

# The ARCHITECTURAL RECORD

VOLUME 57

APRIL, 1925

NUMBER 4

## "LOUIS SULLIVAN - *An Old Master*"

*By Jiske Kimball*

... For in all their works they proceeded on definite principles of form and in ways derived from the truth of Nature. Thus they reached perfection, approving only those things which, if challenged, can be explained on grounds of truth.—Vitruvius, Book IV, Chap. ii.

IN LOUIS SULLIVAN America had a great master of realism in architecture. His achievement was not merely provincial or parochial—he belongs with a very few thinkers and designers, leaders of the scientific school of the nineteenth century: Ruskin, Viollet-le-Duc, Gottfried Semper, Otto Wagner. More than to any of these, it fell to him to embody their organic theory in a creation of vital originality, deeply rooted in the new soil of modern life. Not since the genesis of Gothic construction had there been a development like that of the steel frame building, the skyscraper, to which he was the first to give artistic form.

The demand for truth and reason in architecture, the appeal to the laws of nature, is as old as Antiquity. Vitruvius, the arch-villain of the modernists, expressed it, we see, in words which Sullivan himself might have written. So, too, Boileau, the high-priest of French classicism, reiterated, as his central doctrine:

*Rien n'est beau que par la vérité,*

and Voltaire wrote of his own Temple du Goût:

*Simple en était la noble Architecture;  
Chaque ornement à sa place arrêté,  
Il semblait mis par la nécessité  
L'Art s'y cacheoit sous l'air de la nature;  
L'oeil satisfait embrassoit sa structure,  
Jamais surpris et toujours enchanté*

Each generation has been able to interpret the doctrine of truth, of obedience to nature, as the guiding principle of its own artistic strivings.

It was in the hands of Herder and Goethe that the idea of relation between art and nature began to take on a modern coloring. From a model of ordered unity, for merely rational imitation, nature became the source of romantic inspiration. The artist, filled with its spirit, in impressing form on his material, accepts the practical necessities, and gives characteristic beauty:

*... bis in den kleinsten Theil notwendig schön, wie Bäume Gottes.*

The mid-nineteenth century, under the



*The Architectural Record*

April, 1925

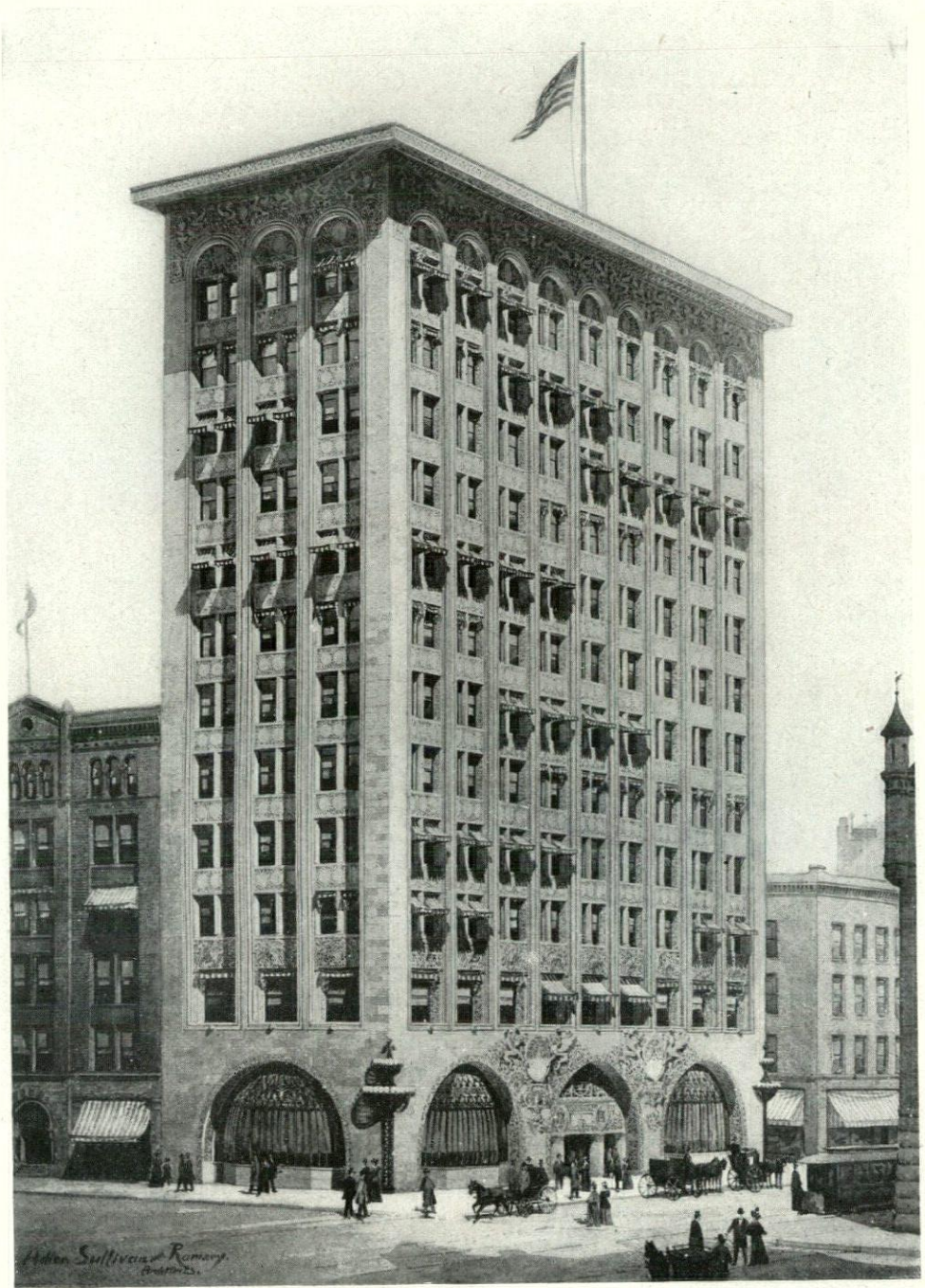
WAINWRIGHT BUILDING, ST. LOUIS, MO.  
Adler and Sullivan, Architects



*The Architectural Record*

*April, 1925*

GUARANTY BUILDING, BUFFALO, N. Y.  
Louis Sullivan, Architect



*The Architectural Record*

*April, 1925*

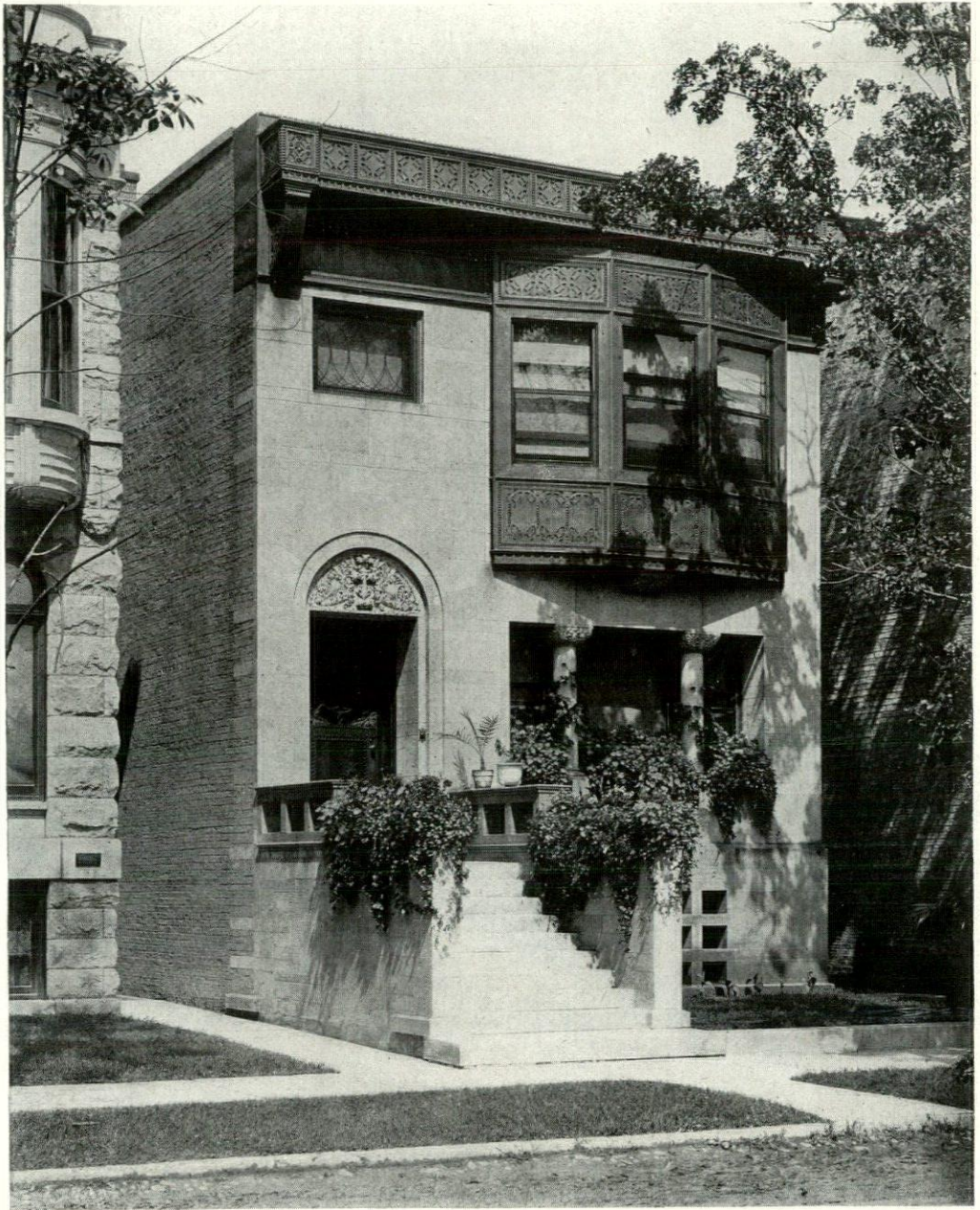
TRUST AND SAVINGS BUILDING, ST. LOUIS  
Adler, Sullivan & Ramsay, Architects



*The Architectural Record*

*April, 1925*

STOCK EXCHANGE, CHICAGO  
Louis Sullivan, Architect



*The Architectural Record*

*April, 1925*

RESIDENCE OF LOUIS SULLIVAN, CHICAGO  
Louis Sullivan, Architect

spell of natural science, identified beauty in painting with minute "truth to nature," and, in consonance with its biologic theory of adaptation of organic form to function and environment, emphasized onesidedly the attainment of beauty in architecture through expression of use and structure. Ruskin wrote in 1851:

"Every building presents its own requirements and difficulties; and every good building has peculiar appliances or contrivances to meet them. Understand the laws of structure, and you will feel the special difficulty in every new building which you approach. . . . And an enormous number of buildings, and of styles of buildings, you will be able to cast aside at once, as at variance with these constant laws of structure and therefore unnatural and monstrous."

Semper in 1860 crystallized the organic theory in the formulae:

"Every technical product a resultant of use and material.

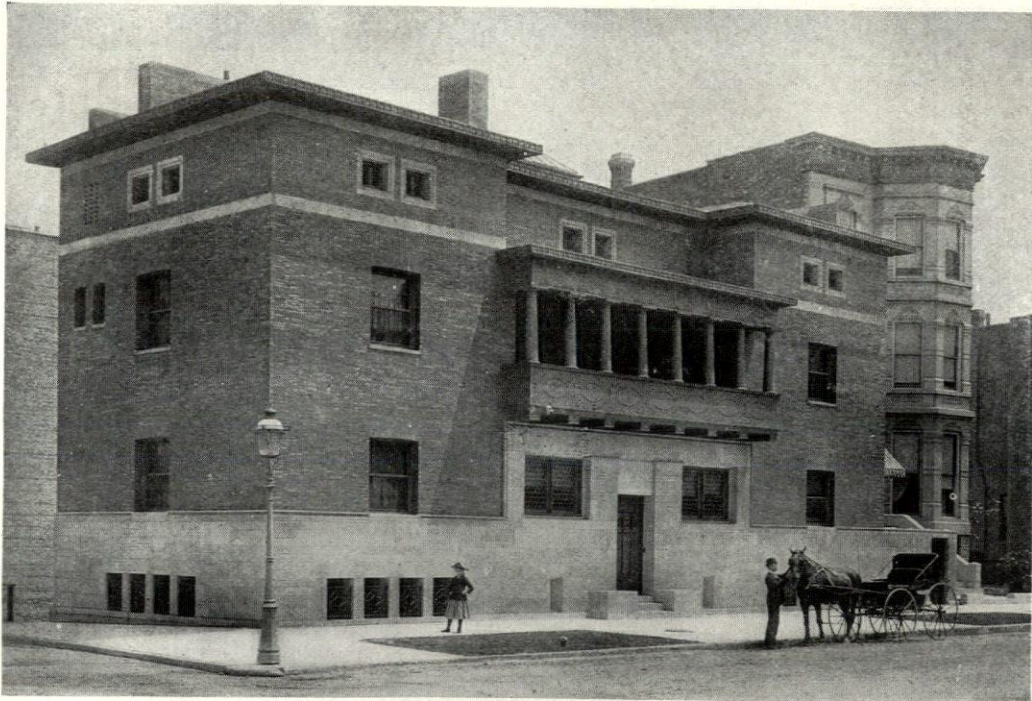
"Style is the conformity of an art object with the circumstances of its origin and the conditions and circumstances of its development."

Viollet-le-Duc in his *Discourses on Architecture* (1863), exalted truth as the supreme merit, and said:

"There are two ways of expressing truth in architecture: it must be true according to the programme of requirements, and true according to the methods and means of construction. . . . fulfil with scrupulous exactness all the conditions imposed by necessity; . . . employ materials with due regard for their qualities and capacities."

Simultaneously, and likewise related to evolutionary theory in biology, came the interpretation of the history of art by Hegel, Taine and Schnaase as a resultant of changing natural and historical conditions.

The predominance of these ideas was fundamentally hostile to every survival



CHARLEY HOUSE, CHICAGO

Louis Sullivan, Architect



*The Architectural Record*

*April, 1925*

Japanese Room, Auditorium Annex  
AUDITORIUM HOTEL, CHICAGO  
Louis Sullivan, Architect

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or "revival" of historical forms, but the new principles were only gradually driven to their extreme consequences. The classic style, however rationalized, could not justify itself under them as an expression of modern uses. Ruskin still thought the way of salvation lay through Gothic. Viollet-le-Duc, in spite of his enthusiasm for the Middle Ages, came to deny "the propriety of imposing on our age any reproduction of antique or mediaeval art." Semper announced that "the solution of modern problems must be freely developed from the premises given by modernity." He was, himself, however, still content to do his work with historical elements; and Viollet-le-Duc's attempts to deduce new architectural forms from the sporadic employment of iron in construction had little success. They were too purely cerebral, too little *felt*. We must recognize, also, that the problems and materials currently offered to the designer in 1870 had not yet changed enough from those of previous centuries, or yet crystallized enough, to give sufficient basis for a revolutionary change of forms.

A new continent, a new society, a new community, was needed for the realization of modernist ideas. In America commercialism, industrial society, developed unrestrained. Patriotic motives added the call for an "American style" to the more general demand for a "modern style."

In the eighties, while the East sought to assimilate itself to cultivated Europe, the West gloried in the American "innocence" exaggerated by Mark Twain. A conjunction especially favorable existed in Chicago. The great fire left a *tabula rasa*—all was to be made new. For once there was an opportunity for young men in that most difficult and responsible of arts, where the "younger men" are usually past fifty. On the active and independent spirits who were attracted to the city, the ideas of Viollet-le-Duc and Semper made a deep impression. Van Brunt of Kansas City had translated the "Discourses"; John Root in 1889 was to publish excerpts from Semper's work. The Western Association of Architects was founded, with pronounced modern tendencies; a new

journal, *The Western Architect*, gave its sponsors a voice and an audience. There was a ferment of discussion, experiment, and emulation.

In the unregulated commercial exploitation of urban land, a new type was just coming into being, the tall office building. It is a common fallacy to suppose that it was evoked by conditions peculiar to New York, by the circumstance that Manhattan is an island. The enormous preponderance of low buildings on Manhattan, even today, teaches us that the cause lay rather in the absence of legal restriction on the development of preferred sites. It could operate even more freely in the rebuilding of Chicago. Out of the Chicago ferment came the decisive structural invention—first used by William Holabird in the Tacoma Building—the riveted steel frame, carrying the enclosing walls as well as the floors. This frame must be encased for protection against fire. How might its indispensable presence be expressed? How might the monstrous, unprecedented pile be given artistic form?

In Louis Sullivan, Chicago found its poet. Half French, half Irish, he had the analytical mind of a scientist, the soul of a dreamer and artist. Overflowing with romantic enthusiasm for Nature, dazzled by the logical splendor of mathematics, fascinated by Taine and Darwin, abased before the titanic creative power of Michelangelo, he had passed rapidly through the discipline of school and of the Beaux-Arts—assimilating, questioning, feeling. At seventeen enamored of Chicago, its energy, its wide horizons of lake and prairie; at twenty-five already established in a position to build his air-castles; at thirty he was a prophet to youth, in lyrical outbursts of rushing words, enveloping an authentic philosophy.

Among the architects of our day, whose expressed notions are apt to be the *disjecta membra* of inconsistent systems, his aesthetic had an intuitive harmony and value, under "the dominant, all-pervading thought that a spontaneous and vital art must come fresh from nature, and can only thus come." The artist is "to arrest and typify in materials the harmonious

and interblended rhythms of nature and humanity." To him reason and analysis are not all; structure but the first step.

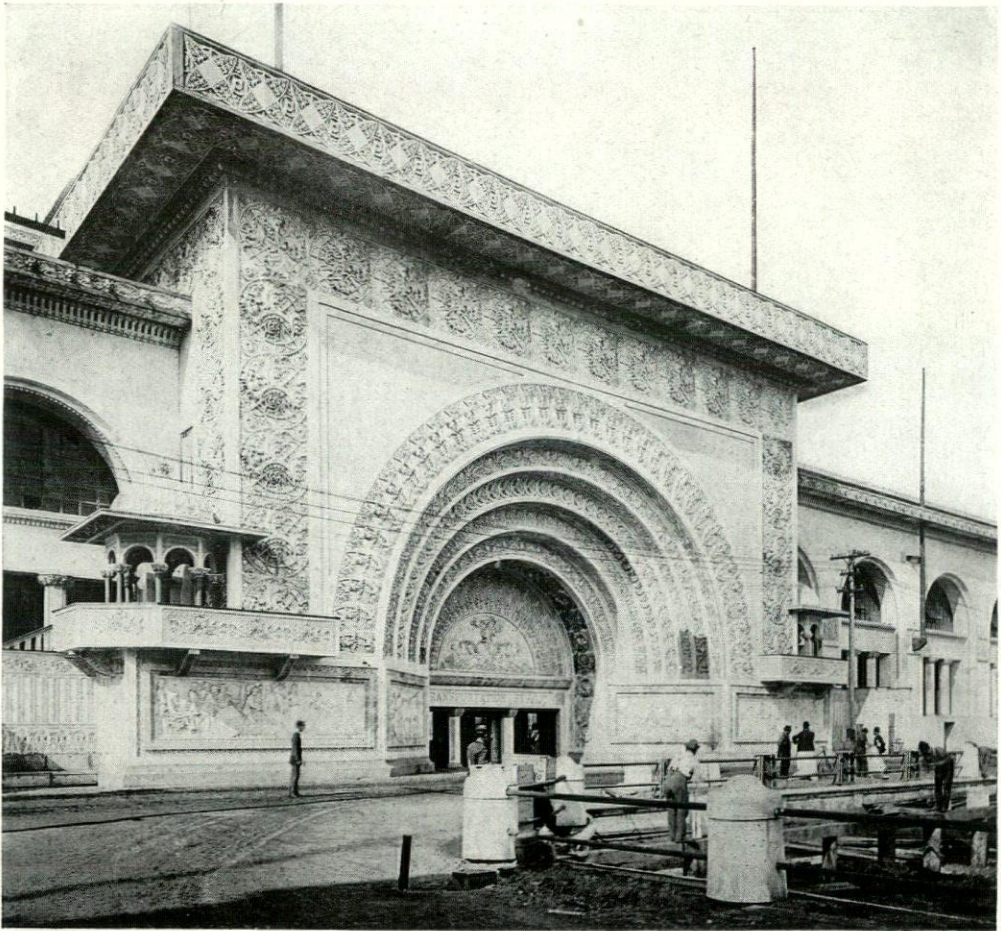
"It would appear to be a law of artistic growth, that the mind, in its effort toward expression, concentrates first upon matters of technical detail, next upon certain abstractions or theories—for the great part mechanical, and quite plausible as far as they go—and at last upon a gradual relinquishment of these, involving a slow and beautiful blending of all other faculties with the more subtle manifestations of emotion."

Sensitive, passionate, and courageous,

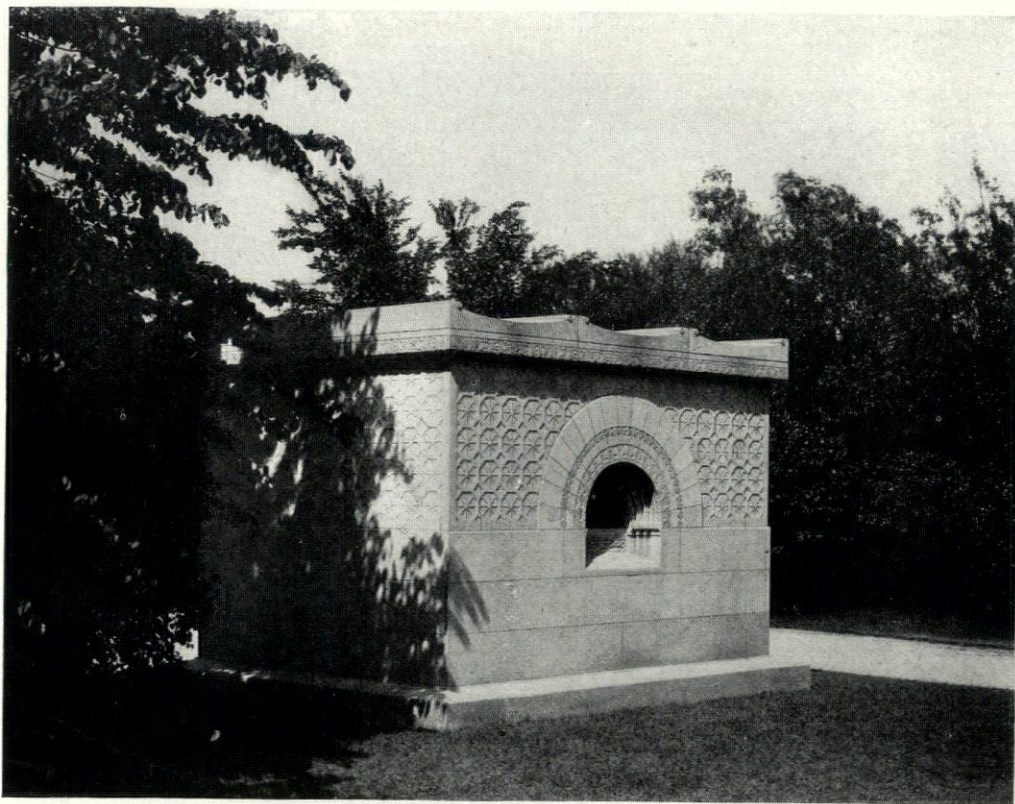
he illustrates in his own career that:

"To the master mind . . . imbued with the elemental significance of nature's moods, humbled before the future and the past, keenly aware of the present, art and its outworkings are largely tragic."

Sullivan's early work, like the work of Root, and so many others of less genius, was colored by Richardson's influence. The treatment of the Auditorium Building (1886-90), with its masonry walls and arches, was suggested by Richardson's design for the Field wholesale store, made in 1885. From Richardson also must have come the first suggestion of



East Entrance, Transportation Building  
WORLD'S COLUMBIAN EXPOSITION, CHICAGO  
Louis Sullivan, Architect



Getty Tomb  
GRACELAND CEMETERY, CHICAGO  
Louis Sullivan, Architect

the foliate ornament which Sullivan afterwards developed so characteristically<sup>1</sup>, and which flowered especially in the Golden Doorway of the Transportation Building at the Chicago Fair and in the Schlesinger and Mayer store. On the completion of the vast auditorium enterprise followed a breakdown, recuperation, a long communing with nature, a gathering of new forces. The return to Chicago in March, 1890, marks the opening of Sullivan's great creative period.

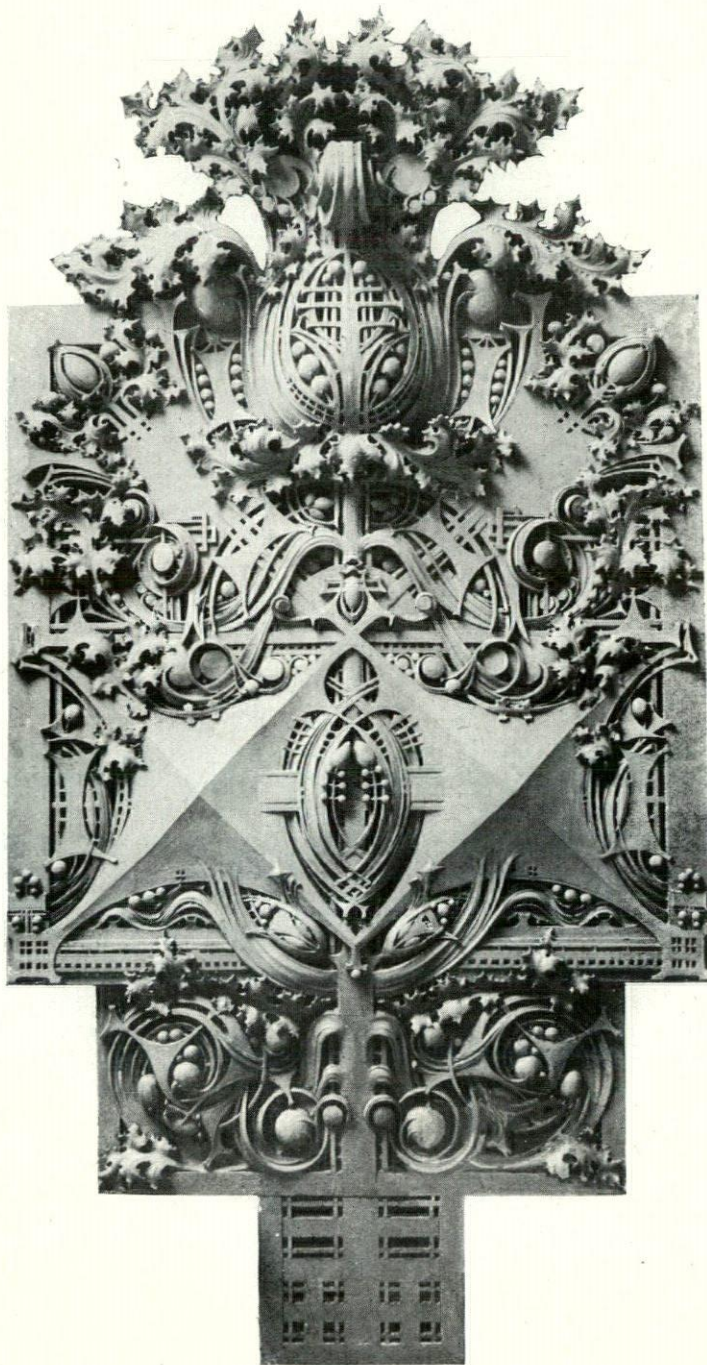
His first problem was the novel one of the steel-frame office building. "He felt at once that the new form of engineering was revolutionary, demanding an equally revolutionary architectural mode. That masonry construction, in so far as tall buildings were concerned, was a thing of the past, to be forgotten, that the mind might be free to face and solve new prob-

lems in new functional forms. That the old idea of superimposition must give way before the sense of vertical continuity." So he wrote in his autobiography,<sup>2</sup> a generation later. The Wainwright Building in St. Louis, designed before the close of the year, was the perfect embodiment of this idea. With the taller Guaranty (Prudential) Building in Buffalo, completed 1896, in which the same system is developed and perfected, it represents Sullivan's greatest achievement.

