilized the sloping hillside to develop the houses practically to the crest of the hill in attractive terraces, rows of houses rising above others, clinging to the hillside in a way that suggests in their general appearance those attractive crescent terraces of Bath, England. A considerable part of the charm of the Park lies in this attractive grouping of the buildings and the way in which they fit into the natural landscape. This effect is greatly enhanced by the use of gently curving streets wherever possible, preserving at the same time the advantages of the rectangular street plan and fitting it into the street plan of the city itself.

One of the most distinctive features



A CHARACTERISTIC VIEW OF SAWYER PARK.

of the whole colony and to which a large part of the charm is due rests in the fact that the houses have not been arranged in strict rectangular lines, but have been placed at angles, breaking up the monotony of the usual block plan that prevails in most cities. We understand that this method of grouping the houses was viewed in the beginning with grave misgivings by many of the local people. As one of the townspeople put it, "The man who laid out those lots must have been drunk or crazy."

The best city planning principles have been followed. This being a residential development the streets have not been made unnecessarily wide, the 40-foot street prevailing. One thoroughfare which borders the Park on the east, namely, Wildwood Boulevard, is 80 feet in width, and a curving highway known as Park Avenue, which skirts the main residential development on the south, was already established as a 60-foot thoroughfare. With these two exceptions all of the streets in the Park proper are 40-foot streets, thus not only saving money, which is so often wasted in streets of unnecessary width, but also discouraging through traffic from utilizing streets designed purely for residential purposes.

The orientation has been given very

thoughtful consideration. While it has not been possible always to insure every room in every house getting direct sunshine at some hour of the day, owing to the necessity of adapting the development to the contours of the land, the maximum amount of sunshine has been afforded. According to the architect, ninety-seven per cent. (by actual count) of the rooms in the various buildings will have the sun at some hour of the day. Many of the houses face the south. Not only has the orientation been considered, but attractiveness of outlook has had equal consideration, and from practically every house a delightful and charming view over the treetops and across the valley to the surrounding hills is afforded.

The property, while on the edge of the city, is within the city limits and readily accessible by trolley. One line comes direct to the edge of the Park and another within two minutes' walk of it. The heart of the city is not over fifteen minutes away by trolley. Within a radius of a mile there are fourteen large industrial plants employing over 5,000 persons. It is thus possible for practically every one residing in Sawyer Park to walk to his work, even to get home at the noon hour for dinner, if that is desired—all of which means a consider-



A FRINGE OF SHOPS AND APARTMENTS MASKING THE FACTORIES .

able saving in carfare, a saving that has been estimated to be equal to the equivalent of one month's rent. Public schools are within easy access. The high school is less than a mile away. Churches, stores and other public facilities are found in the neighborhood; but notwithstanding this, the company contemplates the building of neighborhood shops for the residents of the Park, in which can be found those small stores that are necessary for the needs of a community; in addition, a moving picture theatre and club or assembly rooms in which the social life of the community can be maintained are to be provided. A very attractive building for this purpose, harmonizing in architectural style with the whole park development, has been designed by the architects. While not yet erected, its construction is planned at a later date. Out of the total acreage of 36 acres,  $5\frac{3}{4}$  acres have been set aside for recreation and play and school buildings.

The diagram on the opposite page shows in an interesting way the proportion of the land allotted to various purposes. Of the 36.71 acres 16.06 acres or 43.70% is utilized for building lots; 5.71 acres or 15.55% has been reserved for school buildings and recreation space; 6.98 acres or 19.80% it is contemplated to develop with factories; 6.32 acres or

16.50% is being utilized for streets; 1.32 acres or 3.55% for sidewalks, and .32 of an acre or a little less than one per cent. may be devoted to alleys. Following the practice of the best Garden Village developments, the property is being arranged so that when the whole development is completed there will be an average of about eight families to the acre.

To the south of the Park the company owns a strip of land running down to the railroad tracks that is adapted to factory development. In fact there are a number of factories already built in this location and it would be most unwise to develop this portion of the property in any other way. The company is now considering the suggestion, made by the writer when he was at Williamsport recently, of treating this property by developing with factories the major part of it immediately adjoining the railroad tracks, but placing on the Park Avenue end of the property, facing the main residential part of the Park, a fringe of shops and small apartments such as are shown on this page. This will serve a two-fold purpose. It will mask the factories and thus prevent the factory development from interfering with residential values; it will maintain the residential character and appearance of the entire Park; it will place the shops and stores and build-

# SAWYER PARK

WILLIAMSPORT PENNA.

Acres devoted to school & play	5.71	15.55%
" in Factory Sites	6.98	19.80%
" " Building Lots	16.06	43.70%
" " Streets	6.32	16.50%
" " Sidewalks	1.32	3.55%
" " Alleys	.32	.90%
<b>Total</b>	<b>36.71</b>	<b>100%</b>

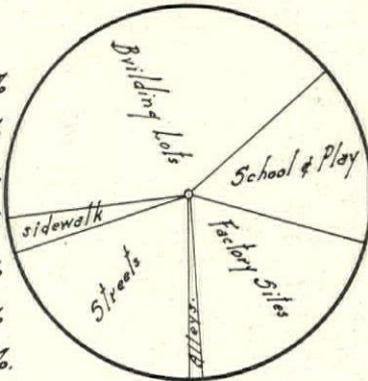
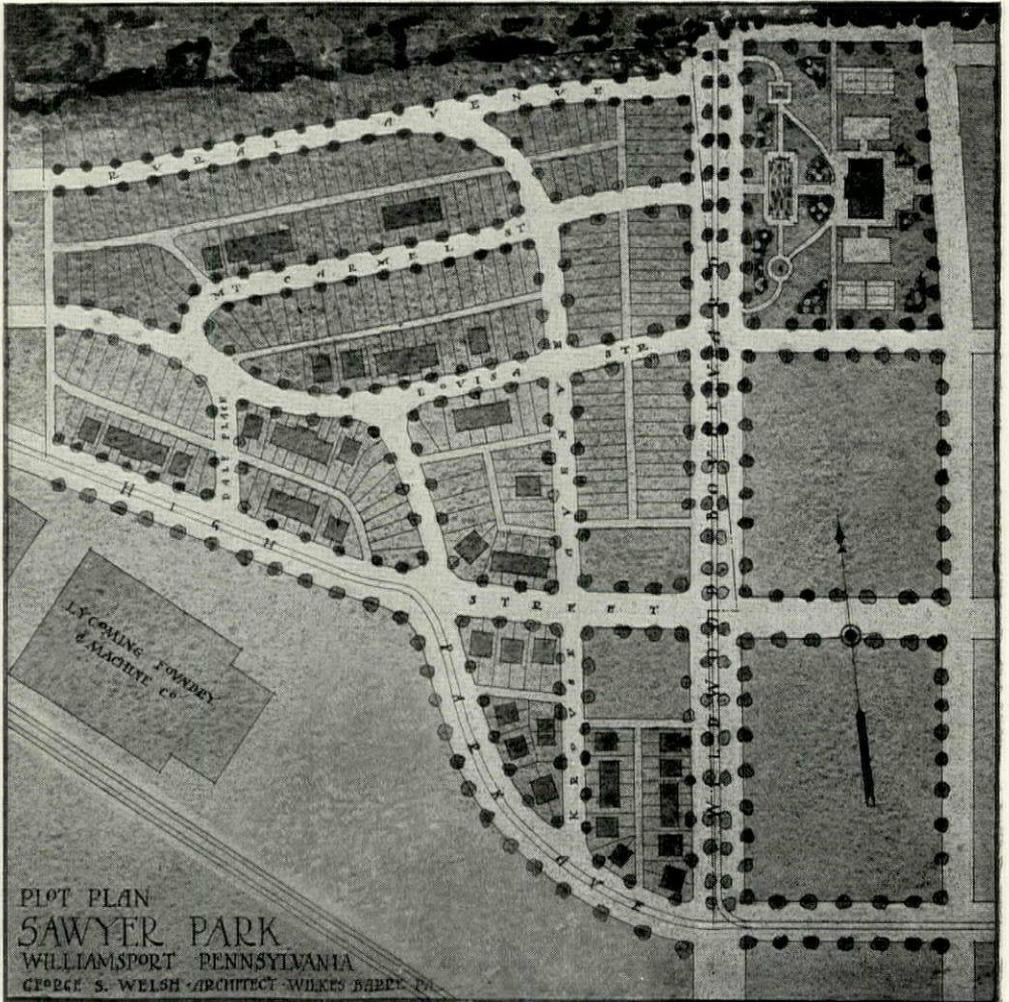


DIAGRAM showing proportional division of property.

ITEM	Length.	Cost per lin ft.	TOTAL
8" House sewers.	6120	.90	5508.00
10" " "	1734	1.10	1907.40
House sewer Manholes	No. 31	57.00 each	1767.00
15" Storm sewers.	675	1.26	850.50
12" " "	635	1.04	660.40
10" " "	1235	.94	1160.90
8" " "	2334	.82	1913.88
36 Concrete Conduit	893	1.60	1428.80
5 Storm Sewer Manholes	No. 25	47.00 each	1175.00
Catch Basins	" 63	33.00 "	2079.00
8" Line to do	1500	.75	1125.00
Walks 4 1/2' wide	11752	.50	5876
Curb	14552	.55	8003.60
Gritters 24"	11752	.28	3290.56
Electric wiring - street Lighting.			7800.00

DODSON REALTY CORPORATION. BETHLEHEM PA.  
 GEORGE S. WELSH. ARCHITECT & GEN. MGR. WILKES BARRE PA. 3-419.

TABLE I.—LAND DISTRIBUTION AND USE. DEVELOPMENT COSTS.



THE CURVING STREETS GIVE CHARM TO THE DEVELOPMENT.

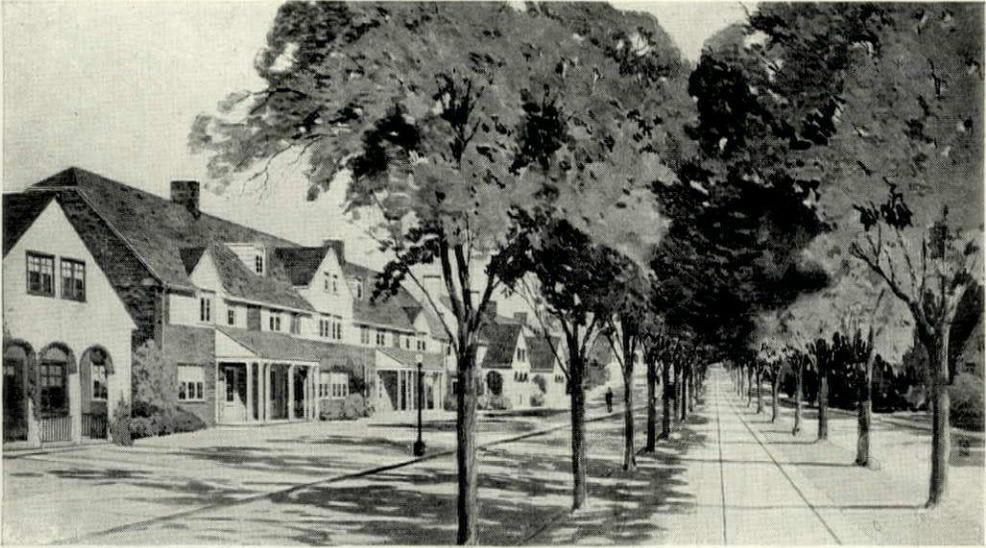
ings of public assemblage in a sense on the outside of the Park and yet at the same time in a convenient location.

#### PLOT ARRANGEMENT.

With 36 acres available, as already stated, only 16 acres have been developed into building lots, the balance of the property being devoted to streets, sidewalks, recreation, etc. These 16 acres have been divided into some 25 different plots or blocks of varying size and shape, none of them too long, however, nor any of them too wide. On this land it is contemplated erecting altogether houses for 300 families; 100 houses have already been built.

#### TYPES OF HOUSES.

The houses are of three main types: Two-family houses—semi-detached or double—of which there are two types, Types A and B; four-family houses of Type D, and six-family houses of Type C. The best planned house in the writer's judgment is Type D, the four-family house. This is but two rooms deep and is a house of seven rooms and bath. Each house, there being four houses in a row connected by party walls (see pages 460-461), has a frontage of 22 ft. 3 ins., and a depth of 24 ft. On the ground floor there is a spacious parlor or living room 11 by 15 ft.; opening from



WILDWOOD AVENUE—A BORDERING THOROUGHFARE.  
Trolleys Screened by Trees.

this with a large archway and to the rear of it is the dining room, 11 by 12 ft., and to one side of the dining room and at the rear of the entrance hall is the kitchen, 9 ft. by 12 ft. 6 ins. The entrance hall is very attractive, being 7 feet in width, and the stairs open from this and not directly from the living room, thus insuring privacy for the latter. Upstairs on the second floor there are three very attractive bedrooms and a good sized bathroom. The bedrooms are approximately 10 by 11 ft. in size. On the attic floor there is a large bedroom, well ventilated, with windows at both ends.

The rooms in this house are especially well arranged to insure cross ventilation, which is so important in view of recent discoveries as to the value of moving air. Both the parlor and the dining room have windows on two different sides, and are so arranged with reference to each other as to insure a complete circulation of air at all times. The bedrooms of the end houses similarly have windows on two sides, and in the middle houses the rooms are so located as to make cross ventilation possible.

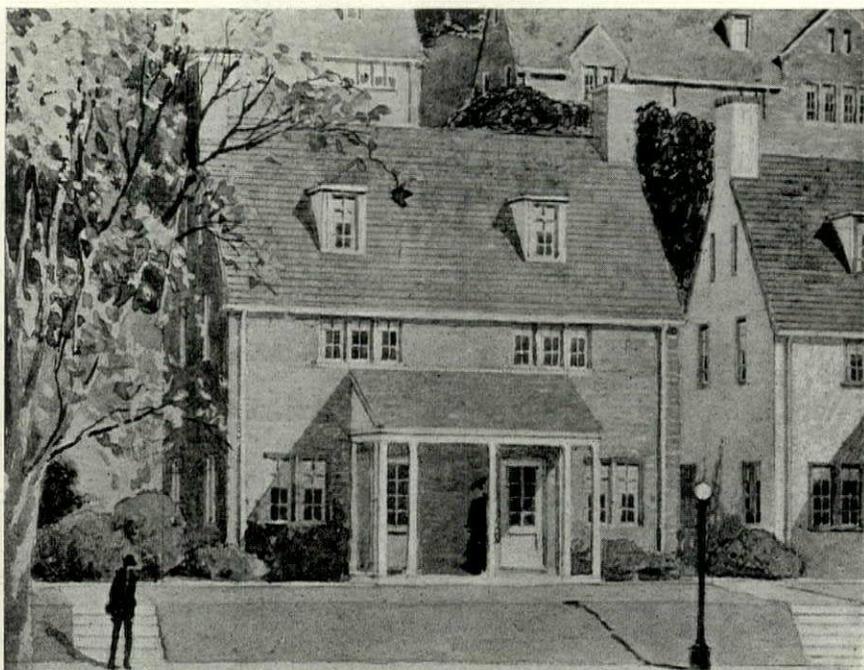
#### THE TWO-FAMILY HOUSE—TYPE A.

