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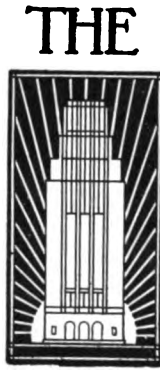
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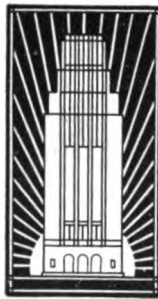
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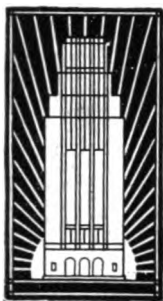
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DETAIL OF MAIN ENTRANCE
RESIDENCE FOR MR. WILLIAM H. COBURN, INDIANAPOLIS, INDIANA
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THE WESTERN ARCHITECT

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Volume XXXVI

JANUARY, 1927

Number 1

That Plan
for a
Five Day Week
in Building

A movement is under way to establish a five-day week in the building trades. In line with similar movements in other fields, it has been furthered, if not fathered, by the announced policy of Henry Ford to establish the shortened working period in his plant. Much may be said in favor of any sound plan which shall benefit those who labor in the building or any other trades. But this or any other similar plan must and will be subject, eventually, to the operation of economic principles. In any discussion of this many-sided question, certain basic considerations are involved. We have closed two years of unparalleled activity in building. That there will be another year of splendid activity seems assured under conditions similar to those which prevailed in 1925 and 1926. We would not dare risk the prophecy that under any ordinary circumstances this year will equal in volume of building either of the other two. Certainly if building costs advance for any cause, we may expect a decided recession. Now we are of those who believe that building costs—along with other costs—must be reduced. We believe that the great problem confronting us as a nation today to be an equalization of prices. That there should be so wide a divergence between the prices of farm products, raised by a trifle less than half our population, and manufactured products, is a disturbing situation, one which grows no less disturbing as its deep influence is sounded. We cannot expect to exist indefinitely half prosperous and half not prosperous. We admit openly that we have no cure to offer. But we do hold the decided opinion that the remedy, when and if administered, will be swallowed by the prosperous as well as by the others. In brief, we think that prices of farm commodities may and probably will increase to a degree and that other prices at the same time will come down. The latter trend is in that direction. If this be the correct diagnosis, then all elements involved in production of other than farm products, must share in the processes of price recession, labor included. There is an inexorableness about these processes that operates whether

or no, and any attempt to establish a five-day week must submit itself to this operation. This plan, we understand, contemplates no reduction in wage. It may contemplate no reduction in the amount of work accomplished. But, if this policy involves any decrease in production, which is actually an increase of cost, it is a source of real danger, if persisted in. Building will not proceed if costs advance. Most of us, we imagine, will be called upon to do more rather than less work during the period of readjustment which must come. A five-day week plan avails nothing if there be no work for the five days. We have hope that this view will receive consideration by those upon whom rests the responsibility of decision. They and all of us surely desire to take no steps to kill the goose which, during the recent years, has been so consistent a producer of golden eggs.

A January First
Glance
at the
Building Field

"Fair, with not much change in temperature," a prophecy common to weather reports, might with some degree of accuracy be used to indicate the probable building situation for the year 1927. With a "high" in some sections and a "low" in others, the reports from the whole country in general indicate a general average of normal industry in both urban and suburban constructions. If a further analysis were made, the reduction in construction is found in the large city areas and an increase in activity in the smaller cities and towns. In New York City, building on Manhattan dropped many millions in volume during the last months of the year, while suburban activities have almost proportionately increased. The same situation is reported from other cities, notably Kansas City, in the Middle West. This seems to indicate that the larger cities have reached or are close to that point of saturation which has been looked for from year to year of late; while the movement of people toward the suburbs and the active demand for homes places housing first in the list of demands in the construction field. Apparently, there is no lack of funds for suburban investment. The steady increase in cost of

labor in the building trades has probably reached its peak, though it seems to be a fact that these increasing costs have not affected the volume of building, the quality and quantity of the work performed being the main desideratum. The old and reliable "supply and demand" arbiter seems to continue to hold the steering wheel of the construction truck. That Labor is satisfied and therefore tranquil, may not, does not, wholly explain the cessation of strikes in the building trades, which has been a remarkable feature of the past year. In the Eastern cities, of which New York is the barometer, men of ability and intelligence have come into Union control. This, coupled with the work of such architects as the late Burt L. Fenner and Robert D. Kohn with employers of prominence urging the wisdom of arbitration methods has been the strongest factor in the peaceful settlement of labor disputes. It is realized more and more clearly that both the man who employs and the man hired are partners in a joint enterprise. The improvement is startling when one considers that five years ago Brundell was the most powerful labor leader New York has ever known, and that his curt command, "knock-off" was implicitly obeyed by a hundred and fifteen thousand men. Brundell died recently, deserted by the friends of his more prosperous days. In San Francisco the situation is different. There public opinion, backed by a Citizens' Committee, organized some five years ago when it swept union control from the city, continues to control the situation. A carpenters' strike in May lasted through the Summer and Fall, distinguished by all the brutality that marked such strikes a quarter of a century ago. Recently committees representing the contending parties have been in conference and adjustments agreed upon which include a raise in wages, and the continuance of the open shop rule established by the Citizens' Committee. That this peace will be permanent is doubtful, as the disturbance and real issue is the demand of organized labor for monopoly of all industry in the city with the initiative coming from headquarters in Indianapolis. That the conservative element in San Francisco is determined that unionism shall not be established again and will in the end prevail is hoped if not certain. In Chicago the Landis Award Committee has been sustained during the year, and the effect has been of benefit to both labor and employees. It is gratifying to note that the labor union policies of the past are fast changing and that a spirit of equity and compromise is growing in the ranks of the tradesmen and their employers. Unionism is beginning to mean what it should, a union of all forces that combine in carrying on the building constructions of the country. The present disparity between the cost of labor and the reduced cost of manufacture in building materials through the adoption of more standardized and cost-saving meth-

ods, will possibly result in a gradual lowering of labor costs, but here again old "supply and demand" will be a determining factor. The conditions indicated, and others of minor influence all presage a tranquil and industrious building year for 1927.

An Important
Innovation
in
Institute Procedure

Following the custom of commercial organizations in holding "conferences" periodically with the heads of departments, the Executive Committee of the American Institute of Architects, for the first time in its history, held a joint session of its Directors and the Chairmen of its standing and special committees at Washington on December 3. The work of the annual convention of the Institute has always been retarded and much of the purpose of a meeting of members made ineffective by the laxity of committees in the accomplishment of their appointed duties. However this has been due largely to the wide separation between the chairmen and the members of committees. As a rule it has devolved upon the head of the committee to do the work for his committee. This separation has also handicapped his activities as he could receive no support from his Board of Directors except through correspondence. In this get-together meeting committee work in all its branches was discussed and preparations made for full reports of committees at the next convention, to be held at Washington, May 4 to 6 next. In the words of President Milton B. Medary, the meeting was held "to exchange ideas, harmonize progress, and generally to weld the leaders of the Institute work into a smooth-running and harmonious group, each element doing its job with a good understanding of the whole situation and with the enthusiasm which comes from personal contact". Reports of results of this conference are now being sent to members of all committees with definite instructions that hardly would have been possible without the definite and comprehensive instructions of the Board to each chairman. This conference still further advances the Institute as a "going concern" and removes it still farther from the almost anomalous position it once occupied as a gathering of artists almost informal in its work and results. The past decade has seen the Institute treble its membership, and more important, take an advanced place in the economic world and in the leadership of every movement toward higher ideals and enlightenment among the general public as well as in the confined circle of the art architectural. Following this conference the Directors invaded the south-eastern states, holding their semi-annual business meeting at Atlanta, and informal meetings with local Chapters at Charleston, Savanna, and the Alabama Chapter at Birmingham.

Color in Architecture

I. Introductory

By REXFORD NEWCOMB, A. I. A.

ASIDE from the vital problem of making the aesthetic expression of modern architecture indicative of the constructive systems which make possible its existence, (a question to which I have recently devoted myself in another journal), there is perhaps no more important problem before the American architect today than that of architectural polychromy. We are living at the threshold of a highly colorful age, an age made possible by the tremendous development that within the last twenty-five years has taken place in the field of chemistry and the industries dependent upon chemical knowledge.

Doubtless man has always loved color. And why shouldn't he? He lives in a world of color which ranges from the deep cool greens of the primeval forest and the evanescent blues of sea or sky, to the burnt oranges of a desert landscape or the reds, pearls, purples and greys of the daily sunset. Color—protective and otherwise—is an element in all life, we are told by the naturalists, a real factor in life's and nature's processes. Primitive man so far back as we know him has been alive to the appeal of color, and early in the history of the race a primitive idealism led him to modify his body and to enhance what he thought its beauty by the smearing on of whatever pigmental materials—earthy or vegetable—he could lay hands upon.

In response to the various phases of our environment, made sensible to the mind of man through the eye and the ear, there has arisen what we know as the "fine arts". These arts, practiced entirely for the delight which they afford the aesthetic nature of man and which have no utilitarian or material value, are predicated directly upon these aspects of our environ-

ment: *form, color, motion* (changing or moving form) and *sound*.

I shall not go deeply into this classification of the fine arts upon the basis of the stimuli detected by the eye and the ear, for it is my purpose to let the following tabulated list of the arts speak for itself, explaining that by the "pure" or "abstract" I mean those arts which do not take their forms, their subject-matter, directly from nature but present us ideal, man-made, "abstract" forms, if you will; and that by "representative" arts I mean those which depict or represent for us pictures, episodes or situations which are expressible in terms of nature's forms.

| <i>Detecting Organ</i> | <i>Stimuli</i> | <i>Abstract</i> | <i>Representative</i> |
|------------------------|-------------------------|-----------------|---|
| Eye | Form Color Motion | Architecture | Sculpture Painting Aesthetic Dance Poetry |
| Ear | Sound | Music | |

From this table it would seem that the important and most completely developed of the fine arts are the "representative." This is perhaps accounted for by the large measure of the imitative that actuates all human and indeed all animal action. Aside from whatever observations we may make with regard to the other expressions of the aesthetic impulse in man, let us for a moment examine that art which is called into being by his appreciation of color.

Most of us are familiar with the art of painting and with the subject-matter of its essays. This art which deals with representation in color of nature's or man's messages has largely confined itself to two dimensional (plane) expedients. Yet at times we have seen it cross to the sister arts of sculpture and architecture, there to modify the appeal of pure form. Indeed it would seem that man's first use of color had to do with its modification of form. He used it to impart a further decorative quality to his own body, his arms or his utensils.

Very early, however, the use of color for the representation of things that he knew in his natural environment became popular with man, and in those cave-paintings of prehistoric France and Spain we have abundant evidence of this normal, natural human impulse. Whether or not even a "practical" art of building had as yet arisen we do not know. The fact that these early paintings occur in nature-supplied caves, would seem to indicate that the primitive

EDITOR'S NOTE: This is the first of a series of articles by Professor Rexford Newcomb upon this important subject which, more and more, is drawing the attention of the architect. Running parallel with this series of articles there will appear a series of color plates. These plates, which will appear throughout the year are designed to stimulate interest in the important subject of polychromy as applied to architecture. The plate which appears this month is an imaginative one and contrasts the color of the *old* with the color of a *new* architecture that is slowly but surely arising in our midst. It is *not* supposed that anyone should take this as a definitely practical suggestion, but rather as an idealistic study designed to stimulate thought on the part of the designer with regard to the whitherward of American architecture, especially as regards this important question of color.

art of hut fabrication had not as yet emerged, to say nothing of a fine art of architecture. All of this argues great age for the art of color, and perhaps this fact would indicate that an appreciation of color is a more primitive impulse than the appreciation of form or sound. In other words the color of a thing may "hit" us before a definite notion of its form becomes appreciable. The value of color in the differentiation of forms thus becomes apparent.

By a glance at our table we note that there is a significant vacancy opposite color in the "abstract" column. This means there is no "pure" art of color based upon an appreciation of color as divorced from form. In recent years, however, there has been a tendency to develop such an art, an art of mobile color or "color music" as it has been termed by some. A man-made instrument generally known as the "clavi-lux" or "color-organ" has been developed to make possible ordered and rhythmic cadences of color, just as various of our musical instruments have been invented to make possible ordered and rhythmic cadences of sound.

Now, while man reacts keenly to changing color in nature—sea or sky—he has not as yet developed a fine art of pure or abstract color. The development of this field with its interesting and unfathomed psychological concomitants still lies before us. Perhaps the present-day awakening to the appeal of color will make possible the development of this phase of our color appreciation, and indeed in combination with music, already highly developed, make possible appeals, the intensity of which is not attainable in any of the arts when practiced singly.

Most architects are conversant with the status of modern architecture so far as color is concerned. Their studies of historic styles give them a knowledge of the fact that most of the world's great architectures up to the period of the late Renaissance depended for a large measure of their interest upon the appeal of color as well as that of form. By this I do not mean simply the intrinsic colors of the materials themselves but color applied to form in somewhat the same sense that it was applied to the body of the primitive savage. If one recall his historic studies he will remember immediately the appeal of rich color made by the Egyptian, the Assyrian, the Persian, Greek, Roman, Byzantine, Saracenic, Hindu, Chinese, Japanese, Inca, Maya and Aztec architectures. If he is not conversant with the appeal of color during the Romanesque and Gothic periods, it is because our information on these points has been, until lately, rather scant, and what we had in a measure faulty.

But, for that matter, our knowledge until within the last few years has been faulty with respect to Greek polychromy, and indeed it was not without pain that some of our immediate professional predecessors learned of the brilliant polychromy of Greek architec-

ture, an architecture which we in our ignorance of the facts had imagined to be largely of pure white, Pentelic marble. Those who are familiar with the pages of the Transactions of the Royal Institute of British Architects for the middle of the last century are conversant with the doubts that were expressed and the debates and discussions that were waged with respect to the validity of such discoveries. But archaeology has now made the facts plain to us with the result that we are able to sense the message, meaning, and practical suggestions of this sane, logical and beautiful architectural polychromy. What its lessons may mean for us of today I propose to treat in a future paper.

Viollet-le-Duc and others since his day have demonstrated conclusively the presence of applied pigment during the Middle Ages, and while our knowledge regarding the underlying laws and principles of such application are not as complete as those regarding Hellenic architecture, a considerable body of information exists regarding them.

The early and middle Renaissance retained a large measure of polychromy, but this color interest, upon the exterior, (and most of our notations here have to do with external color), decreased gradually as the modern period approached. Some measure of the colorless character of the late Renaissance is laid at the door of that popular exponent of the day, Palladio, who, while he lived and worked in one of the world's most colorful environments, the Venetian Lagoon, ruled the appeal of color out of his essays and depended largely upon form for his effects. Far be it from him to call to his aid the brilliant polychrome terra cottas of the earlier periods which Brunelleschi and his successors had used so brilliantly at Florence and elsewhere. Two reasons appear to account for his minimization of color. One was his intense study of antique architecture; which he thought to be colorless, the other the fact that he constructed the greater proportion of his works in stucco-covered brick, the surface of which he left white in imitation of the ancient marbles.

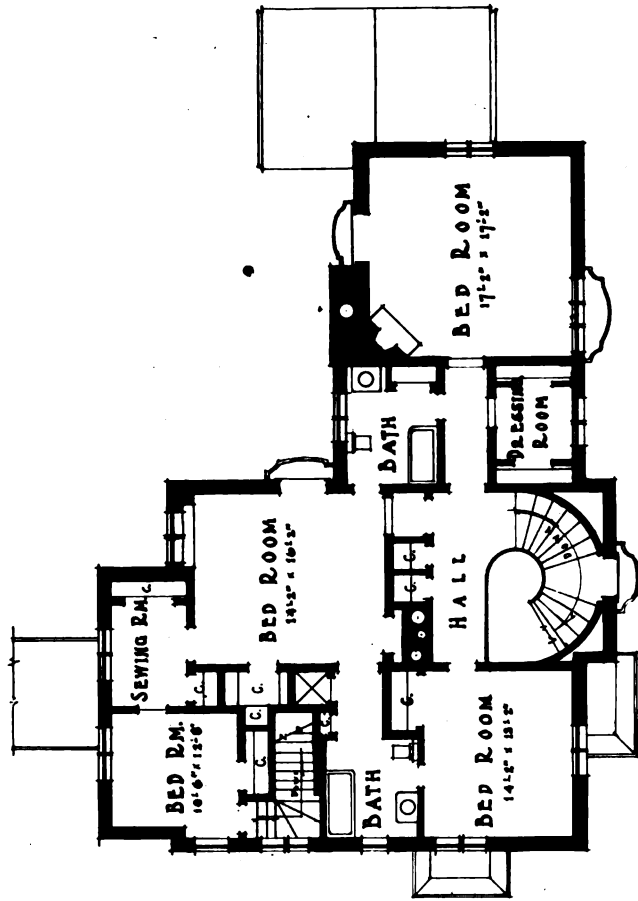
Our own architectural progenitor, Inigo Jones, who introduced the Renaissance into England, was a deep student and faithful follower of Palladio, and his architecture in a less colorful country was, if anything, more drab than Palladio's. Jones' successors, Sir Christopher Wren, Hawksmoor, Gibbs and the rest, concentrated upon form, leaving polychromy to be introduced by the intrinsic colors of their materials. Those familiar with the history of early American architecture and the accompanying prohibitions of Puritanism are able to account for the relatively unimportant place taken by color in American architecture down to date.

Since the rise of the schools of architecture some attention has been paid to "color theory," but on the

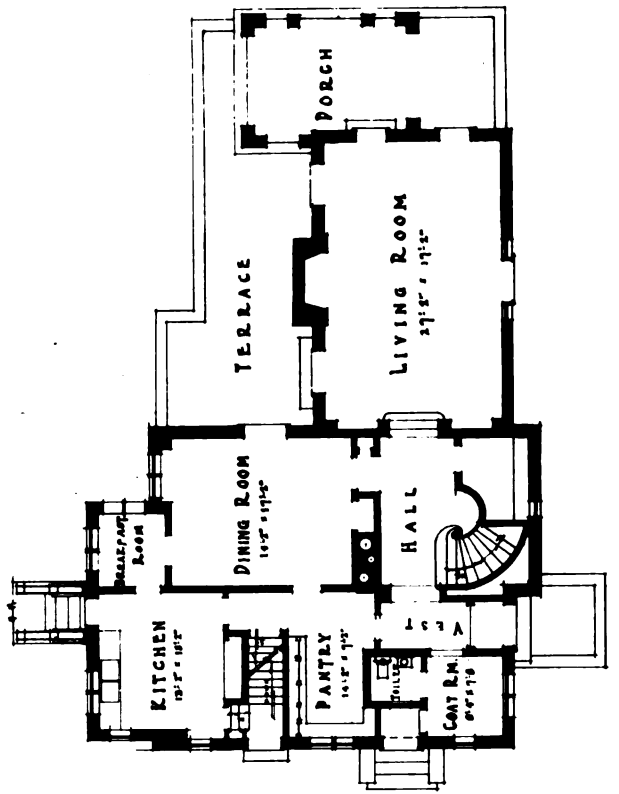


DETAIL OF MAIN ENTRANCE

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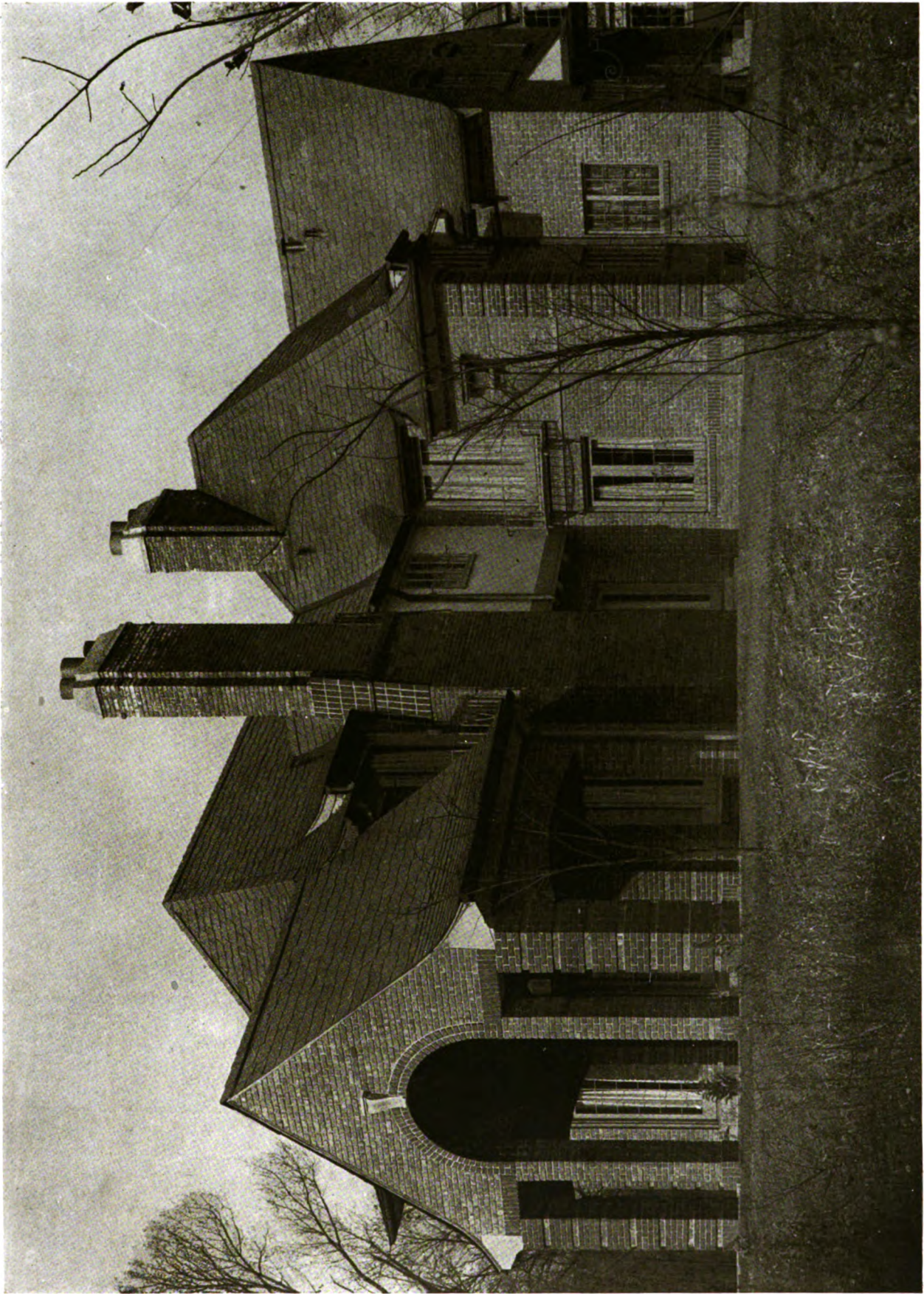


FIRST FLOOR



DETAIL OF LIVING ROOM PORCH

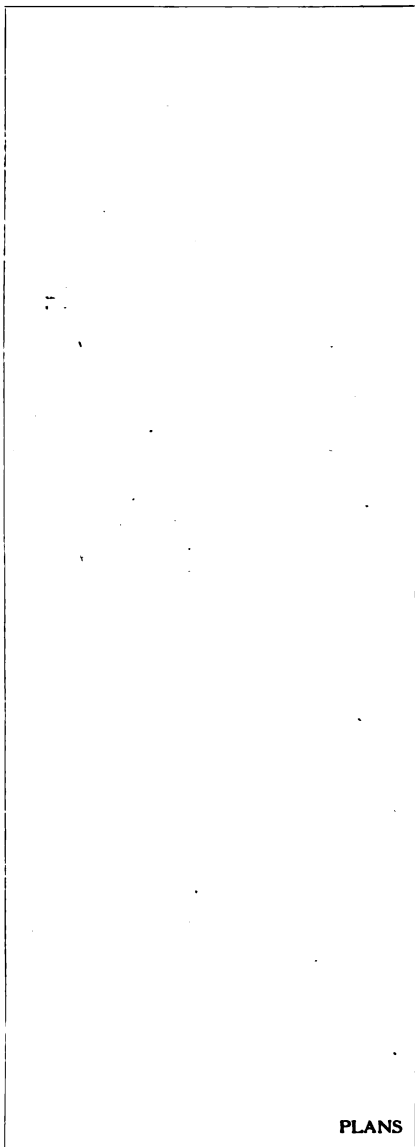
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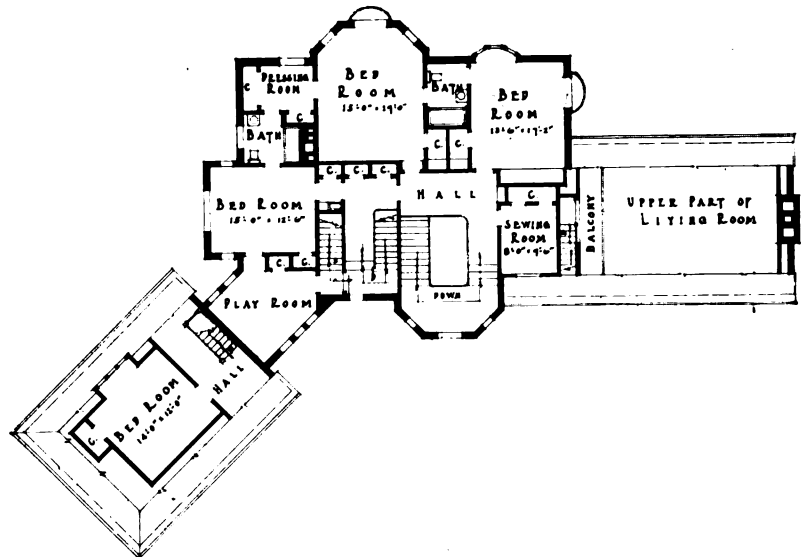
VIEW FROM SOUTHEAST
RESIDENCE FOR MRS. IDA R. SMITH, INDIANAPOLIS, INDIANA
FREDERICK WALLICK, ARCHITECT :: :: :: :: :: ::



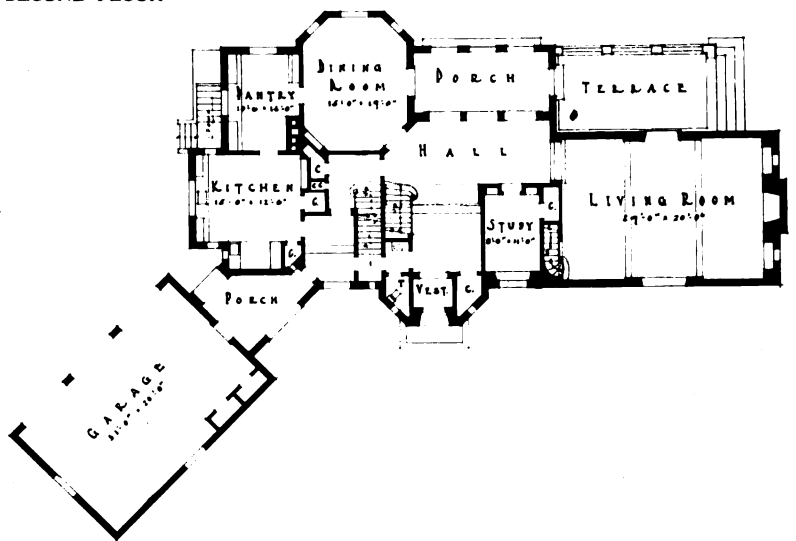
FRONT ELEVATION



PLANS

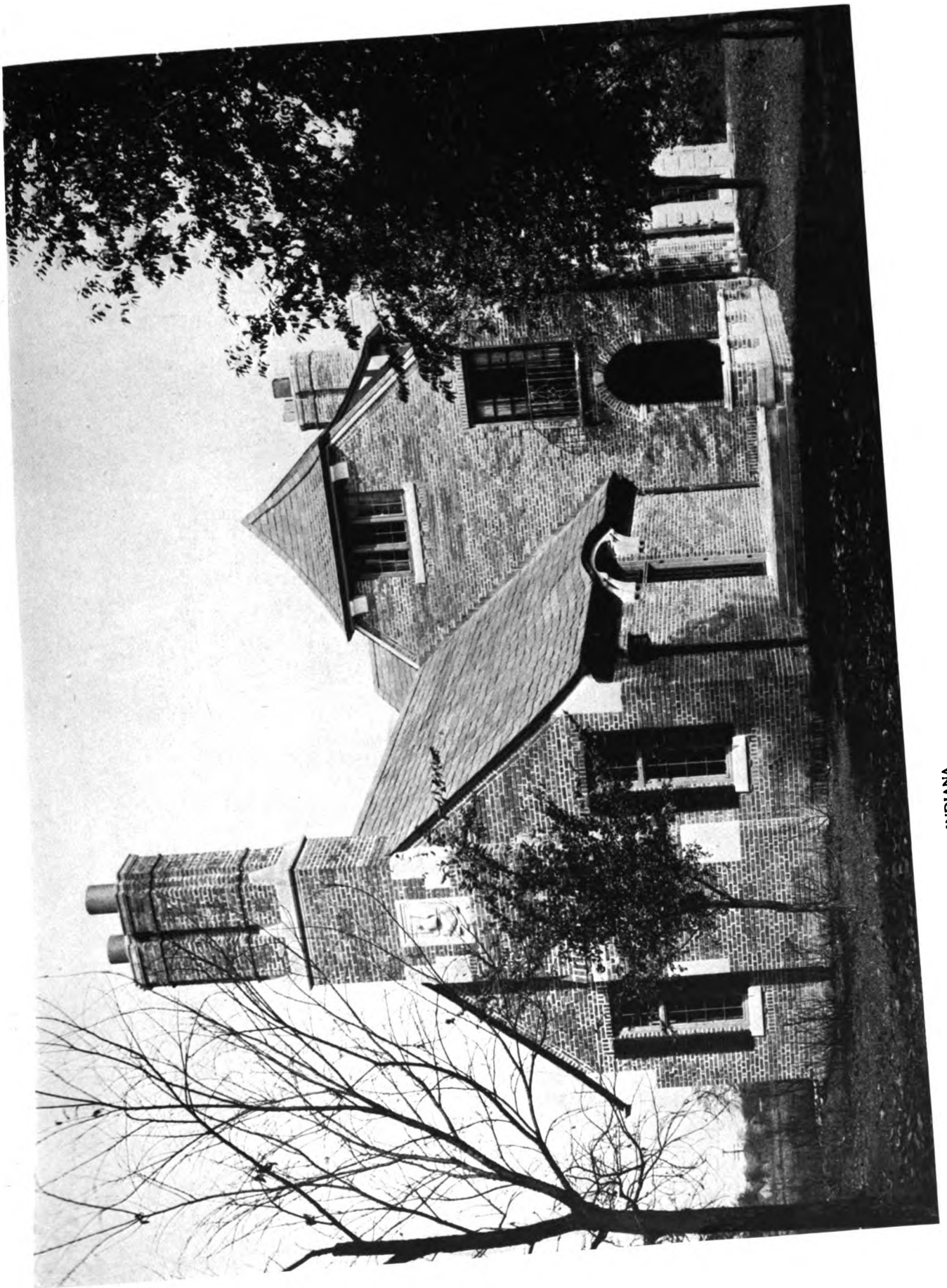


SECOND FLOOR



FIRST FLOOR

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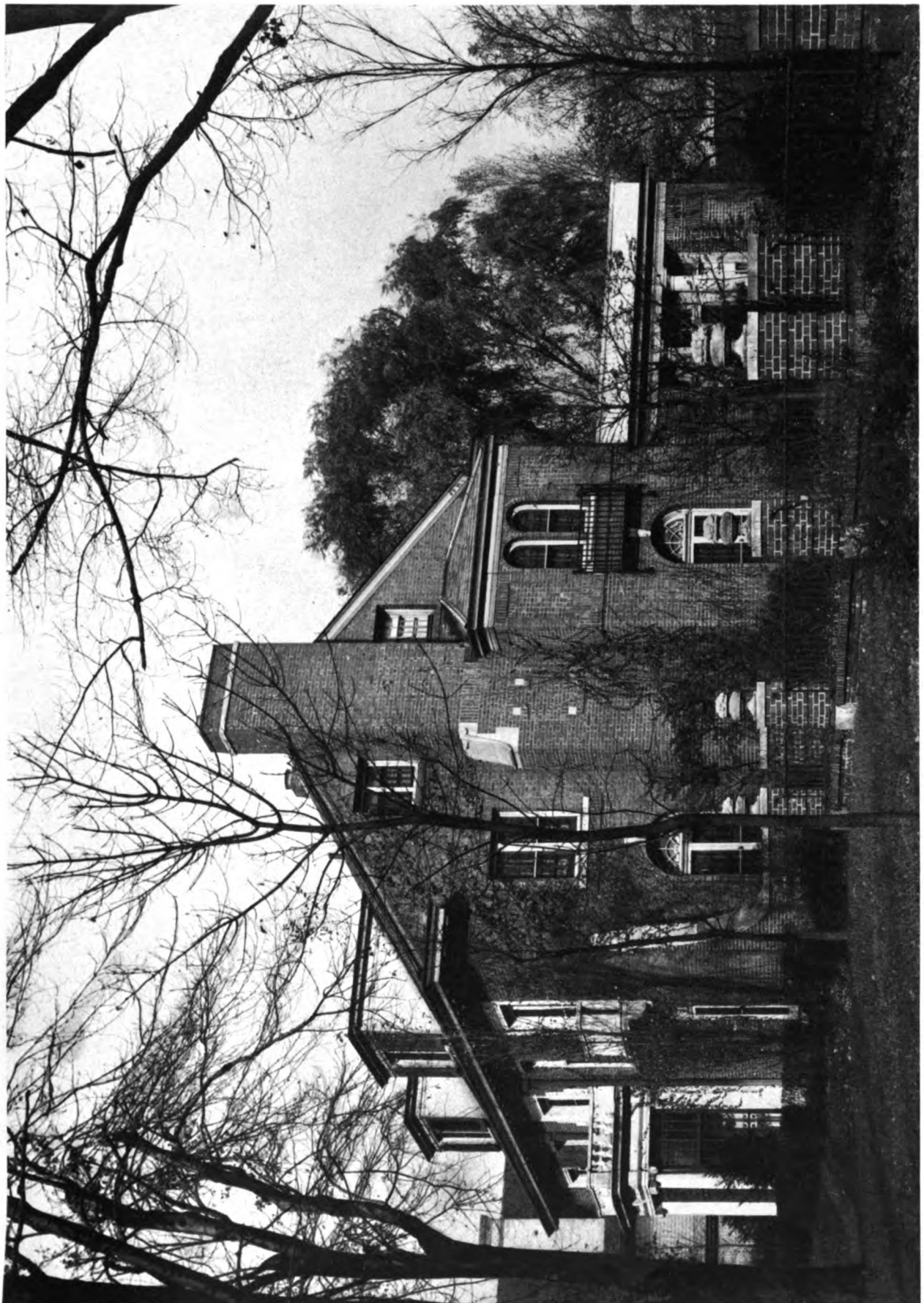


LIVING ROOM WING
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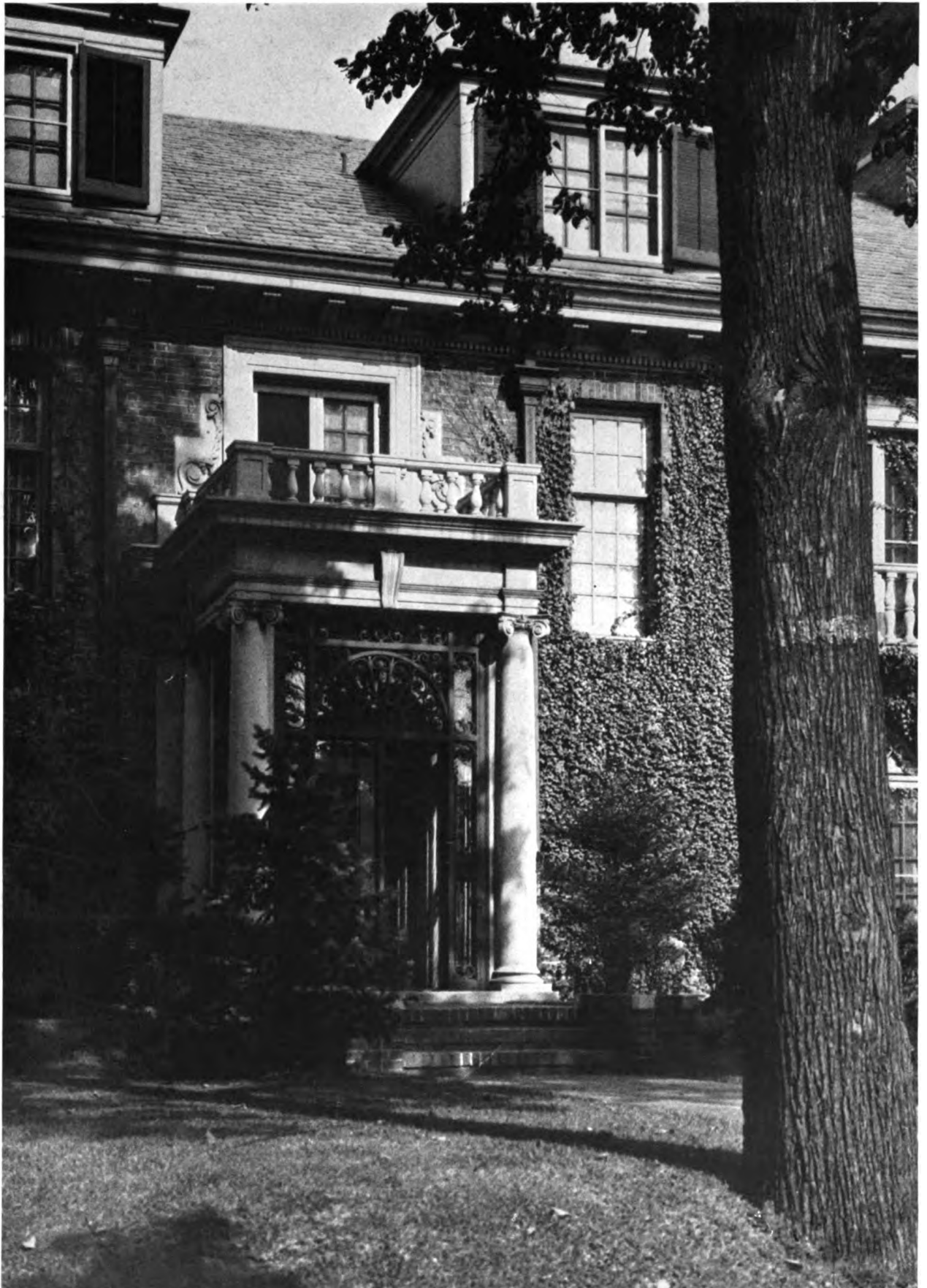


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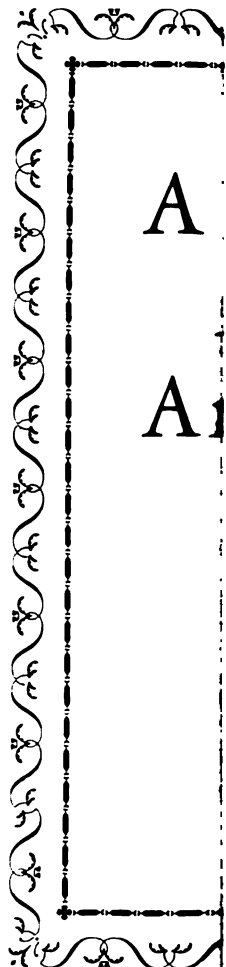
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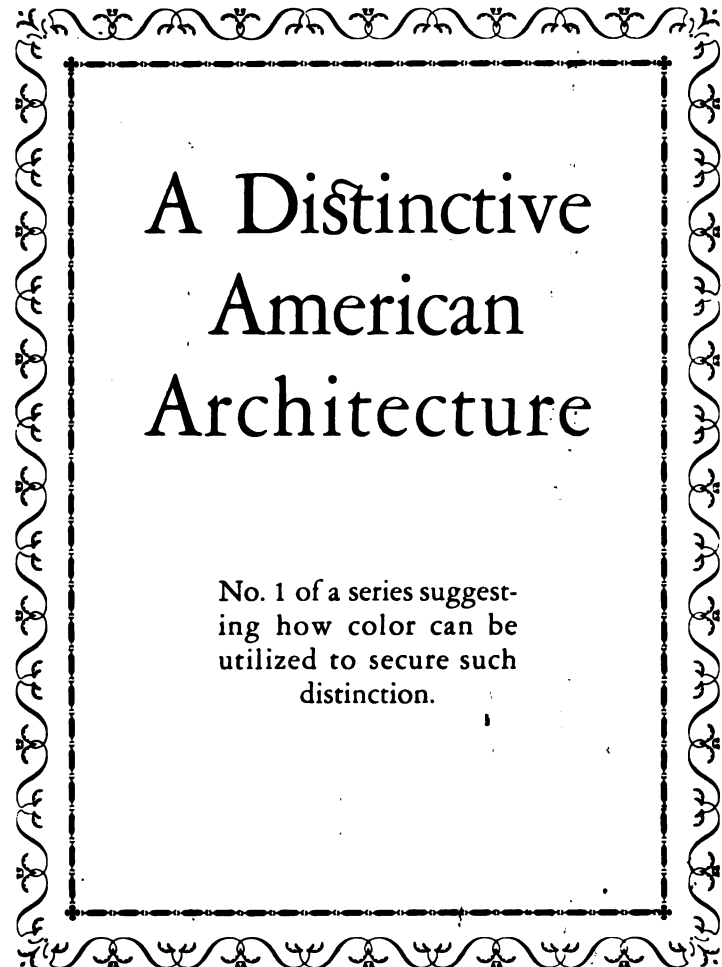


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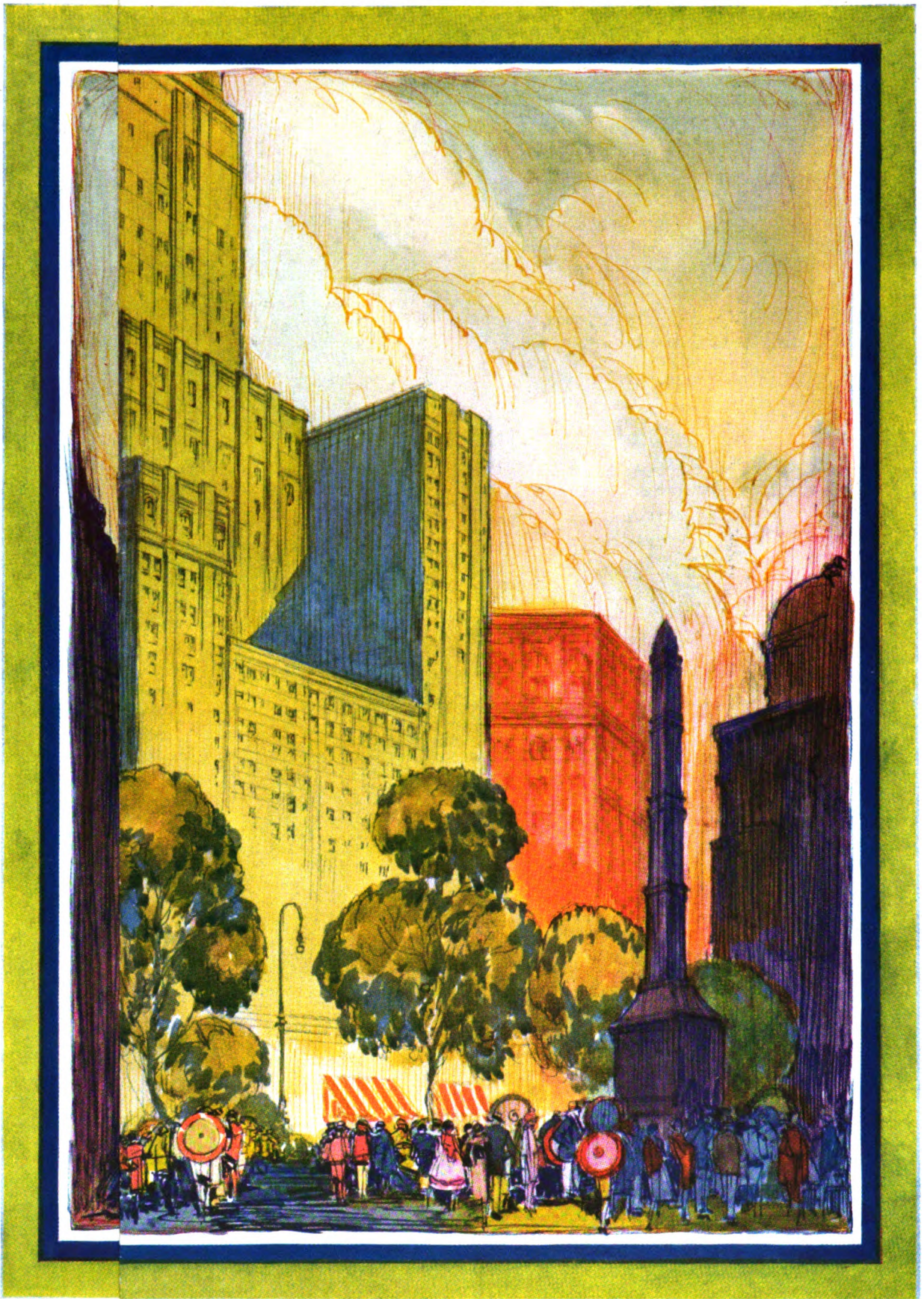
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A Distinctive American Architecture

No. 1 of a series suggest-
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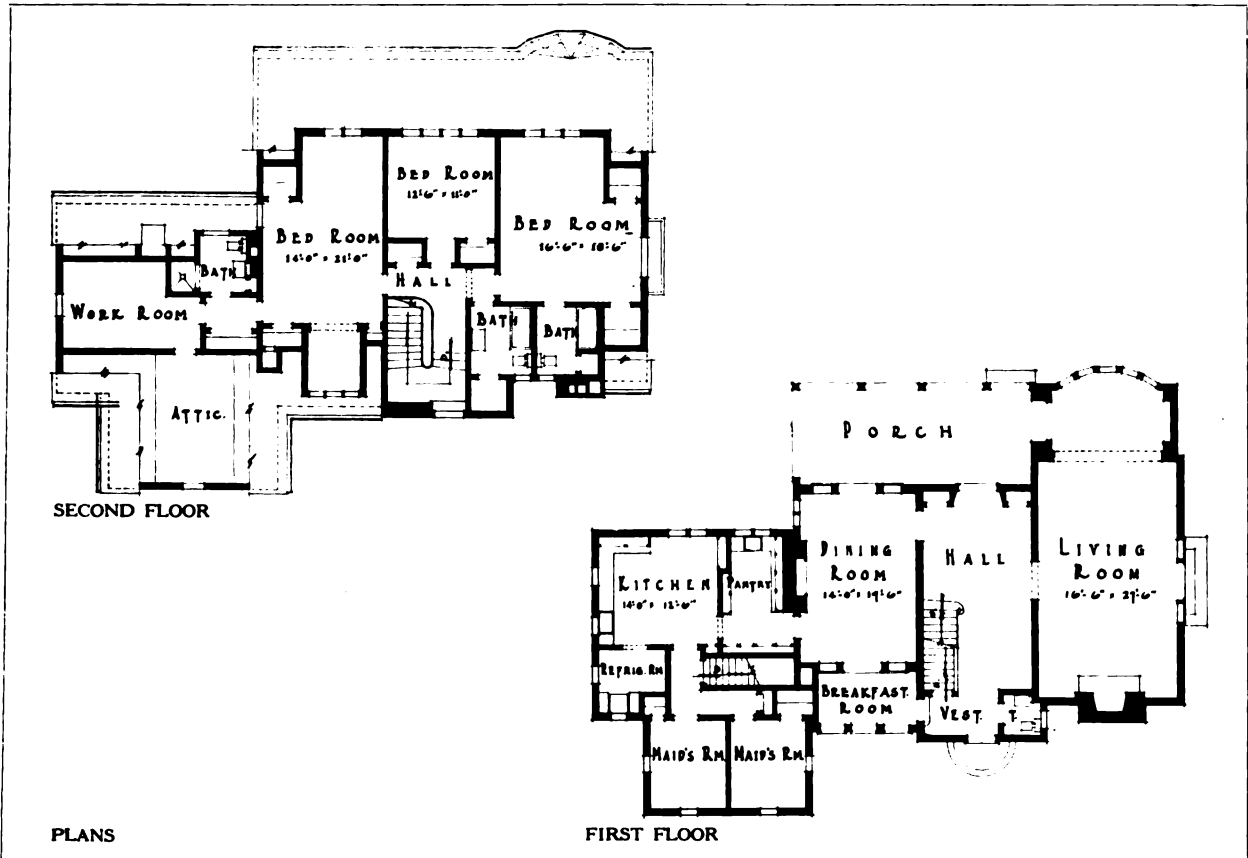