His own interpretation, "The Tall Office Building Artistically Considered," appeared in *Lippincott's Magazine* for March, 1896. Here was formulated most briefly and clearly his whole philosophy of art:

<sup>1</sup>A System of Architectural Ornament, Press of the American Institute of Architects, 1924. \$20.00.

<sup>2</sup>"The Autobiography of an Idea," Press of the American Institute of Architects, 1924. \$3.00.



TERRA COTTA CLAY MODEL

Louis Sullivan, Architect

"It is my belief that it is of the very essence of every problem that it contains and suggests its own solution. This I believe to be natural law. Let us examine, then, carefully the elements, let us search out this contained suggestion, this essence of the problem.

"The practical conditions are, broadly speaking, these:

"Wanted—First, a story below-ground, containing boilers, engines of various sorts, etc.—in short, the plant for power, heating, lighting, etc. Second, a ground floor, so called, devoted to stores, banks, or other establishments requiring large area, ample spacing, ample light, and great freedom of access. Third, a second story readily accessible by stairways—this space usually in large subdivisions, with corresponding liberality in structural spacing and in expanse of glass and breadth of external openings. Fourth, above this an indefinite number of stories of offices piled tier upon tier, one tier just like another tier, one office just like all the other offices—an office being similar to a cell in a honeycomb, merely a compartment, nothing more. Fifth and last, at the top of this pile is placed a space or a story that, as related to the life and usefulness of the structure, is purely physiological in its nature—namely, the attic. In this the circulatory system completes itself and makes its grand turn, ascending and descending. The space is filled with tanks, pipes, valves, sheaves, and mechanical etcetera that supplement and complement the force-originating plant hidden below-ground in the cellar. Finally, or at the beginning rather, there must be on the ground-floor a main aperture or entrance common to all the occupants or patrons of the building. . . .

"The practical horizontal and vertical division or office unit is naturally based on a room of comfortable area and height, and the size of this standard office room as naturally predetermines the standard structural unit, and, approximately, the size of window openings. In turn, these purely arbitrary units of structure form in an equally natural way the true basis of the artistic development of the exterior. Of course the structural spacings

and openings in the first or mercantile story are required to be the largest of all; those in the second or quasi-mercantile story are of a somewhat similar nature. The spacings and openings in the attic are of no importance whatsoever (the windows have no actual value), for light may be taken from the top, and no recognition of a cellular division is necessary in the structural spacing.

"Hence it follows inevitably, and in the simplest possible way, that if we follow our natural instincts without thought of books, rules, precedents, or any such educational impedimenta to a spontaneous and 'sensible' result, we will in the following manner design the exterior of our tall office building—to wit:

"Beginning with the first story, we give this a main entrance that attracts the eye to its location, and the remainder of the story we treat in a more or less liberal, expansive, sumptuous way—a way based exactly on the practical necessities, but expressed with a sentiment of largeness and freedom. The second story we treat in a similar way but usually with milder pretension. Above this, throughout the indefinite number of typical office tiers, we take our cue from the individual cell, which requires a window with its separating pier, its sill and lintel, and we, without more ado, make them *look* all alike because they *are* all alike. This brings us to the attic, which, having no division into office cells, and no special requirement for lighting, gives us the power to show by means of its broad expanse of wall, and its dominating weight and character, that which is the fact—namely, that the series of office tiers has come definitely to an end. . . .

"However, thus far the results are only partial and tentative at best; relatively true, they are but superficial. We are doubtless right in our instinct, but we must seek a fuller justification, a finer sanction, for it. . . . We must now heed the imperative voice of emotion.

"It demands of us, What is the chief characteristic of the tall office building? And at once we answer, it is lofty. This loftiness is to the artist-nature its thrilling aspect. It is the very open organ-tone:

in its appeal. It must be in turn the dominant chord in his expression of it, the true excitant of his imagination. It must be tall, every inch of it tall. The force and power of altitude must be in it, the glory and pride of exaltation must be in it. It must be every inch a proud and soaring thing, rising in sheer exultation that from bottom to top it is a unit without a single dissenting line—that it is the new, the unexpected, the eloquent peroration of most bald, most sinister, most forbidding conditions.

\* \* \*

“The true, the immovable philosophy of the architectural art . . . let me now state, for it brings to the solution of the problem a final, comprehensive formula:

“All things in nature have a shape, that is to say, a form, an outward semblance, that tells us what they are, that distinguishes them from ourselves and from each other.

“Unfailingly in nature these shapes express the inner life, the native quality, of the animal, tree, bird, fish, that they present to us; they are so characteristic, so recognizable, that we say, simply, it is ‘natural’ it should be so. . . .

“Whether it be the sweeping eagle in his flight, or the open apple-blossom, the toiling work-horse, the blithe swan, the branching oak, the winding stream at its base, the drifting clouds, over all the coursing sun, *form ever follows function*, and this is the law. Where function does not change, form does not change. . . .

“It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. . . .

“Does not this readily, clearly, and conclusively show that the lower one or two stories will take on a special character suited to the special needs, that the tiers of typical offices, having the same unchanging function, shall continue in the same unchanging form, and that as to the attic, specific and conclusive as it is in its very nature, its function shall equally

be so in force, in significance, in continuity, in conclusiveness of outward expression? From this results, naturally, spontaneously, unwittingly, a three-part division—not from any theory, symbol, or fancied logic.

“And thus the design of the tall office building takes its place with all other architectural types made when architecture, as has happened once in many years, was a living art. Witness the Greek temple, the Gothic cathedral, the mediaeval fortress.

“And thus, when native instinct and sensibility shall govern the exercise of our beloved art; when the known law, the respected law, shall be that form ever follows function; when our architects shall cease strutting and prattling handcuffed and vainglorious in the asylum of a foreign school; when it is truly felt, cheerfully accepted, that this law opens up the airy sunshine of green fields, and gives to us a freedom that the very beauty and sumptuousness of the outworking of the law itself as exhibited in nature will deter any sane, any sensitive man from changing into license; when it becomes evident that we are merely speaking a foreign language with a noticeable American accent, whereas each and every architect in the land might, under the benign influence of this law, express in the simplest, most modest, most natural way that which it is in him to say: that he might really and would surely develop his own characteristic individuality, and that the architectural art with him would certainly become a living form of speech, a natural form of utterance, giving surcease to him and adding treasures small and great to the growing art of his land; when we know and feel that Nature is our friend, not our implacable enemy, then it may be proclaimed that we are on the high-road to a natural and satisfying art, an architecture that will soon become a fine art in the true, the best sense of the word, an art that will live because it will be of the people, for the people, and by the people.”

\* \* \*

In Sullivan's actual designs, wall surface was abandoned for a system of pier

and spandrel. That the terra cotta which gave fire-protection was not self-supporting masonry, but merely a casing, was expressed with particular success in the Guaranty Building, by a delicate surface ornament. The height was emphasized by unbroken continuity of the vertical piers, and by their close spacing, between every window, two to each office. Vitrally unified in a form deeply felt by its creator, the building became indeed "every inch a proud and soaring thing," filled with the "force and power of altitude."

The achievement was widely recognized and acclaimed. Almost without exception, tall buildings from 1897 to 1912 showed its influence by accented vertical lines. This was scarcely more true in the work of consistent "modernists" like Sullivan, who sought to abandon all historical forms, than of their antagonists, the eclectics. They gave at least lip-service to "structural expression," and turned often to Gothic with its soaring lines. Even the most consistent devotees of abstract form did not remain untouched. In their New York Municipal Building, designed in 1908, McKim, Mead & White marked the lines of the steel columns by shallow vertical strips. Thus in the treatment of the skyscraper Sullivan's creative work attained a historical influence corresponding to its artistic significance.

In many other fields the free and functional mode of design which he championed achieved signal triumphs. Ernest Wilby, working with Albert Kahn, established a characteristic physiognomy for American industrial buildings. Frank Lloyd Wright, a disciple of Sullivan, developed a system of domestic design and an idiom of form which had considerable following in Chicago's sphere.

Abroad, the leaders of the movement, developing independently under similar cultural influences, were certainly later than Sullivan in arriving at a system of new forms. The experiments of Hankar and Horta in Belgium, of Otto Wagner in Vienna, were scarcely begun in 1890. The People's Palace at Brussels, the manifesto of *l'art nouveau*, seems hesitating and inchoate beside the Wainwright building. Indeed the foreign architects

have lacked a great novel problem like the skyscraper to give point to their striving for originality. Wagner's church at the Steinhof, for all its novel treatment of materials, remains a child of the Renaissance by its composition of space and mass. On the other hand, nationalism in Germany, by adopting the "secession" movement as its own, gave it a currency which it never attained in America. Thus Sullivan, whose work at the Chicago Fair attracted foreign attention in 1893, and Wright, whose designs were sumptuously published in Germany, have had more influence there than in their own country.

The general victory which Sullivan long prophesied, indeed, has not come to pass. He realized the defeat, and tried to console himself by hope in a coming generation. To him the outcome was a corruption, a national confession of failure, an evidence that the American people of today had proved unworthy to have a modern architecture.

"Modern," however, is a relative term: its meaning changes from generation to generation. The creative nature of art itself determines that no single formula, however cogent, can long prevail. There is not, as in science, a single, "right" way. Art must change to live; and will change, harmoniously in all its manifestations, through every generation.

The coherence of the realistic treatments of the subject matter of modern life by Sullivan and his fellows was with the work of the realistic schools of the nineteenth century in painting and sculpture, in literature and music. Under the domination of science, the painting of Monet and the impressionists, the sculpture of Carpeaux and Rodin, the music-drama of Wagner, the novels and plays of Flaubert, Zola, Tolstoi, and Ibsen, all sought characteristic beauty through truth to nature, rather than abstract beauty through relations of form.

Against this domination of art by science, this equation of beauty with truth, there began a reaction even before 1890. Cézanne let anatomy and photographic foreshortening in painting give way to formal organization; sculpture became "archaic" and geometrical; there was a

renaissance of verse, of "absolute" music. The counterpart in architecture has been a renewed interest in unity and simplicity of form, as against a functional or dynamic emphasis. As in previous great periods of abstract composition of mass and space, the fifteenth and eighteenth centuries, there has been a reversion to the classic elements, regarded as a universal language of elementary geometrical simplicity. Beginning in New York in the eighties with Joseph Morrill Wells, White, and McKim, triumphing at the Chicago Fair, the movement, American in its genesis, is now pressing on to foreign conquests.

Even the skyscraper, the last stronghold of functionalism, is yielding. Long ago had come a voice of protest, that "instead of constructing first, without pre-occupation with the final appearance, promising oneself to utilize the ingenuity of the construction as the decoration, one should relegate the ingenuities of structure to a position among the secondary means, unworthy of appearing in the completed work." Even as to an effect of loftiness it might be argued that a sheer cliff of bedded stone is as impressive in its height as the serried trunks of the forest. By 1912 the leaders of the formalists, Platt and McKim, no longer compromised. In the tall New York apartments east of Central Park, in the Leader-News Building at Cleveland, the steel frame disappeared again behind sheer unbroken walls, the merits of which lay in uniformity and proportion. The zoning law of 1915 has placed a premium on

varied compositions of mass, and these possibilities of form are now engaging the designers. For better or worse, the problem of expressing the steel frame, so crucial in the nineties, has become a dead issue.

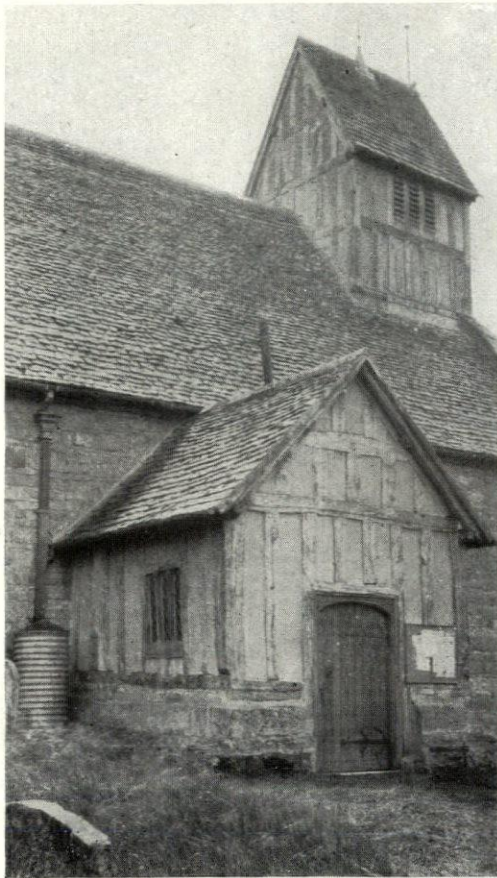
Instead of the forerunner of the new century, Sullivan, we now see, was the last great leader of the old. He was the Monet; Wells the Cézanne. Like Monet, living on into another age, he was within his life-time already an old master.

In the revaluing which accompanies such a change of ideals as has taken place in the past generation, many a reputation has gone down. In their narrow search for truth to nature, for expression of use and structure, too many of the impressionists and functionalists lost all form. The little men have now only a historical position. The quality of greatness, however, is to survive such changes, by fulfilling the new demands as well as the old. The exaltation of an ideal of form has not dimmed the luster of Sullivan's achievement. We find the Wainwright Building, still more the Guaranty Building, simple, crystalline, cast in one jet. In them Sullivan rose superior to any merely mechanical theory of expression. The steel occurs only at alternate piers, yet all are uniform. A unity of form has been arbitrarily achieved. The artist has felt, not calculated. Louis Sullivan lives not merely as the founder of a great school of the past, but as a master who can speak out of the past to pupils of succeeding generations in the eternal language of form.

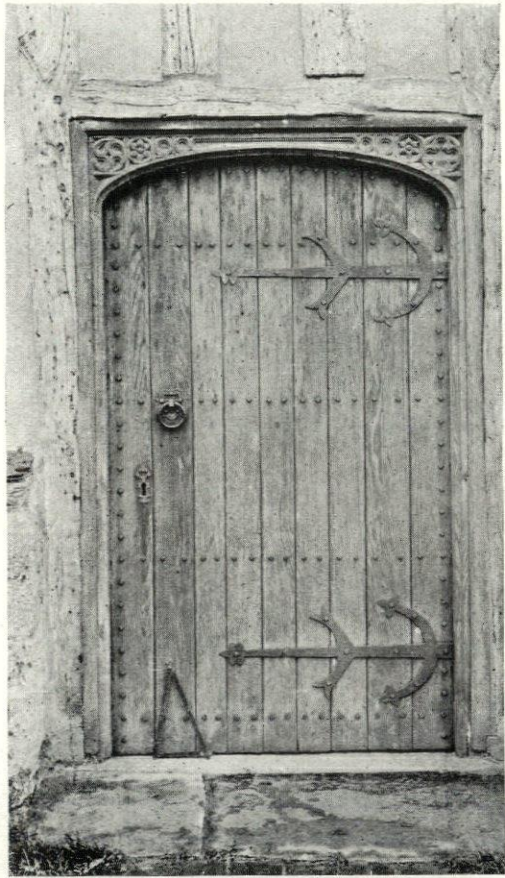


— The —  
ENGLISH PARISH CHURCH  
AND ITS DETAILS

By  
*Robert M Blackall*  
*Measured Drawings and Photographs by the Author*

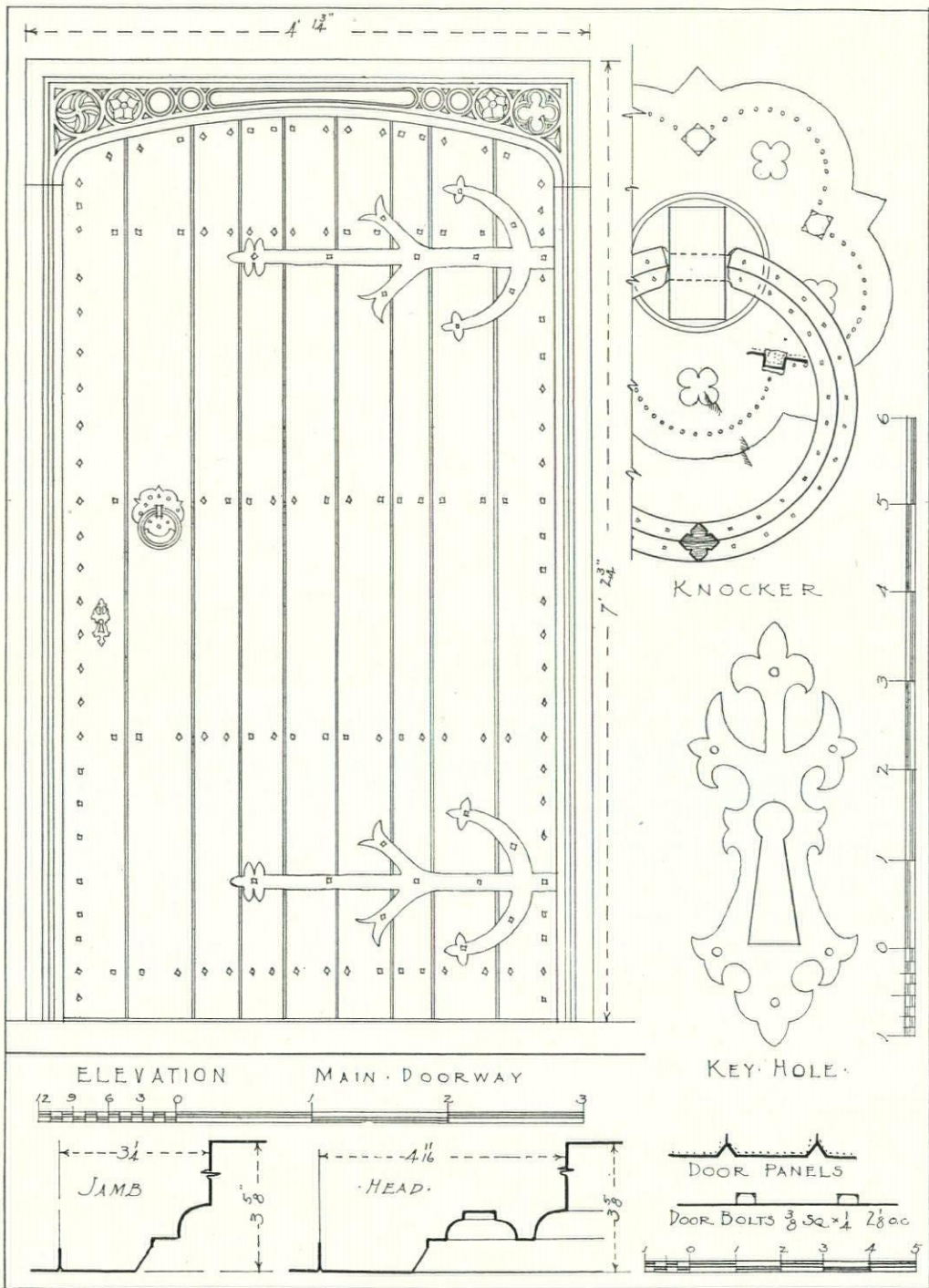


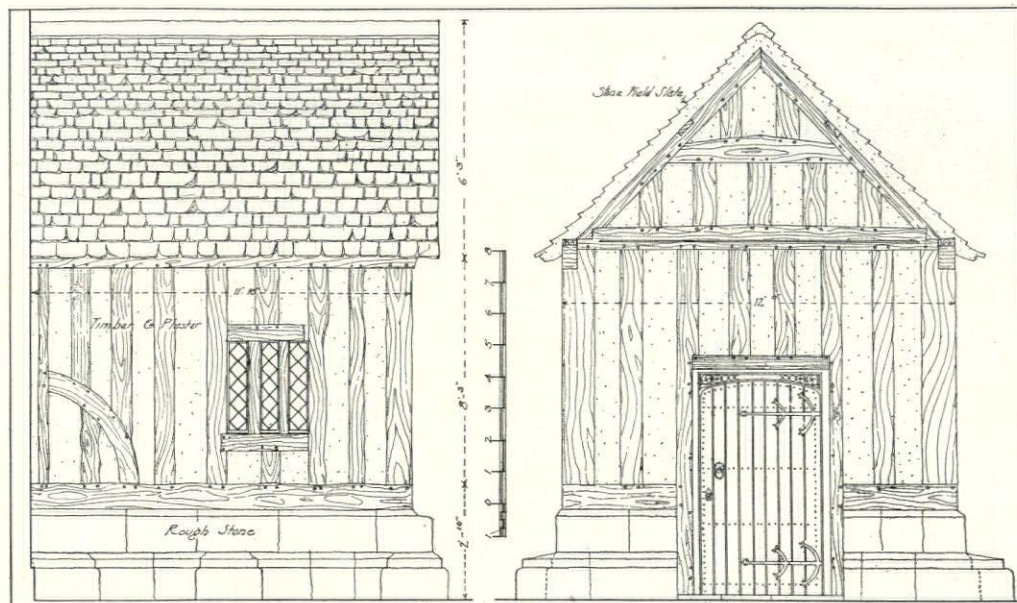
Half-timber Porch



Detail of Door

PORCH OF THE CHURCH AT LONG MARSTON, COTSWOLD DISTRICT, ENGLAND





PORCH OF CHURCH AT LONG MARSTON, COTSWOLD DISTRICT, ENGLAND

Measured and Drawn by Robert M. Blackall

PORCH OF THE CHURCH AT LONG  
MARSTON, ENGLAND

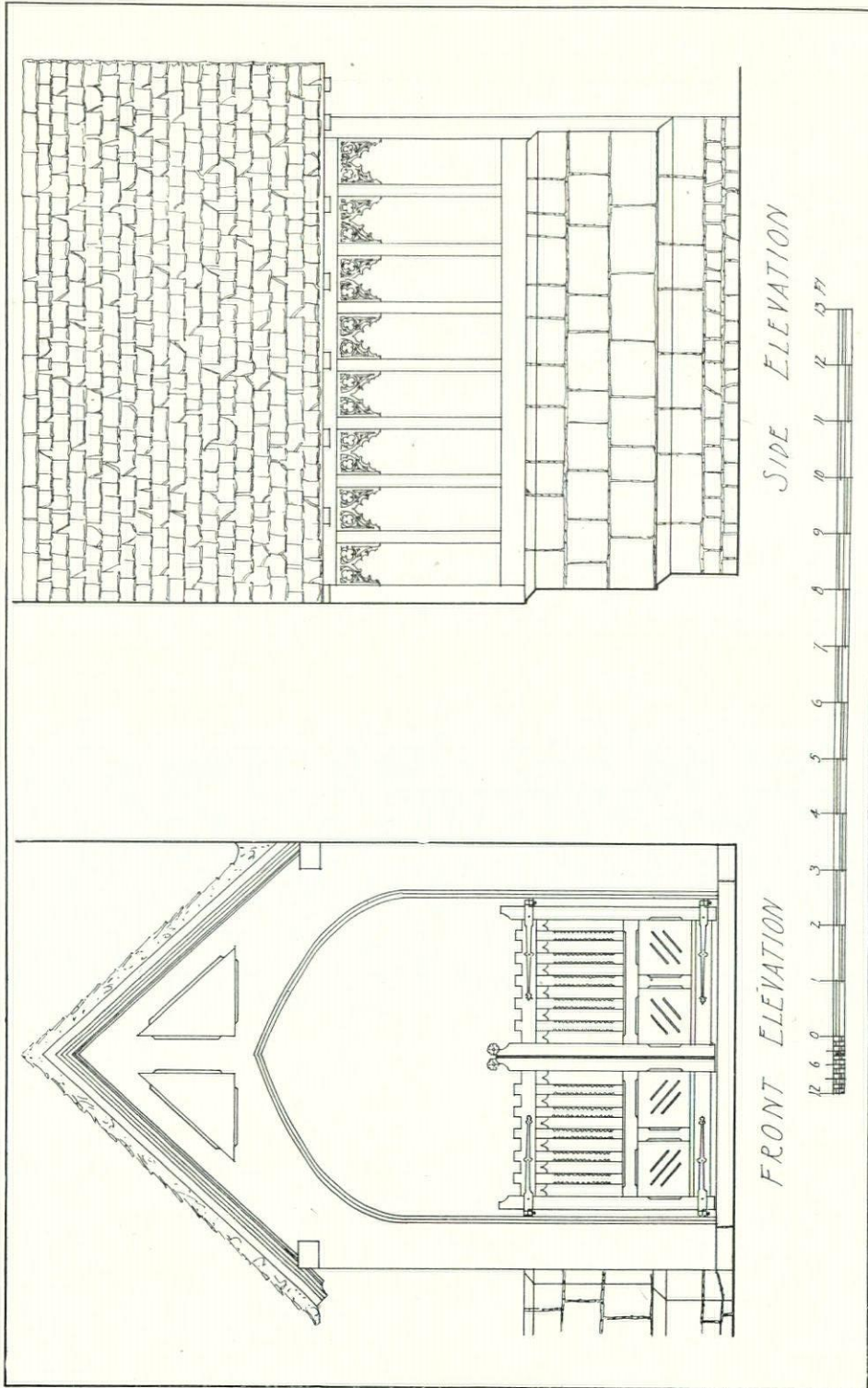
Long Marston is situated at almost the dividing line between the half timber work of the Shakespeare Country and the stone work of the Cotswold District. The church at Long Marston is of half timber and typical of this type of church, fitting in delightfully with the half timber houses in the neighborhood.

While the door is a modern renovation of the old door, the half timber of the porch is the old original work. The roof is covered with the grey stone field slate typical of the Cotswold house instead of the thatched roof usually seen on the half timbered Shakespearean house.