The double or semi-detached house is built on a 16-foot frontage with a 24-

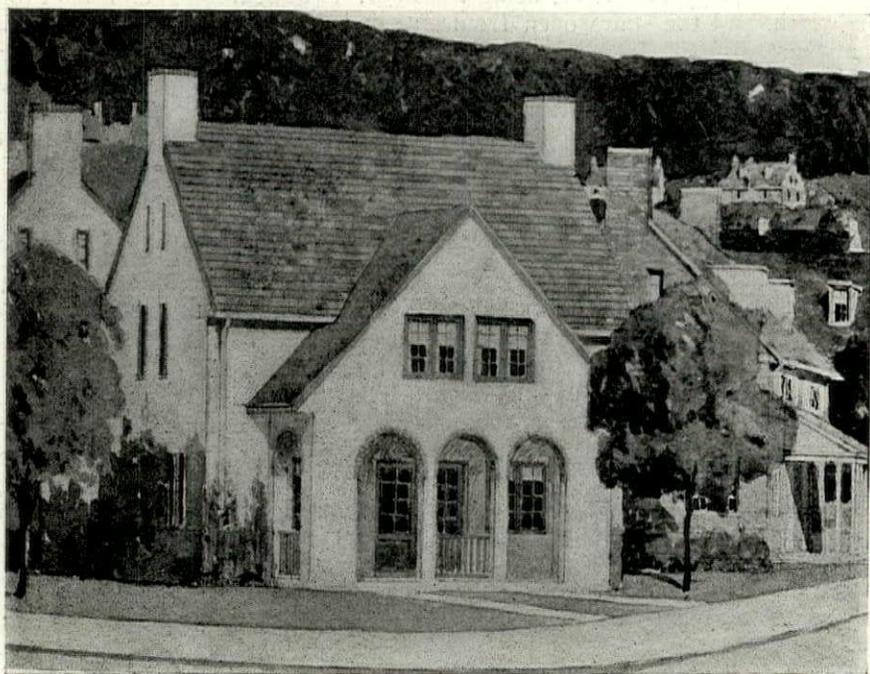
foot depth for the main body of the house and a kitchen extension making the total depth 33 ft. 6 ins. This house contains six rooms and bath—a parlor, dining room and kitchen on the ground floor, two bedrooms and bath on the second floor and a third bedroom in the attic. The size of the rooms and the general arrangement are very similar to the Type D house; all rooms being of generous size, the parlors in this case being 11 ft. 3 ins. by 12 ft. 6 ins., the dining room the same size and the kitchen 8 ft. 6 ins. by 10 ft.

#### TYPE B.

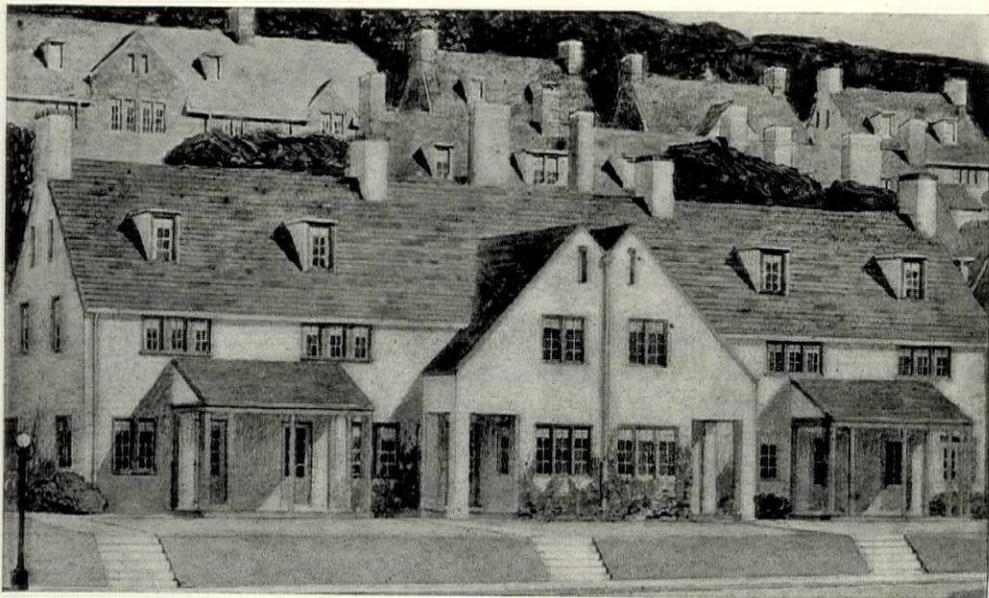
The other two-family or double house, Type B, is the least desirable type in the development. It is a three-room deep house, whereas all of the other houses are but two rooms in depth; the result is that the middle rooms—on the ground floor the dining room and on the second floor one of the bedrooms—are dependent for their light and ventilation on the somewhat narrow side yards left between adjacent buildings. Otherwise the type of house is similar to the other types already described, though all of the rooms in this type are somewhat smaller than in the others owing to the narrow frontage on which the house is built, each unit in this type having a frontage of 14 feet and a depth of 39 feet.



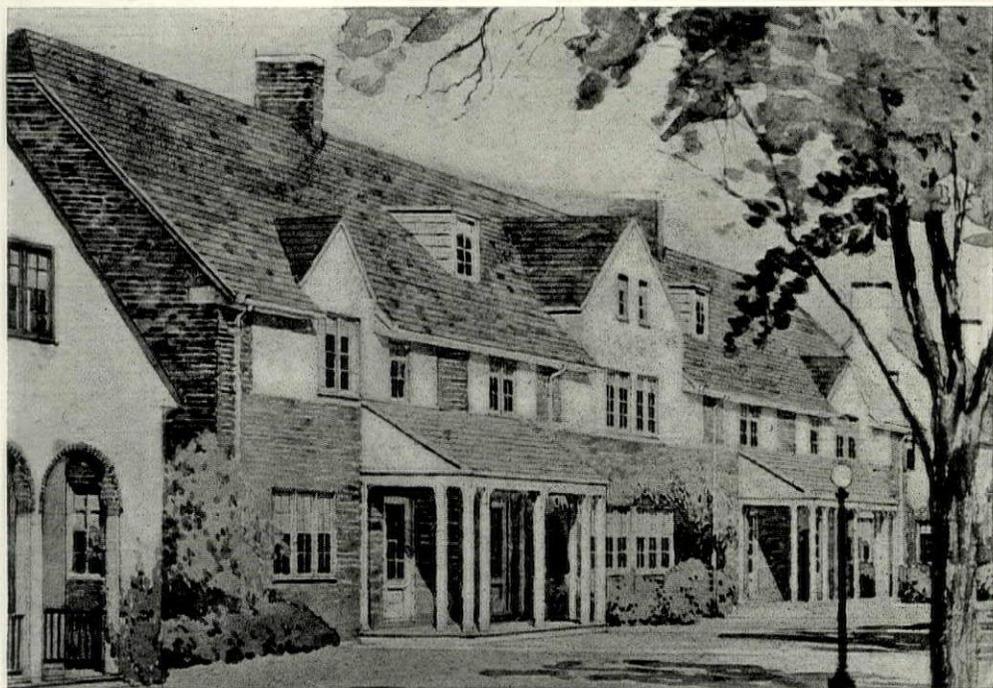
TYPE A—DOUBLE HOUSE.  
Six Rooms and Bath; Unit, 16 Feet by 24 Feet.



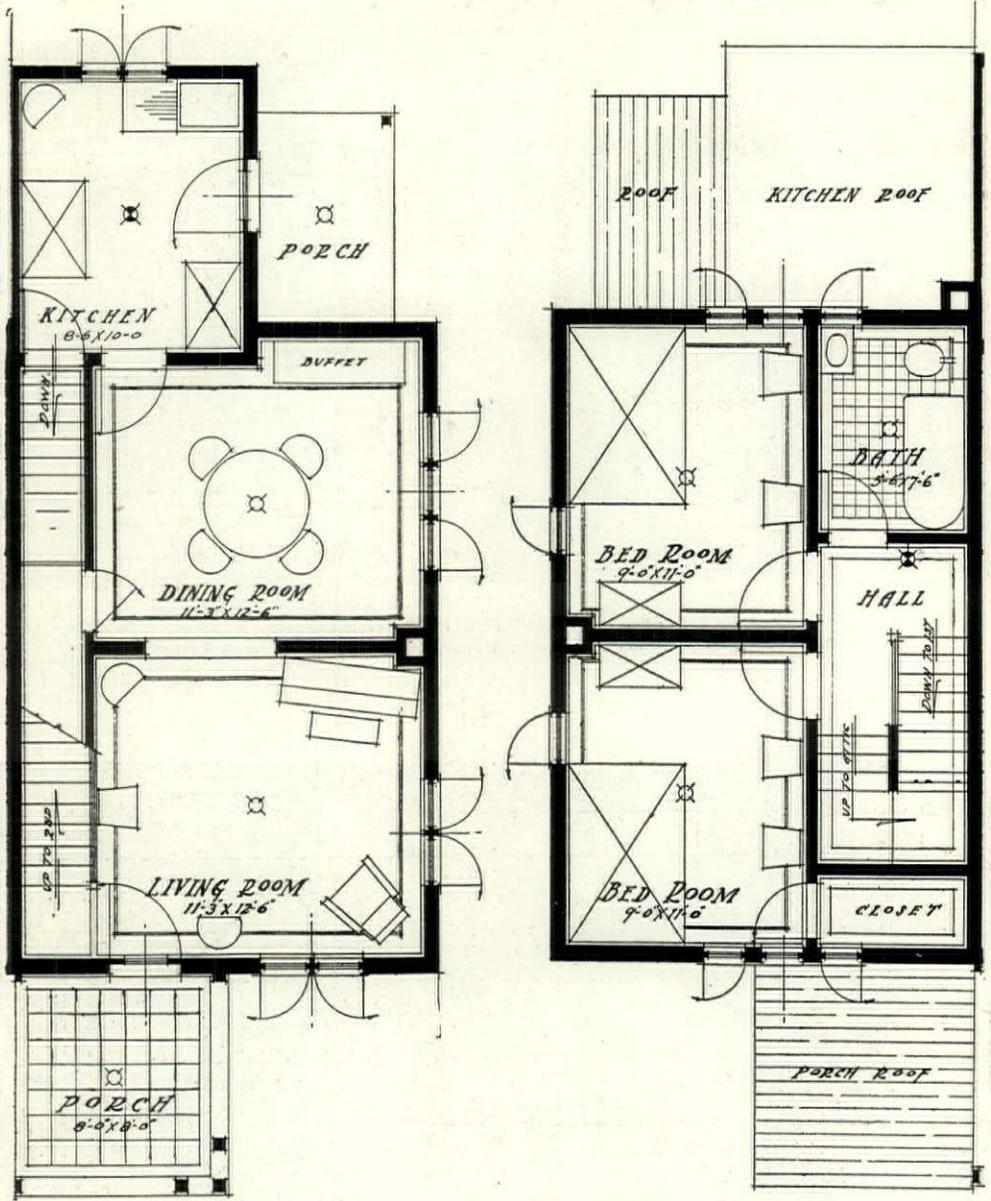
TYPE B—DOUBLE HOUSE.  
Six Rooms and Bath; Unit, 14 Feet by 39 Feet.



TYPE C—GROUP FOR SIX FAMILIES.  
Each Unit, Six Rooms and Bath; House, 16 Feet by 33 Feet 6 Inches.



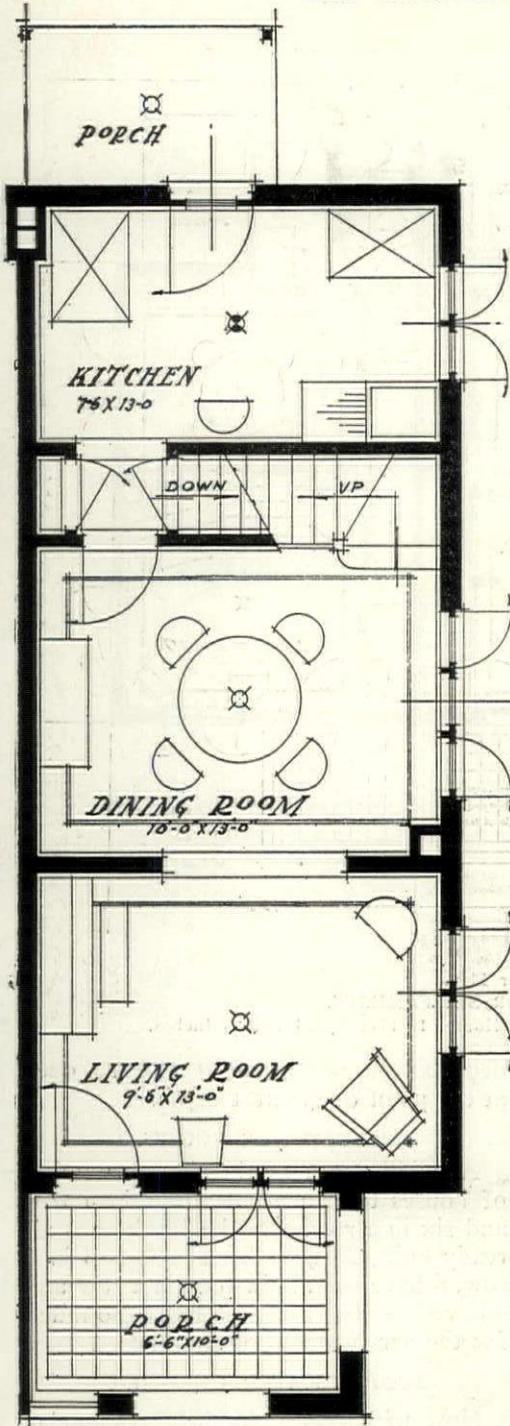
TYPE D—GROUP FOR FOUR FAMILIES.  
Each Unit, Seven Rooms and Bath; House, 22 Feet by 24 Feet. The Best Type.