IN ARCHITECTURE

Courtesy the Terra Cotta Service Bureau, Chicago



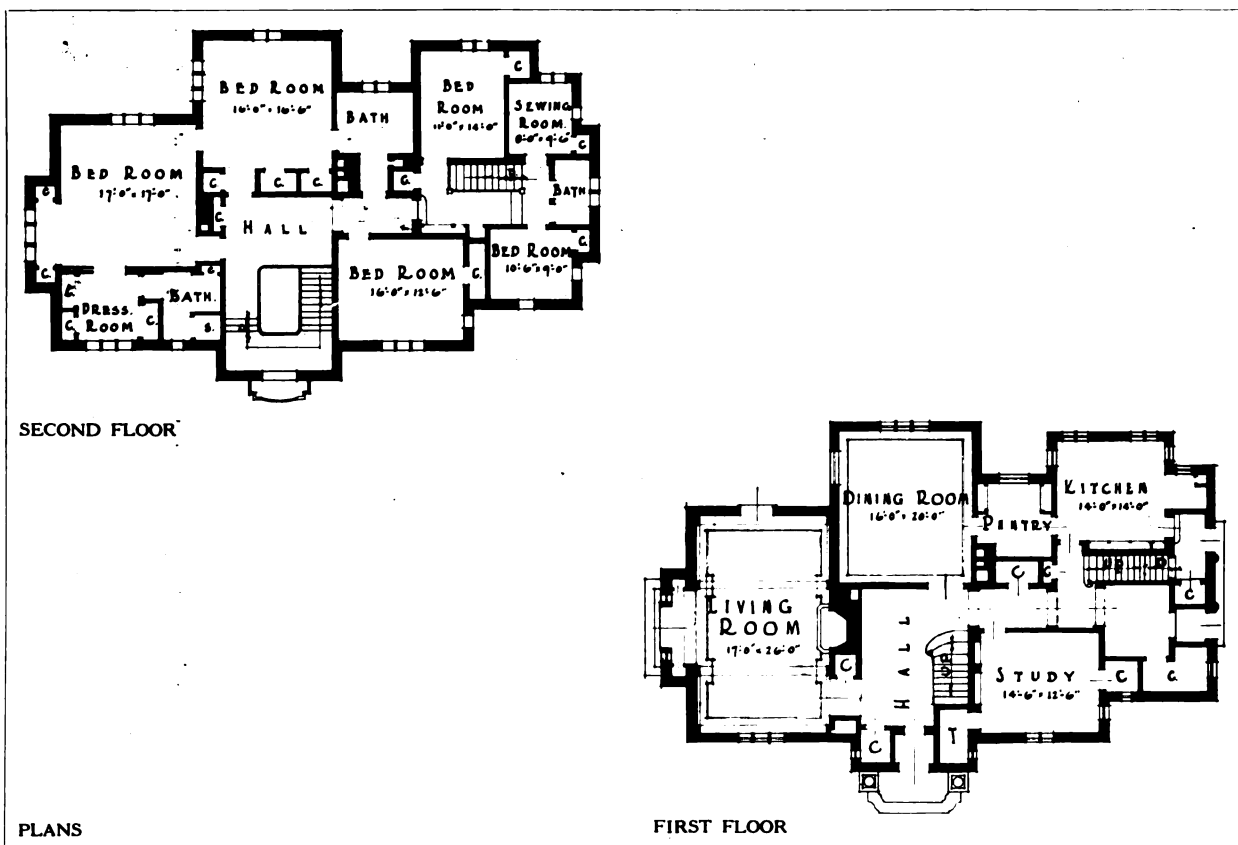
FRONT ELEVATION



RESIDENCE FOR MR. CLARENCE STANLEY, CLERMONT, INDIANA
 FREDERICK WALLICK, ARCHITECT



GENERAL VIEW



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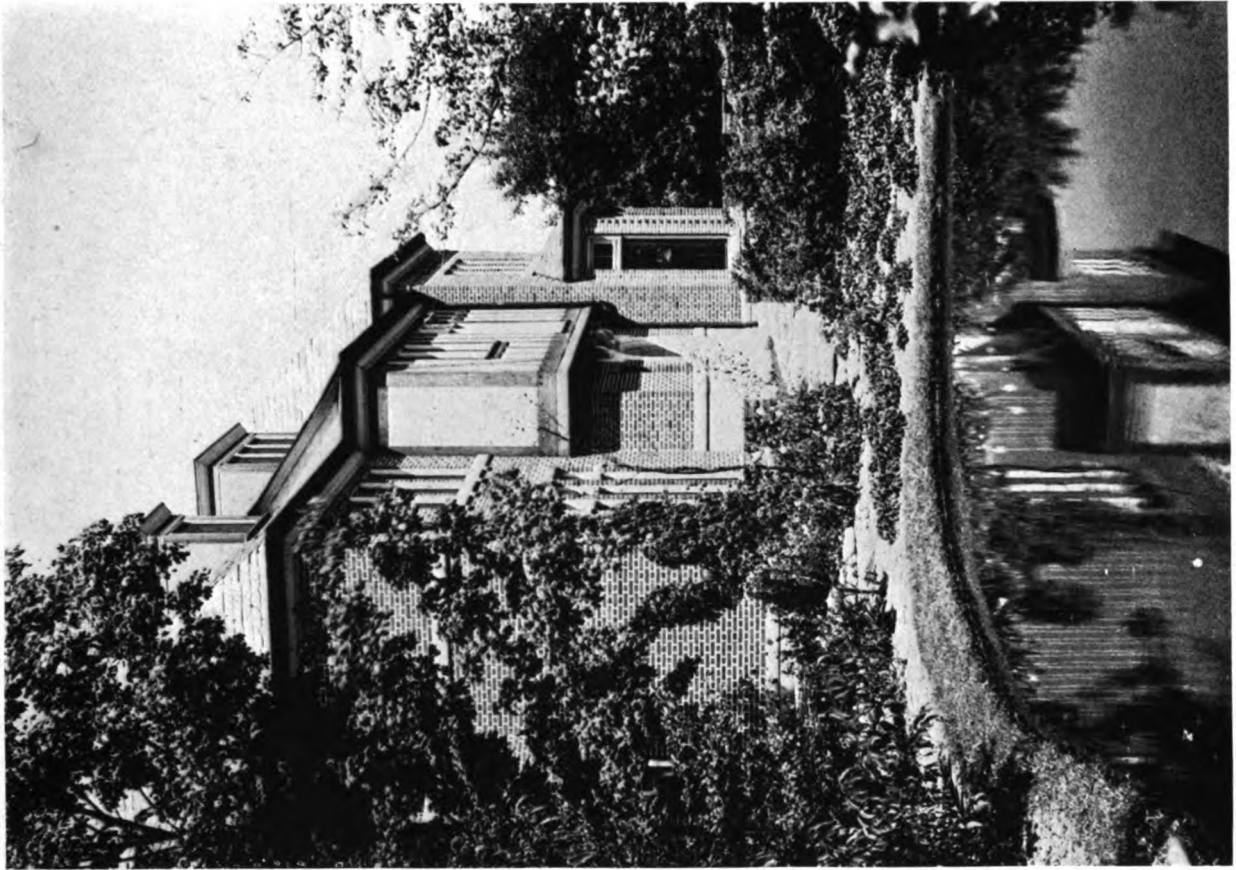


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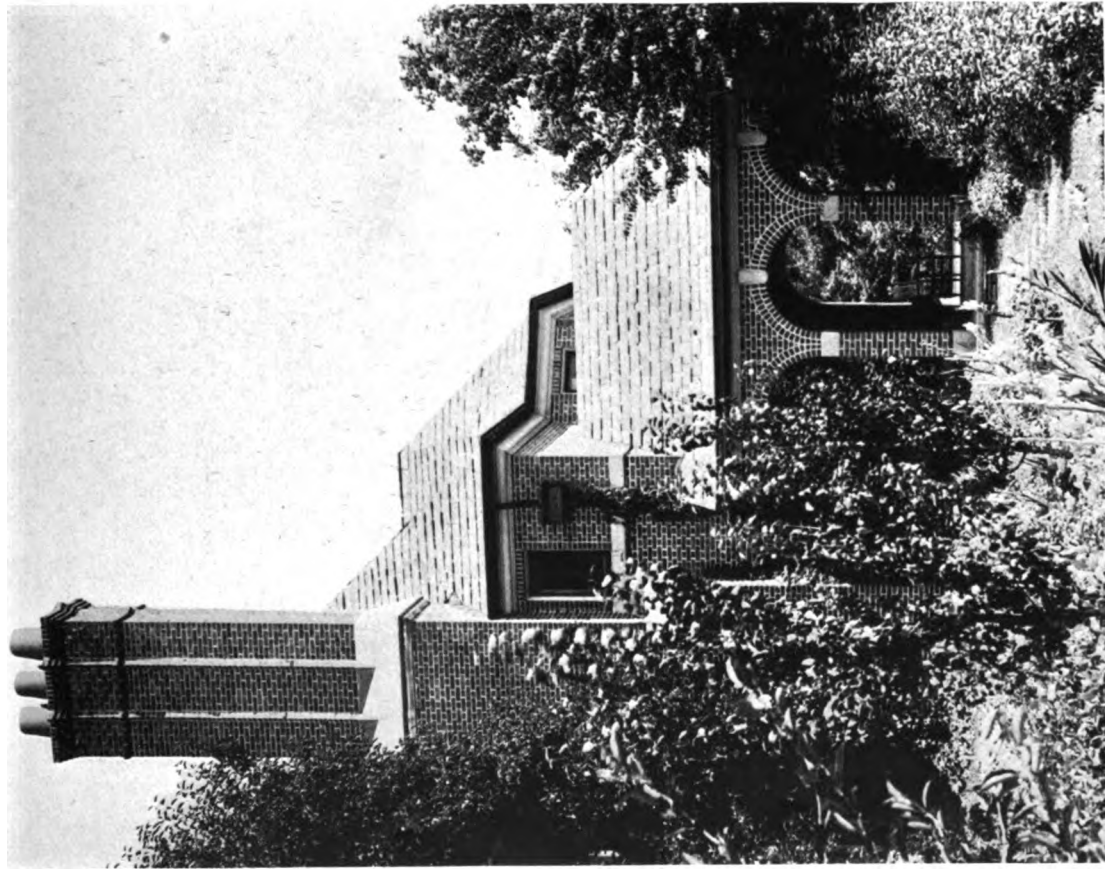


DETAIL OF EAST TERRACE

RESIDENCE FOR DR. GOETHE LINK, INDIANAPOLIS, INDIANA
FREDERICK WALLICK, ARCHITECT :: :: :: :: :: ::

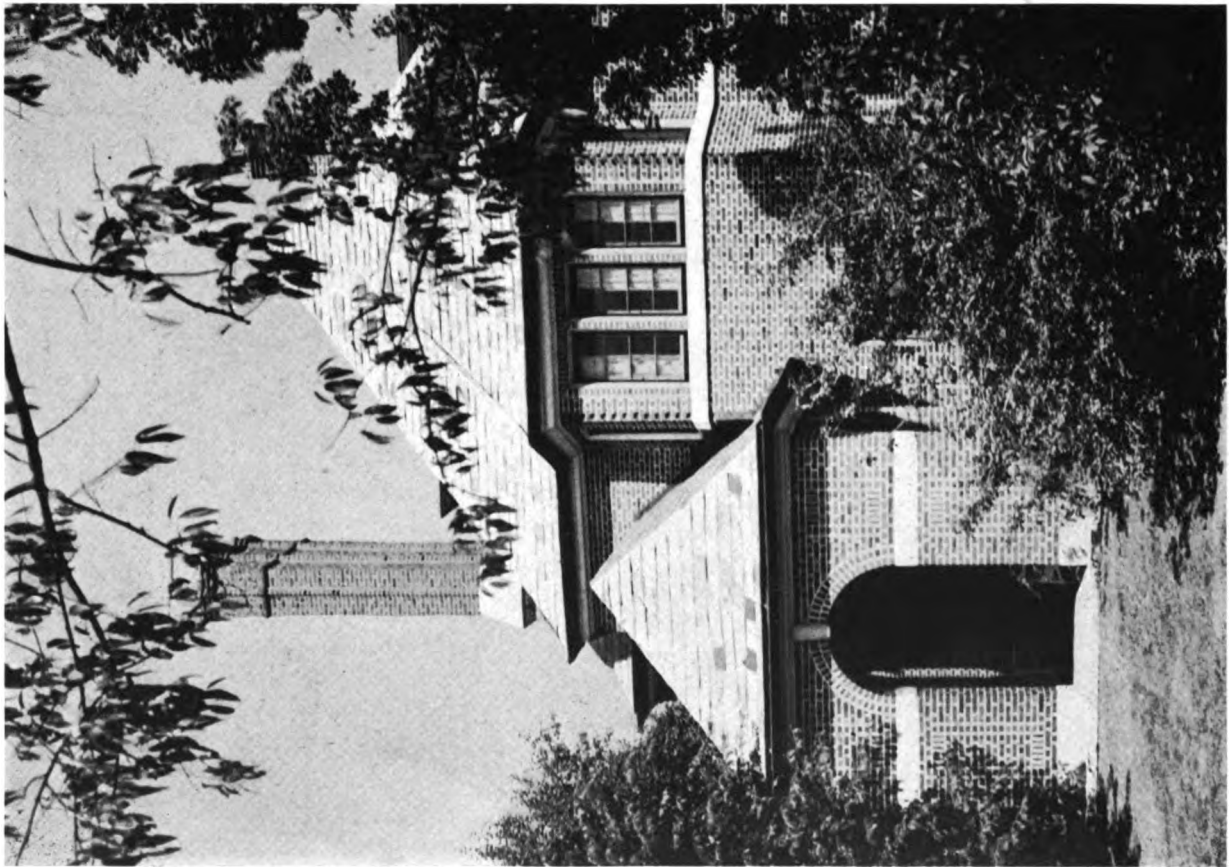
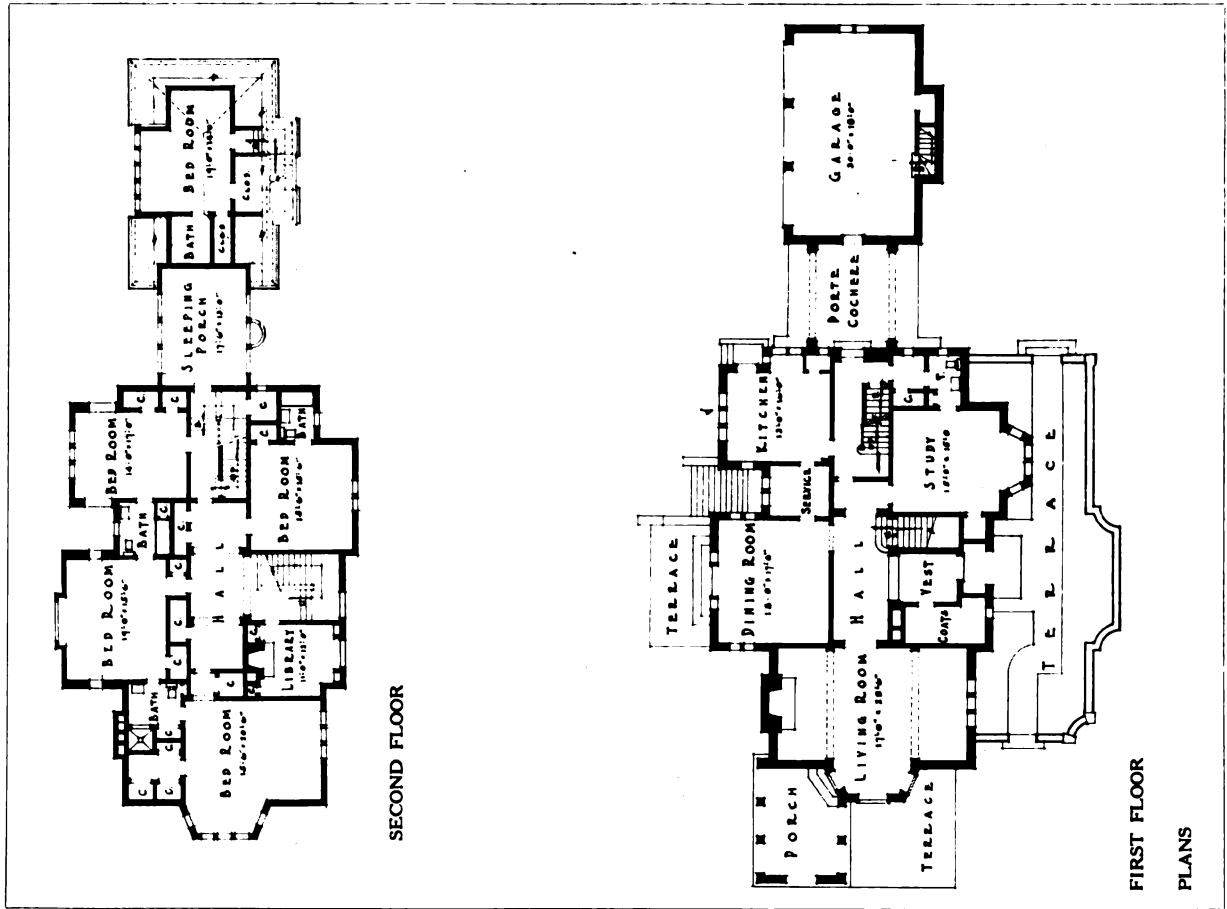


DETAIL ON TERRACE

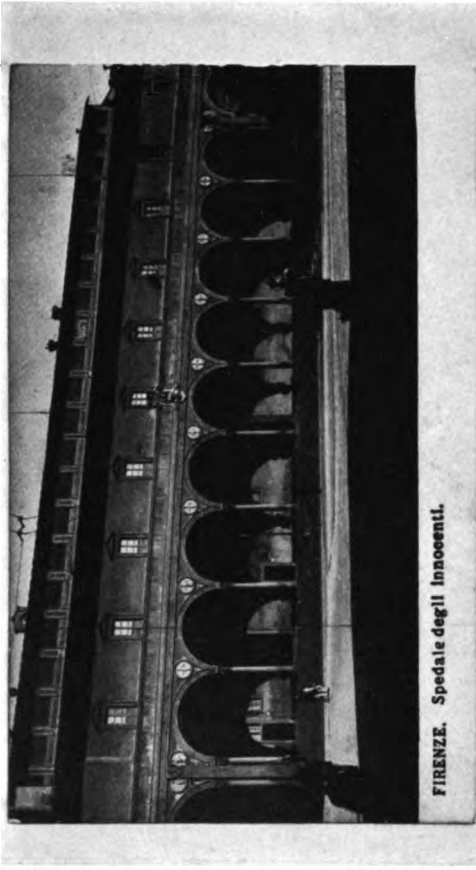


SOUTH GARDEN

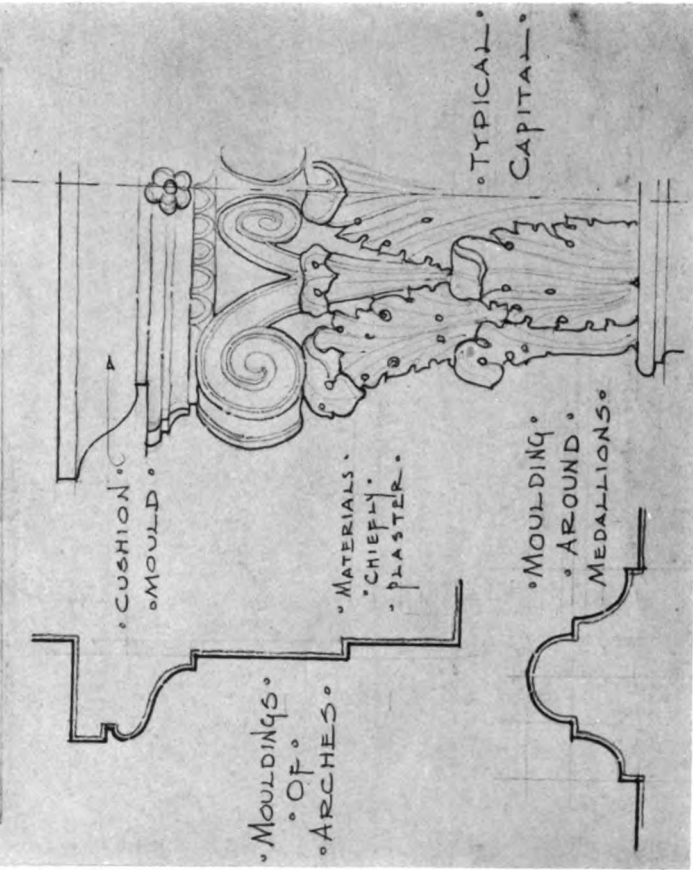
RESIDENCE FOR DR. COETHE LINK, INDIANAPOLIS, INDIANA
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DETAIL OF SOUTH PORCH
RESIDENCE FOR DR. GOETHE LINK, INDIANAPOLIS, INDIANA
FREDERICK WALLICK, ARCHITECT

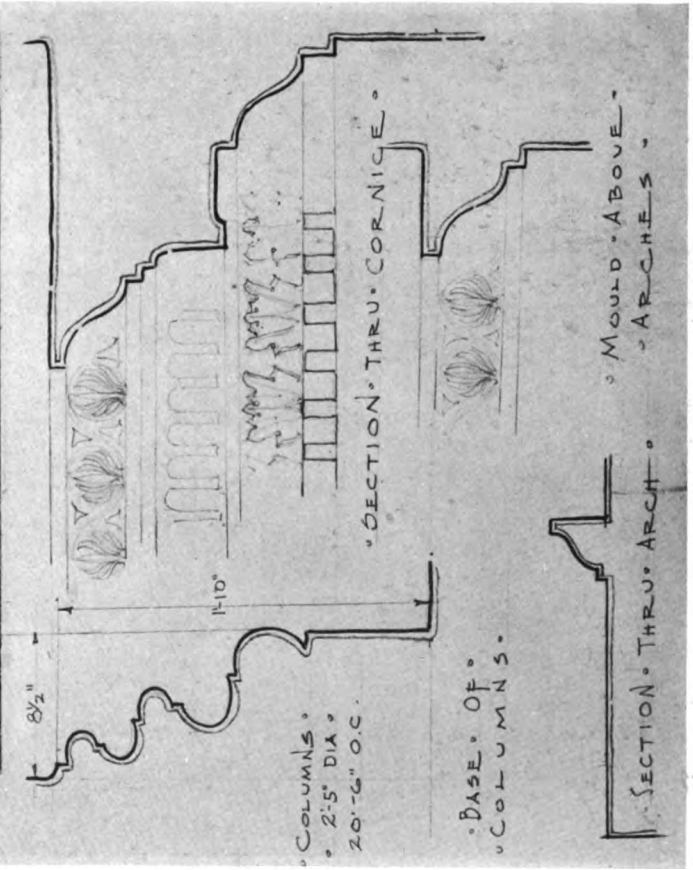
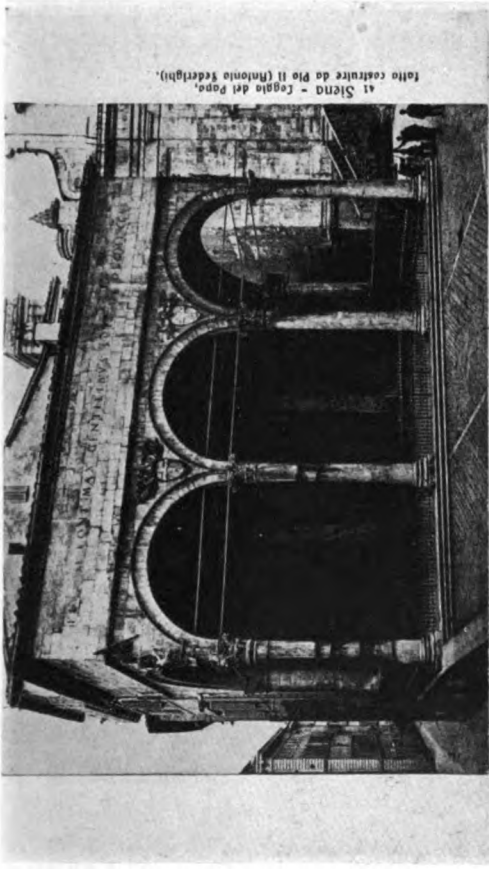


FIRENZE. Spedale degli Innocenti.



LOGGIA DEL PAPA, SIENA

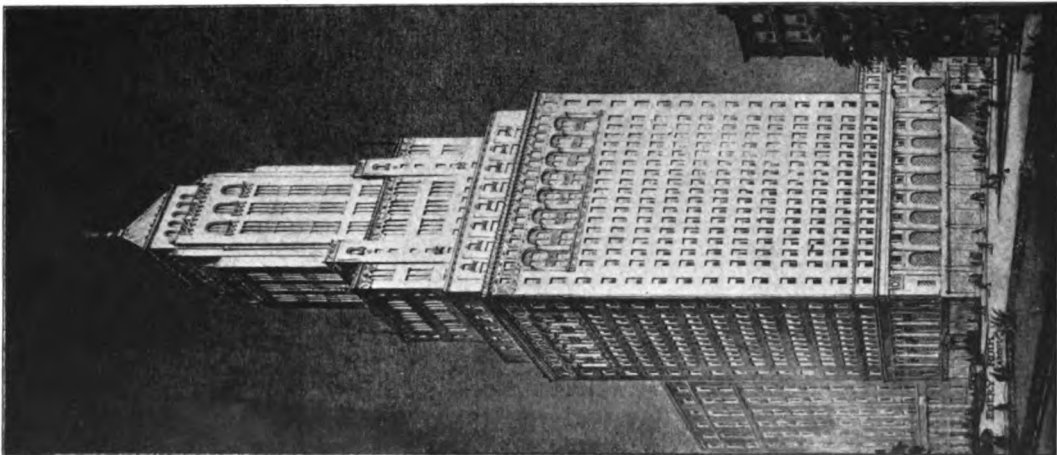
This loggia, open on three sides, was built by Pius II., in 1462. It is magnificent in scale, with its columns over twenty feet on center.



ARCADE, HOSPITAL OF THE INNOCENTS, FLORENCE
ERNEST PICKERING, DEL.

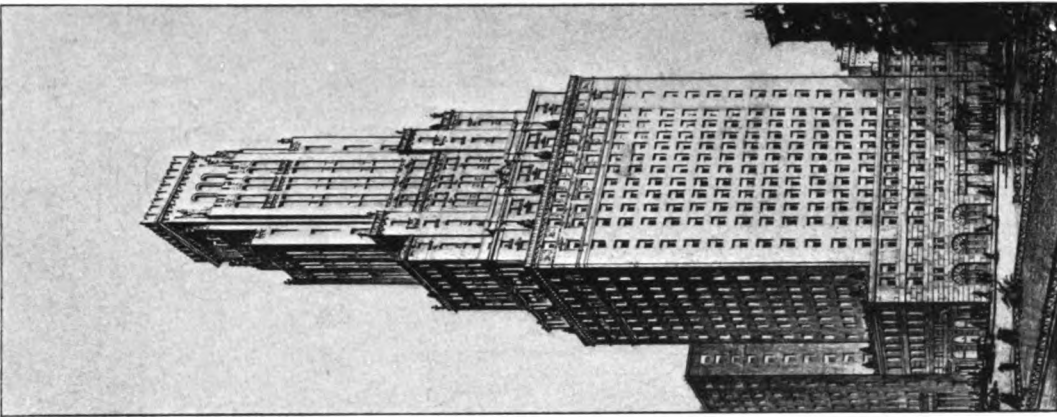
All lovers of art are familiar with this building by Brunelleschi, chiefly on account of the medallions of infants between the arches. The capitals and mouldings, however, deserve attention as examples of Early Renaissance carving.

FROM "AN ITALIAN SKETCH BOOK"
BY ERNEST PICKERING, PLYM FELLOW, UNIVERSITY OF ILLINOIS

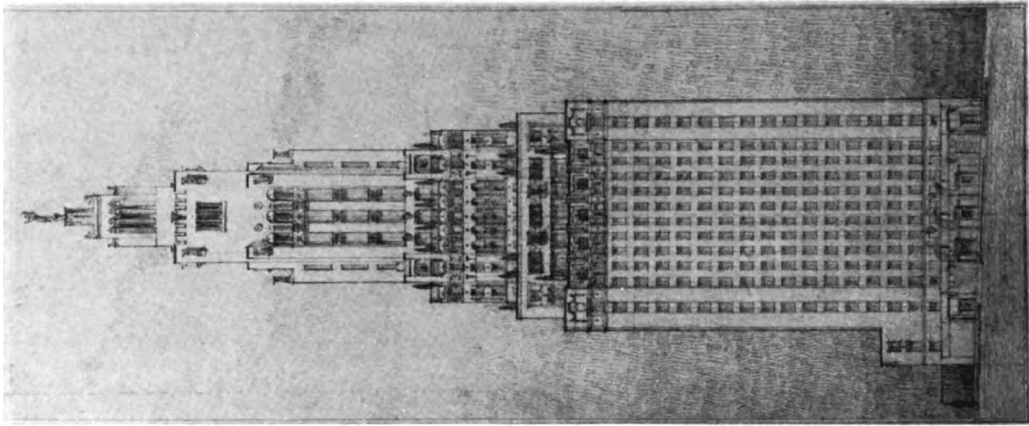


FIRST STUDY

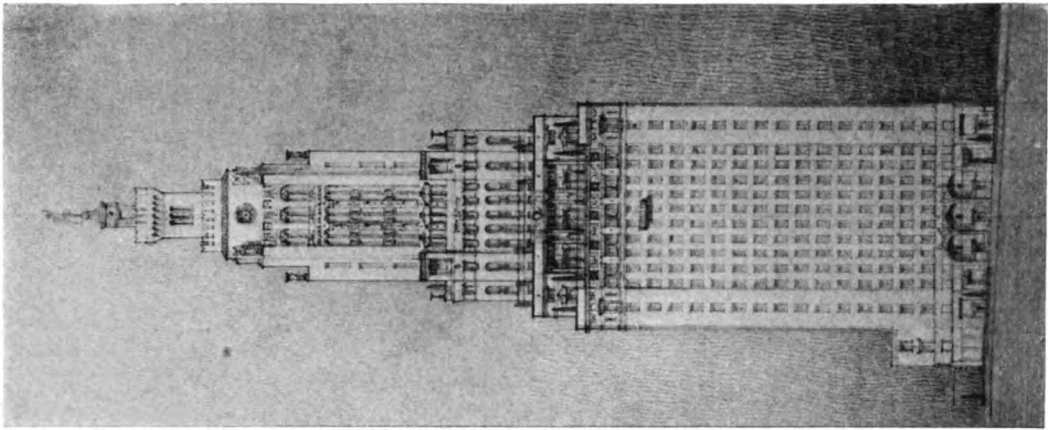
STUDIES OF PERSPECTIVE OF ELEVATION
 RITZ TOWER APARTMENTS, NEW YORK CITY
 EMERY ROTH, ARCHITECT



SECOND STUDY



THIRD STUDY



FOURTH STUDY

Note: The effect on the Park Avenue front of the building results from a clause in the leasehold which covers 17'0" on that street. All designs after the first, are made with this effect.

whole little or no attention has been paid to "*architectural polychromy*" as a formal part of the instruction, and this in spite of the fact that most American schools, patterning after the French system, present formal instruction in "shades and shadows", a subject intended largely to acquaint the student with the intricacies, appeal, and presentation of form. It has been nearly fifteen years since I began paying attention to polychromy in my own courses in the history of architecture, and while such courses form the proper place for a review of historic use of color in architecture, I am firmly convinced that the time has come for the introduction of formal instruction in "*architectural polychromy*" courses in which the theory will be presented and experiments made to test the practical application of them. Certainly a large number of mistakes in the future may be obviated by instructing the embryo architect in such matters. Color, it would seem, will in the future be quite as important an architectural consideration as is form.

Now this increasing demand for color in architecture will arise—is arising—not in response to the desire of the architect, but in obedience to a demand

upon the part of the public. A good many of our former notions and conventions are being discarded, and in their stead we find others, amongst them a changed attitude toward color. Certainly among the material trappings of our age we note an increasing measure of color, in clothing, in furniture, in cars, in books and periodicals, in practically every expression where the prowess of modern chemistry makes possible a developed polychromy. These more mobile manifestations of the age have come about because of an awakened interest on the part of the public and a desire to get away from the somewhat drab and certainly inartistic expressions of the late nineties and early twentieth century. Architecture always responds somewhat belatedly to popular movements, but close students of present-day trends are aware of the fact that we are in for a more colorful architecture. Would it not be wise to anticipate as clearly as possible the problems involved and turn our heads and our hands to their adequate solution? It is our hope in succeeding articles to present some of the salient considerations affecting the problem, and if possible, to suggest methods of attack and lay down rules of procedure.

A Problem in Regional Architecture

THE Fourth Annual Margaret Salathiel Newcomb Prize Competition for seniors in the School of Architecture at the University of Southern California, involves the design of a College Inn. The program of this competition so thoroughly recognizes the development of regional architectural types that it is reproduced:

"This Inn is to be located on a winding road which borders a university campus. The site which is covered by a natural growth of live oak trees, stretches for 800 feet along the south side of this road and slopes gently for 300 feet to the southeast where it overlooks a golf course. The campus on the north side of the road runs back to a mountain range.

"The purpose of this Inn is to furnish suitable accommodations for permanent as well as transient guests of the college. The designer should make every effort to take advantage of the California climate, landscape and traditions. It is realized that the prejudice of people accustomed to other climates is the greatest obstacle in our local architectural development, hence, this inn is established by the college

as an example of planning and furnishing which will combine the crafts of the Southwest. The use of simple walls, colored tiles, wrought iron, wood carving, and textiles of all kinds is advised. Court yards and gardens should be used freely, remembering that it is practical to use them not only for circulation, but also as dining and living areas. It is desired that the inn should have a feeling of hospitality within, giving its guests a feeling of quiet and seclusion—a sense of aloofness from the outside world. The external aspect might well be rather severe in feeling.

"The Inn should include seventy-five rooms with bath and about twelve apartments of not over two rooms and bath for resident guests. The arrangement and number of general living rooms to accommodate the guests is left to the discretion of the designer and it is hoped that a new and unusual arrangement of such living or lounging rooms can be worked out so as to give interesting vistas and the quaint characteristic hominess of old European Aubergs. The necessary service rooms, service courts, and garage accommodations must not be forgotten."

The Ritz Tower Design

By EMERY ROTH

MR. ARTHUR T. NORTH'S article in the November edition of *The Western Architect* takes some hard "whacks" at the design of the Ritz Tower. I can appreciate his point of view having in mind "architecture" as apart from the particular building that is being designed.

The first and obvious solution of the problem should have been the long, perpendicular line as used in tall office buildings. The American Radiator building is a conspicuous New York example.

The Ritz Tower, however, is an apartment building. After a few studies I discarded the obvious solution and attempted, how well or how poorly I am not able to say, to express in the design a type of architecture suitable for domestic buildings. I did not feel that I was primarily designing a tower facade but did the necessary dressing up of a large number of livable rooms containing many windows so placed as to provide good lighting and good furniture space within the rooms.

I decided on a historical style rather than attempt a design on modern lines, and avoided the Gothic feeling in order to attain an atmosphere of domestic architecture.

Mr. North makes the ex cathedra statement that a tower-like building should have the perpendicular

accentuated, and must not be disturbed by horizontal effects, and that such horizontal effects are not suitable for a tower structure. Having decided on the Italian Renaissance style the precedents of tower-like structures that have strongly marked horizontal divisions are so numerous that it is hardly necessary to call attention to them, in fact, with the exception of the Campanile of Venice, such treatment is a rule.

I admit that the obelisk is an easy means of forming a transition, or a finial, as the case may be. Its use has many good historical precedents and needs no more apology than the use of any other conventional form.

Had I been designing an office building, the chances are that I may have done it somewhat in the style of the building known as No. 5 East 57th Street, which illustrates the lower part of Page 143, of Mr. North's article. I am the architect of this building also.

I enclose photographs of several of the preliminary studies for the "Ritz Tower." Your readers may be interested in these. I trust that I do not convey the idea to you or to your readers, that I did the best that could have been done by any one, or that possibly Mr. North may not be quite right in his point of view, but I was the man on the inside looking out, while Mr. North was passing in the street.



STUDIES OF PERSPECTIVE OF THE RITZ TOWER, MADE FROM WORKING DRAWINGS, IN ACTUAL PHOTOGRAPHS OF THE SURROUNDING BUILDINGS.

The Passing Show

Commercial Architecture, Annual Award and Chapter Functions

By ARTHUR T. NORTH, A. I. A.

A PLEA has been made recently by Joseph Freedlander, F.A.I.A., for a better architectural treatment of business buildings. To illustrate his idea, Mr. Freedlander cites the building which he has designed for the Fairchild Realty Corporation on East Thirty-first Street, to be occupied by a silk company.

"In respect to this design an effort has been made to give the facades a distinctly architectural character although the structure is purely commercial in its purpose and devoted entirely to business. It is, in fact, a two-story loft building, for which it is usually assumed any old kind of an elevation suffices," said Mr. Freedlander. "But this should not be the case. There is no reason why our commercial buildings, and lofts and stores should not be studied as to design with the same care that is bestowed upon more monumental structures.

"Beauty in architecture and great expense are not synonymous—in most instances a well-proportioned facade costs far less than an over-elaborate and consequently unstudied one. Simplicity of expression, in architecture, as in all other Fine Arts, is the quality most difficult of realization".

The Fairchild Building is faced with plain Indiana limestone ashlar. The window and door frames, spandrel panels and transom and bulkhead grilles are made of cast iron. The figurines on the keystones and the vases on the parapet are made of the same metal—all painted in brilliant colors. The charm of this facade is in the expanse of plain wall surfaces, the proportions of the openings and the restraint shown in the character of the ornamentation. The walls could be faced with materials other than stone and equally as well, provided the great areas are not disturbed by inharmonies of color, texture or articulation.

Granting that Mr. Freedlander's idea is correct, we are confronted with the problem of realizing it in fact. Of all the arts and professions, architecture

is the one most exploited by the ignorant—those who either assume a false ability to appraise or merely employ it as a process for financial gain. Everyone can judge architecture, of course, especially those financially successful real estate and building operators. One secures a design for an apartment house in the Bronx, it goes at a profit. Others employ the same draftsman to "architect" the same front on another plan which has proven to be successful. These operators, I am told, get such facades "architected" for as low as \$75.00 per job.

In the face of this condition, where does the legitimate, qualified architect come in? The owner will not pay for a design that embodies architectural treatment resulting from careful and hard study. He is oblivious to the aesthetic shortcomings of his buildings and immune, apparently, to criticisms. But the operator, touted by real estate editors as "successful," is more than likely one of those just seven years from the steerage and already reputed to be a millionaire.

It is these men who control the designing of a large percentage of New York's important and conspicuous buildings, and their practices are the most serious menace to American architecture. The situation may not be as acute in other cities, but, like an insidious plague, it will spread because a so-called success always has its imitators.

Perhaps a daily criticism of architecture, similar to that of the drama and other things, might eventually have its effect as a more architecturally intelligent and critical public exerted an influence. Apparently, that day will never come. Good architecture does not advertise.

Perhaps through the efforts of organized architects some restraint could be effected on a certain class of architects. But, alas, the A. I. A. would not accept them as members for reasons of their own and probably they would not become members even if they could. Both parties can justify their positions in



BUILDING FOR THE FAIRCHILD REALTY COMPANY, NEW YORK; JOSEPH FREEDLANDER, F. A. I. A., ARCHITECT

this respect with equal propriety. There must be some feasible solution for this problem which threatens the integrity of architecture in New York.

* * *

The Fifth Avenue Association has made its annual award of a gold medal for the best building constructed in the Fifth Avenue district during 1926. The committee of award consists of laymen appointed by the Association and architects appointed by the New York Chapter, A.I.A. The first prize and gold medal was awarded to the Gould Realty Company for the new Aeolian Building at Fifty-fourth Street and Fifth Avenue. The certificate was given to the architects, Warren and Wetmore. The building is designed in the French Renaissance. The facades are of buff Indiana limestone with a pink granite base and Old Convent Italian marble panels and inserts and limestone cornices, balustrades and finials. The entrance doorways and display windows on the ground floor are cast bronze, and the window frames and sash are bronze throughout.



AEOLIAN BUILDING, NEW YORK, WARREN AND WETMORE, ARCHITECTS. AWARDED FIRST PRIZE BY FIFTH AVENUE ASSOCIATION AND NEW YORK CHAPTER.

It is a pleasing building which imparts a sense of restraint and richness—essentially a finished production with nothing lacking in its completeness, nothing discordant, and a harmony of parts and proportions. The offsets required by the Zoning Law are made in an unusual manner and evidently are the result of serious study.

The French Renaissance has always appealed to me. Its details have a certain delicacy and charm which can be suited to large and vigorously proportioned buildings. They can be so made as to be incorporated in the structure as having purely decorative functions and not excrement as are the Orders when applied to multistory buildings. These same architects produced one of the most charming towers in New York—the Heckscher Building—in the same type of architecture.

* * * *

The function of the A. I. A. and that of its Chapters, was discussed in October and November by H. Van Buren Magonigle, the new President of the

New York Chapter. To some this may appear to be a silly topic for serious consideration, but is it? As in everything that Mr. Magonigle undertakes, he aims to get down to primary aims and to lop off the inevitable barnacles that attach themselves to slow moving bodies.

Mr. Magonigle considers a Chapter as a part or section of a national organization and not a separate entity conducted for the purpose of maintaining what it may conceive to be its geographical or territorial rights and privileges, or for advancing any of its private, political, local interests. The interests of a profession, as represented by the Institute, are the interests of all its Chapters. What the Chapter needs is to exchange ideas, not to hear the reports of committees.

“As far as I can see”, said Mr. Magonigle, “the Chapter has been for at least five years carefully considering architecture as a manufacturing enterprise rather than as an art to be practiced. For the next year I can definitely promise a very thin time indeed to the manufacturers—for

the time has come to establish a rational balance between the excessively practical and the other extreme of perfectly ineffectual absorption in the purely artistic.

“Every time anybody gets an idea, whether it is constructive or whether it is not, it is immediately referred to a committee, or a new committee appointed . . . and why have I not attended the meetings of the Chapter in five years? Because they bored me to extinction. They did not seem to lead anywhere. . . . So I warn you now that so far as I can, within the next year, I shall do my utmost to restore to architecture as an art the status it is properly entitled to in our organization. All the other elements of architectural practice are merely contributions to the art of architecture—and while it is all very well to have fine specifications and all sorts of thrilling relations with building trades and uneconomic practices and things of that sort, the thing that has made architecture what it is worth in the world—an expression of the civilization of the

world—is architecture as an art, not architecture as a manufacture. . . . Are our paths of activity converging upon one common end or are they *diverging* from a common starting point? . . . When we go to see a great work of architecture we do not stand agape and say, 'How wonderful are thy specifications, O Building! With what care and efficiency did the office manager function in thy behalf! With what splendid aplomb did the promoter, disguised as architect, sell the idea of thee to his reluctant customer—I mean client! With what exquisite tact did the plumber wipe the joints of thy mighty lead bends! How desirable in our sight are the rich financial returns thou pourest into the coffers of thine owner!' Or, at least, I hope we don't. It is an expression of our civilization, as a measure of our civilized state, by the highest standards of life and thought our time can raise. Unless we do this for our own works as well as those of others, then we have failed in a sacred trust. For I hold that the architect is vowed to the service of beauty as fully as though he had kept vigil as the Knight of old who watched his arms until dawn. . . . One word about Institute politics. The Institute is riddled with politics, and very petty politics. Why there should be politics in an organization dedicated to a high cause passes my comprehension. So dedicated, what is there to plot about, except to find ways and means to further

those high ends—that would be politics on a high plane. Perish the thought that we intrigue in our sometimes more, sometimes less, amateurish way, to magnify or advance our own personal standing in the organization, or to get ourselves elected to some office, or maneuver for appointment to some committee, or to 'put over' some little pet scheme that has nothing to do with the really great and high purpose of the Institute. . . . Under this administration, the New York Chapter will have no axe to grind. It will seek no advantage in the Institute. It will not play politics, personal, local or national. It will dedicate its energies to the highest ends of our art and profession."

* * * *

And thus President Magonigle sets up a standard of Chapter intent and procedure that will be an innovation in his Chapter at least. Perhaps it may apply to some others as well. *The Passing Show* (July, 1926) was mildly censured by some for protesting against the invasion of the Chapters by a campaign instigated by the Scientific Research Department, A. I. A. We claimed that goods should be sold in the architect's office and not in his Chapter meetings. The New York Chapter will be free from this form of commercialism. The program of the New York Chapter, at least, promises to be interesting and sociable.

Oppose Five-Day Week Plan

AT its third annual conference, The National Association of Building Trades Employers, held in Pittsburgh, December 13, went on record as emphatically opposing any attempt of the American Federation of Labor to establish a five-day week. At the same time the organization emphatically opposed any wage increases in the building trades for the coming year, on the basis that "careful analysis of wage rates and general conditions failed to reveal any economic reasons for any advance in the already high wage rates in the building trade".

The resolution opposing establishment of the five-day week sets forth the reasons for this opposition. Declaring the high labor cost in building to be "levying too great a tribute on all classes of our citizenship" at the present time; and insisting that even if the present basis of costs be permanent then there should be a pause until the general level is adjusted, present inequalities removed and the purchasing power of the dollar earned in agriculture, and practically every line is given a chance to catch up with that in the building industry, the resolution goes on to state that the five-day week jeopardizes the economic balance in industry for the following reasons:

"First: The building industry is of such a seasonal character that the loss of even a single half day, when the weather is favorable, at a critical point in the progress of a building, may result in the loss of many days later with attendant financial losses, or may even endanger the safety of life or property.

"Second: The five day week would make a substantial increase in the cost of building. This arises from reducing the hours worked from 44 to 40 hours and by forcing contractors of necessity to work overtime at one and one-half, or double time rates. It would also result in an increase in the cost of overhead, all of which additional costs must be passed on to the public.

"Third: It would reduce the available labor in proportion as the hours were reduced, thus increasing artificially the present shortage of labor in the building industry. This is a very serious matter when taken in connection with the curtailment in the supply of labor under the operation of our new immigration laws, and the restrictions imposed by the trades unions.

"Fourth: The trend towards extravagance induced by idle time is such that we may soon expect additional demands for increased wages to supply

the means to properly enjoy the new found leisure, thus further adding to the already high cost of living."

For these reasons the following resolution was adopted:

"THEREFORE BE IT RESOLVED by the National Conference of Building Trades Employers, THAT as a patriotic as well as an economic duty, we protest against and will resist by every lawful means, the adoption of the five day week in the Building industry, as being unjustified by any requirement,

either physical, mental, or spiritual, and as placing an additional burden on an already overburdened industry."

At its meeting widely attended, the association called attention in a third resolution to the necessity for a greater number of skilled mechanics in the building industry and suggested that important communities establish a system of apprenticeship in the building trades, whereby a greater number of young men may be attracted to the industry.

The Romance of the Factory

By GEORGE C. MARS

THE peculiar capacity of man which distinguishes him from the lower orders of creation lies in his reason or his ability to think, and in a measure understand both himself and his surroundings. Coming thus to himself up out of the order of nature, he is no longer satisfied with what nature provides, and even in his lowest form of civilization begins to invent and create out of the resources of nature things that serve his higher purposes and ambitions.

To begin with, he may simply pick up a sharp stone to use as a cutting tool. Later, he discovers methods by which he can sharpen stones at will and thus make his axes and spear heads. He weaves out of the reeds and osiers along the streams or out of branches in the forest a shelter for himself. He invents clothes to cover his nakedness. He becomes a shepherd and tames animals; he settles in a chosen locality and tills the soil.

But at the same time he is not fully satisfied with these mere necessities of food or protection against his enemies and the weather for there stirs in him a sense of beauty, which he expresses not only in the fabrics he makes, often with great skill, but in the more or less aesthetic form he gives to his weapons, his habitations, and his drawings of the animals taken in the chase, or tamed to his use.

Through many weary centuries or, rather, millennia, man has developed this capacity to improve his condition until now we take for granted, without thinking of the hard and toilsome road traveled, the vast and complex variety of products which are made for the use and pleasure of man, and which he has created out of the resources of nature by his own efforts of invention and skill.

The simple fact is that man has heard the original call to make himself a master of the world in which he lives; and, while thus far, his efforts are meager compared with what may yet be done, they are inconceivably great compared with his crude beginnings. Now our simplest necessities and pleasures, from

morn till dewy eve, involve creative activities, inventions of all sorts, and even the highest artistic efforts to a degree almost beyond the imagination. In reviewing these complex activities in a general way, we may designate them under the commonplace term of "business". The whole world is busy in laying hold of nature's resources, useless as they are in their raw condition, and by intelligent skill turning them into objects which are of use or give pleasure to man. In a sense, the class of men who are fundamental to these world-wide activities are the manufacturers; that is, the men who lay hold of things with their hands and make something out of them which is desired by other human beings. To be able to do this successfully, the manufacturer must know the scientist's discoveries about nature and her forces; he must bring into play the subtle efforts of the inventor and the artist; he must invest his capital in productive equipment, and organize a working force; then he must turn his products over to the carter or common carrier and merchant who in turn distribute them throughout the communities where they are needed.

Playing into the hands of both the manufacturer and the merchant necessarily is the banker who holds in reserve a reservoir of money, which is simply a symbol of service and which he furnishes on proper conditions of security, to the merchant or manufacturer for his temporary uses. When we view business in this broad way and see in it a gradual progress of man in his attempt to master his natural environment and bring it under his control, we begin to comprehend how business in all of its phases takes on a more or less idealistic form, whether the individual manufacturer or merchant at all understands the process in which he is engaged. He may be simply carried along by a stream of tendencies which he doesn't understand and over which he has very little control, but to which in spite of himself he furnishes his contribution.

Suppose, however, that in our own wonderful country of business progress the manufacturer himself

grasps the significance of his important function in the whole process of human advance; and suppose he recognizes himself as a creator of products for the benefit and pleasure of man, he will, in organizing and conducting his various activities, become aware of his great responsibility as a leader in his community which he builds up and develops by assembling a large number of artisans and workers for whom he affords an honorable means of livelihood. The extreme importance of such a man in a community cannot well be overestimated; or, at least, it can be somewhat appreciated if, either untrue to the idealistic side of his duties or incapable of realizing it, he fails and his workmen are thrown upon the community without resource; the distress, the suffering, and often crime that result from such an industrial disaster painfully indicate what a real benefactor he is, if he keeps his factory in operation by living up to the genius of his calling.

Now suppose a man of this type, an organizer, a director of big affairs, a man who is justly proud of his real accomplishment, should fully recognize the true significance of himself to the community and the great benefit his efforts are to its welfare and happiness, it would be the most natural thing for him to seek to embody his conceptions in an outer form that would express himself and his value to the community. This could not be done in a better way than to build his factory as a great architectural monument, secure, permanent and beautiful, declaring to the community and to all passers-by the great significance of his work. There is no man who rises above the ordinary who is not possessed of a deep and ineradicable desire to make a name for himself among his fellow men and to leave something behind him for which they will give him praise. This is not an unjustifiable ambition; in fact, it indicates that he does not regard his life as a passing phase of temporary existence but as a reality in the midst of his world, not only for a passing moment but for future generations.

What monument so significant or so beautiful could the great manufacturer not only erect in his lifetime but leave behind him as a worthy memorial greater than an establishment which took on the form of permanent architectural beauty, enhancing the value of the community, giving to it a certain fame, and offering a center well worth the visit and consideration of the passing pilgrim?

Important considerations of this kind have led us to the presentation of this volume* in which we wish to show the rare possibilities of the proper selection

of face brick for the erection of a monumental factory building worthy of the man who organized it, worthy of the product he makes, and worthy of the community which he builds up. Such a monument would not be a cold and senseless shaft of marble or granite amid lugubrious shades, but a warm and living center of happy and prosperous human activity that would forever proclaim the builder's progressive character and his great and lasting service to the community which he benefited.

But aside from these worthy sentiments, there is a certain very practical consideration that is not to be overlooked, and that is the morale of the factory personnel. A beautiful, fire-safe factory, provided with modern conveniences and surrounded by attractive landscaping will tend strongly to make the working people much more content and greatly reduce the problem of labor turn-over. In addition to this, if a garden village be provided where the working people may rear their families amid attractive and wholesome surroundings, they will not only be proud of their factory and homes but boast of them to their friends as well as develop a new loyalty to and capacity for their work.

It is by releasing and utilizing the forces of nature that we make all of our material progress. Science tells us that if we could explode the hidden forces in the atom, our use and control of nature would be incalculably advanced. And if in the average man there are hidden incalculable forces of contentment, loyalty, enthusiasm for service, capacity still untouched but capable of release under favorable treatment, the employer who is wise might find in these hidden mental and moral human forces an undreamed of wealth to be developed.

The fact is the contentment and good will of the factory people belong to those imponderable assets that have as much or more real value than the physical property itself. If the industrial leaders of our country would build for their own higher personal satisfaction and as well for the benefit of their working people, they would gain not only a financial reward but one far greater than any ledger can ever possibly record.

*EDITOR'S NOTE: This appeal for architectural treatment of factory and industrial buildings, appears as the preface to a recent publication "Industrial Buildings and Housing." It is reproduced by permission because of its interest to the architectural profession. The book is for the use of the designer and prospective owner of factories and homes for industrial workers. It is profusely illustrated with views of such developments which possess architectural merit. The publication is priced at \$2.00; American Face Brick Association, Chicago.

Tests of Columns

Results of tests recently completed on full-sized steel columns at the U. S. Bureau of Standards, show that under present specifications differences in the physical properties of the material entering into sturdy columns produce greater variation in the column strength than all the differences in type of construction.