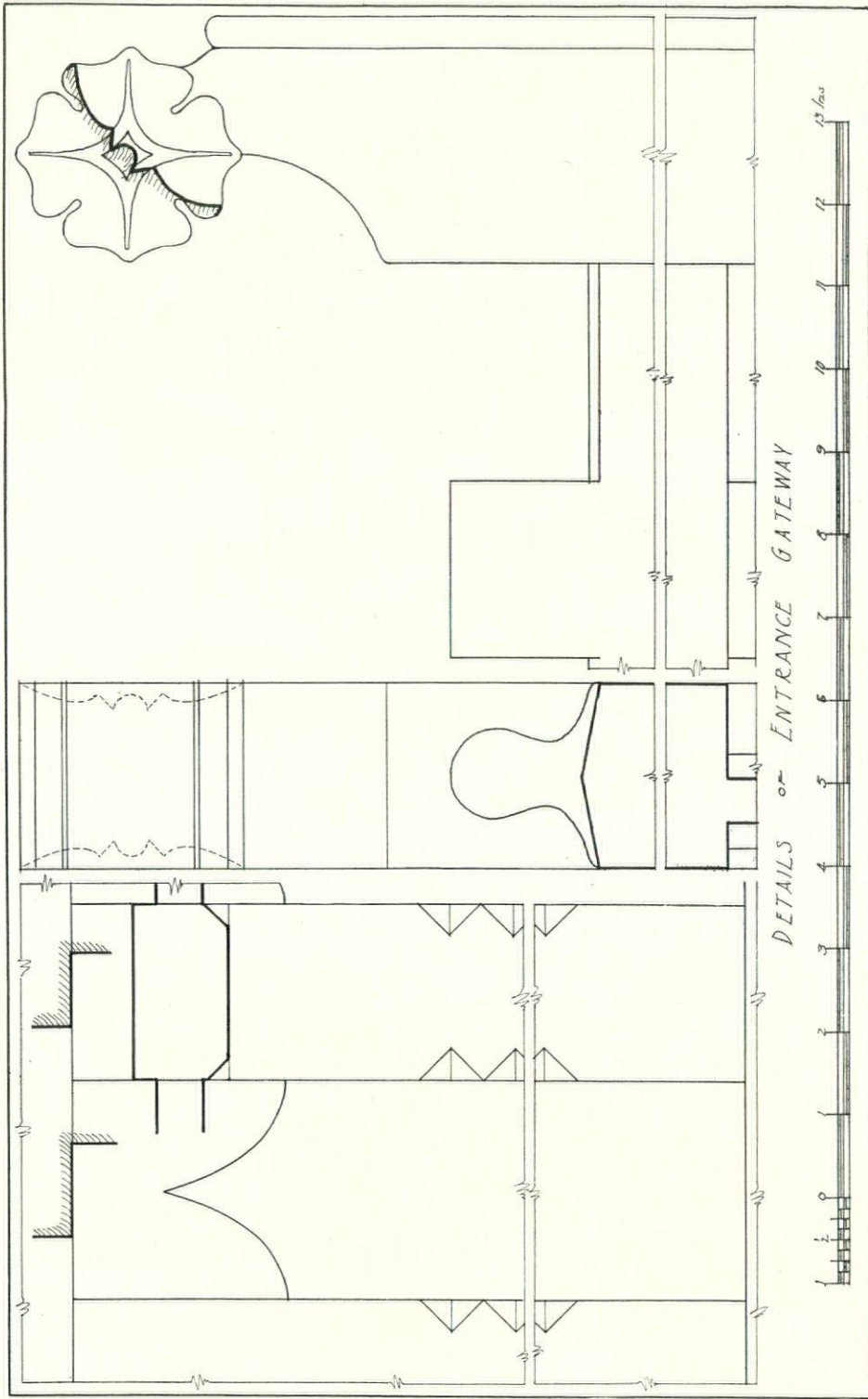
PORCH OF CHURCH AT WIXFORD,  
ENGLAND

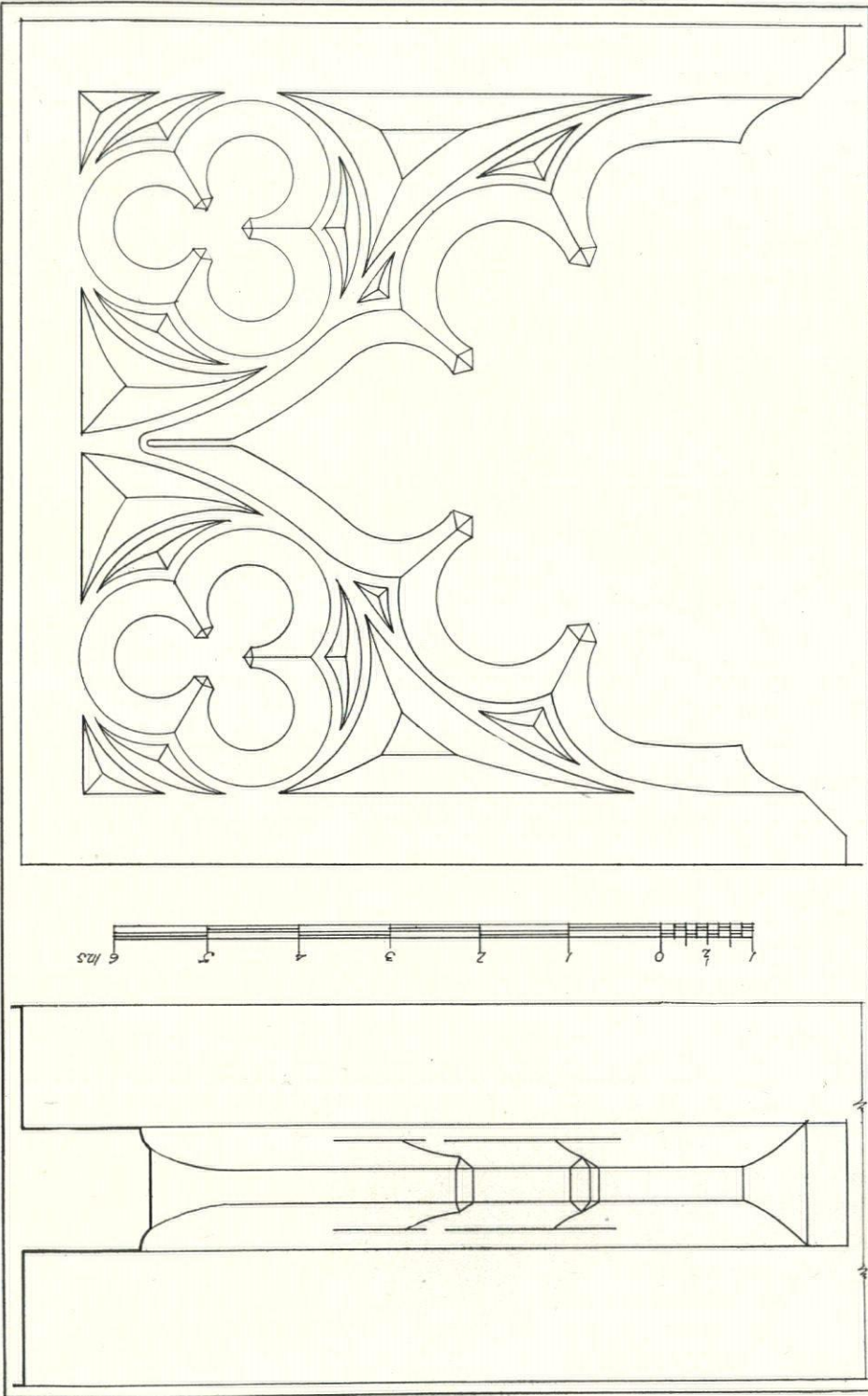
This porch has been built in modern times, but is a good example of the wood work which is being done at the present time in the English parish churches.

Like most of the porches, it sets on a concrete or stone base, with half timber framing, carrying the roof of the porch. The front is entirely of wood, and the verge board, which is out approximately ten inches from the face of the front, is molded, while the remaining rafters in the interior are simple rectangular beams. A little tracing has been placed between the posts on the side, and some of the wood work on the gate has been carved.





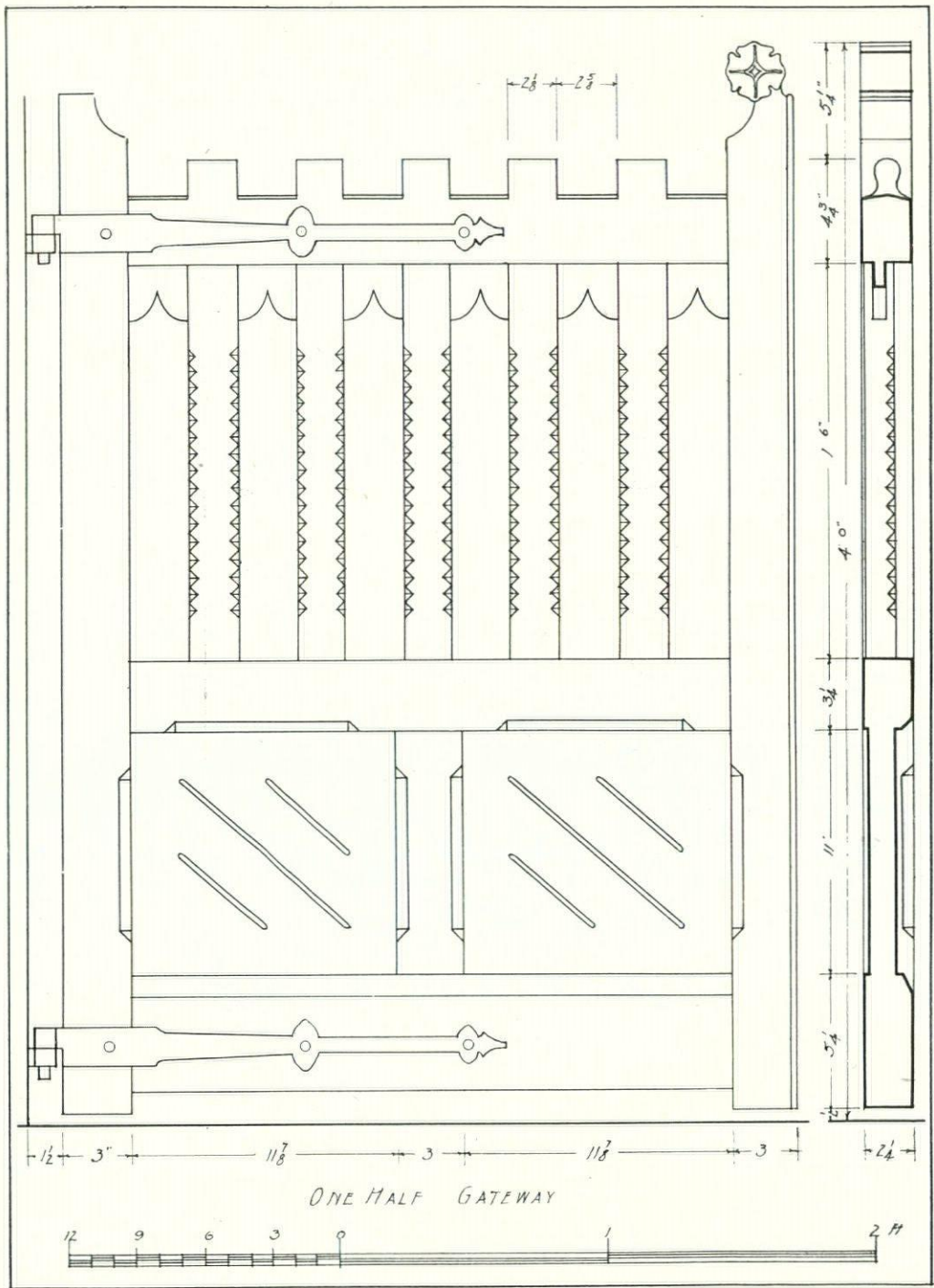




April, 1925

Detail of Porch  
 CHURCH AT WIXFORD, WARWICKSHIRE, ENGLAND  
 Measured and Drawn by Robert M. Blackall

*The Architectural Record*





# PAST WRITINGS ON MEDIÆVAL ARCHITECTURE

By  
Charles H. Moore

## PART II.

WILLIS, WHILE IN his essay on vaulting—published in the *Transactions of the Royal Institute of British Architects*, vol. I, part II, 1842, showing rare comprehension of the principles of such vaulting as he deals with, still follows Rickman in grounding his classifications of mediæval styles or unimportant features and insignificant details. He repudiates Whewell's just conclusion respecting the origin of the use of the pointed arch as a structural necessity in the new vaulting, afterwards carried out in the whole building; and affirms a distinction between what he calls "*Mechanical and Decorative construction*," that has no justification in reason and no existence in genuine art. In his *Remarks on the Architecture of the Middle Ages* (London: 1835), he begins a discussion of this supposed distinction by saying: "The eye, even of an unpracticed observer, when viewing a magnificent building, is never satisfied unless the weights appear to be duly supported, and it receives a corresponding pleasure when that is the case. Hence in all complete styles, part of the decoration is made to represent some kind of construction . . . to be sure, this apparent frame is often totally different from the real one, but so long as the inconsistency is concealed, that is a matter of no consequence. It appears then, that there are two things to be observed in the construction of a building; how the weights are really supported, and how they seem to be supported. The first I shall call the *mechanical*, or actual construction, and the second the *Decorative*, or apparent construction, and it is necessary to make a strong dis-

inction between them. In the decorative sense it is allowable to speak of shafts sustaining weights which are held up by connection with the wall behind, . . . the mechanical construction is no less important; and above all should be observed the artifices by which it is concealed, and adapted to what is very often a totally different *Decorative construction*" (pp. 15, 16).

Such a notion could arise only from uncritical study of what I have called spurious Gothic building. It is only in such building that shafts have an appearance of bearing weights that are really "held up by their connection with the wall behind." In true Gothic art there is no false appearance of structure. The vaulting shafts of Amiens and Reims are not dependent on walls, since there are no walls on which to depend. A little attention to structure in the French Gothic monuments would dispel this absurd notion. Willis himself virtually recognizes its fallacy, for he goes on to say: "in Egypt and Greece we behold the actual stones of which a building is composed ornamented with mouldings and so decorated as to display their connection, . . . in this case the decorative construction is identical with the mechanical construction; and we may naturally expect to find it so with the works of men unfettered by sophistical notions"—a frank, though unwitting, admission that the art in which his two kinds of construction are found, is sophistical, or what I call spurious.

It should, I think, be obvious that good art is produced only by men unfettered by sophistical notions; and it ought to

be seen that since imperial Roman times, sophisticated art has predominated in Europe, and that in the great complex of what is loosely called Gothic architecture, the only genuine style is that of the Ile-de-France of the twelfth century. For in this French art alone, among the arts of the middle ages, in Western Europe, is structure consistent and duly manifest in every feature, while no false simulations of structure occur.

Among other early English writers, Thomas Hope, in his *Historical Essays on Architecture*, published in 1840, shows further gropings after principles of construction, but no clear grasp of them in any particular. For example, in what he calls pointed architecture, he says: "insulated pillars with intervening openings, were in part substituted for walls," and adds, "In the new fashion architects conceived the idea of making the essential supports and stays of the stone building entirely like those of an edifice put together of wood, or of a timber frame." But the skeleton of piers, arches, and buttresses in Gothic construction is nothing like the frame of a wooden building. It is on a fundamentally different principle. The wooden frame is held together by pinning the parts one to another—cross strains being met by the tension of ties; whereas the Gothic framework of stone is made secure on the principle of compression, thrusts being met by abutments. There is no tensile action in the Gothic framework, which is made up of small stones held together by the action and reaction of balanced forces.

In an almost unintelligible passage, which yet has glimmerings of truth, the writer says: "Like the carcasses of vertebrate animals, are those parts necessary for the general substance and stay of the body—the bones, and spine—moulded into slight masses, distinct from each other, and left between them intervals filled up by yielding flesh and their integuments . . . . In the vault, now always made groined, the parts of the arches at right angles with each other, and the intervening cross springers, which were to fall immediately on the

pillars, acquired the exclusive task of supporting directly the timbers of the roof above; and received alone the substance requisite for that purpose; and were converted from continued inclined bodies to ribs and stays, narrow and separate from each other, leaving between them, like pillars, wide insulated spaces: architects only tied the summit of each to that of each of the rest, by transverse beams or joists of stone, called ridge stones, forming to them a sort of spine, and with them a species of reticulation; nay, in order that the separate stays, thus multiplied, might combine, with less width, greater strength, they converted them from wide shallow bands apparent in the Lombard construction, into deep but narrow plates rounded downwards." (pp. 310, 311).

What the writer appears to mean is, I take it, (1) That a Gothic building has a supporting frame, and that the vault shells may be likened to the flesh and integuments in the body of an animal; (2) that the cross springers, or transverse ribs, support the timber roof; (3) that these and the other ribs may be conceived as gathered out of the vault shells—like Mr. Ruskin's columns gathered out of a wall; and (4) that the members called ridge ribs (which do not, however, occur in true Gothic vaulting), function like beams or joists of stone. His first point, namely, that the building has a supporting skeleton, is true of the pure French Gothic, but of no other mediaeval architecture. His second point is, however, entirely erroneous; for the transverse ribs, or cross springers, do not at all support the timber roof, or have any connection with it. The timber roof is an altogether independent covering which rests on the piers that rise from the ground—its tie beams clearing the vaulting by several feet. His conception of the ribs as members gathered out of the vault shells, as it were, ignores the fact that the rib system is in no way incorporated with the vault shells, but is wholly independent of them—merely furnishing a support on which they rest. His remarks on what he calls beams or joists of stone, involve essential error;

for these members are not coherent like beams of wood which are self supporting throughout their lengths when supported at the ends. They are composed of small separate stones, held together by compression on the principle of the arch.

Later English writers proceed on the same lines as their predecessors. Ferguson, for example, in his *History of Architecture in all Countries*, begins his section on that of England by saying: "It is perhaps not too much to assert that during the middle ages architecture was practised in England with greater success than among any of the contemporary nations. In beauty of detail and elegance of proportion the English cathedrals generally surpass their continental rivals. It is only in dimensions and mechanical construction that they are sometimes inferior" (vol. 2, p. 119). Rightly urging the importance of study of the monuments, he says: "for the purpose of such a study, the English mediaeval architecture is, perhaps, the most complete and perfect. Nowhere else can the gradations of change be so easily traced; and in no other style was there so little interference from extraneous causes." The writer offers no reasoned discussion in support of this affirmation. He writes in manifest ignorance of the real character of the French Gothic style, in which alone it will, I think, be found that the creative developments of Gothic art were worked out.

Parker, in his *Introduction to the Study of Gothic Architecture*, published in 1849, is equally emphatic. He says (p. 217): "The English Gothic is as thoroughly national as that of any other country; perhaps, from our insular position, it is even more distinct and independent than that of any other people." And again (p. 219) he declares: "The Gothic of England is more perfect, more pure, more systematic, better proportioned, more consistent, than that of any other country."

Nor, with few exceptions, has better work been done on the continent. French writing on the subject begins virtually with De Caumont in the twenties of last century. This writer, in his *Abécédaire*

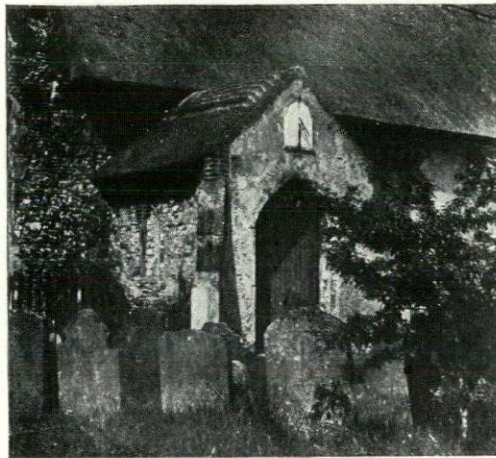
*d'Archéologie*, gave a wrong direction to methods of investigation and classification, by, like Rickman, making details the basis of his system. Thus, through the great popularity which his writings promptly attained, he had a harmful influence on subsequent French studies of the subject. It was not until the middle of the nineteenth century that the study of mediaeval architecture was put on a right foundation by the genius of Viollet-le-Duc, who saw that the primary characteristics of styles arise from structure. Through quick apprehension of the principles of construction in each of the different types of mediaeval building, and through strenuous first-hand examination of the monuments, he became pre-eminently competent as a writer. For accuracy of observation and clarity in description, he has not been equalled by any other writer. No warping of judgment from patriotic zeal, nor any obscurity of language, will be found in his works. Minor errors, such as no man, however competent and careful, can wholly avoid, may sometimes be met with in his writings, but they are rare. The personal equation counts for little in his works, because he wrote from experience, with a mind intent on observed facts.

Viollet-le-Duc has had no followers. No other writers have started with like aptitude, and equipped themselves by so solid attainments. Adverse influences, academic and popular, have prevailed against his teaching. Thus the later French literature on the architecture of the middle ages has continued on the lines of De Caumont, with a very few partial exceptions—notably that of Quicherat, who, under the influence of Viollet-le-Duc, strove to take due account of structure as a determining factor in the making of a style. But Quicherat's apprehensions of structure were not profound. His genius was not of a sort to lead him far in this direction. Of actual contact with buildings and building operations, of a kind to quicken insight into mediaeval principles of structure, he had no adequate experience. Like most other recent French writers, he was an *archiviste*

*paléographe*, and thus inclined to give first importance to the study of written documents, and to forget that the documents which chiefly matter are the extant buildings themselves. Quicherat—as indeed Viollet-le-Duc himself while feeling his way in the unexplored field—lays stress on geographical variations of styles, and does not see that these variations are for the most part unessential, consisting largely of mixtures of incongruous elements, borrowed from different sources and assembled without creative changes in adaptation to new

conditions—as the barrel vaulting of Southern Gaul, derived from the ancient Roman buildings of that region, coupled with grouped supports fashioned after those of the organic vaulted Romanesque of Lombardy; and the domes on pendentives over long naves, of the Périgord—as well as countless other heterogeneous mixtures which make up the vast bulk of spurious building which I have mentioned earlier in this article.

We cannot here go on to consider the writings of other continental countries, but they are not materially different.



# The LIBRARY OF THE ARCHITECT



By

*A Lawrence Kocher*

## PART VIII

### SELECTED LIST OF STANDARD WORKS RELATING TO ARCHITECTURE AND INTENDED FOR OFFICES OF ARCHITECTS

#### ORNAMENT

BRAGDON, CLAUDE F. Projective ornament. Rochester, N. Y., 1915.

HAMLIN, A. D. F. A history of ornament. N. Y. 1916-23. 2 v.

JONES, OWEN. The grammar of ornament. London, 1856.

A useful work for ornament in color.

MATÉRIAUX et documents d'architecture et de sculpture classés par ordre alphabétique. Directeur: A Ragueneau. Chicago, 1872-1914. 10 v.

MEYER, FRANZ SALES. Handbook of ornament. N. Y. n.d. \$3.50.

PIRANESI, GIOVANNI B. Vasi, condelabri, cippi, sarcofagi, tripodi, lucerne ed ornamenti antichi. Roma, 1778.

RACINET, A. L'ornement polychrome. Paris, 1873-86. 2 v.

SPELTZ, ALEXANDER. Das farbige Ornament aller historischen Stile nach eigenen Aquarellen. 1914-23.

————— The styles of ornament from prehistoric times to the middle of the XIXth century. London, 1910. \$10.00.

WEYHE, E. Ornament. N. Y., 1924.

#### LANDSCAPE ARCHITECTURE, CITY PLANNING

ADSHEAD, S. R. Town planning and town development. London, 1923.

BLOMFIELD, SIR REGINALD T. The formal garden in England. London, 1892.

ELIOT, CHARLES W. Charles Eliot, landscape architect. Boston, 1902.

GODFREY, WALTER H. Gardens in the making; designs by the author and Edmund L. Wratten. London, 1914.

HARVEY, WILLIAM A. The model village and its cottages; Bourneville. London, 1906.

HAVERFIELD, F. J. Ancient town planning. Oxford, 1913.

JEKYLL, GERTRUDE AND LAWRENCE WEAVER. Gardens for small country houses. London, 1914.

LATHAM, CHARLES. The gardens of Italy. London, 1905.

LEYLAND, JOHN AND HENRY A. TIPPING. Gardens old and new; the country house and its garden environment . . . London, 1900-08. 3 v.

REPTON, HUMPHREY. Observations on the theory and practice of landscape gardening. London, 1803.

TRIGGS, HARRY INIGO. The art of garden design in Italy. London and N. Y., 1906.

————— Formal gardens in England and Scotland. London, 1902.

————— Garden craft in Europe. London, 1913.

————— Town planning, past and present. London, 1909.

For Italian gardens see Italy.

#### BOOKS ON THE ARCHITECTURE OF

#### COLONIAL AMERICA AND OF THE EARLY REPUBLIC

BACH, RICHARD F. Books on colonial architecture listed in *The Architectural Record*, v. 38, 39 and 40.

BAXTER, SYLVESTER. Spanish-colonial architecture in Mexico. Boston, 1901.

BENJAMIN, ASHER. A reprint of The country builder's assistant, The American builder's companion, The rudiments of

architecture, *The practical house carpenter, Practice of architecture* by Asher Benjamin. Edited with text by Aymar Embury II. N. Y., 1917.

BROWN, GLENN. *History of the United States Capitol*. Washington, D. C., 1900.

CHANDLER, JOSEPH EDWARD. *Colonial architecture of Maryland, Pennsylvania and Virginia*. Boston, 1900.

————— *The colonial house*. N. Y. 1906.

COFFIN, LEWIS A. AND A. C. HOLDEN. *Brick architecture of the colonial period in Maryland and Virginia*. N. Y., 1919. \$16.50.

CORNER, JAMES M. AND E. E. SODERHOLTZ. *Examples of domestic colonial architecture in Maryland and Virginia*. Boston, 1892.

————— *Examples of domestic colonial architecture in New England*. Boston, 1891.

CRANE, EDWARD A. AND E. E. SODERHOLTZ. *Examples of colonial architecture in Charlestown, South Carolina and Savannah, Ga.* Boston, 1895.

CUNNINGHAM, HARRY F. AND JOSEPH A. YOUNGER. *Measured drawings of Georgian architecture in the District of Columbia; 1750-1820*. N. Y., 1914.

COUSINS, FRANK. *Colonial architecture, (Fifty Salem doorways)*. N. Y., 1912.

EBERLEIN, HAROLD D. *The architecture of colonial America*. Boston, 1915.

ELWELL, NEWTON W. *Architecture, furniture and interiors of Maryland and Virginia during the 18th century*. Boston, 1899.

EMBURY, AYMAR II. *Early American churches*. N. Y., 1914. Appeared originally in the *Architectural Record*.

————— *The Dutch colonial house*. N. Y., 1913.

An inadequate account of the Dutch colonial house.

FRENCH, LEIGH. *Colonial interiors*. N. Y. 1923.

THE GEORGIAN PERIOD; text edited by William Ware, N. Y., 1923 Ed. 6 v.

The monumental collection of drawings and photographs for early American architecture.

GOFORTH, W. D. AND W. J. MCAULEY. *Philadelphia architecture*. N. Y., 1890.

HOWE, LOIS AND C. FULLER. *Details from old New England houses*. N. Y., 1913. \$12.50.

ISHAM, N. M., AND A. F. BROWN. *Early Connecticut houses, an historical and architectural study*. Providence, 1900.

————— *Early Rhode Island Houses, an historical and architectural study*. Providence, 1895.

JACKSON, JOSEPH. *American colonial architecture*. Philadelphia, 1924.

KELLY, J. FREDERICK. *Early Connecticut architecture*. N. Y. 1924.

Measured drawings with full size details of moulded sections.

————— *Early domestic architecture of Connecticut*. New Haven, 1924.

KINGMAN, RALPH C., *New England Georgian architecture*. N. Y. 1913. A portfolio of measured drawings.

KIMBALL, FISKE. *Domestic architecture of the American colonies and of the early republic*. N. Y., 1922.

The first scholarly appraisal of our early architecture.

MILLAR, DONALD. *Measured drawings of some colonial and Georgian houses*. N. Y., 1916. 2 v.

NEWCOMB, REXFORD. *The Franciscan mission architecture of Alta California*. N. Y., 1916.

ROBINSON, ALBERT G. *Old New England houses*. N. Y., 1920.

SIMS, J. P. AND C. WILLING. *Old Philadelphia colonial details*. N. Y., 1914.

SODERHOLTZ, E. E. *Colonial architecture and furniture*. Boston, 1895.

SMITH, A. R. H. AND D. E. H. SMITH. *The dwelling houses of Charleston, South Carolina*. Photos and drawings by Albert Simons. Philadelphia, 1917.

WALLIS, FRANK E. *Old colonial architecture and furniture*. Boston, 1887.

WISE, HERBERT AND H. F. BEIDLEMAN. *Colonial architecture for those about to build*. Philadelphia, 1913.

#### BOOKS OF GENERAL INTEREST

ADAMS, HENRY. *Mont-Saint-Michel and Chartres*. Boston and N. Y. 1913.

————— *The education of Henry Adams an autobiography*. Boston and N. Y. 1918.

BUTLER, SAMUEL. Erehwon; or over the range. N. Y., 1910.

ANSTRUTHER-THOMAS, C. Art and man; essays and fragments. Introduction by Vernon Lee. London, 1924.

ARNOLD, MATTHEW. Culture and anarchy. N. Y., 1883.

ASHBEE, C. R. Where the great city stands; a study in the new civics. London, 1917.

"Such things as dirt, noise, the squalor of education, the need for open spaces and the ideal of the garden city affects him so passionately that his prose almost stutters"—Williams-Ellis.

BABBITT, IRVING. The new Laokoon; an essay on the confusion of the arts. Boston and N. Y., 1910.

BELL, CLIVE. Art. N. Y., 1913.

BLOMFIELD, SIR REGINALD T. The mistress art. London, 1918.

BROCK, A. CLUTTON, PERCY DEARMER, J. MIDDLETON MURRAY and others. The necessity of art. London, 1924.

CHESTERTON, GILBERT K. What's wrong with the world. Leipzig, 1910.

———. The Napoleon of Notting Hill. London, 1904.

CRAM, RALPH ADAMS. The Nemesis of mediocrity. Boston, 1917.

———. Walled towns. Boston, 1919.

CROCE, BENEDETTO. The nature of architecture. Society of Architects Journal. London, 1923. v. 16, p. 273-278.

FAGUET, EMILE. The cult of incompetence. N. Y., 1914.

A cure for intellectual inefficiency.

FRANCE, ANATOLE. Penguin Island. Paris, 1908.