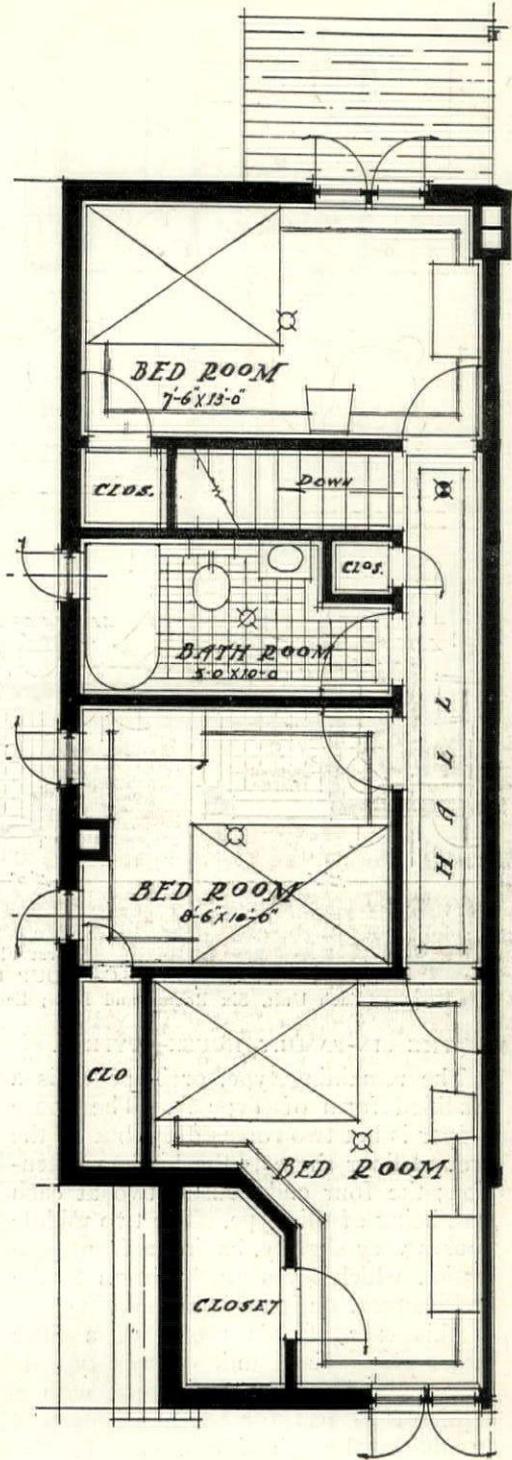
First Floor Plan.

Second Floor Plan.

TYPE A - DOUBLE HOUSE.  
 Each Unit, Six Rooms and Bath;  
 Each House, 16 Feet by 24 Feet.

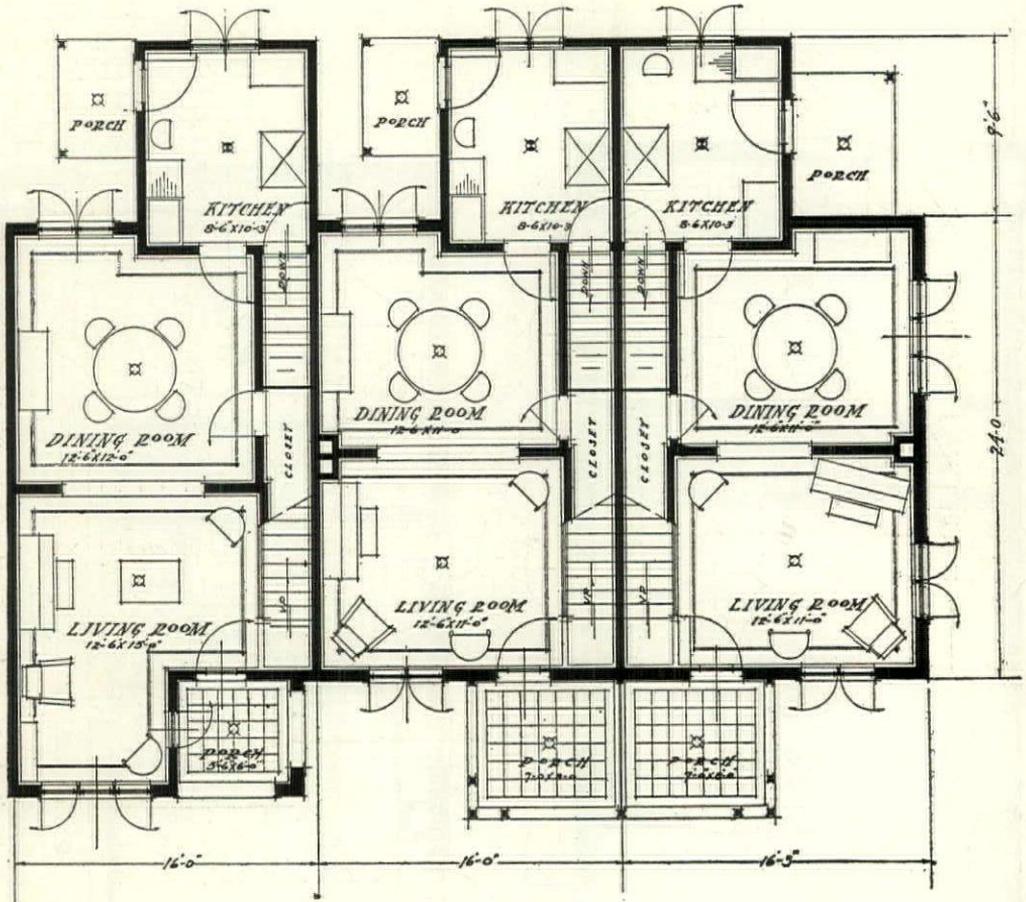


First Floor Plan.



Second Floor Plan.

TYPE B — DOUBLE HOUSE.  
 Each Unit, Six Rooms and Bath;  
 Each House, 14 Feet by 39 Feet.



First Floor Plan.  
TYPE C—GROUP FOR SIX FAMILIES.

Each Unit, Six Rooms and Bath; Each House, 16 Feet by 33 Feet 6 Inches.

#### THE SIX-FAMILY HOUSE—TYPE C.

The remaining type, or Type C, is a modified form of Type A. The house proper is but two rooms deep, but on the ground floor there is the kitchen extension; the four end houses, two at each end, being of this type. The two middle houses vary slightly, having a front projection which gives much charm to the architectural design of the building and in this case affords rooms of a little larger size. Each unit of this type is built on a frontage of 16 feet, with a depth of 24 feet for the house proper, an additional depth of 9 ft. 6 ins. for the kitchen extension and a further additional depth of 6 feet for the front projection, making the house 33 ft. 6 ins. in

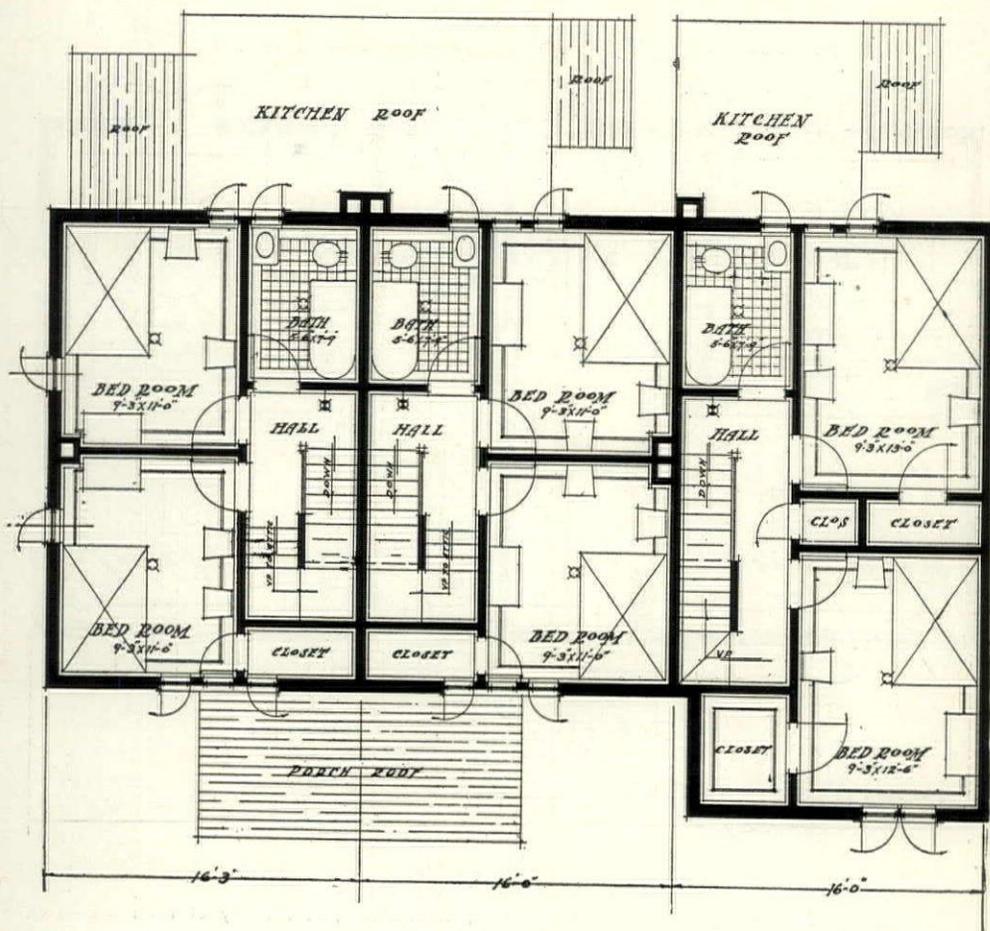
depth at one point and 39 ft. 6 ins. deep at the point of greatest depth.

#### GROUPING OF HOUSES.

As will be seen we thus have a number of houses two in a row, four in a row and six in a row. Of the 100 houses already built, 26 have been built two in a row, 6 have been built four in a row and 4 have been built six in a row. So much for the arrangement of the houses.

#### ACCOMMODATIONS OFFERED.

Now with regard to the accommodations offered. Every house has a well lighted and ventilated, concrete floor cellar and a hot air furnace with pipes to each room on the first and second floors. The houses are equipped with



Second Floor Plan.

## TYPE C—GROUP FOR SIX FAMILIES.

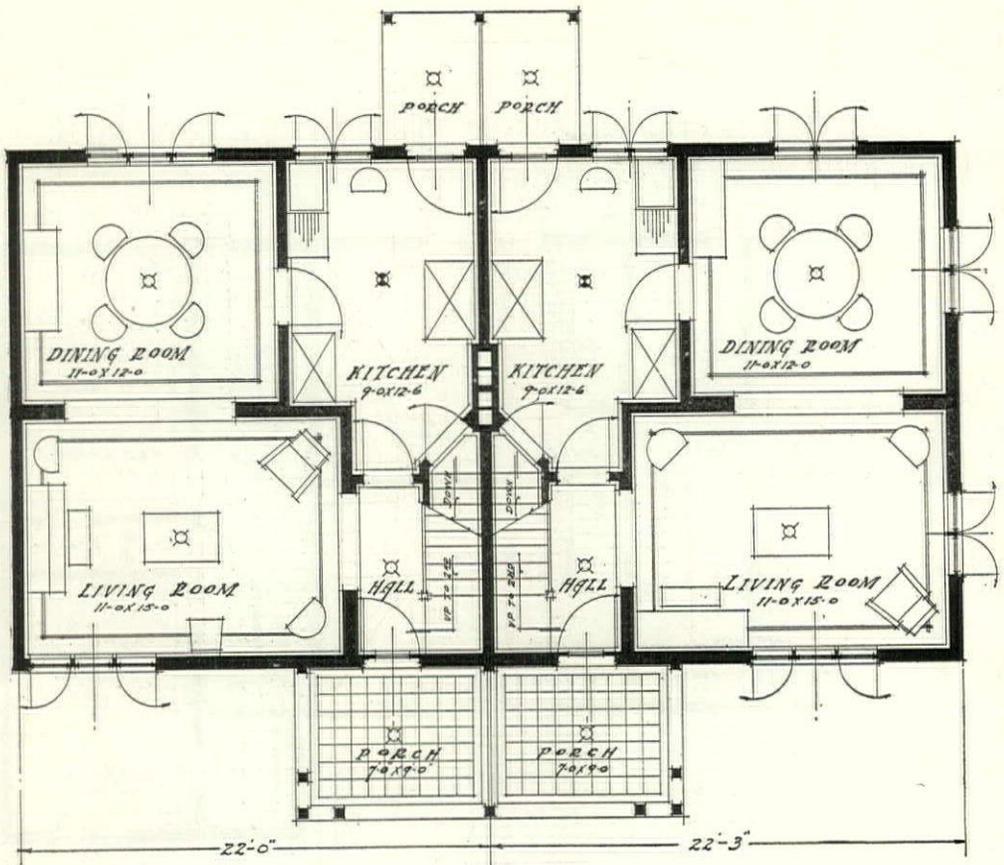
Each Unit, Six Rooms and Bath; Each House, 16 Feet by 33 Feet 6 Inches.

all modern devices. The bathroom is complete in every respect, with a porcelain tub, washbowl and toilet fixture of modern type. Kitchens are provided with a sink and porcelain washtub, the cover of the washtub acting as a drain-board for the sink. Kitchen dressers have not been provided, but it is stated that these can be furnished where the purchaser desires them at an additional charge of \$25. In the opinion of the writer it would have been wiser to have provided a built-in dresser to contain china, glass and dishes in each kitchen, also a pot-closet, leaving to the tenants the providing of their own kitchen cabinet for the holding of supplies.

Every house has a front porch as well

as a rear entrance to the kitchen. The treatment of the front porch has been handled with great skill. As a rule, the average piazza demanded by American custom destroys the architectural style of the building, but the architects in this case have with very great skill provided the necessary porches without in any way detracting from the appearance of the building. So, on the contrary, they have made the front porch add to the architectural design of the structure.