This work was conducted in co-operation with the American Bridge Company and the Bethlehem Steel Company. These firms furnished more than 130 tons of steel meeting specifications under which structural steel is usually purchased. This was fabricated into 69 columns having H-shaped sections and of five different types of construction. The finished columns were tested to destruction in the 10,000,000 pound testing machine of the Bureau. Likewise, over 1,000 test specimens were cut from the columns and subjected to chemical analyses and physical tests to determine as accurately as possible the properties of the steel from which the columns were made. All of the material met the specifications under which it was furnished, but differed greatly in tensile yield point. Although much work has already been done on columns, the subject of column strength and method of design, especially in large sizes, is still a matter for so much discussion that the additional data which these tests have furnished will be of great value to engineers.

This work is fully described in Technologic Paper No. 328, copies of which may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 40 cents each.

Architectural uses of concrete will be under discussion at the session of the American Concrete Institute to be held February 22, 23 and 24, at the Palmer House in Chicago. At the session Wednesday evening, February 23, the architectural phases of the subject will be discussed by Irving K. Pond, F.A.I.A., of Chicago, and Frederick L. Ackerman, F.A.I.A., New York. John J. Early, whose work in concrete is well known, also will be a speaker. Members of the Chicago Chapter, A.I.A., were especially invited to these sessions which will be of so deep interest to the profession, and are open to all architects.

By reason of the death of Andrew C. McKenzie, on October 10th, the architectural firm of McKenzie, Voorhees and Gmelin has been dissolved. Its successor is the firm of Voorhees, Gmelin and Walker, comprised of Stephen F. Voorhees, Paul Gmelin and Ralph T. Walker. The offices will continue at 342 Madison Avenue, New York. This partnership continues a practice founded about 1882 by Cyrus L. W. Eidlitz.

Civic Center Competition

An invitation has been extended by the General Purposes Committee of the Corporation of the City of Birmingham, England, to architects, town planners and others to take part in a competition for the planning of a new civic center which it is proposed to organize for that city. H. B. Lanchester, F.R.I.B.A., has been appointed advisor of the competition and will act as assessor in selecting the design submitted, his decision to be binding on the corporation and the competitors. The prizes in the competition are \$5,000 for the first design and an additional sum, not exceeding \$5,000, is to be divided between the authors of other designs according to the recommendation of the advisor.

Full program material, including the conditions of competition may be obtained from H. H. Humphries, City Engineer and Surveyor, The Council House, Birmingham. Copies are available, however, through the United States Department of Commerce, the Chicago office being located at room 845, 33 S. Clark Street. The designs must be delivered in Birmingham not later than June 30th, 1927.

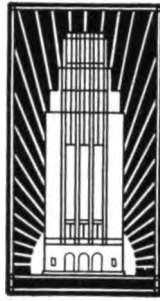
Pan American Congress

The third Pan-American Congress of Architecture will be held in the city of Buenos Aires, capital of the Argentine Republic from July 1 to 10. At the same time the third Pan-American Exposition of Architecture will be held. Both Congress and Exposition will be held under the auspices of the Argentine government and invitations have been sent to all nations in the Americas. The executive committee of the Congress has asked the American Institute of Architects to co-operate and to organize attendance of architects from this country. As in the other two meetings of the Congress, matters of vital importance in the development of architecture in the Americas will be under discussion.

John Archibald Armstrong, formerly a member of the firm of H. R. Wilson and Company, architects, Chicago, and who has been carrying on that business since the death of Mr. Wilson in 1917, heads a new architectural firm to be known as Armstrong, Furst and Tilton. William H. Furst, formerly of H. R. Wilson and Company and John N. Tilton, son of one of the older architects of Chicago by the same name, more recently with Marshall and Fox, are the other members of the firm. The offices will continue at 127 North Dearborn Street.

The firm of Bentley, Taylor and Salisbury, architects, 343 South Dearborn Street, Chicago, was dissolved January 1. Harvey Bentley will continue to practice under his own name, occupying the same offices.

THE WESTERN ARCHITECT



ARCHITECTURE

ALLIED ARTS

Volume XXXVI

Number 2

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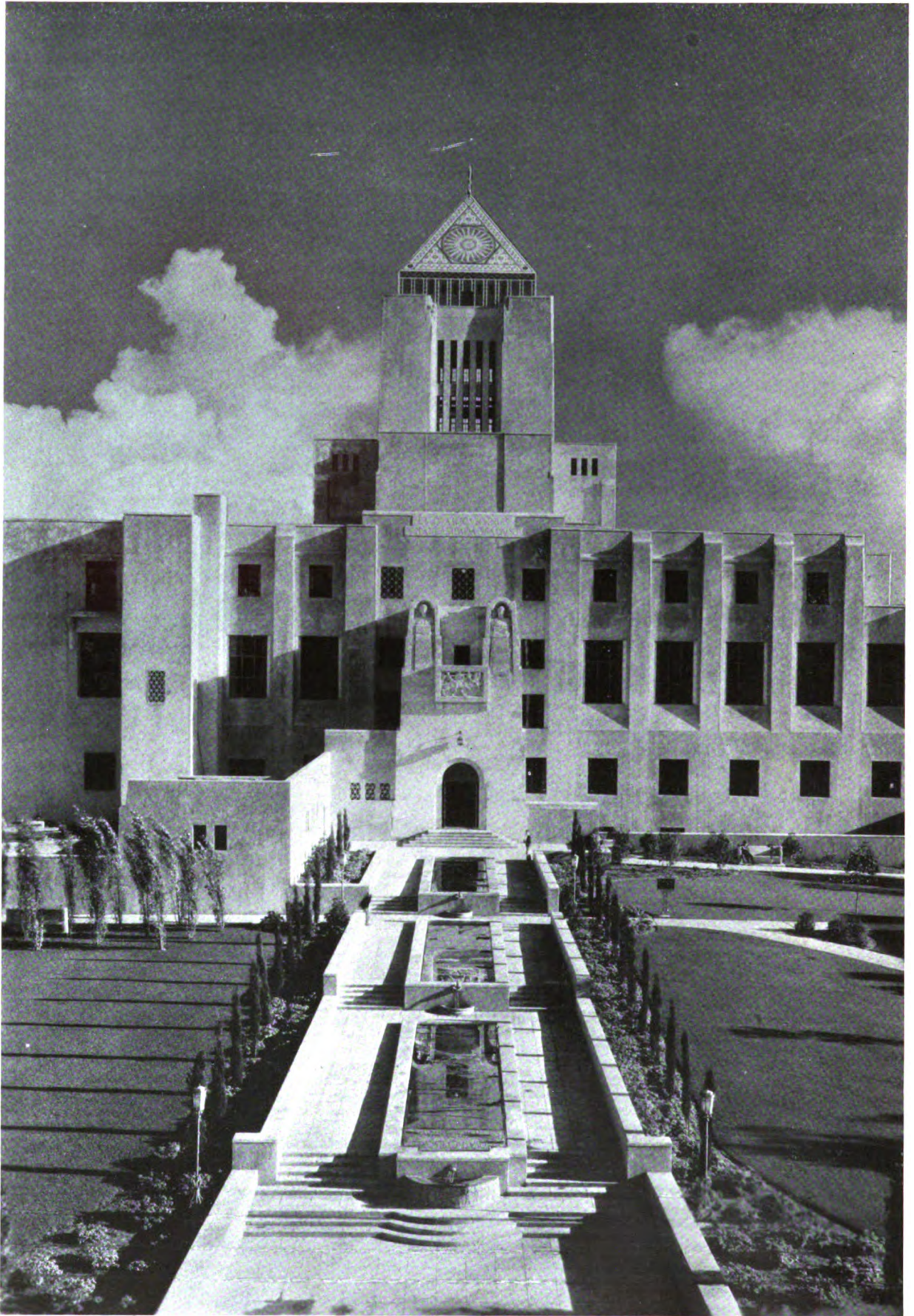
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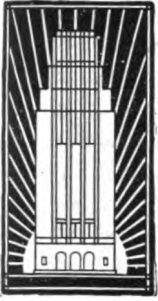
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THE WESTERN ARCHITECT

ARCHITECTURE

ALLIED

ARTS

Volume XXXVI

FEBRUARY, 1927

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The Third
Pan-American
Congress
of Architects

Announcement comes of the Third Pan-American Congress of Architects, to be held during the first ten days of July, next, at Buenos Aires under the auspices of the Argentine Government. The American Institute of Architects has been asked to organize attendance of practitioners in this country. The Congress will continue the work begun at the first such gathering of architects in the Americas, in Montevideo in 1920, and in Santiago de Chile, in 1923. In connection with the Congress there will be held the Third Pan-American Exposition of Architecture. It is to be hoped that the architects of our country will respond heartily to the invitation from their fellow architects in South America. Much of good is to be accomplished by the interchange of amenities, of ideas, of fellowship. That good obtains not alone in architecture but in a better understanding among the people of the countries involved. It is further to be desired that in the Exposition of Architecture, our country shall be represented by an adequate showing of architectural accomplishment of recent years, which have been the most interesting years in such development. The occasion offers an opportunity for an interchange of ideas and ideals, of friendship and of fellowship which architects of the United States will not overlook.

A Problem
in
A. I. A. Chapter
Development

While it would be unfortunate, in our opinion, were the American Institute of Architects to grant a chapter charter to that group of architects in Illinois who live in suburbs north of Chicago, the condition which has produced a request for such a charter should and can be corrected. There reside in the locality of Evanston, northward, a considerable number of Chicago chapter members who find it inconvenient to attend Chapter meetings now held in The Architects' Club, on the near south side. In addition are many younger men practicing architecture, not members of the Chicago Chapter, at present, but who would affiliate with a chapter in Evanston. This condition produced the request for

an Evanston Chapter, which, under the constitution of the Institute is referred to the Chicago Chapter for its decision. Without entering further into the arguments, we feel that the Chicago Chapter should not be weakened by the founding of a second Chapter. Rather, we believe, the solution should come in the formation of a group in Evanston, which shall include members of the Chicago Chapter, working with and through that Chapter in the best interests of which lie the interests also of the smaller group. Such a group may well hold independent meetings in its own localities, discussing local problems which may arise. The suggestion that the entire Chapter hold an occasional meeting or certain regular meetings with such a group is good. The Chicago Chapter, and possibly other chapters in larger centers, is suffering from a complaint which is common to many similar organizations—a wide distribution of membership over a large territory. Other organizations are meeting the situation as probably this one will be met. Let the various groups in the Chicago Chapter work in their communities, as do the groups in many state chapters; then arrange that a certain number of meetings of the Chapter be held each year with these outlying groups. To divide so strong and so influential a unit as the Chicago Chapter, would be inimical to the best development of Chapter and Institute influence.

An
Advisory Attitude
toward Government
Building Program

After the very discouraging slump into which fell the months of assiduous and self-sacrificing effort of Mr. Medary and his Public Works Committee of the Institute, simultaneous with the failure of the United States Senate to support the contention that only the best of architecture executed by the most capable of America's architects should be represented in public works, there was a chance that the Treasury Department would feel that only a few in the profession were interested in a helpful way but that the majority were looking toward commissions. This of course is not true, but it is human nature as read by the average layman who sees only

in life the "what-is-there-in-it-for-me" principle. It was undoubtedly the long months through which the Public Works Committee collectively and through individual members labored with Congress that secured such modifications and improvements as were made in the original bill before its final passage in the Senate. It is indicative of the low quality of our civilization that it was the money expenditure involved that the entire group of the people's representatives centered upon, waving aside as too trivial to be seriously considered the more serious question of the best solution of the problem of purpose and stability, and in design with a regard for their harmonious relation to the neighborhood in which they are built. There may now be some inclination to let the matter of public building design rest and to make no further effort to impress the Government with a proper conception of its obligation to the present and future citizens by placing before them the best possible examples of our national architecture both because of its educational value and its general effect upon the visitor within our gates. Now comes a time when each Chapter of the Institute can adopt a policy of advisory helpfulness in any workable form agreeable to the Treasury Department. Thus may it gradually convince the skeptical that it is not the possibility of commissions which actuates the profession, but a genuine desire to see that our Government is represented fitly and with dignity in its buildings. This is our advice, and it is along similar lines that Abram Garfield, now chairman of the Public Works Committee of the Institute addresses its membership. Thus may the American Institute of Architects continue to carry out the purpose of its great founders and by such action prove that it exists primarily "to make the profession of architecture of ever-increasing service to society."

The latest Industrial Accident
Prevention Conference at Wash-
ington, discussed ways and means of
lessening accidents in all branches of
industry pertaining to mills perhaps
rather than to building constructions. But the
carpenter who puts only two nails in a scaffold or saws

Conference
to
Cut Down
Industrial Accidents

off a plank while sitting on the outer part was not neglected. Among the several safety proposals was that to establish a national museum of safety in which should be presented graphically the accident dangers to which workers are exposed in the different industries. Such a museum probably would not be visited by any large number of those most directly exposed. But it would further inform those in whose charge the safety of the workers is placed by those large employers who have seen the commercial value of accident prevention and its corollary, first aid. It would spread among them such information on industrial hazards as would tend largely to focus the attention on the most common of the dangers in specific occupations in their charge. To protect the workman, who the "safety first" campaign showed was prone to be reckless, and to save the employer large sums through the recovery for injuries through the workman's compensation laws, it is necessary to reach all employers with the financial advantage gained by cutting down all risks to the level of unpreventable accidents. This gives industrial companies the double duty of guarding against damage by machinery and of forestalling the thoughtlessness of the individual. In doing this a formerly unknown occupation has sprung up in industry—which calls for exceptional and varied talents in one individual. He is an inspector who knows at least in a general way the entire working of the plant or field under him. He must be a genial companion, rather than instructor, of the men under his observation, because it is only through such methods that the object, carefulness, can be reached and the men imbued with a "no accident" spirit. He must be an adept in all branches of "first aid" so that he can teach it to all the men, or at least some of each group in the industry they are engaged in. He must be energetic, sober, industrious and have a natural liking for the job. Such a man is worth many times his cost to the concern that employs him. In addition, from a humanitarian standpoint he is making himself valuable as a citizen. Recognizing the problem of accident prevention is perhaps the most meritorious action of the Department of Labor.

The Sculpture and Inscription on the Los Angeles Public Library

Lee Lawrie, Sculptor
By DR. H. B. ALEXANDER

LIGHT and learning are associated together by an impulse so natural that it pervades the great literatures of the world. Knowledge is imaged as a lamp, wisdom as a guiding star, and the conscious tradition of mankind as a torch passed from generation to generation, while in the same figure we speak of those minds as illumined and those epochs as enlightened in which book-learning is prized and letters cultivated. And of the great teachers of men, the poets and prophets and thinkers, we say that they are seers and their visions are revelations.

This natural image, of the light of learning, is the theme of the sculptural decorations and of the inscriptions which adorn the Los Angeles Public Library building. The key to the whole plan is the ray-encircled book above the terrace entrance on the south front, upon which, from Psalms 119:105 in the Latin of the Vulgate, are the words "*Lumen Pedibus Meis. . . Lumen Semitis Meis,*" (a lamp to my feet. . . a light to my paths). Directly below the book is a panel bearing the inscription: "In the world of affairs we live in our own age; in books we live in all ages." And perhaps there is no truer thing that could be said of the gift that comes to us through books for it is to them that we owe our whole horizon of time and history. The saying is imitated from a passage in de Senancour, whose own phrase, however, is "in solitude we live in all ages."

Flanking the doorway are two images, to the left that of Reflection or the Thinker; to the

right, Expression or the Writer. Upon the scroll of the Thinker is inscribed, "Thought is the grandeur of man," which is imitated from Pascal's "*Toute Notre Dignite Consiste en La Pensee,*" while the scroll of the Writer bears a passage directly translated from Longinus' *De Sublimate*, "Sublimity is the echo of a great mind." After Longinus, also, though imitated rather than translated, is, "Wisdom is the ripest fruit of much reflection," inscribed below the terrace. Still lower, first to greet the eye, is the library's welcome, "Books invite all; they constrain none."

Above the doorway the theme suggested by the form and inscriptions which adorn it receives a kind of exposition in the six great portraits symbolizing above the Thinker, the labors of reflective, and above the Writer, those of expressive thought. Here Herodotus represents History; the poet Vergil, Letters; Socrates, Philosophy; Justinian, Statecraft; Leonardo Da Vinci, the Arts; Copernicus, Science. The six images form two groups, three right and three left, and at the same time, three pairs, for beginning at the center, Philosophy and Statecraft, next Letters and the Arts, and lastly History and Science, have correlative positions in defining the frame of life, its ideal expressions, and its setting in time and space — the whole group giving in image the whole form of our human and humane tradition.

On the North front the principal decoration is the arms of Los Angeles, but on either side of the entrance are here again two images, in this



DETAIL OF SCULPTURE, NORTH TERRACE ENTRANCE; LEE LAWRIE, SCULPTOR



INSCRIPTION AND SCULPTURE ABOVE THE MAIN ENTRANCE OF THE LOS ANGELES PUBLIC LIBRARY; LEE LAWRIE, SCULPTOR

instance symbolizing the great literary powers of mind, *Reason* and *Imagination*, or the Philosopher and the Poet. High above, on the cornice is an inscription taken from Richard de Bury's apostrophe to books in the *Philobiblon* beginning: "*O Libri soli liberales at et liberi,*" which is changed into straightforward English: "Books alone are liberal and free; they give to all who ask; they emancipate all who serve them faithfully." It is a sentiment echoed in several other of the inscriptions.

On the north side, too, there is a terrace entrance leading into the rooms reserved for art and music. "Love of the beautiful illumines the world," over the door, is suggested by a passage in Plato, while for the two lateral panels, it seemed nothing could give nobler introductions than, for Music, Job 38:7, "The morning stars sang together and all the sons of God shouted for joy;" and for Fine Art, Psalm 19:1, "The heavens declare the glory of God and the firmament sheweth his handiwork."

Around to the east is the children's entrance. It is surmounted by the Globe of Adventure with the words, "Books are Doors into Fairyland, Guides unto Adventure, Comrades in Learning;" while below the globe with Titania and Puck serving as mischievous caryatides, is written, "The World is my Book." On the capitals of the piers in the court into which this entrance leads are scenes and themes from fairy books and children's lore.

Emblematically the west entrance is one of the most significant, for here the image of light is given its fullest symbolism below the central tower. The inscription is the Latin of Lucretius, "*Et quasi cursores vitai lampada tradunt,*" taken from a famous passage:

Races of man increase and
races fade,
And in brief space tribes fare
their mortal way,
Like runners passing on the
lamp of life.

The idea is that of the ancient torch race, the flame of knowledge passed from people to people through successive ages, and it may have been suggested to the Roman poet by the passage at the beginning of Plato's Republic, where the Greek philosopher uses the like image. The symbolic torch race gives the subject for the relief panel on this front, and it is peculiarly in keeping with the great images of the Morning and Evening Stars, Phosphor and Hesper, which rise above this panel, for there is little question but that in the dawn of time the torch race was a ritual of the rising and the setting of the heavenly luminaries. Phosphor and Hesper here are taken also as symbolizing the East and the West, with the light of wisdom carried forward in succession by the great thinkers of each world who have taken up the torch in the age-long course.

On the scroll of the Wisdom of the East are inscribed first the names of the founders of the five great Oriental religions: Moses, Zoroaster, Buddha, Confucius, Mohammed; and second, of the sages of the Eastern nations, Lao Tse for China, Hillel for the Jews, Avicenna for the Persian and Algazali for the Arabian Mohammedans, and Badaryana for the Indian metaphysicians.

On the scroll of the Wisdom of the West are first, three Greeks, Herodotus, the "Father of History" and Socrates and Aristotle, the philosophers; next, Vergil for the Latins, St. Augustine for the Christian Fathers, and St. Thomas Aquinas for the Mediaeval Schoolmen; Petrarch, "Father of Humanism," representing Italy; and afterwards, for England, France and Germany, the founders and shapers of the modern age, Francis Bacon, Descartes and Kant. All these are only indicative of the stream of thought and culture; but while many others might be given, there is little in the tides of civilization that is not suggested by these few great names.

Of course, exception should



DETAIL OF SCULPTURE, NORTH TERRACE ENTRANCE; LEE LAWRIE, SCULPTOR



DETAIL OF FIGURE, "POESY;" LEE LAWRIE, SCULPTOR

be made for the eight great figures which crown the tower. These eight are the Seers of Light, and here the image of the light of wisdom receives its final completion. David the Psalmist; St. John of the Apocalyptic Vision; Homer and Milton, each blind in the mortal sense, but each gifted with sight beyond physical sense; Shakespeare and Goethe, whose understanding penetrated deep into the hearts of men; Plato who likened the Idea of the Good to a sun more luminous than the sun of nature; and Dante than whom no poet and no thinker ever more imaginatively extended the image of light, or made it to carry a more varied and spiritual meaning. These are the great Torch Bearers of Mankind, sources of the high illumination which is carried on down the ages through the precious service of books. Their images are a fitting crown for a library which is temple and custodian of their light.

But not all is illumination, even for the gifted among men. There are limits to human knowledge, and there are darkneses to which the light has not penetrated and to which it may never be expected to reach. Perhaps it was some such premonition as this that caused the architect of the Los Angeles Library, after he had set at the entrance the illumined book, to place just within its doors, the splendid black marble sphinxes, with their brazen veils. Plutarch, speaking of Egypt, says that the Sphinx before the temple, represented the hidden and perplexed wisdom of the priests, and in the same passage he goes on to tell of the inscription before the shrine of the Saitic goddess of nature. It is this passage, in Plutarch's Greek, that is inscribed in letters of brass upon the pages of the marble book below the goddess face of the Los Angeles sphinx. Literally translated, it is, in English: "I am all that was, and is, and is to be, and no man hath lifted my veil."

✓ The Los Angeles Public Library

By CARLETON MONROE WINSLOW, A. I. A.

ARCHITECTURE is the most outstanding, enduring expression of civilization, and, as a living, progressing part of it, is never a slavish copying of historical, periodic or previously-built structures. In its best expression it is an alert, dignified, sincere and thoughtful exposition of a very real purpose, speaking to him who observes, by means of an architectural vocabulary of true and tried forms. The best of architecture is classifiable only when time has drawn it into perspective.

The general architectural character of the Los Angeles Public Library cannot be classified at this time. It can be expressed only in generalities. Its character is a modern expression of the plan and manner of construction. In part and in detail the building recalls numerous ancient styles, for no building, particularly a Library, can disregard the accumulation of architectural experience of the past. This character is determined by the requirements and limitations of reinforced concrete construction, expressing in a straightforward manner the lines of typical post and lintel design.

A conception of such simplicity would result in sternness were it not for the softening influence and adorning of the carved and sculptured stonework and the color note of the tile work, both of which are integrally and structurally a part of the design. The subject matter involved in the stone work expresses directly the purposes and ideals of a great Library and adds an interesting and valuable classical contribution to the building. The use of colored tile

recalls the California heritage of Spanish Colonial architecture and, more remotely, the scholarly influence of a more eastern heritage.

The site, fronting on three streets, with a fourth street abutting the property at the north and south axis of the building, covering approximately an area of 300 by 745 feet, offered many difficulties to the architects. Although abstract planning of a library stressed the minimizing of public entrances, legal ordinances and pedestrian circulation necessitated doorways on all sides of the building. Architecturally, the chief entrance is on the west or Flower Street side, approached by paths on each side of three long tile pools, flanked by rows of Italian cypresses. Other entrances at the center of the north and south sides bear elaborate carvings and sculptures, and more informal doorways are found at the Children's and the Northeast Terrace entrances.

The property is surrounded by a rather low wall, interrupted by paths leading to the building, and the *entourage* is planted in lawns and shrubs, with groups of trees mostly of a classic character, such as the laurel, acanthus, the olive, palm and cypress, at salient points. The vast flat elevation of a neighboring building at the south side is softened by rows of stately eucalyptus trees. Along the paths are placed at intervals specially designed stone seats and lighting standards.

The building consists of a three-story main structure 200 by 239 feet, a two-story wing 89 by 129 feet, and a central tower rising 188 feet above the sidewalk

at the Hope Street entrance. The exterior is surfaced with hard, smooth, buff stucco, toning in with the Bedford limestone trimming which is incorporated into the walls where the sculptural features are carved. The neutral tone of the exterior is relieved by the highly-colored, glazed tile of the pyramidal upper portion of the tower, the pools, the fountains and by the sculptured bronze work of the doorways. Interior wall surfaces in the main rooms as far as possible are left as stripped from the forms, with concrete beams exposed.

The main building, quadrangular in character, is intersected on its long axis by public corridors leading, on the first floor, to a central lobby, and on the second floor, to a large rotunda, which is the center of library activities and the chief decorative and structural feature of the building. The exterior expression of this central feature is the square tower crowned with the tiled pyramid, terminating in a finial in the form of a hand entwined with the serpent of knowledge and holding aloft a golden torch. On the interior, the dome is supported by great arches of a 42-foot span, springing from four concrete piers, each of which is eight feet, six inches, square.

From the rotunda, passages lead to the main reading rooms, all of which have exterior exposure and form the outer perimeter of the building. Occupying, as it were, an inner ring between these reading rooms and the rotunda are the four divisions for the general bookstack—steel stacks, fire and earthquake proof, rising in seven tiers to the tower space and opening on the reading rooms they serve. The main stairway on the north center of the building leads to a large, formal hall adjacent to the rotunda. The third floor is devoted to executive offices. Built into the main portion of the building at its easterly side is a two-story wing, housing four reading rooms connecting with the main building, surrounding on three sides an open court embellished with tiled tree wells and a sculptured fountain.

The magnitude of the building may be judged by the estimation of floor space at 260,000 square feet and cubical content at 4,300,000 cubic feet. There are in all fifteen public reading rooms with 1200 reading room seats. There are also study, club and

lecture rooms, with over 500 seats, and a present book capacity of 1,125,000 volumes, with possibility of expansion in the tower space. Allowance has been made for expansion on the west of Flower Street side of the building for a future additional wing. In general, this is a resume of the architectural arrangement of the building.

At the beginning the Library Board selected as architects for the building, Bertram Grosvenor Goodhue, of New York, and the writer, as architect and associate architect. Tentative diagrams and scheduled requirements of the different departments were worked out by the librarian, his heads of departments and the associate architect. These were turned over to Mr. Goodhue, who evolved the design and plan. The working drawings were made under his constant direction and supervision. Just as Mr. Goodhue was completing them he was suddenly stricken and died in April, 1924. The work and responsibility of the associated contract devolved upon the writer, who further associated himself with the Bertram Grosvenor Goodhue Associates, of New York, successors to Mr. Goodhue's general practice, with whom the most cordial and helpful relations have obtained.

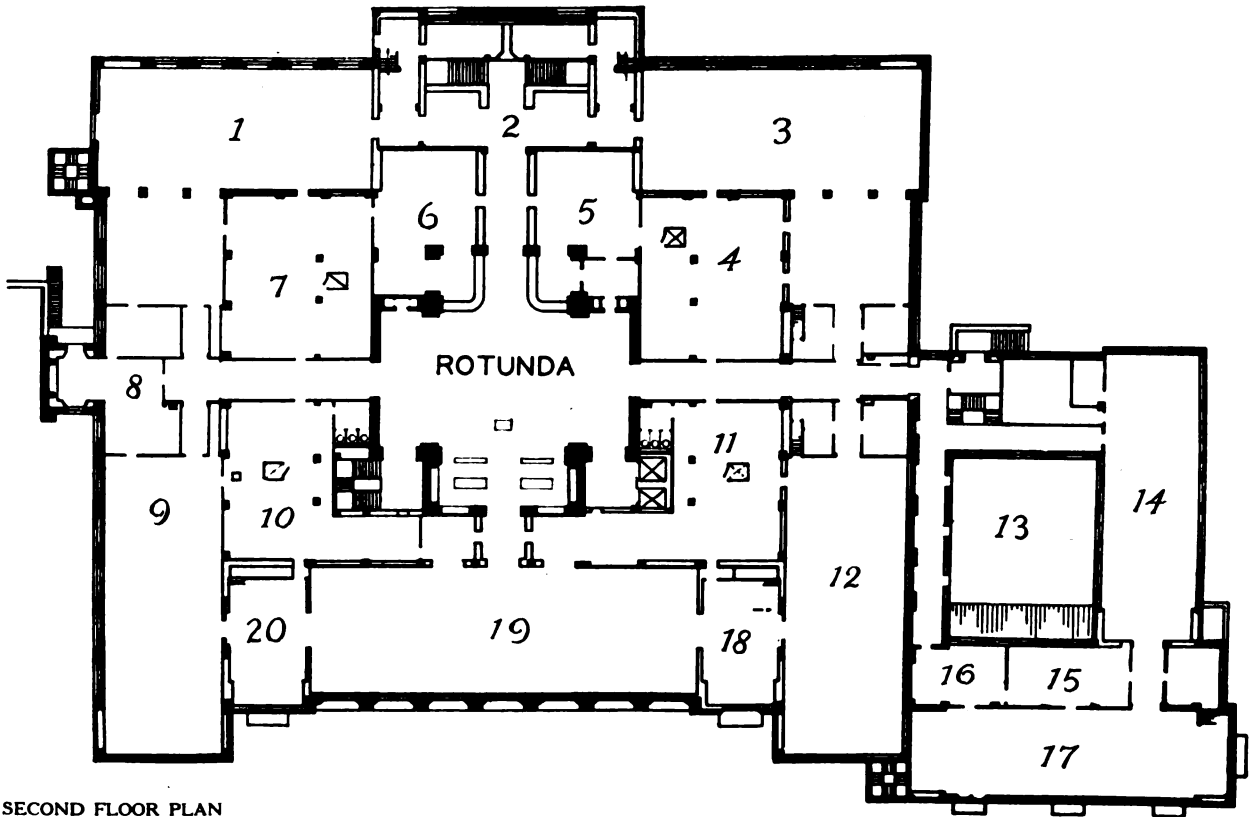
To Mr. Lee Lawrie, of New York, to whom the sculpture for the building was given, full honor must be paid. We all are justly exceedingly proud of his sculptural work.

Dr. H. B. Alexander, of the University of Nebraska, is likewise honored for his scholarly compiling of the inscriptions and the symbolism which has enriched the edifice. And Mr. Julius Garnsey, his associate Mr. Parsons and the painters who assisted them, supplied the decorative work which will stand for all time as a tribute to their genius.

Architectural planning is the proper arrangement of the needs and purposes of a building. The further work of the architect is the physical expression of this planning, endowed with spiritual aspiration. The writer, first as associate with, later as successor to Bertram Grosvenor Goodhue, together with the Bertram Grosvenor Goodhue Associates of New York, has striven to preserve the character of the building as Mr. Goodhue saw it from the first.

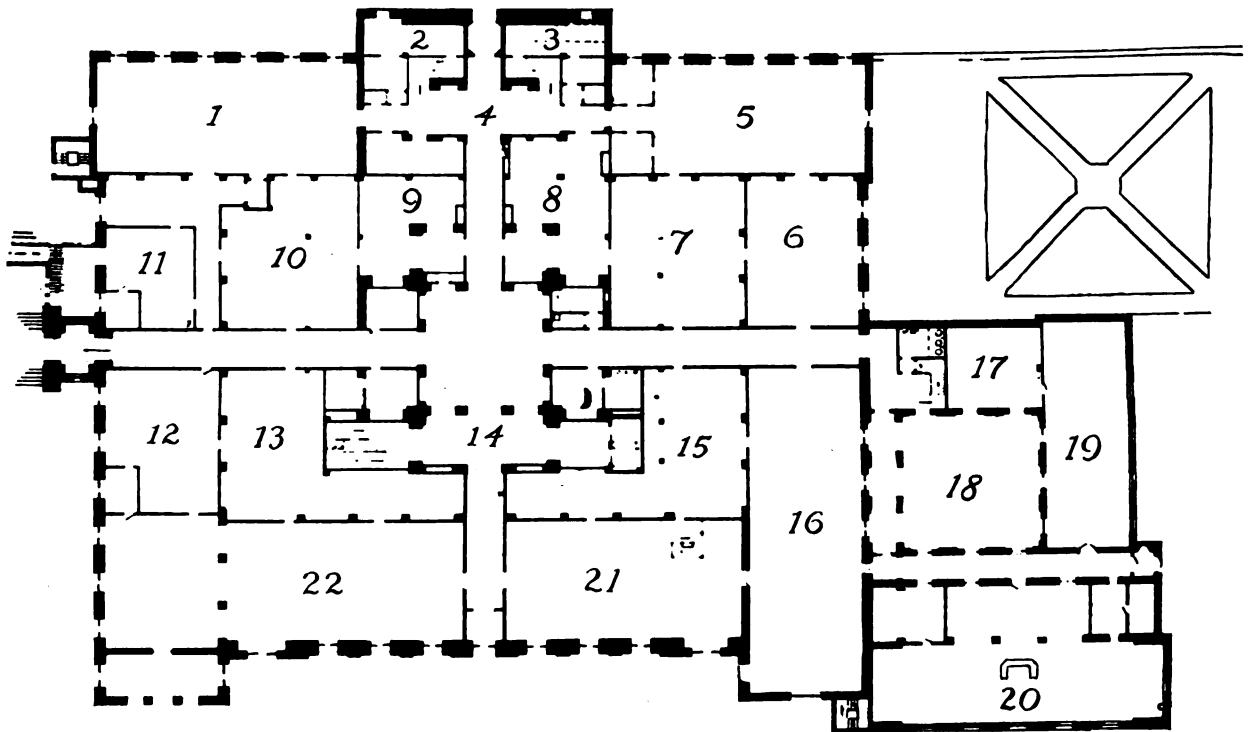


GENERAL VIEW OF FRONT (WEST) ELEVATION
PUBLIC LIBRARY, LOS ANGELES, CALIFORNIA
BERTRAM G. GOODHUE, ARCHITECT; CARLETON M. WINSLOW, ASSOCIATE ARCHITECT
CARLETON M. WINSLOW, ARCHITECT; BERTRAM G. GOODHUE ASSOCIATES, SUCCESSORS



SECOND FLOOR PLAN

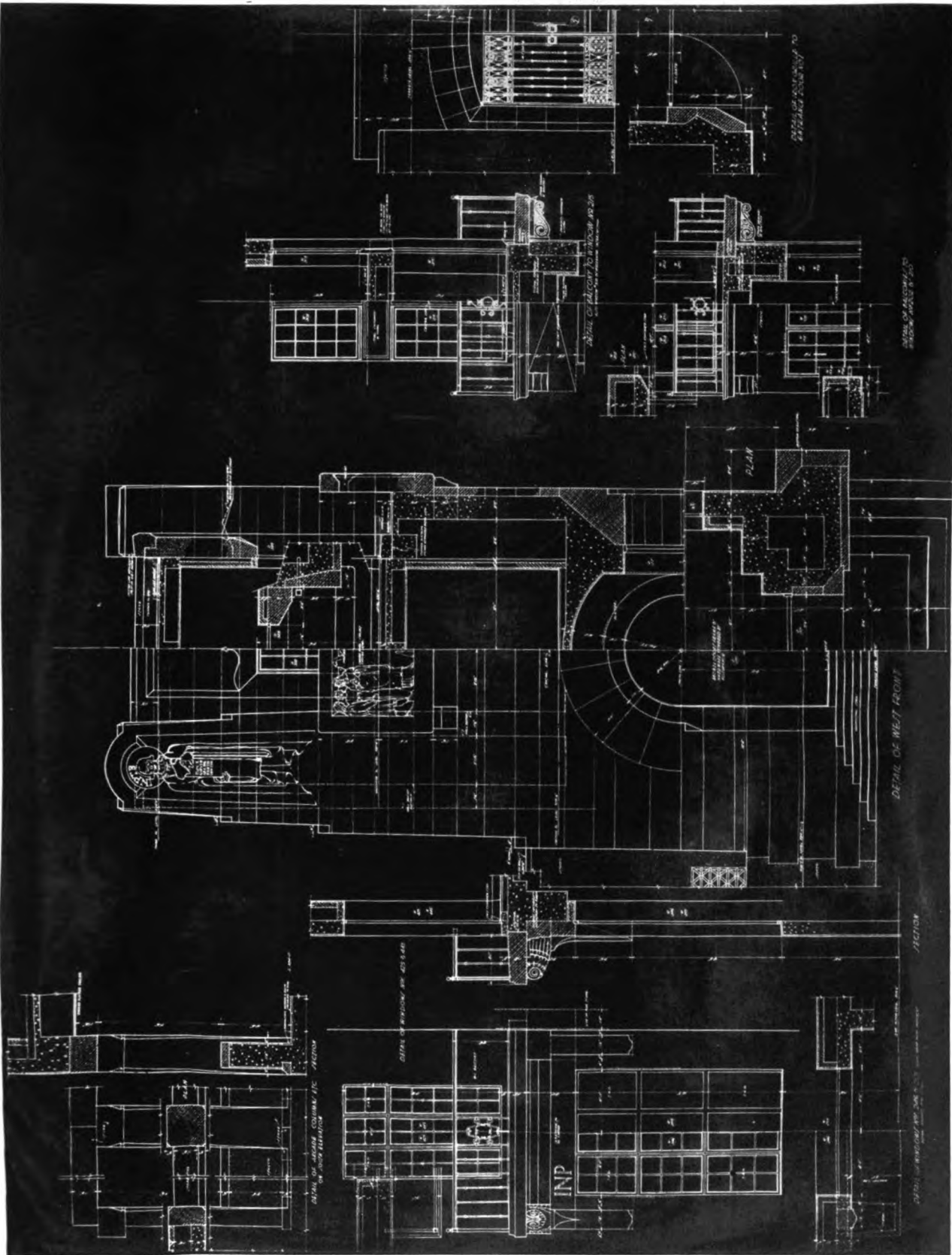
- | | | | |
|------------------------|---------------------|-----------------------|--------------------|
| 1 Science and Industry | 6 Registration Room | 11 Stack | 16 Stack |
| 2 Corridor | 7 Stack | 12 General Literature | 17 Art Room |
| 3 Fiction Room | 8 Office-Work Room | 13 Court | 18 California Room |
| 4 Stack | 9 Sociology Room | 14 Music Room | 19 Reference Room |
| 5 Receiving Room | 10 Stack | 15 Work Room | 20 Map Room |



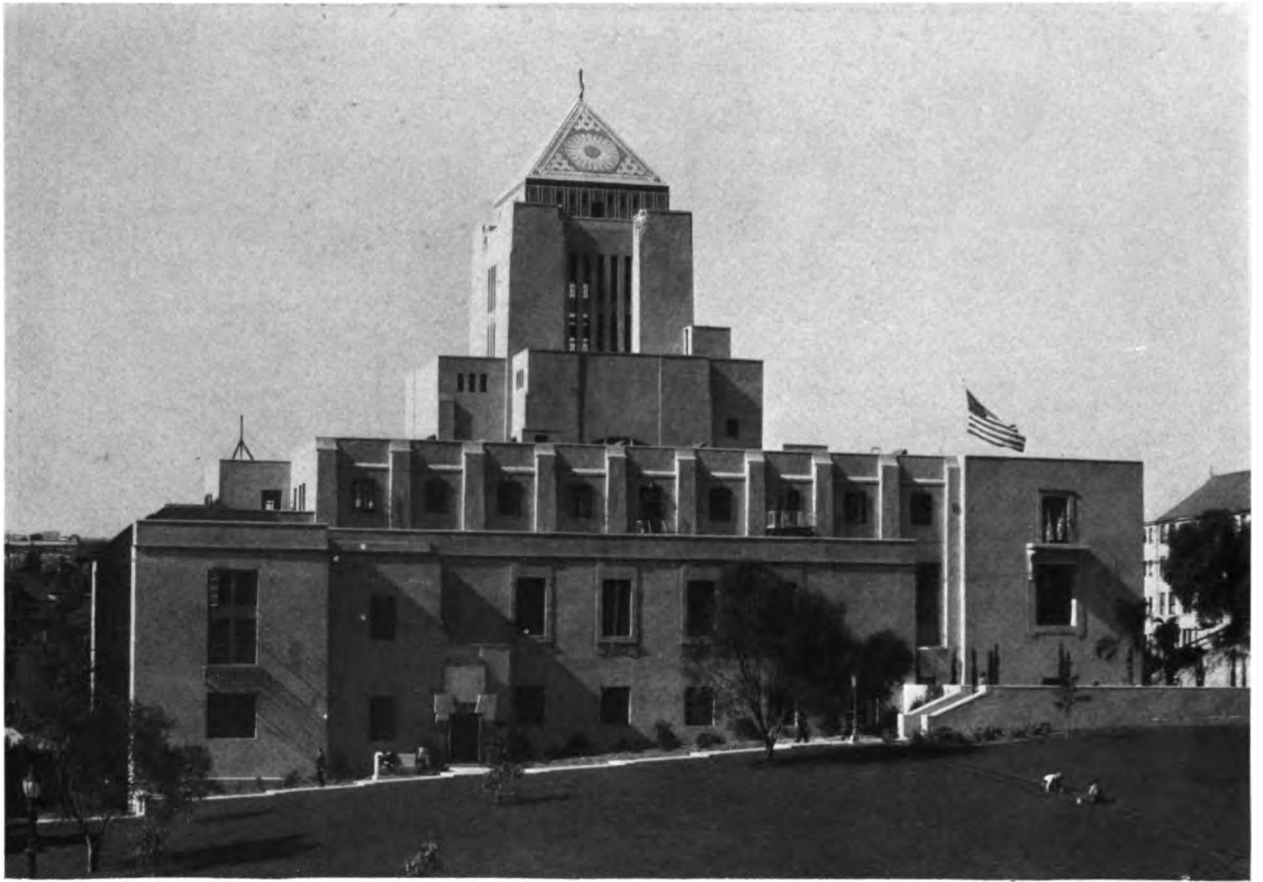
FIRST FLOOR PLAN

- | | | | |
|------------------|----------------|-------------------|-------------------------|
| 1 Future Bindery | 6 Patents Room | 11 Bindery | 16 Curios and Exhibits |
| 2 Women | 7 Stack | 12 Work-Mail Room | 17 Stack |
| 3 Men | 8 Store Room | 13 Stack | 18 Court |
| 4 Corridor | 9 Store Room | 14 Corridor | 19 Schools and Teachers |
| 5 Foreign Room | 10 Stack | 15 Stack | 20 Children's Room |
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THE WESTERN ARCHITECT
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PLATE 22



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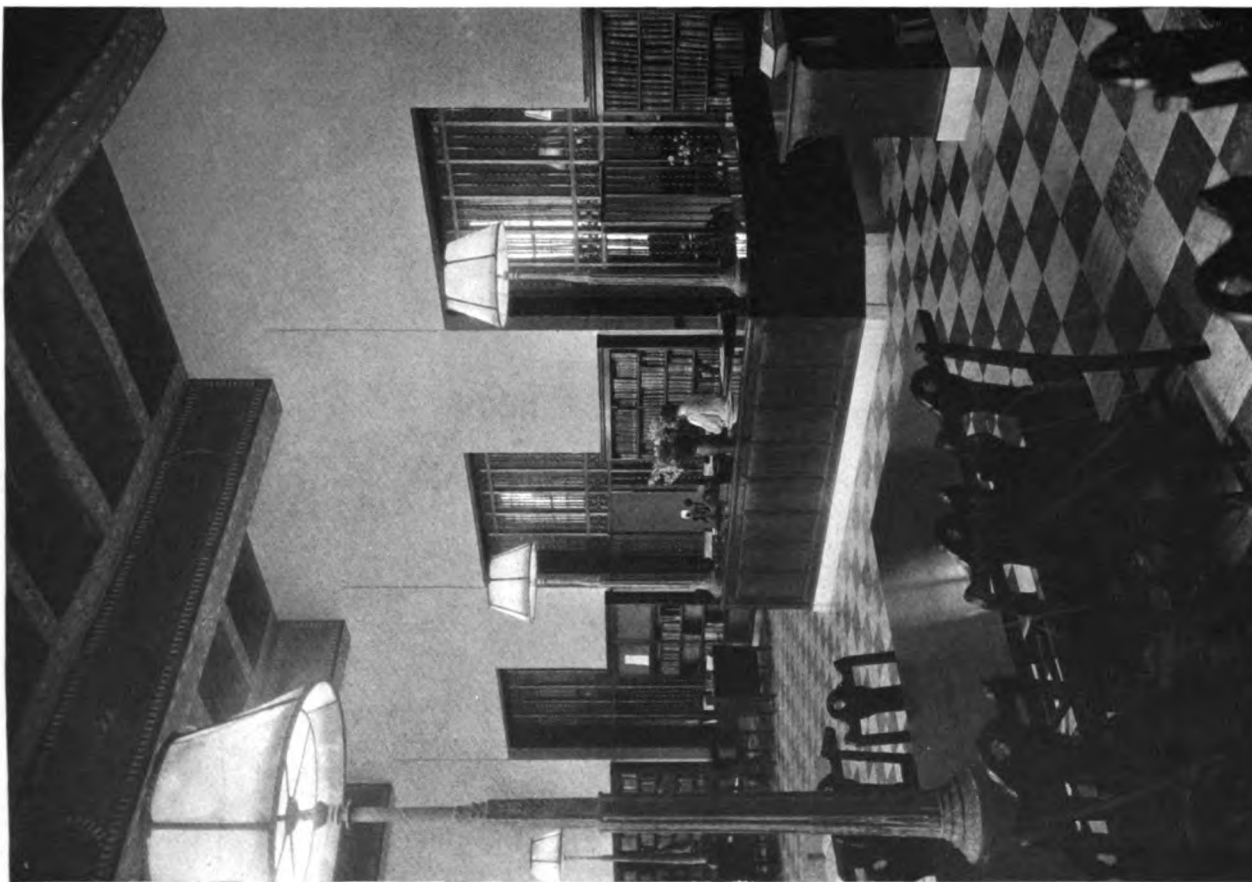
A Distinctive American Architecture

No. 2 of a series suggest-
ing how color can be
utilized to secure such
distinction.



A Distinctive American Architecture

No. 2 of a series suggest-
ing how color can be
utilized to secure such
distinction.