———. The Latin genius. London, 1924.

FRY, ROGER. Vision and design. N. Y., 1924.

HEWLETT, MAURICE HENRY. Earthwork out of Tuscany; being impressions . . . N. Y., 1908.

———. Little novels of Italy. N. Y., 1910.

HOLBORN, J. B. S. An introduction to the architecture of European religions. Edinburgh, 1909.

LEE, VERNON, pseud. of Violet Paget, and C. Anstruther-Thomson. Beauty

and ugliness and other studies in psychological aesthetics. London, 1912.

LEE, VERNON. The beautiful; an introduction to psychological aesthetics. Cambridge, 1913.

—LETHABY, W. R. Form in civilization. London, 1922.

MORRIS, WILLIAM. The dream of John Ball. London, 1886.

MUMFORD, LEWIS. Sticks and stones. N. Y., 1924.

PARTRIDGE, WILLIAM O. Art for America. Boston, 1894.

PATER, WALTER H. The renaissance; studies in art and poetry. London, 1910.

PENTY, ARTHUR J. A guildman's interpretation of history. London, 1920.

———. Old worlds for new. London, 1917.

A study of the post-industrial state.

PHILLIPPS, LISLE MARCH. Art and environment. N. Y., 1914.

———. Form and colour. N. Y., 1915.

PORTER, A. KINGSLEY. Beyond architecture. Boston, 1918.

ROBINSON, JAMES HARVEY. The mind in the making; the relation of intelligence to social reform. N. Y. and London, 1921.

SCOTT, GEOFFREY. The architecture of humanism. London, 1914.

A summary of architectural theory but particularly a defense of classical and of the Baroque style.

SANTAYANA, GEORGE. The life of reason. N. Y., 1905-06. 5 v.

STURT, GEORGE, PSEUD., GEORGE BOURNE. The ascending effort. London, 1910.

TAYLOR, HENRY OSBORN. The classical heritage of the middle ages. N. Y., 1901.

———. The mediaeval mind. London, 1911. 2 v.

A history of the development of thought and emotions in the middle ages.

TAYLOR, RACHEL ANNAND. Aspects of the Italian renaissance. With a preface by Gilbert Murray. London, 1923.

THORNDYKE, LYNN. The history of medieval Europe. Boston, 1917.

WALSH, JAMES J. The thirteenth. greatest of centuries. N. Y., 1924.

WILLIAMS-ELLIS, C. AND A. The

pleasures of architecture. London, 1924.

(EDITOR'S NOTE)—The foregoing concludes the list of books on Architecture which first appeared in our issue of August, 1924.

This list, compiled with the advice of prominent architects of the United States and England, is not intended as a complete bibliography of the subject but rather as a classification of works likely to prove helpful to the practicing architect and the draftsman.

A summary of the various parts of the series is as follows: Parts I, II and III, appearing respectively in August, September and October, 1924, contain the views of various well-known American architects on the selection of the most helpful books on architecture.

Part IV, December, 1924, gives the views of writers and well-known archi-

tecs of England on the same subject.

Part V, January, 1925, a list of selected works under the heads: Bibliography; Dictionaries and Histories; Aesthetics and Theory of Architecture; Manuals for Draftsmen and Students of Architecture; Preclassical Antiquity; Classical Antiquity.

Part VI, February, 1925, a list of selected works under the heads: Byzantine and Early Christian Architecture; Italy; France; Spain.

Part VII, March, 1925, a list of selected works under the heads:—England, Scotland, Ireland; Germany, Netherlands, Scandinavia; The Crafts, Furniture, Sculpture, Painting.

Part VIII, April, 1925, a list of works under the heads: Ornament; Landscape Architecture, City Planning; Books on the Architecture of Colonial America and of the Early Republic.



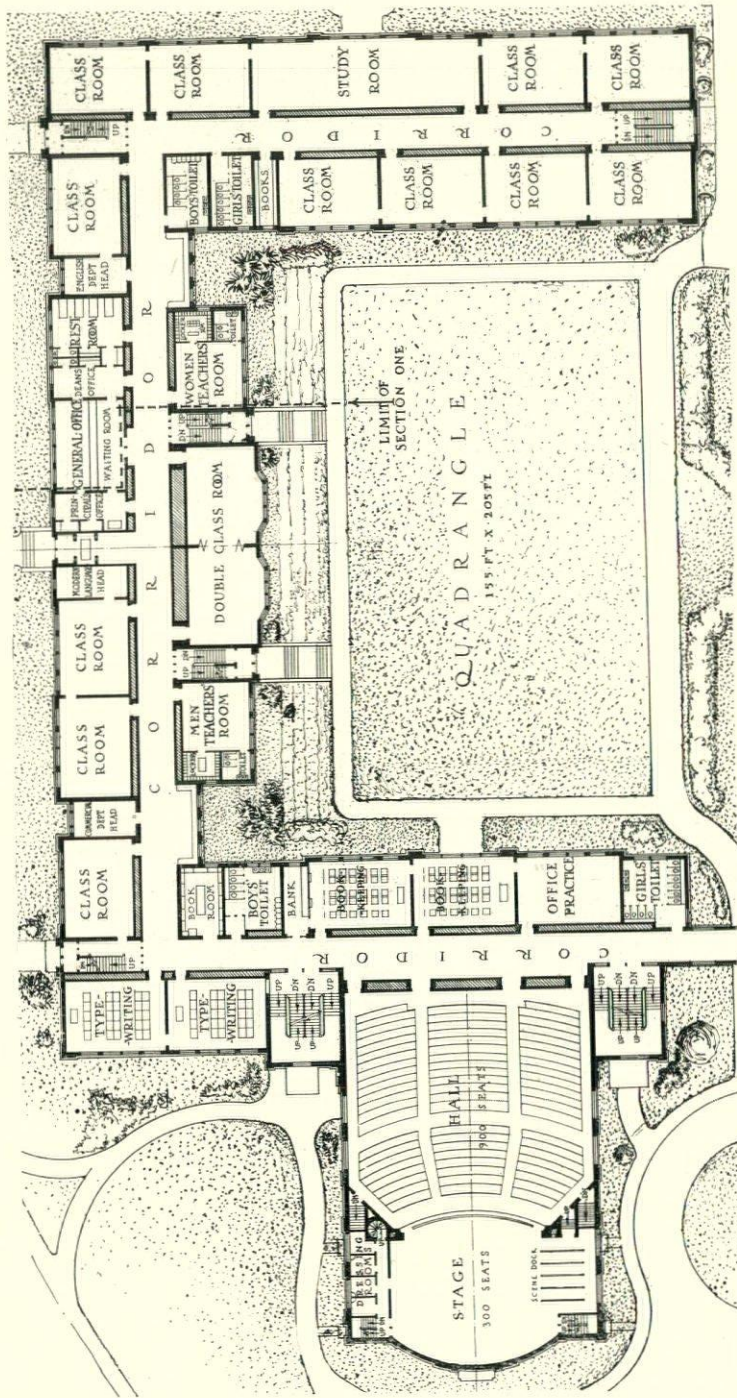
BURTON-ON-THE-WATER, GLOUCESTERSHIRE, ENGLAND



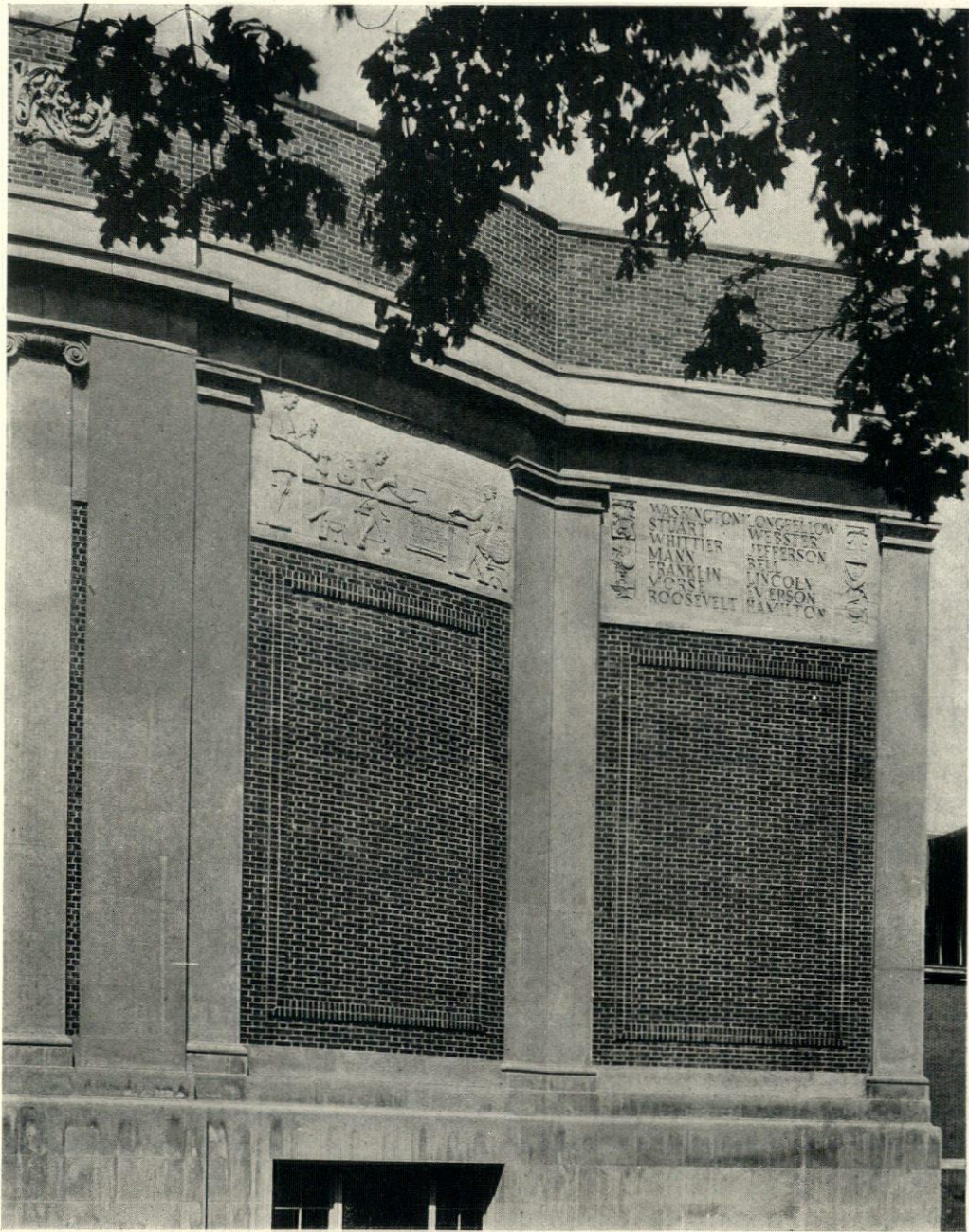
P O R T F O L I O  
C V R R E N T · A R C H I T E C T V R E



End of Auditorium, Showing Allegorical Panels  
THE HIGH SCHOOL AT BROOKLINE, MASS.  
Kilham, Hopkins & Greeley, Architects

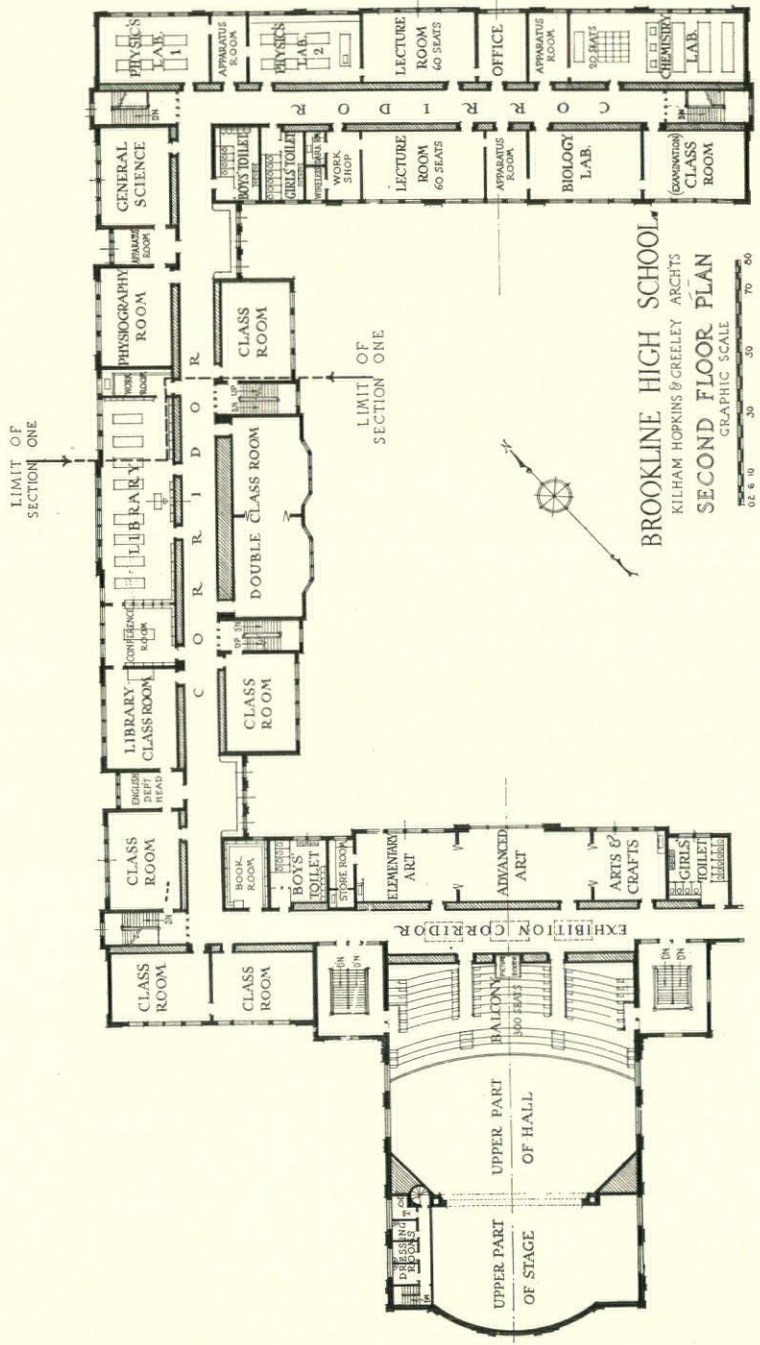


Floor Plan  
 THE HIGH SCHOOL AT BROOKLINE, MASS.  
 Kilham, Hopkins & Greeley, Architects



End of Auditorium

THE HIGH SCHOOL AT BROOKLINE, MASS.  
Kilham, Hopkins & Greeley, Architects



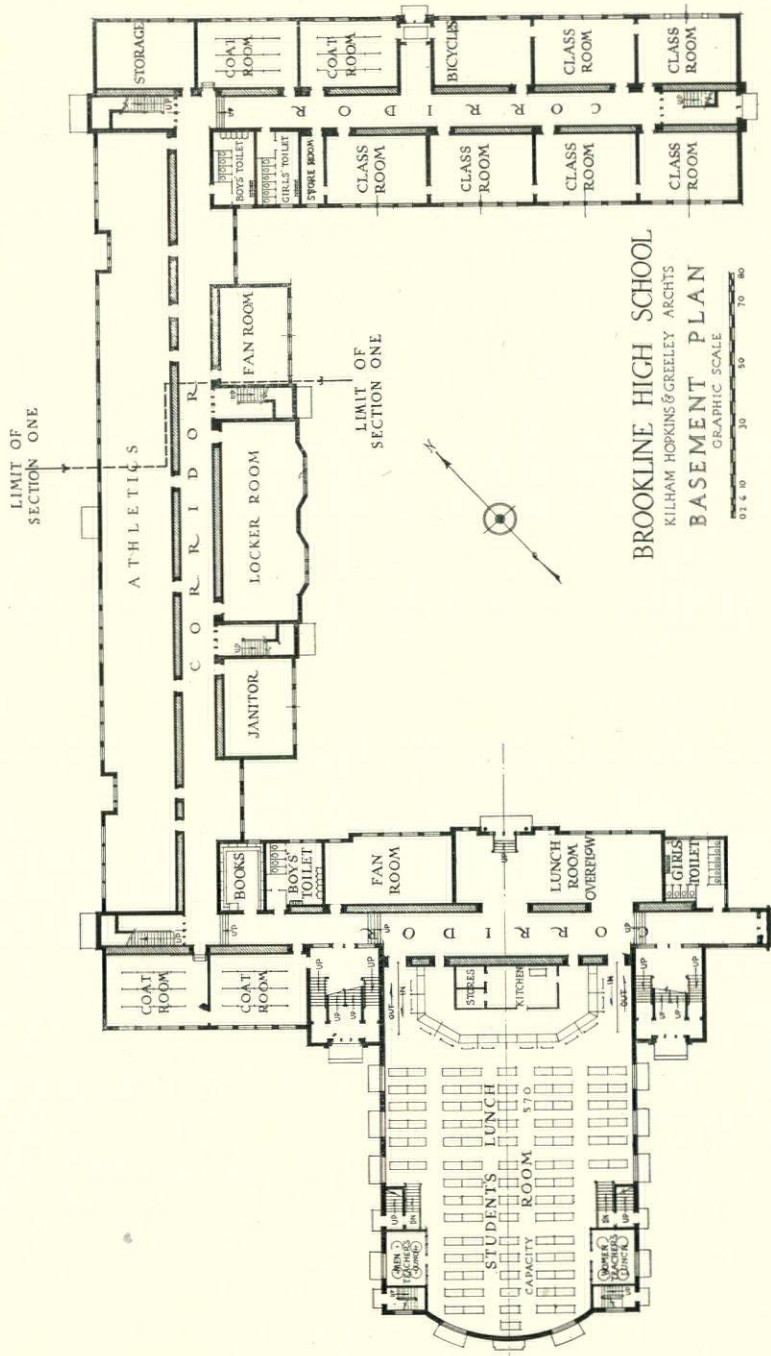
**BROOKLINE HIGH SCHOOL**  
 KILHAM HOPKINS & GREELEY ARCHTS  
**SECOND FLOOR PLAN**  
 GRAPHIC SCALE



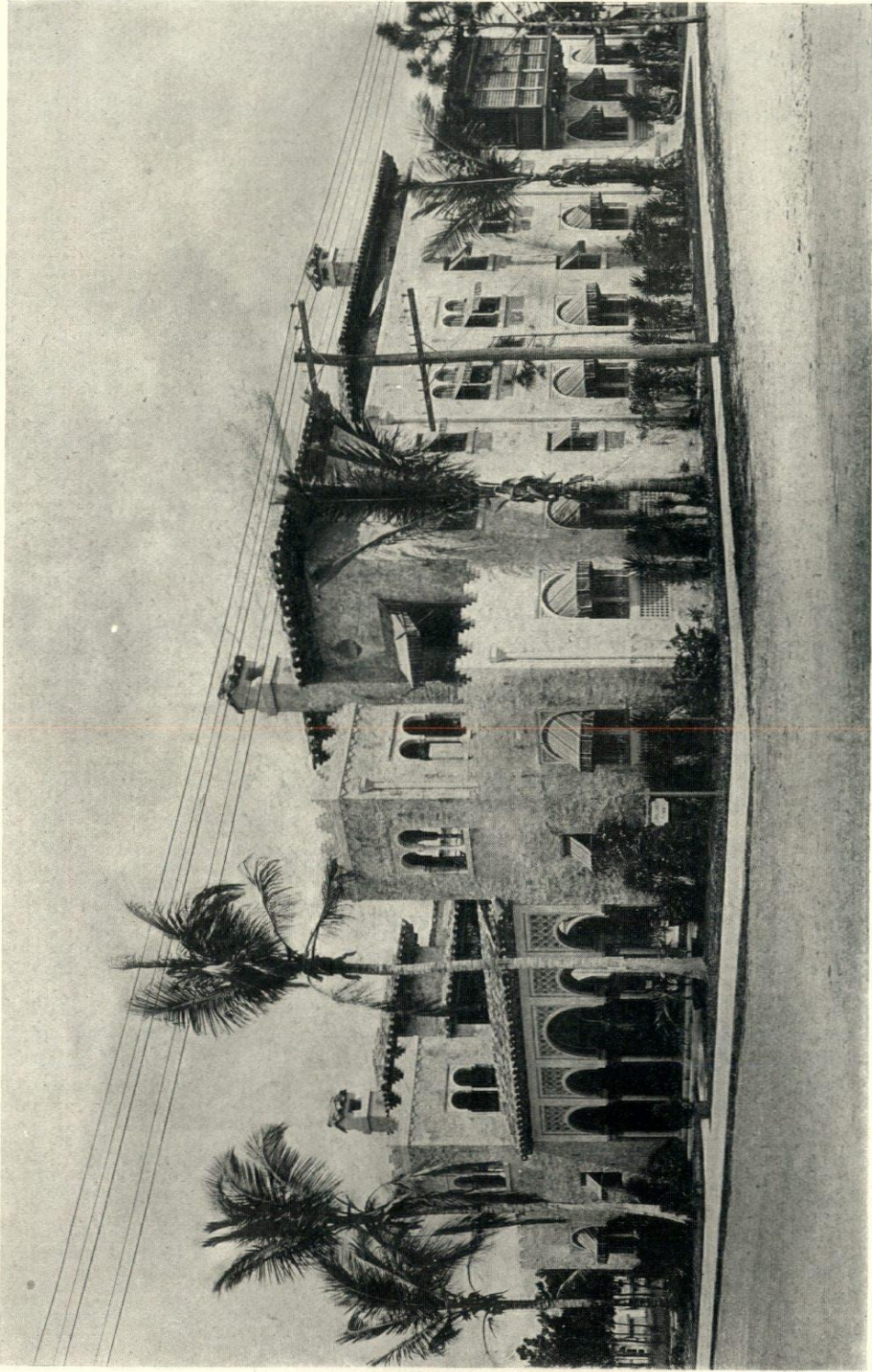


Administration Wing

THE HIGH SCHOOL AT BROOKLINE, MASS.  
Kilham, Hopkins & Greeley, Architects



BROOKLINE HIGH SCHOOL  
 KILHAM HOPKINS & GREELY ARCHTS  
 BASEMENT PLAN  
 GRAPHIC SCALE  
 0 10 20 30 40 50 60 70 80



CORAL GABLES INN, CORAL GABLES, MIAMI, FLORIDA  
M. L. Hampton, Architect







Patio  
CORAL GABLES INN, CORAL GABLES, MIAMI, FLORIDA  
M. L. Hampton, Architect





Entrance to Patio  
CORAL GABLES INN, CORAL GABLES, MIAMI, FLORIDA  
M. L. Hampton, Architect





Corner of Patio  
CORAL GABLES INN, CORAL GABLES, MIAMI, FLORIDA  
M. L. Hampton, Architect





Fountain in Patio  
CORAL GABLES INN, CORAL GABLES, MIAMI, FLORIDA  
M. L. Hampton, Architect







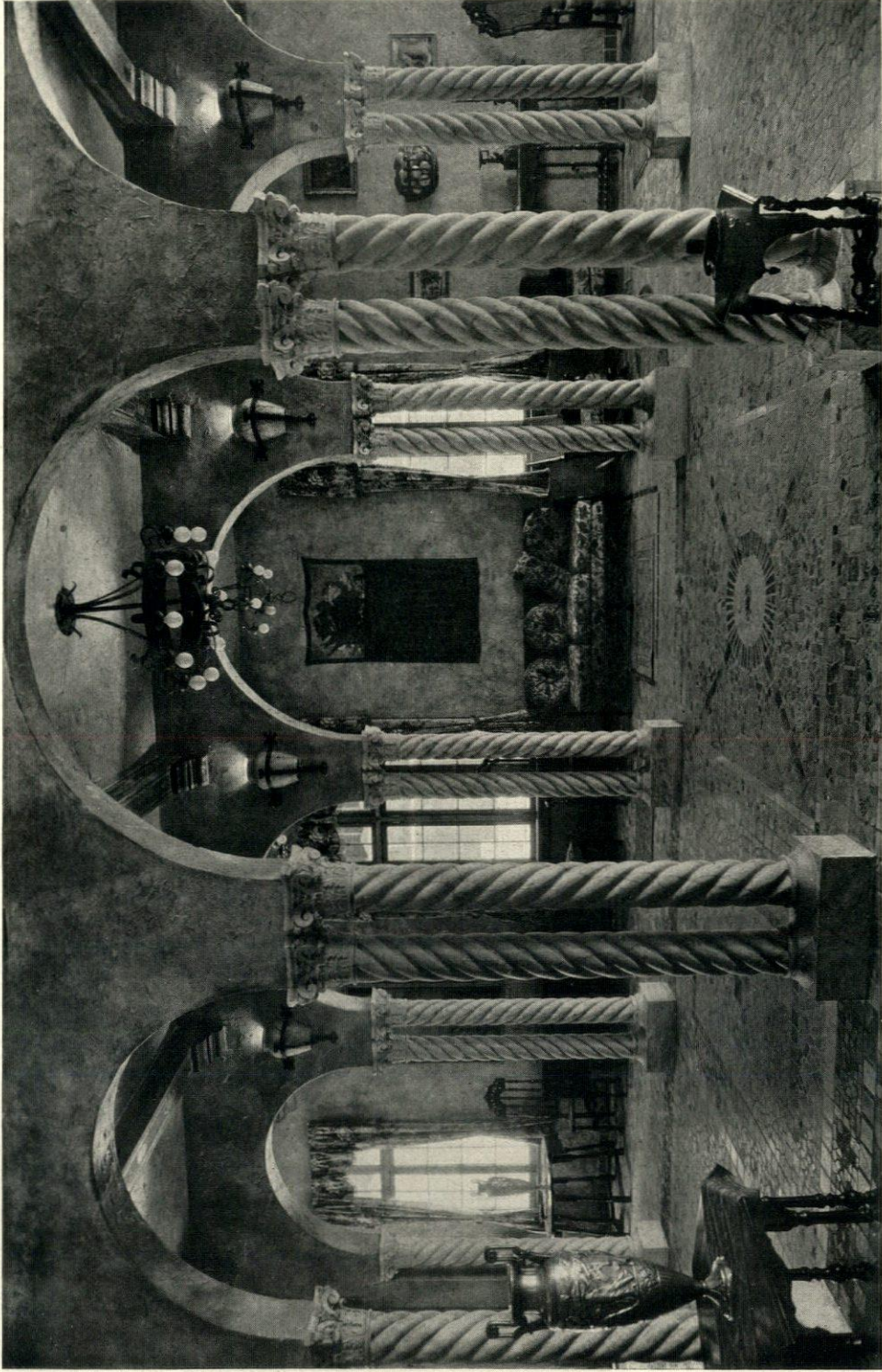
Entrance to Reception Room of Executive Office  
CORAL GABLES, MIAMI, FLORIDA  
H. George Fink, Architect