As well as having modern plumbing every house is equipped with gas pipes and also is wired for electricity. The fixtures are direct, with the exception of the dining room, which is semi-indirect, and the switches control the lights not only in



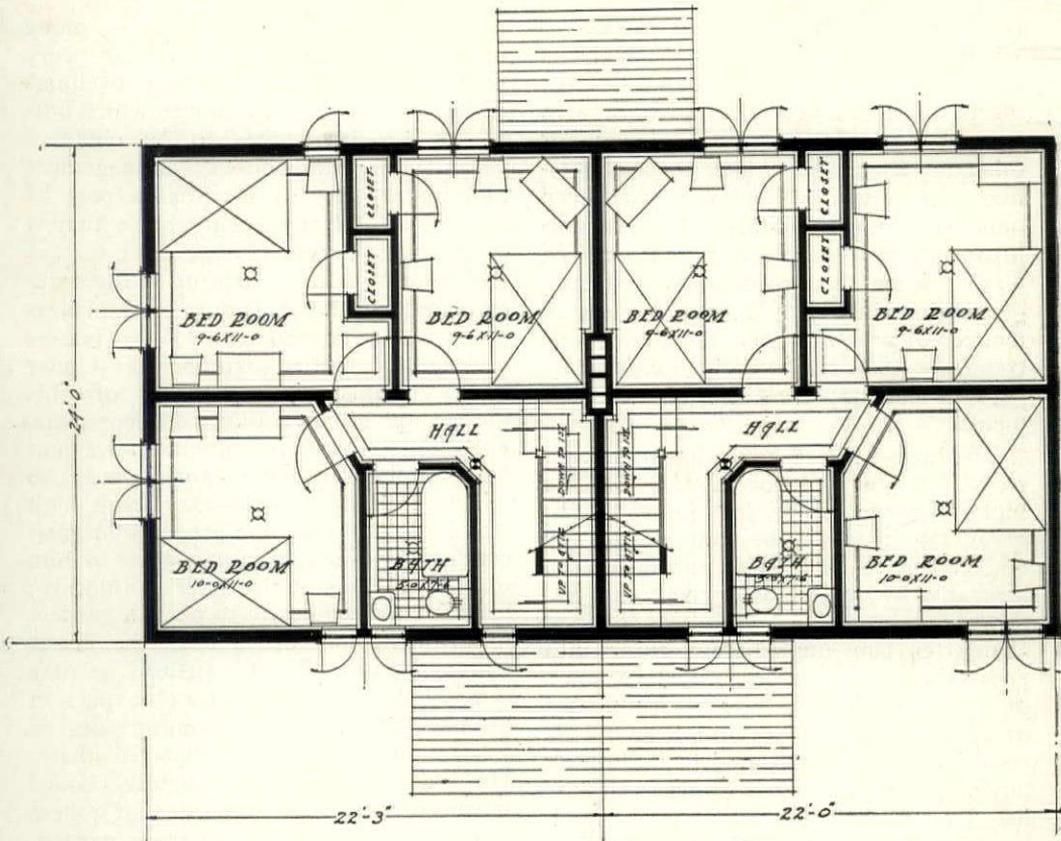
First Floor Plan.  
 TYPE D—GROUP FOR FOUR FAMILIES.  
 Each Unit, Seven Rooms and Bath; Each House, 22 Feet by 24 Feet.

the basement, but also on both the front and rear porches. This is a very real comfort to the housewife, who, at night when her husband may be away, or in the late hours of the short winter days, finds considerable concern about opening her door to everyone who knocks upon it. By turning on the switch from the inside of the house she is able to see who is out there before going to the door. It is little things like these that make or break developments of this kind.

The interior finish of the houses is varied—yellow pine, stained mission, golden oak and green. Most of the rooms have been designed so that the usual 9x12 rug, the size that is generally purchased by the workingman, can be easily accommodated and not leave a large floor space to be covered in some supplementary way. To Williams-

port belongs the honor of having discovered the 9x12 rug as a standard in determining the size of rooms in a workingman's dwelling. It is a good, practical method.

Clothes closets are provided in all of the houses. While much more generous provision has been made in this respect than is found in the usual commercially built workingman's dwelling, this is one of the features in which the houses might be improved. In some of the types there are no clothes closets in each of the bedrooms. In one type, the only clothes closet opens off one of the bedrooms, thus forcing other members of the family to go through an occupied bedroom in order to get their clothes. The space provided for linen closets is not always adequate. There should be a linen closet on the second story of every workingman's



Second Floor Plan.

## TYPE D—GROUP FOR FOUR FAMILIES.

Each Unit, Seven Rooms and Bath; Each House, 22 Feet by 24 Feet.

dwelling. The workingman's wife, just as much as any other man's wife, wants a linen closet for the storage of linens, blankets and similar household supplies.

## TYPE OF CONSTRUCTION.

The houses have all been built with outer walls of fireproof material, there being no frame construction in the development. This means greater permanency, less cost for upkeep and less depreciation. Hollow tile has been used for the cellar walls, foundation side walls and division walls between the houses, thus not only affording greater strength and fire safety but providing the necessary air space so essential for warmth in winter and coolness in summer and protecting against dampness in all seasons of the year. Some of the houses are developed with an artistic stucco finish in white or gray on top of

the hollow tile; others, with pentex treatment. It is believed that because of this method of construction the houses will be less expensive to heat than houses built of frame or of solid walls. The fire risk has thus been reduced to a minimum. In fact the smallest possible amount of wood is used on the exterior of the houses. Even the roof overhangings only being faced with wood, the under side being stucco. The roofs are of slate.

## THE ECONOMIC SIDE.

The acid test of a development of this kind is to be found on its economic side. Given good judgment and taste and intelligence, it is always possible to build houses that are attractive architecturally and possess charm; but to build such houses at a cost within the purchasing power of the skilled mechanic is a total-

ly different question. The extent to which this has been done is the real test of such an enterprise. Sawyer Park meets this test and comes out of it with flying colors. It is an object lesson for other communities, to note the business-like way in which the project has been handled from the start. The various prospectuses issued by the Board of Trade, when the project was first suggested in March, 1917, are models in manner of presentation and soundness of treatment that may well be followed by persons contemplating similar developments.\*

The lowest priced house has been built so that it can sell for \$2,935, and the highest priced house for \$3,335. The great majority of the houses sell for \$3,185 and \$3,285. This means that a mechanic by an initial payment of \$300 down and a monthly payment of \$30 thereafter can immediately enter into possession of a high-class, modern home of six rooms and bath, and at the end of 10 years own it free and clear. This result has been accomplished through buying material at pre-war prices in car-load lots at wholesale rates at costs much less, of course, than would prevail today. All unnecessary middlemen's profits have been eliminated. The investors in the property have deliberately limited their return to 6% on their money and the contract made with the construction company has been so fair and equitable as to reduce to a minimum the necessary overhead expenses connected with the construction of the houses and the development of the property.

The houses have frankly been built to sell and not to rent. The projectors of the enterprise have been of the opinion that it was more advantageous to the community, as well as to the workingman, that he should own his own home. That a community of home-owners was preferable to a community of "renters."

At the time of going to press with this article the sale of the houses was in progress. The writer believes that ultimate-

ly the company will find, as so many others have found, that there are very distinct advantages in renting dwellings of this character—advantages which outweigh the advantages to be obtained from selling the houses. Management and upkeep are so essential a part of the success of any such scheme that it is an almost universal experience that, if the property is to be kept up to the highest standard, the projectors of the enterprise must retain control. When houses are sold, control is surrendered. Under such circumstances property of this kind is apt to deteriorate and depreciate, especially where restrictions have not been imposed. One workingman to whom a house is sold may have high standards and keep his property in good condition. The man next door to him may be shiftless in character and untidy; he may have no desire to plant a garden, to grow flowers or to keep the lawns trimmed and well cut. Instead he may keep chickens, horses, cows or pigs in his backyard; or he may dump piles of ashes and other refuse material there. He may build an unsightly board fence or one with scraps of sheet iron to fence in his vegetable garden. The effect of all this is to drive the orderly and tidy people away. Thus the whole class of occupancy is in danger of gradually changing, undesirable occupants creeping into the settlement. After the company once sells a house to a man there are no means of preventing him from reselling it.

Under such conditions the Garden Village loses its character; while it still remains a village, the garden vanishes.

This has been the general experience, not only in this country but in Great Britain, an experience that has led to the copartnership scheme of property ownership by which, instead of there being individual ownership of individual houses, and though actually paid for by the occupiers of the dwellings, nevertheless the entire community owns them, so that its proper upkeep and management is secured; for, no individual owns his house but only its value in stock of the company. The result is that all the advantages of the individual's ownership

\*See "Prospectus of the Williamsport Realty Company" and "Report of a Proposed Industrial Village at Williamsport" issued by the Board of Trade under date of March 15, 1917.

of property in having a stake in the community are maintained, while the disadvantages just cited are overcome; with the added advantage that the objection to the purchase of houses, which is being more and more often advanced by the workingman, namely, that it interferes with mobility of labor and chains him to his job, is entirely overcome.

It is to be regretted that some such plan was not developed in connection with Sawyer Park; and it is to be hoped that even now restrictions will be imposed in the deed which will protect the purchasers of the houses in the perpetual enjoyment of the amenities of this Garden Village.

#### CONSTRUCTION SIDE OF THE PROBLEM.

One of the reasons for the success of this development has been the skill and efficiency with which the construction company, in this case the Dodson Realty Corporation of Bethlehem, Pa., has handled the work. The directors of the Housing Company decided wisely at the beginning of the undertaking to make a contract with one concern for the entire development and selected the Dodson Realty Corporation as the company to whom they entrusted the supervision of the entire scheme. The terms on which this contract was made represent a fair basis for similar contracts in similar developments and for this reason the following summary of the terms of the contract is given:

The contract with the Dodson Realty Corporation provides that they furnish plans and specifications for land development, including:

- (a) Plans of streets, lots, parks, etc.
- (b) Locations and grades for streets and sidewalks.
- (c) Cross-section details of streets, sidewalks, curbs, gutters.
- (d) Landscape plans—(street planting).
- (e) Plan of street lighting system.

It is agreed that in case the contract is cancelled by either party, the plans of Dodson may be used for Williamsport, on the basis of 4% for originals and 2% for repeats without superintendence on the cost of construction, or which cost of construction no commission has been paid to Dodson.

Dodson further agrees to perform the following services, for which he receives a percentum on expenditure for construction as shown below:

(a) Prepare four sets preliminary plans of land improvements and houses, showing location of houses on plot plan.

(b) Furnish four sets of detailed plans and specifications for land improvements and houses when preliminary plans have been approved.

(c) Provide an experienced field superintendent, who shall be in constant attendance during the progress of the physical operation, and provide such other assistants as may be required for efficient supervision, direction and administration, beyond recognized duties of the contractor.

(d) Examine all proposals, estimates and contracts in connection with the work, and give Williamsport the benefit of Dodson's experience in all matters pertaining to the operation.

(e) Have its representative, experienced in various branches of the work being done, visit the operation from time to time, and make suggestions for the general welfare and progress of the operation.

Williamsport agrees to pay Dodson for its services under this contract a percentage of the amounts expended for materials and labor which actually enter into construction during the term of this agreement upon the following basis:

Ten per cent. of a maximum of \$200,000, so expended during the first year of this agreement, or until \$200,000 is so expended.

Five per cent. of such amounts in excess of \$200,000, so expended during the duration of this agreement.

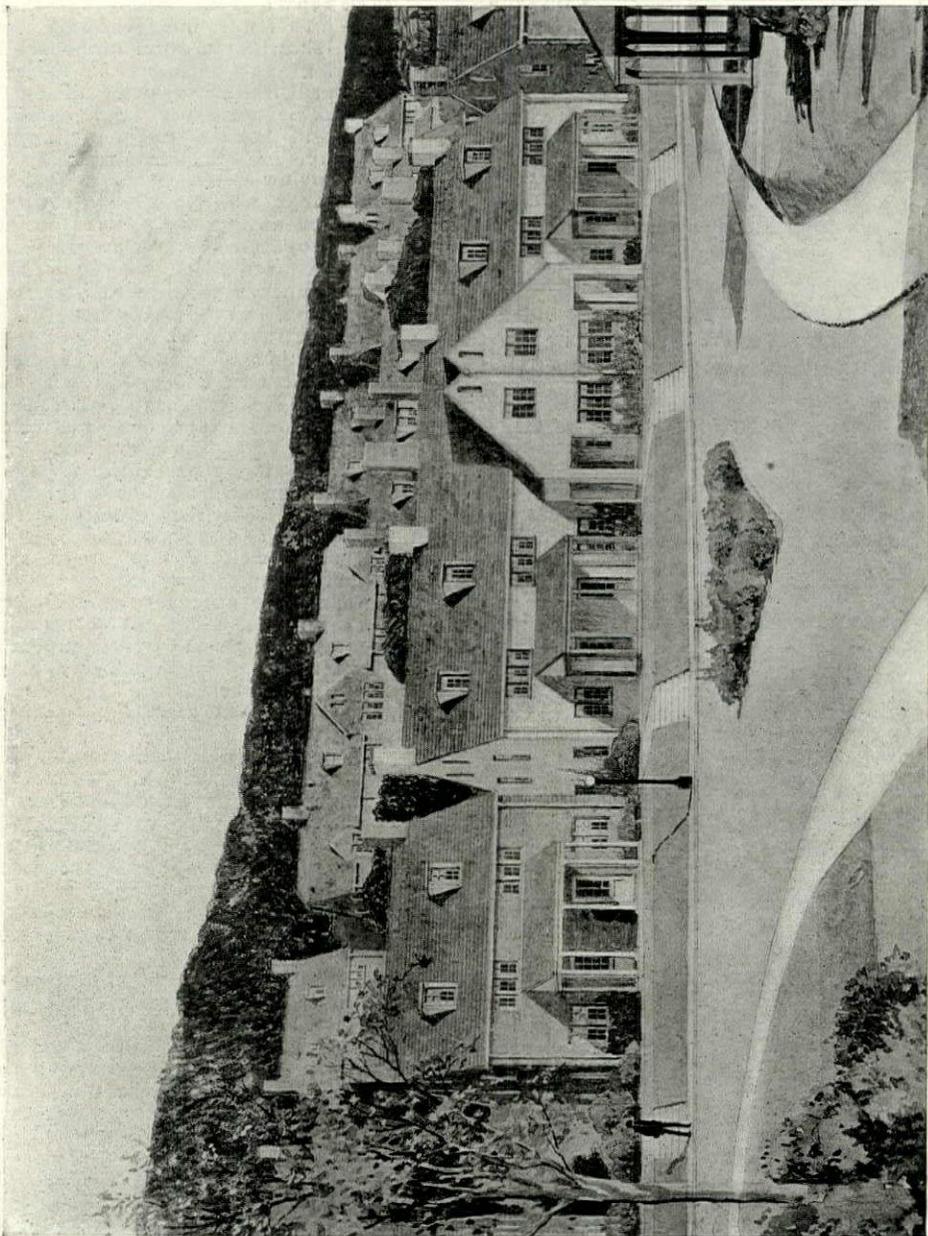
Williamsport shall pay Dodson the amount specified above in manner following:

(a) \$2,000.00 when preliminary drawings for land improvements and house plans are approved.