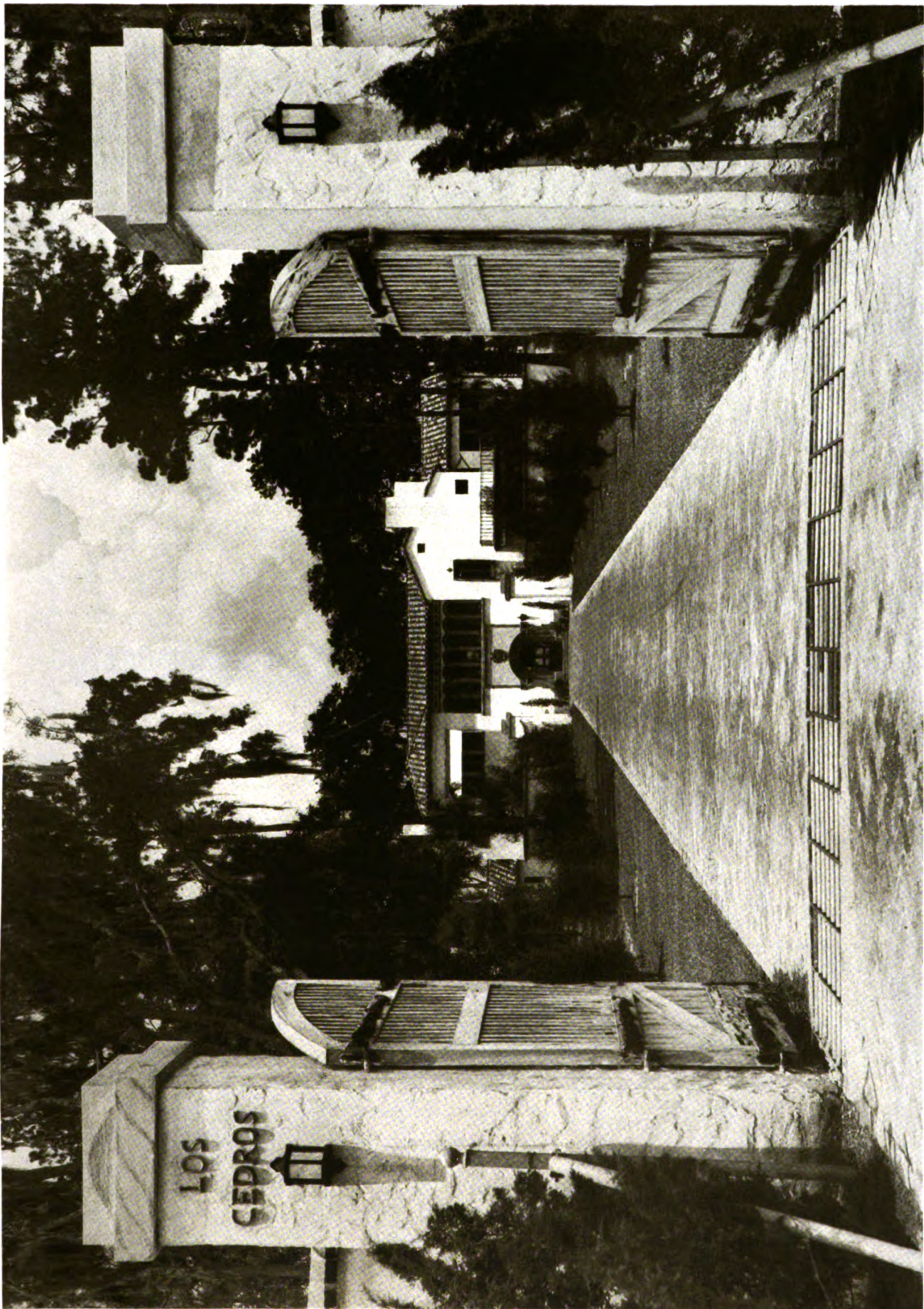
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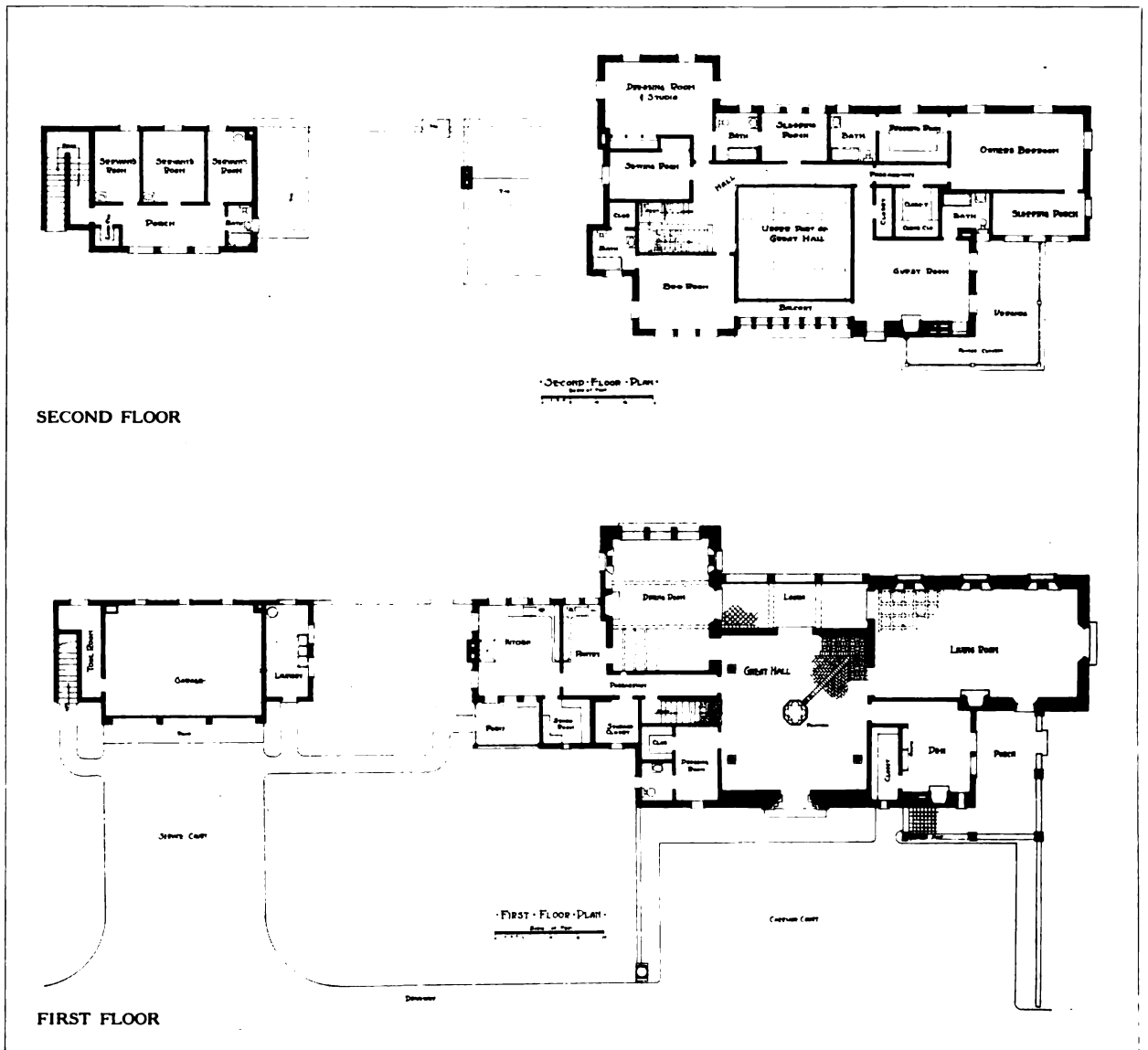
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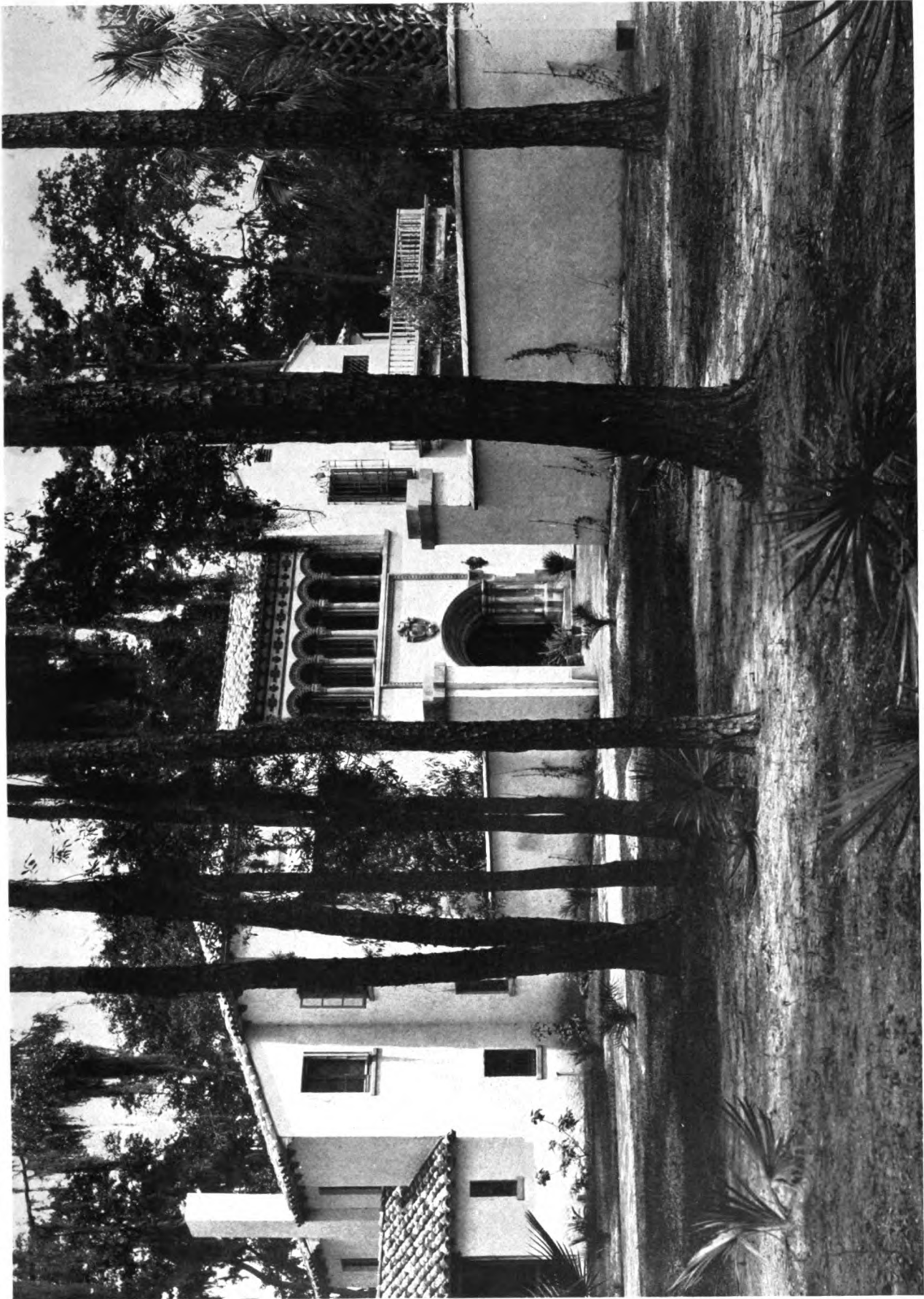
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"LOS CEDROS," RESIDENCE OF COL. RAYMOND C. TURCK, ORTEGA, FLORIDA
MARION SIMS WYETH, ARCHITECT :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::



REAR ELEVATION



PLANS
 "LOS CEDROS," RESIDENCE FOR COL. RAYMOND C. TURCK, ORTEGA, FLORIDA
 MARION SIMS WYETH, ARCHITECT



"LOS CEDROS," RESIDENCE OF COL. RAYMOND B. TURCK, ORTEGA, FLORIDA
MARION SIMS WYETH, ARCHITECT :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::



LIVING ROOM

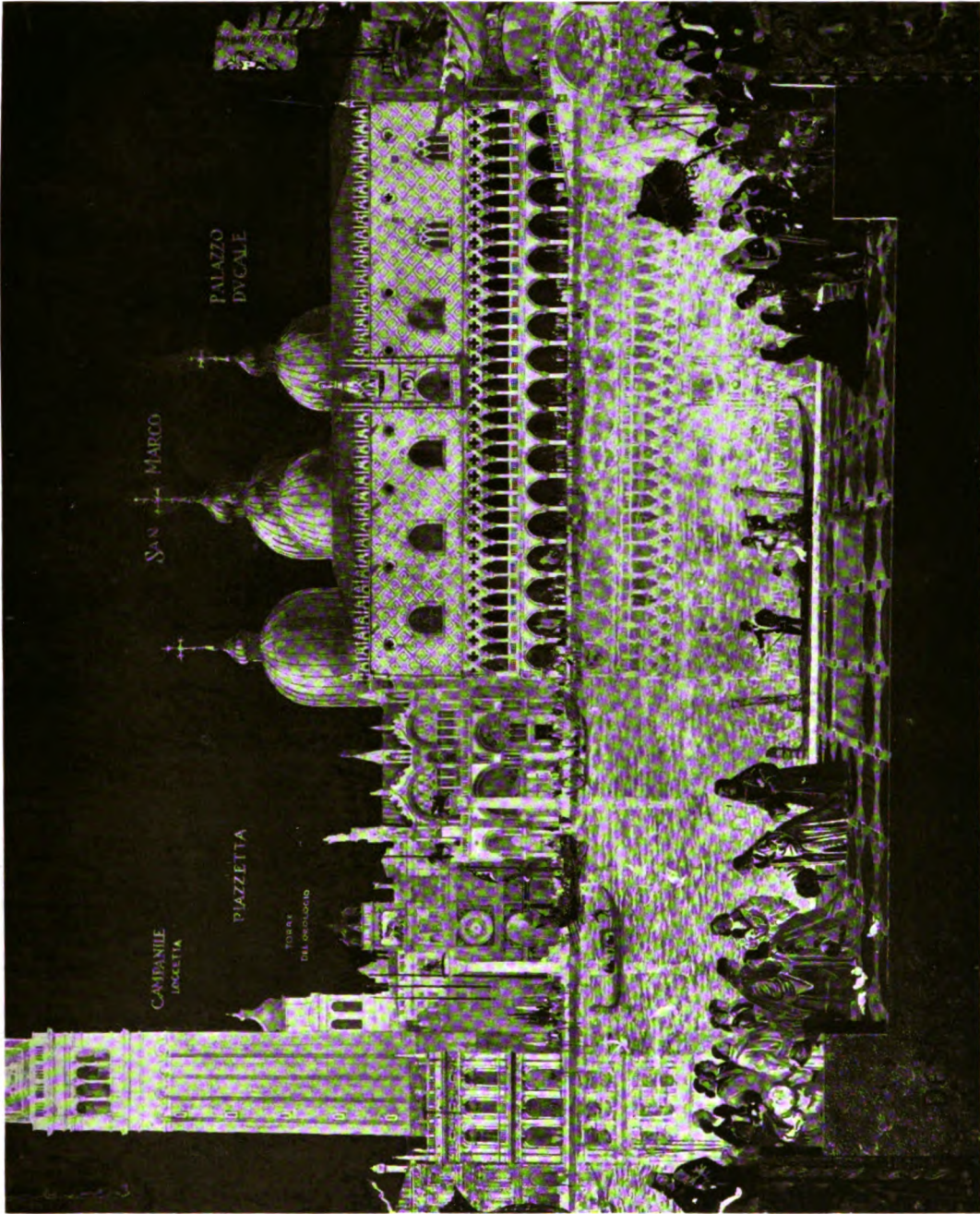


DETAIL OF STAIRWAY

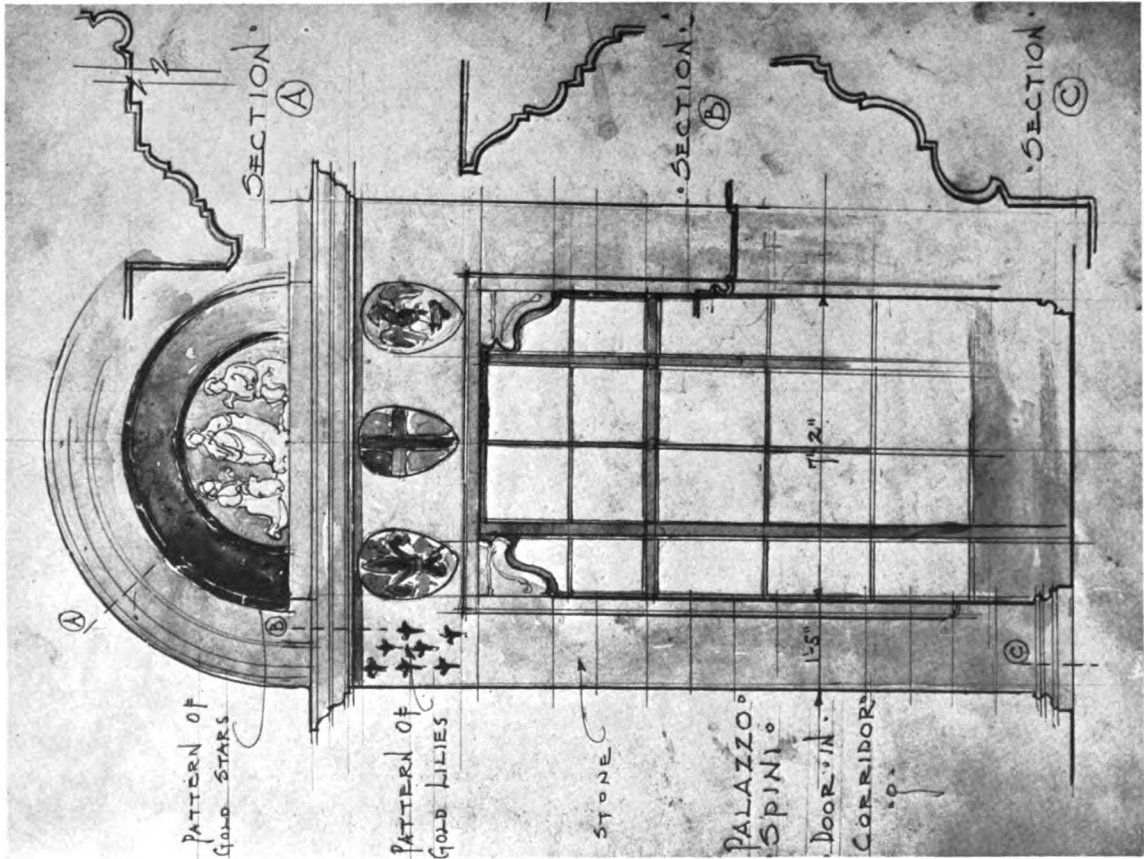


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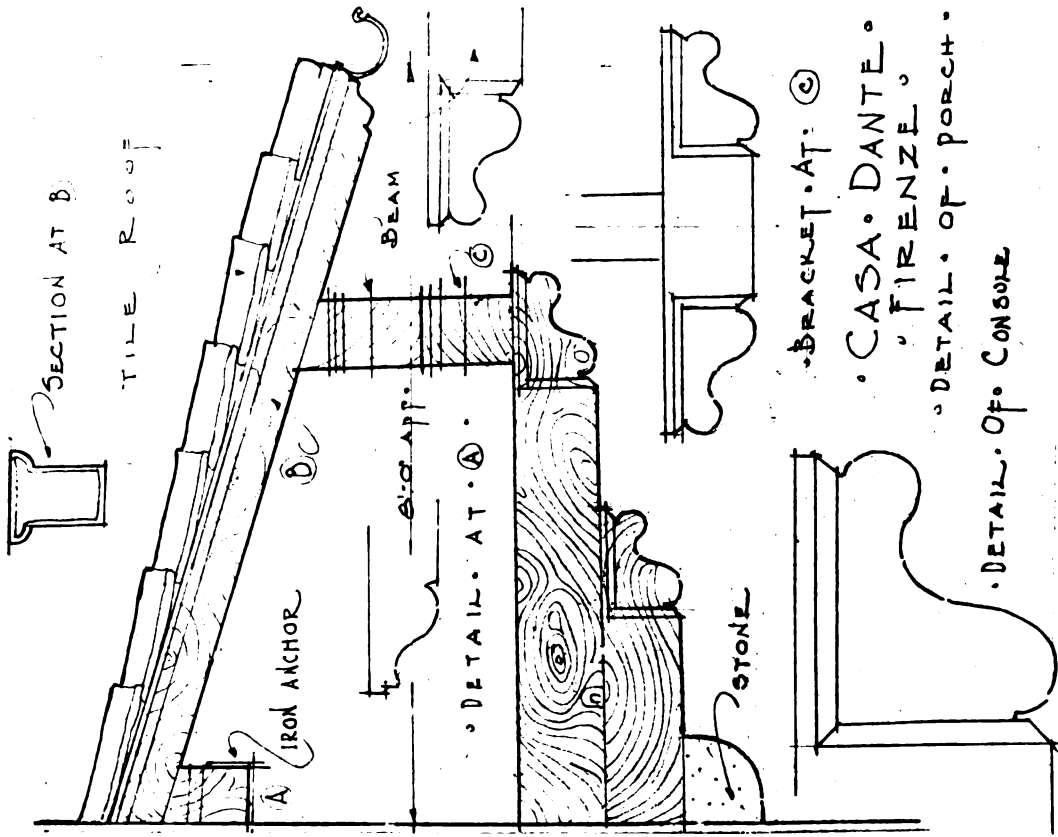
"LOS CEDROS," RESIDENCE OF COL. RAYMOND B. TURCK, ORTEGA, FLORIDA
 MARION SIMS WYETH, ARCHITECT :: :: :: :: :: :: :: :: :: ::



DECORATIVE COMPOSITION (DETAIL)
 PLAZZETTA AND PALAZZO DUCALE, VENICE
 BY JACQUES CARLU :: :: ::



DOORWAY IN CORRIDOR
 PALAZZO SPINI, FLORENCE
 ERNEST PICKERING, PLYM FELLOW, UNIVERSITY OF ILLINOIS, DEL.
 The Palazzo Spini belongs to the 14th century, and has a heavy castellated exterior. This interior doorway, however, reflects the spirit of the lighter Renaissance with its simple mouldings and polychrome decorations in blue, gold and red.



DETAILS OF PORCH
 THE HOUSE OF DANTE, FLORENCE

Tradition says that Dante was born in this unpretentious house not far from the Duomo. The entrance porch with its simple beams and brackets is shown above, and seems to be very much in harmony with the rubble walls of the home where the poet lived with Beatrice.



EXTERIOR PERSPECTIVE, WARD MEDICAL-DENTAL CENTER
ALEXANDER MCKINLOCK CAMPUS, NORTHWESTERN UNIVERSITY CAMPUS, CHICAGO
JAMES GAMBLE ROGERS AND CHILDS AND SMITH, ASSOCIATE ARCHITECTS

Color In Architecture

II. The Nature of Color

By REXFORD NEWCOMB, A. I. A.

ALL who have eyes with which to see are acquainted with the *eternal miracle of light*, and, after all, color is only a phase of light. It was Sir Isaac Newton who discovered that white (sun's) light may be broken up into its constituent parts. By causing a ray of white light to pass through a prism, he was able to divide or *disperse* it into its seven primary colors which, caught upon a white screen, formed what we call the *spectrum*. (Figure 1). Of course in nature we are constantly conversant with this phenomenon, which we call the *rainbow*, and doubtless man was familiar with the colors of the *spectrum* long before Newton was able to prove their identity experimentally.

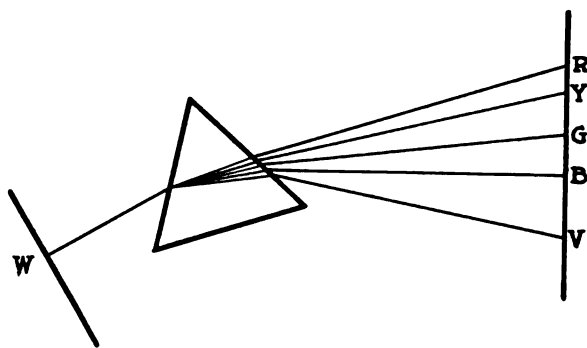


FIG. 1.

Named in order the colors which comprise the spectrum are: violet, indigo, blue, green, yellow, orange and red. Thus it will be seen that *white light* is the *presence of all colors, i. e. all* that the human eye, as it is at present constituted, is able to detect. Conversely *black* is the *absence of all color*. As commonly used, the word *color* refers to the appearance of an object caused by the light waves which it reflects. Thus an object (in white light) which we say is *green* appears so because it absorbs, more or less, all other light waves and reflects to the eye only the *green*. This same object seen in a *different light* will of course appear quite different in color. An object which in white light appears *white* is then an object the surface of which reflects with equal efficiency all the waves which strike it, and an object which appears *black* is one, theoretically, the surface of which absorbs successfully all the waves, leaving none to be reflected to the eye. Practically, of course, there is no such object and those which we say are black do reflect some light waves. From the above it might seem that it would be proper to call *white* a "color" (or all colors) while *black* can scarcely be so designated.

The waves of greatest "*wave length*" and lowest "*frequency*" of vibration visible to the human eye

are those which produce upon the retina of the eye the effect known as *red*, while those of shortest *wave-length* and greatest vibration frequency produce the sensation known as *violet*. Waves of slower vibration than red waves (infra-red) do not affect the eye but may be perceived as heat; those of more rapid vibration than violet (ultra-violet) are called "actinic" waves and produce chemical effects. Thus it would seem that the human eye in its present state of development is capable of detecting a relatively small part of the total spectrum and that, of the total range of radiation, our spectrum is again a relatively small part. What these other colors might be, were we able to sense them, we have no means of knowing. We do know, however, that by a combination of different light rays thousands of different colors may be formed. Thus many not known in the spectrum, such as purple or brown, are made possible.

When two rays of different colors together form white light, those colors are said to "*complementary*". This is relatively easy to demonstrate in the laboratory. It is done by producing (by means of a prism) the spectrum at some point in space. By means of slits cut in a black card-board, the desired beams may be isolated from the rest of the spectrum. These by means of a lens may then be made to combine on a white screen. If the result is white light the colors are said to be complementary.

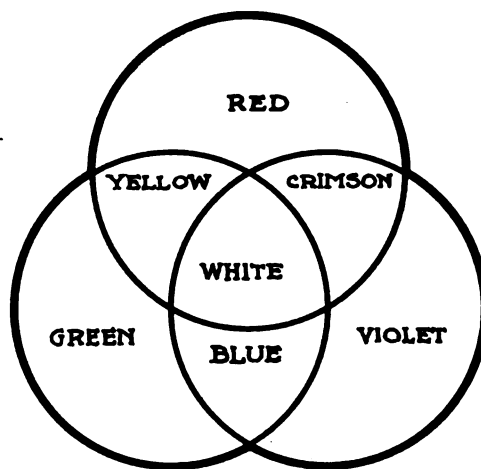


FIG. 2.

Now, if *red* spectral light and *blue* spectral light are thus added, *white light* will result and the same results from a mixture of *green* and *crimson* light and from a mixture of *violet* and *yellow* light. We may show this relationship by means of a diagram (Figure 2). Moreover, these further phenomena are to be noted with respect to the mixture of spectral colors:-

- a. If red and green be mixed, yellow results.
- b. If red and violet be mixed, crimson results.
- c. If violet and green be mixed, blue results.

Since then *yellow*, *blue* and *crimson* can be produced by an addition of one spectral color to another, the colors (red, green and violet) of which these are made are known as the *spectrum primaries*, while *yellow*, *crimson* and *blue* are known as the *spectrum secondaries*.

Now what has just been recorded regarding the mixing of *spectral color* appears not at all to be the truth with respect to the pigmental equivalents of these same colors. This can be shown by the following experiment which is often performed by students of color. If the eye be allowed to rest upon a patch of red until it becomes fatigued and immediately the gaze is transferred to a white field, a spot of the same size and configuration as the red spot will be seen upon the white field but instead it will be blue-green in color. Presently, however, when the eye recovers from the fatigue occasioned by the red, the blue-green spot disappears. Thus: White - Red = Blue-Green, or $R + (B-G) = W$. But we have just seen above that *red* light plus *blue* light = *white* light, and here we encounter one of the discrepancies observed between the behaviors of spectral colors and their pigmental equivalents.

Moreover if you mix *red* and *green* pigments certainly *yellow* will *not* result as we have seen to be the case when red light and green light are mixed. Our experience with pigments has led us to the following conclusions and upon this basis has generally rested the color practice of artists down to the present time.

- a. If red and blue be mixed, purple results.
- b. If red and yellow be mixed, orange results.
- c. If yellow and blue be mixed, green results.

Upon this basis, Newton, Brewster and others have concluded that *red*, *blue* and *yellow* are the colors from from which all others are derivable and these, then, they term the *primaries*, while *green*, *purple* and *orange* are termed the *secondaries*. The student of color is at first confused by these differences in results, but he is helped if he will remember that the Newton-Brewster theory of primaries and color mixture is based directly upon the *behavior of pigments*, while the Young-Helmholtz-Tyndall theory is based upon the *spectrum*.

Now the question arises: which system should be followed? Should we continue to practice a pigmental system or should we attempt to get closer to nature's own processes and represent, in so far as is possible, the real scientific facts in terms of pigments? The artistic camp is at present divided upon this question, although a considerable group of present-day painters have come to the position that, since nature's laws and nature's truths are the goal and since, after all, a practice based upon a pigmental theory is far from

the facts, it would be wiser to sense the scientific truth and then represent that truth upon canvas or elsewhere in terms of pigment or pigmentally colored units which are the only permanent color media that we have. Or as Michel Jacobs has put it: "Why painters should change the laws of color as seen in the spectrum and their complimentaries because the chemical properties of the pigments on their palette do not mix as do the rays of light, one fails to understand, although it is possible with certain chemicals to follow exactly the laws of the spectrum."

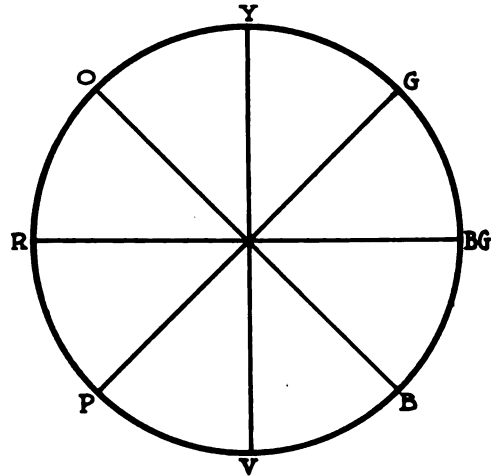
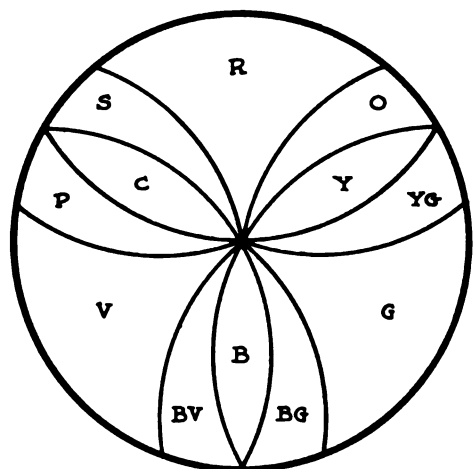


FIG. 3. - COLOR WHEEL FOR SHOWING PIGMENTAL COMPLEMENTARIES.

Now to the superficial observer this question may seem of little moment; but when one remembers that the shadow of a colored object partakes of the nature of the complementary of the color of the object, it makes a vast difference what is considered the complementary. Moreover, since maximum contrast is produced by the juxtaposition of complementaries, the potency of an effect depends entirely upon what is determined to be the complementary. The capacity of color to differentiate form is a well known fact but its value may be greatly impaired if maximum contrast is not afforded at the strategic place by the selection of a correct complementary. Thus the question of what we are driving at in the use of color becomes a very important problem and one to which the architect must diligently devote himself if he expects to use color effectively or intelligently.

Personally it seems to me that, since architectural forms, like other objects in nature, are subject to laws of light, an architectural polychromy in harmony with those laws would seem the logical and sensible thing to develop. It would seem, however, that some "laboratory" deductions made possible by actual experiment in the open and under atmospheric conditions would help in a solution of these problems. The mere application of theory, no matter how sound it may appear, cannot suffice in the solution of such a

tremendous problem as that which architectural polychromy will presently appear to be. It is to be hoped that some agency sufficiently equipped will prosecute experiments of this character under "actual working conditions."



PRIMARIES
 RED ..
 VIOLET
 GREEN

FIG. 4.

COLOR WHEEL FOR SHOWING SPECTRUM
 PRIMARIES AND COMPLEMENTARIES.

For the sake of those who are unacquainted with the *spectrum* theory or the *pigmental* theory of primaries and their complementaries, I give here two "color wheels" (Figures 3 and 4). In each case the complementary color is found at a position directly opposite the color in question.

It remains now simply to explain the *qualities* by

which colors are identified and classified. Of these qualities there are three: "*hue*," "*luminosity*," and "*saturation*." *Hue* refers to the quality whereby green differs from red. The hue of a color can be changed only by mixing another color with it. Thus by mixing with *red* a bit of *yellow* we change the chromatic quality (hue) of the red. *Luminosity* refers to the *brightness* of a color. Yellow for instance is far brighter than either red or violet. In fact in this respect it stands next to white. The artist or architect generally refers to this quality of a color by the term "*value*." To change the value of a color we may mix with it black or white. It becomes therefore "lighter" or "darker" without altering the *hue*. By "*saturation*" we mean the color strength of a hue as compared with neutral gray. "*Intensity*" is a term often used to denote the same quality. Thus we speak of a "brilliant" or a "dull" blue or any other hue. The intensity of a color may be altered by mixing with that color a neutral grey of the same *value* as the color itself. Thus *hue* and *value* are unchanged while *intensity* is changed. When we mix black with a color we refer to the result as a "shade" of the color. When a color is mixed with white we refer to the result as a "tint." Thus *pink* is a "tint" of red, because red plus white produces "pink." These then are the terms that attach to colors and these make up a simple "color terminology," without which it is impossible to discuss the phenomena of this fascinating manifestation of light.

The Passing Show

What of Washington? What To Do?

By ARTHUR T. NORTH, A. I. A.

At last the long anticipated post-war construction of Government buildings appears to be a probability. The contractor and the material man justly look upon the prospect with gleeful expectation. It is immaterial to them as to the quality of the architecture which consumes their labor and wares—profits are in prospect and it is to be hoped that they, at least, will be realized.

But what of the architecture to be employed? Does that concern the public or the architects themselves? We can all foresee what will be the result of the building program. Give us the size of the ground and the floorage of the structure and we immediately visualize the unborn building—nay, we can even sketch it with our eyes shut.

Walter D. Blair, A. I. A., has very happily made a forecast and expressed a hope in the *Journal of the A. I. A.* (January, 1927). Mr. Blair did it so forcibly and truthfully that we feel justified in repeating it as a text.

To the Editor of the *Journal*:

In the erection of the new public buildings for Washington, it is to be hoped that those in charge will have a larger conception of architectural potentialities and possibilities than their immediate predecessors. They and their architects conceived of architecture as consisting solely of columns. Be the problem a convention hall, a memorial to a great man, a post office, a courthouse, a department building, the exterior was always the same, a gigantic colonnade. Thus was exterior governmental architecture reduced to a universal common denominator—a colonnade. It did not matter to the architectural judges, who thus decided competition after competition, that colonnades, when rightly used, are means of communication along their axes, while the traffic in their premediated colonnades was invariably perpendicular to the colonnade. The colonnade ceased to function as an architectural motive, but it brought home the bacon to the competitor. Nor did it occur to our judges that these drums of stone, growing bigger each decade, so that four stories, then five were housed between their flanks, constituted a waste of building material, colossal in its ineptitude, and was a public confession that our architectural leaders were devoid of the necessary creative ability to solve the simplest architectural problem. Our leaders, God bless them, were such good copyists that they could create nothing and were resolved, so far as competitions were premediated, that nothing new should be created by any one. It has now reached the stage where only designers of old colonnades are permitted to compete for the new colonnades which will be variously called memorials, courthouses, and public buildings. The limited competition has reached its logical goal—complete sterility. The government should seek ideas for its new buildings, architectural ideas that are expressive of our day and are solutions of our

problems and are withal fraught with beauty. Ideas, not organization; beauty, not system; artists, not business men are needed.

Walter D. Blair.

How did this deplorable condition come about? A condition that indicates American architecture, insofar as Washington and its architectural spawn is concerned, to be totally sterile and impotent. Our recollection takes us back to our student days of the latter years of the Nineteenth Century. It seems that some Americans had studied in Paris and had become imbued with the idea that architecture is the Five Orders only—everything else was *barbare*.

Admitting the horrible atrocities committed by the Government and American architects prior to that time, what excuse was there for foisting on the Government and the helpless people the forests of ordered colonnades that distinguish our capital city? Did they not make us a nation of stylists? We were stylists before their efforts were successful—we had the Colonial, the nondescript, carpenter-book Victorian, the Good Queen Anne, the Romanesque and then the Classical styles that stay with us yet. The reason for adopting those classical styles was, perhaps, that they were so well established by moduled layouts and measured drawings that by no possibility could any error in design be made and every structure and part thereof would be precedented. There would be no possibility of an original detail or concept, nothing created architecturally insofar as the Government was concerned.

Thus by a fortuitous circumstance, a style was made the vogue by those who were devoid of creative power and who were the weak votaries of a French cult. But why an architectural style for the Government or any other organization or person? The palsied hand and heart of the stylist are well described by Professor Rexford Newcomb, A. I. A., in *The Architect* of January, 1927, reading:

One of the great mistakes of the architect of today is to think that because a form or a type, or even a "style" was expressively adequate in its time, it remains so today. This sort of reasoning results in indiscriminate and ridiculous "adaptation" and often in an artificial forcing of the "styles" of the past into present-day usages to which they are generally ill adapted.

In my estimation *style* has been over-emphasized, over-worshipped with the result that designers, intoxicated by the beauties of line, mass and color of the very masterpieces which they study, become *slaves of the past* rather than *masters of today* and, instead of creating in terms of the present, content themselves with a repetition of the architectural glories of the past—expressions which become, in

view of a changed world, a little more than beautiful platitudes.

So often it is asked of a building, "What is its style?" Isn't this, after all, a foolish question? Perhaps what should be asked is *not* has it "a style"? but "has it *style*, has it distinction?" What self-respecting author would sit down to write a modern drama in the *style of a Shakespeare*, but what author does not seek style—a style, a distinction all his own? To be sure he may resort to Shakespeare to study his attack, his symmetry of expression, his use of figure, but none of the great bard's explicit forms would he think of borrowing for use in our day. Nor could he; for language, if it is anything, *is alive and modern*. I wonder if we can say the same of architecture? Certainly we may of its constructive phases, for new materials make their appearance and become part and parcel of our constructive system, striving the while for some recognition in the finished expression. Meanwhile the facades present appearances more archaic than modern, the hackneyed expressions of a masonry age living out of its time. No, it is neither form nor style we should seek; it is the *spirit*, the *principles* of the great work of the past that we should strive to emulate.

The matter of public architecture seems to be in the mind of others. F. W. Fitzpatrick, commenting on a recent quotation from Ralph Adams Cram in *The New York Times* has a communication in that paper of January 23, 1927, which reads in part:

I submit that any builder could supply the slight variations one notes in any such group of buildings. It would not take an overdose of intelligence to supply the variations we find even in the stately Capitols and ultra-pure "classic" governmental buildings that are springing up all around us. They are all in the same key, the same hackneyed and over-worked theme. The builder could use stock sash and frames and stock moldings more or less artistically varied in combinations; he could use stock bands and cornices juggled at different levels and his creation would be not one whit less attractive or original than ours, and would have the saving grace, besides, of costing decidedly less.

The average architect believes that his most important function is fulfilled when once he has "designed" a beautiful, much becolumned and highly ornamental exterior for a building just like or nearly like 4,376 other buildings. He stands ready to sacrifice almost any advantages of plan or economy of construction to that "front." Indeed, his whole education and training have been "frontward."

It is apparent that the protest against the stupidity and deadly dullness of governmental architecture is not a localized expression. It is probable that in every community there are architects, the forward-looking ones, who protest inwardly against the architectural conditions in Washington. It is strange that in a profession which presumably engages in the most important branch of the fine arts, there is not a decided protest against the emasculation of that art by the "holy ones of architecture," those early

American protagonists of the French cult who sterilized adolescent American architecture and left it helpless beyond producing a marble box entirely surrounded by columns. And the mantle wearers of those old "holy ones" have now assumed the role and kowtow in Washington before the aforesaid white marble box entirely surrounded by columns. And it is these second generation protagonists who will influence the appointment of the Art Commission and thus preserve and perpetuate the classical dynasty.

What to do? Would it be possible for a member of the A. I. A. to propose in any Chapter the adoption of a resolution requesting the President and the Chairman of the Building and Grounds Committees, to free our capital city from a decadent architecture and foster one worthy of our successes in other arts?

But if a Chapter should do so, the "holy ones" who seclude themselves in the architectural "mosque" in New York City and a few of the brethren who have strayed into distant fields, would immediately estop any action directly between a Chapter and any other thing, as they did in 1925. It is unthinkable that a group of citizens constituting a Chapter should act on a Washington matter direct—nay it must emanate from the eight-sided mosque in Washington.

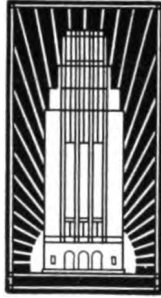
If no Chapter is alive to this deplorable condition, perhaps a group of architects drawn from widely spread localities would see fit to make a move towards a governmental architecture that might be comparable as an art with some of the splendid architecture of today which is fostered by private individuals. The Government should lead and not shackle.



Dwight W. Perkins, senior member of the architectural firm of Perkins, Fellows and Hamilton, Chicago, for many years, has retired from that firm and formed a partnership with the firm of Chatten and Hammond, under the firm name of Perkins, Chatten and Hammond. Melville C. Chatten and Charles Herrick Hammond, comprise the other members. Offices are in the Burnham Building. Mr. Perkins, for years architect for the Board of Education in Chicago, is widely known for his school and college work.

William K. Fellows, John L. Hamilton, Laurance E. Wilkinson and James F. Gerrity have formed an architectural partnership to succeed the firm of Perkins, Fellows and Hamilton. The new firm will practice under the name of Hamilton, Fellows and Wilkinson. Both Mr. Wilkinson and Mr. Gerrity have been associated with the firm for many years. The offices will remain at 814 Tower Court, a building erected several years ago by the older firm.

THE WESTERN ARCHITECT



ARCHITECTURE

ALLIED ARTS

Volume XXXVI.

Number 3

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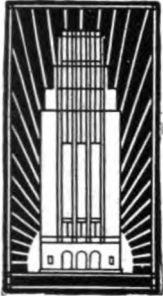
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PATRICIAN HOUSES OF OLD NORTH GERMANY
STEFFENHAUS ON LANGEN MARKT, DANZIG
(COLORS, GREY AND GOLD)



THE WESTERN ARCHITECT

ARCHITECTURE

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ARTS

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Number 3

The Five Day
Week
In Theory
And Practice

When labor in the building trades was free to accept work where it was to be had, at a wage that was regulated by the supply and the skill of the individual, custom regulated the hours that constituted a day's work. This freedom of the individual, theoretically sound, in its practical workings brought the evils of low wages augmented by lay-offs in inclement weather and gave the employer always the upper hand in the transaction. These conditions brought into the field the "labor union." It also destroyed the partial, if not complete union of effort between employer and employee and at once established an attitude of opposition toward each in the ranks of both. Labor, coming to realize its strength, became aggressive, and the feeling of dominance in the employer led to opposition to every demand of the unions as much upon principle as for economic reasons. The answer of the union to a rejected demand was a strike, in which war measures ruled. Any workman who sought to exercise his individual right to earn a living, by the union with which he chose not to affiliate, was deemed a traitor to his class and sometimes clubbed or killed.

Union leaders for the most part were men of dominating, ruthless tendencies though some were idealists who thought that labor should be supreme. Employers tried only to make the job pay and viewed with hostility all combinations which sought ameliorating conditions in labor. Thus, for many years past, the attitude has been that of armed camps with few truces, and these frequently broken by one side or the other. Opposition to the steadily-growing unions only increased their strength—and also their demands. The latter being met, the unions naturally went beyond reason and became arbitrary and even confiscatory, even as employers had been when they ruled with a high hand. It came the time for the intelligence of the building unit, the architect, to take a hand and to try to bring some sort of mutual cooperation into the building business. It has been to a great extent the advice of architects that has brought employers on the one hand and unions on the other, to a realization that the interests of both are identical,

not inimical. In the unions there has arisen to leadership a finer class of men to replace those of former days. These work with intelligence to support their claims instead of applying the brute force methods of former years. It is through the unions that an eight-hour day has been almost universally established. The pressure of demand for labor since the war has forced wages to an unprecedented height. This condition is not objected to by the employers so much as that the feeling of dominance by labor has destroyed incentive to give a full day's work for a full day's pay. With the doubling of the wage scale came the forty-four hour, Saturday half holiday, rule which has also been accepted without opposition by employers. Thus a satisfactory working basis was established and "tranquillity" surpassing that of any previous year obtained in the building trades during 1926. A large manufacturer, whose product is so extensively used as to revolutionize transportation throughout the world, either with eleemosynary intent, or to limit an over-production, established in his factories a five-day week schedule. Almost at once the unions seized upon this action as an excuse for a demand for like action in the building and other trades. But this time the old methods of force will hardly be resorted to. Instead of a strike there is discussion, not only in the union organizations but in those of the employers. In the unions is a large element which opposes the shortening of the week. Among employers the discussion is upon how contractors can best direct their efforts in opposing the five-day week. During a conference held at Pittsburgh recently by the National Association of Building Trades Employers, constructive consideration was given to the problem. Its effect upon the cost of construction and the consequent effect upon the cost of living generally was voiced. That these would more than offset any advantage gained by the short schedule was the concensus voiced by delegates from all quarters of the country. This will lead to the getting together of employers and employees. The former hope to be able to show conclusively that the five-day week will be economically detrimental to workmen in the building trades.

Patrician Houses of Old North Germany

FROM COLOGNE TO DANZIG

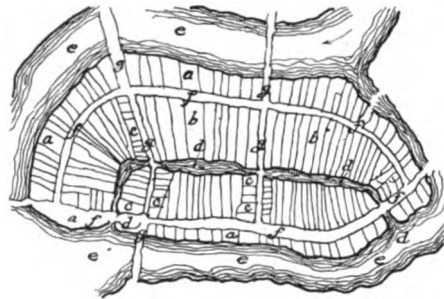
By ARTHUR WOLTERS DORF, F. A. I. A.*

THE seed from whose sprouts may be traced these picturesque, imaginative and often daring constructions lies back in the eleventh century in the time of the founding of east German cities, a time of tribal wars along the Elbe, the Oder and the Vistula. Cultivation of land was a question of home-stake possession. Army columns, shock troops, were in the vanguard and chose the summer camps and temporary halting places. The clergy assisted and held vantage points by erecting castellated churches. Thus guarded, settlements of colonists were established. Carrying of arms by the settlers was prompted by necessity rather than from a spirit for strife, for the townsman, not the peasant, was the privileged bearer of arms. The townsmen banded together in guilds or companies according to the crafts followed for purposes of war. From such organizations grew the classes of patricians. They were the tangible leaders of the *burg*, and the manifest embodiment of their position was their house.

Hanseatic spirit means joyousness in trading. Its cradle is the North Sea coast, the land of the Friesians. They founded the first Guild, erected 905 markethalls in Germany with that at Corvey as a nucleus. They were the first foreign carriers of English textiles and introduced them into the Netherlands and Hanseatic towns.

The time presented a picture of extraordinary historical moment. Overland proceeded the march of Christian-Germanic civilization in two divided offensives. One led by way of Hamburg to Luebeck over Mecklenburg and Pomerania and the East; the other advanced from the castle-tipped and saga-wreathed land of the Harz Mountains to the Middle Elbe, overran Brandenburg and thence won the Oder. Posen and Silesia became the barrier precipice. More rapidly, however, than following the overland trail of the warrior by the townsman and the colonist, came the seafaring merchant along the coast. Emden, Bremen, Stade and other towns sprung up under Dutch-Friesian influence. Hamburg's earmarks of a trading-center foundation are, perhaps, most pronounced of all. On the high shores were the peasant farms of the native Saxons; below, the dyke-protected marsh-land offered opportunity for the harbor of Hollandish origin.

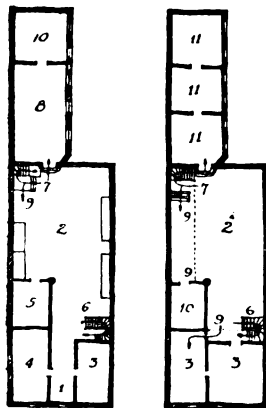
Luebeck was founded in 1143. The city was likewise conceived as a harbor for Dutch-Friesian merchants. The settlers came from Flanders, Holland, Friesland and Westphalia. Already in the thirteenth



Plan of Hamburg's Cremon Island

- a. Beach
- b. Merchant's Quarters
- c. Artisan's Stalls
- d. Canal
- e. River
- f. Dyke & Merchant's Highway
- g. Byway for Craftsman's Quarters

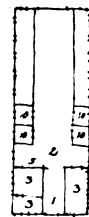
PLAN OF HAMBURG'S CREMON ISLAND



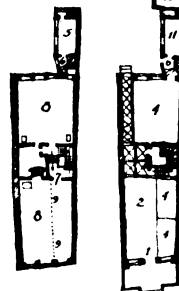
Middle Ages
Ground & Renaissance Floors
House of Merchantman 40
Luebeck

*To Regierungsbaumeister Dr. Bahm, of Hamburg, for his exhaustive studies of the subject, and to Dr. Edmund Schueler, of Berlin, for the accompanying illustrations, the author gratefully acknowledges his obligation.

TYPICAL GROUND PLANS
SHOWING THE DEVELOPMENT
OF THE PATRICIAN HOUSE



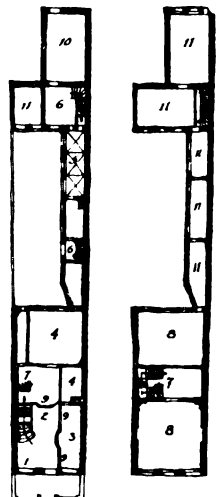
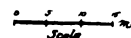
The Lower Saxon
Renaissance House



Renaissance
Second floor
First floor
Livenschilder Langens 35,
Danzig

Legend

- 1. Entrance
- 2. Hall
- 3. Living Room
- 4. Office
- 5. Kitchen
- 6. Secondary Stairs
- 7. Main Stairway
- 8. Reception Room
- 9. Suspended Balcony
- 10. Chamber
- 11. Living & Sleeping Room



Renaissance
First floor
Second floor
Upmommen Langens
Danzig

century it ranked second only to Cologne, the largest German city. Like Hamburg, Luebeck recognized from the start the necessity of planned consideration for merchandising. Its building laws early differentiated between the gabled street-front houses of the merchants and the cross-street houses of the craftsmen. And so the gable becomes the symbol of merchant and patrician.

It is apparent that the type of merchants' house is found wherever the Hanseatic traders operated. Of the types occurring in Germany, the free-standing, gabled-front house is of general interest, showing great diversity in its development. Organization of masses varies in the different Hanse towns. Bremen, located in the heart of Lower Saxon farm lands, presents a storage-housing roof space above the ground and first *etages*. A rear warehouse does not occur; the resemblance to the Lower Saxon farmhouse is marked, —its derivation betrayed. In Hamburg the plan separates storage space from office, storage and brew house, giving onto the waterway. Luebeck tends to

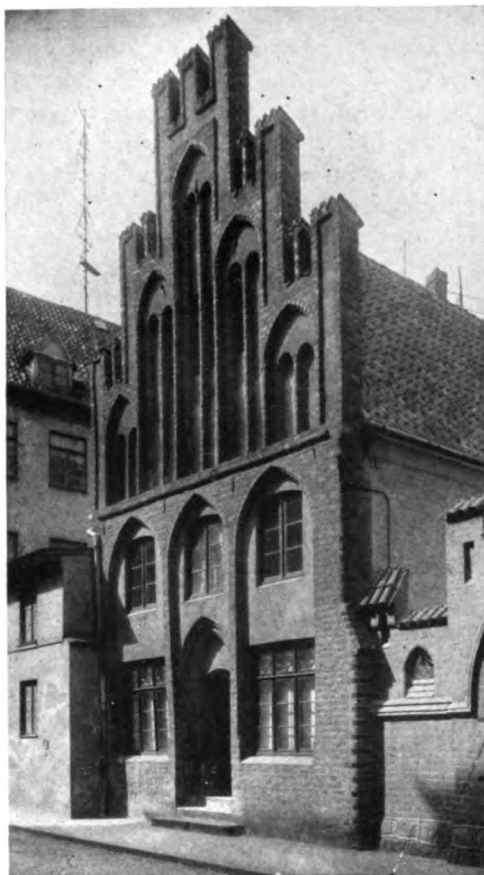
court buildings for *allenteil* and tradesmen's shops. Danzig goes into zoning for warehouses and quarters for offices. The Speicher Island (Warehouse Island) of Danzig's year 1300 foundation was by 1425 (the time of the great fire) a homogeneously developed quarter, until that eventful night in 1808 when every human life was snuffed out leaving only the faithful police dogs patrolling the streets.

The early interiors hark back to the farmhouses; their entrance halls and approach to the waterway. The plan fixes the mode of living, business customs; it influences the organization of the facade. It is the kernel in the development, at the same time the retarding element; it bridges the span from Bremen to Luebeck and to the East; it is the tie binding the Patrician Houses of the Middle Age to those of the Renaissance and the Baroque.

Bremen's patrician house has its entrance in the center of the front; a short, narrow vestibule leads to a small outer office giving onto the large two-storied



PATRICIAN HOUSES OF OLD NORTH GERMANY: AM BERGE, 4-7, LUENEBERG



DWELLING OF THE ATTENDANTS OF THE
RATSHERRN, ROSTOCK

hall. Above were warehouse floors with lifts serving all floors.

Hamburg's ground - plan shows a more restricted house-frontage with the doorway nearer one side. The entrance is provided with a decorative stairway and leads, as in Bremen, direct to the hall. The lighting is as in Bremen. The subdivision into rooms is in the Middle Age first recognizable in Hamburg. The stairway followed the court wall with five or six steps, then turned to continue to the first story. Then came a swinging door leading to the rooms beyond. Hamburg and Bremen alike have the open gallery in the hall carried by heavy posts and connecting front and rear rooms. Living and bedrooms are along the front in first and second stories, producing more stories in the narrower Hamburg houses than in Bremen.

A feature of the Hamburg house is the "Zibuerken", a cage of wood and glass for supervision of goods in transit, offering protection to the attendant against draft. The development of the medieval plan, however, is most clearly

seen in Luebeck. The oldest examples extant are the present "Loewenapotheke" and Marlesgrube 53, showing a small room added, a mezzanine built later in the hall which hall carries through two stories as usual. Ceiling heights are meager. Luebeck places the entrance door in the middle flanked by two large windows. The hall has a pavement of stone discs; to either side of the entrance is a small room. The kitchen is on the hall axis and open on all sides. Opposite is the secondary stairs—then the space widens at the hall of double-story height with a court wall all window; here, in the Middle Age is located the principal stairway. It leads to a suspended gallery longitudinal with the house, giving approach to the maid's room over the kitchen and to the front room of the mezzanine. The other front room approached from the secondary stair serves as counting room.

The ground-plan of the house in Gothic days in Danzig has not come down to us unchanged, though in essentials the Renaissance house is the same. More pronounced than in plan, the gable shows the antecedents of the population to be from the Lower Rhine, from Holland and Friesland. A distinctive manifestation in the development is the advance in the arts found in the cities of Luebeck and Lueneburg to the disadvantage of Hamburg and Bremen in the Middle Age. During the Renaissance, Danzig became the leader of the new art epoch.

In Luebeck, as in Hamburg and Bremen, the house of wood was



THE TOWN HALL AT DANZIG



HOUSE AT LANGERMARKT 43, WITH TYPICAL PORCH. (ABOVE)
 (RIGHT) SO-CALLED "ENGLISCHES HAUS" IN THE BROTTBAENKENGASSE,
 BOTH IN DANZIG.



the forerunner. Then, in 1276, brick building set in. The first brick houses of the gentry, turretted structures for defence, were soon forbidden by the author-

ities on democratic grounds, as were such buildings belonging to foreign merchants. The oldest form of gable is characteristic of Cologne storied houses.