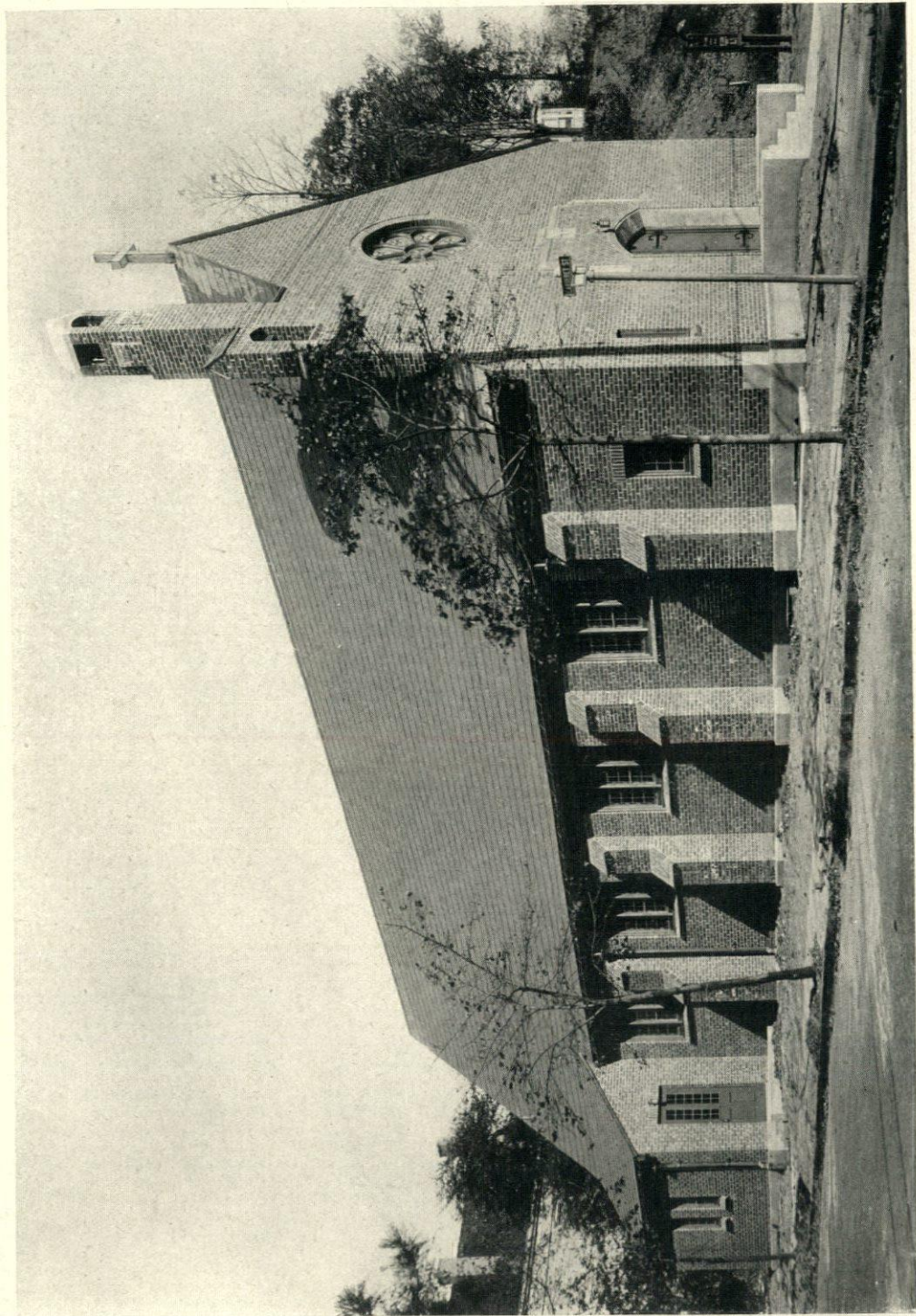
Reception Room, Executive Office  
CORAL GABLES, MIAMI, FLORIDA  
H. George Fink, Architect





Detail, Reception Room of Executive Office  
CORAL GABLES, MIAMI, FLORIDA  
H. George Fink, Architect





REDEEMER EVANGELICAL LUTHERAN CHURCH, NEWARK, N. J.  
William S. Gregory, New York, Architect







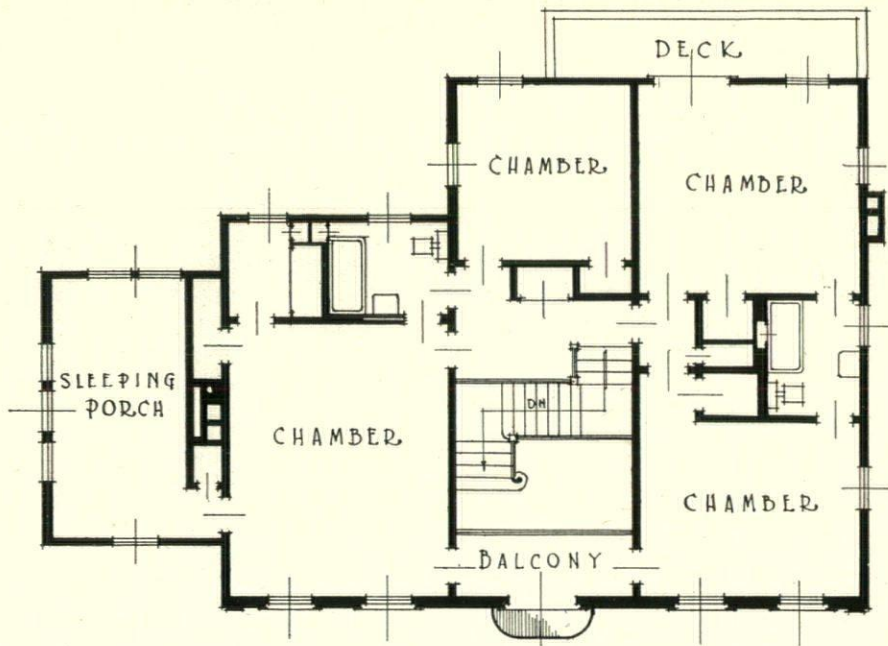
Interior

REDEEMER EVANGELICAL LUTHERAN CHURCH, NEWARK, N. J.  
William S. Gregory, New York, Architect

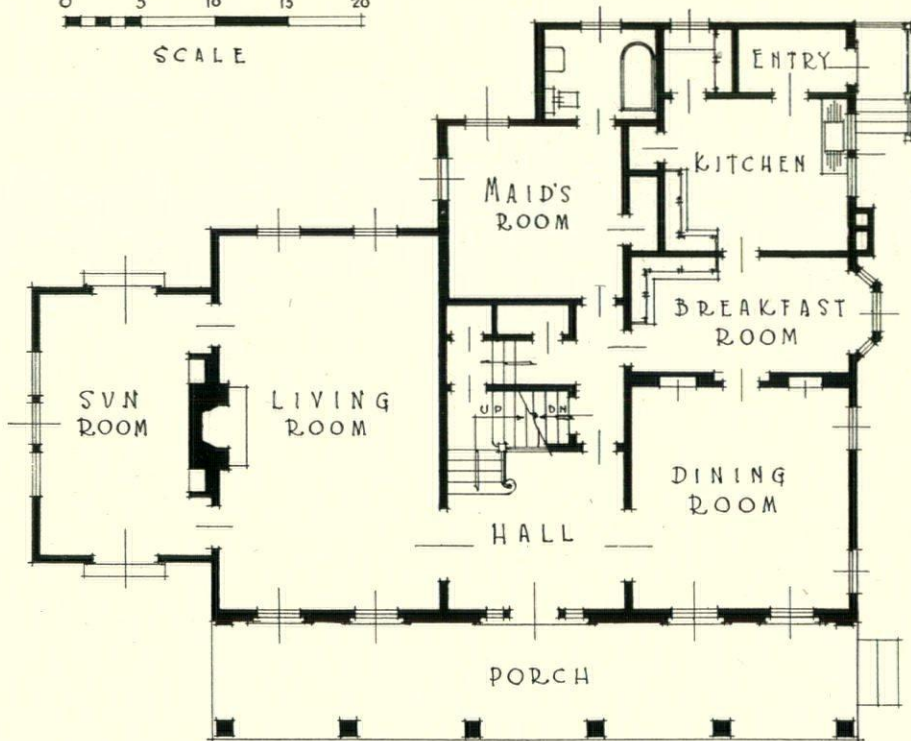
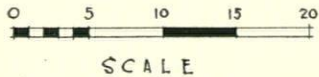




RESIDENCE OF DR. ELMER TWYMAN, KANSAS CITY, MO.  
Clarence E. Shepard, Architect



SECOND FLOOR PLAN



FIRST FLOOR PLAN

RESIDENCE OF DR. ELMER TWYMAN, KANSAS CITY, MO.

Clarence E. Shepard, Architect



Stair Hall Detail

RESIDENCE OF DR. ELMER TWYMAN, KANSAS CITY, MO.  
Clarence E. Shepard, Architect





Fountain "The Vine"  
GARDEN OF MRS. VALERIA LANGELOTTI, RIVERSIDE, CONN.  
Noel Chamberlin, Landscape Architect  
Harriet W. Frishmuth, Sculptor





# ~ SYNTHETIC HARMONY ~ A STUDY IN CONCRETE BEAUTY

By  
Gerald Lynton Kaufman, AIA

THE ANCIENT Roman adage, "Art is long and Beauty is only skin deep," has at last fallen before the onslaught of modern science. Art may nowadays be reduced to a few simple formulas and may be used quite beneficially by all sorts and conditions of men, if taken with the proper proportions of mathematics. Beauty is no longer an amorphous, volatile, and inconstant abstraction; it is a fixed and definite science based upon all laws of the laboratory except those of physiology and biology, and it has become, thanks to the researches of modern mathematicians, so simple and easy that even a child can operate it.

Aesthetic appreciation no longer bears a relation in the individual to pocket-book, nationality, philosophy, religion, or sobriety; the standards of beauty are the same for banker, Babylonian, Bolshevik, bishop, and bartender. No longer may one say "I don't know much about Art, but I know what I like"; this illuminating and abstruse declaration is obsolete. One can either *do* Art or one can't; one has taken it or one hasn't. That is all there is to it.

To those who have never heard of Synthetic Harmony the above statements may seem rather revolutionary. They are; but so is Synthetic Harmony. This is said literally as well as figuratively; for Synthetic Harmony is entirely based upon the revolution of the simpler forms of super-space and the projection of their intersections with our own (three-dimensional) space, upon the astral plane of our consciousness. The few experiments and diagrams outlined in this brief dissertation may not give the entire theory, but will serve at least to indicate the general method of Synthetic Harmony and will show the patient reader a few of the simpler rules and formulas for determining

what is *not* Art; from this step it will be comparatively easy for him to follow the constructive side, or how to do Art, by himself. (Note: Copies of my book, "Synthetic Art and How to Do It," are on sale at all the news-stands, price \$6.98 per copy.)

Unfortunately limitations of space prevent the telling of the history of the discovery of the Obloid. We must content ourselves with the methods of determining one and of constructing graphic representations of it in its various phases of intersection. Figure 1 shows the simplest

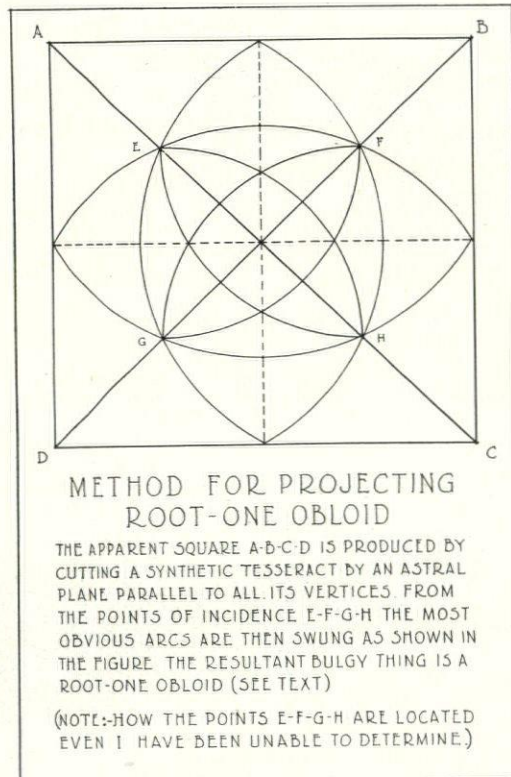


Fig. 1. The Simplest Obloid—the Root-One

Obloid, the Root-one. The text in the cut is so clear that further elucidation is unnecessary. It might be added, however, relative to the points E-F-G-H, that since October, 1924, Prof. Isaac McCarthy of the University of Leningrad has succeeded in projecting all but one of them, with a degree of accuracy positively astounding.

The Root-two Obloid is more difficult to construct, being incapable of conception by the lay mind except in motion; i.e., during the process of generation, when it is shy and hard to catch upon paper. The easiest method, therefore, has been found to be to wait until it has entirely revolved. It may then be shown as in Figure 2, which represents the same super-spacial volume of revolution as in Figure 1, projected in *time* with the unit one (1) as a basis. It is upon this figure that most of the pre-Raphaelite Persian miniatures are based; strangely enough,

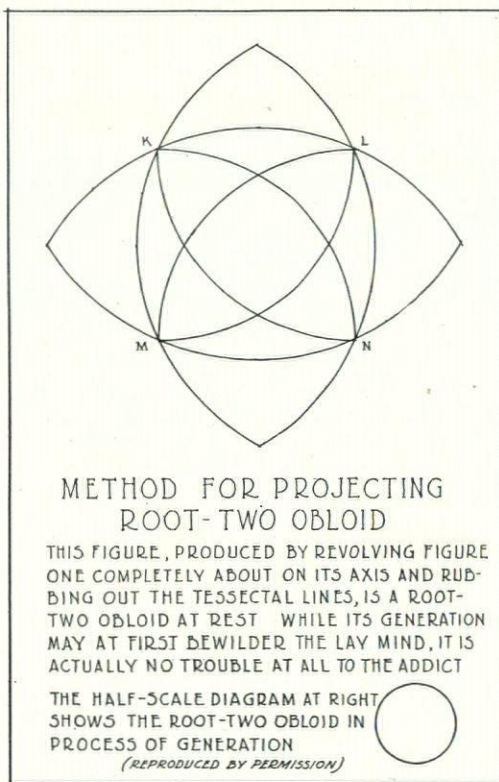


Fig. 2. The Root-Two Obloid in a Condition of Rest at the End of Its Revolution

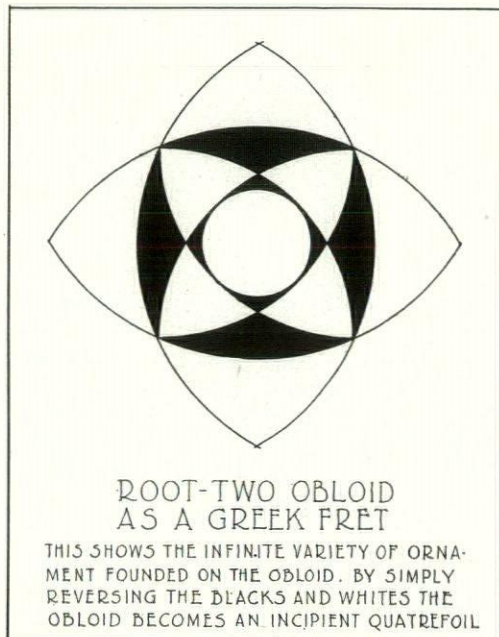


Fig. 3. The Root-Two Obloid as a Basic Source of Ornament

it is upon this figure also, but taken in the opposite sense, that most of the post-Raphaelite Persian miniatures are based.

The Root-three Obloid—(Figure 4)—is technically known as a void of revolution. That is, it is produced by taking the space occupied by a Root-two Obloid and rotating it in a direction perpendicular to each of its sides. It was sub-consciously in the minds of the Nubian Greeks when they laid off their intercolumniations; this has been proven in the treatise of Mr. Tertium Pliny of Seattle, who has prepared a series of measured drawings of Nubian temples showing only the voids, the openings, the intercolumniations, and the interstices. Oddly enough, Mr. Pliny has discovered that by constructing temples made up of these voids rather than of the material spaces between them, an architecture is evolved which bears the same relation to trans-finite beauty as the Nubian structures bear to Synthetic Harmony.

It is of the Root-four Obloid—(Figure 5)—that the most might be said; the Root-four Obloid is the *sine*

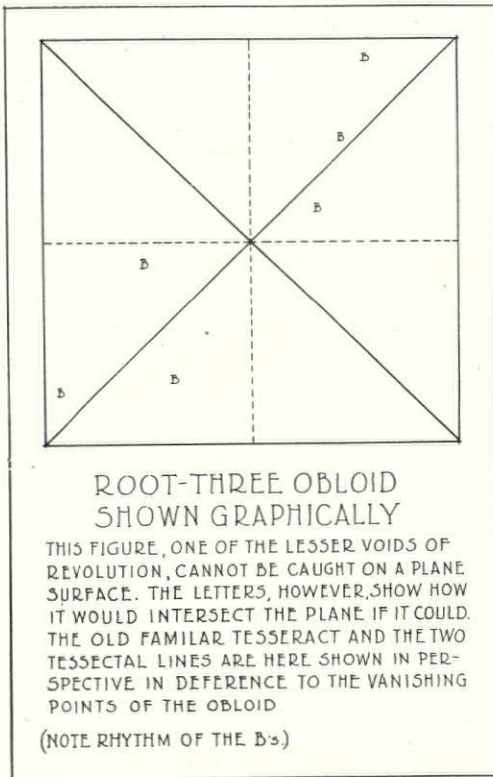


Fig. 4. The Root-Three Obloid—Technically Known as a Void of Revolution

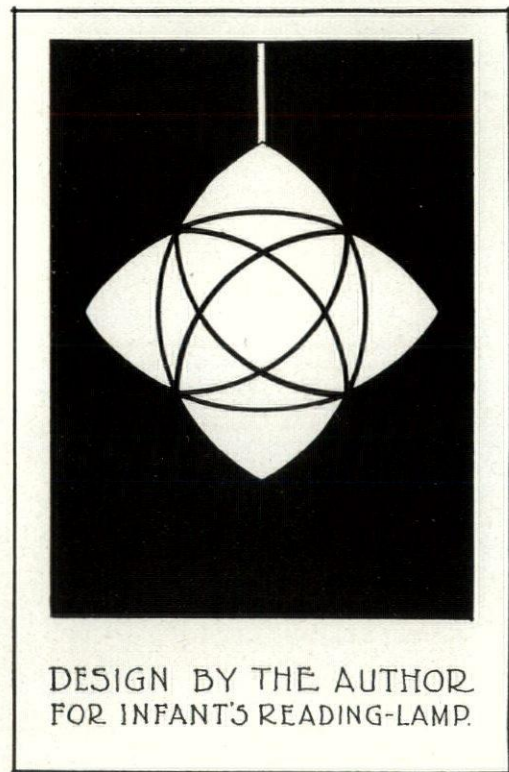
qua non of æsthetic ecstasy. It is the triumph of mathematics over the emotions; it is the *ne plus ultra* of categorical eclecticism. The Root-four Obloid is the subtle *je ne sais quoi* that links the essence of Art to the *Linga-Sharira* of *hoipolloi*. In other words, it is in the evolution of the Root-four Obloid that Science has done its damndest.

In the same page are shown Whirling Obloids, or Bicycloids; they are not, as might be concluded from a too hasty glance at the drawings, the projections of four-dimensional spheres upon a plane, but are Obloids in revolution at the speed of light, taken at a moment of ertia. The form is one recognizable throughout nature, even to the lay eye; it is upon a form similar to this that the two-dimensional figure known as the Circle is based. This shape is recurrent throughout the best known works of Botticelli and George de Forrest

Brush; it is a form used also quite frequently in Architecture, in this case being revolved upon its axis to form a three-dimensional circle, when it is cast in stone or some other pliable material and put on top of gate-posts and free-standing columns. The Whirling Obloids in the cut are actually all the same size in super-space, but appear of different sizes in the sketch because of the temporal interval between their projections, due to the time-limitation upon the manipulation of the compasses.

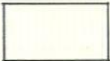
Figure 3 and the design for an infant's reading lamp given below show the practical application of the Root-two Obloid for the purposes of design. Needless to say, the forms that may be evolved from this figure are infinite, and each possesses its own particular Synthetic Harmony, depending only upon the point of view.

For the purpose of further elucidating the practical application of Obloid Art, I



**ROOT-FOUR OBLOID  
NOT SHOWN AT ALL.**

THE ROOT-FOUR OBLOID IS THE ULTIMATE SCIENTIFIC FORMULA FOR ABSTRACT BEAUTY. THE AUTHOR HAS A MODEL OF IT IN HIS ATELIER. SHE IS FORMED BY—(SEE DIAGRAM)

THE FIGURE IN THE SQUARE IS A ROOT-FOUR OBLOID AT AN INFINITE DISTANCE AWAY VIZ:— 

THE SQUARE IS A SQUARE OF ELONGATION.

Fig. 5. The Root-Four Obloid—Defined as the Triumph of Art Over the Emotions

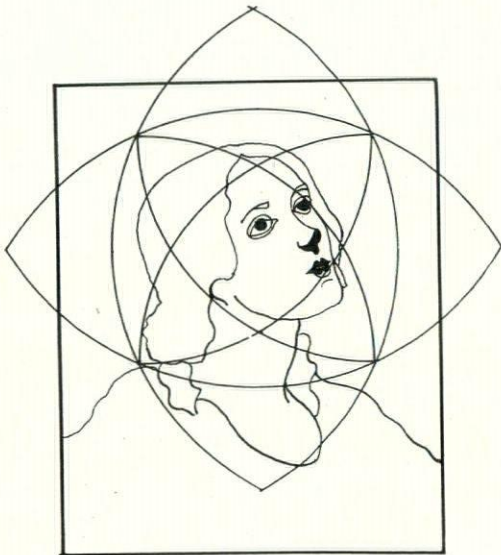
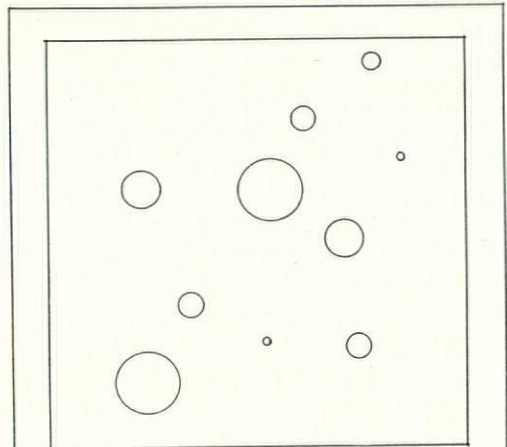


Fig 6. Note How the Principal Features of "Santa Lucia" Coincide (More or Less) with the Curves and Intersections of the Figur-



Fig. 7. Carlo Dolci's "Santa Lucia," One of the Gems of the Author's Small But Choice Collection



**WHIRLING OBLIODS  
AT A MOMENT OF ERTIA**

THESE ODD-SHAPED FIGURES ARE TWO-ROOT BICYCLOID OBLIODS OF IDENTICAL SIZE AND VOLUME BUT VARIABLE IN TIME. THIS ACCOUNTS FOR THE SUBTLE DISCREPANCY IN THEIR RADII. SLIDE A PLAIN WHITE PIECE OF LETTER-SIZE PAPER OVER THE CUT AND THEY WILL DISAPPEAR ONE AFTER ANOTHER. THIS ILLUSTRATES THE IMPERMANENCE OF WHIRLING OBLIODS BOTH TEMPORALLY AND SPACIALLY.



Figs. 8 and 9. Athenian Hydria from the Author's Collection of Aquatic Terra-Cotta. Its Salient Features Parallel or Intersect a Root-Two Obloid Almost Everywhere

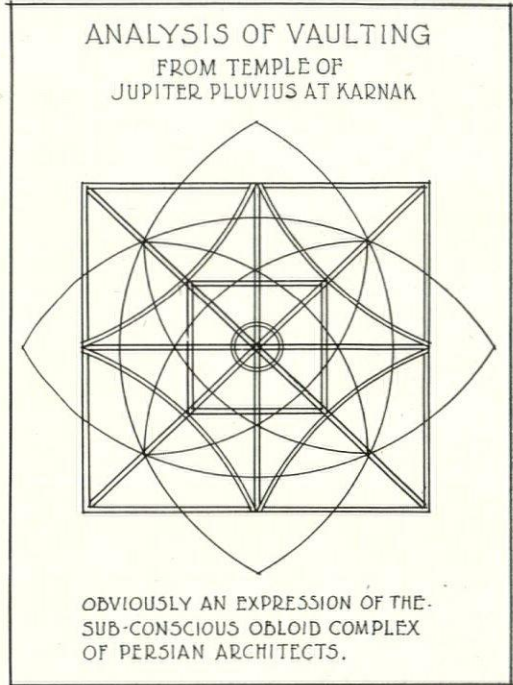


Fig. 10. Showing How This System of Vaulting Is Based in Practically No Particular Whatsoever Upon the Obloid

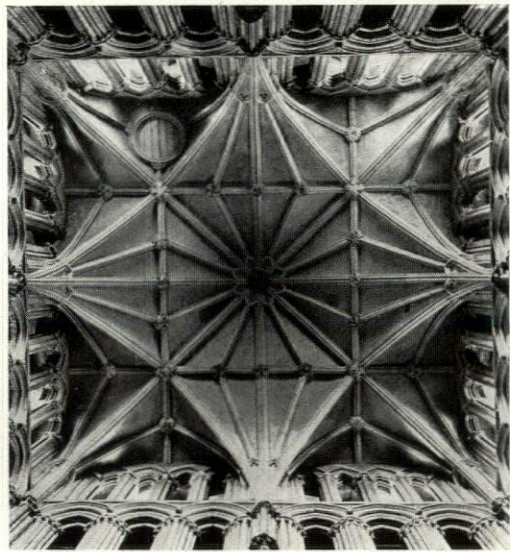
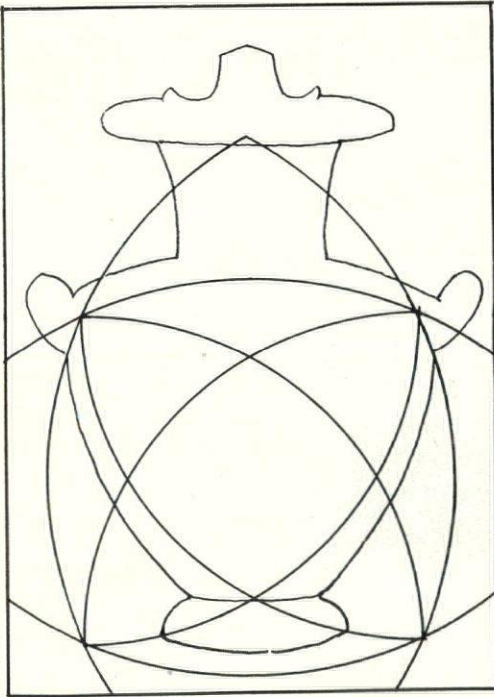


Fig. 11. Photograph of the Vaulting from the Temple of Jupiter Pluvius at Karnak, Made under the Auspices of M. Puvis de Montparnasse

have chosen at random from my two-room, bath, and kitchenette, a few designs, pictures, and *objets d'art*, and have indicated the principle of Synthetic Harmony inherent in each one. The Athenian Hydria (vase, or mug, Figures 8 and 9), on the washstand in my wife's room is one of the finest forms of aquatic terra-cotta in my collection; the small diagram beside the photograph shows how the salient features of its design either parallel or intersect a Root-two Obloid nearly everywhere.

In the case of the reproduction of Carlo Dolci's "Santa Lucia,"—(Figures 6 and 7)—which hangs over my *garde-robe-en-bois-sculpté*, it will readily be seen how the slant of the head, the location of the principal features, and even the finer *nuances* of expression, fit into the curves and intersections of the Root-two projection, or just a little outside them. The expressive nose, one notes, occupies almost the exact centre of the central Thoid—or is not so very far from it.

The photograph of the vaulting from the Temple of Jupiter Pluvius at Karnak is one of my most cherished possessions.

It was made under the auspices of M. Puvis de Montparnasse at the time he collaborated on the measured drawings of this masterpiece of archeology. The diagram in the figure shows graphically how this system of vaulting is based in practically no particular whatsoever upon the Obloid; a fact not nearly so astounding as would first appear to the reader. For it is because of this very fact that the builders of the Temple abandoned vault-construction in their earlier and later works, so that today scarcely any examples of this system are to be found by archeologists along the banks of the Nile.

Last of all, now that the reader has familiarized himself with the simpler principles of Synthetic Harmony, I am showing a portion of the mosaic from our bathroom floor, that he may apply for himself the Obloid Test thereon,—as I have done many a time without a slip.

While it is not suggested that every creation of beauty is based directly upon Obloid forms, the author feels that nearly every great work of art is based upon *something*, and that the Obloid will do as well as anything else.