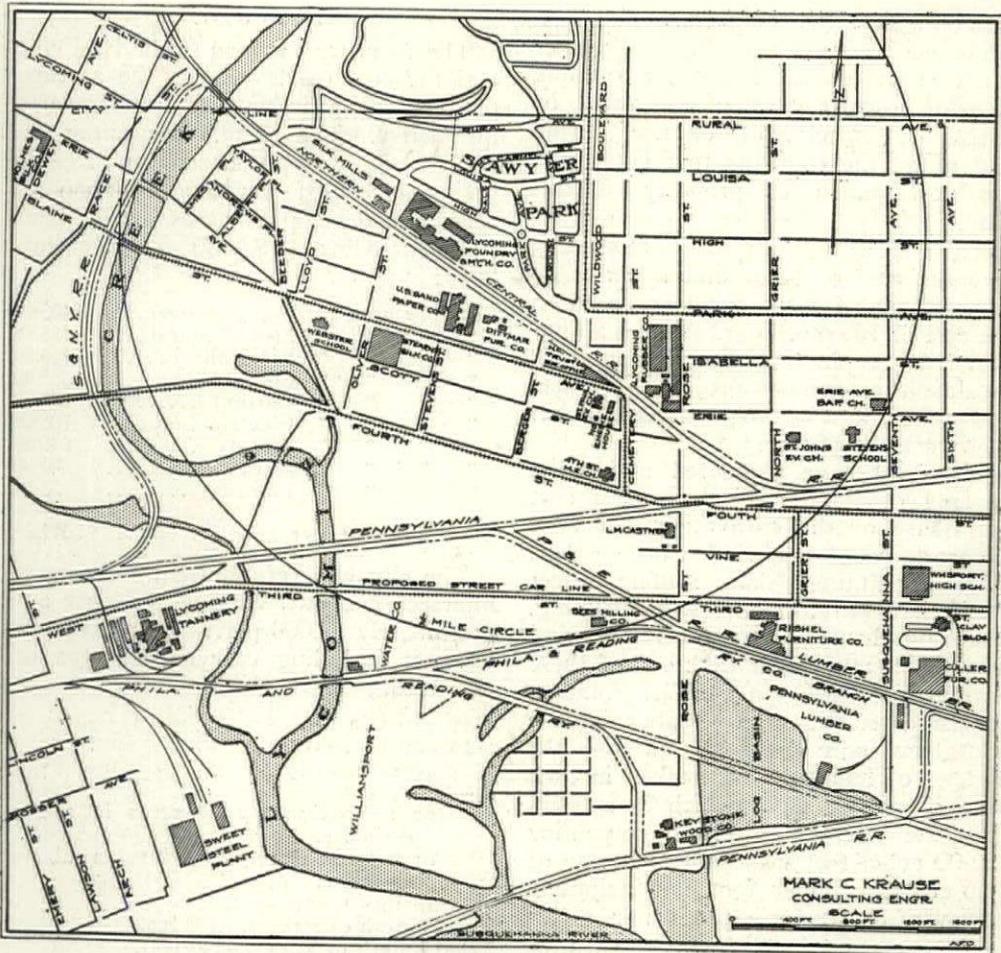
(b) \$5,000.00 when detailed plans and specifications for land improvements and houses are completed and approved.

(c) 6½% of expenditures for materials as shown by the bills when and as they are checked into construction account, and 6½% of labor payrolls when and as they are reported as having been paid, until such time as said materials and labor accounts amount to the sum of \$200,000. After the first \$200,000 have been expended, and during the continuation of this agreement, 5% of such amounts so expended or charged shall be paid in the same manner and form.

It appears from a perusal of these terms that all details of the enterprise, after initial decisions have been reached, such as furnishing of expert architectural service, of the city planning services and



THE TERRACES CLINGING TO THE HILLSIDES ADD TO THE CHARM AND GIVE ATTRACTIVE OUTLOOK.



SAWYER PARK IS ACCESSIBLE TO THE HEART OF THE CITY.  
Map Showing a Half Mile Radius.

of all that usually goes with a development from acreage property into building sites, have been placed in one hand, thus eliminating unnecessary middlemen's profits and reducing overhead charges to an absolute minimum, at the same time affording to the contractor a proper reward for his services.

An interesting commentary on how the war has affected building is found in the statement of the architect that he closed a contract for 50 houses similar to Type D on April 16th, at a price \$269 per dwelling for material and \$208 per dwelling for labor, or a total increase of \$477 per dwelling over the cost of these buildings built a year ago. Some of this advanced cost was due to different costs in a different locality.

It is interesting to note that this village of 100 houses was under roof in six months' time and that it had been brought to completion in a reasonable time notwithstanding the unanticipated difficulties of the extreme weather encountered during last winter. The building company has not only furnished unusual intelligence and skill in its work, but has also established standards in methods of record keeping and presentation of facts which may well serve as a model for similar undertakings. Through the courtesy of the Dodson Realty Corporation we are able to present here three statistical charts showing various phases of the costs that entered into this project. Table I shows what may be termed the Development Costs, not only in totals, but

also on a unit basis of running foot cost. Thus we are able to see at a glance the cost of house sewers per running foot, of storm sewers, of sidewalks, of curbs, of gutters, of electric wiring and of all the elements that enter into the development of property of this kind.

Table III shows in a similarly striking way the cost of labor and material of various kinds for one dwelling, based on the cost of 100 dwellings. This is an impressive, graphic presentation and is invaluable to persons projecting similar enterprises, in affording a basis of what such costs should be.

Here we have presented under the heading of "Material" the actual cost per house of the excavation, concrete, tile work, rough lumber, finished lumber, plaster, painting, slate roofing, sheet metal, hardware, electric work, heating, plumbing, hauling, structural steel and miscellaneous. Under each one of these various categories in parallel columns are presented the costs for labor for one house, not only the cost, but also the number of hours of labor taken in each kind of work; from which it appears that the average dwelling containing 13,600 cubic feet was built at a rate of 14.6 cents per cubic foot, not including, however, contractor's profit nor architect's fees nor certain extras such as cement floors, gas range, kitchen cabinet and medicine cabinet. This would give the average cost of a house without the contractor's profit in round figures at \$2,000 (\$1,985.60).

Table IV shows in a comparative way the relative cost of labor and material entering into each one of these various categories, with the percentage of the total cost of each; thus we note that the tile work, for example, was 24.8% of the total cost of the building and that of this cost materials constituted 63% and labor 37%.

Of course to these actual costs of the building must be added the overhead charges, interest on the money invested and the important cost of land and land development, especially the latter, as well as the carrying charges on the buildings during the ten-year period of sale.

LAND COST.

The facts with regard to the land cost and the cost of developing the acreage property into suitable sites are singularly instructive. The land, amounting to 36.71 acres, was purchased for \$23,235, giving a cost of raw land of \$636 an acre. To develop 24 acres of this land cost approximately \$2,000 an acre as follows:

Cost per acre for	House Sewer....	\$405.64
" " " "	Storm Sewer....	385.24
" " " "	Sidewalks .....	236.50
" " " "	Curbing .....	333.48
" " " "	Gutters .....	137.10
" " " "	Electric Lighting	106.66
" " " "	Streets .....	630.00
" " " "	Alleys .....	43.00
" " " "	Planting .....	32.66

Total cost per acre.....\$2,311.28

The city will refund for lights, street intersections, etc., making the cost approximately \$2,000 per acre or \$166 per lot, not including carrying charges or overhead.

16.00 acres in lots.  
7.64 acres in streets.  
.32 acres in alleys.

23.98 or approximately 24 acres in above estimate.  
or approximately 304 lots in above estimate.

12 lots to an acre.  
Total length of streets, 7,740 feet.  
Total length of alleys, 4,140 feet.  
Total length of sidewalks, 11,752 feet (4½ ft. wide).

Our single-tax friends, who are so wont to hold that low land cost is the solution of the housing problem and that the keeping of land out of use is responsible to so large an extent for the inability to develop workingmen's dwellings at a price within the purchasing power of the workingman, should take to heart and ponder these figures, for they will then discover what has been patent for many years to all persons who have had experience in developing acreage property, that the heavy cost is not in the cost of the land, but in the cost of developing that land.

Could this cost of developing property—of building sewers, laying sidewalks, curbs and gutters, of installing electric lights and building streets and alleys—

# SAWYER PARK

WILLIAMSPORT PENNA.

CHART SHOWING THE AVERAGE COST OF LABOR & MATERIAL  
FOR ONE DWELLING, BASED ON 100 DWELLINGS.

Item.	Cost	MATERIAL	Hours	Cost	LABOR
Excavation			139	41 90	
Concrete	9 <sup>00</sup>		42	15 15	
Tile work	312 45		297	178 28	
Rough Lumber	160 10		306	140 56	
Finished Lumber	173 14		217	99 75	
Plaster	69 14		172	91 06	
Painting	19 22		70	39 47	
Slate roofing	39 58		63	27 29	
Sheet Metal	15 32		12	5	
Hardware	35 55				Included in carpenter work
Electric	46 10		35	12	
Heating	66 90		22	9 70	
Plumbing	168 38		154	70 87	
Hauling			90	89 90	
Structural Steel	6 82				
Miscellaneous	12 90		75	30	
<b>Total</b>	<b>1134 60</b>		<b>1614</b>	<b>850 93</b>	

### NOTES

The above figures do not include contractors profit nor Architects fees.  
 " " " " " " cement floors ----- Add \$50.00 for same.  
 " " " " " " gas range ----- " 35.00 " "  
 " " " " " " Kitchen cabinet ----- " 25.00 " "  
 " " " " " " Medicine " ----- " 7.00 " "  
 Average dwelling contains 13600 cu. ft Cost 14.6¢ per cu. ft.

DODSON REALTY CORPORATION BETHLEHEM, PA.  
 GEORGE S. WELSH, ARCHITECT & GEN. MGR. WILKES-BARRE PA. 3-25-18

TABLE III.—COST CHART,  
LABOR AND MATERIALS.



have been defrayed by the City of Williamsport *in toto* it would have been possible to have sold these houses to the workingman at a materially lower rate.

TO SUM UP.

Sawyer Park is a very distinctive achievement of which the City of Williamsport may well be proud. The city owes a debt of gratitude to the men of vision and courage who undertook this project in the face of the opposition and conservatism which usually prevail in all communities.

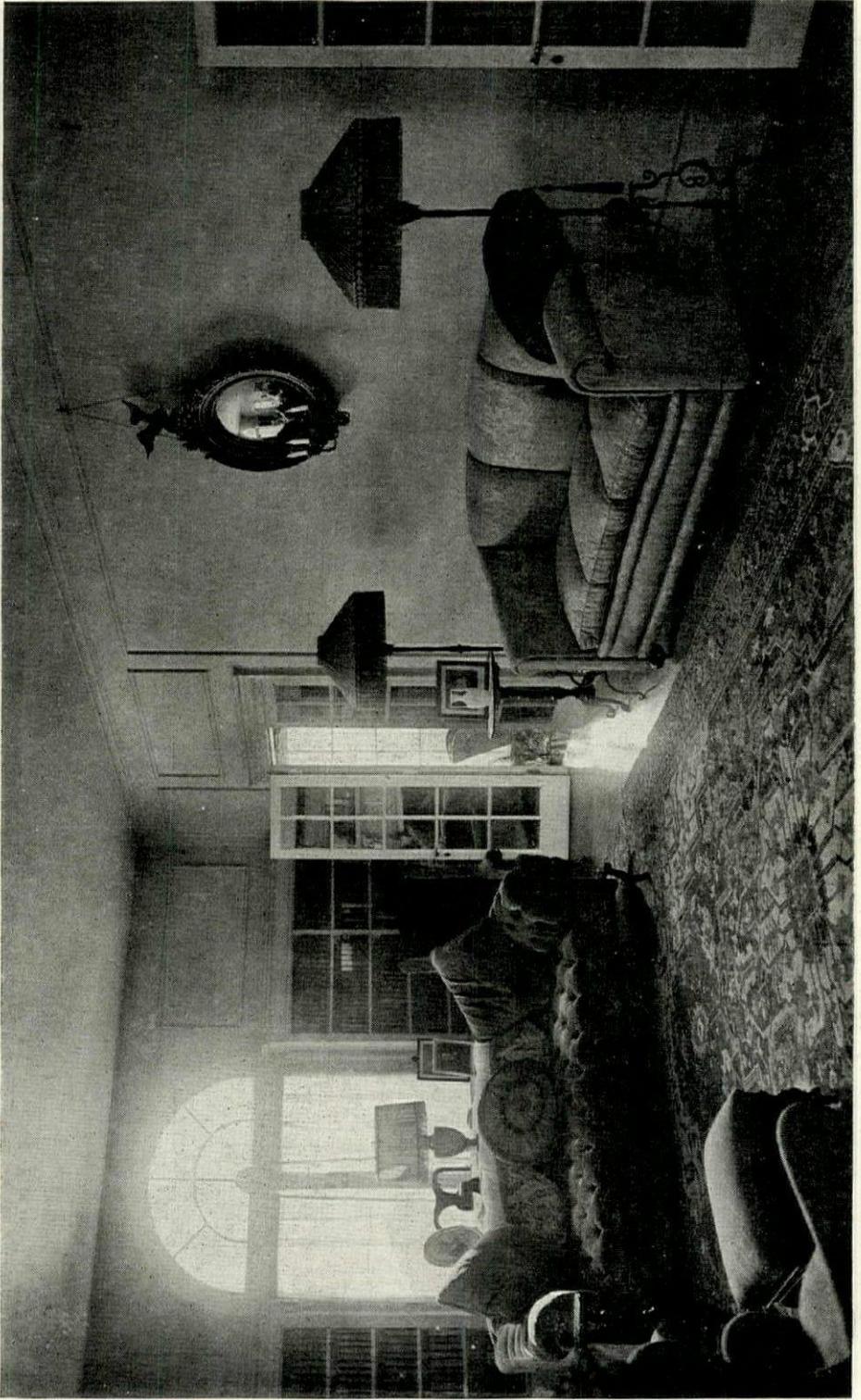
It is the nearest approach that this country has to the best English Garden Village developments.

It is a genuine Garden Village, architecturally attractive, with buildings that possess charm and distinction.

The houses are well and substantially built at a minimum cost, well within the purchasing power of the skilled worker. The development follows the best city planning practice.

It is on a scale sufficiently small to make similar developments possible in other communities throughout the country, while the methods which have been employed by the business men of Williamsport in organizing and carrying out the project, the terms of the contract with the construction company and the methods employed by that company in carrying on the work and in keeping track of costs and other records of the expense of the development may well serve as models for similar enterprises.