LANGENSTRASSE 123 BREMEN

Great gable walls rise solidly flanked by turrets and pierced with huge openings for the passage of the wind, producing the type of the Templarhouse in Hildesheim and Cologne, forerunners of still larger and sturdier forms,—the town halls. Suddenly there arises a culture producing a finished product from a stamped early art. The monumental idea of a great, dominating facade triumphs in the town halls of Luebeck, Stralsund and Rostock. In powerful mass, in monumental scale, they are unsurpassed in the history of architecture. They have no forbears nor real successors. Daring, imposing, inspiring; naive creations of a people's joyousness, they became no longer understandable under the burden of antique culture binding head and hand. Not unlike the American skyscraper, they were the product of their own time and circumstance.

Nevertheless, these forms affected the organization of the facade of patrician houses during the Middle Ages. Subconsciously the sense of the monumental

lives and influences the later developments. The Hanseatic stepped-gable discloses strong sympathy. Gable structures like those at 92 Hundestrasse and 19 Fischerstrasse in Luebeck, and "Alter Schwede" in Wismar are scarcely conceivable without this wall-type as precedent. In other respects Luebeck shows strong resemblance to this wall. In the Romanesque gable the windows are frequently the only features. Architectural effort centered about the window opening with stone capitals, arched heads done in parti-colored brick, the whole reminiscent of Romanesque churches. Glass in this time was not in use for burgerhouses. Horizontal brick bands tie into strong ends and surface ornament. The steps or offsets increase with



LANGENSTRASSE 112, IN BREMEN

the advent of the Gothic, and the wall begins to take on a vertical organization. Window grouping in twos and threes still prevails. Of the developed Gothic which corresponds to developed Hanseatic, Luebeck is rich in survivals of patrician houses.

Fronts with piers beginning above the ground-story and extending into a gable crowned with pointed arches are subdivided into three or five and occasionally four axes. Invariably it is brick design. Frequently the surface is enlivened with light, unglazed or dark, glazed brick bands. In the older houses moulded brick are unknown, while later profiling becomes rich with the verticals reduced to elaborate brick mullions. About 1300, glazing of windows becomes common.

What freedom, what variety in fenestration! Change in axes, change in scale as the composition proceeds gableward with larger, bolder forms, as

temperamental as the great town-hall walls to which they are related, and withal a town picture of wonderful unity.

Forecast of the Renaissance.

With the change in political conditions came the altered mode of life of the *burger*. With the close of the fourteenth century came the introduction of bulls-eye glass from Thuringia, though oiled linen still fills window openings in Hildesheim in 1410, and Breslau uses oil paper as late as 1474. The wood window-frame appears about 1450 and affects the appearance materially. Windows become wider, grouped windows are contracted to accommodate sheets of leaded bullseyes of a 40-inch or even 27-inch width. The enclosing arch becomes segmental and the

crowning spandrel arch is no longer pointed, Impost moulds appear to interrupt the verticality of the piers. The introduction of bulls-eye glass in its diverse forms improved home comforts. Painted interior decorations were introduced. Court rooms replace the hall and street front rooms in importance. The court displaces the street as the center from which the organization radiates.

The changed disposition is marked also in the facade. No more the elemental verticality, no more the urge of a youthful people skyscraping, seeking the titanic, but rather a quiet going upward. The square body of the wall gains in elevation divided into nearly equal story heights, and the gable starts higher up. Values and proportions change. Round arches crown the facade. Active trade with South Germany leads to a spiritual exchange. Danzig replaces Luebeck in cultural leadership and architects

like Hans Kramer of Dresden become dominant in the land. These men came from a section where the new order had struck root earlier. Wismar in Mecklenburg harks back to burnt clay in exterior decoration. Lueneburg offers some of the finest examples of this typical North German art.

It is interesting to note that glass-enclosed windows produced the need for outdoor terraces or porches.

The Renaissance

The Renaissance strove for a revival of the joy of living, and so thought and art were humanized. In the Hanseatic domain the east-bound trend came to a halt. Replacing the advance guard of colonists, the merchant crowds the highways southbound. South German influence is felt in architecture; in Luebeck rises the Schifferhaus, and Danzig feels the presence of Architect Hans Kramer from Dresden. Danzig says farewell to tradition in its new patrician houses, though here and there the warehouse still has a part in the plan. Skyward goes the rectangle of the facade confining four stories; stucco painted in polychrome for the face replaces expressed brick architecture and the roof is subordinated. The arrangement of hallway is marked in the placement of lower mezzanine windows. Classical orders with stone framing and horizontal entablatures mark each story. Vigorous and fanciful modelling as appears in the house 37 Langgasse are soon suppressed in favor of dry, academic compositions. For this type observe the so-called Loewenschloss.

The disposition tends towards court building. A wing joins the front, housing the stairway, and there is a ground-floor kitchen above which occur chambers. The fundamental thought of the Lower Saxon peasant house is retained, but the court throws the office towards the rear, the front door letting one directly into the hall. South German influence, however, did not strike root; temperamentally the Lower Saxon, Friesian and Netherlandic antecedence asserted itself. A new wave from the related western provinces assisted the now supine Renaissance to victory. Dutch fugitives, escaped from the Netherlands in the fight for independence waged against the Spanish kings found a welcome haven in the Hanseatic towns.

Bremen produces cut-stone from the quarries in the Weser hills and has a lively trade in this material. Lueder von Beutheim introduces the practice of building with brick and cut-stone trimmings; this reaches Hamburg by 1602, skips Luebeck and reaches Danzig the same year. Danzig is now fertile soil for the Renaissance; the Dutch architects Anthony Van Obbergen and Hondius the Younger soon find native followers and their work is designated the "Danzig style".

In disposition of masses the Danzig pattern is followed in Luebeck's placement of salt warehouses

before the Holstentor and in Koenigsberg on the Las-tadie. The court frontage is surrendered to the reception rooms, while oriel windows relieve the severity of the street front and plastic decoration crowns the portal. These additions mark the homes of the socially elect in Danzig. Ground floor and mezzanine increase in elevation with added stories serving warehouse purposes. Above all, creature comforts are added; wood-carvings, decorative tiles on walls and tile floors in pattern are introduced. The early auxiliary stair becomes the principal stairway; the hall's heavy wood posts become stone columns and rich carving is added in friezes.

The Renaissance Facade's Organization

The earmark of Dutch Renaissance influence is the incorporation of cut-stone trimmings; red brick in white joints trimmed with light sandstone whose carving is often picked out in blue, red, white and gold. The entrance-hall's added height produces large windows flanking the entrance and these openings affect an increase in the scale of windows above. This expansion below produces contraction in the crowning gable. Conception of an all-embracing organization, as enthusiastically portrayed in the Gothic fronts to the end, is abandoned in favor of a fundamentally new idea; the designer's individualism sunders the traditional order. Yet, the stepped-gable with ever upward decreasing steps, windows, cornices, prevails. But in place of undeviating structural expression, the designer applies rich ornament to the portal, supplements the elegance of flanking windows with a glittering *coloratura* of painting on glass; from quiet horizontal bands and cornices are born curves and cartouches. A graceful harmony pervades the whole, punctuating the gable with obelisks, vases, allegories, culminating in a fluttering finale, a work of refinement and elegance. Never since have appeared such sturdy eave-moulds, possessed of such delicacy, on the big wall, such gradation and climax of ornament. Such masters as Anthony von Obbergen, William von Blocke, Hans Schneider von der Linden and others elevated their art beyond the more flat achievements in other lands, and Danzig became the artistic mistress of East Prussia, Poland and Russia through her patrician houses.

The dream of the big, the monumental wall, once realized in Luebeck and Stralsund, was reborn and triumphed in the splendid town-hall wall on the Langenmarkt in Danzig, its new form evidence of its German citizenry. This heart-throb resounds in the Artushof facade in Danzig, the Schwarzhaeupterhouse in Riga, and finds an echo in the townhalls of Thorn, Kulm and Posen. With romanticism a matter of surface with an urge for relief; and with Gothic a shot heavenward; with the knell of the Middle Age a

thoughtful balancing of verticality below and horizontality at the roof—so the Renaissance in its best examples becomes asymmetric, yea eccentric; from within, be it a portal, a statue, a wall fountain, the rays extend in unconfined diagonals embracing windows in groups. So from story to story these asymmetric axes climb, spreading as they go, windows increasing in size and ornament growing bolder with the elevation. All is subservient to the caprice of the designer. Individualism in house design is born.

The Time of The Baroque

The Baroque ripened what germinated in the Renaissance. It is a period of internal repose and holding fast. Security leads the movement eastward, radiating not only still further east but also towards the west deeper into the homeland.

In the plan, separation of office and warehouse occurs. The court develops a rear building paralleling the front but including a garden wing. Arrangement within is not unlike the house of earlier times with the entrance hall the focal point though its character is changed from goods display to reception room. The kitchen in the middle loses the superimposed bedrooms to the upper stories. Luebeck abandons the mezzanine along the street; the ground story becomes lower, the first story higher and upper stories are devoted to living quarters. Plaster and decorative stucco covers walls and ceilings. Stair rails have sawn and contoured, flat, board balusters; then come carved and painted balusters in the round. Later square and turned spindles are introduced. Sculpture is added to hall columns.

In this period, too, Danzig is the leader in architecture. The Uphagenhaus in the Langgasse is well preserved and retains much of the original furnishing. Built in 1776-79 it has a frontage of 30 feet with a depth of 257 feet.

The Facade

The glow of the Renaissance was soon spent. The soaring flight undertaken by the less gifted was too daring for the time. Unity in the effort failed. Craftsmen eked out an existence in unpretentious smaller work. The artist arose to new development. The Baroque proved itself the worthy heir of a great day. The burgerhouse of the elite became a work of art.

Gradual and steady development was typical. In the Baroque the portal appears as a plastic projection from the wall until the Rococo age, when a sparing

stone frame is substituted. The grand stairway with its large spheres at the start, curling and fantastic wrought-iron guards, grotesque ornament on stone posts and supplementary sills prevail for a long time. But for elements the architect now resorts to the canonized orders and grouping of columns in the adopted ground plan. For each large window flanking the portal, is substituted two smaller superimposed windows, prompting a more animated grouping, and then is added a balcony, an innovation from the south. Replacing the wall subdivision by stories, comes Palladian monumentality. The gable acquires a limited number of stepplings carrying voluted bands. Then follows an urge toward bigness. The land, now impoverished, is driven to stucco for its building dress; it rids itself instinctively of encumbering formal ballast and evolves a broad simplicity and largeness not unrelated to its Middle Age productions and not inferior to these; stucco has finally found its art expression. A quiet wall launches large, well articulated windows; luminous colors set off by graduated brighter surfaces produce an effect all their own. Even the gable is reduced to simplicity; the stepping vanishes. From a strongly moulded apex the wall sweeps downward in one volute-like swing. Picturesque windows heighten the effect. The next stage presents the gable as a simple triangle after long, historical development over byways and stepplings through the bizarre forms of the Renaissance.

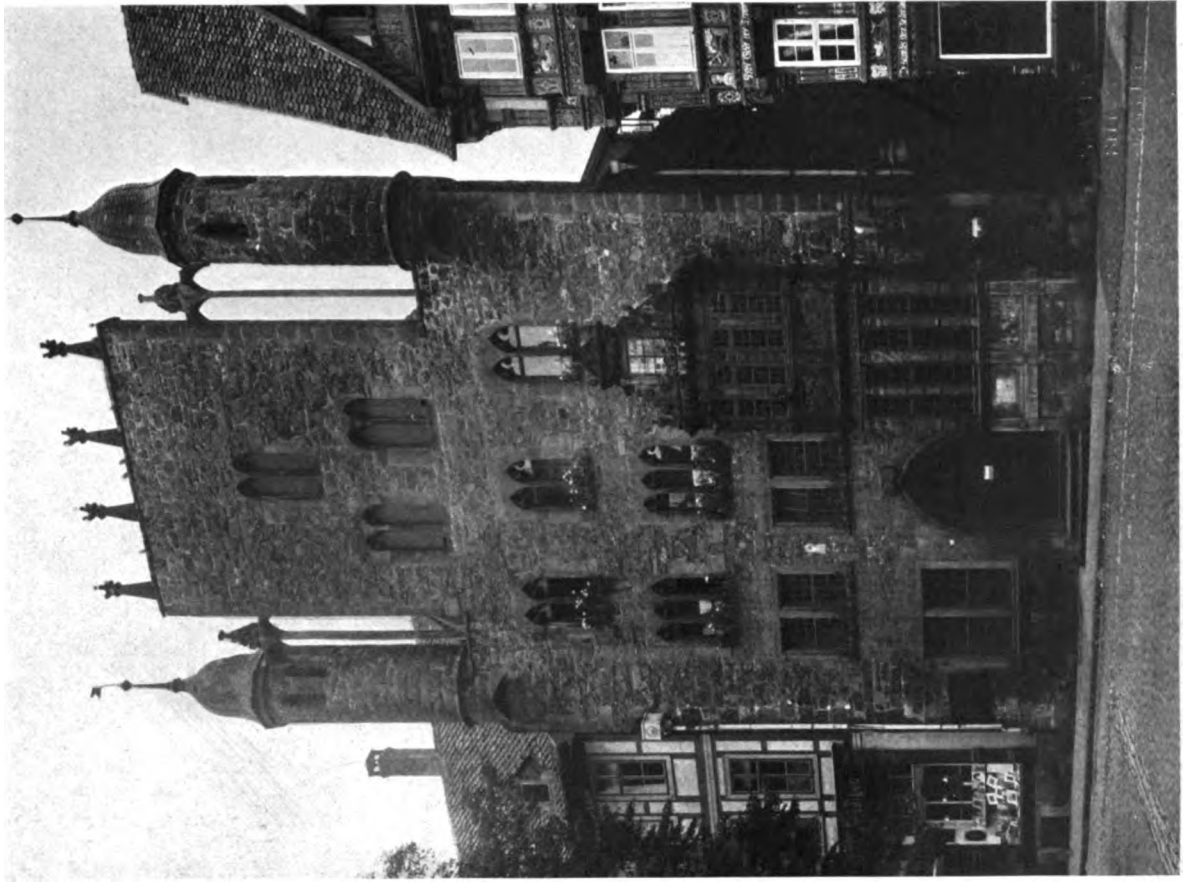
Under the influence of classicism the patrician house-type is abandoned; gone are the characteristics produced by office and salesrooms in this type of house. The new order calls for country estates; the unity of plan of the patrician house with a precedent of centuries, its position and importance in the town plan, its use of material—all come to the end. The old order is over.

But through succeeding days the past would not be denied; North German characteristics asserted themselves. In place of painting, modelling, in place of bulbous surface, the powerful line, and again in the classicised burgerhouse the impulse towards the "big wall" breaks out. Small wonder that at Danzig was born and ripened Andreas Schuelter, master of Danzig Baroque, architect of the Schloss and Zeughaus at Berlin, buildings in Prussia, Russia and Poland. He personified Hanseatic spirit.

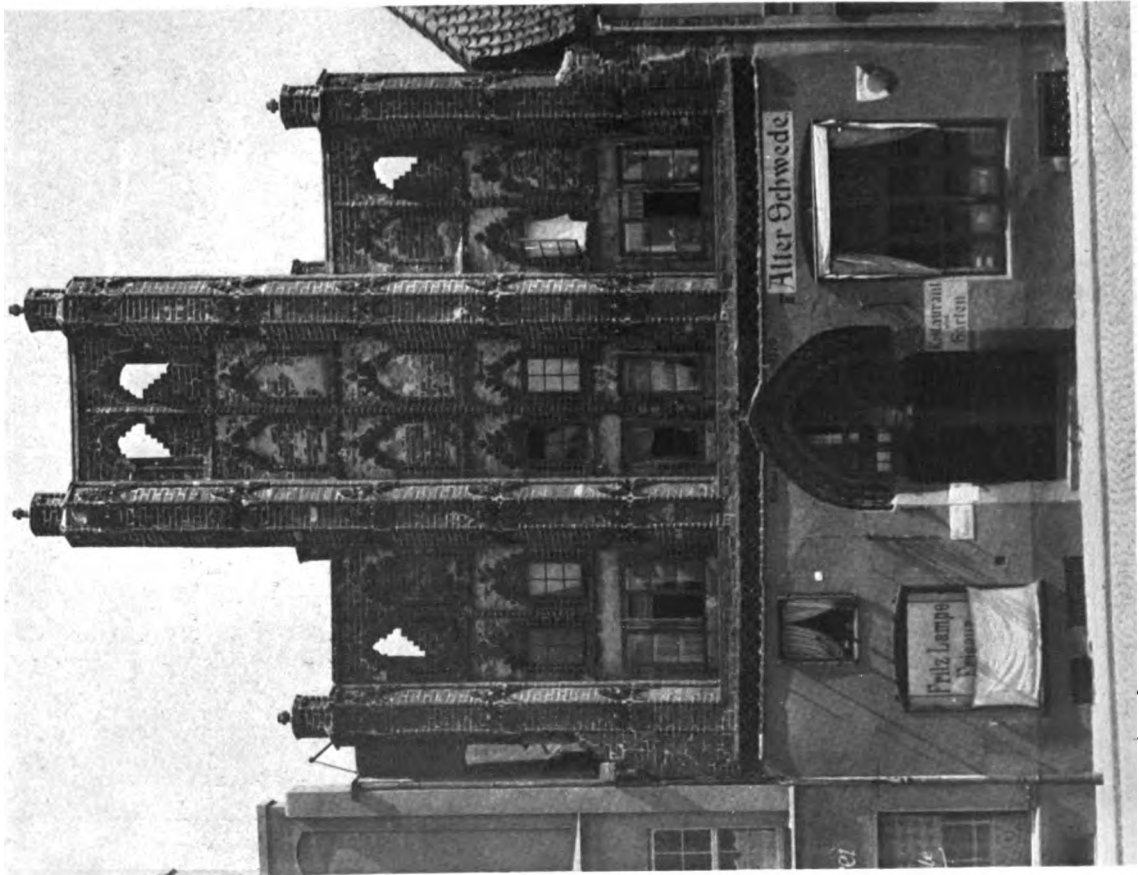
Danzig the Hanseatic, the city of patrician gables, is an unfathomable milestone in North Germany's architectural history. And finally, what can be said of German art without reference to Danzig?



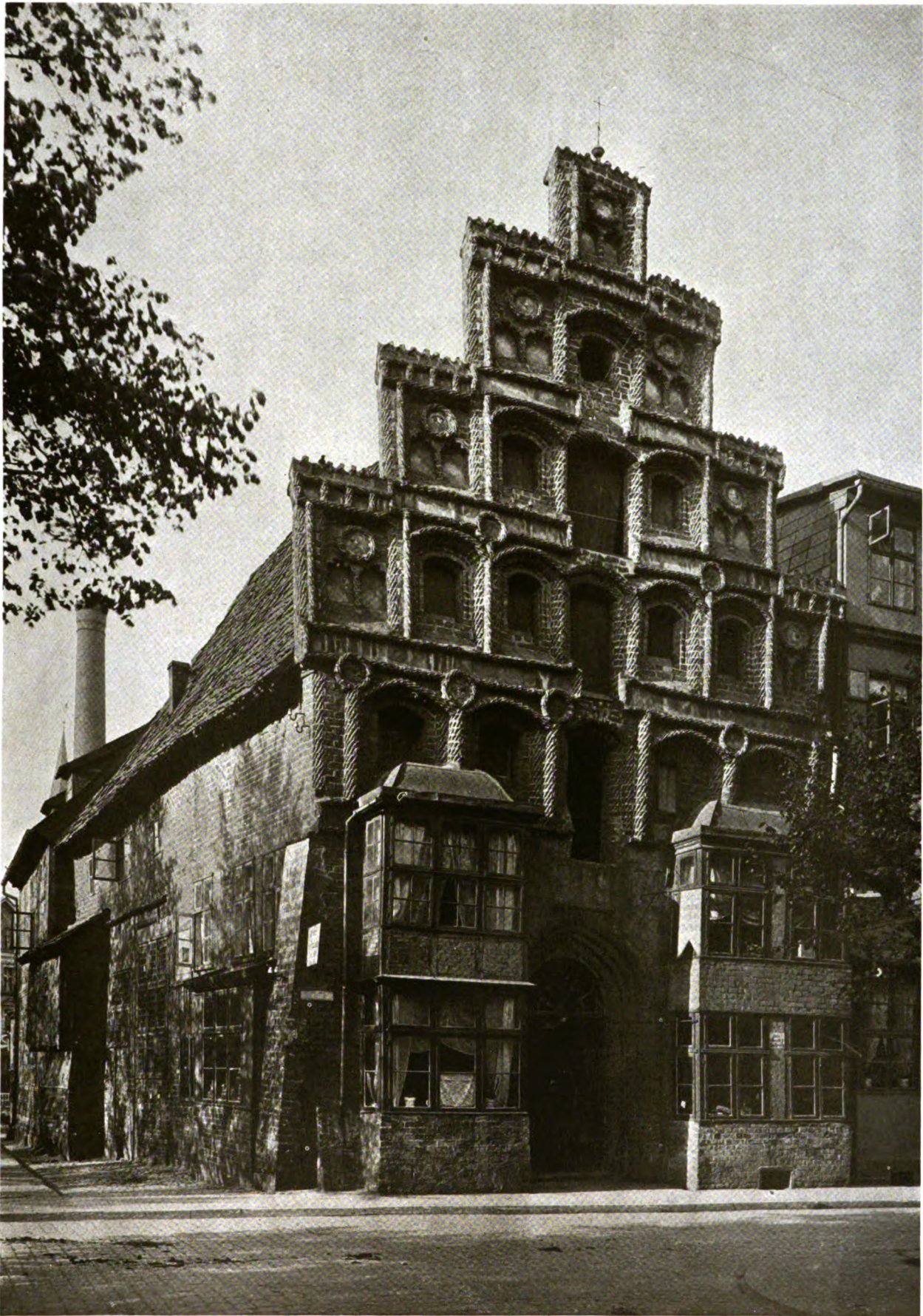
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REAR FACADE OF ARTUSHOF, DANZIG :: ::



THE TEMPLAR HOUSE, HILDESHEIM



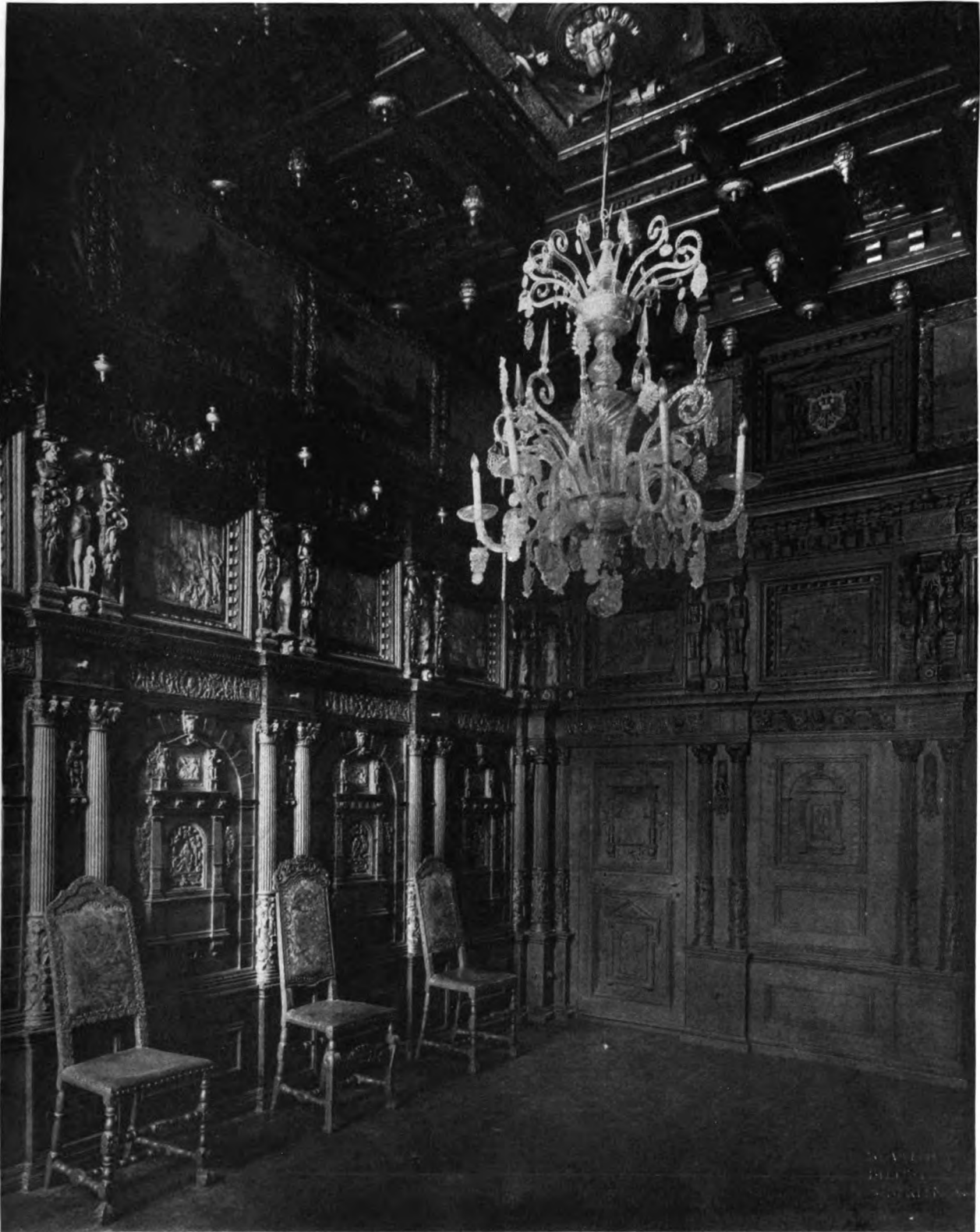
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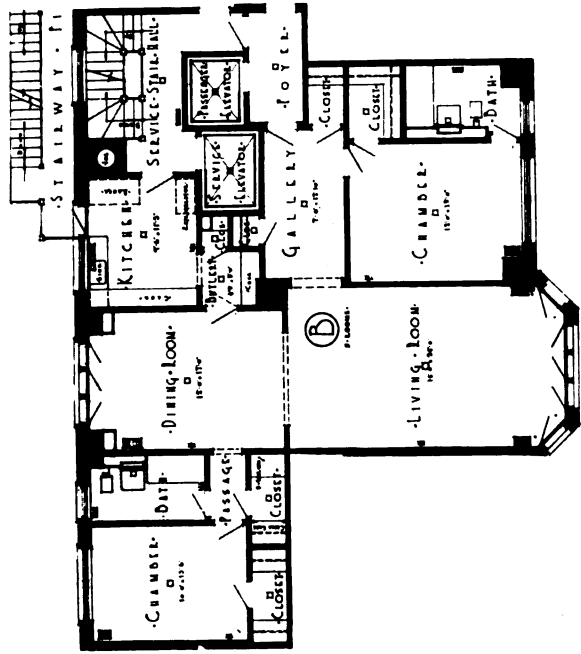
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INTERIOR OF ARTUSHOF, DANZIG :: :: ::



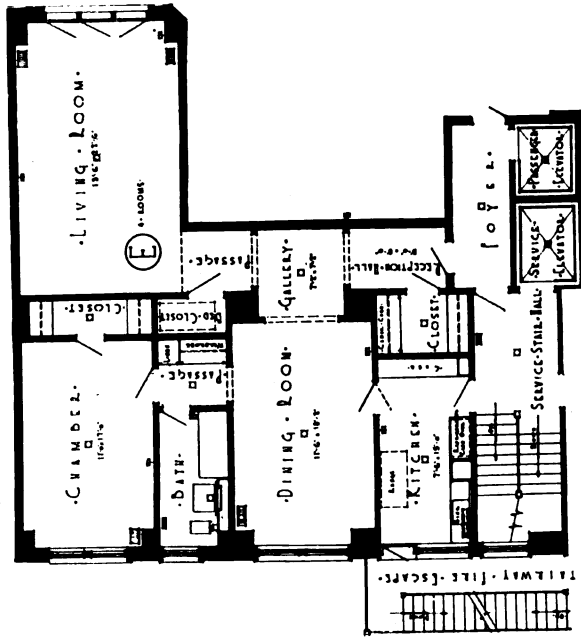
PATRICIAN HOUSES OF OLD NORTH GERMANY
FREDENHAGEN ROOM IN MERCHANTS' GUILDHALL, LUEBECK



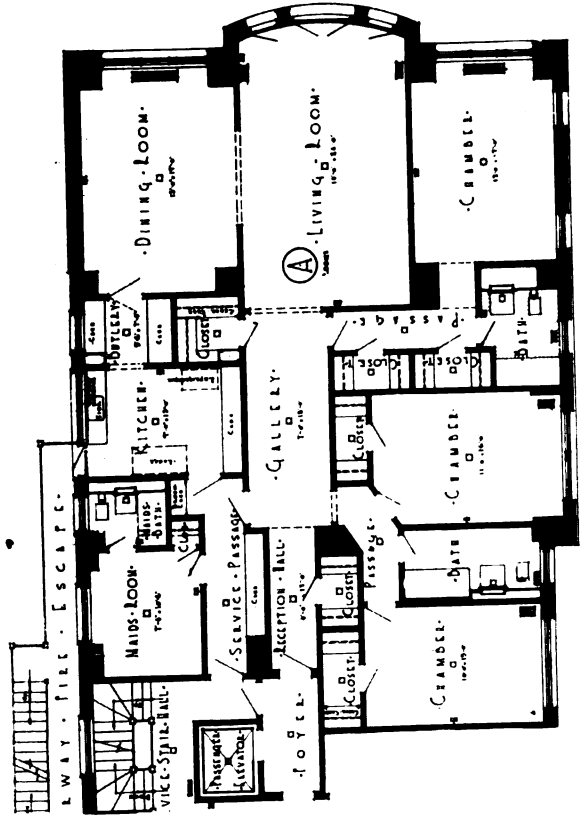
GENERAL VIEW
VISTA HOMES CO-OPERATIVE APARTMENT, CHICAGO
PAUL F. OLSEN, ARCHITECT :: :: :: :: ::



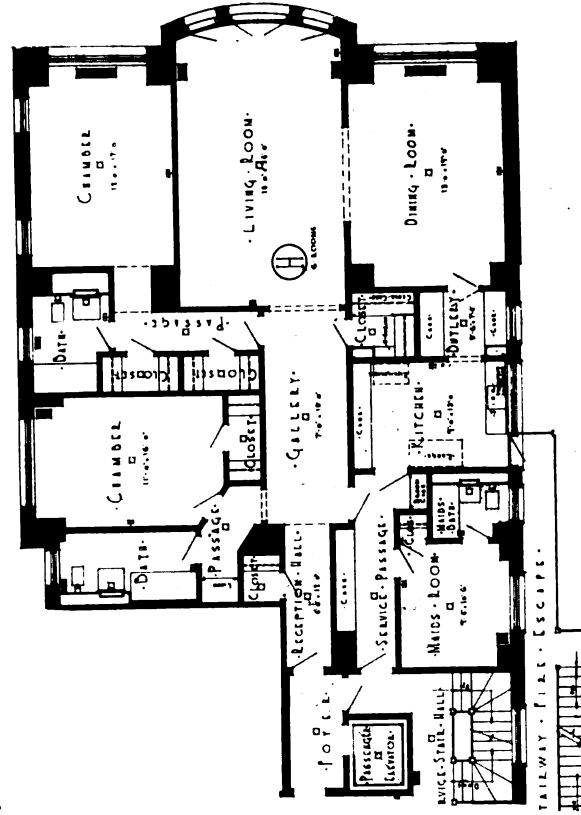
TYPICAL FIVE ROOM APARTMENT



TYPICAL FOUR ROOM APARTMENT



TYPICAL SEVEN ROOM APARTMENT



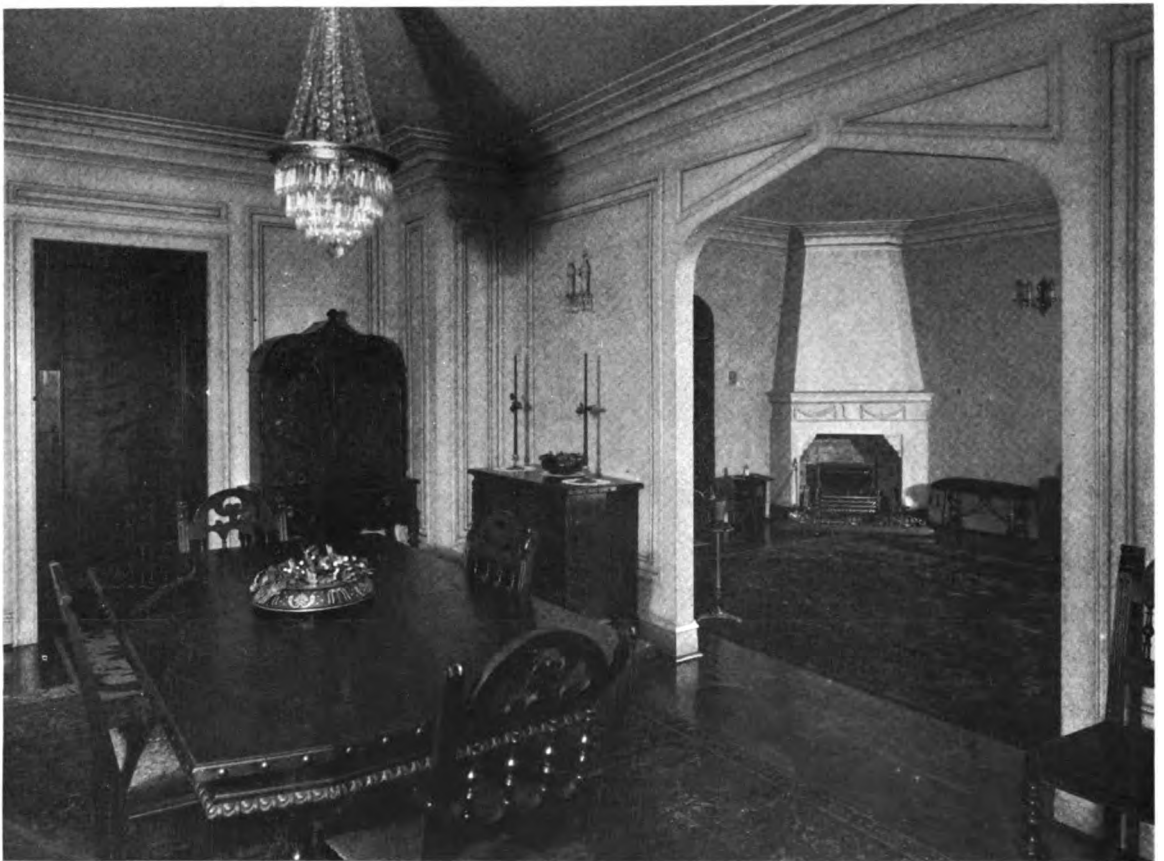
TYPICAL SIX ROOM APARTMENT

PLANS
VISTA HOMES CO-OPERATIVE APARTMENTS, CHICAGO
PAUL F. OLSEN, ARCHITECT



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PHOTOGRAPHING COMPANY

A LIVING ROOM IN AN APARTMENT



DINING ROOM IN AN APARTMENT
VISTA HOMES CO-OPERATIVE APARTMENT, CHICAGO
PAUL F. OLSEN, ARCHITECT :: :: :: :: ::

THE WESTERN ARCHITECT
MARCH :: :: :: :: 1927

PLATE 44



A Distinctive American Architecture

No. 3 of a series suggest-
ing how color can be
utilized to secure such
distinction.



A Distinctive American Architecture

No. 3 of a series suggest-
ing how color can be
utilized to secure such
distinction.

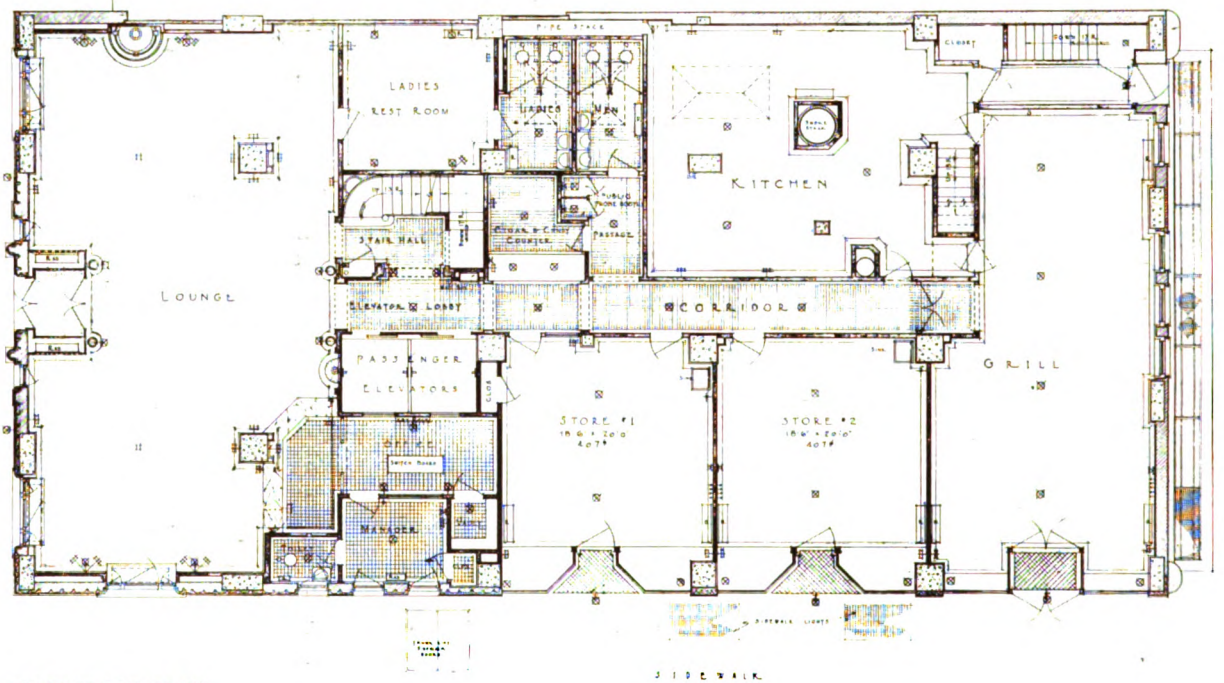


GENERAL VIEW
HOTEL EASTGATE, CHICAGO
OMAN AND LILIENTHAL, ARCHITECTS

Photograph Copyright by E. L. Fowler



TYPICAL FLOOR PLAN



FIRST FLOOR PLAN

PLANS
HOTEL EASTGATE, CHICAGO
OMAN AND LILIENTHAL, ARCHITECTS

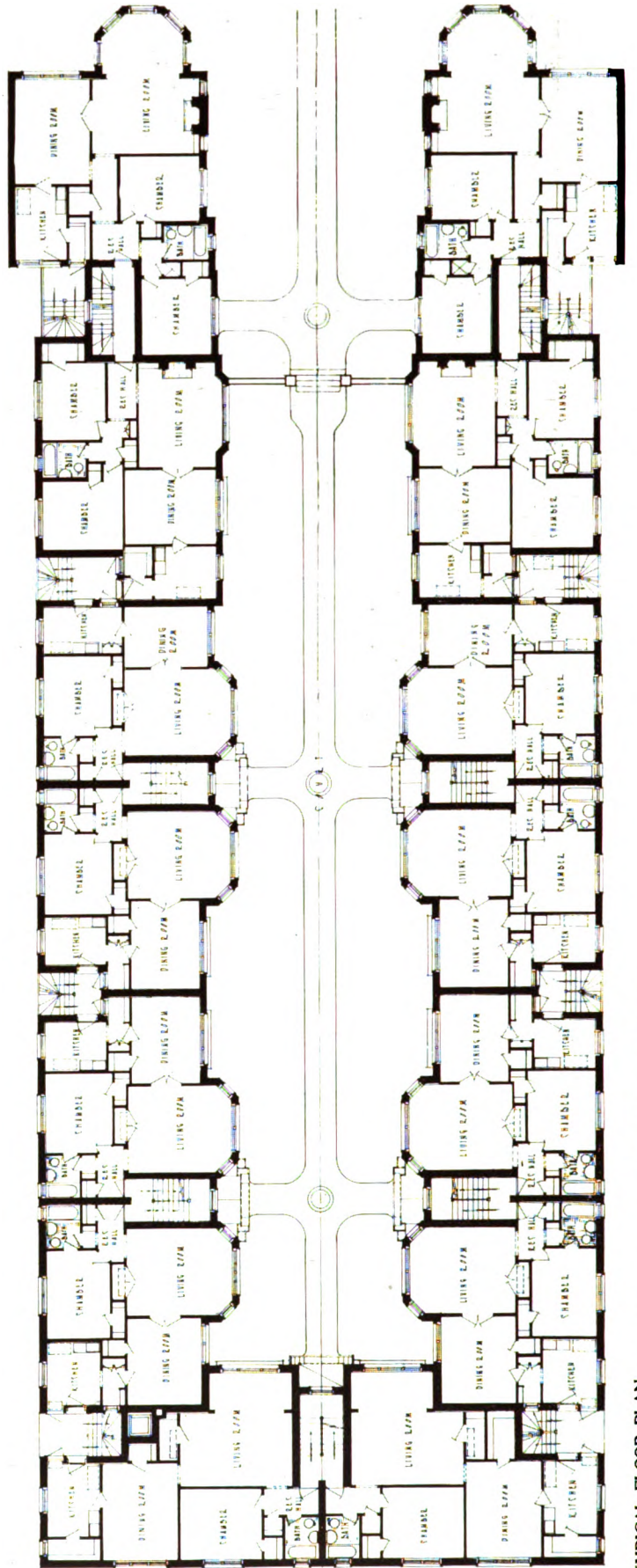
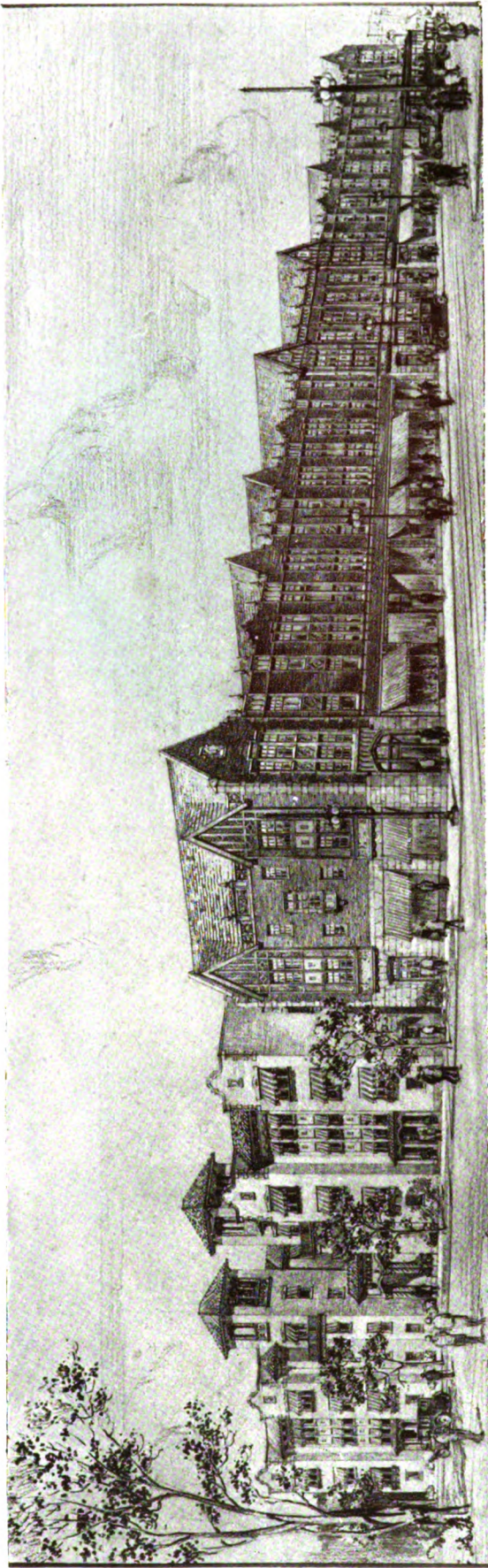


VIEW OF PARLORS



ENTRANCE LOBBY
HOTEL EASTGATE, CHICAGO
OMAN AND LILIENTHAL, ARCHITECTS

Photographs by E. L. Fowler



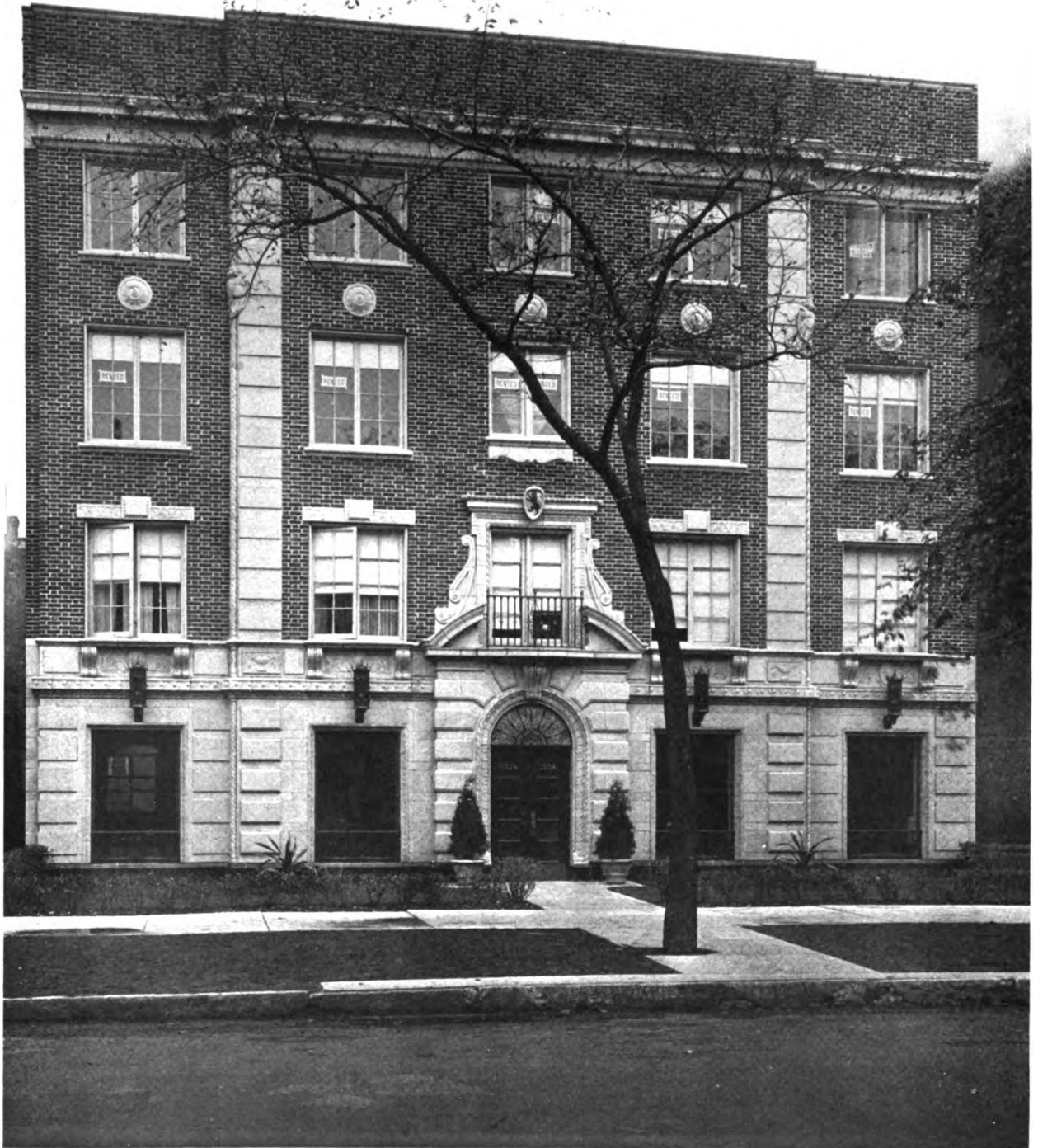
TYPICAL FLOOR PLAN
WEBER MEMORIAL BUILDING AND PATIO APARTMENTS, CHICAGO
ROBERT C. OSTERGREN, ARCHITECT :: :: :: :: ::



ENTRANCE AND COURT



VIEW IN COURT
 WEBER MEMORIAL BUILDING AND PATIO APARTMENTS, CHICAGO
 ROBERT C. OSTERGREN, ARCHITECT :: :: :: :: :: :: ::

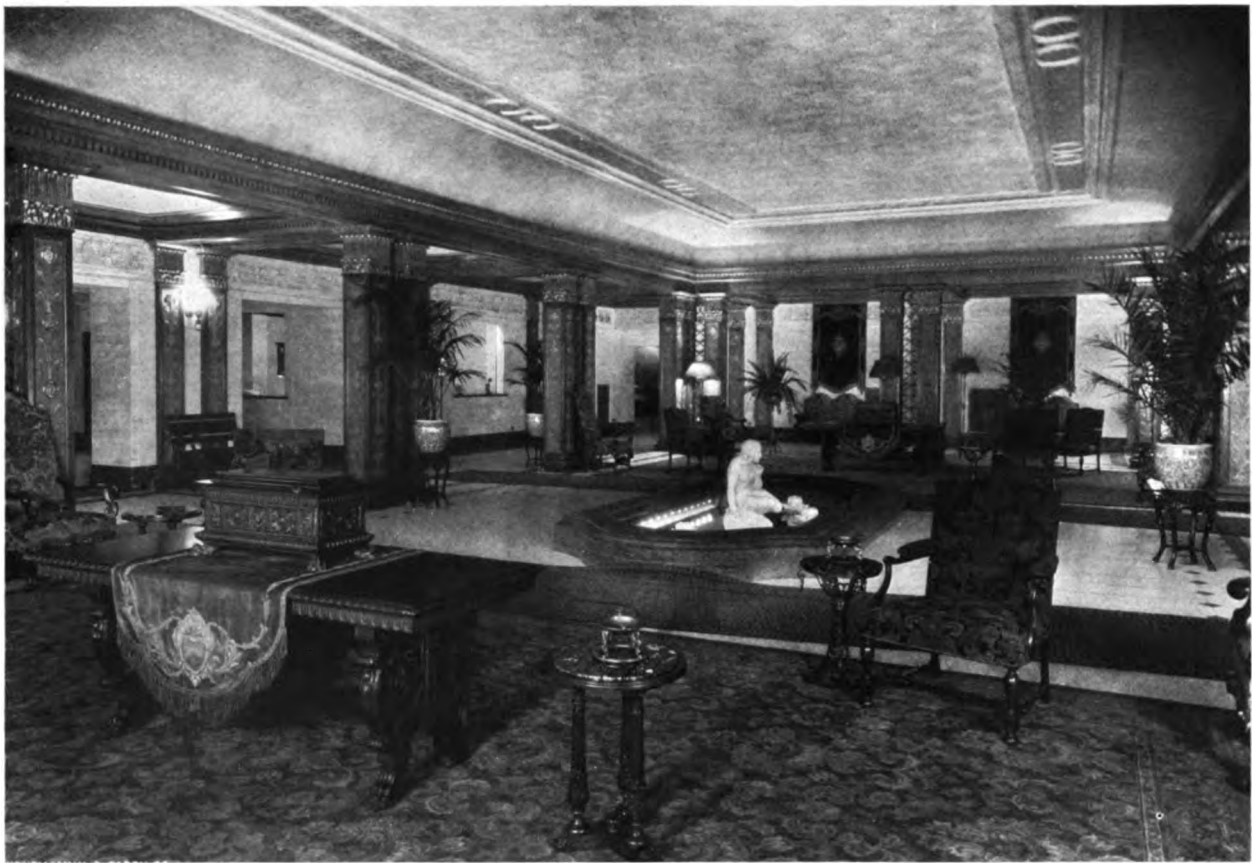


APARTMENT HOTEL 1504 DEARBORN PARKWAY, CHICAGO
RAYMOND GREGORI, ARCHITECT :: :: :: :: ::

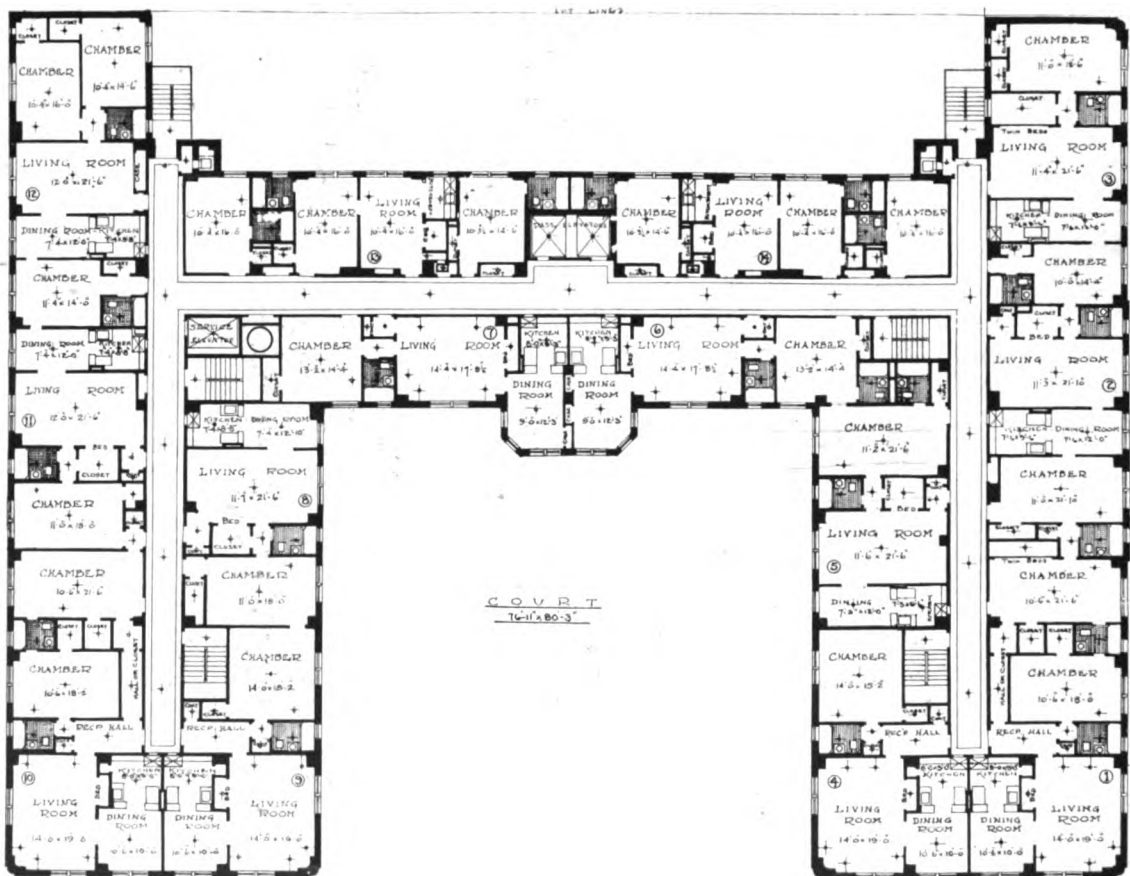


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THE GEORGIAN APARTMENT, EVANSTON, ILLINOIS
ALBERT S. HECHT, ARCHITECT



VIEW OF LOBBY



TYPICAL FLOOR PLAN
 THE GEORGIAN APARTMENT, EVANSTON, ILLINOIS
 ALBERT S. HECHT, ARCHITECT

The Passing Show

*Architectural League Exhibit; Regional Conference, A. I. A.;
the World's Best Architecture*

By ARTHUR T. NORTH, A. I. A.