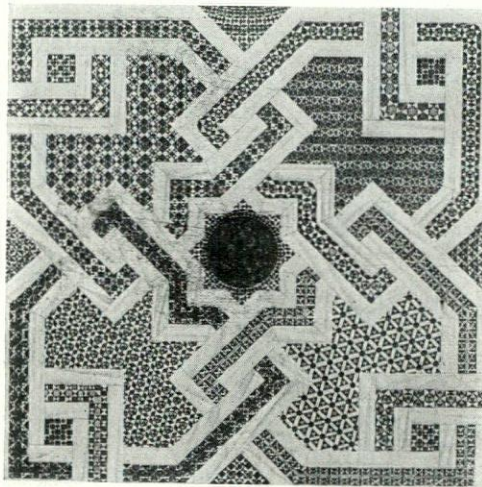


Fig. 12. Portion of Mosaic, to Which the Reader May Himself Apply the Obloid Test

# AN ENGLISH HOUSE *and* GARDEN

*"Hazelwood," the Estate of W. J. Sharp, Esq.  
at Silverdale, Lancashire*



By  
*Thomas H. Mawson, F.L.S.*



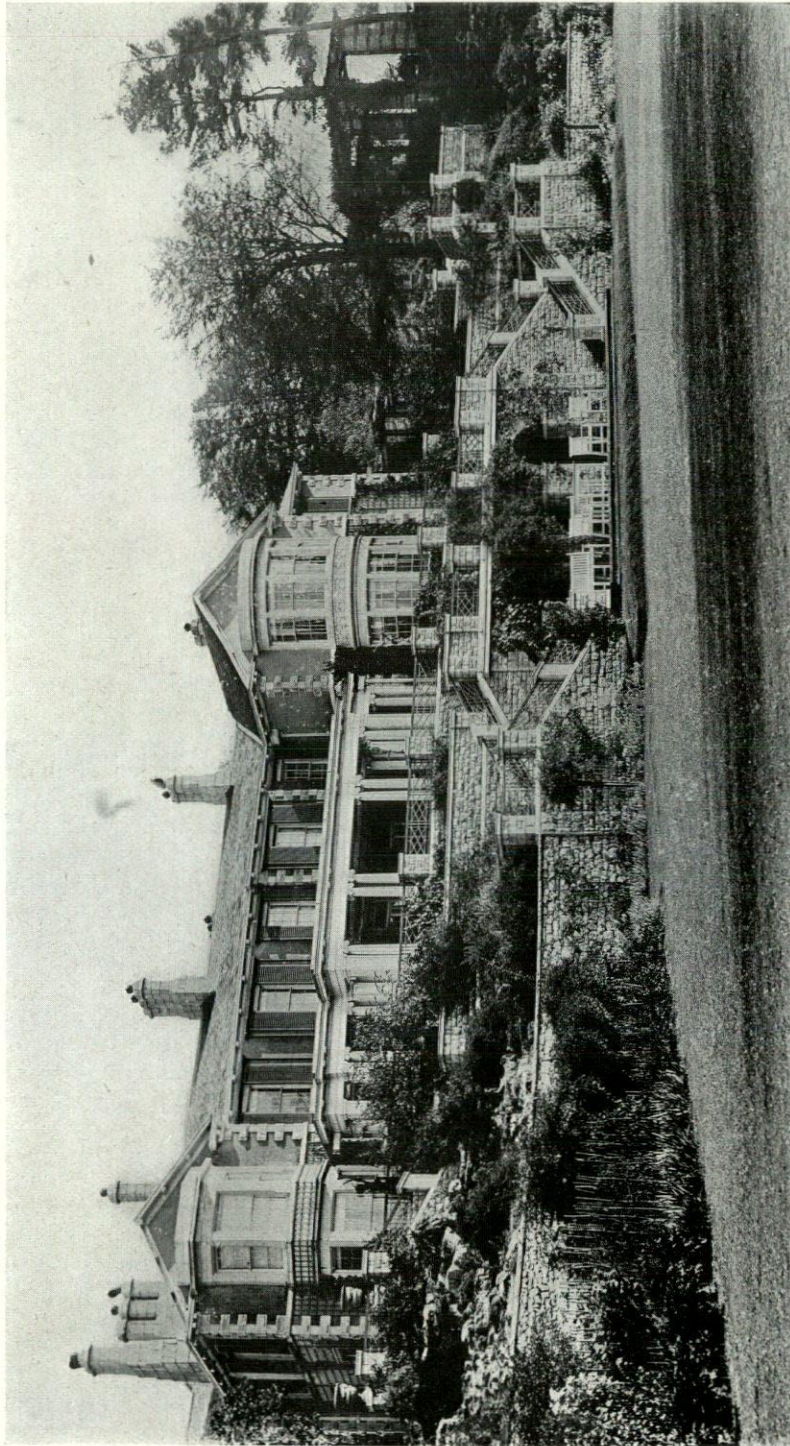
SILVERDALE is a village on the eastern shore of Morecambe Bay, tucked away in a sheltered rocky nook on "that glorious plain that the sea has left," as Wordsworth described it. Its location is picturesque, nestling amid abundant limestone rock outcropping everywhere on hills and escarpments which butt sharp and abruptly on to the vast reaches of sand or of sea, as the case may be; for the tide sweeps the Bay twice a day and then leaves it as a stretch of yellow sand, its marvelous perspective overtopped by the mountains of the English Lake District. The characteristics of this stretch of scenery are to be gathered from any water color drawings made of it by J. M. W. Turner, P. de Wint, David Cox, and others of the same school. The soft color cadences and the subtle tone gradations to be seen on the wet sands, the endless play of light and shade and the majestic cloud effects reflected in the pools and runnels in the sand, lend themselves particularly to water color and are not nearly so effective in oils.

In the days of Wordsworth, (a contemporary of these artists,) the sands formed the high road to Ulverston and the Furness villages and towns. The custom was for the public to assemble at the Lancaster end of the sands at Hest Bank, and proceed in droves under the direction of an official guide. Sometimes their numbers amounted to a hundred or more, with coaches, carts, cows, pigs, sheep &c., making a picturesque assembly which the artists eagerly seized upon to give foreground interest. A similar cavalcade came back from Ulverston and Cartmel, the return journey being accomplished between tides. There were (and are) dangerous fogs and dreaded quicksands to be negotiated, which on more

than one occasion, owing to their shifting character, led to disaster. A glance at the map of Lancashire, running the eye around from Morecambe on the east to Barrow on the west, will show the extent of this sandy area and the sweep of the tide, but nothing save the actual sight of it can give any idea of its varied beauty. To the thousands of Americans who have visited Furness Abbey, and Cartmel Priory, and who have made a pilgrimage to George Fox's residence and Meeting House at Swarthmore, description is needless.

The Silverdale vein of limestone reaches its highest point at Warton Cragg, some four miles distant. This takes its name from the village of Warton, lying at the foot of its eastern shoulder. In the immediate vicinity of this village is the ancient home and heritage of the Washington family, from which the first President of the United States traced his descent. The Washington coat of arms is carved on the exterior stonework of Warton Church.

The village of Silverdale is composed of a number of scattered cottages and farm-houses and tourists' haunts, most of which are simple and becoming in character, built of the local limestone, slated with Lakeland green or grey slates, and limewashed; they are homelike in character, and the village fits into its location harmoniously. Many of the cottages have the round barreled chimney springing from the massive square base, which Wordsworth loved so well, and other characteristic features known as the North Lancashire style. These features figure largely in that now rare and expensive "John O'Gaunt's Sketch Book," which was compiled from drawings made by the staff and pupils of a noted firm

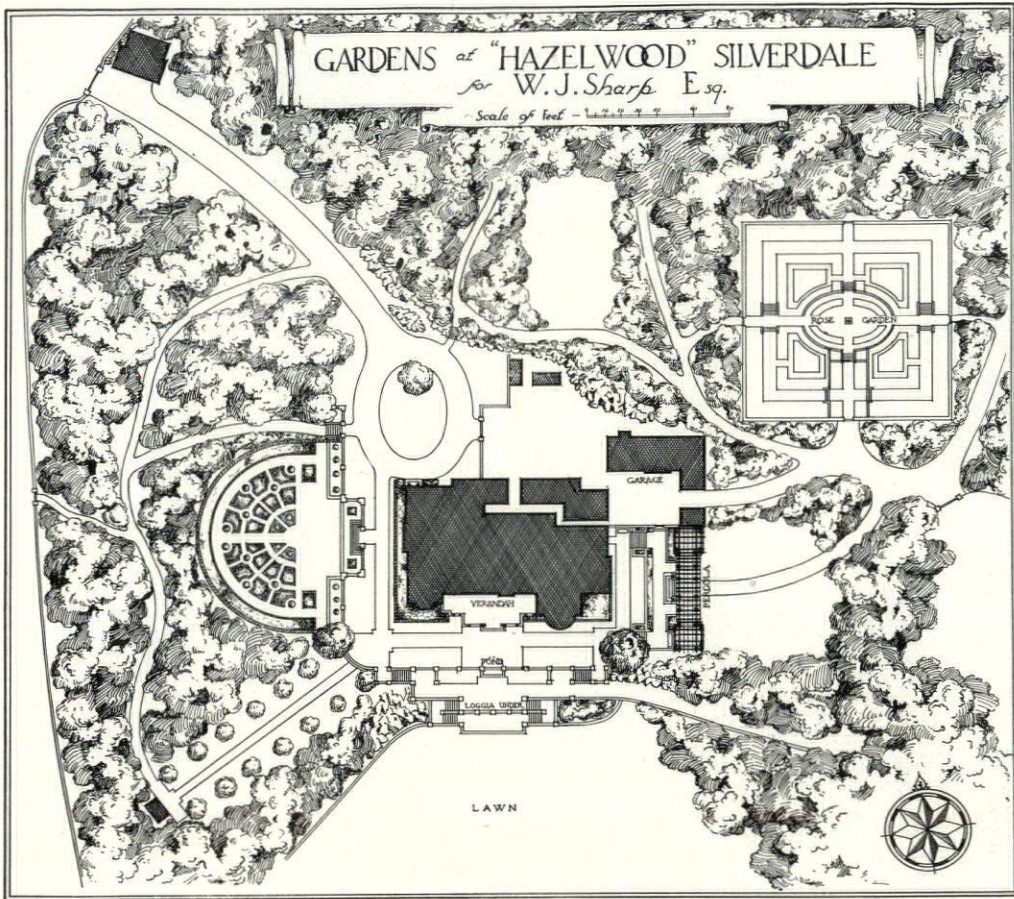


*The Architectural Record*

"HAZELWOOD," THE RESIDENCE OF W. J. SHARP, ESQ., AT SILVERDALE, LANCASHIRE, ENGLAND  
Remodeled by E. Prentice Mawson, Architect

*April, 1925*



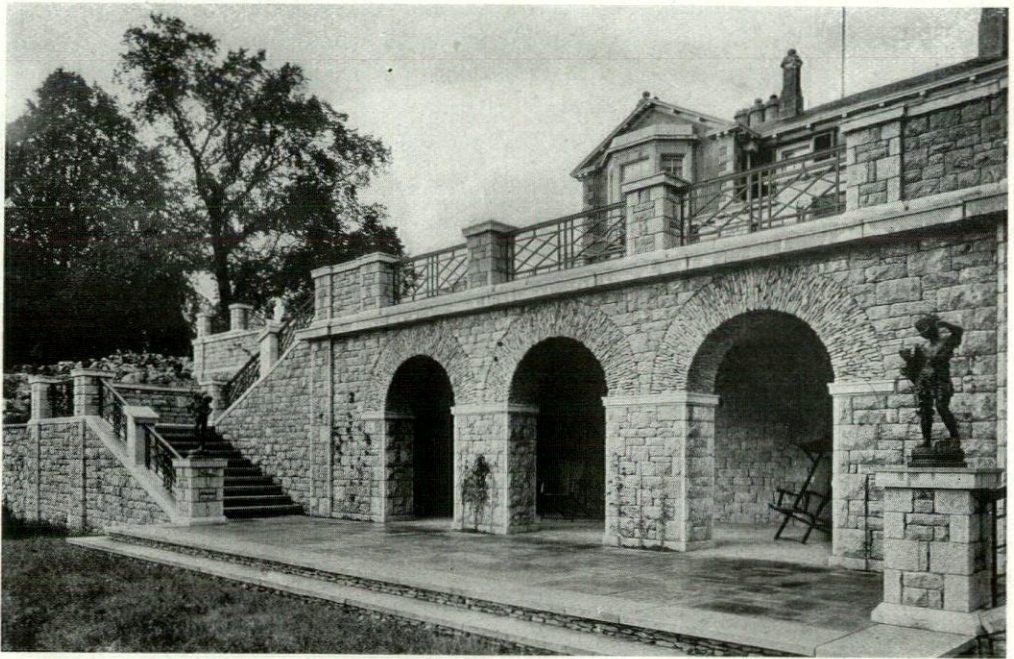


of ecclesiastical architects in Lancaster. The squire or principal landowner of Silverdale is Mr. W. J. Sharp, whose residence, known as "Hazelwood," occupies, along with its gardens, policies, and forest land, a site of several hundred acres, elevated above and on the south side of the village. Unfortunately the house—of much later date than the village—was both incommensurate and lacking in architectural character and interest, and but for certain sentimental reasons would have been pulled down and rebuilt. The site of the original house was faultless, without doubt the best location on the estate, and the aspect was perfect, being nearly due south.

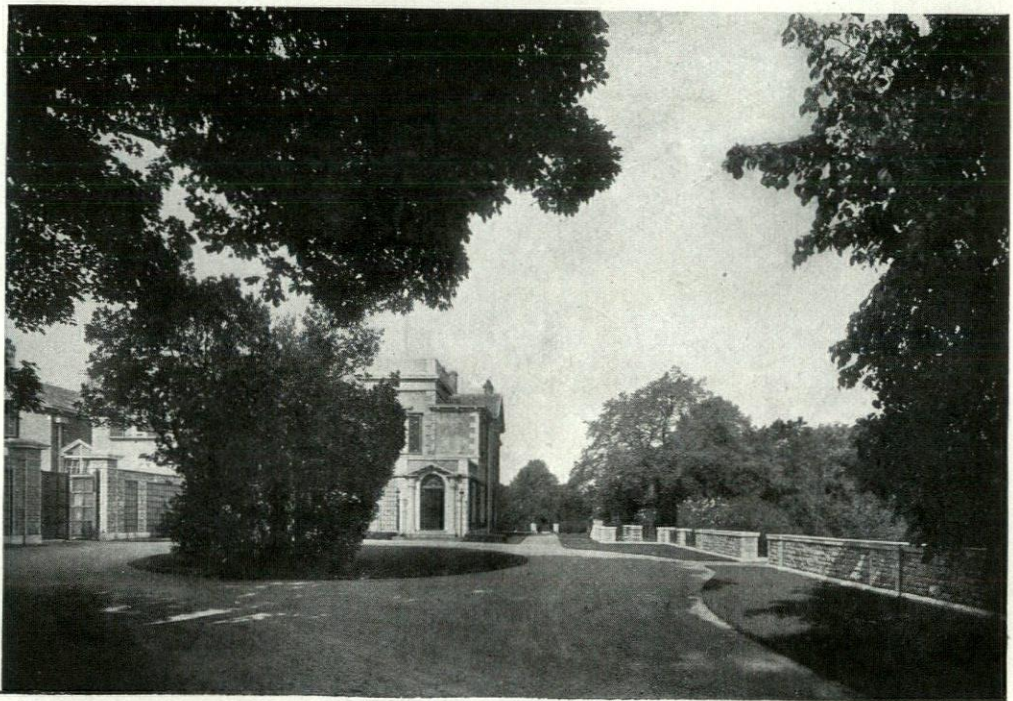
Some ten years ago my son, E. Prentice Mawson, was commissioned to remodel and extend both the house, terraces

and the garden. The first thing was to give the whole some pronounced style which would impart a distinctive architectural character and accord with the local conditions of the district. For this a free rendering of the Georgian convention was chosen—to which the local stone was favorable. How far this choice was warranted is shown by the view which gives the perspective range of house front, loggia, pergola and terraces with their background and garden setting. The view shews its excellent poise on the plateau of the rocky hill, with a suggestion of the dense foliage behind. Another illustration shews the new entrance and carriage court embracing a view beyond the terraces on the north and west sides of the house.

A problem of even greater difficulty



Loggia on Bottom Terrace

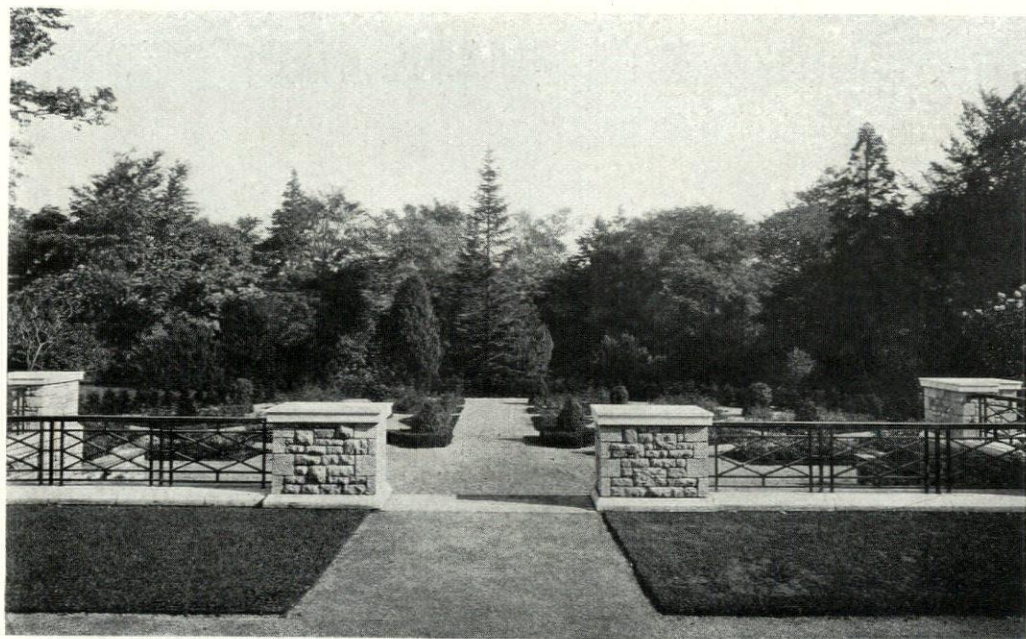


*The Architectural Record*

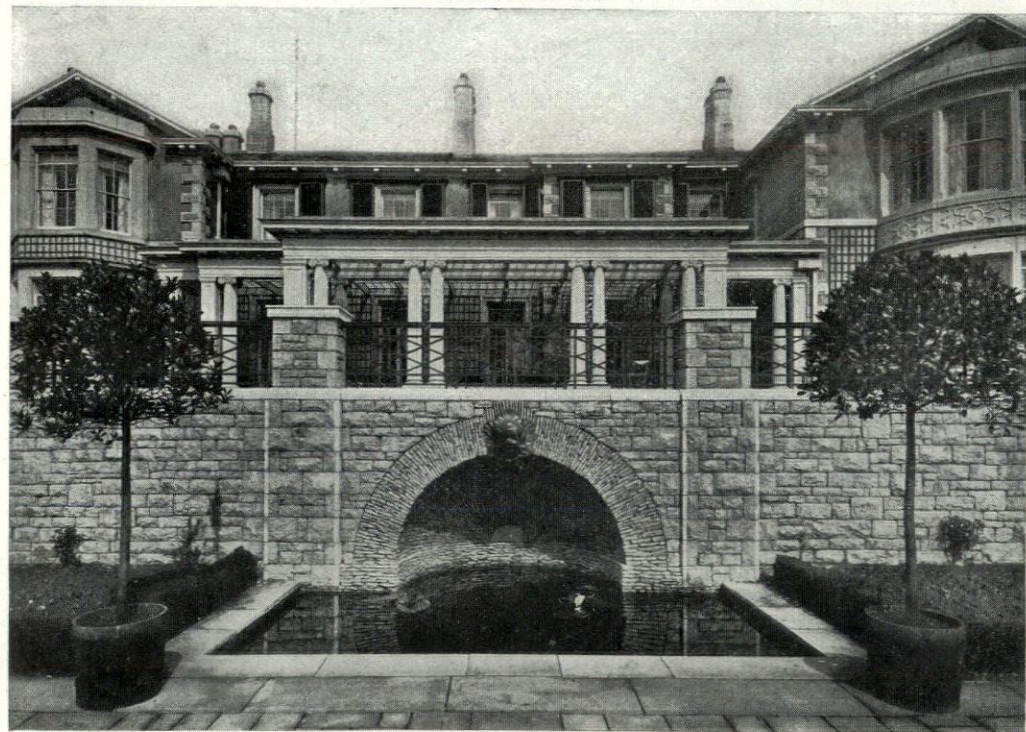
Carriage Sweep and East Side of House

*April, 1925*

"HAZELWOOD," THE RESIDENCE OF W. J. SHARP, ESQ., AT SILVERDALE  
LANCASHIRE, ENGLAND



Garden on East Side



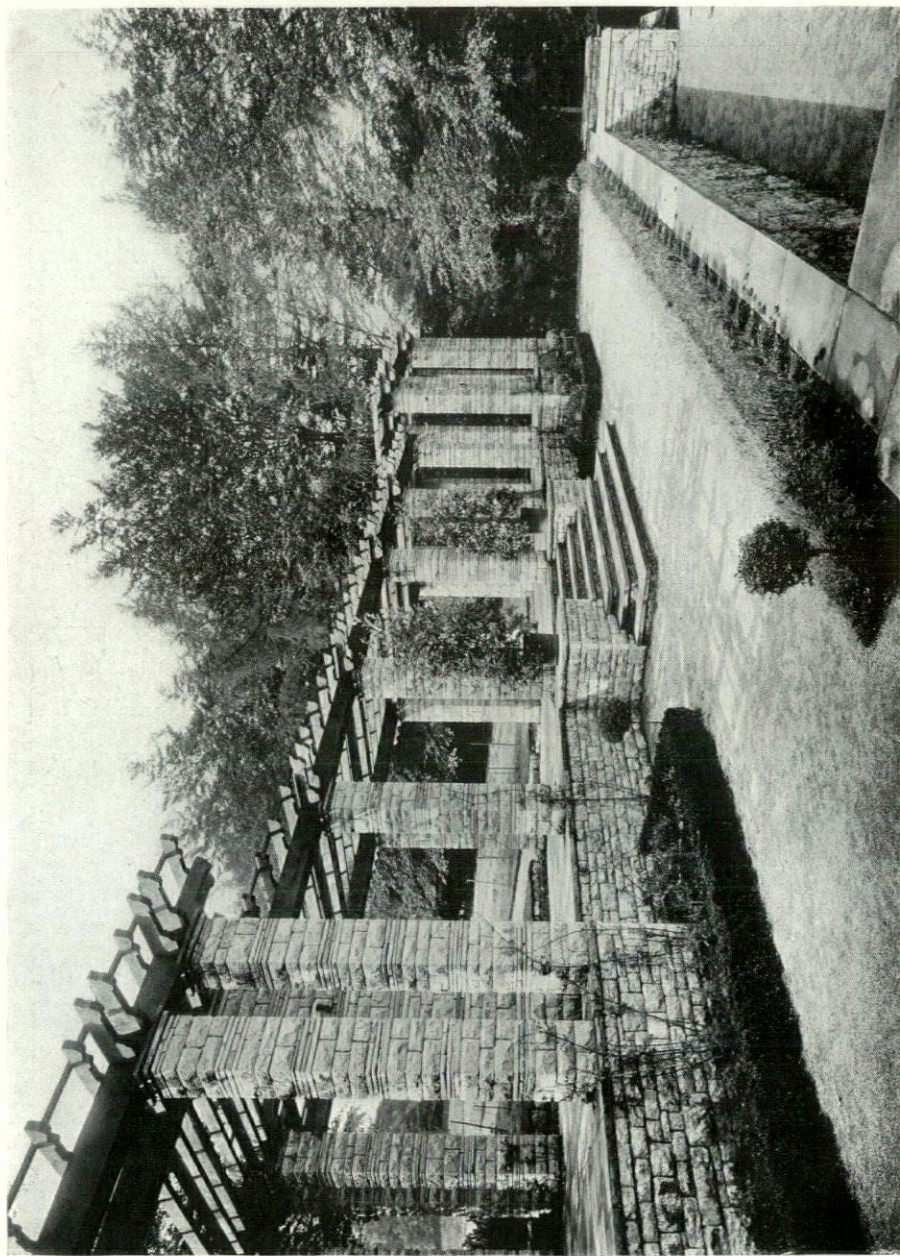
*The Architectural Record*

Upper Part of Exterior of New Verandah  
(Photo taken from first terrace level)

*April, 1925*

"HAZELWOOD," THE RESIDENCE OF W. J. SHARP, ESQ., AT SILVERDALE  
LANCASHIRE, ENGLAND

[363]



*The Architectural Record*

The Pergola at South-West End

"HAZELWOOD," THE RESIDENCE OF W. J. SHARP, ESQ., AT SILVERDALE, LANCASHIRE, ENGLAND

April, 1925



Inside of Verandah  
 "HAZELWOOD," THE RESIDENCE OF W. J. SHARP, ESQ., AT SILVERDALE  
 LANCASHIRE, ENGLAND

was to impart to the interior a dignity to accord with the new exterior, and the status of the owner. The latter had a remarkable collection of Chippendale furniture, which, in the days of the early glory of the Gillows, was a product of Lancaster. The ornamentation extends little beyond low plaster relief decoration, the aim being to maintain the sense of breadth and simplicity. The hall is oak paneled.

One of the illustrations shews a view of the new verandah which maintains something of the flavor of both the new interior and exterior design, while another shews the upper part of the exterior of this verandah taken from the first terrace level, in which is formed a small wall fountain and pond.

Here it may be interesting to note the

stonework of the arches of this fountain and also the loggia below. They are built of thin layers of limestone quarried on the spot. The loggia room makes a cool retreat during the hot "dog days." In winter it makes a storage place for the garden seats and chairs. To the south of the house is a pergola where the ground rises to the level of the Rose Garden.

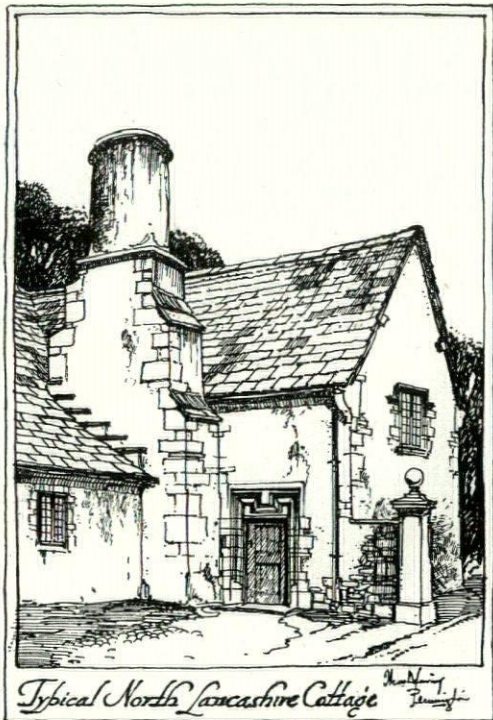
The private grounds or gardens proper comprise many acres of typical limestone-country interspersed with delightful secluded walks wherein abound and flourish trees and conifers of all descriptions, the limestone being particularly favorable to the beech and hazel. The silvery hue and tone of the clean beech trunks accord perfectly with the stone, and take on a polished sheen upwards, which is carried throughout the



Interior of Dining Room  
 "HAZELWOOD," THE RESIDENCE OF W. J. SHARP, ESQ., AT SILVERDALE  
 LANCASHIRE, ENGLAND

branches. Doubtless it is from the prevalence of the hazel in the woods, that the mansion takes its name, or possibly the woods were so named by the villagers when they had the free range over them to gather the nuts. The delightful outcrops of rock may be judged from some of the illustrations, one of which shows the lichen-covered boulders lying about in pleasing abandon, plentifully interspersed with hart's-tongue and numberless other hardy ferns which delight in the limestone formation

It used to be a fashion in the Lake District to cope the boundary or garden walls abutting the road with the most curious and quaint blocks of limestone procurable. The more they resembled stalactites, petrified tree boughs and stumps, or elongated animals, the more prizable they were. For this purpose thousands of tons were carted from Silverdale and the adjacent district, oftentimes a score of miles inland, and survivals of this depraved taste may still be seen, but for the most part they have been broken



Typical North Lancashire Cottage



Corner of Garden Showing Limestone Boulders  
"HAZELWOOD," THE RESIDENCE OF W. J. SHARP, ESQ., AT SILVERDALE  
LANCASHIRE, ENGLAND

up for road material, and another fashion is taking its place. Nowadays water washed, moss grown limestone is being advertised and trafficked to make limestone rock gardens—largely replicas of the prize design at a popular annual National Show—and this may be seen in places where there is not a trace of its kindred rock within a radius of many miles. This when all around there

is a plentiful supply of natural boulders of native slate or other rock to be had already adorned with moss and lichen!