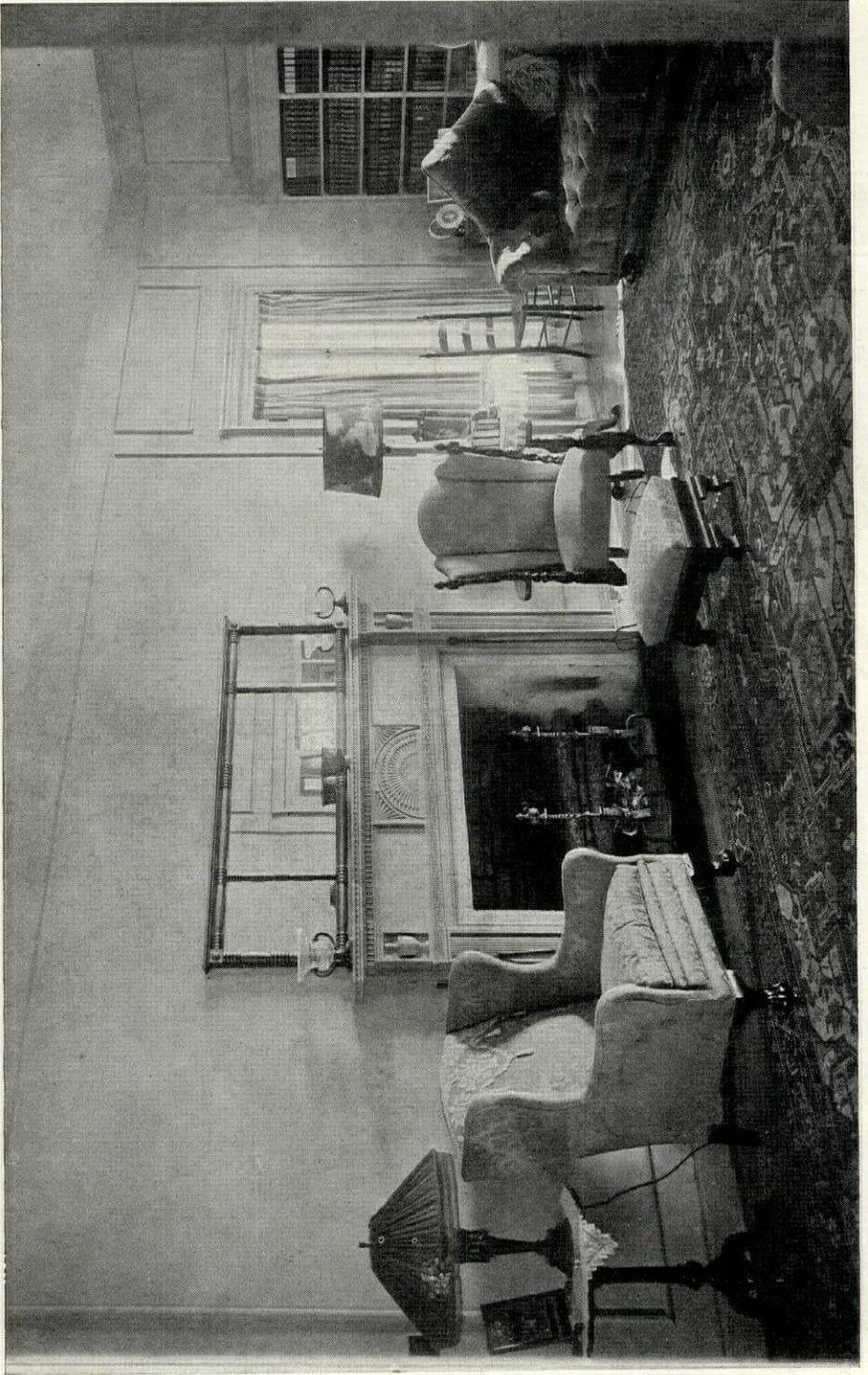


DRAWING ROOM—RESIDENCE AT MERION, PA. CHARLES WILLING, OF FURNES, EVANS & CO., ARCHITECT.

PORTFOLIO  
OF  
CURRENT  
ARCHITECTURE



FIREPLACE IN DINING ROOM—RESIDENCE  
AT MERTON, PA. CHARLES WILLING, OF  
FURNESS, EVANS & CO., ARCHITECT.



DRAWING ROOM—RESIDENCE AT MERION, PA. CHARLES WILLING, OF FURNESS, EVANS & CO., ARCHITECT.



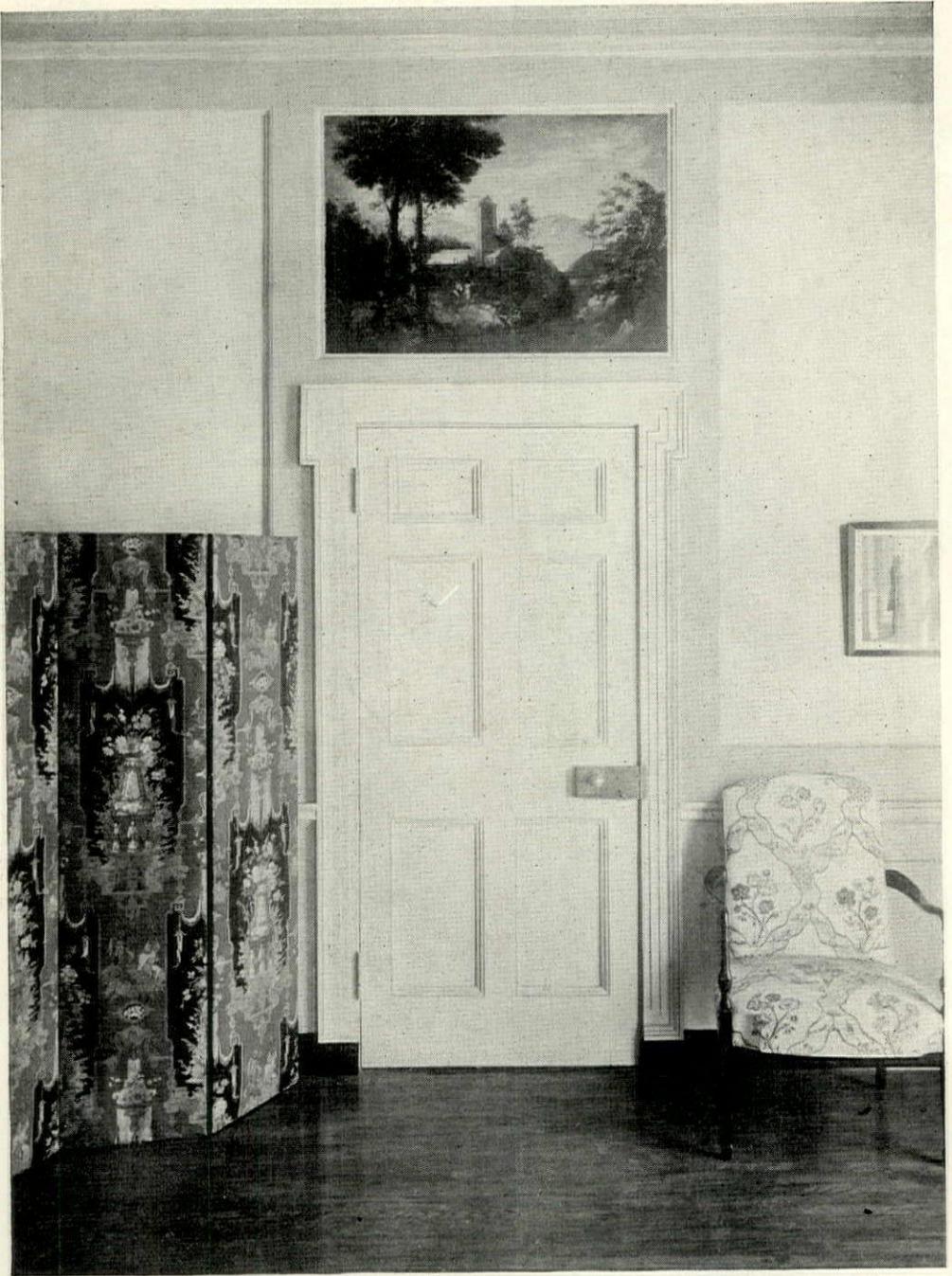
DRAWING ROOM—RESIDENCE AT MERION, PA. CHARLES WILLING, OF FURNESS, EVANS & CO., ARCHITECT.



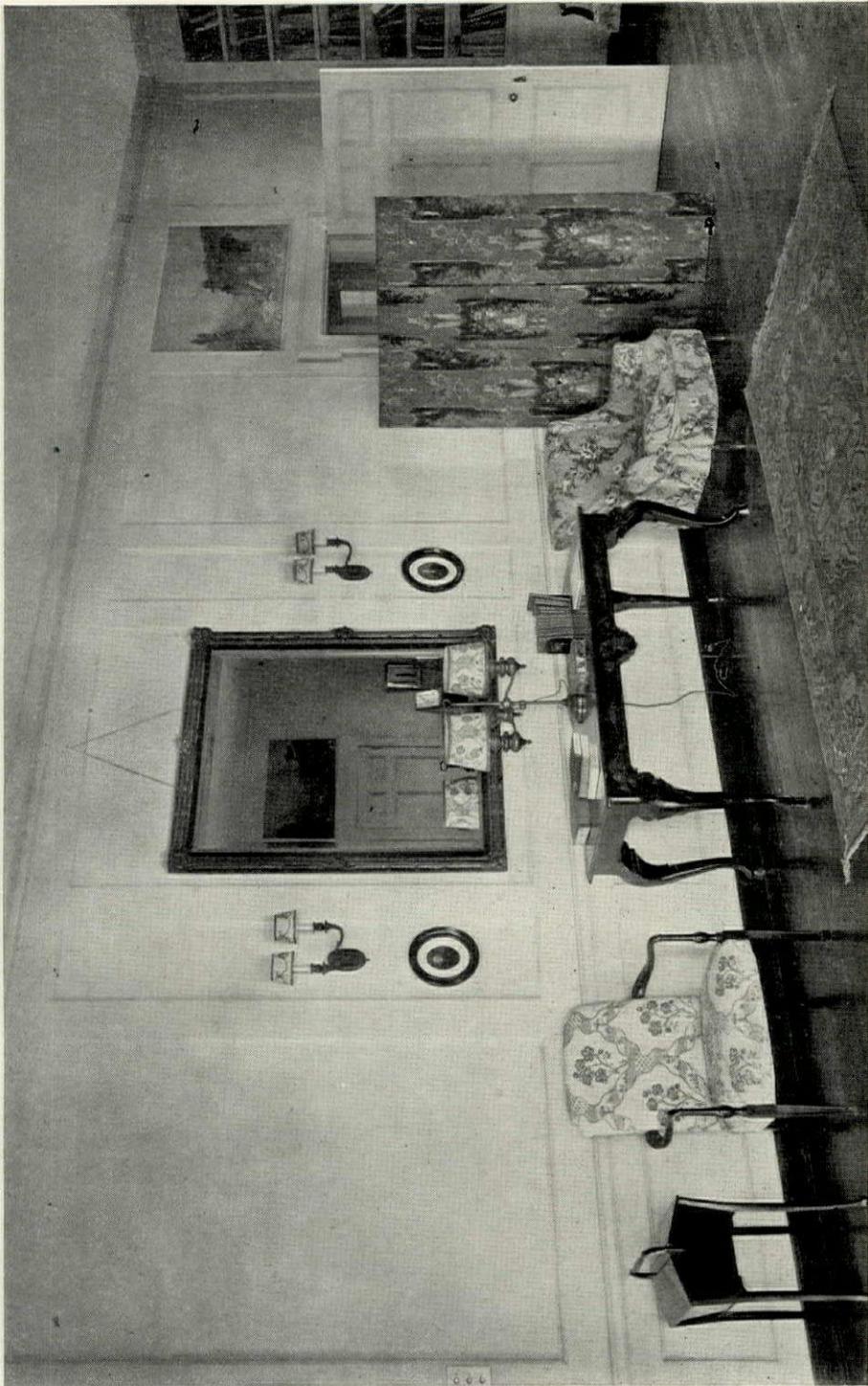
IRONWORK DESIGNED BY CROSS & CROSS,  
ARCHITECTS, FOR THE RESIDENCE OF  
CHARLES H. SABIN, ESQ., NEW YORK CITY.



DRAWING ROOM—RESIDENCE OF COL. JENNINGS C. WISE,  
RICHMOND, VA. WILLIAM LAWRENCE BOTTOMLEY, ARCHITECT.



OVERDOOR PANEL IN DRAWING ROOM—RESIDENCE  
OF COL. JENNINGS C. WISE, RICHMOND, VA.  
WILLIAM LAWRENCE BOTTOMLEY, ARCHITECT.



DRAWING ROOM—RESIDENCE OF COL. JENNINGS C. WISE,  
RICHMOND, VA. WILLIAM LAWRENCE BOTTOMLEY, ARCHITECT.

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WILLIAM LAWRENCE BOTTOMLEY, ARCHITECT,  
RICHMOND, VA.



LIBRARY—RESIDENCE OF COL. JENNINGS  
C. WISE, RICHMOND, VA. WILLIAM  
LAWRENCE BOTTOMLEY, ARCHITECT.



OVERMANTEL IN DINING ROOM—RESIDENCE  
OF COL. JENNINGS C. WISE, RICHMOND, VA.  
WILLIAM LAWRENCE BOTTOMLEY, ARCHITECT.



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## HISPANIC SOCIETY PUBLICATIONS

By MARRION WILCOX

**G**EORGE EDMUND STREET, who labored tirelessly and successfully to revive Gothic architecture in England, drew much of his inspiration from the great examples of that style which he studied in northern and central Spain. He was, we think, a man who held that adding a new feature or expression to the earth's countenance is a parlous matter, and that it is hardly possible for the products of two different architectural schools, the Gothic and the Renaissance, to harmonize equally well with the natural contours of the same landscapes. At any rate, his strong preference for the Gothic was asserted from the early days when, at Oxford, he knew William Morris and Burne-Jones (Morris afterward became one of his assistants) and throughout more than two-score years of triumphant work at London and elsewhere. If we wish to know the secret of his intellectual achievement, the answer given by a thoughtful biographer is at hand: "As the medieval builders reared and poised their great churches by a calculated balance of thrust and strain, and hung aloft in stone a proposition in proportion, so, you feel, with Street, it must have been some extraordinarily just measure, some perfect

balance of temper, some secret of self-control, only comparable to the engineer's control of his crane or hammer or locomotive, that gave him life so abounding and yet so temperate, so huge in accomplishment and yet so undistressed."\*

His great commissions were: for the Law Courts, for building the nave of Bristol cathedral, for rebuilding the cathedral at Dublin, and for restoring that of York. As Professor of Architecture to the Royal Academy, he delivered six lectures on Gothic Architecture in 1881. In the same year his death occurred, after a brief illness. All of his best work was done in the spirit and in the terms of that medieval work he understood so well; and in this connection we quote a passage from his own writing: "For that period of just five hundred years so regular was the development that it is not too much to say that a well-informed architect or antiquary ought always to be able to give, within ten, or at most twenty years, the date of any, however small a portion, of medieval architecture with almost absolute cer-

\*George Edmund Street: Unpublished notes and reprinted papers; with an essay by Georgiana Goddard King. Frontispiece (in colors) and 12 illustrations; 430 pages; 5½ by 8½ inches; price \$2.25. New York: The Hispanic Society of America and G. P. Putnam's Sons, 1916.

tainty of being correct when his judgment can be tested by documentary evidence."