AT this writing the annual exhibition of the Architectural League of New York is well under way. It is a creditable show and includes everything under the sun that might pertain to building construction—from pure architecture on the first floor to kitchen cabinets on the third floor. The attendance is of a mixed character, including those who delight in the finer phases of architecture and its artistic accessories, and those anxious, "own - your - own - home" people who are intently serious and comprise pater and mater familias, including some offspring. So we see the universality of architecture's appeal.

The architectural portion of the exhibit is of high quality and interesting. As is to be expected, the local work overwhelmingly predominates. Some of the exhibits are especially interesting, notably the Barclay - Vesey Building of the New York Telephone Company, by McKenzie, Voorhees and Gmelin. The detail photographs offer an opportunity to study closely the remarkable details of this building to which The Passing Show referred last year. A perspective rendered in oil is particularly striking. The Medal of Honor in Architecture was awarded the architects of this building "for their notable contribution to modern architecture."

Quite a number of buildings are represented by models as well as drawings and photographs. Of these, Arthur Loomis Harmon's Y. M. C. A. at

Jerusalem, attracts much attention. A Y. M. C. A. in Jerusalem must be a most modern religious accessory—if I may term it as such—in the land of the

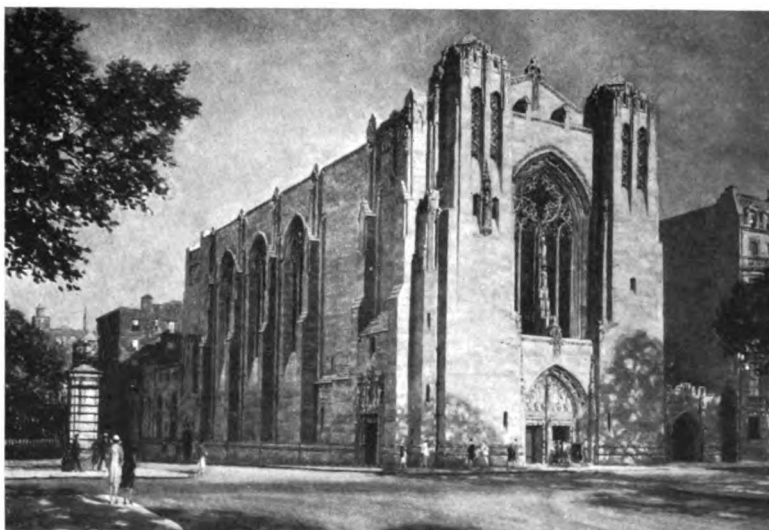
beginnings of religion. The group is exceedingly well balanced, the central building with its tower, and the two projecting wings with their low, oriental domes. There is a slight oriental flavor but no reproduction of precedents. It is an architect's design for an entirely new problem and splendidly executed.

There are some full size and scale models of the new Philadelphia Art Museum in color, reproducing the supposed color effects used by the ancients in Greece. A colored Greek Temple is certainly a great relief from the sterile white ones that give us that feeling of ennui because of their triteness. But why make such an effort to reproduce an alien and overdone style in America? Could not the distinguished architects have created something worthy of the project? Maybe it is the dying gasp of a passing cult. The word "museum" brings to me a place that contains curious things and maybe this curious building will well serve that purpose.

Raymond Hood's Scottish Rite Cathedral, at Scranton, is a novelty in that line and as far as I know, the most appropriate building of its kind in America. Those who have walked the halls of the Rite, have studied its historical lore and symbolism understandingly, will realize that in this one instance the Rite has been given an



GENERAL MOTORS BUILDING, NEW YORK;
SHREVE AND LAMB, ARCHITECTS



CHURCH OF THE HEAVENLY REST AND CHAPEL OF THE BELOVED
DISCIPLE, NEW YORK; MAYERS, MURRAY AND PHILLIP, ARCHITECTS

architectural expression specifically adequate and appropriate. On another wall we see the Saint Louis Scottish Rite Cathedral which resembles a perfectly good cold-storage warehouse with a dinky Greek temple way up on top. Why do they do it? This one is worse and less appropriate than the Cathedral in Washington. The Scranton Consistory can consider themselves as fortunate in having Hood for their architect and having let him solve his problem as he did.

The Church of the Heavenly Rest and Chapel of the Beloved Disciple, Mayers, Murray & Phillip, architects, is a most satisfying design. It has all of the spirit and flavor of the Church. It will wear well and endure with its insistent and silent appeal to the knowing.

Large and tall buildings are quite well presented in fair number. They generally show the trend of the day into which new notes are injected, especially by Buchman and Kahn. The type of details used by this firm is an interesting study. It is unclassified as far as I know and that removes it from the catalogued, standardized class. Not a novelty by any means because a novelty is destined to the discard; but it is a new note in the architectural symphony which will persist and remain until the harmonious finale concludes the performance.

Dwellings and landscape architecture are represented by many fine examples. And thus the American house progresses towards its destiny as the best domestic architecture.

Color is the main topic of discussion during this exhibition. The attention given to its application to architecture is most encouraging. Its use is as yet a distinct novelty but each new application keeps alive the hope of its general and appropriate use. Color is always subjected to adverse and sometimes hilarious criticism. From my cubicle window, I can see the top stories of the talked-of French building. Good or bad, it is a welcome spot of color in a very drab surrounding. We gladly turn to the black-and-gold Radiator building and find a new charm with each inspection.

The Award of Distinguished Merit was made to the late Bertram G. Goodhue for his Los Angeles Public Library.

The Second District Regional A. I. A. Conference discussed the subject of Fellowships in the A. I. A. It was well attended and the discussion was participated in by President Medary of the Institute. Holsman, Chicago; Bergstrom, Los Angeles; Cunningham, Florida, and others from far places were heard. Every shade of opinion was expressed and logical and appealing arguments made.

The matter of Fellowships, it appears to me, should not be one of personal desires. The good of the Institute as the national architectural organization is paramount. Does the rank of Fellowship strengthen the Institute in its work for the betterment of architecture and the practice of the profession? That is the only thing to settle.

As the question will be a leading feature of the annual convention in May,

it is well that the Chapters begin their discussions and instruct their delegates. To some it may appear to be a trivial matter because to many members a Fellowship appears to be of no importance. It is of importance because the Institute is now so over-loaded with excess baggage that it may become waterlogged and like the too-swiftly descending balloon, it may be necessary to throw out ballast.

* * * *

Into our cubicle came a man who always has an idea. This time he maintained that the world's best architecture had never been executed. He referred to those designs that were the finer conceptions of architects who were unable to execute them because of the owner's lack of understanding, or fear of criticism because it was unconventional; or the common result of the stupidity or jugglery of juries of award in competitions.

A few preliminary investigations quite convince us that in many portfolios there are laid away many examples of the world's best architecture, conceived but not born. And would these examples not be as interesting, instructive and valuable contributions as works executed?

Perhaps their creators may turn to them at times as a source of inspiration accompanied by a sense of sadness or cynicism, but always with an abiding belief that it was good architecture. If these real creators of the world's best architecture will yield up



BRANCH OF PHILADELPHIA SAVING FUND SOCIETY;
MELLOR, MEIGS & HOWE, ARCHITECTS

their treasures, The Passing Show will soon exhibit that which was lost to the art and which was, and is, so badly needed.

* * * *

The time approaches when The Passing Show must award the prizes for last year's best designs.

The first prize, the shot of Acestes, is difficult to place because several contenders are neck-and-neck. That settled, the rest of the tourney is comparatively easy. Two contend strongly for the no-prize award that goes to the shooter Hyrtacus. The crop of bad ones was unusually large in 1926.

Color in Architecture

III. Color Behavior

By REXFORD NEWCOMB, A. I. A.

ALTHOUGH we are thrown constantly into contact with a colored world very few of us ever pay enough attention to Nature to observe her important color messages; consequently when we come to practice any art having to do with the use of color we often err and wonder why the creation is not satisfactory. It might therefore be profitable to examine some of the simpler phenomena that accompany color.

One of the most interesting and at the same time baffling of the characteristics of color is its variable behavior in different situations. Most of us are familiar with the different aspects that a color exhibits under daylight and under the electric lamp, and most of us, considering interior decoration problems, make adjustments to compensate for this fact. But *colors act very differently in the presence of other colors*. All one has to do to prove this is to take a square of say neutral gray and a similar square of pink and upon each field superimpose a small square of purple and then note the aspect which the purple exhibits in each environment. (Such an experiment may be performed by the use of colored paper).

This means that each color problem, especially when it affects large areas, as might often be the case in external architecture, must be solved *in harmony with and in obedience to* the limitations imposed by its environment. This is a lesson that the American architect has never learned through the handling of pure form and, as a result, the average American street presents the most awful incongruity so far as the harmony, cadence or rhythm of forms are concerned. European architects have long been alive to this problem and as a result European cities present more tolerable skylines and more harmonious street facades than are generally found in our own land.

Those who have been offended by the way in which colored electric signs vie with one another in the city street at night will have to remember that here the beneficent agency of the surrounding darkness helps to ameliorate their suffering, and that, if color should come insistently into the field of external architecture, the lawlessness now practiced with respect to architectural form and with respect to

illumination would go far to ruin any artistic advantage that might result from such an introduction. If architectural polychromy could teach us to have a regard for adjacent work and help us to come to the point of studying our cities as a whole rather than as a conglomeration of separate structural units, it would go far to justify itself.

Under the present system of "every lad for himself," so insistently practiced in American art in general and in the field of architecture in particular, only inharmony and chaos can result from an increased use of color. No, as artists we shall have, once and for all, to learn the law above enunciated and forever abide by its truth.

Suppose that a pleasant, colorful building be erected and that upon an adjacent lot an owner should build another colorful structure that should pay no more attention to the claims of its neighbor than at present usually obtains. The beauties of the first structure would, just as at present, be utterly destroyed. Moreover, since color is so much more insistent than form and so intensely dynamic in its appeal, the crime perpetrated would be far more execrable and its capacity for the production of human unhappiness certainly more far-reaching. No, if a brilliant architectural polychromy is to succeed, owners, architects, colorists and the whole host of interested parties must learn the lesson of co-operation. The caution, therefore, should be *to go slow*, lest a mistake of ours be the means of ruining for many years to come an adjacent piece of property, a street or a section. Lack of caution in this respect and a few outstanding mistakes may postpone for many years, or indeed forever kill the fine contribution which color may, if correctly handled, contribute to the art of architecture.

Another observation in regard to color is this: the place at which two colors join is the place of maximum activity—the place at which the colors are most insistently vibrant and, if not harmonious, most completely antagonistic. The Egyptians and other early peoples learned this and therefore, developed neutral "*separators*" by means of which they "partitioned off" obstreperous colors. These "*separators*"

(usually black or white with the Egyptians) permitted a fairly close juxtaposition of hues that, without the neutralizing efforts of these bands upon the "firing line" of greatest chromatic activity, would have been intolerable. In certain of their work these same lines serve as the "drawing" in their designs, pictorial or geometric, and thereby help to delineate the forms which are almost invariably depicted upon flat surfaces.

The grey leads in Gothic windows served somewhat the same purpose chromatically and, aside from their practical value as supports for the glass units, are aesthetically quite necessary as neutral agencies in a brilliant, translucent and colorful mosaic. Often a Gothic window in full sun vibrates so intently that the efficacy of these barriers is somewhat impaired and the colors "get together" anyway. However, such phenomena are scarcely more than momentary and under a constantly changing sun, our window does not long present a single aspect but kaleidoscopically changes with the passage of the hours. Moreover, this vibration of the colors facilitates the synthetic action of the eye and a window of many colors often becomes under such conditions a pleasant monochrome in effect.

This synthesis of color leads to the further observation that, if colors are broken up into bits small enough the eye gets *not* the full force of each separate color but has a chance to "blend" them, so that many brilliant and varied colors may be used in close juxtaposition. This law frequently operates in the textile art and is often exemplified by the oriental rug. Here brilliant bits of color, which *in larger areas*, would behave unseemly are, through the synthetic habit of the eye, "blended" as we say, into a pleasant monochrome. Now the size of such areas of color may vary somewhat with their application. In small compositions seen at close range such areas must of necessity be relatively small. But upon the high walls or the dome of a structure, such as we often see in Persia for instance, such areas may become considerable. But whenever *more than one color* (and that the "dominant" or "key" of the scheme) stands out or detaches itself from the general synthesis, antagonism and therefore inharmony and chaos result.

This general law the Byzantine mosaicists very well understood and they took pains always to make one color so completely dominant as not to run any chance of strife. This dominant, due to the theory and proportion of their patterning, had of course to be the ground color and this in accordance with the limitation of their palette and in obedience to hereditary color preferences, they made of either sea-green, deep blue or gold.

Now while the variety of colors which could be used upon a ground of sea-green or blue was limited, most any color used in small bits was at home upon a

ground of gold and such grounds for mosaic patterns, both on account of their regal splendor and because of their harmonious and versatile nature, long remained in favor.

Mr. Bertram G. Goodhue upon the dome and tower of the delightful California Building at the San Diego Exposition of 1915-16, a permanent structure of reinforced concrete, utilized the same principle above enunciated, using the neutral gray of the concrete body of the structure to assimilate as much varied color, applied through the medium of ceramic units, as he desired to introduce. Here the tiles in *comparatively* large areas are beautifully "harmonized" under the beneficent agency of the neutral gray of the ground color and by a splendidly lighted and vibrant atmosphere which in itself would assimilate color in great amount. *Black, white and gray*, together with certain of the metallic tinctures, it would seem, can safely be used with most hues and many and varied colors will dwell together amicably, provided their areas are *not too large* and the eye thereby has an opportunity of synthesizing them.

Colors of varying degrees of *visibility* upon the same plane may appear to be in different planes. This phenomenon, it will be immediately appreciated, may result in chaos and a perversion of fact ensue. By the working out of a surface pattern upon a wall in two colors of different visibilities it would be possible to destroy the essential "moral" character and proper architectonic value of the wall. Thus an area of relatively large checkered squares of, say, alternate red and blue may produce the appearance of a "pigeon-holed" arrangement, while a similar disposition of smaller squares of the same colors may produce the sense of a vibrant purple-hued plane. That is to say that, when the separate units of color with which the wall is treated are made small enough to come within the "blending" action of the eye above noted, the wall will appear as a plane, if rough-textured surface. This variety of color behavior, then, also the architect must take into account.

Another thing about the behavior of color that is well to remember is the fact that pure prismatic colors retain their identity at a distance far more efficiently and effectively than composite colors; and, since most architectural effects must be accomplished at a rather great visual range, the number of available colors for exterior use is thereby somewhat abridged. The delicate colors are so completely reduced in visibility when seen out-of-doors as to become valueless as active polychromatic agents.

Color by some peculiar quality or trait bears a certain antagonism to form; that is it tends to *negative form*. This has long been appreciated and indeed this very fact may in a way be held to account pretty largely for the passage of color from exterior architecture. The Renaissance, especially in its later

phases, went in for form, and the designer, sensing something of the incompatibility of "full form" and "full color" concentrated upon *form* and let *color* go. The Egyptian on the other hand allowed color full run and made his forms correspondingly simple. The Greeks with that fine balance always characteristic of the race, allowed both *form* and *color* co-ordinate places in their architectural scheme. From the Greeks, therefore, we shall expect to learn some fine lessons—but that chapter is reserved for a subsequent paper. Suffice it here to point out the general law that *as form proceeds color must recede and vice versa*.

In architectural considerations, especially at the present, I think we would all agree that *form must dominate* and that *color must appear as an aspect of form*. The reverse of this, of course, often obtains in the field of painting. Moreover, *color must always be used in such a way as not to negative form but to enhance it and make it more sensible*. With some of the above set forth observations upon the behavior of color firmly in mind and some premise of procedure enunciated, the student of architectural polychromy may come closer to the solution of the problem of color in architecture than would otherwise be the case.

A Distinguished Draftsman

An Appreciation of Burch Burdette Long

By ROBERT CRAIK MCLEAN

WITH startling suddenness, at the very height of his career as a perspective draftsman, Burch Burdette Long died in New York City, on March 1, in his forty-ninth year.

It is not given to many "slaves of the drafting board" to reach so distinguished a place in the branch of art as that occupied by Burch Long, and achieved through years of steady endeavor and single application to pure draftsmanship. There have been other distinguished, nationally known, perspective draftsmen, from Paul Lautrup through the list that includes Gregg, Eldon Dean, Zimmerman, Huson Hawley, Fitzpatrick. But Burch Long seemed to be loved by draftsmen and valued by the architects who employed him or associated with him to a greater degree than any of his predecessors or contemporaries. Here is his story. And incidentally, his start indicates, yes, emphasizes, the inherent value of architectural draftsmen's clubs to the aspirant in the art.

The writer's personal acquaintance with Burch Long and the observation of his career began somewhere in the early years of the Chicago Architectural Sketch Club, which was organized, as the first club of draftsmen, in 1884. A slight, blonde, and diffident member named Burch Burdette Long won a club sketch competition in a problem for the architectural treatment of a triangular lot between city streets. Architectural journal publicity being given the drawing, it was seen by the South Park Board and Long was employed to make the improvement. This was his start. After winning a Club traveling fellowship and a sojourn in Europe, he took up his work in New York. The next contact came during a meeting in New York on the eve of Long's sailing for London to make sketches for illustration for the Century Company. On his return he executed an important commission for the Century Magazine in a series of

drawings in color of the new buildings of the Military Academy at West Point.

The years have been busy since in the work of perspective drawing for architects not only in New York but as far west as Detroit and Pittsburgh. Among notable renditions are his drawings of the Bacon Lincoln Memorial, the Cass Gilbert Woolworth building, Goodhue's San Diego Fair building and Nebraska State Capitol.

It was only a month ago, after a gap of twenty years, that the writer again met Burch Long. Called to Pittsburgh on a perspective drawing, upon which he said he had worked continuously for something like nineteen hours, he was the guest of honor at the monthly meeting and dinner of the Pittsburgh Architectural Club. There seemed to have been little change in his physical make-up. He retained the same joy of life and zest in the draftsman's club fellowship. Speaking about the early days in Chicago and alluding to his first essay in design, he told how the design was decorated with terra cotta turtles, and gleefully remarked: "The boys fed them and blew them up with fire crackers and Gates had to renew them about every week or so."

At this dinner he was in his element. None present will forget his rendition of the Italian's description of a base ball game. In no circle had Burch Long's talent and personality won him more friends among the draftsmen and the architects who from time to time employed his rare talent than in Pittsburgh.

In decorative composition Burch Long is probably best represented by his decorations in the William Penn Hotel at Pittsburgh, the series of decorative paintings for the New York Building at the San Francisco Exposition; and architects who attended the

(Continued on Page 46)

“Efficiency” In Apartment Planning

HIGH ground values and mounting building costs, coupled with the necessity of providing rentable space in desirable localities at costs not prohibitive, have brought into apartment house planning a new factor—the “efficiency apartment.” It developed on the Pacific Coast. There the annual influx of pilgrims and the rapid increase of permanent residents, created for the community a condition not unlike the unexpected arrival of groups of relatives was wont to create in the household of former days. Ingenious planners worked out for the community thus “stricken,” a modus operandi not dissimilar to that which, in many an older household made sleeping and living quarters of the front parlors, for unexpected guests.

In truth the “efficiency apartment” of today, originating in California and traveling eastward to become an accepted canon of apartment planning, is a refinement of the immemorial custom of providing more and continued uses for floor space than has been necessary in times past or now is required in less crowded communities. That it produces also greater return on the investment by providing a larger number of rentable units in a given space, thereby satisfying owner; and, at the same time, reduces floor space and thus lessens labor for the tenant in an era when household duties are

not overly popular and when the servant problem is an everpressing and perplexing one, are, the realtor insists, all to the merry.

Introduction of the double utility element in planning and equipment enables owner to increase rentable space by approximately one-third, as compared to older standards of apartment planning, it is shown. This is accomplished at some additional expense in construction, variously determined at from five per cent, upwards. There is to be considered, also, the additional cost of upkeep and increased depreciation due to the installation of built-in furniture. But even these are more than satisfactorily absorbed in the increased rental value. In fact, presentation of such plans has turned the balance in many instances, when construction of high-cost buildings on valuable ground along other less concentrated methods would have been impossible or unlikely from an investment standpoint.

Concisely stated the problem in “efficiency” planning is so to eliminate and combine function as to give to small apartments the efficiency of much larger ones. Under such planning one, two or three rooms may assume the functions of two, four and six under old methods. And, while renting for higher figures than the former, they do not produce as high rentals as the latter, bringing ten-

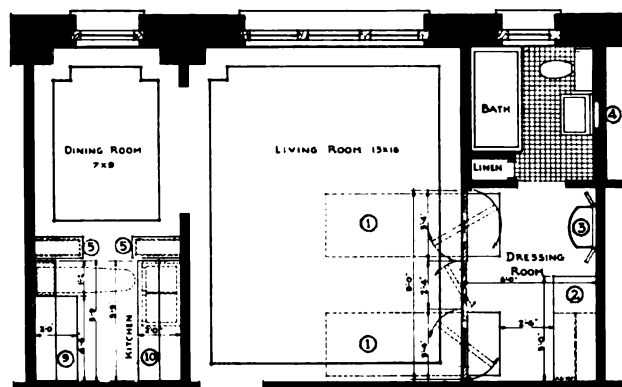


FIG. 1. PLATE OF TWO-ROOM APARTMENT WITH TWIN BEDS, SHOWN IN PHOTOGRAPHS IN FIGS. 2 AND 3



FIG. 2. LIVING ROOM OF TWO-ROOM APARTMENT, SHOWING WALL PANELS ON REAR OF WHICH BEDS ARE FASTENED



FIG. 3. LIVING ROOM DOING SERVICE AS BEDROOM, IN TWO-ROOM PLAN, FIG. 1. SAME VIEW AS FIG. 2



FIG. 3. DINING ROOM AND KITCHEN OF TWO-ROOM APARTMENT (SEE FIG. 1.) IN GEORGIAN APARTMENTS, EVANSTON ILLINOIS; ALBERT S. HECHT, ARCHITECT

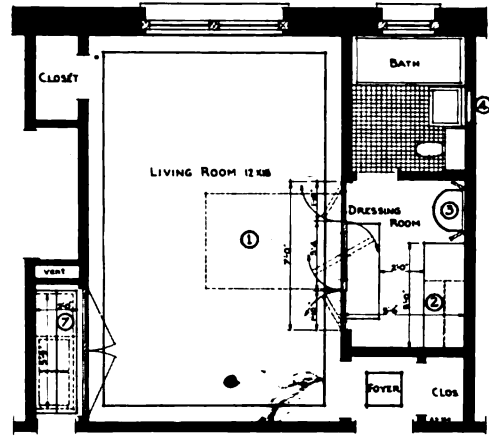


FIG. 4. AN EFFICIENCY PLAN IN WHICH ONE ROOM DOES DUTY OF TWO

ant and owner upon a common, satisfactory ground for doing business.

In larger structures such as many of the newer

in the dressing room. The adjoining bath-room contains the medicine cabinet (4) also built in. China cabinets (5) separate kitchen from dining room, and are shown in photograph in Fig. 3. Kitchen is equipped with gas or electric range, kitchen cabinet, sink, refrigerator, (in these days usually equipped with artificial refrigeration), ironing board and broom cabinet, designed to meet every requirement for the type of housekeeping demanded by tenants.

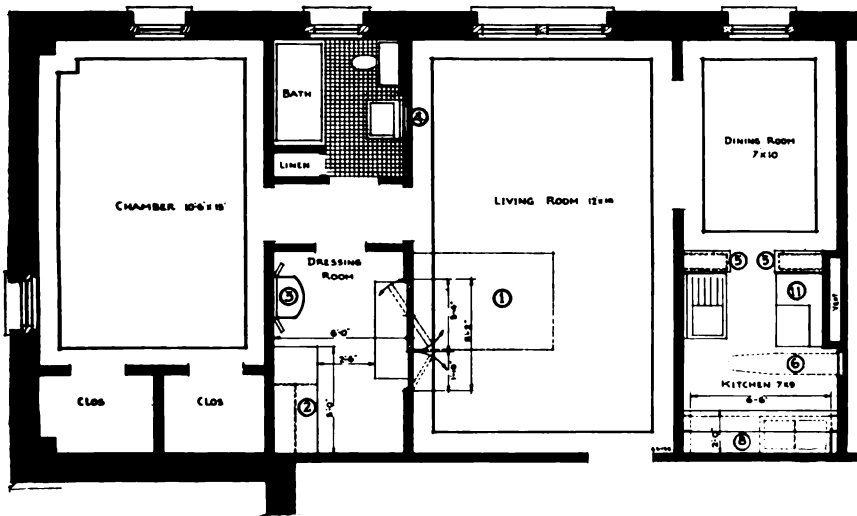


FIG. 5. THIS THREE-ROOM PLAN FUNCTIONS AS FOUR OR FIVE

Figs. 2 and 3 are two views of the living room of this apartment, the latter showing the beds in place. The dining room and kitchen of a similar apartment is pictured in Fig. 3, while Fig. 4 illustrates plan for a one-room apartment with foyer, bath and kitchenette, the latter completely equipped with a combination cabinet, which includes a stove, with baking oven, refrigerator and opening for standard sink. The stove cupboard is supplied with vent and hood to comply with municipal regulations

co-operative apartments, the same efficiency makes possible reduced floor area for the care by servants, an element of real advantage. And in the apartment hotel, material gain is made in space available for rental. In the latter, also, as well as in the buildings in which furnished apartments are provided, material gain is made in rentable area. Naturally such apartments are slightly more costly to build and to equip. Efficiency standards call for furniture built in and thus provided for in the plans. Typical floor plans of several standard and recognized types are shown to illustrate the newer methods of "efficiency" planning. In Fig. 1 is the plan of two-room apartment, views in the living room of which appear in Figs. 2 and 3. In this plan the twin beds (1), the built-in closet and cabinet (2), the dressing table (3), are provided for

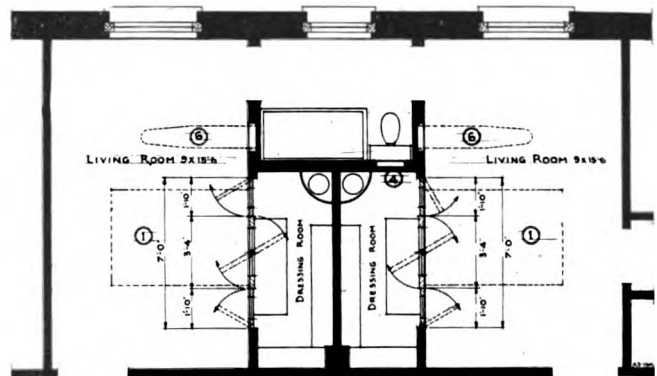


FIG. 6. ADJOINING ROOMS IN A WOMAN'S APARTMENT HOTEL, HAVE COMMON BATH AND BUILT-IN IRONING BOARDS

A DISTINGUISHED DRAFTSMAN

(Continued from Page 43)

providing for the installation of gas stoves, although the use of electric stoves for efficiency apartments is increasing in popularity. The refrigerator has an ice capacity of one hundred pounds and arrangements for outside icing, and may, if desired, be equipped with artificial refrigeration.

A three-room efficiency apartment with one bedroom and a door-bed, with dressing room, giving the efficiency of a four-room apartment, is shown in Fig. 5, while Fig. 6 is a new plan for a two-room apartment, with connecting bath and living rooms, designed for a women's hotel and allowing space for built-in ironing boards and other conveniences which appeal to this type of tenant. The combinations of kitchen and dining room have resulted in the development of "dinette" equipment. Some of this may be concealed behind wall doors, while other of it is similar to the usual breakfast room type of furniture.

The attitude of bankers towards mortgages and loans on efficiency apartments has changed radically during recent years. There was once decided opposition to such loans. But the response of tenants to the appeal of this type of building has been decidedly favorable, resulting in the obvious fact that the efficiency apartment is a solution of a definite requirement of present day living and not a temporary and unsatisfactory substitute for detached dwellings or the older type of apartment.

Doubtless it is not necessary to add that efficiency equipment must be provided for in the structural plan of the building. The various conveniences cannot be provided for after plans are completed or construction started, without material added expense, as has been learned through unfortunate experience by many designers. But, and this adds materially to the ease of planning, such equipment is so thoroughly standardized that the necessary information is readily available for the architect who seeks it.

A special summer school and tour of instruction, in Italy under the direction of Professor Paul Valenti, School of Architecture, Washington University, St. Louis, and under the auspices of the Italian government, is now being arranged. This course will include illustrated lectures on board ship as well as by prominent Italian professors at the important universities and academies in Italy. Opportunity to see special exhibitions and to come into contact with the art and culture of Italy, will be given, together with travel and recreation to make an intensely interesting trip. Sailing is June 18, returning September 20, the cost being \$850. Information may be had from Prof. Valenti.

Pacific Steel Boiler Corporation of Illinois is the present corporate name of the organization formerly known as the General Boilers Corporation, Waukegan, Illinois. This change was made January first.

fifty-eighth Convention of the American Institute of Architects, at New York, will remember Harvey Wiley Corbett's wonderful designs for the restoration of Solomon's Temple, illustrated in mass and detail by superb drawings by Burch Burdette Long.

Working continuously, and usually on "rush" jobs, as the architect, urged by his client, "must have that perspective next morning," which consequently provides a continuous performance for the delineator till finished, and which is probably the cause of his life candle burning out while he is yet a young man, Burch Long has had what he would call recreation in taking charge of the hanging of the yearly exhibitions of the Architectural League since 1903. Five days before his death he was the honor guest at a dinner given him by the officers of the League.

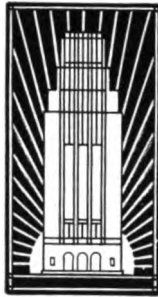
The high rank occupied by Burch Burdette Long and the estimation in which he was held is in some degree indicated by the honorary pall-bearers who included Harvey Wiley Corbett, H. Van Buren Magonigle, J. Monroe Hewlett, Howard Greenley, Horace Moran and Charles Z. Klauder. No greater honor could be conferred upon any architect than this recognition by the profession whose works he presented in the limning mediums and to whom he had endeared himself by his personality and genius.

Courses in architecture will be featured in the Summer Session this year at the Carnegie Institute of Technology in Pittsburgh. The Department of Architecture of the College of Fine Arts will give intensive six weeks' courses from June 13 to July 23 to meet the needs of students who desire to continue their work in architecture in the vacation, whether to make up credit, obtain advanced credit, or to prepare themselves better for entrance. Among the subjects to be offered are Architectural Design, Outdoor Sketching, Descriptive Geometry, Shades and Shadows, Perspective and Mathematics.

Rebuilding of the Shakespeare Memorial Theater which was destroyed by fire on March 6, 1926, is to be combined with a Stratford-on-Avon town planning scheme. A competition, open both to American and British architects, is described in a schedule which can be obtained from the Secretary, Shakespeare Memorial Theater, Stratford-on-Avon, England, upon deposit of one guinea (\$5.12).

First award in the architectural class was given at the fourth Annual Convention of the Photographers' Association of America, held in Chicago, to Henry Fuermann and Sons, photographers, Chicago. This is the third time this well-known firm has been given the first prize in the architectural group.

THE WESTERN ARCHITECT



ARCHITECTURE

ALLIED ARTS

Volume XXXVI

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GEORGE R. HORTON, BUSINESS MANAGER

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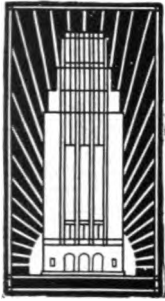




Printed in Germany

Courtesy of Ravenna Mosaics, Inc.

DETAIL OF SAINT'S HEAD
A MOSAIC IN CATHEDRAL OF TOPOLA, NEAR BELGRADE, SERBIA
R. SMIRNOFF, ARCHITECT



THE WESTERN ARCHITECT

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Volume XXXVI

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Fellowship in the
Institute
Becomes a
Mooted Question

A question has been raised in the Institute membership as to the practice of conferring the Fellowship degree for distinguished execution or other professional merit. It does not seem to be a subject for general convention discussion, yet, in the minds of many it seems to demand some definite conclusion and final action. This discussion is somewhat new. Less than a decade ago the title of Fellow was taken for granted, though its significance has been changed in by-law alterations at several times since its establishment in 1867. Inauguration of the practice came from the need for higher revenues and was "conferred" upon those who were willing to pay higher dues for the privilege of being styled a Fellow of the Institute. This was soon changed to a reward for "distinguished service" and so remained until the "consolidation" of the Institute and the Western Association of Architects, in 1889, when the name of the Institute, and the constitution and by-laws of the Western Association were retained. All members of the amalgamated body then became Fellows, the membership consisting of "Fellows, Corresponding Members and Associates." In 1891 and again in 1894 changes were made, but it was in 1898 that for the first time the title was conferred "for professional merit only." In 1902 and 1911 changes were made in phraseology though not in intent, and since 1920 committees have been working sporadically at the Fellowship problem. The end is not yet. In the March issue of the Journal of the American Institute of Architects under the title of, "Why Fellowship in the Institute?" both sides of the question of Fellowship are presented by members possessing fundamental knowledge of the underlying significance of the Institute and its history, as well as patriotic regard for the Institute and all that it stands for. Each weighs the subject impartially and with clearness and detail, and each argument is sound and convincing in its essence. Henry H. Kendall conceives a Fellowship in the Institute "not as conferring a rank or creating a class more meritorious than another, but rather as a recognition of ability manifested in one or

more of several ways," and upholds the Fellowship idea with the conclusion that "the almost universal custom of bestowing such honors as Fellowship in literary, educational and professional societies, surely merits the retention of such recognition in the American Institute of Architects." William L. Steele draws his conclusions along different, yet just as logical and seemingly convincing lines. Like those of Mr. Kendall, his remarks are in compliance with a request by the Board of Directors for a statement of personal views, in no sense official, but in effect to suggest what, if anything, is wrong with the system of Fellowship. Taking the ground that the Institute should be, in fact, a unifying agency, that it may serve the public through an increasing efficiency, Mr. Steele presents food for serious thought throughout the entire membership in his elaborate analysis of the entire subject of Fellowship. He reviews its history, comments on its advantages, sums up its disadvantages and even suggests to the Board a referendum that would present the collective thought of the Institute upon the matter. In his opinion, "the history of Fellowship in the Institute has been the story of an expedient, which has been made to serve now one purpose and again another. It has been the story of difficulty, evasion, compromise, disagreement. It has been for years a source of envy and even personal enmity—not in every case, of course—but frequently enough to condemn it." And, queries Mr. Steele, "What inherent virtue does it possess that it should be cherished?" As a summary of his remarks he indicates his convictions, and perhaps those of many of the rank and file of the twenty-seven hundred members: "Let us cease to be worried over which among us should be enrolled on a list whose distinction bears an inverse ratio to the length of the roster. Let us rather be concerned with the growth of a professional spirit among architects that will make each bearer of the title, 'Members of the American Institute of Architects,' a distinguished citizen." It would be presumptuous for this journal, or any other published independently outside of Institute control, to take sides upon a matter so

purely a family affair as this of Fellowship, or even to offer advice, other than that before indicated, that the question receive the earnest consideration of all members, voted upon at convention without discussion, and then "forgotten" as a matter of too little moment to disturb the membership. After over forty years of attendance at conventions and listening to the recurrent discussions of by-laws, schedule of charges, competitions, and other perennials of the convention garden, it would seem that these subjects may be profitably interred; that interest may well be centered upon the sustaining and upbuilding of the profession in professional worth and public service.

A Revival of
Polychrome
in Architecture
Indicated

The world's Columbian Exposition of 1893, brought to the people of the United States so forcible an example and realization of the beauty that could be expressed in architectural

design, and so strongly impressed the profession itself, as to promote a movement toward an American renaissance that has gained impetus through the years. As a result of architectural development since, form has replaced precedent, and purpose is expressed in form. Height of business structures has risen to any limit that the projector may desire; the suburban residence, great or small, presents the ideal of the architect and the taste of the owner without regard to any established rule or precedent. And now it is found that aesthetic proportions in business or industrial development in even the best examples are capable of further enhancement than has yet been achieved. The fresh and logical problems offered by the "set-back" have brought to architects opportunity to express in flat surfaces and squarecut walls, an austere beauty presented only in the early Gothic which they remotely resemble. And now the vast and ever-crowding field for architectural compliance with modern demand through changing social conditions, presents polychrome as the next essay into newer fields for embellishment, rather than structural novelty in design. Of course it is only getting back to ancient usage, perhaps, though the same might be said of the use of stone, for that matter. But recent design, notably that in the East, for the Philadelphia Museum of Art, and in the far West by numerous examples, is showing an increasing desire, among designers and presumably in public taste, to turn to color. Tile and terra cotta and other colorful materials are growing steadily in favor to provide a livening note in architectural design. Even in this the history of our present day architectural freedom goes back to that assembly of structures and landscape effects which resulted from the symphonic joining of the "best minds" in architectural design the Nation at that time afforded, in the housing of the Columbian Exposition exhibits. For here the polychrome note

was so strongly and definitely struck when the superb courage as well as designing genius of Sullivan presented the polychromatic Romanesque doorway of the Transportation building, that architects and public alike were impressed with the possibilities of a new and vigorous accent which our neutral taste in color had never before encouraged. It is well that the introduction of color in architectural exterior design has been slow, for great crimes against color harmony are possible. In fact the skill of the painter as well as designer is necessary for the appropriate use of polychrome in architecture.

A Prolific Field
for
Architectural
Design

Changes in the thespian world are opening up a field of design which has been comparatively untouched in this country. Theaters in the past have been designed for the larger cities and towns. The local "opry house," often the hall over the livery stable or general store, has sufficed for the "one-night-stand" theatrical companies that visited the smaller communities. It seems that of late the increased intelligence of the people has demanded something better than the present-day theater provides. As a result there has been organized the theater guild movement, not confined, however, to small communities, which is presenting plays of first importance, paying royalties to playwrights for the privilege. At once the need for adequate auditoriums for presentation of such efforts presents itself. Herein lies the architects' opportunity. For, though the town be of less than one thousand people and twenty miles from a railroad the same, if not greater intelligence and drama appreciation exists as in the larger centers of population. The time is approaching when the future of drama in America will depend largely upon the activities of these groups of so-called amateur organizations, and the wealth of opportunity in variety of design of community theaters is opening up to the architect of ability and training in the smaller communities of the land. In such the architect has two appreciable advantages as compared to the theater designer in the large cities. Ample space, always necessary but almost always lacking in the too-small lot in the metropolis, is always available in the smaller centers. It goes with the needed endowments and community subscriptions which are forthcoming wherever an intelligent and art-appreciative public decides that it requires a local theater. This gives to the architect the always looked-for but too seldom realized free hand. Instead of formal and too often merely conventional design, he can revel in an indigenous theatrical design and freedom to express his dream of what such a design should be. It is only in the smaller communities that this can be realized. The smaller community theater is a most promising architectural opportunity.

The Art of the Mosaicist

By REXFORD NEWCOMB, A. I. A.

LIKE all of the splendid sister arts that have contributed to the development of the distinguished architecture of the past, that of the mosaicist has enjoyed an age-long career. To those strolling under the domes of a St. Marks or remarking the splendor of color in such a little gem as the Tomb of Galla Placida, the earlier forms of this noble art may *not* be apparent. Indeed, we usually think of the mosaic art as having had its origin in Rome. But, while the Romans made a far greater contribution to its development than did any previous people, we shall have to seek the beginnings of the art in that earlier, sister land of classic culture—Greece. Indeed, we may go even beyond the Hellenic period of Greek history to that forerunning culture generally known as Aegean or Minoan.

In this early age, it seems that "mosaic" pavements were made by the imbedding of pebbles in a beaten clay background. In such a primitive type, of course, nothing in the way of pattern was developed, although simple geometrical variations were apparently executed in different colors of pebbles. This simplest type of mosaic floor was succeeded by one in which small pebbles, chosen for color, were set into a ground of hard lime plaster, and this type was used not only for pavements but also for the lining of pools, conduits and water receptacles generally. One of the earliest conduits at Olympia (Seventh Century, B. C.) leading to the Altar of the Nymphs was lined with such materials, while the early pavements of the Temple of Zeus at the same sacred spot were similarly constructed.

With the passage of time, such mosaics became decorative and, although the stones remained uncut, involved geo-

metrical motifs were executed by means of vari-colored pebbles. Pebble mosaics were eventually replaced by pavements in which the *tesserae* were formed of small cubical blocks of stone or marble. This type (the *opus tessellatum*) was developed,

especially during the brilliant Hellenic Period in Greece, into a beautiful and highly decorative pavement. Marble mosaic pavements of this character became very popular, especially among the Ionic colonies of the Asia Minor coast, and, indeed, representatives of this type were eventually executed in the Doric cities of *Magna Graecia* (south Italy and

Sicily). Here the art became known to the Latins who, in the great days of Roman supremacy, used them profusely and introduced them into all those colonies which, through their military prowess, they had gained for themselves.

One must not think that, with the development of *opus tessellatum*, pebble mosaics disappeared, for this would not be correct, and mosaics of small colored stones upon occasion were used for the facing of walls, domes and other surfaces. Examples of such work are to be found in the famous "Mosaic Fountain" at the rear of a house in the Vico di Tesmo at Pompeii, and in the mosaic-covered columns in another house in the same city.

The type of Greek pavement formed by the setting of pebbles in a hard lime ground found its reflection in Rome in a variety of work known as *opus signinum*, in which bits of colored marbles were used to work out geometrical linear patterns, like scrolls and frets, in a background of Roman cement. A favorite color scheme for such work consisted of patterns worked out in *tesserae* of black and white upon a cement ground. But the most



FIG. 1. THE BATTLE OF ISSOS, AN OLD ROMAN MOSAIC, 9x17 FEET, FOUND IN THE HOUSE OF THE FAUN AT POMPEII. (SECOND CENTURY).

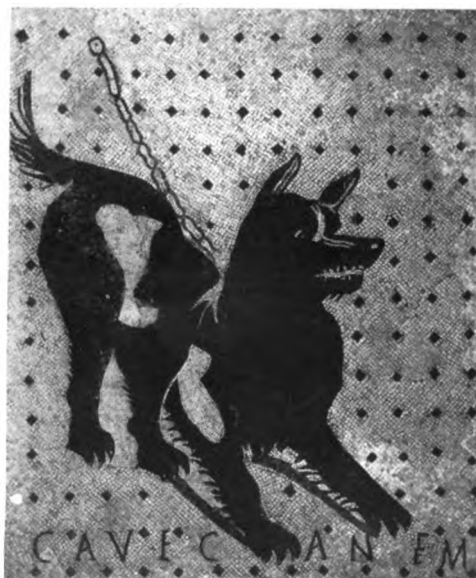


FIG. 2. ROMAN MOSAIC IN THE MUSEUM OF NAPLES. SUCH "CAVE CANUM" (BEWARE THE DOG) PANELS WERE COMMON IN VESTIBULES OF POMPEIIAN HOUSES.

popular type of mosaic employed by the Romans was after all the *opus tessellatum* which they developed to a splendid climax technically and artistically. Moderns, of course, resent the use of pictorial mosaics upon floors, but this objection apparently did not disturb the Roman citizen who enjoyed walking upon a pavement setting forth the career of an important battle, (Fig. 1) a garden scene, or even animal forms, (Fig. 2). One recalls at this point the famous "unswept banquet floor" mosaic in which broken goblets, bits of foods, flowers and other remnants of a great feast are shown as having dropped to the floor.

Many excellent bits of Roman pictorial (Fig. 3) and geometrical (Fig. 4) mosaics, executed in marble *tesserae*, come down to us, some of them from sites as far away as Roman Germany and Britain. A splendid coloring was made possible through the supremacy of Roman commerce which scoured the ends of the known world for colorful marbles with which to grace the city, and the technical excellence was certainly contributed to by the development of an excellent cement which also made possible that versatile and serviceable material



FIG. 3. ROMAN PICTORIAL MOSAIC (OPUS TESSELLATUM) IN THE NAPLES MUSEUM.

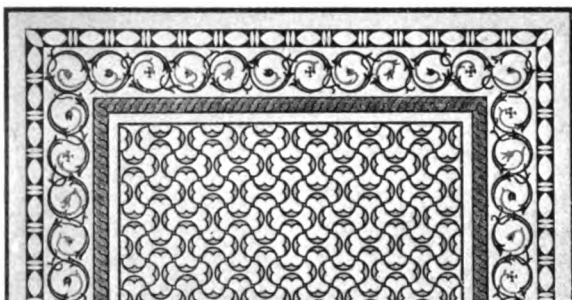


FIG. 4. ROMAN GEOMETRICAL MOSAIC FOUND IN GREECE.



FIG. 5. (LEFT) DETAIL OF THE HEAD OF LOT'S WIFE IN THE CHURCH OF SANTA MARIA MAGGIORE, ROME. (FOURTH CENTURY).



FIG. 6. (RIGHT) MOSAIC IN APSE OF ST. MARKS, VENICE.

known as Roman "concrete."

Now while Roman mosaics were largely of marble or stone, as has been noted, glass *tesserae* were not unknown to them. Among the early examples of the use of glass as a mosaic material may be cited that found at the Isola Farnese, nine miles from Rome, which was made of "tile-like slabs of green glass." Upon the Palatine Hill, in Rome, another excellent pavement made of pieces of black, white and a deep yellow glass has been found, and it is well known that in the House of the Faun in Pompeii, small bits of glass were mixed with the marble *tesserae* to gain a greater brilliance and variety of color. The Romans used the term *opus mixtum* for mosaics in which cubes of glass were employed. This glass was rendered opaque by the addition of tin oxide and colored by the intermixture of other metallic oxides.

With all the splendor of the Roman mosaics, however, it remained for the quickening influence of Christianity to bring forth the most splendid development of this noble art. Those who are familiar with Early Christian symbolism will remember that many of the old pagan forms and motifs were appropriated and given Christian significances by the converted Romans. Thus, many time-honored Roman motifs took on the Christian meanings set opposite them here:

A cup or goblet signified The Grail; The anchor signified Hope; The Phoenix signified Immortality; The ship signified The Church; The cock signified Watchfulness; The peacock signified Eternity; Hermes and the Sheep signified The Good Shepherd (Christ); The dove signified Purity; The fish signified Christ, because the Greek name contained the initials of the Greek words for "Jesus Christ, Son of God, Savior." Many of these symbols then adopted come down to our day.

By the Milan Decree of 313, A. D., the Emperor Constantine recognized Christianity, and ten years later it became the Roman state religion. The tremendous impetus that this recognition gave to the struggling faith is well known to most readers. This exultant period is reflected in the building of those first early (Fourth Century) churches at Rome and elsewhere in Italy. The beginnings of many of the churches like St. John Lateran, San Clemente, the old St. Peters, St. Paul-without-the-Walls and the sepulchral Chapel of Santa Constanza, on the Via Nomentana, one and one-quarter miles from the Porta Pia, date from this period.

The building of churches was accompanied by as glorious a form of decoration as the builders could command. Naturally, therefore, since mosaic decoration was popular in the Imperial City, the finer of these early churches, especially near the high altar, were made as glorious as possible by this means. Some of this splendid early work remains in fragment, but in such a church as that of Santa Constanza, built as a mausoleum to his daughters, Constantina and Helena, by the Emperor Constantine, we find a wealth of the earliest Christian mosaic. Some very excellent bits are to be found also in the churches of Saint John Lateran and Santa Maria Maggiore at Rome, but the large bulk of the work in each of these structures was added at later dates,

principally during the Eighth and Twelfth centuries. The fact remains, however, that upon the basis of these Roman beginnings the art of the Christian mosaicist went forward confidently and deliberately, especially in the Byzantine centers like Constantinople, Venice and Ravenna.