The manner in which the various portions immediately surrounding the house are woven together, are shewn on the plan on page 361. However, some of the picturesque woodland walks more remote from the house and the freer portions of the grounds are not included.



S. B. P. TROWBRIDGE  
(1862-1925)



# S. B. P. TROWBRIDGE

## (1862-1925)

### AN APPRECIATION FROM PRESIDENT WAID

To the Editor of THE ARCHITECTURAL RECORD:

Another strong man has fallen from our ranks. During the past two years, "the silent forest" seems to have been shaken more often than before, and the shocks were deeply felt as one tall pine after another came crashing to earth. But the fall has been only in the earthly sense. In each case one of the giants of the architectural profession has in reality passed on and his name and influence have been raised to greater heights.

S. B. P. Trowbridge, "Breck" as he was affectionately known, is another one of whose memory architects are proud. His name is associated with notable buildings; his material success was enviably great.

To those already prosperous the temptations to overstep the bounds of honorable practice seem even more difficult to withstand than those which come to men with hungry families. No one would dare breathe a whisper against Breck Trowbridge. During a long practice he was jealously proud of the reputation of his firm, Trowbridge & Livingston. He was loyal to the ideals of The American Institute of Architects and would unhesitatingly refuse a commission of the greatest importance if his acceptance meant injustice to his fellow architect or involved himself in any questionable way.

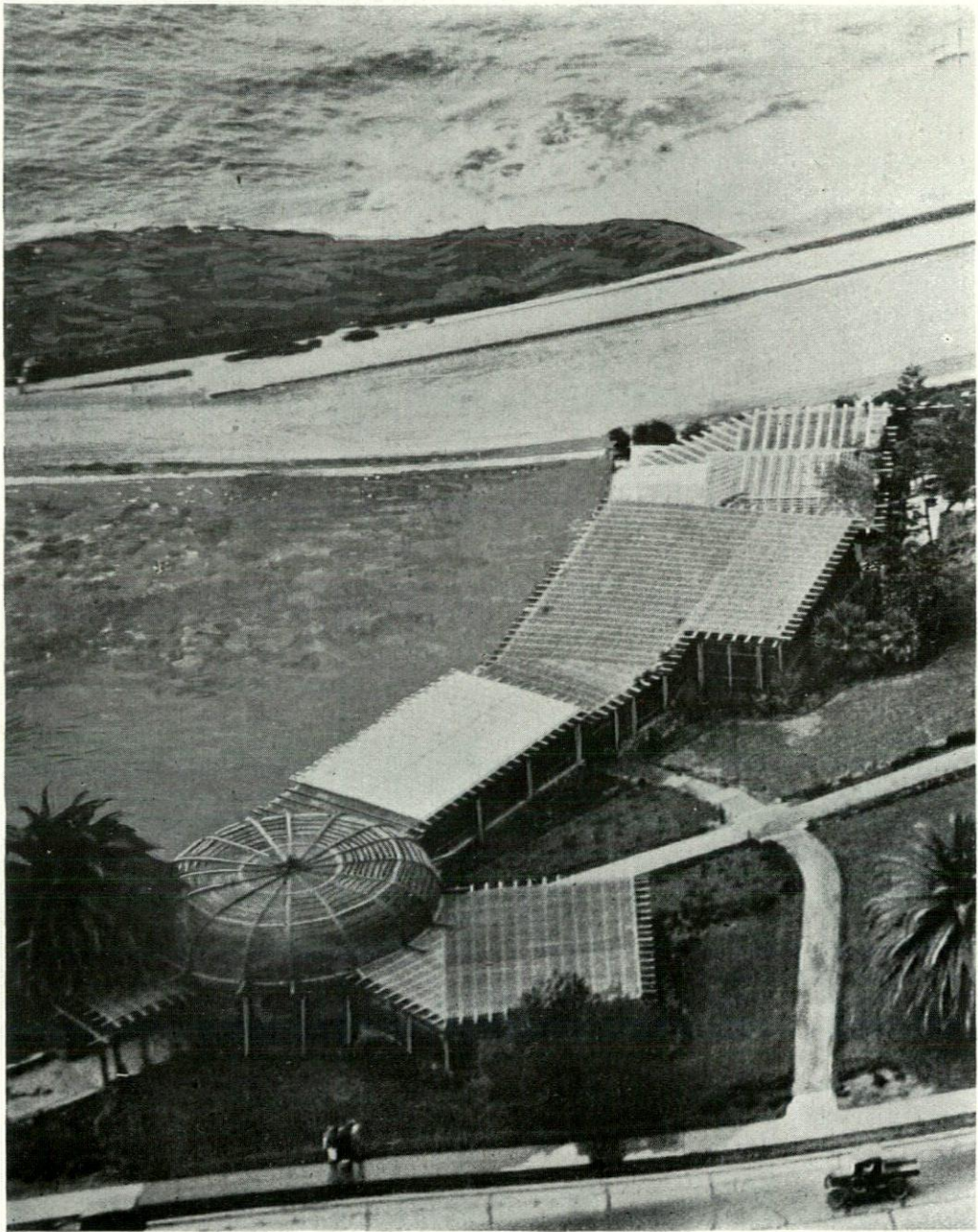
Due praise will be given to Trowbridge for his ability, his public spirit and his generosity. But one phrase comprehends all of these—he was an architect and a gentleman.

(Signed) D. EVERETT WAID.

TROWBRIDGE, S. BRECK PARKMAN, Architect:

b. New York, May 20, 1862; s. Gen. William P. and Lucy (Parkman) T.; B.A., Trinity, 1883, M.A., 1891; Ph.B., Columbia U. School of Architecture, 1886; Sch. of Classical Studies, Athens, Greece, and Ecole des Beaux Arts, Paris (atelier. Daumet-Girault); (degree of Sc.D., Trinity College, 1910); M. Sophia Pennington Tailer, of New York, January 26, 1896. After graduation from School of Architecture, 1886, sent out by Archaeological Institute to superintend erection of building of Amer. School of Classical Studies, Athens, Greece; then after study in Paris, returned to New York and was four years in office of George B. Post; member of the firm of Trowbridge & Livingston. Served as Member Troop A, also as 1st Lieut. 12th Inf. N. G. N. Y. Appointed by President Roosevelt Chairman National Council of Fine Arts; Incorporator, Vice-President and Trustee American Academy in Rome; Fellow, A.I.A.; Member of National Institute of Arts and Letters, National Academy of Design, Architectural League of New York (Ex. President), Soc. of Beaux Arts Architects (Ex. Pres.), Soc. of Colonial Wars, Metropolitan Museum, Museum of Natural History, American Geographical Society, American National Red Cross, Society of American Philhellenes (President) Delta Psi; Hon. Member Brit. Institute Archaeology, Chevalier Legion of Honour, France; Officer Knights of the Royal Order of the Redeemer, Greece; Grand Comdr. Knights of Royal Order of St. Sava, Serbia; Decorated Servian Red Cross; Comdr. Royal Order Crown of Roumania, 1919. Episcopalian. Clubs: Union, Knickerbocker, Metropolitan, Century, Racquet & Tennis (New York); American Yacht, Piping Rock Country. Home: 123 East 70th Street. Office: 527 Fifth Avenue, New York.

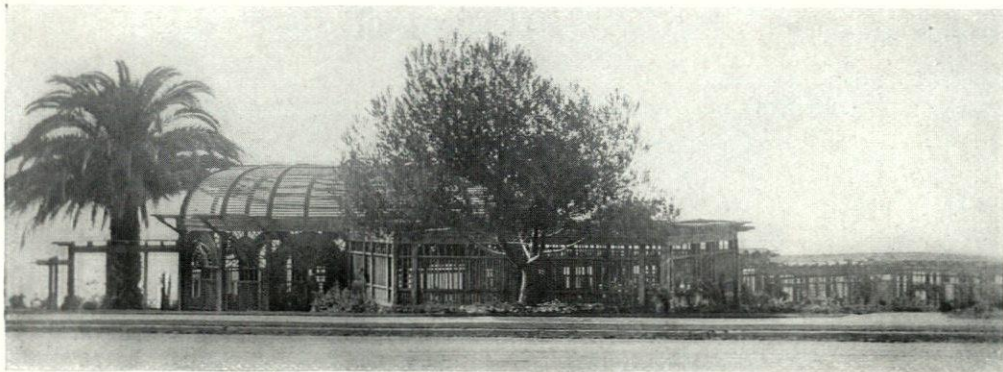
Mr. Trowbridge was associated with Mr. Livingston, as Trowbridge & Livingston, architects, for thirty years and as a member of that firm erected, among other notable buildings, the Bankers Trust Company Building, the Addition to the New York Stock Exchange and the banking house of Messrs. J. P. Morgan & Company, all on the corners of Wall, Broad and Nassau Streets, now known as the Financial Center, the Chemical National Bank, the Empire City Savings Bank, the St. Regis Hotel, the mercantile building of Messrs. B. Altman & Company, 34th Street and Fifth Avenue, and the Mellon National Bank in Pittsburgh, the Palace Hotel in San Francisco, and the Bank of America now under construction on Wall, William and Pine Streets; he also completed plans for the thirty-three story office building to be erected for the Equitable Trust Company on the site of the present Mills Building on Broad and Exchange Place; also designs for the Mitsui Bank of Tokyo, the construction of which will shortly be begun.



*The Architectural Record*

*April, 1925*

"EL DESCANSADERO"  
As Seen from the Air  
Nathaniel E. Slaymaker, Architect



## "EL DESCANSADERO"

By  
L. H. Donaldson

*A "garden under lath," a new garden architectural form designed by and erected under the supervision of the former firm of Landscape Architects, Gardner & Slaymaker, now Nathaniel E. Slaymaker, San Diego, California.*

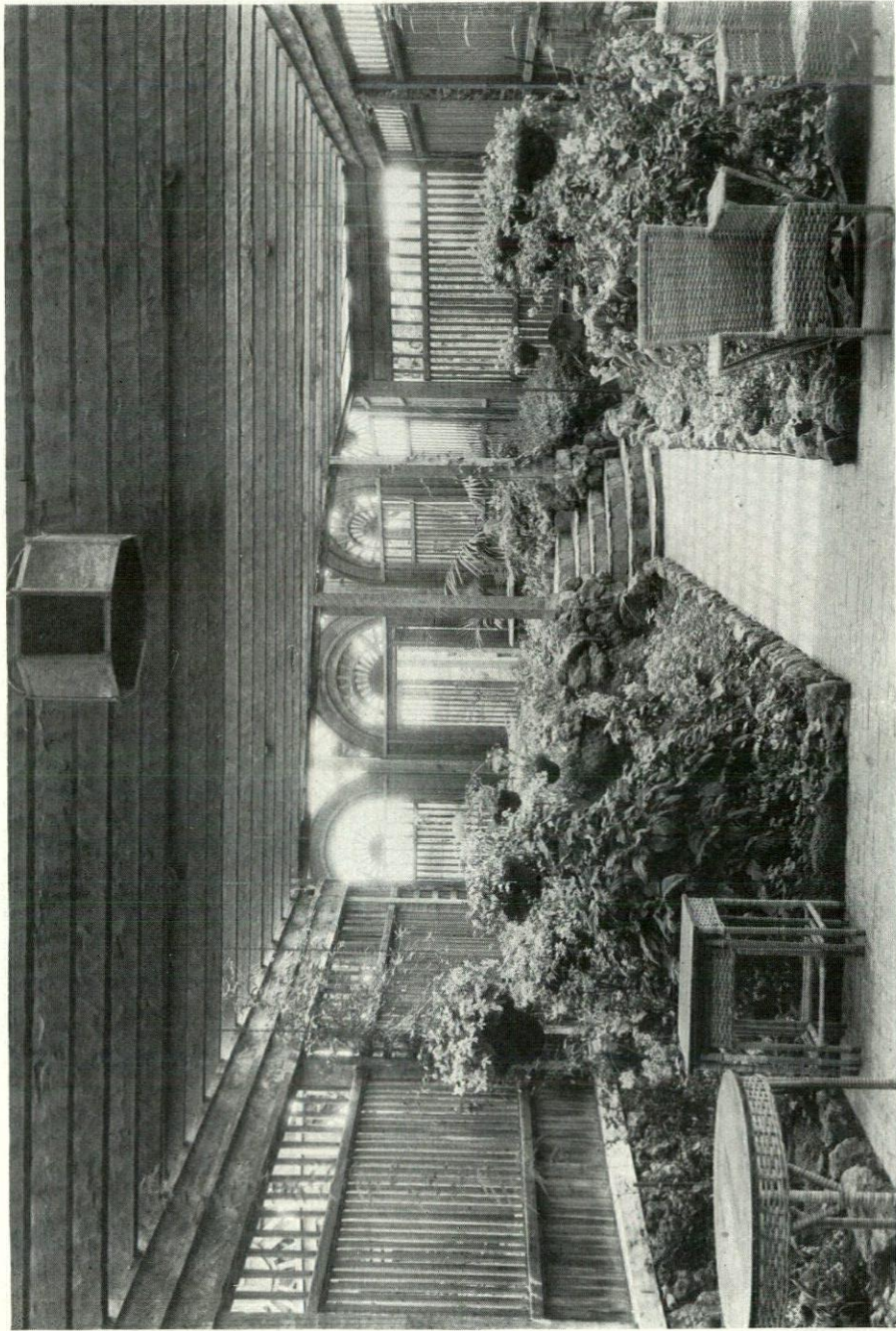
SINCE CLIMATE IS ONE of the most influential factors in determining the trend of architecture, it is not surprising that California should offer one of the latest developments along architectural lines. In California, indoor and outdoor living are almost inseparably connected, and it is natural that the new architectural form should be the outcome of the mingling of the two arts, architecture and landscape architecture.

In many parts of the State small "Gardens under Lath" have been known for several years. The need to supply shade for certain tender plants like begonias and ferns led to the erection of mere coverings of lath, for all the world like chicken coops. Gradually these lath structures became larger, growing conditions within them being so phenomenally satisfactory, and some covered as much ground as a greenhouse. Even so, they remained mere squares or oblongs, the product of amateurs or building contractors of the neighborhood.

So, in the quite recent evolution of the so-called Lath House, it fell to the lot of a landscape architect to design and con-

struct what, so far as we know, is the first really architectural Lath House. It embellishes the estate of Miss Ellen B. Scripps at La Jolla by the Sea, a few miles north of San Diego, and is of interest to architects as well as landscape architects from several points of view. To the latter because, being a garden under lath, it is landscape design indoors, as it were, and to the former, because it has no prototype in design at all, is daringly original in conception, unorthodox, and incorporates several new ideas in design and structure. Though outstanding because of its artistic beauty and magnitude, its exact reproduction in other parts of the country might be inadvisable on account of different climatic conditions. Nevertheless, it is well worth studying because it illustrates the successful working out of principles that can easily be applied to other structures of similar purpose.

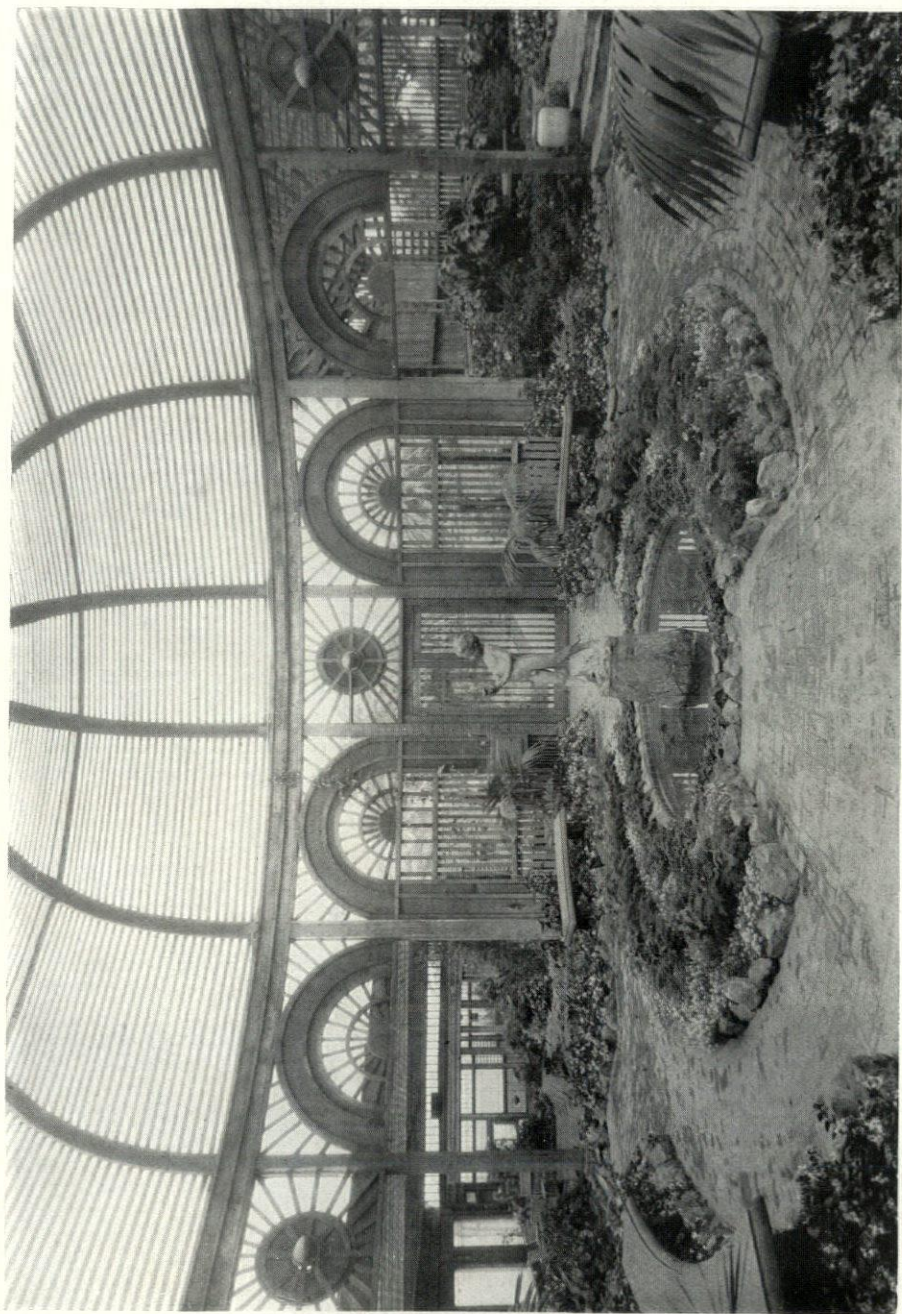
Two factors determining the character of the structure are present in the site, which is a long narrow triangular plot sloping down toward the sea in two directions. One of these is the horizontality of all the natural lines of the rock forma-



*The Architectural Record*

The Tea Room  
"EL DESCANSADERO"—A "Garden Under Lath"  
Nathaniel E. Slaymaker, Architect

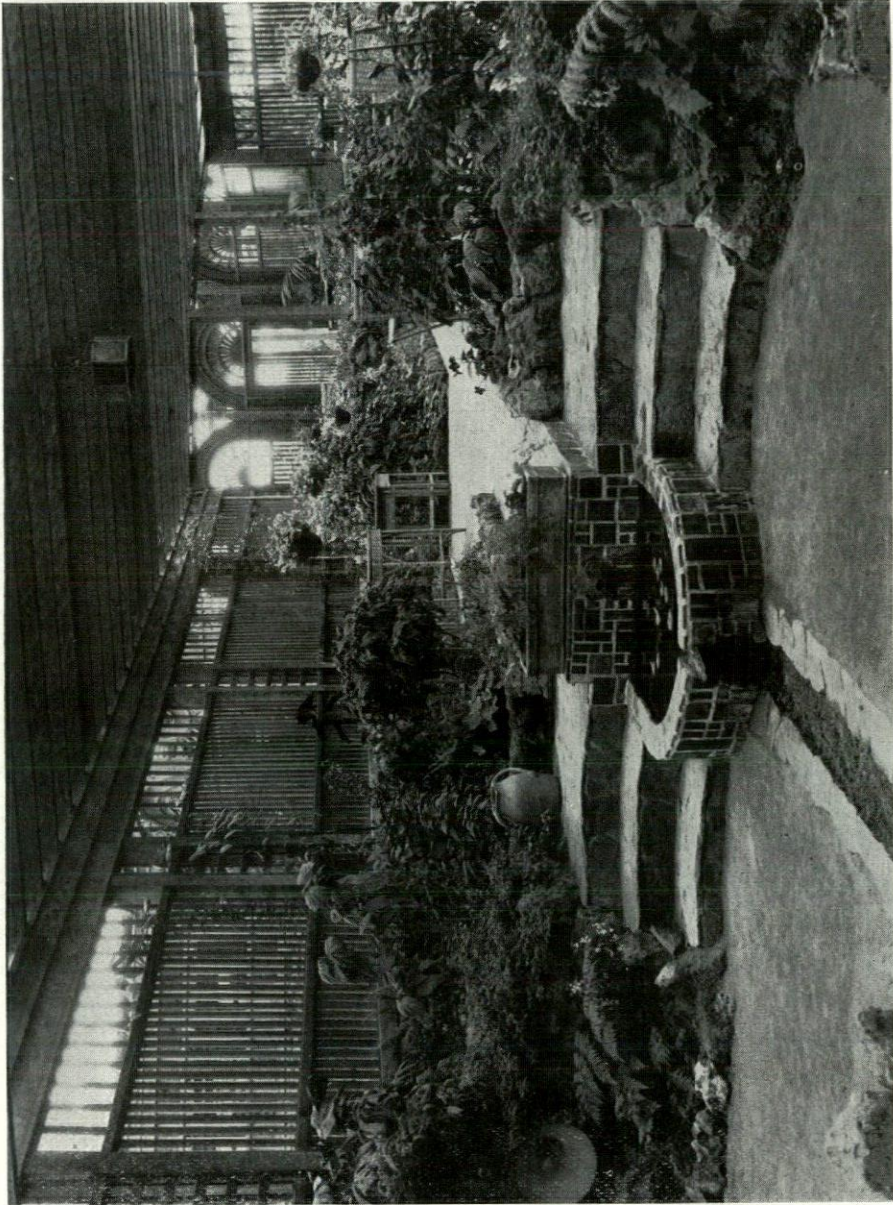
April, 1925



*The Architectural Record*

Circular Pool in the Rotunda  
"EL DESCANSADERO"—A "Garden Under Lath"  
Nathaniel E. Slaymaker, Architect

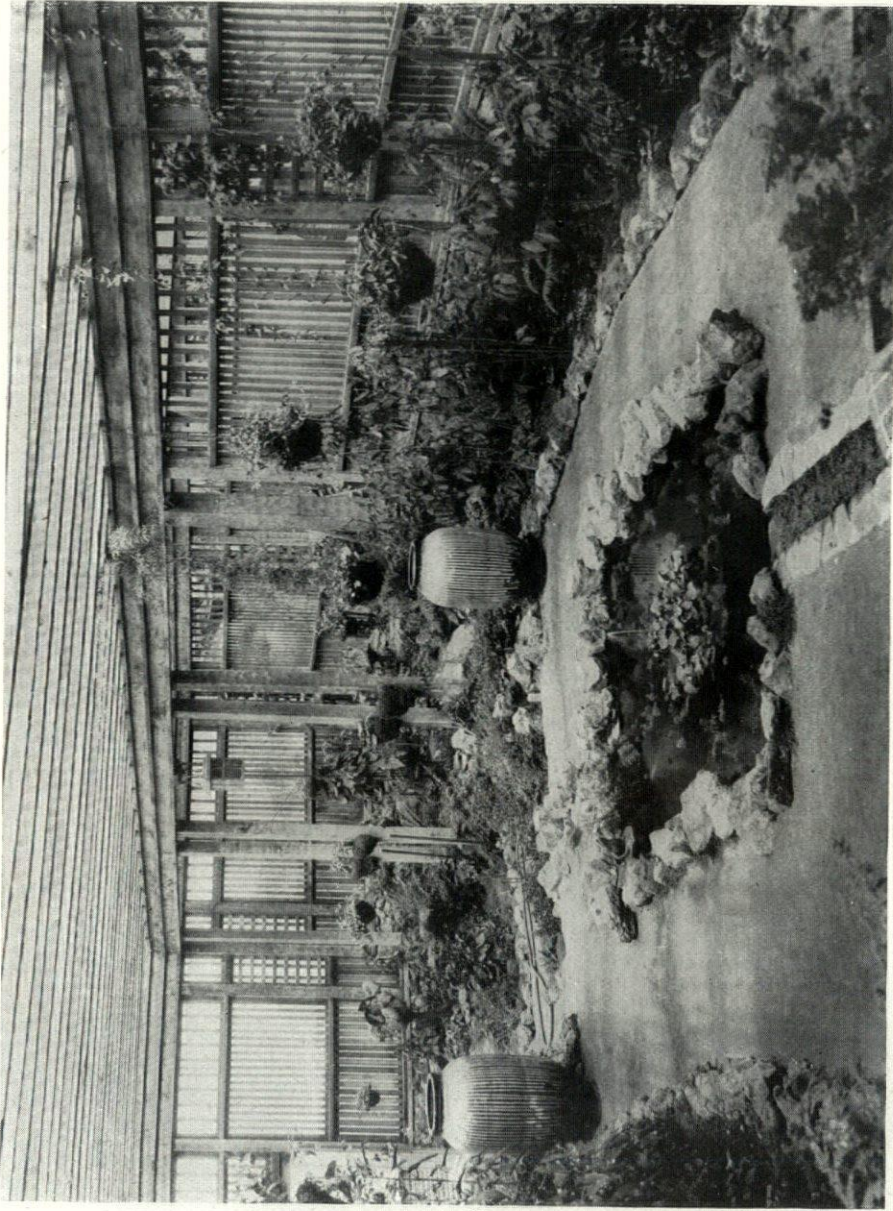
April, 1925



*April, 1925*

Fountain in Hand-Made Brown Tile  
"EL DESCANSADERO"—A "Garden Under Lath"  
Nathaniel E. Slaymaker, Architect

*The Architectural Record*



*The Architectural Record*

Lily Pool

"EL DESCANSADERO"—A "Garden Under Lath"

Nathaniel E. Slaymaker, Architect

April, 1925

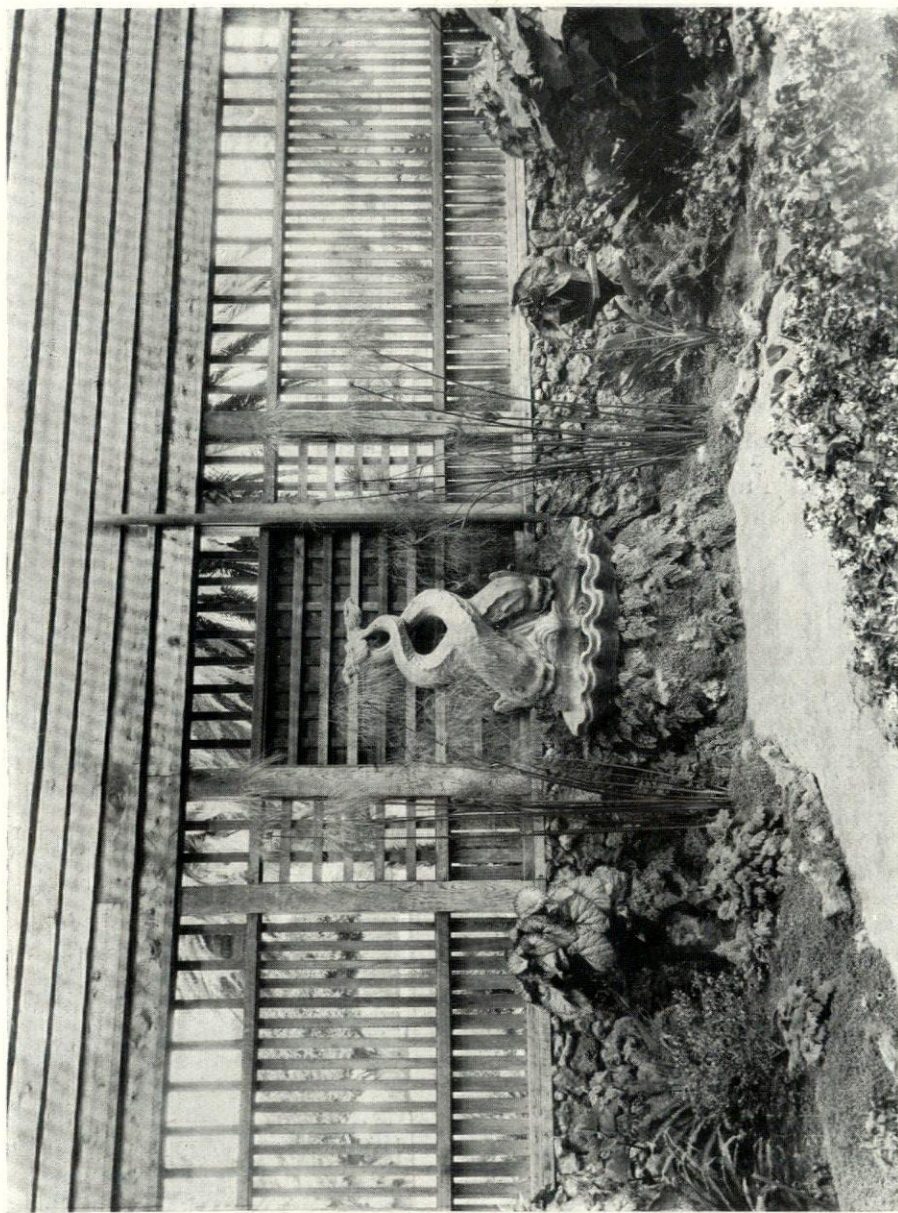


*The Architectural Record*

Rock Cascade Dividing Flight of Rock Steps  
"EL DESCANSADERO"—A "Garden Under Lath"  
Nathaniel E. Shaymaker, Architect

April, 1925





*The Architectural Record*

Wall Fountain in Tawny Cast Concrete  
"EL DESCANSADERO"—A "Garden Under Lath"  
Nathaniel E. Slaymaker, Architect

*April, 1925*

tions, horizon and coast lines, the other being the tawny colors of the sandstone cliffs, the beaches and distant hilly background, both of which are reflected in the architecture, style and natural coloring of the Lath House. Again, the obliquely sloping ground indicated a structure of varying levels inside, with a roof-line dropping down in steps. Thus the site seems to grow right out of the land-forms and to belong, you might say. Both in its outward line and its airy, lacey, albeit firm inner detail it presents a distinctive and arresting silhouette as seen foreshortened against the blue greens of the southern sea.