Spain's obligation to him, for the publication of his book on Gothic architecture in that country, receives appreciative recognition on page 47, where we read: "The effect of it [the work just mentioned] was to teach the rest of Europe that the glory of medieval Spain endured; that one could actually see something south of the Pyrenees, neither Saracenic nor Jesuit, a great religious art surviving, not decadent, not moribund nor morbid nor corrupted by the gold of the Indies, strong, virile, spontaneous, the expression of personal independence and manly piety." And on page 52 we read, without surprise, that he cared little for the architecture of the Renaissance: his temperamental, habitual preoccupation with the Middle Ages was too strong for that.

Moreover, his Gothic prepossession must not be regarded as exceptional in the field of the study and criticism of Spanish architecture. On the contrary, Street's practice conformed to the rule in this respect; and as time passed the fact became evident that we stood in need of a good new book on the Plateresque, simply because so few critics, either Spanish or foreign, had ever "ventured into the Renaissance century, the epoch of civil rather than ecclesiastical building activity."

It is a pleasure to say that such a book has finally been written and published in attractive form under the auspices of the Hispanic Society of America, postdating the work on George Edmund Street by about one year.\* The special interest of its subject is well expressed in the following passages: "Spanish Renaissance or Plateresque, in its merely partial acceptance of the Italian and its adherence to earlier styles which it never hesitated to combine with the new, diverged farther from the

established Renaissance type than did any architecture north of the Pyrenees. . . . It flourished principally in Castile. It is absolutely a distinct product from that picturesque, semi-Moorish stucco architecture of Andalusia which was carried to the Spanish colonies, later to be accepted as typical of the mother country. Andalusia has very little in common with the stern central and northern provinces where stone was used and monumentality was achieved. While not wishing to deny the charm of the stucco house nor its suitability to the Andalusian climate, one is forced to protest against its standing for the whole of Spanish architecture. Such widespread misapprehension simply means that the buildings of Castile, the very heart of the country, have been passed over for a type acknowledged by all Spaniards except Andalusians to be exotic. It is to increase the appreciation of what was done in Castile, to point out its charm . . . and to give the student some idea of what awaits him in Spain that this general view of the sixteenth century is written." The distinguished authors, Mr. and Mrs. Byne, remind the reader that the Renaissance came late to Spain and there drew its first architect from the ranks of practicing Gothicists. No record has been discovered of any Spaniard studying in Italy until a quarter of a century later.

Spanish efforts to build in the Italian style resulted in Plateresque modifications—the word *plateresco* implying a resemblance to the work of the silversmith, or *platero*, in scale and delicacy of execution. But it "does not mean that the Spanish architect followed the silversmith's lead in the use of Renaissance motifs; for the earliest church vessels—that is, important pieces such as custodias, chalices, or processional crosses in which such forms are to be found—are posterior to Egas's experiments. Nor were the first Spaniards who practiced Plateresque recruited from the goldsmith's shop as in Florence nearly a century before. They were Gothic architects and sculptors, who changed their style as opportunity presented itself, but who saw the new from

\*Spanish Architecture of the Sixteenth Century; General View of the Plateresque and Herrera styles. By Arthur Byne and Mildred Stapley [Byne]. With 80 plates and 140 illustrations in the text, from drawings and photographs by Arthur Byne. New York and London, G. P. Putnam's Sons, 1917. (Half-title: Publications of the Hispanic Society of America, No. 109.) Price \$7.50.

the ornamentalist's point of view rather than the builder's." The earliest noteworthy example, the Hospital de Santa Cruz, Toledo, is eclectic in design, showing Renaissance and Gothic elements together with those which are known as *Mudéjar*—a term presently to be explained. "On the doorway and windows is concentrated a wealth of delicate ornament carved in marble. The contrast of this with the severe granite walls in which it is inserted is striking." In 1501 or 1502 a similar hospital was designed for the famous city and place of pilgrimage, Santiago de Compostela, named in honor of St. James (*Santiago*) the Greater. The architect of both hospitals was that Egas, already mentioned, whose experiments demonstrated the possibility of combining old with new, traditions of Spanish building with the new ornament, "and evolving therefrom something distinctive and racial." Egas's son-in-law and successor was Alonso de Covarrubias.

In regard to the ancient place which, with good reason, interests architects more than any other one place in the peninsula, our authors have this to say: "Toledo was a *Mudéjar* city. In it the Moorish type of civilization flourished long after the city had passed into Christian hands, and the fact is nowhere more evident than in its domestic buildings. The artizans were Asiatics—Moors and Jews; and not only the house, but nearly all the objects in it—furniture, fabrics, utensils—were of their making. Those un-European craftsmen were given a free hand and worked along unaffected by new styles that came from without, except when employed on Christian churches. What they produced for Christian masters is known in Spain as the *Estilo Mudéjar*. The latter word is derived from the Arab *Mudejlat*, meaning subdued, and was applied to those infidels, mainly Moors, who remained in any district after it had been conquered by the Christians. These industrious *Mudéjares*, with their superior skill in the arts and trades, found ready employment everywhere until the time came when economic considerations could no longer prevail against race

hatred and religious bigotry. . . . The *Mudéjar* style may be roughly described as the combination of Moorish ornamentation with Christian plan and structure." It is quite true, however, that some of the building methods for roofs, floors and ceilings were, for centuries after the expulsion, largely or wholly Moorish; and the elasticity of the term *Mudéjar* becomes still more apparent when we reflect that its Christian element may be in the form of a Romanesque church like S. Tomé in Toledo, or such a medieval fortress as the castle of Coca, or again a Gothic-Plateresque palace such as the *Infantado* at Guadalupe.

Mr. and Mrs. Byne refer to the University of Salamanca as the most brilliant piece of Plateresque in Spain. Their descriptions of this and of the *Casas Capitulares*, Ayuntamiento or City Hall, of Seville (Diego de Riaño, Architect, 1527-1534) will be very well liked. Also in Seville, the Giralda tower, "a most skillful welding of Asiatic and European architecture," receives special attention. "In 1568, Ruiz, *maestro mayor* of the cathedral," we read, "was instructed by the chapter to design a Renaissance termination to the tower, and crowned it with an enormous bronze statue of Faith holding the banner of Constantine. This Faith (instead of being fixed and unchanging) is the *giralddillo*, or weather vane, which gives the whole tower its popular name, for the statue, though weighing a ton and a quarter, is so adjusted as to turn with the wind." Interesting and suggestive is Chapter VIII, on the Sevillian house, the patterned plaster called *yesería*, enameled tiles called *azulejo*, etc. It is but right to direct attention also to the chapters on Granada and the work of the architect Diego de Siloe, who founded there a distinct Granadine school; to the pages devoted to old palaces in Palma de Mallorca; and finally to the characterization of the Escorial (Juan Bautista de Toledo and Juan de Herrera, architects; structure completed in twenty years). The Escorial, our authors say, "as a majestic and awe-inspiring scheme comes nearer to the grandeur of antiquity than any-

thing erected in Italy during the Renaissance." But they add that "its severity, its pessimism, its determination to conquer by sheer weight of mass, its utter absence [? lack] of esthetic appeal, would have been inconceivable to an Italian or a Frenchman." Surely, then, not a *Plateresque* monster.

The two books thus briefly reviewed—and yet sincerely commended—supply a

most convenient literary path of approach to full comprehension of the Spanish phases of the Gothic and the Renaissance. Beside that, they bring out clearly the contrasts, the occasional blendings, of Gothic and Renaissance in general. It would be well to read them, we think, in connection with Street's authoritative work entitled *Some Account of Gothic Architecture in Spain*.



The Natural Style in Landscape Gardening: A Clear-Cut Workable Outline of the Technique of Design. By Frank A. Waugh. 16 pages of ills., 145 p., 6 by 9½ inches. Boston: Richard G. Badger. Toronto: The Copp Clark Co., Ltd. Price \$2.50 net.

Outdoor Theaters. A Treatise on the Design and Use of Garden Theaters and Outdoor Auditorium. By Frank A. Waugh. 16 pages of ills., 145 p., 6 by 9½ inches. Boston: Richard G. Badger. Toronto: The Copp Clark Co., Ltd. Price \$2.50 net.

Report of the Commission of Fine Arts for the fiscal year ended June 30, 1916. Many ills., 83 p., 11 by 8 inches. Washington: Government Printing Office.

Annual Report of the Board of Regents of the Smithsonian Institution for the year ended June 30, 1916. Many ills., 597 p., 9 by 6 inches. Washington: Government Printing Office.

Smithsonian Institution, Bureau of American Ethnology, Bulletin 63. Analytical and critical bibliography of the Tribes of Tierra del Fuego and adjacent territory. By John M. Cooper. 1 map, 228 p., 9¼ by 6 inches. Washington: Government Printing Office.

Our Community. Good Citizenship in Towns and Cities. By Samuel H. Ziegler, A. M., and Helen Jazette, A. B. Many ills., 240 p., 7½ by 5 inches. Philadelphia: The John C. Winston Co.

The Language of Color. By M. Luckiesh. 282 p., 7¾ by 5¼ inches. New York: Dodd, Mead & Co. Price \$1.50 net

A History of Architecture. By Fiske Kimball, M. Arch., Ph. D., and G. H. Edgell, Ph. D. 603 p., many ills. 8 by 5½ inches. New York: Harper & Brothers.

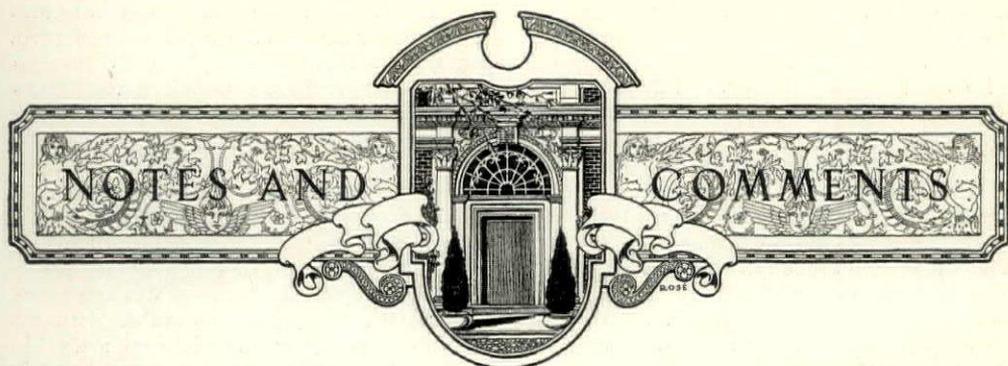
Fire Prevention and Protection. By A. G. Huston. Third edition. Completely revised. 125 figs., 11 plates, 757 p., 7 by 4½ inches. New York: The Spectator Company.

Furniture of the Olden Time. By Frances Clary Morse. 470 p., many ills. 8½ by 6 inches. New York: The MacMillan Company. Price \$6.00.

Handbook for Architects and Builders. Vol. XX, 1917. 448 p. 9¼ by 6¼ inches. Chicago: Illinois Society of Architects.

Catalogue of Mrs. Phoebe A. Hearst's Loan Collection of Oriental Rugs and Textiles, Prints, Tapestries and Paintings, Persian Manuscripts, Phoenician and European Glass, Furniture and Objets d'Art in the Palace of Fine Arts, San Francisco. Edited by J. Nilsen Laurvik, Director. 253 pp., 2 color plates, 1 map, 75 half tone ills. 5 by 7¼ inches. San Francisco: The Palace of Fine Arts. Price \$1.00.

Over the Drawing Board. A Draftsmen's Handbook. By Ben J. Lubschez, F. A. I. A. Many ills., 131 p., 7½ by 5 inches. Washington: The Journal of the American Institute of Architects. Price \$2.00 postpaid.



**Leonardo, an  
Architectural  
Theorist.**

As a general thing, the conception brought to mind by the professional title of architect implies not only the planning and design, but also the supervision of the execution of a structural

problem. However, great designers, though chiefly known by their handiwork in one of the major arts, have occasionally been endowed with an accurate grasp and understanding, not to mention a keen appreciation, of the technical requirements and esthetic guiding principles characteristic of another medium, or even of several other media, what though as widely separated in material and treatment as are painting and architecture. Add to this possibility the fertile potentiality fostered by the phenomenal versatility which so frequently characterized the master minds of the Renaissance, and we have rich ground for an excellent parallel growth of two or more arts out of one intellect, and a fitting background for the activities of that genius of refined intellectuality and perfection of technique, Leonardo da Vinci, a practical painter and sculptor and engineer, even a musician, but in architecture chiefly a professional theorist. In his recent analytical biography of this consummate master, Professor Osvald Sirén, of the University of Stockholm, has given us some interesting sidelights upon this phase of Leonardo's prolific mind. From architectural studies overlooked by Vasari and other early writers, no doubt because they quite generally led to no practical results, we can now reconstruct in part at least da Vinci's abstract pleasure in the problems of what may be called pure architecture, a pleasure which amounted to an avocation or even to a hobby, and finding

its outlet in design on paper only, the accomplishment of which seems to have given the artist a satisfaction now so often seen in parallel among modern practitioners who delight in "projets" and false perspectives and the skillful "blague" of rendering, to the utter exclusion of the constructional facts to which the problem on paper is the very flimsy preamble. Fortunately da Vinci's ability as an engineer forced into his purely theoretic architectural problems a certain fact and reality, tying them to earth, as it were, and to the actualities of humble materials and human occupancy.

Prompted, no doubt, by the same impulse which made for the subsequent type of mural painting delighting in the semblance of perforated walls, ceiling views giving upon an open sky overhead, balustrades with urchins dangling their legs and smiling down upon the spectator, colonnades seen in terrific foreshortening from directly beneath, and a dozen and one other vagaries of a wayward but forceful brush, Leonardo frequently assigned himself a task of egregious difficulty for no other purpose than to test his own ability at solving it. Again, he found great satisfaction in achieving the ideal solution for a given set of circumstances. For instance, his work at the Porta Giovia had for its chief motive the artist's hope that he could there develop his theories on fortification. Again, when he made a model for the cupola of the cathedral of Milan, the theoretical conditions of the task chiefly engrossed his mind. We are driven to conjecture the great value of a mind of this type and strength when the original problem of building Brunelleschi's dome at Florence was brought to the fore. In da Vinci the founder of the Italian Renaissance would have had an able competitor for the honor of solving this gigantic prob-

lem in domical vaulting, and thus beginning the long series of domed Italian churches of the Renaissance.