Medieval mosaics are generally classified under three headings: (1) those made of glass and used to decorate walls, vaults and domes; (2) marble mosaics (either *opus tessellatum* or *opus sectile*) used upon floors; (3) glass in small pieces, used to decorate marble pulpits, columns or other architectural features. The first phase of the medieval work begins with the Fourth Century and

lasts through the Seventh. During the Eighth, Ninth and Tenth centuries the work is noticeably decadent but, strange to say, does not cease to be a current means of church decoration. It took the mosaicist until the Twelfth Century again to gain the splendid heights reached in the wonderful Byzantine work of the Sixth Century at Ravenna. This renaissance, however, lasted only through the Fourteenth Century. We have not the space at our disposal to go into a detailed study of this work but we may cite, by centuries, the more notable examples.

Fourth Century

Rome

- S. Constanza
- S. Maria Maggiore (square panels over columns in nave)
- S. Prudenziana
- S. John Lateran (Chapel of S. S. Rufina e Seconda)

Fifth Century

Ravenna

- Orthodox Baptistry (vault)
- Tomb of Galla Placida (vault)
- Archbishop's Chapel (vault)

Rome

- S. Paul-without-the-Walls (triumphal arch)
- S. Maria Maggiore (triumphal arch)
- S. Sabina (figure, west wall)

Sixth Century

Ravenna

- Arian Baptistry (vault)

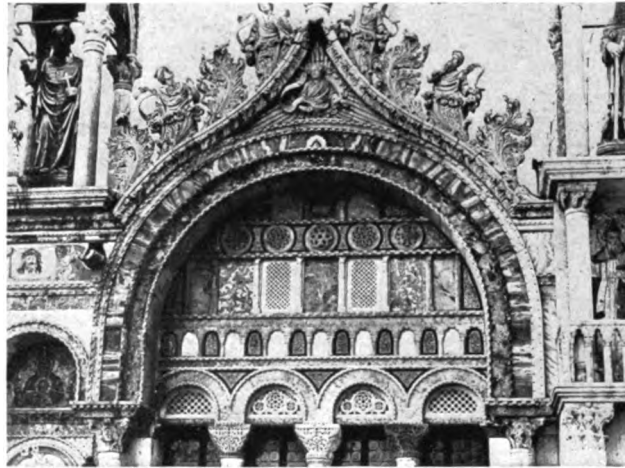


FIG. 14. DETAIL OF FACADE OF ST. MARK'S, VENICE, SHOWING MOSAIC INSERTS.

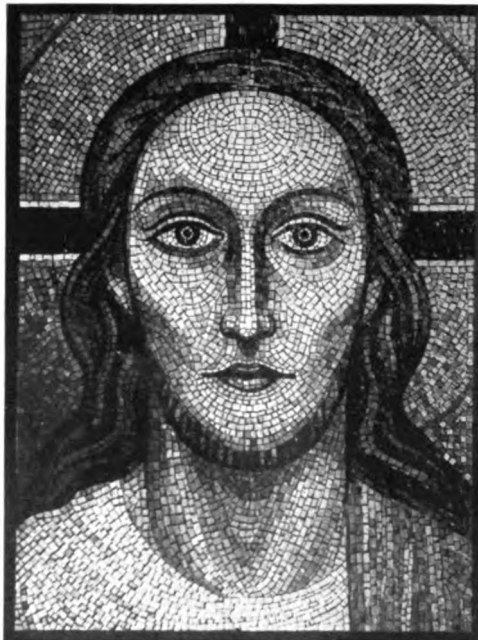


FIG. 15. HEAD OF CHRIST IN TRIUMPHAL ARCH, ST. LOUIS CATHEDRAL, ST. LOUIS, MISSOURI.

- S. Apollinare Nuovo (apse and nave, added to in Ninth century)
 - S. Vitale (apse and sanctuary, 547)
 - S. Apollinare im Classe (apse and nave, 549)
- Constantinople
- S. Sophia, (walls and vault) c.550

Seventh Century

Rome

- S. Agnese (apse)
- S. Stephano Rotondo

Eighth Century

Rome

- S. John Lateran (baptistry)
- S. S. Nereus and Achilles

Ninth Century

Rome

- S. Cecilia in Trastevere (apse)
- S. Prassede (triumphal arch)

Milan

- S. Ambrogio (apse, 832)

Twelfth Century

Venice

- S. Mark's (narthex, apse, walls of nave and aisles) (Fig. 6 and Plate 62).

Torcello

- Cathedral (apse)

Murano

- Cathedral (apse)

Salerno

- Cathedral (apse)

Palermo

- Capella Palatina (complete)
- Church of La Martorana (vault)

Monreale

- Cathedral (1170-90) (Fig. 7 and 8)

Cefalu

- Cathedral (apse, 1148)

Rome

- S. Clemente (apse and pavement) (Fig. 9).
- S. Maria in Trastevere (apse begun)

Thirteenth Century

Florence

- Baptistry (vault begun)
- S. Miniato (apse and west front)

Rome

- S. Paul-without-the-Walls (apse)
- S. Clemente (triumphal arch)
- S. John Lateran (apse) (Fig. 10).
- S. Maria Maggiore (apse and west end)

Fourteenth Century

Pisa

- Cathedral (apses)

Rome

- S. Maria in Cosmedin

From the above chronology, one may pick outstanding examples with which, through travel, he is familiar. The Early Christian work of Italy has a Roman feeling and spirit up to the Fifth Century after which time, due to a reflected Byzantine influence from the East, the splendid work of Ravenna developed. After this time, the works of Latin and Byzantine lands are so similar in spirit and application that it is difficult to distinguish between them, and this work, now formed entirely of glass *tesserae* of brilliant colors combined with units of gilded and silvered glass, we know as *opus Grecanicum* ("Greek-work" because done in Byzantine (Greek) lands). But internal evidence points to the employment of Greeks from Constantinople at Ravenna, Rome and various other places in Italy.

During this splendid period the walls, above a panelled marble wainscot, and all curved surfaces, like arches, vaults and domes, were encrusted with these mosaics in glass "paste." The Fifth Century mosaics (Tomb of Galla Placida) set upon *deep blue* backgrounds; the Sixth Century types (St. Vitale) are upon *sea-green* grounds, while the later examples have gold backgrounds. These mosaics are large in texture, simple in drawing (Fig. 11) and conventional in form, the proportion of the field to the ornament being large. In the best periods the treatment of both forms and draperies is broad and simple, a just amount of relief being expressed by delicate gradations of tints. In the Ninth Century, however, the drawing becomes awkward and the folds of the robes are rudely expressed in outline only, with no suggestion of light and shade.

A marked revival of the mosaic art in the Twelfth Century makes itself felt in two separate portions of Italy: the first in the Venetian lagoon, the second in Sicily, where, due to the patronage of the Norman kings, an exultant artistic spirit was fostered. The brightest days of Sicily came under William the Good (1166-89) during whose reign the Cathedral of Monreale and other important buildings of the island were splendidly decorated.

The impetus thus given to a decadent art resulted also in excellent things at Venice and at Rome, where important renovations of the old churches of Saint Paul-without-the-Walls and San Clemente took place. These were followed in the succeeding century, by further work at Saint John Lateran and Santa Maria Maggiore. But the Fourteenth Century in Italy witnessed the revival of painting and the introduction of *fresco* work. The development of these relatively cheaper and just as colorful means of decoration meant the death knell for mosaic art, for, while the simple work of Cimabue and Giotto was interpretable into mosaic, a growing realism and complexity required a more flexible means than mosaic offered. While the Fifteenth Century saw the execution of a few good

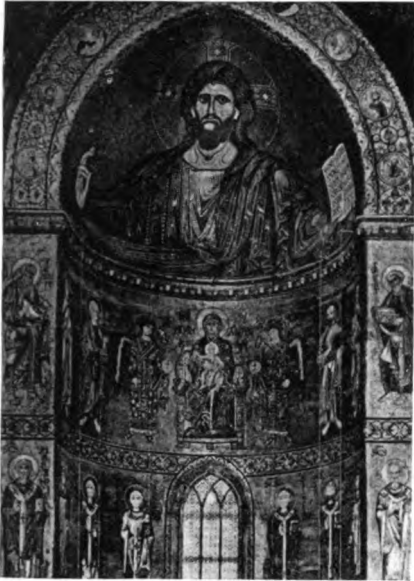


FIG. 7. (Left) DETAIL OF MOSAIC IN MONREALE CATHEDRAL.



FIG. 8. DETAIL OF HEAD OF CHRIST IN MOSAIC, MONREALE CATHEDRAL.



FIG. 9. (Left) MOSAIC PAVEMENT IN THE CHURCH OF SAN CLEMENTE, ROME. (TWELFTH CENTURY).

FIG. 10. (Below) APSE IN CHURCH OF ST. JOHN LATERAN, ROME.

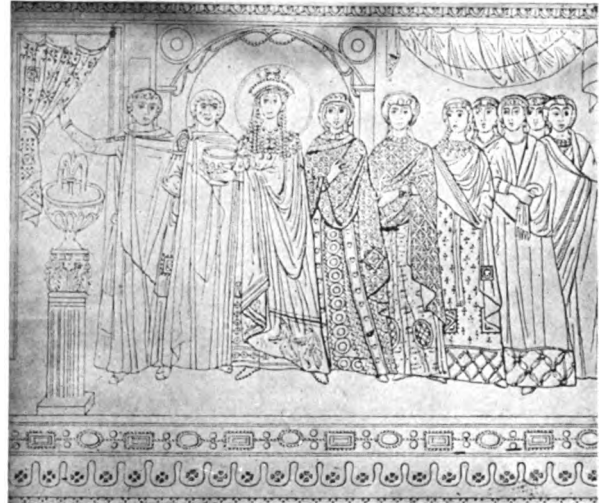


FIG. 11. CARTOON OF MOSAIC IN ST. VITALE, RAVENNA: THEODORA AND LADIES.

FIG. 12. (Right) DETAIL SHOWING MOSAIC DECORATION IN MONREALE CATHEDRAL.



FIG. 13. (Left) DETAIL OF THE FACADE OF THE CATHEDRAL OF FLORENCE SHOWING COSMATI WORK.



mosaics, notably at Venice and Rome, the art was practically dead and remained so until the latter part of the last century.

We are not here essentially interested in floor mosaics but a word should be said regarding the decoration of ecclesiastical furniture and architectural features by the use of inlaid mosaics. The elaboration of furniture and other objects by the insertion of bits of colored glass, stone, or enamel is an art of long standing, both ancient Egypt and the Tigris-Euphrates Basin offering examples of it. Indeed it is asserted that the bases of some of the marble columns of the Erechtheion at Athens were ornamented by a *guilloche* design into which bits of colored glass were inserted to emphasize the lines of the pattern. Be this as it may, it remained for the Christian artists of Italy to bring to a fine climax this means of decorating architectural forms and marble furniture. Bishop's thrones, (Fig. 12), ambones, pulpits, tombs, baldachini and other features received this form of ornament from the Sixth to the Fourteenth centuries, much of the work being attributed to a family (or perhaps a guild of mosaicists) known as the *Cosmati*. From this family, which reached its greatest activity during the Thirteenth Century, the work is known as *Cosmati* work.

Cosmati work is simple in idea. The white marble is used as a matrix into which sinkings are made to receive the glass *tesserae*; twisted columns are frequently ornamented with spiral bands of this glass mosaic, or flutings are suggested by vertical bands upon straight columns. Here, however, the simplicity disappears, for often the patterns themselves are of the most involved character. Upon Plate 69 are shown column decorations from the Cloisters of Monreale and the Cathedral of Orvieto, while in Figs. 13 and 14 are seen the application of mosaics to the facades of the Cathedral of Florence and Saint Mark's, Venice. Other well known examples are the splendid cloisters of Saint John Lateran and Saint Paul-without-

the-Walls, Rome, and the porch of San Lorenzo, near the same city. The pulpit of Ara Coeli, Rome, the ambones of San Clemente and San Lorenzo, and that in Salerno Cathedral testify to the skill and beauty with which glass mosaics, have been applied to ecclesiastical furniture.

Elsewhere in this issue the subject of the revival of this age-long art of the mosaicist is discussed. Both in Europe and America this most noble means of architectural decoration is rapidly gaining ground as the plate pages will prove. On Plates 60 and 61 are shown details for the mosaic decoration of the Serbian Cathedral of Topola. The frontispiece represents the head of a saint in the mosaics of this interesting cathedral. Topola, a small town in the interior of Serbia, until recently was little known to anyone outside that country. The reigning dynasty originated here, however, and the King of Serbia has been instrumental in erecting a cathedral in the town, and a structure that may serve as the resting-place of the family.

Serbia is rich in old works of art, its old buildings and frescoes being well-known to art students. Many of the frescoes, as in other lands, have disintegrated with time and it is the hope of the King to reproduce as many of them as possible in mosaic. Beginnings have already been made and a number of cartoons have been executed. It will not be many years before Topola will be one of the most important of places, so far as examples of old Serbian art traditions are concerned. This work, together with that in the Church of the Resurrection, in Leningrad, the Imperial Fountain in Constantinople, the Church of Saint Mary in Jerusalem, the German Church in Rome, the Golden Hall of the New City Hall of Stockholm, and the Cathedral of Saint Louis, in our own country, are among the recent important contributions of the noble art of the mosaicist.

Religious Mosaics

By EDWARD P. BETZ

THE art of glass mosaics is closely associated with the development of Christianity, and until lately was practically confined to the decoration of churches, chapels and other religious buildings. One of the earliest examples of Christian mosaics, still to be seen in the original building for which they were made, are those in the Mausoleum of Santa Constanza near Rome (Fig. 1). They form an example of the adaptation of this heretofore pagan decoration to the embellishment of a Christian chapel. Here classic motives appear on a white background, as was the old Roman style, but the symbols are Christian, such as are found in abundance in the catacombs.



FIG. 1. MAUSOLEUM OF SANTA CONSTANZA, NEAR ROME, FOURTH CENTURY; MOSAICS ON VAULTED CEILING.

Later in the same century, the Fourth, the church now known as Santa Maria Maggiore was founded in Rome. The original building and much of its mosaics have been destroyed, but those that were saved and are now to be seen in the present building are recognized as amongst the best of the Early Christian mosaics (Fig. 2). Their composition, their technique and their harmony of color leave nothing to be desired. Something of the earlier Roman style they have, but the themes are entirely Christian, illustrating incidents from the Old Testament and from the life of Christ. These pictures from the Bible were undoubtedly an important factor in the propagation of Christianity. Faultless as a decoration, a perfect means of impressing upon even the illiterate the beautiful story of Christianity, and as permanent as it is possible for a material thing to be, it is no wonder that from that time until well into the Ninth Century mosaics were considered and used as the most worthy adornment of churches.

It is impossible in a short article to mention more than a few of the most important works in mosaic. In the Fifth and Sixth centuries Ravenna became the center of Christianity and in this comparatively small

town we find mosaics in almost every ecclesiastical building erected at that time. Those in the Tomb of Galla Placida and in the Baptistry of the Orthodox remind one of the Christian mosaics of Rome, but in

the two churches of St. Appolinare (Fig. 3), and especially in San Vitale, which were of a somewhat later date, is seen the glorious influence of Byzantium. The colors are much stronger and the figures are grim and austere and stand out vividly from a rich background of scintillating gold.

From the end of the Seventh Century a gradual decline in the art is noted and although churches continued to be

decorated with mosaics the work became less and less impressive, as though the workers were losing their enthusiasm and ability in direct proportion to the general dilution of the strong and simple faith of their forefathers, until towards the middle of the Ninth Century it ceased entirely. In the latter part of the Tenth a strenuous revival took place, during which the wonderful Byzantine mosaics in Palermo and Monreale were made and much of the work in St. Marks, Venice, was done. This flourish died out in the Fourteenth Century and nothing of note, or even of interest, was accomplished until a movement started late in the Nineteenth Century, beginning probably on account of the necessity of restoring some of the older mosaics, but resulting in an interest in and appreciation of the work that gradually developed into the revival of this art which is generally remarked at the present time.

One of the first fruits of this revival was the decoration of the cathedral at Aix-la-Chappelle (Plate 62). The work was extensive and covered with rich designs, modern, yet reminiscent of Monreale, the walls and ceilings of that part of the cathedral which had been built in the Byzantine style in the Tenth Century. Shortly after new mosaics began to make their



FIG. 2. (Left). TWO ANGELS, A DETAIL FROM "THE ANNUNCIATION", SIZE $56\frac{1}{4} \times 33\frac{1}{4}$ INCHES; FROM S. MARIA MAGGIORE, CIRCA, 352-366 A. D.



FIG. 3. (Right) ST. AGNES FROM S. APOLLINARE NUOVO, RAVENNA, CIRCA 500 A. D. WITH NINTH CENTURY ADDITIONS. THE FIGURE IS IN GOLDEN EMBROIDERED ROBES AND WHITE TUNIC. GRASS AND PALMS A DELICATE GREEN UPON A GOLDEN BACKGROUND. SIZE, $100\frac{1}{4} \times 39\frac{1}{2}$ INCHES.

appearance all over Europe, the Abbey Church of Maria Laach; the Church of the Redemption, Jerusalem; the Memorial Church in Berlin; the Evangelical Lutheran Church in Rome; the chapel in the Imperial Palace at Posen, Poland; the memorial to St. Elizabeth in the old Wartburg castle, Thuringia; and many other buildings of an ecclesiastical character, mostly in Central Europe. The process of making material identical with that used in the early centuries had been discovered and at least those works mentioned show a proper feeling for the material and an understanding of the art, although few of them approach in spirit and strength the masterpieces of the early Christians.

The world war put a temporary halt to this latest revival, at least in those countries which were practically ruined by the war, and renewed activity is first noted in Sweden where the Golden Hall of the new City Hall at Stockholm (Plate 59) was embellished with mosaics. Done in an extremely modern design on a gold background this tremendous room rivals in splendor the best of the Byzantine mosaics.

Then in our own country the first really important work in mosaics was started in the new Cathedral in St. Louis, Missouri (Plates 55, 56, 57). The building is in the Byzantine style and, although the work is not finished, the triumphal arch, its soffit, the arches of the transepts with their pendentives and the architraves in the nave are covered with rich and

harmonious mosaics, perfect in technique and carrying out their part of the grand scheme of decoration in the direct and awe-inspiring manner of the truly Byzantine. From the mosaics already done in this building, it is not hard to visualize the magnificence that will be attained when the entire church is finished in this way. It will take years to complete, but when completed it will be a permanent and glorious monument to those who have had the foresight and strength to sponsor such a notable artistic undertaking.

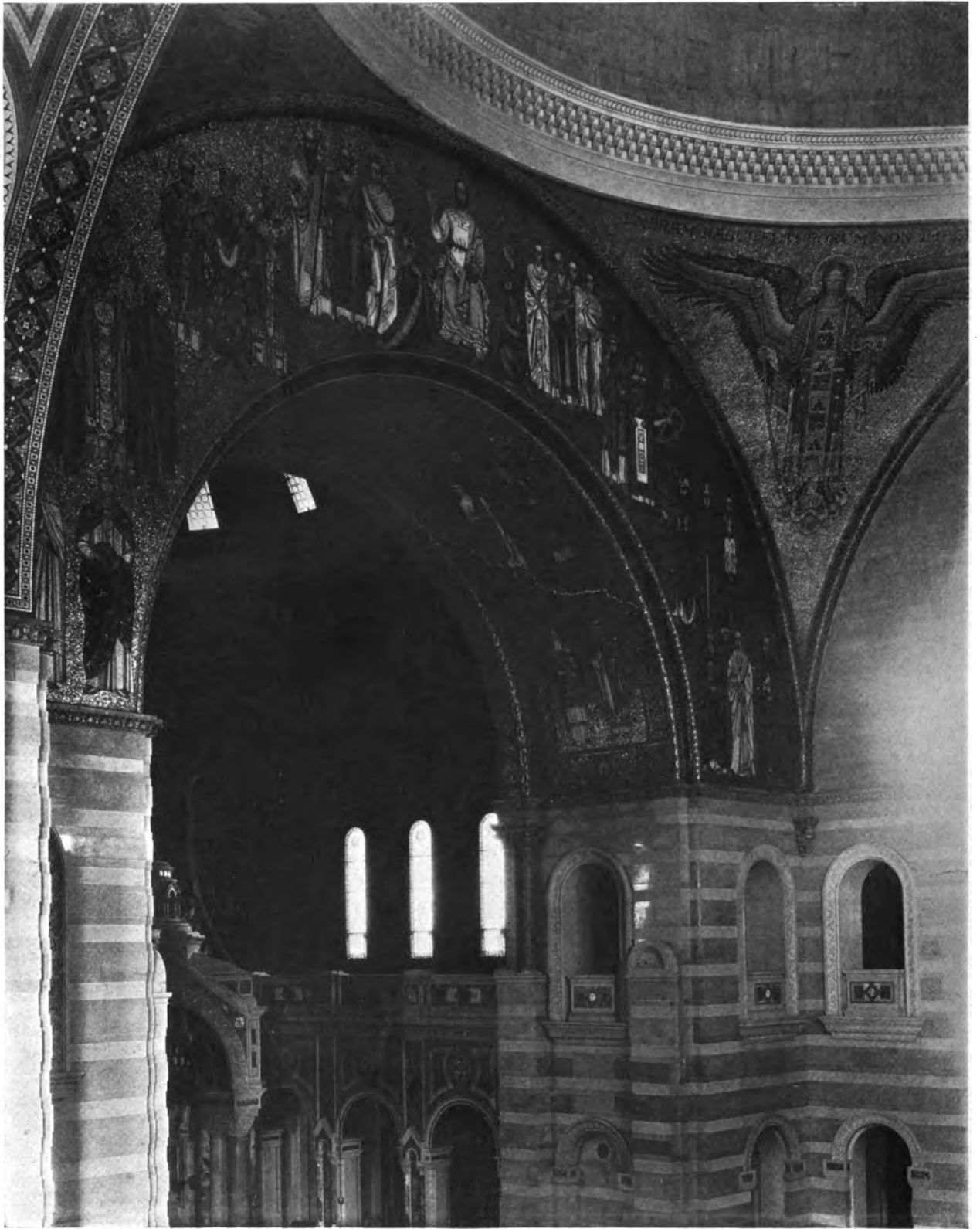
In Detroit, also, there is an excellent example of mosaic work in its true character in the baptistry of the Holy Redeemer Church (Plate 58). Here one is strongly reminded of the earlier mosaics in St. Marks, Venice. The chapel is not large but it is well worth seeing, especially to those who may be doubtful as to the ability and sincerity of the mosaicists of today.

In Brooklyn is a more modern but artistically and technically good work in the Church of St. Catherine of Alexandria; and in the crypt of the National Shrine in Washington, D. C., can be seen the first few of a series of mosaics that are entirely worthy of their setting.

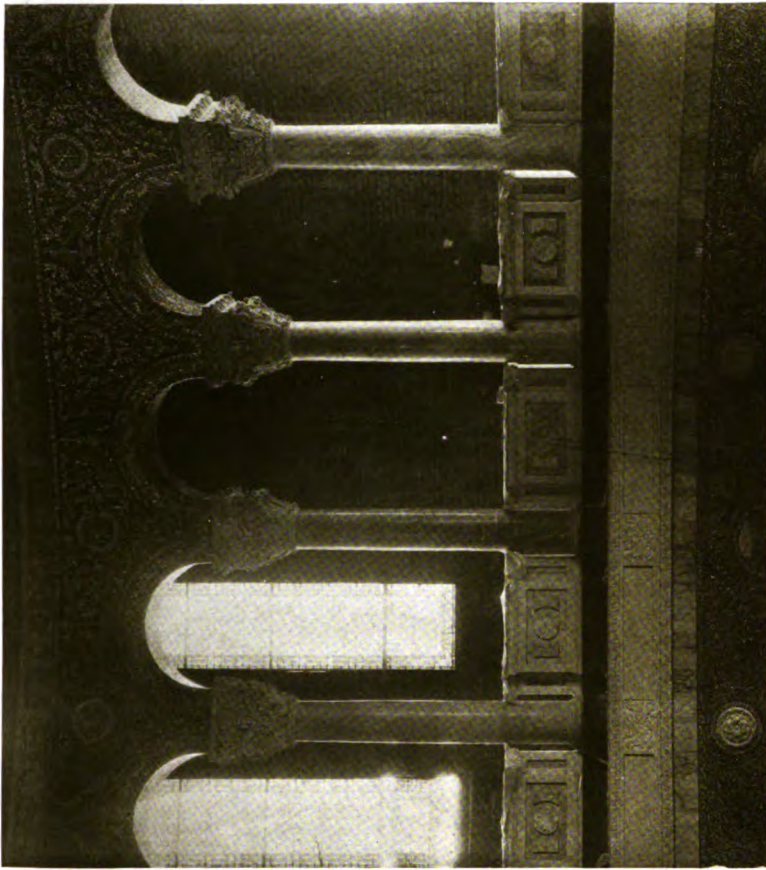
In many churches and chapels throughout the country smaller installations of mosaics have been made; shrines, altar panels, reredoses, niches, stations of the cross are made in mosaics, and while the real glory of this art is in the embellishment of large



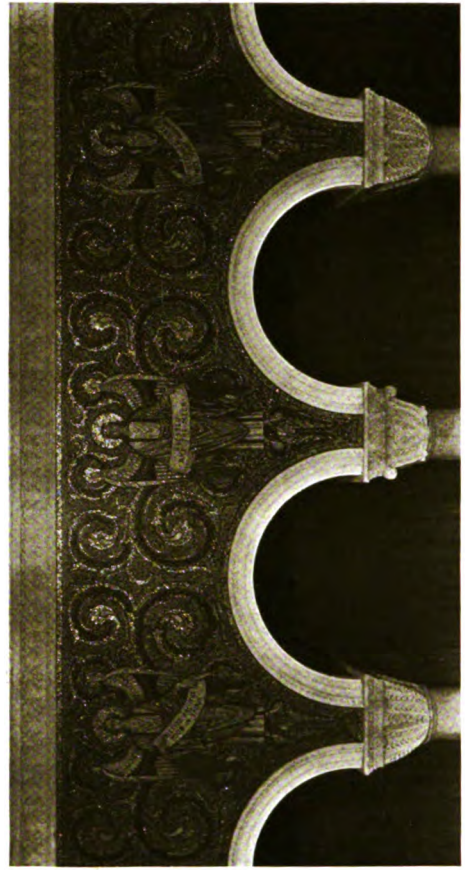
MOSAICS ON TRIUMPHAL ARCH
ST. LOUIS CATHEDRAL, ST. LOUIS, MISSOURI
BARNETT, HAYES AND BARNETT, ARCHITECTS
PROFESSOR A. OETKEN AND FELIX BAUMHAUER, DESIGNERS



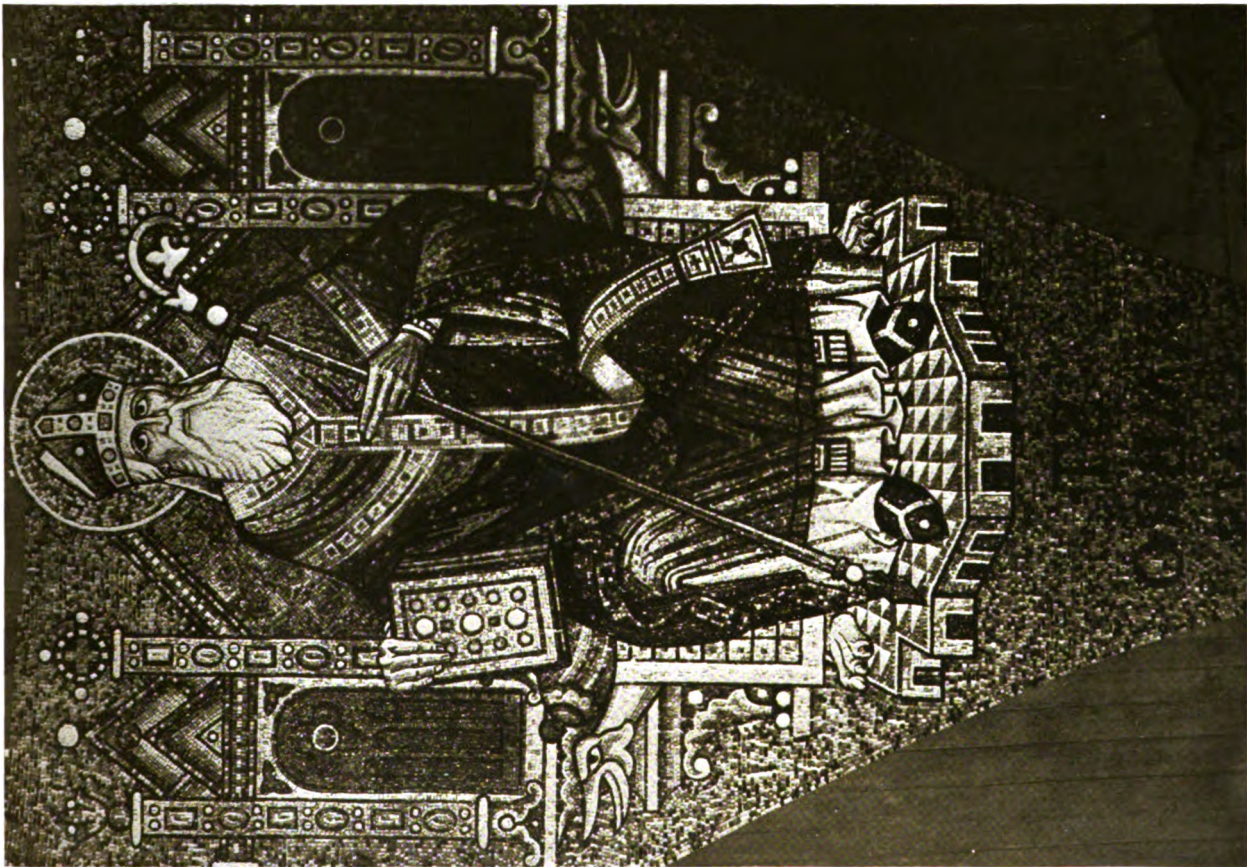
DETAIL OF PENDENTIVE AND ARCHES OVER HIGH ALTAR
ST. LOUIS CATHEDRAL, ST. LOUIS, MISSOURI
BARNETT, HAYES AND BARNETT, ARCHITECTS
PROFESSOR A. OETKEN AND FELIX BAUMHAUER, DESIGNERS



DETAIL OF MOSAIC IN TRANSEPT



DETAIL OVER NAVE



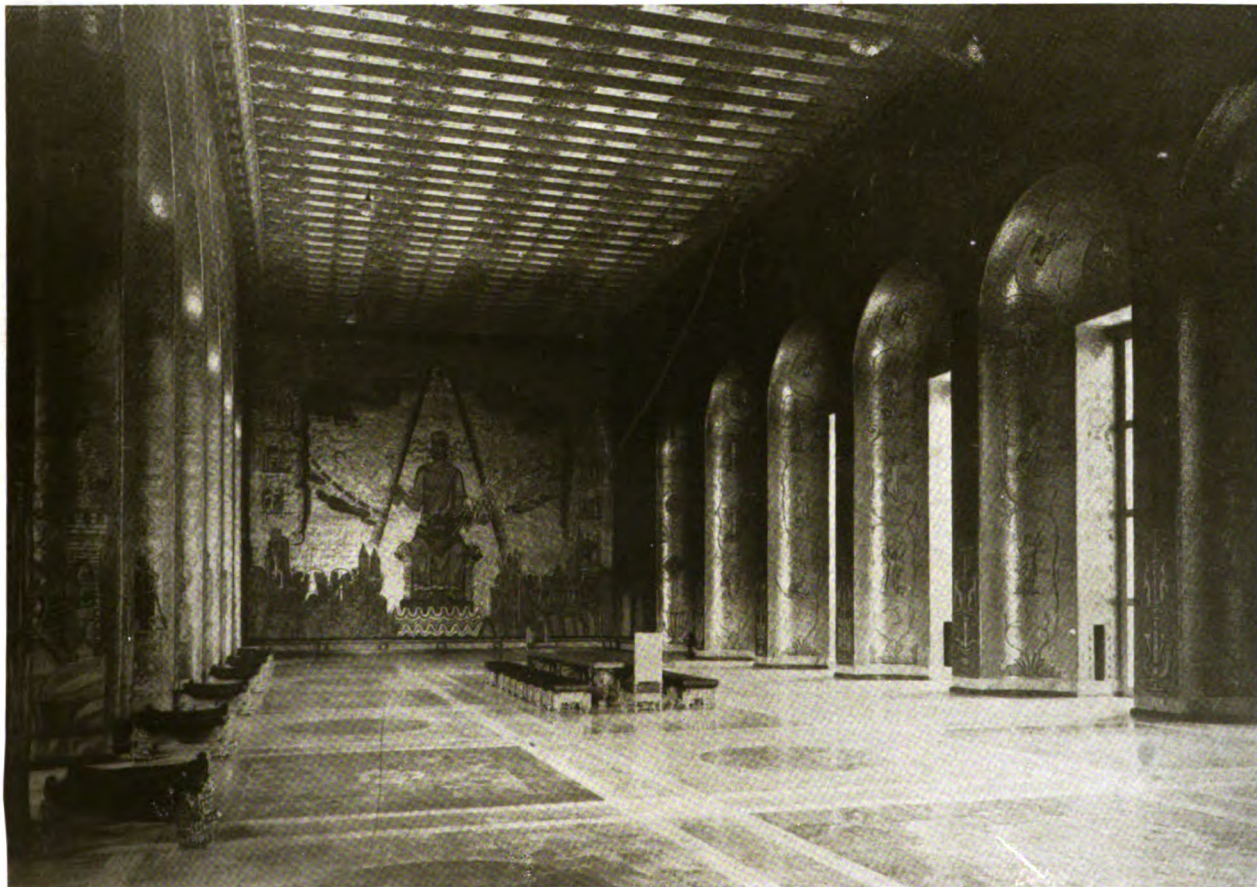
DETAIL OF FIGURE OF ST. AMBROSIOUS
ST. LOUIS CATHEDRAL, ST. LOUIS, MISSOURI
BARNETT, HAYES AND BARNETT, ARCHITECTS
PROFESSOR A. OETKEN AND FELIX BAUMHAUER, DESIGNERS



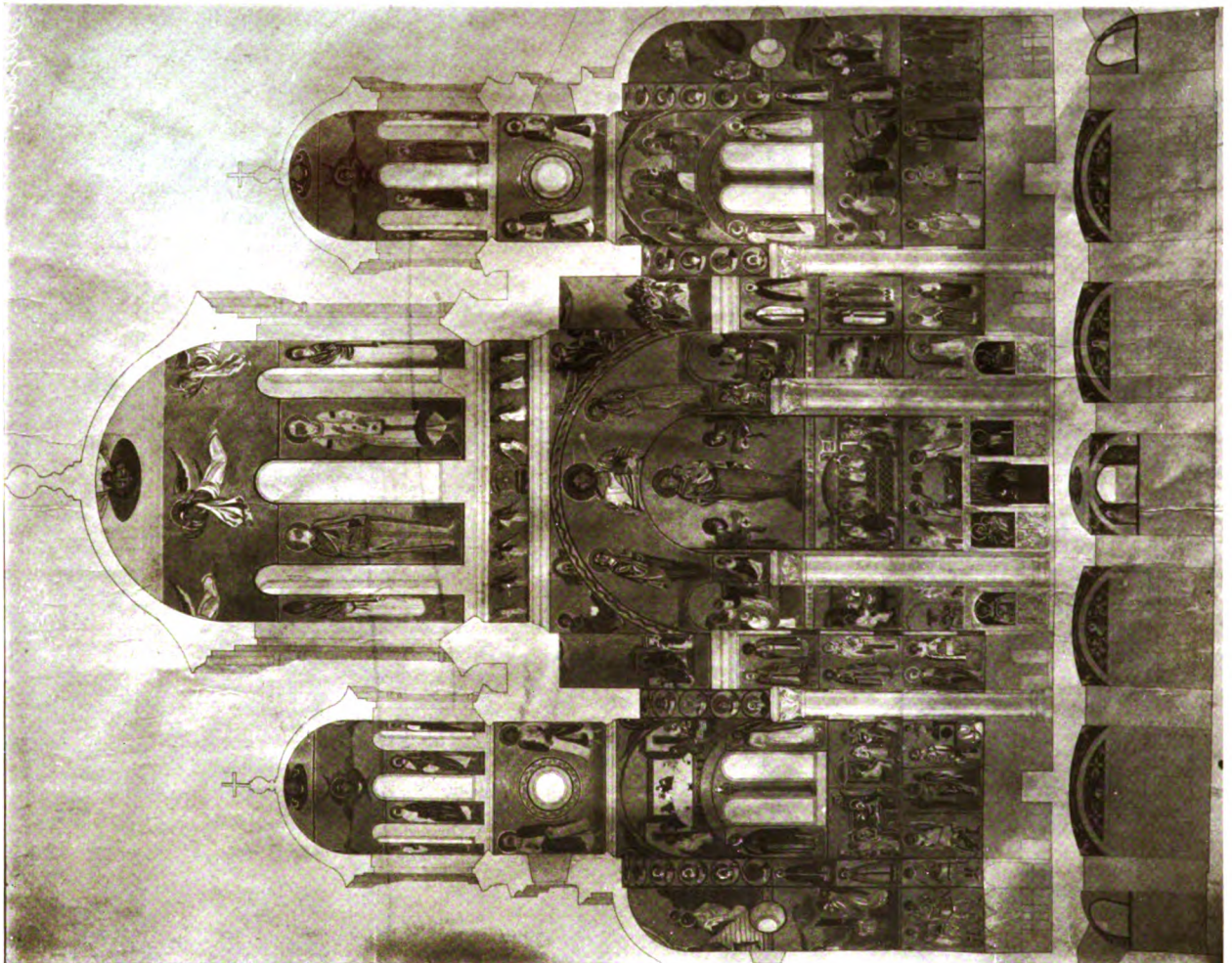
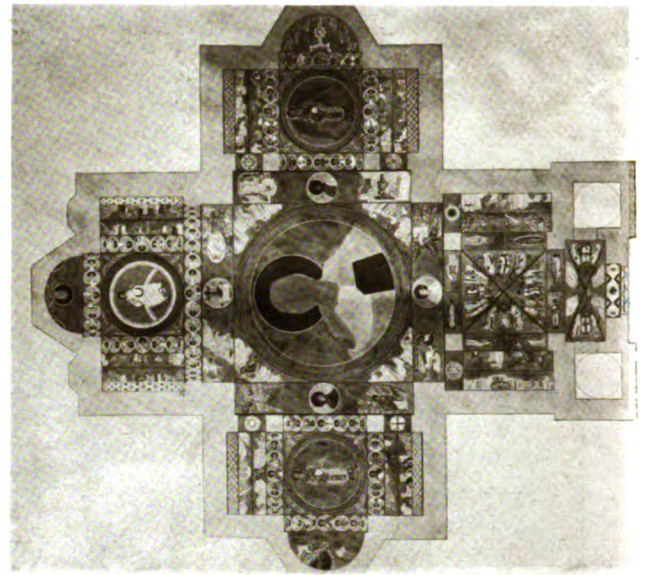
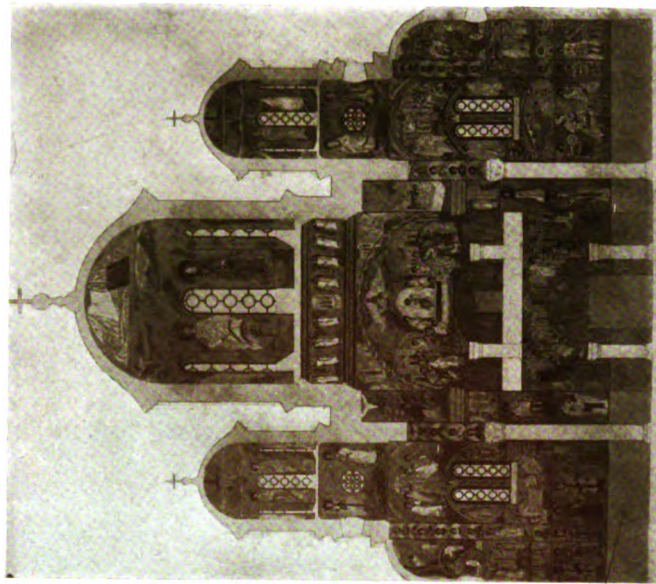
CHAPEL IN CHURCH OF THE HOLY REDEEMER, DETROIT, MICHIGAN
DONALDSON AND MEIER, ARCHITECTS
RUDOLF SCHEFFLER, DESIGNER ::



SWIMMING POOL IN THE ADMIRALSPALAST, BERLIN, GERMANY
 F. A. BECKER, DESIGNER :: :: :: :: :: :: :: :: :: ::



"GOLDEN HALL" IN NEW CITY HALL, STOCKHOLM, SWEDEN
 RAGNAR OESTBERG, ARCHITECT :: :: :: :: :: :: :: :: :: ::
 EINAR FORSETH, DESIGNER :: :: :: :: :: :: :: :: :: ::



SECTIONS AND CEILING PLAN IN CATHEDRAL OF TOPOLA, NEAR BELGRADE, SERBIA
R. SMIRNOFF, ARCHITECT



ABOVE: CHRIST CARRYING HIS CROSS :: :: :: :: ::

LEFT: DETAIL OF FIGURE OF A SAINT :: :: :: ::



McGINNIS AND WALSH, ARCHITECTS :: :: :: :: ::
 BOUCEL LAFARGE, DESIGNER
 BELOW: ALTAR PANEL IN CRYPT OF NATIONAL CATHOLIC CATHEDRAL, WASHINGTON, D.C.

BELOW: DETAIL OF SAINT'S HEAD :: :: :: ::



MOSAICS IN THE CATHEDRAL OF TOPOLA, NEAR BELGRADE, SERBIA
 R. SMIRNOFF, ARCHITECT :: :: :: :: ::



BAPTISTRY OF ST. MARKS CATHEDRAL, VENICE (12TH CENTURY)

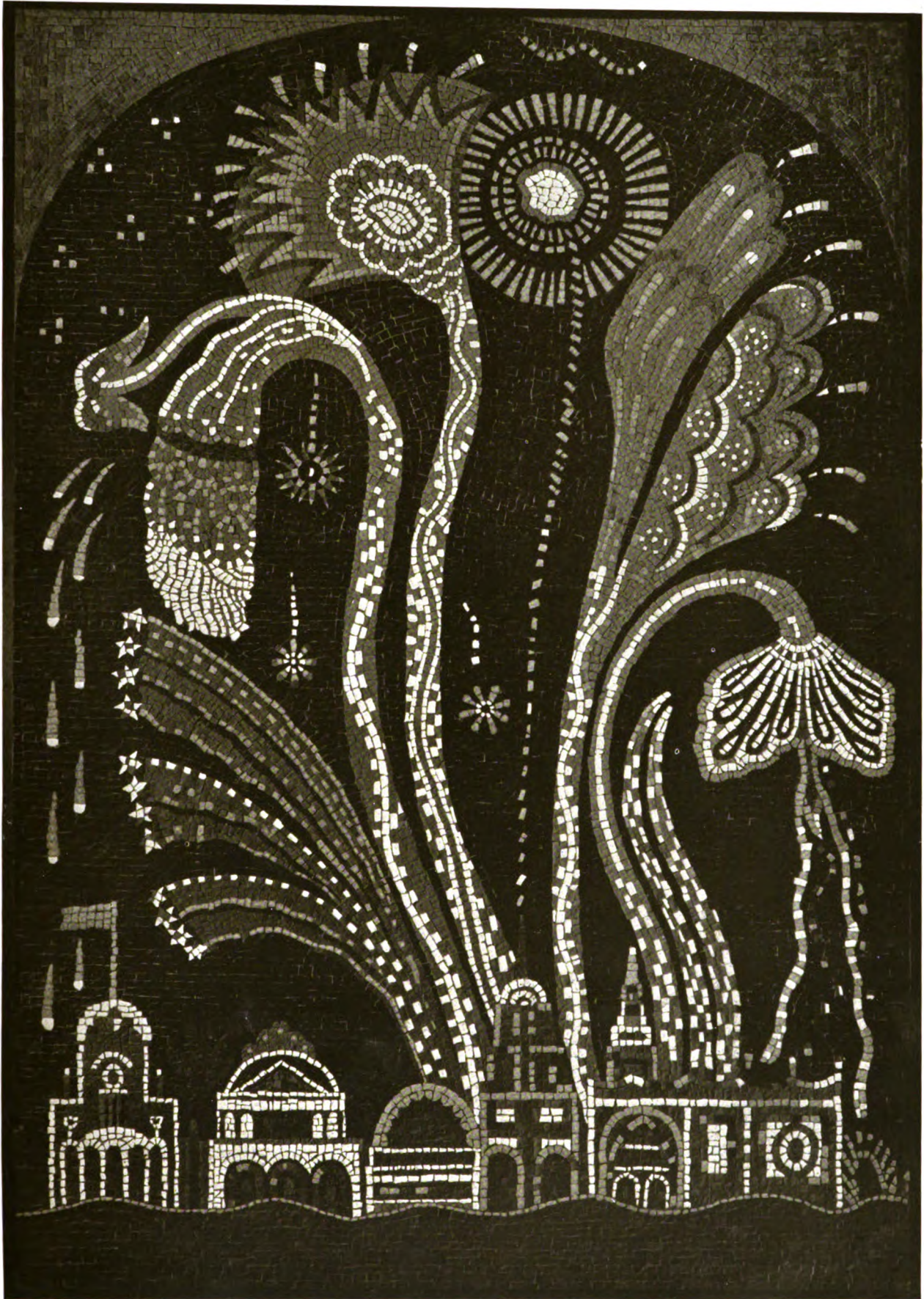


MOSAICS IN CATHEDRAL OF AIX-LA-CHAPELLE, GERMANY (BUILT BY CHARLEMAGNE AS HIS TOMB IN TENTH CENTURY). PROFESSOR HERMANN SCHAPER, DESIGNER FOR RESTORATION OF MOSAICS

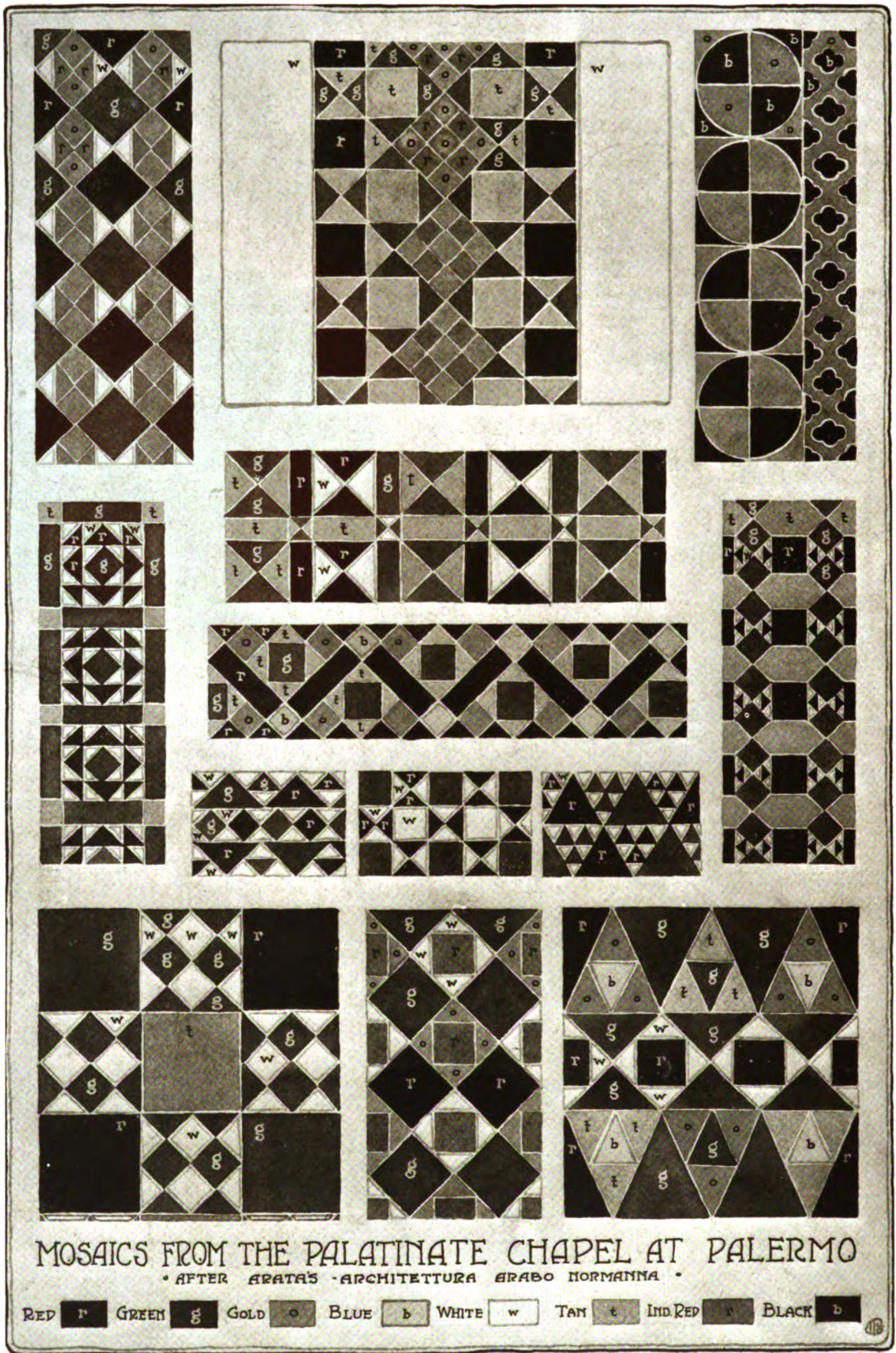


A Distinctive American Architecture

No. 4 of a series suggest-
ing how color can be
utilized to secure such
distinction.