In plan, there is a rotunda with one short wing, up-grade to the right, as you enter, and a very long wing, in several levels, down-grade to the left, covering six or seven thousand square feet. The axis of the long wings is bent near its middle, to conform to the natural outside slope. The rotunda or main entrance is forty feet in diameter, sixteen-sided, the chords of the circle being of varying widths and twenty-four feet in height, over all, eight feet for the dome proper and sixteen for the body of the rotunda. The shorter wing is four-sided, three sides being about twenty-five feet long, and has a total height of about twelve feet. The longer wing is some hundred and eighty feet long, twenty-five feet wide and twelve to fifteen feet high on different levels. Flat roofs on both wings harmonize with the flat-roofed dome crowning the rotunda, the whole planned to foreshorten pleasantly against the horizontal lines of the nearby residence and the general flat contours of the coast lines.

The carefully worked out design in elevation depended for a large share of its effect upon the two chief materials used in construction, namely, natural weathered lichen-covered rock, or hard-pan, for the low supporting bases or walls upon which the entire superstructure of redwood timbers and beams with detail pattern of redwood lath was superimposed. This combination in itself was a structural novelty. It was made possible by the employment of solid concrete footings or cores varying in height for the differ-

ent levels desired. The native rock was thus applied like a veneer over this concrete core, the inside and outside treatment being the same, to all appearances laid like the dry stone walls typical of the houses of New England.

The chief structural innovation lies in the erection of the broad flat dome for the rotunda. Ordinarily risky, this type of dome was made possible by the use of iron beams which spring from above all the heavy vertical timbers of the rotunda and are caught in a "frog" at the center. Light lath webbing in concentric circles composed the only overhead covering and the iron beams were covered to the desired thickness with laminated strips of redwood. Hence the effect of a great cobweb. The main lines were clean cut, everything carrying right through. The sixteen sides of the rotunda were filled in with a definite lath design, treated like panels. The wider ones reflected the semi-circular Mission Arch often used in the old Spanish California architecture.

Throughout the other wings or gardens, piers of redwood supporting timbers were used and the spaces between filled with a uniform lath design or pattern. A Japanese "interval" or ratio of widths was used as a standard and increased, proportionately, only in the lowest garden, where a greater headroom was called for. Though not in the least French in feeling, but inclining more to the Japanese, this panel design might be designated as "treillage." Redwood cross beams spaced two feet apart spanned the whole structure except the rotunda, and on top of these beams miles and miles of lath, specially grooved to carry off water, were laid in a north and south direction. This procedure gives the most even distribution of sun and shade throughout the year.

In order that the building might be more than just a specialized conservatory, a novel feature in the shape of a tea-room was developed midway down the longer wing. Whereas dull green handmade tile covered the rotunda paths, in the tea room section a hand wrought tile in dull blue, also laid at random, was used both on the floor and as a frame for the three great plate glass landscape windows facing the

Pacific, the same body of water suggesting the blue and green of the tile. On the ocean side of this section a couple of Chinese perforated medallions were used as decorative inserts. To provide against inclement weather the tea room has a glazed roof, under which a lath pattern laid to simulate tile was hung.

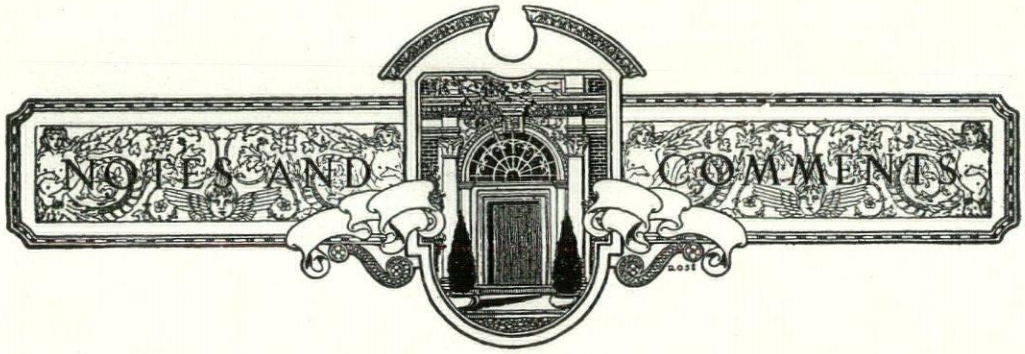
To make the structure usable for entertaining at night and to get special effects of beauty, a complete system of lighting was installed, using lead conduits as protection against water underground, and iron pipes overhead concealed behind beams wherever possible. Two types of lighting were adopted, one for overhead permanent lanterns at fixed points with numerous blind sockets for Chinese lanterns on occasion, and the other a system of reflectors placed below each retaining wall at changes in floor level, so that at will the whole interior might be lighted in any way desired. All the permanent lanterns are original designs worked out in hammered copper with lights of a composite mica giving an orange glow.

Fully as much thought was given to the decorative water features as to anything else. For practical purposes a complete sprinkling system was installed, of course, but having achieved the necessary shade, it was felt that water should be everywhere both visible and audible. To this end there are in all five fountains or pools and a cascade. In the rotunda there is a circular pool of diminutive bright green tile in the center of which is a pedestal of thin granite veneered on a concrete cone. This is truncated to support a bronze fountain figure, "the Boy with the Frog," by the well known sculptor Edward Berge. The smaller garden has a wall fountain in tawny cast concrete, consisting of a pair of dolphins that empty into a fluted conchshell. At the point where the blue tile of the tea room ceases, a double set of stone steps leading down to the next garden surrounds a fountain in the Spanish manner, done in handmade brown tile, the water issuing from a conventionalized terra

cotta fish form. This pool initiates a unit water feature over sixty feet long, comprising, beside the brown tile pool, a lily pool outlined in weathered rock with a simple jet d'eau in the center, and two bronze frogs at diagonal corners for low curved streams, the water from which courses down a rock cascade dividing the next and highest flight of rock steps on through a rock runnel to a final pool, with another jet d'eau emitted from a terra cotta sea-horse. The sea note is thus carried out in full in each fountain.

Special attention was given to the rhythm, not only of line but of color and texture. Redwood, which will gradually weather to deep brown tones, weathered lichen-covered rock in tawny tones, hammered copper hardware, paths of deep ochre disintegrated granite, (except where tile was used) numerous redwood benches throughout, tea room furniture,—in fact everything is harmonious in color. And in texture this is also the case because in addition to the hammered copper, the uneven hand-made tile, the natural rock bordering all the walks, pools, etc., the hundreds of feet of rock veneer, inside and outside the structure, the unmilled lath, miles of it, every single beam and every strip of moulding was rough-hewn, thus tying together the texture of the whole creation. As occasion demanded, beams were six, eight or ten inches square, the cross roof beams and horizontal beams being four or six by eight or ten, as needed.

A most careful drainage plan was followed and to make assurance doubly sure by way of protection from sea breezes, the entire ocean side of the structure was glazed on the outside in such a way as to be entirely invisible from the inside. Finally, there is a general service house where one finds ample space for the potting and caring of plants, the toilets, a kitchen complete in every detail and even a pantry well stocked with Spanish peasant ware for tea-service to complete the story.



### A BRICK WALL

There exists in New York City at present (February, 1925)—but not for long—a unique and most imposing architectural spectacle. This spectacle is as much a matter of accident as is the pageant which the skyline of Manhattan sometimes presents from certain points of view in the Harbor or in the Hudson River. No architect designed it with the expectation of making it impressive. It is devoid of economic value. It will certainly disappear in the near future. The rare combination of conditions which brought it into existence is not likely to be repeated even in such a fruitful breeding place for architectural "sports" as the Borough of Manhattan, in the City of New York.

The architectural spectacle to which I refer consists of two sheer, bald, uncompromising stretches of brick wall which rise on two sides of a right angle on the northeast corner of Thirty-seventh Street and Eighth Avenue. The corner itself, measuring approximately 100 by 100 feet, is for the moment cleared of all buildings. But there has just been erected on the north side of Thirty-seventh Street, one hundred feet east of Eighth Avenue, an eighteen story factory. The wall of this factory is composed of ordinary brick, unbroken by a single window or opening of any kind. It is just one vast desert, with a superficial area of almost 17,000 square feet of brick wall. On the southeast corner of Eighth Avenue and Thirty-eighth Street a twenty story factory has been built, and the south side of this factory presents to the passerby a superficial area of brick wall even more impressive than the wall which encloses the eastern line of the same corner lot. This second wall, it is true, is not completely deprived of openings. It is cut by a small well which will supply air, if not light, to the inhabitants of the lofts when the corner of Thirty-seventh Street is "improved" with a new building. But all the windows are situated in the interior of the well;

and the majesty of the brick desert itself is not offended by even one officious and trivial opening. There they stand at right angles, one to another—two lofty and dreary wildernesses of brick wall, their surface giving not the slightest indication that they serve any useful purpose to any human being.

Of course they will not serve even the purpose of an enclosure for long. These walls were born to parade their monotonous magnificence in unrelieved obscurity. If the owners of the buildings could have counted on their continued exposure to the public gaze, they would of course have ordered the walls to be pierced with many windows so as to supply the workers in the busy lofts with additional light and air. But they knew that the vacant lot on the corner would soon be occupied by a factory of the same or greater height, and that the walls which are now exposed would thereafter fade away into a partition, as invisible as an imaginary section of any brick wall cut parallel with its longest dimensions. Yet during the brief period of their utterly uneconomic exposure to the eye, they certainly present a most imposing sight—one the like of which the hands of man have not built since the pyramids.

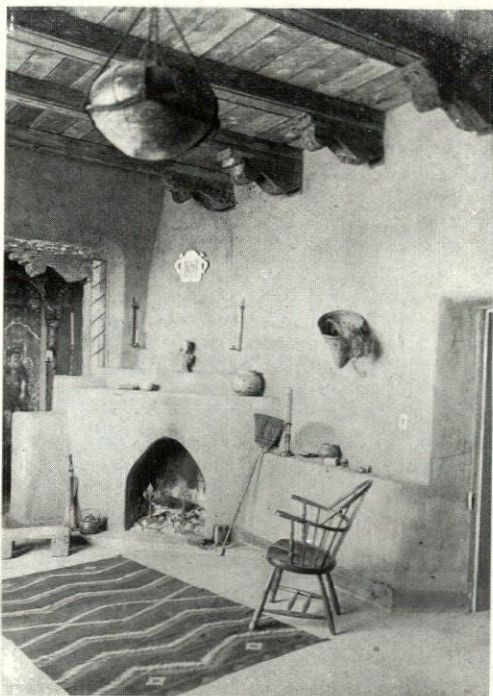
There is nothing rarer in architecture yet more intrinsically satisfactory to the eye than a generous stretch of unpierced wall. It does not often happen that conditions permit such walls to be built. A mediaeval castle, surrounded by fortifications, forms the classic example of comparatively unbroken wall surfaces; and its utility was of short duration. As soon as it became less necessary for wealthy people to fortify their homes, holes were cut in these massive stretches of masonry, and ever since, but particularly in modern times, the demand for air and sunlight has forced on architects the necessity for piercing walls with windows. There are many Italian and Spanish villas whose occupiers wished to exclude the sun for a large part of the year and who per-

mitted their architects to build them urbane yet substantial walls with comparatively few openings, but the modern house builder all over the world seeks and is quite right in seeking all the light and air which he can get. The walls in modern houses are merely the frame work for doors and windows. All the more exceptional and interesting, consequently, is the fantastic defiance of this rule which has appeared on the corner of Eighth Avenue and Thirty-seventh Street—to my mind a strangely and monotonously impressive apparition.

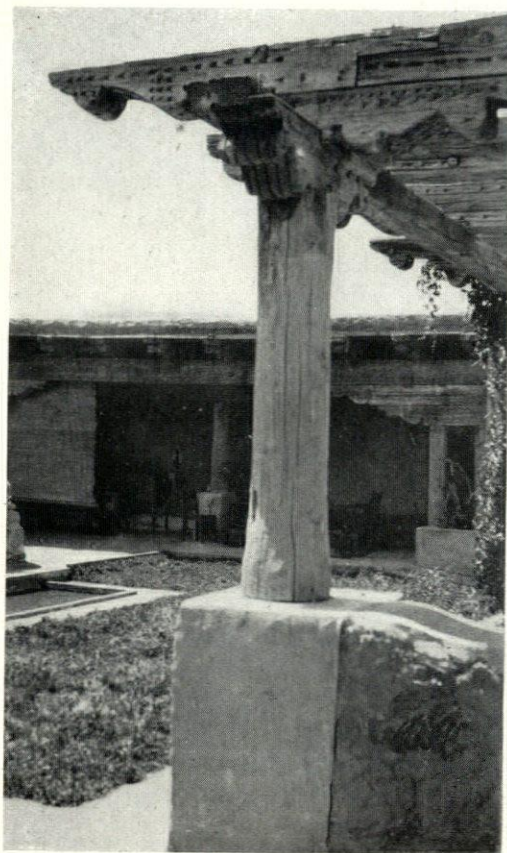
HERBERT CROLY

### OLD INDIAN MISSION TIMBER USED IN MODERN HOME

From the abandoned mission church of Nambé, for two hundred years the center of religious activity and education among the Indians and Spanish colonists of New Mexico, have come the hand-carved and painted timbers used in the studio home of Gerald Cassidy, Santa Fe artist. The historic weathered wood was junked unwittingly in the town several years ago and rescued by Mr. Cassidy and his wife, who immediately set about restoring and preserving the treasure in their own home.



Interior of Studio Showing Typical Corner Fireplace of Indian Construction

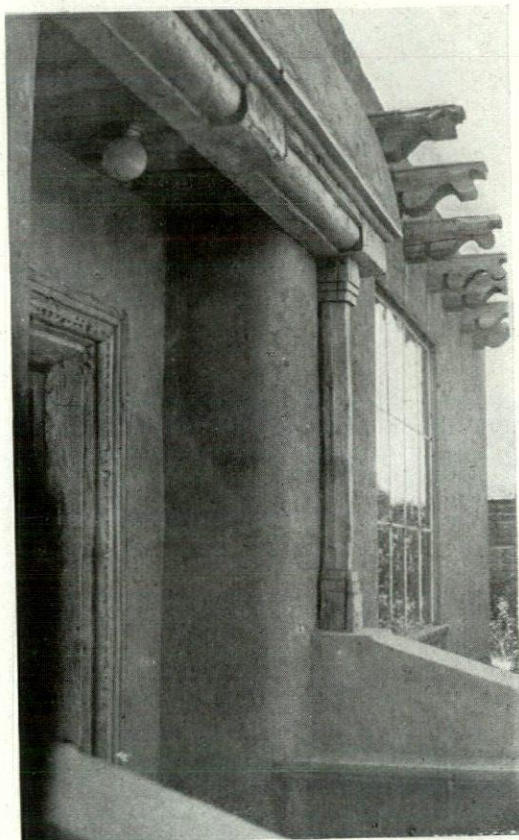


Pillar of Pergola Porch Showing Detail of Carving on the Vigas. Across the Patio Is Seen the Historical Carved Beam

The most valuable relic of the old mission, the altar paintings of La Senora de Las Rosas (Our Lady of the Roses) has been set up intact as one wall of the entrance hall of the house, seen through a carved wooden arch from the living room. The center panel on which is painted Our Lady and her symbol, carved roses, has been hinged to form a door into an adjoining room.

A great carved beam which tells of the erection of the church by Governor Don Juan Domingo de Bustamente, in 1729, has been used to support the roof of an open porch along one side of the patio in the rear of the house. In the center of the beam is a large crack where the wood gave way under the too great burden of a modern style roof with which the Indians endeavored to improve the mission a few years ago.

Other carved wooden members of the old mission, the columns with their elaborate capitals, and the projecting roof vigas, have been incorporated into the house as both outside



Studio Entrance, Showing Hand Carved Wood-work Trimming from the Fallen Indian Mission Church of Nambé

and inside trim for windows and doors. Scraps of the antique wood have been made into a cabinet in the living room for Indian curios. The quaintly cupped cavities of the decoration in the wood are faintly tinted with alternating rose and blue. The belfry of the old mission has been converted into a well tower in the garden.

### MESTROVIC IN RELATION TO AMERICAN SCULPTURE

Americans are a race of builders—builders of great new cities, traditions and ideals. With this constructive instinct there is a tendency to estimate values from the basis of serviceableness. A systematic diagnosis of our ethical necessities and requirements is resulting in a clearer definition of our artistic sympathies and aspirations, and as a natural consequence the critical verdicts of Europe are accepted with greater reserve than formerly. A higher value is now attached to the inspirational ca-

capacity of a work of art by those who follow the creative arts, as their constructive tendencies call for suggestion and mental stimulation. A new artistic movement, or the work of a contemporary is intuitively judged by the portent of its educational message, or the extent to which it contributes to our aesthetic culture and breadth of vision. Mestrovic, when considered from these points of view, reveals a serious lack of adaptability to those singularly complex circumstances which are beginning to control the direction of our artistic sympathies.

He comes to us with great prestige, with fanfares of literary trumpets. The foreign critics who praise his work are of such standing that any deviation from their opinion requires courage—or temerity. In his address to the Architectural League Mestrovic spoke of Art as an international language; this is so, but it is the *significance* of the sentiment expressed which concerns us most in our endeavor to formulate a code which will govern our future aesthetic existence.

As an artist of consummate skill and a rare personality, we accord him full honor—but his inspirational capacity leaves us cold, and little desire is felt to see in him the precursor of a new movement. In conversing with sculptors on this subject, there appears little likelihood that his manner will influence their aims or views in any way. It might have been assumed that the primitive quality of Mestrovic's work would have exerted an instantaneous appeal, when we consider the enormous attraction for the earlier phases of Greek sculpture, and the present predilection for the Romanesque in architecture.

The reactions which his work stimulate are contradictory. Though his form of expression is primitive, his sentiment is essentially decadent; then, the extreme sophistication of his technique is in conflict with the manipulation of mass. These factors accentuate the divergence between his manner and the spirit of the school he emulates. In contemplating primitive sculpture, we invariably feel that technique is a natural product of substance conquered in the realization of an aesthetic concept; but in the synthetic primitive, technique is an accomplishment very deliberately directed to produce an artificial equivalent to the spontaneous. It represents the fundamental difference between the formula and the intuition. Primitive sculpture in our day is greatly dependent upon environment—a fact fully demonstrated in the design of Mestrovic's chapel, which we recently reproduced. The macabre quality of his expression is distinctly repellent to American virility. He invades our memories, but lacks those essential associations which contribute

vitality to those things which he simulates.

We have the inquisitiveness of the new race just awakening to aesthetic consciousness, which makes us susceptible to artistic diversion; but our pleasure is distinctly combative when a new interest challenges that which we hold as sane and sacred. An adolescent appetite prevents us seeking nourishment in that which we suspect of unwholesomeness. We search for that in art which will ennoble our ideals, not that which reflects the introspection of the lonely individual tortured by super-sensitiveness. As a race, conscious of a tendency towards sentimentalism, we regard his work as a warning rather than a message.

A new factor which has probably been inoperative since the days of the Greeks, begins to exert powerful influence over artistic creation in this country; we are conjuring the image of an enlightened public, which must only be proffered the highest aspirations in normality. Though this public is yet a mythical quantity, the artist senses its capacity for sound judgment if carefully nurtured, and an educational responsibility stabilizes creative effort. The artists of Europe hold their publics in active contempt as a mass of beings beyond redemption, while we regard ours as a rising generation which must be influenced by the virile, sane and beautiful. The morbidity of Mestrovic is a barrier which turns those back who might be tempted to follow along his path.

LEON V. SOLON

### FONTAINEBLEAU SCHOOL OF FINE ARTS FOR AMERICAN STUDENTS

The special three months' course in Painting and Architecture at the Fontainebleau School of Fine Arts, which achieved such success in the years 1923 and 1924, is to be offered again to American students this coming summer from June 25 to September 25.

The school, under the direct patronage of the French Government through the Minister of Fine Arts, counts among its professors some of the most distinguished French artists and architects of the day. This, added to the fact that the school is located in the Palace of Fontainebleau—an art treasure in itself—is sufficient indication of the advantages to be gained from a course of study there.

No attempt is made to duplicate the program of study outlined by any other School of Art either in the United States or in France, the purpose being to provide a sort of post-graduate course for advanced students.

For painters and sculptors, the course includes atelier work in the Palace studio, spe-

cializing in the study of the art of Mural Decoration and the study of Ornament; special work in Tempera and Fresco; trips to Paris and the surrounding country to study the work of the older and the modern masters.

For architects, it includes atelier work in the Palace drafting room; specialized study of French Architecture, past and present, and of its allied arts; study trips to places of architectural interest, covering a wide area.

In addition, lectures are to be given on the History of Painting, Sculpture and Architecture, and on the French styles. Also, classes are to be held in French and French history.

Two prizes are to be awarded this year in the Department of Architecture; one of one thousand francs, given by the Massachusetts Institute of Technology, and the other of six hundred francs, given by Mr. J. P. Alaux.

Though America possesses wonderful opportunities for technical training in the Fine Arts, a sojourn in a land which abounds with the artistic manifestation of an older civilization cannot but benefit the student who is seeking to widen his outlook and to gain inspiration. And where could he choose a better center than this fine old palace replete with furniture and mural coverings of a past decade, and set amidst surroundings of picturesque charm!

LOUISE MASON

### A CORRECTION

We desire to express regret for the error which occurred in the captions under the illustrations on pages 283 and 285 of our March, 1925, issue. The captions in each case should have read: "Decorative Leaded Glass Windows Designed by Scott Williams for a Florida Residence."

### INTERNATIONAL EXPOSITION OF MODERN DECORATIVE AND INDUSTRIAL ART AT PARIS, FRANCE

The International Exposition of Modern Decorative and Industrial Art to be held at Paris, France, from April to October, 1925, covers all decorative art as applied to architecture, furniture, dress and adornment, street planning, the theatre and landscape gardening.

The Committee of Admission have announced their intention to admit only those works which possess the quality of artistic originality, of perfect adaptation to modern conditions of living, and of good workmanship. The exhibits are limited to works of *new inspiration*, imitations and copies of existing work being rigorously excluded. New models of cheap as well as of expensive production will be shown since

beauty and art may be present even in the simplest and most modest object.

Arrangements are being made to carry out this Exposition on a large scale, exhibits being housed not only in the Grand Palais but structures are to be erected along the Seine Embankment from the Concorde to Alma Bridge. This Exposition should form a great source of attraction and of educational and commercial interest to visitors to Europe during the year.

#### EUROPEAN TOURS FOR ARCHITECTS AND STUDENTS

An attractive prospectus recently issued by the Temple Tours announces two trips to Europe under their auspices during the coming spring and summer. Although these trips are planned to be of especial interest and value to architects and architectural students, we read in the announcement that there will probably be enough non-professionals in the parties to prevent too much shop talk.

The first of these parties is scheduled to sail on the *Laconia* from New York April 25th, and will be under the leadership of Mr. W. L. Groben, Architect, of Philadelphia. The date was chosen with a view to the convenience of those architects from a distance, who might be planning to attend the coming Institute Convention in New York.

The summer tour will leave after the closing of schools and colleges, June 27th, on the *Carmania* from New York, and should attract students and teachers, as well as those

architects who are unable to leave earlier in the season. This party will be led by Mr. E. Donald Robb, of the firm of Frohman, Robb & Little, of Boston.

The two itineraries are substantially the same and are carefully planned, so as to cover not only many of the principal places of interest in England and France usually visited by architects, but, by means of automobiles, to reach points less familiar to tourists on account of their inaccessibility.

Sufficient time is to be allowed everywhere for sketching, measuring, photographing and the studying of details, and for the careful inspection of objects of interest in museums and galleries. While in Paris, an opportunity will be had to see the International Exposition of Decorative and Industrial Art, a show which will be full of inspiration. Side trips will be taken to the battlefields and to points of interest within easy reach of Paris.

After the completion of the main tour, parties will be formed for extension trips into Southern France, Spain and Italy.

For the experienced traveler as well as for the inexperienced one, these trips should be pleasant and profitable. The former will enjoy the sensation of being freed from the anxiety of looking after hotels, transportation and baggage. The latter will be shown the architectural resources of Europe by those who know them and can interpret them; and the congenial companionship, together with freedom from care, should provide a pleasant summer vacation for all.



VELVET DOSSAL  
ENCRUSTED WITH GOLD AND COLOR  
STUDIO OF J. M. AND A. T. HEWLETT

This process for the enrichment of textiles has been developed by the Hewlett Studios as a result of some years of experiment. The ornament is applied to the velvet or other material through a stencil screen of gauze in which the solid portions have been filled with an elastic, paper glaze. The material used for this encrustation is similar to the gesso of the early Italians. Over this gesso the gilding and colors are applied, the fabric being tightly stretched during the process. When the fabric is removed from the stretcher the movement of the material produces a minute crackle over the entire surface—which, owing to the fact that each particle of the crackled surface is tied back on the fabric by the projecting nap, cannot flake off) thereby greatly adding to the charm of the surface texture. The screens used for the great curtain of the Eastern Theatre in Rochester were eight by fourteen feet in area. The great size possible for these stencil screens makes practicable an heroic scale in the repeat of an allover ornament.



VELVET DOSSAL  
J. M. AND A. T. HEWLETT