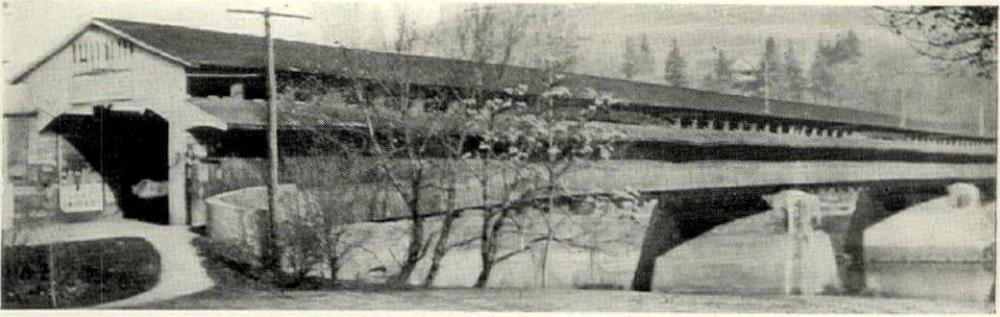
Leonardo's architectural interest was fostered above all by his close friendship for Bramante, whose connection with the cathedral and other building projects at Milan is well known. No doubt these two great minds collaborated on more than one of the buildings now attributed to one or the other individually. Assuredly their minds were cast in much the same mold and their mode of approach in most cases shows a similarity. We know especially that they both devoted their attention primarily to church edifices of the so-called central type, which for Bramante always seemed the perfect solution of the problem of a domed central interior raised over a plan of polygonal or circular form. Leonardo devotes himself also to solutions of this problem of the domed central structure, called by Burckhardt the last in the series of "absolute types" of architecture. Leonardo's inventive mind reveals itself in every manner of combination of circular or polygonal plans for domed churches, or indeed, for monumental structures as well. Thus almost all his sketches show the central cupola, usually with smaller domes over side chapels or other motives. Frequently the simple Greek cross plan is found, usually with apse terminations. We note primarily the resourcefulness of da Vinci's mind, his direct creative method, and the ease with which his imagination is guided into purely architectonic channels. In fact, we have Leonardo's own word for it that he had intended to produce a treatise on dome building and design, and we are safe in assuming that the sketches he has left us are in part suggestions for illustrations to accompany his discussion.

In addition to the domical church problem, da Vinci also favored highly specialized problems, as, for instance, that of the ideal solution for a "preaching room" or teatro di predicare, in which we note the inspiration from ancient amphitheatres with a speaker's pulpit in the centre. A most remarkable idea is that of a great hall externally cone-shaped and internally barrel-shaped, with a speaker's position on top of a column in the middle, and the seats of the audience disposed in diminishing circles in both upper and lower parts of the hall, thus placing all hearers at about equal distances from the speaker. We have also

the drawing of an enormous oriental sepulchre or mausoleum, again cone-shaped, and with a temple set upon its truncated top. A terrace in the middle gives access to a vast labyrinth of sepulchral chambers within. However fanciful these problems may have been, they were undoubtedly suggested by current problems in the hands of other great architects among his contemporaries. He approaches them all with a largeness of vision, with an understanding of architectural scale and proportion, that is quite comparable with his supreme mastery in the pictorial art.

Leonardo has left us also a most fascinating scheme for replanning the city of Milan. After the plague of 1485 and 1486 he addressed to the Duke, his patron, a letter describing a new type of thoroughly hygienic metropolis, so that his fellow citizens might no longer be required to live "packed together like goats and pollute the air for one another." The plan involved the construction of ten smaller cities, each containing five thousand houses with an average accommodation for 30,000 inhabitants. A system of artificial rivers or canals, with lock connections and regulation, was to provide circulation facilities and a means of carrying off sewage. A maximum of light, air and cleanliness was accounted for in the plan; streets within the ten cities were as wide as buildings bordering them were tall; great squares and market spaces were also included. Streets were, furthermore, arranged in two levels, the upper for pedestrians, the lower for traffic; the latter were also accessible from the canals, thus providing ready means for cleaning them and also for transportation of goods. A still lower level was occupied by a complex system of smaller canals to be used by gondolas. This level and the traffic level both had access to all houses for purposes of easy delivery of goods. To be sure, this huge project was at that time far beyond human means and exchequer to finance, though we do not doubt that da Vinci could readily have brought it physically into being. To day such enormous undertakings are everywhere in progress; many even of much larger scale are a matter of common practice. There is much in this Utopian plan of Leonardo's that will merit investigation, and for modern methods and materials it would not be of exaggerated magnitude.

RICHARD F. BACH.



OLD COVERED BRIDGE AT LOCK HAVEN, PA.

**An Old  
Covered  
Bridge.**

Among the many evidences which we have of pioneer industry in our Eastern states not least in interest are the old covered wooden bridges. Owing to floods, fires, county commissioners and other agencies of destruction, they are yearly becoming less numerous, and it may not be long before these picturesque old structures will be but a memory and the highly efficient and ugly steel spider will have come into its own.

With the substitution of the automobile for nervous horseflesh, the desirability of enclosing a bridge, in order to shut off the terrifying view of rushing waters, has largely ceased to exist, and the open truss-work of steel, with its decreased wind pressure, fire risk and flood danger, offers a more efficient, though certainly a less picturesque substitute for the closed wooden structure.

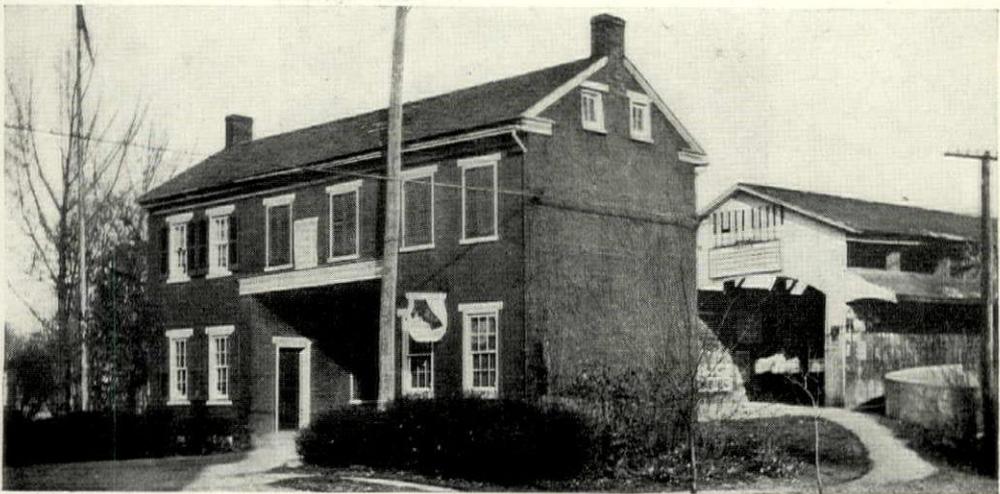
There is one of these old covered bridges spanning the Susquehanna River at Lock Haven, Pennsylvania, which was built in

1852 and is of unusual interest, not only because of its great length (over eight hundred feet), but also because of the two-story tollhouse which spans the roadway where it leads up to the south approach of the bridge. A covered walk for pedestrians built out on one side of the bridge adds an interesting touch of irregularity to the structure and, as may be readily judged from the photographs, it forms a picturesque feature of a beautiful valley.

It is unfortunate that the American people do not possess a more intelligent appreciation of the historic and esthetic value of such interesting reminders of the past, for crude though such a structure may be, it nevertheless represents the craftsmanship of its time. Even so interesting an old building as this tollhouse has escaped the spoiler's hand only because of the protests of a Women's Civic Club.

Regrettable as the popular lack of appreciation for old heirlooms may be, there are hopeful indications of a tendency toward greater appreciation of their value.

I. T. FRARY.



OLD TOLLHOUSE AT LOCK HAVEN, PA.

**A  
Sleeping  
Chamber on  
a Tower.**

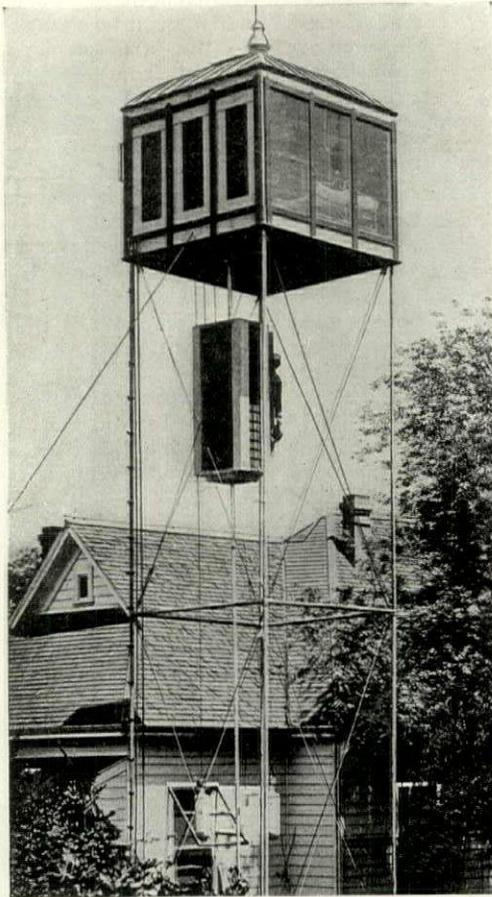
After suffering from insomnia for several years, especially during the hot spring and summer nights, Mr. L. Gregory, of Winters, California, decided that he would imitate the birds and sleep high. A bungalow in a tree was his first idea; but as there were no trees in his yard large enough to hold such a structure, he decided to build a steel tower with a screened bedroom at the top. The result is a sleeping porch on a forty-foot tower, which not only gives the occupant of the room the benefit of every breeze that blows, but also eliminates the ground vapors that ascend

from the earth on damp evenings. In addition, the room makes a fine reading place during the day, besides affording an excellent view of the surrounding country.

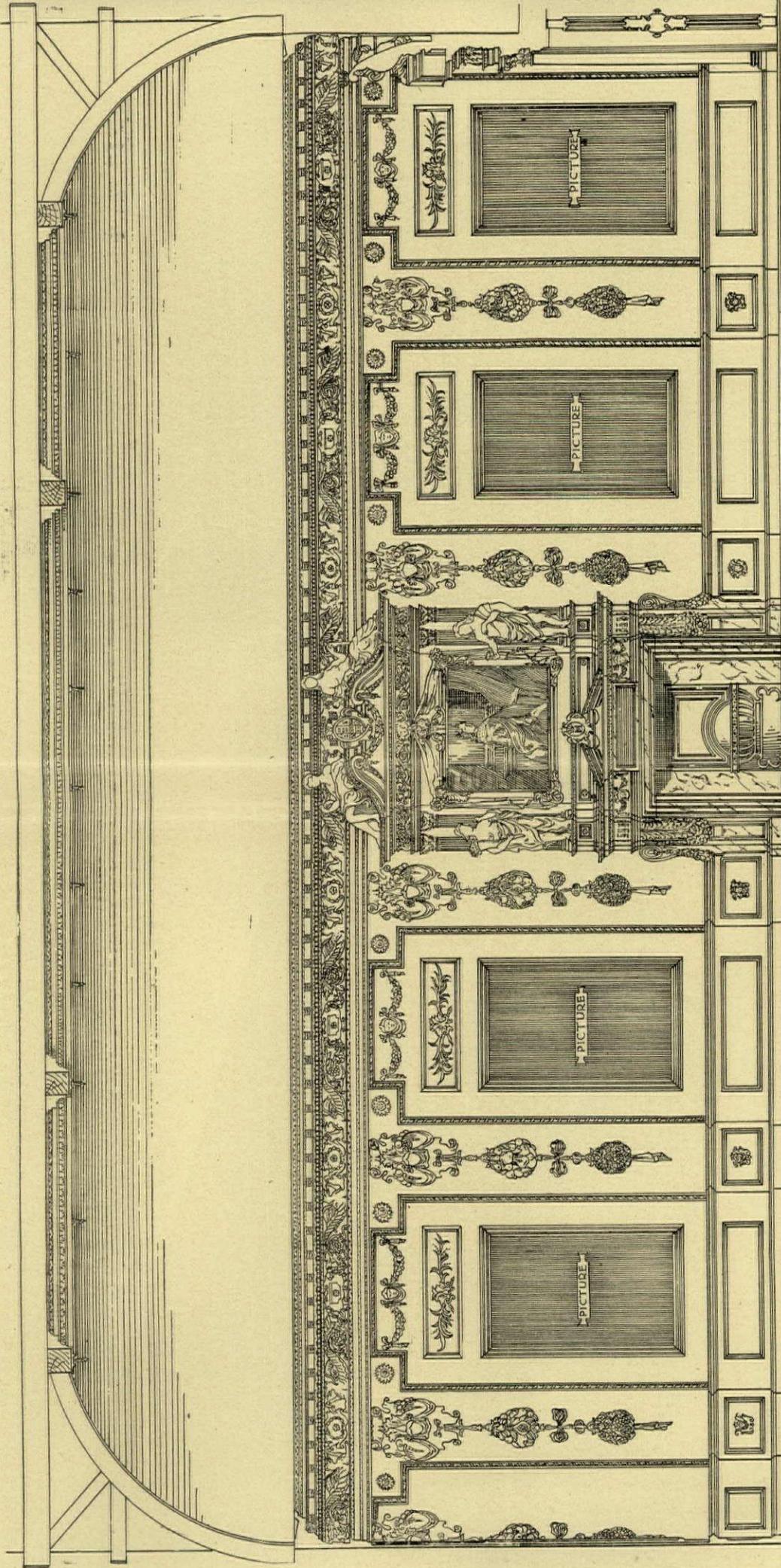
The bedroom is about ten feet square and contains a single bed and a couple of chairs. Access to it is gained by means of a small electrically operated elevator, which enters through a trap door in the floor of the chamber. The trap door prevents the entrance of flies and mosquitoes when the elevator is at the ground.

After continued experiment Mr. Gregory found that the temperature averages ten degrees cooler at the top of the tower than down on the ground.

ROBERT H. MOULTON.



SLEEPING CHAMBER ON A TOWER, SHOWING  
ELEVATOR HALF-WAY UP.



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