DECORATIVE MOSAIC PANEL FOR AN OVER-MANTLE
ADOLFO BEST-MANGARD, DESIGNER :: :: :: ::



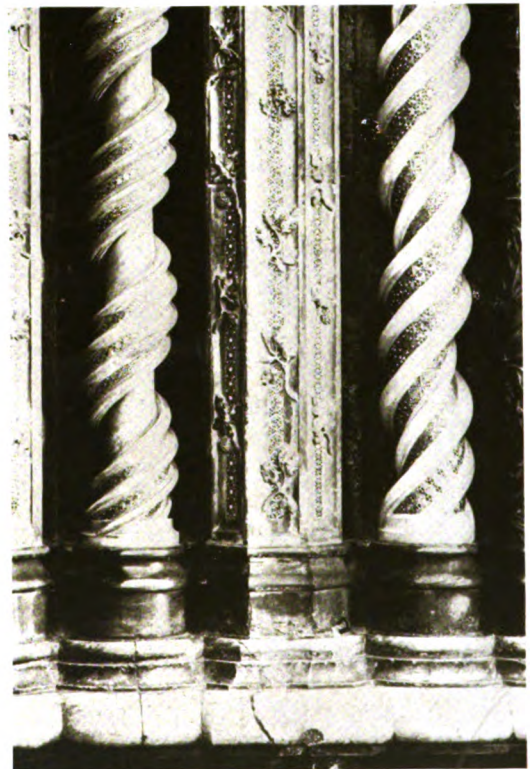
MOSAIC PATTERNS FROM THE PALATINATE CHAPEL, PALERMO, SICILY



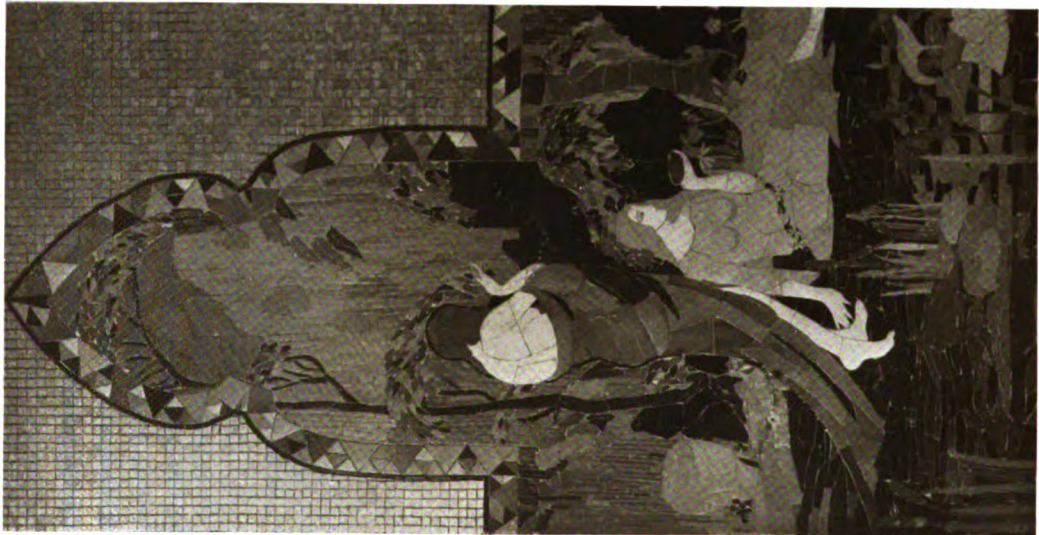
SUN CHARIOT FROM
GOLDEN HALL, NEW CITY
HALL, STOCKHOLM,
SWEDEN
RAGNAR OESTBERG,
ARCHITECT
EINAR FORSETH,
DESIGNER



COLUMNS IN CLOISTER OF BENEDICTINE
CONVENT, MONREALE, SICILY :: ::

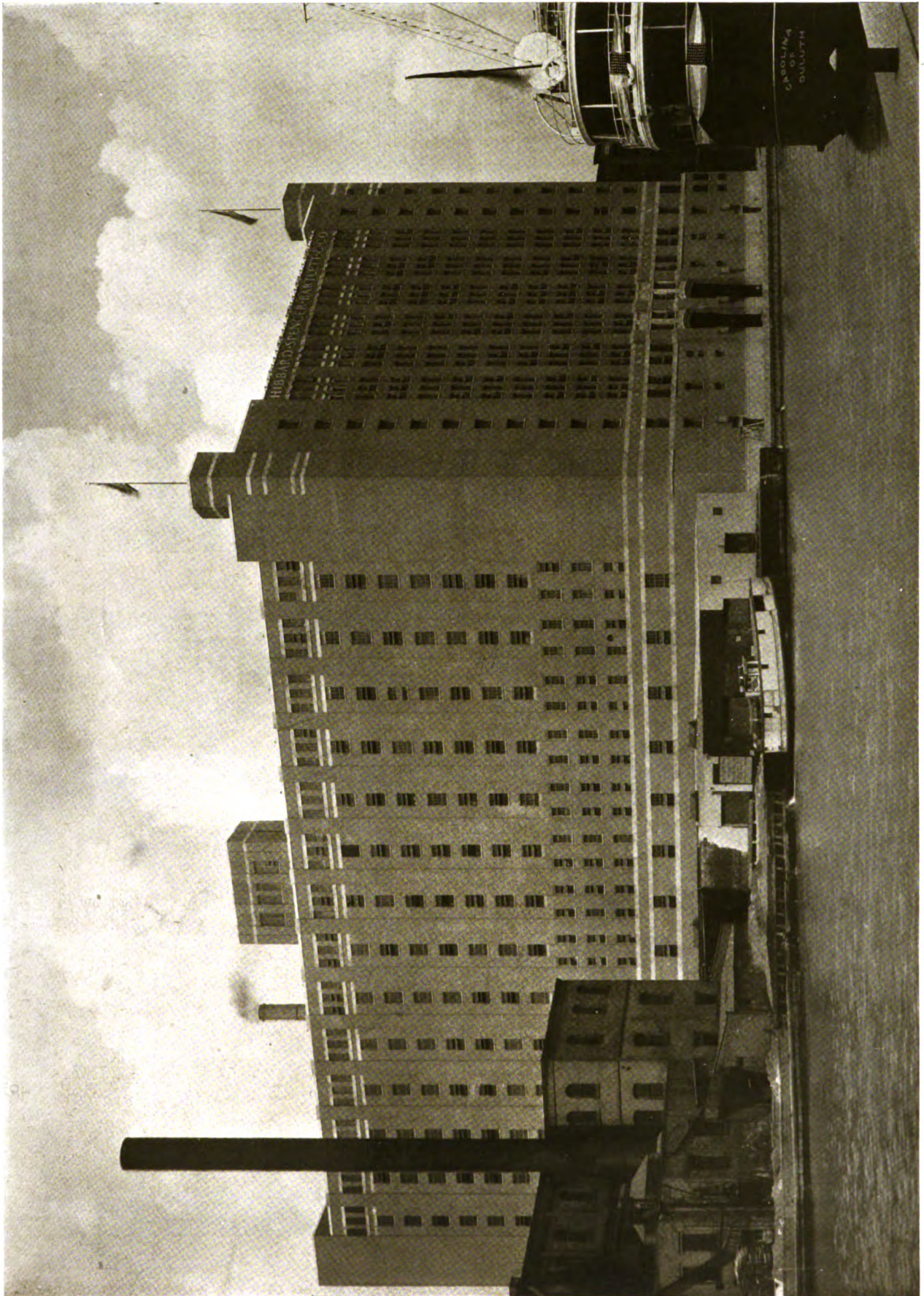


DETAIL OF COLUMNS IN FACADE OF ORVIETO
CATHEDRAL, ITALY :: :: :: :: ::

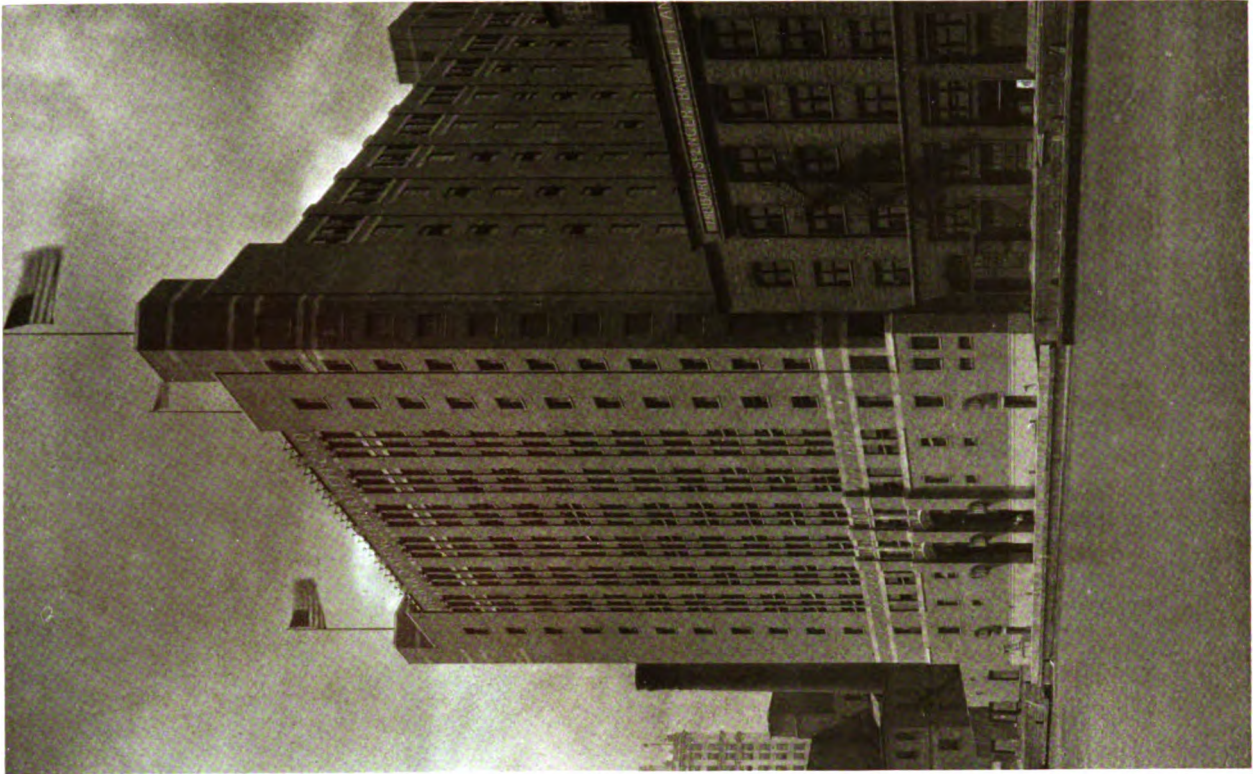


MOSAIC WALL PANELS FOR AVALON THEATRE, CHICAGO
 JOHN EBERSON, ARCHITECT
 DESIGNED AND EXECUTED BY CHARLES L. MORGAN AND ASSOCIATES

NOTE: This is one of a series of imposing panels executed in the modern process perfected by the late Professor Newton A. Wells, of the University of Illinois, with whom Mr. Morgan was associated. It is quite the most important example of this process, made possible through co-operation of Mr. Eberson, the architect, and Mr. Morgan.



BUILDING FOR HUBBARD, SPENCER, BARTLETT COMPANY, CHICAGO
GRAHAM, ANDERSON, PROBST AND WHITE, ARCHITECTS :: :: ::



DETAILS OF RIVER FRONT
BUILDING FOR HIBBARD, SPENCER, BARTLETT COMPANY, CHICAGO
GRAHAM, ANDERSON, PROBST AND WHITE, ARCHITECTS

surfaces, these smaller works have also a beauty and an intrinsic value that is seldom attained in other materials.

Without considering any but ecclesiastical buildings, it is evident that another revival of the mosaic art is taking place. This country, though young, has passed the age of temporary structures, and churches and other buildings that are now being erected are

built of stone, steel and concrete, and such well-nigh imperishable materials. For such buildings, it is only logical for the architect to look around for a worthy and equally permanent decoration. This and a gradually accumulated appreciation of the great decorative value of mosaics are the reasons that assure us that the United States will have its full share in the present revival of this old art.

Mosaic, Its Material and Technique

By GERDT A. WAGNER

MOSAIC has often been called the "*ars eterna*"; and indeed what technique could be more enduring? Fashioned of small cubes of a solid material, mainly stone or glass, and embedded in cement mortar, a mosaic will stand all the ravages of time and keep its sparkling color, design and beauty. Although one of the oldest means for decorating the walls, ceilings and floors of buildings, mosaic has again become a living art and offers us all the charm that hundreds of years ago it offered to the people of Pompeii and Rome, of Venice, Ravenna and Constantinople.

For centuries the art and technique of mosaic had been almost forgotten. With the beginning of the Renaissance, oil painting was invented and gradually brought to rich development at the cost of the earlier forms of decorative art, such as mosaics. Thus the materials and technique of this ancient craft had to be invented almost anew. This was accomplished in the second half of the Nineteenth Century. And, although this new era of mosaic art is hardly fifty years old, the results achieved are so remarkable that today we are in a position to produce mosaics equal in color, richness and beauty to the famous works of Byzantine, Ravenna and the Early Christian period.

The Materials

The mosaics of that time, like the decorative mosaics of today, were mostly executed in small cubes of a special glass, manufactured exclusively for this purpose. This glass is not translucent but entirely opaque, similar to enamels. The color goes all the way through, so that the glass may be broken up into any number of smaller pieces, as required by the mosaic artist to work out his design and color scheme.

While the glass mixture is still in the oven certain metals are added to give the desired color. Often it is difficult to get a certain tint, as the temperature of the oven, the chemical by-products of the coke used for firing, and the process of cooling are important factors in determining the final shade of the finished glass. Therefore many trials must be made before the desired shade is obtained. For this reason a mosaic studio is obliged to carry in stock thousands of different tints of glass tesserae, ranging from dark to light, so that the execution of the mosaics always can proceed expeditiously.

As mentioned, the glass must be cooled with great care. As a result of this special cooling process, the glass, when broken with a specially formed hammer and chisel, (Fig. 1) will split easily and form those



FIG. 1. CUTTING THE MOSAIC GLASS.



FIG. 2. BLOWING OF THE MOSAIC GLASS.



FIG. 3. MAKING THE WORKING DRAWING.

uneven, shell-like surfaces which bring out the beauty and sparkle of the material, so typical of the glass mosaics of the Early Christian period. All cutting is done by hand, no machines of any kind being employed.

While the colored tesserae are uniformly tinted throughout, this is not the case with the gold and silver mosaic glass. In this special material a very thin layer of gold, silver or platinum is smelted in between two layers of glass. For this purpose "balloons" (Fig. 2) are blown of translucent glass in order to make a "cover" glass a hundredth part of an inch thick. The gold or silver leaf is affixed to this thin glass and a second layer of hot glass is then pressed on to the metal leaf. Fusing with the thin "cover" glass through the metal this second layer thus embeds the metal leaf entirely and preserves it against the destructive influences of air, acids and change of temperature. By making the thin "cover" glass in different colors, various shades of gold and silver mosaic glass may be obtained, ranging from bluish and greenish gold and silver to warm yellowish and reddish tints.

Recently it has become possible to make this gold and silver glass fully translucent so that it can be used for leaded glass windows. It produces a fine yellow or silvery light during the day and wonderfully colored gold and silver effects at night, by reflection of the artificial illumination. Thus the stained glass window, which in the past has produced a dark and disagreeable interruption of the wall surface so soon as the daylight vanishes, becomes a valuable decorative feature through use of this special glass.

In addition to the glass tesserae, marble (for floors), shells, mother of pearl, and even pebbles and tiles are often used for mosaic decoration. None of these materials, however, has the possibilities and qualities of the glass tesserae, as their generally even surface and restricted range of color impose a limitation most difficult to overcome. They lack the sparkle and life of glass mosaics and, besides, are

much more subject to the influence of weather, dust and dirt than glass which, because of its hard surface, always can be easily cleaned.

Design and Cartoon

The execution of a mosaic involves the combined efforts of the artist and the craftsman. Centuries ago mosaics may have been done by the artist himself. But in those periods of early craftsmanship time meant but little. Today the well-organized mosaic studio with a large number of trained craftsmen who work under the direction of a special artist must make the actual mosaics. The artist confines his work to the making of the designs and full size cartoons.

Color is of the utmost importance in planning a mosaic decoration. Knowledge of color and of the effects which can be obtained with the material are often of greater importance than the actual design and pattern. In designing a mosaic decoration, the artist should never forget that his ideas are to be carried out in small tesserae, color units of a special brilliancy and effect, which must be used in a way entirely different from the technique of oil painting or fresco. Mosaic is not painting; and a mosaic resembling a painting is a bad mosaic; just as bad as is the reproduction of a wood carving in bronze or a photograph in painting.

When designing a mosaic the artist should know the technique, its possibilities and limitations. Too many details do not help any piece of wall or ceiling decoration, much less a mosaic, where each small detail has to be carried out in smaller tesserae, thus producing an undesirable effect of clumsiness and limit. The size of the individual tesserae must be in key with the design and ought to correspond in an organic way with the rest of the tesserae.

The balance of detail and wall space, the use of contrasting colors, especially the composition with dark and light shades, black and white, gold, silver and mother of pearl, have never been brought so near to perfection as in the mosaics in Rome, Ravenna,



FIG. 4. SETTING THE STONES ON THE PAPER CARTOON.



FIG. 5. THE MOSAIC PIECES ARE PUT TOGETHER ON PAPER TO GET THE EFFECT OF THE FINISHED MOSAIC.

Venice and Sicily. Any modern artist should study these basic principles of the ancient mosaics before making a design or cartoon for a mosaic, in order that he may master the spirit of a technique so different from any kind of painting.

The Working Drawing

After the artist has finished his cartoon to the satisfaction of the architect and owner, a working drawing (Fig. 3) is made by tracing the cartoon in its principal outlines and surfaces and rubbing this tracing onto a heavy sheet of detail paper, thus producing a reversed picture of the original cartoon. This working drawing is made under the direction of the artist in charge of the mosaic studio, a man thoroughly familiar with the technique and schooled in the execution of the cartoons of many artists with all their personal styles and peculiarities. He also arranges the general way in which the tesserae are to be set, which should *not* be indicated in detail on the cartoon itself. The mosaic artist should have full liberty in "translating" the cartoon into mosaic and be allowed to set his tesserae as his experience and judgment dictate. Moreover, it is simply impossible to paint a mosaic and then copy it literally without achieving an entirely different effect from that intended.

When curved surfaces are to be decorated, full size models are made and the drawings laid out to fit the architecture exactly. Everything must be considered very carefully in advance as changes are more than difficult after the work is in place.

After the reversed working drawing has been finished it is divided into sections, usually not larger than two square feet, which will be convenient to handle on the working table of the craftsman and during the process of installing the mosaics on wall or ceiling. In dividing the working drawing the natural outline of the design is followed, and great care is taken that the finished work when put together again will not show any lines or indications of this

necessary process. Each part is given a number and a diagram is made of all the different parts, showing their location. Thus it is not difficult to piece the design together again, especially as the reverse side of the working drawing is criss-crossed with a pencil before being divided up, thus showing exactly how the single parts fit together.

Setting of the Tesserae on the Working Drawing

Each of the craftsmen is then given certain of these parts for execution, according to his ability, experience and training (Fig. 4). Certain men will be able to do a special class of work better than their fellow craftsmen. Some have more feeling for decorative work, some for the more pictorial kind of mosaics. Others, again, are better skilled in handling the hammer and chisel and cutting the tesserae to special size, while their neighbors may be talented in executing a small, detailed design in relatively large sized tesserae in a very decorative way. Even the simplest piece of work requires well-trained workmen, for much depends on the way in which the tesserae are arranged.

For mounting the single tesserae on the paper the craftsman uses a special paste made from flour which may be easily softened after the finished mosaic is set in place and the paper has to be removed. While doing this work the craftsman has the colored cartoon always before him. All around him the tesserae needed for his special work are arranged within easy reach. Hammer and chisel are to his left so that he may give any tesserae the form desired.

The colors to be used are chosen in advance by the artist in charge of the studio. He selects them from a tray containing samples of every shade in stock. Often three to six different shades are used to obtain a certain color effect. Even for simple background, be it a colored or golden one, six to eight different shades are mixed to give life and interest to the simplest parts of the design. All this time the artist in charge has to see that the craftsmen, working



FIG. 6. INSTALLING THE MOSAIC IN PLACE.

together as a unit, co-operate perfectly and use the same technique, colors and size of tesserae. Each single part, as soon as finished, is laid out on the floor (Fig. 5) to compare it with the balance of the work or to change it if any fault is found.

As the tesserae (with the exception of gold and silver) are colored all the way through, the reverse picture shows very nearly the full effect of the finished mosaic, taking into consideration the possibilities of toning down the general color scheme by using light or dark cement mortar for the installation. The mortar in the spaces between the tesserae is a very important factor which will enhance or lessen the effect of a mosaic. This has to be considered in advance, as also the spacing of tesserae, and has to be handled most carefully. A difficult task is to judge the effect of the gold and silver from the reverse side. Especially if different tints of gold or silver are being used it is almost impossible to judge of the effect without making some samples first in which the metal glass is shown with its metal side towards the observer. When everything is satisfactory the mosaics are shipped, set on paper, to the building where they are to be installed.

The Installation

The installation is another difficult and important process. The sub-construction must be reliable, strong and exact in size. Brick and concrete walls, also hollow tile or a metal lath construction may be used for mosaics. Great care must be taken that no water can get into the wall or behind the mosaics. Exterior mosaics have sometimes been destroyed by carelessness on the part of the builder, as frost or



FIG. 7. SILHOUETTE MOSAIC FOR WALL DECORATION. THE BACKGROUND IS PLASTER.

cold weather loosens the mortar and that done, the mosaic is lost beyond repair. However, sunshine, frost or rain cannot harm a mosaic so long as the sub-construction is built properly.

For setting a mosaic three coats of plaster are first applied to the wall. None of these should contain any gypsum or artificial plasters, such as are being used generally in buildings. Clean, sharp sand, gray Portland cement and lime are the only materials necessary. For inside mosaics little cement is used (a mixture of 3 parts of sand and one each of cement and lime), whereas fountains and outside mosaic are set in a mixture rich in cement. The first two coats of plaster are usually applied by others than the mosaic craftsman. If the sizes are accurate (which very seldom is the case) an allowance of one-half inch from the finished surface of the mosaics is sufficient for the last coat of cement mortar in which the mosaic tesserae are embedded.

The installation itself is done by men specially trained for this work. After the first two coats of plaster have been applied it is best to wait a week or ten days to let them set and dry. Then the final coat is applied to that part of the surface to be finished first. The same mixture of mortar is rubbed into the joints between the tesserae, still mounted on paper, and the section is put in place and tapped with a wooden block until it is certain that no air spaces remain between the last coat of plaster and the tesserae (Fig. 6).

After a certain quantity of mosaics has been put in place no more should be put on the same day, as the part installed has to be finished entirely before the cement mortar hardens. The paper is then moistened until it is easy to remove, the joints between the parts worked over, missing tesserae replaced, the



FIG. 8. FOUNTAIN OF MOSAICS IN THE "GROSSE GARTEN", DRESDEN, GERMANY. PROF. P. POELZIG, ARCHITECT.

gold and silver tilted so as to give the best effect, and finally the whole is cleaned.

Thus the work progresses day by day until the entire surface is covered. A final cleaning with *hydrochloric* acid and water, using stiff scrubbing brushes, will remove the last objectionable reminders of mortar and dust and the mosaic is finished. Sometimes the cement between the tesserae of an entire surface is gone over with dyes; at other times certain parts only in order to bring them out or tone them down.

A few words remain to be said about the so-called "silhouette mosaics" (Fig. 7). Basically, the technique is the same. However, the design only is executed in mosaics, whereas the background and often even parts of the figure work are left open and

filled in with special colored mortar, which is as *water-and-color fast* as it is possible for mortar to be. The effects thus secured are entirely different from the usual mosaic and are especially suitable for residence work, theatres, office buildings, and the like.

Regarding the acoustical properties of mosaics, many doubts have been expressed as to the advisability of its use in auditoriums on this account. However, a mosaic executed in the technique described above will actually have all the essential properties which make for good acoustics, as the mortar between the tesserae, the varying angles at which the tesserae are set, and the rough surface of the individual units furnish an acoustic medium fully equal to that of any ordinary wall surface.

Architecture as a Problem in Form and Color

By H. VAN BUREN MAGONIGLE, F. A. I. A.

WE are to discuss *Architecture as a Problem in Form and Color*; that is what all architecture fundamentally is—a problem in form and color—but this is so deeply overlaid nowadays by deposits of other matter, so obscured by accretions sometimes relevant, sometimes not, that these essentially simple terms upon which the entire art of buildings, as an art, is based, are frequently lost sight of in our daily practice, and it is, therefore, well to restate them from time to time lest they be altogether forgotten and building as an art, vanish utterly away. Happily, architecture is a living art in America; like all living, growing things it changes under our eyes; scarcely do we say "It is thus" than we must say "It is no longer so; it is thus." Many of these things are superficial—surface differences, like the changes of complexion a lady might consider appropriate for exposure to daylight or night light, the structure under the complexion remaining the same. There are changes of structure going on also of course, slower to reveal themselves as of real import. The terrific pace at which the popular architect is obliged to practice, with the pressure of the practical and technical and mechanical aspects of his work, forces these latter to the fore; and leisure for the study of the appropriate form and color that alone can make a thing of use into a thing of beauty is all too often lacking.

Some persons may question the validity of our

*EDITOR'S NOTE: Delivered as the opening address of a symposium, held at the Architectural League of New York. As president of the New York Chapter American Institute of Architects, Mr. Magonigle presided at this meeting, the proceedings of which were published in the *Journal of the Institute*, March 1927. Reprinted by permission.

thesis altogether, and say that architecture is primarily a sociological problem, or primarily an economic problem, or a structural problem, or primarily a problem in anything else you please, and deplore a reversion to anything so old-fashioned as a return to the old, old spirit in which some of us believe the masterpieces of our art must have been conceived and produced. I can only say that this afternoon form and color are to have their innings and cordially invite such persons to make the best of it.

We shall deal with architecture from the point of view of the creative artist, not that of the collector, compiler and arranger of forms hoary with age out of the dear, dead past, sanctified to our daily use by old custom; not in any sense shall we consider "*Architecture as a Problem in the Best and Easiest Way to Crib From the Historic Styles*" or "*Architecture as a Problem in Revenue Production With Some Reflections Upon Cost and Rent Roll*;" nor shall we prate about "*Architectural Beauty as a Financial Asset to City, State and Nation*." These themes are all beside our mark. We may take it for granted that if there is money in it someone will find it out. And we shall take it for granted that any city, state or nation that does not cherish and foster beauty for its own sake as a spiritual necessity is not only poor but poverty stricken, in something more precious than money.

As we proceed you will see that our approach to architecture is that of the artist whose joy and whose duty is to confront the problem I have stated in a spirit of open-minded inquiry and high resolve to create a work of beauty through a harmonious disposition and use of form and color, quite careless

whether that disposition and that use have the sanction of either fashion or thoughtless habit; to find a just balance and relation between all the elements that may be summoned to the service of beauty, in architecture, in painting and sculpture, in the divers arts of design and craftsmanship, and in the living and the inert forms with which the landscapist works.

We are to forget for an hour or two the architect as a professional man with all the cares and pre-occupations that beset him on that side, and remember him only as an artist with a problem in form and color to solve. * * * * *

When a man sits down with a new building to design and squares his elbows to the task; when, after he has begun to feel that he has so moulded the requirements of the program in accommodation, circulation, and the like, that they show promise of satisfaction in a practical sense, he draws a deep breath and proceeds to have some fun—and this fun, this pleasure, consists in expressing the functions and purpose of the structure by the blacks of voids, the whites of solids, and the greys of ornament with the accent and accompaniment of color; he passes his resources in review; in pigment or ceramics, or burnt and colored clay, or marbles veined and tinted, or mosaics in glass, marble, stone or tile, in the black and silver traceries of wrought iron, the gleam of brass, the mellow resonances of deep toned bronze, the glory of stained and painted glass, the fine austerities of stone. The gold and brown of leather tooled in silver and glazed in splendid hues call to him for chair-back and screen, for walls, and the backs and sides of friendly books; grave tapestries and gay fabrics in silk and wool beckon him and press their claims to notice, with the grain and texture of beautiful woods mellow in tone and enriched with lace-like carvings. Floors, walls and ceilings spread before him their infinite possibilities of treatment. The wizardry of light itself is his to wield as he will. The sumptuous and the austere, the delicate and the rugged, the exquisite and the ugly, are his to summon out of that dim limbo where the spirit of creation lives and moves and all obscurely works.

What a challenge to the imagination! How humble he must be, and how studious in choice and treatment, in the presence of such riches; to control them, to avoid equally the bizarre, the noisy, the vulgar, or the dry, the juiceless, the lifeless. What superb instruments are his to play upon, what an orchestra to submit to the baton of his conductorship! Awake to the sense of his resources the architect moves steadily toward the use of real color; at long last we are freeing ourselves of the Puritan oppression, the bleak and grim and joyless doctrines that have weighed down the American genius and have had their chilling effect by contact upon even those whose open joy it is that no drop of Puritan blood creeps through

their veins. Better far to risk the blatant, the vulgar and discordant, than to lose through timidity a rich and warm and colored frame and background for our lives. For, after all, time with his servants, is the great harmonizer: the sun, the air, the mists and the rain, the frosts and snows and the good old dirt, soften and blend and reconcile all tones in an ultimate harmony, and who knows! our worst mistakes may become by their kindly alchemy, our best successes.

How well prepared is the average young architect to deal with a problem of such complexity, with material of such diversity? Not very well I fear. The education of the artist is ridiculously inadequate and incomplete and until it is placed and maintained on a better and higher plane we shall continue to be less than half trained. The plight in which the average architect finds himself when he is confronted for the first time with the necessity of using color or sculpture is one of exquisite embarrassment, pathetic, unnecessary because avoidable. The mere rudiments of these two principal sister crafts, to say nothing of the techniques of bronze and iron and textiles and ceramics, are almost unknown to him. He has been taught plan perhaps, design in the general sense, perhaps; he has a dim idea of detail, not as light-and-shade-producing elements of design but as Greek *akroteria*, Roman capitals, Romanesque grotesqueries, Renaissance *rincaux*. He shies violently at the thought of using animal or figure sculpture, usually because he can't draw them and what he cannot draw he avoids or ignores. As for color, if it became necessary for him to mix a tone for a house painter or direct the man how to get it, he would probably pass away; and of the mysteries of preparation, of undergrounds, of glazing, or of the higher mysteries of color harmony or contrast, he is as innocent as an unspanked child of the difficulties and diversions of life. His time at school or college or office has been so taken up with the study of what we call architecture that these matters are a closed book to him, despite the fact that his elders for these many years should have been perfectly aware that he should be prepared to meet them. How, without such preparation, can he be expected to be the director of a work of form and color he must be if he calls himself by that high title, Architect! How can he stamp every piece of his work with that character which makes it unmistakably his and which expresses his vision of form, his taste in color, his predilections in tone and key and value!

Sooner or later a man has to face the question whether he is to be an architect, that is to say a constructive artist or a business man. That is the hour when he must weigh his own gifts in the balance and choose his course. The man who has an artistic bent will do well to remember that he can hire better business men than he is to attend to that side of his work. And the business man, alas, may also reflect

that he can buy designers by the score, to whose work he can sign his name and upon whose talents he may pose as an architect before the world.

Also, may it not be that he might make a better landscapist or sculptor or painter or craftsman than he would either architect or business man if he ever had the chance to find out? Consider the training of the artist in the days of the Renaissance in Italy. Frequently, usually, apprenticed to a goldsmith whose craft embraced all the arts of design, a lad entering the *bottega* of a master goldsmith would learn to draw, to grind and mix colors, to paint, to model in wax and clay, to set gems, to work in gold and silver and enamels, to master the technique of *repousse* and damascening and the secrets of bronze casting and chasing; to carve wood and inlay it, decorate it and gild it, learn the principles of mechanics and engineering as they then were known, and the elements, at least, of architecture. The lines of specialization now so sharply drawn were quite unknown, and yet there was just as much to learn about art then as now. No architect was jealous of painter or sculptor if one should design a building. He would have held them untrained if they were not competent to do so. A man became with such a training, an all-round, thoroughly equipped artist. Inevitably his principal bent declared itself later and he devoted himself more or less closely to one or two or three of the fields of artistic creation.

To my mind, a work of architecture is as personal a creation as any work of sculpture or painting, should be so complete a thing, so much all of a piece, so much the creation of one mind, so entirely the expression of an individual impulse, in which the sculpture is one with the architecture and the architecture is modulated to meet the sculptural form in harmony, in which the color is as necessary to the effect of the structure as the stones of which it is built; that I look back with longing and regret toward the training of the artist of the Renaissance. Some architects are making essays in sculptural form and in color in the hope of getting a result closer to their vision than seems possible otherwise. One catches echoes of the hilarity, or scorn, or indignation, with which such essays are regarded by some of our brothers of the brush and chisel. But whatever their opinion of such efforts, they must at least concede the architect's indefeasible right to get his work done in the way he wants it done. Charles Whitaker said to me the other day, "I am not interested in *who* does architecture. Let the plumber do it if he can. I only ask that it be good architecture." Our friends the painters and sculptors may retort "Nor are we as to painting and sculpture—we only ask that it be good sculpture, good painting." As to which may it not be said that if it does for his building exactly what the creator of the structure wants, then and then only is it good sculpture or good

painting—for that particular purpose. It might be, as sculpture or as painting, beautiful in itself as an unrelated work—but if it is not architectonic and in perfect harmony with the building, it is not good sculpture or good painting. And the architect, the creator, and he alone is the judge, and his the disappointment and the sorrow and the pain if he fails to make a beautiful thing of the whole. Trying to be Michael Angelos? Yes, let us all try to be that composite of fire and energy and lofty visions, of vast dreams, of distinction of soul, sculptor, painter, architect, poet—if we can. In such a union of qualities and of aptitudes will be found in my belief, the masters of the future in the art of architecture. * *

Our traditions in architectural color were given their earlier direction through a number of influences—in New England particularly by the Puritanical dread of anything beautiful or warm or joyous in this present world, reserving all the fun for the next; in Pennsylvania by the self-imposed restraints of the Quaker sect; and further south, in the more genial atmosphere of the Cavalier settlements, by the taste prevailing in France and England from the early 17th century through the 18th—a taste for shades of white and pale tones of color in architectural decoration; the 19th century may be said to have been without any convictions in the matter until toward its close when our eyes were turned toward Italy and color as color began to interest us. These traditions made us timid about it, and it is only within a decade and under the constantly shifting direction of feminine taste that the frame of our daily life has become gayer, chiefly, I think, through the textile crafts; and color is flooding upon us pure and fresh and strong. The simple and primitive notes of Southeastern Europe seem to awaken responsive chords here. I am glad to see it even when it is not very well done.

As the leader of this sextet I must not make the important noises—but just as one sees the conductor occasionally take up his violin and play a little obbligato, just so I venture to make myself heard on all the matters we are dealing with as a group. Therefore may I throw out the suggestion; that there is a scale of color as well as of form, and that this principle is not always either known or observed by either painter or architect; a tone that in a tiny boudoir would be tender, subtle and intimate, would be bleak, chalky and washed-out in a great audience chamber. Another: that for every building we should adopt a key—light and airy and graceful, rich and full and dignified, or majestic, or austere, and hold to that key throughout both in form and color; and it is obvious that if austerity is the note of the architecture, the airy and graceful note in color is quite out of place—and here is where the guiding hand of the architect is sorely needed—and here is where, if he be not com-

petent to direct the entire work, there will be a lamentable disharmony.

One sees many violations of these two simple principles, just as one sees evidences of ignorance or imprudence in the kind of color it is possible to use successfully out of doors, as well as the way to use it—as to which, since I must be brief, I would remind you that the best work of the Della Robbia family is the earliest when they worked in two colors only, white and blue, the relief all white, the backgrounds all blue; and that as the sons and nephews began to improve upon papa and the uncles and use many colors and particularly to color the relief, their work got worse and worse. It seems to me this episode in the history of art indicates an entire system of design in the joint use of form and color.

May we not look forward with hope to a revival of the use of color in sculpture? The undoubted fact that horrors will supervene should not restrain the hand of the true artist. It is wonderfully beautiful, and very humanizing, when it is done as, for instance, Mr. Herbert Adams does it. Pure form seems to puzzle and disturb many people who miss the usual color, and repels them from sculpture. Here again, as in the union of architecture and sculpture, may I suggest that merely to color sculpture will not do; the form must be prepared with the definite intention of receiving color, and for the color, just as with the union of sculpture and architecture, the right convention must be thoughtfully sought and found. Infinite tact is required, for color may deny or consume or modify form to such an extent that unity is destroyed; and in the case of a group the choice and disposition of color may be such as to destroy not only the value of units as masses but the sculptural rhythm of the whole, and confuse instead of clarifying.

* * * *

As to the divers arts and crafts that fill life with so many beautiful things, I would have the young architect familiarize himself with the technique and the processes and the tools of all of them. Unless he does so he cannot design intelligently in them. He must know the possibilities and resources and limitations of all these crafts. He may learn more about the technique and the ornament proper to wrought-iron from the armor collection in the Metropolitan than ever entered his philosophy. One stroll through those marvels should banish iron eggs and darts from the diet of the architect forever.

For every craft—I am ashamed to utter such a platitude to such an audience, and yet on every hand one sees the obvious truth ignored—for every craft there is a technique appropriate to the material worked in and the tools possible to use, each producing its own beauty in its own way. And it is unintelligent to transfer the technique of iron, bent and beaten and twisted by hand and cut into with cold chisels and

files, to bronze, melted and cast in a mould. Yet it is done every day, even now, in a decade that prides itself upon its sophistication and intelligence.

The New York Chapter of the Institute intends, as a part of its new program of education, to attempt to persuade the practising architects of this town to see to it that every man in their offices visits the shops of different crafts at least every month, so that he may see how things are done. For here is one of the serious defects in the training of the architect—he does not know how things are made. We are all of us too much the office man.

As I wrote this paper I found myself straying from form to color and back again; this was, as I think, inevitable, but it does not make for clarity; I have done what I could to keep them in categories, however vague the outlines. If you have done me the honor to follow me closely so far, you may perhaps feel that we might have taken for our subject not "Architecture as a Problem in Form and Color" but "The Artist as a Problem in Education." For, all our problems and all the problems of the world come back for solution to the basic necessity for education; only by and through it shall we learn how to live and work—but I become conscious that I am again riding my hobby; so, like Lady Godiva on a certain famous occasion, I shall canter to my close.

Book Review

"THE THEORY OF MOULDINGS," by C. Howard Walker, F. A. I. A. Published by J. H. Jansen, Cleveland, Ohio. Price, \$3.50.

The purpose of the book seems well defined by the author himself in the introductory chapter ". . . . to indicate when, how, and of what materials mouldings were produced and when and how they are of value." A thorough treatment of the subject follows with references to the structural development of mouldings, the genesis of types, and the general chronological development.

Stress is placed upon the principles of design which should govern the use of mouldings, and the distinction is well brought out between those derived from wood construction and those derived from stone construction. Drawings by the author and reproductions from standard works illustrate the text.

The logical analysis and the application of principles make it of definite value to the architect, while the layman would certainly find much to interest him in the general informative material. With the comprehensive background of personal observation and study, extensive professional practice and many years of teaching experience, the author is eminently qualified to write on the subject with authority.

Alan K. Laing, University of Cincinnati

The Passing Show

Architectural Amenities and the Influence of Environment

By ARTHUR T. NORTH, A. I. A.

I THINK it was A. Trystan Edwards, R.I.B.A., who some years ago, wrote some delightful essays on the subject of architectural amenities—or shall we say etiquette? Mr. Edwards claimed the right of a community, a city block or any group of buildings, to protection from the invasion of a disharmonic. We protect the individual from annoyance by setting up certain police powers, and attempts have been made to exercise architectural police powers through the medium of “art commissions” having real authority or more often merely moral suasion. I suppose there may be some really effective art commissions but those which I have had the opportunity to observe seem to be made up of sublimed egotistical esthetes who are suffering from a publicity, uplift, and mission-to-perform complex. It goes without saying that they frown upon anything that is not blindly adherent to genteel, precedented architecture, respectable members of our old architectural families. Imagine an art commission approving Goodhue’s Nebraska State House or Los Angeles’ Public Library! It isn’t done and the world was architecturally enriched.

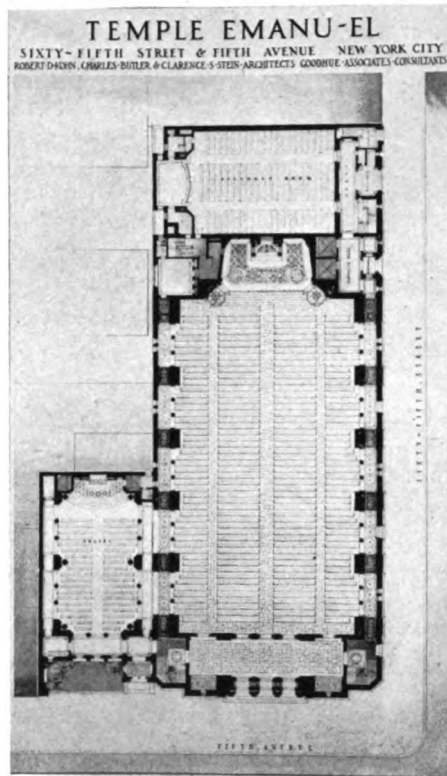
Buildings are like people; encompassing the gamut of the species from rowdy roughnecks to the dignified, made so by simplicity and beauty. The lover of humanity finds merit in all kinds of people and it is equally true that there may be merit in all kinds of buildings—at least they all, except the shoddy speculative building, aim to afford

essential shelter. Like people, they belong in groups or classes and if all of the rowdies, the loud over-decorated, the emasculated super-refined, and the “just buildings” are segregated in variety groups it is not so bad. We can ordinarily choose our places of residence or our routes of travel.

There is an architectural amenity. It is a real thing. The building in itself has not volition because it is merely the result of a conception. It is then the duty of him who conceives to observe architectural amenities, and most of them do not.

It is environment that should determine the character of the design. Whatever is the purpose of the structure, environment still has the right to claim premier consideration. Let us consider ecclesiastical buildings. We have all been bored to extinction by the purist acclaim of a certain little church that formerly faced an open square in New York City. It was the high-brow, architectural cult which then, and to some degree now, saw only perfection in the designer’s work. It might have been an architectural gem in the right environment, but surrounded by skyscrapers it was like a little white alley among a number of big pumpkins—disproportionate and inharmonious interjection.

A few years ago Alfred S. Alschuler and his associates designed the Isaiah Temple in the Woodlawn section of Chicago. It is a beauty and a joy, surrounded by a spacious lawn, trees, a dwelling house environment. (See



PLAN OF TEMPLE EMANU-EL: NEW YORK CITY.



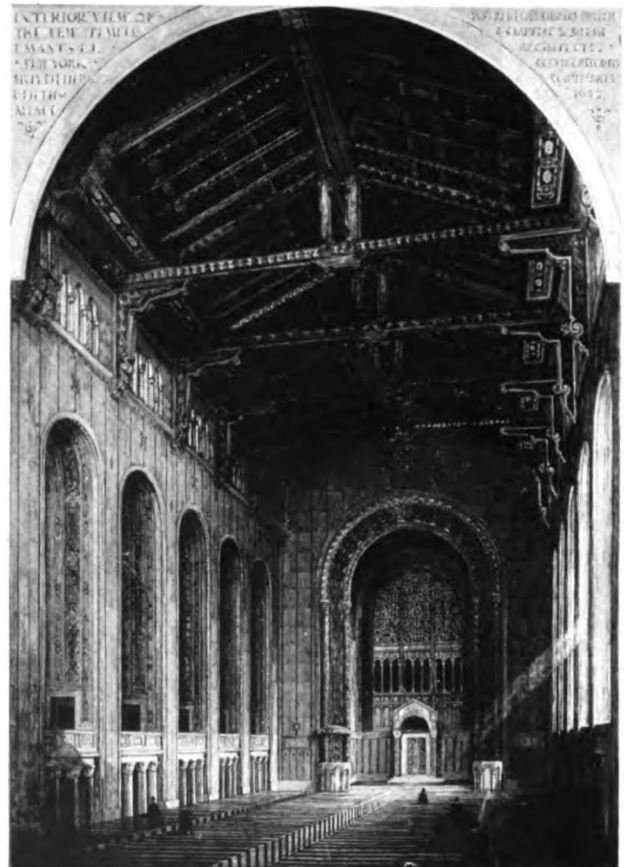
ISAIAH TEMPLE, CHICAGO, ALFRED ALSCHULER, ARCHITECT.



GENERAL VIEW



COMMUNITY HOUSE, FROM 65TH STREET
 TEMPLE EMANUEL, NEW YORK CITY
 ROBERT D. KOHN, CHARLES BUTLER, CLARENCE S. STEIN, ARCHITECTS ASSOCIATED
 BERTRAM G. GOODHUE ASSOCIATES, CONSULTANTS



INTERIOR OF TEMPLE

THE WESTERN ARCHITECT
 APRIL 1927

Western Architect June, 1925.) Its low, flat dome and horizontal lines are delightfully accentuated by the tall slender chimney, reminiscent of a minaret from which the faint, intoned voice of the muezzin would complete a picture of beauty. It is one of those structures that we return to, always eager to get our fill of its beauty of form and color. Not only is it a fine conception, its beauty is enhanced by the environment—it fits.

The scene changes to another environment. Robert D. Kohn, Charles Butler and Clarence Stein, architects associated, and Mayers, Murray & Phillip (Goodhue Associates) consultants, have designed the Temple Emanu-El to be constructed on the north corner of Fifth Avenue and Sixty-fifth Street, New York City. In this instance the surroundings are towering apartment houses with an outlook over Central Park. Concerning the design, the architects are quoted:

"The general manner of treatment of the group is an adaptation of very early Romanesque as it was used in Syria and the East and found occasionally in Sicily influenced by the Eastern and Arab invasions. The forms of the chapel show distinctly Byzantine influences, but in the design of synagogue and chapel, almost as frankly as in the community house, it is recognized that any historic style, if used as an inspiration today, can only furnish as it were the characters of an alphabet. American religious life must express itself anew to meet the changed forms of its service, as our secular life, using the old characters, has found architectural forms that tend toward a new and distinctly American expression.

"It was evident also that were the synagogue to stand surrounded by spacious gardens or have an adequate court-yard approach, it would have been interesting and desirable to build a domed structure. But this group of buildings is already bordered by tall apartment buildings, and eventually will be surrounded by them, except for the front facing on Central Park. For this reason it was deemed necessary to produce a design in which a single great

motif of composition and a great expanse of plain wall surface would distinguish the mass from the innumerable bee-hive holes and cut-up surfaces of the adjoining apartments. The group has, therefore, been given a general verticality of composition which does not try to compete with secular skyscraper architecture, yet recognizes the general tendency in New York buildings. As a matter of fact, from a construction point of view, the forms adopted in this design have a functional purpose aside from their esthetic value. The walls are actually self-supporting, the buttresses of the exterior and the trusses of the interior are, respectively, the stone and concrete coverings of structural steel members necessary to bridge so wide a span."

The designing of Temple Emanu-El is a notable example of a design controlled by the environment. Perhaps this should be more generally expected in ecclesiastical and public than in secular buildings. It is not the case. There is no reason why a fine harmony should not exist between all kinds of buildings. Architectural amenities do not demand similarity in any respect. All styles, types and kinds of buildings can be harmoniously grouped by competent architects. It must be confessed that they would have to compose a group of buildings in the same manner that the musician arranges the orchestration of a symphony.

Architectural amenity cannot be brought about by legislation or art commissions because either would chill and stunt the true creative effort. Creative work cannot be directed or controlled by any exterior influence except a decent respect for environment. But this respect cannot be expected from those architects whose only aim in life is to collect their commissions with a minimum overhead. Hopeless as the prospect may be, there is a real pleasure in recognizing such splendid examples of architectural amenity as those here mentioned.

By these two Temples, two distinct emotions, equally felicitous, are aroused. Both are in fine harmony with their purpose and surroundings.

Government Architecture Once More

A Communication

To The Editor:

My hat's off to Mr. North for his "What of Washington? What to do?" in your February issue. Good stuff, a clear, succinct statement of conditions as they are! But we are no farther along than we were before.

The Capitol at Washington is a stately old pile. In spite of its shortcomings architecturally—from our view-point, the iconoclasts, the ones who feel surfeited, fed-up with the becolumned contraptions—its settings, position, its historical glamour and perhaps our familiarity with it, if not our affection, compel us to accept it as the most satisfying public building in America and the peer of anything I know of abroad. And it was perhaps natural that that building, the most important and key-structure of the City, should establish the style of all that followed. Anyway it did, for with few exceptions the public buildings there harmonize, or at least are intended to harmonize with and be complementary to it. So far even the fellows who have done good, clever stuff elsewhere, when they get a whack at something in Washington feel in duty bound to clothe the thing in classic garb. That seems the logical, loyal and proper caper. It is a sort of official style—certainly formal enough, that has us all buffaloed.

The Pan American building, of the modern ones, is a conspicuous exception and too, it is the most beautiful smaller structure in Washington. Not classic and yet it does not shriek defiance at its columnated neighbors, nor clash with them in any way.

The older departures, such as the post office and other public imitations of Richardsonian rhapsodies were so awful that even the Government at one time contemplated tearing that particular atrocity down. At any rate, Congress tired of the regular Government Architecture and in 1896 tried out a new way of doing. I happened to be the first one to design a building under that new regime, and I am doggoned if I didn't go and make a be-columned affair of it too! The great A. I. A. even fell for that sort of thing, for when, later on, it was invited to write the rules for Government competitions, it prescribed classic treatment!

A casual reading of Mr. North's paper gives one the inference that he, like so many others of the profession, feels that Government buildings should be done by outside architects. Now then I have had many years' experience in Washington and know pretty intimately the work of the Supervising Architect's office, and, in simple justice to it, I must say

its work compares very favorably with any state or other public contemporary work. The latter is the product of the profession at large, presumably under the guidance and with the approval of the A. I. A.

Apart from the aesthetic side of the problem, justice also compels me to add that so much of the work done for the Government by outside architects, under A. I. A. guidance, direction of competitions and what not, that should assure the very best results, has been so messy, tangled-up and costly that the Government is a bit leary of the dear profession, and will only consent to competitions and such because of pressure brought to bear upon it by the A. I. A. and its political friends.

You know what you will get as a result of such competitions, and does competition select the best that is offered anyway? For my part, (and Heaven knows I, of all men, should think and speak kindly of competitions) I think that architectural competitions are the invention of the devil.

Well, suppose they be eliminated, what have we? Giving the Government job outright to the man the Government believes is best fitted to give it what it needs and do it artistically too? Bless you, where will that lead? Oh what a howl there would be in Jericho! And I can jolly well put my finger on the individual or partners who would land the persimmon in each town where a Government building is to be built. Big names, yes, men who do big work and lots of it. But, ye gods, does that, I ask, does that imply or mean that it would be well done or artistic? It is to laugh! So where are we?

I have thought over it all, officially and unofficially. I have had much to do with it and all that, batted my old head for years for a solution and I frankly confess that I am stumped. I see no real answer to the query "What to Do?" Oh yes, suggestions, guesses, closing ones eyes and shooting but no real honest-to-gosh solution.

Isn't it rather up to the Architectural Journals, the guides, philosophers and friends of the "profesh" really to extend help in this as they should, and do, in so many other matters? Why not open their columns to a general and frank expression of opinion upon the subject? Yes, even a competition (!) a year's subscription or a set of fine books to the three best short papers offering an idea, a solution of the problem, "How to Do Government Building."

There are at least seven thousand practicing architects, most of them are most unvocal, they can kick like steers in private, but it is the dickens of a

job to get them to express themselves in public or in print. But surely there are some who would and, who knows, some bright lad may crack the nut, or, Columbus-like, gently flatten the shell and stand the egg on end, just like that. Voila!

And perhaps, who knows, the very best thing to do is to leave things as they are, And organized Government Architecture as it is, is pretty safely entrenched. It will take dynamite to break it up.

Why doesn't *The Western Architect* take a shot at it anyhow?

F. W. Fitzpatrick, Consulting Architect

A travelling fellowship in the United States for French architects has been established by the American Institute of Architects under the auspices of the French Ministry of Education. The annual value of the fellowship, the donor of which is Julian Clarence Levi, of New York City, is \$1,500.

"The Institute," the announcement says, "deems the establishment of this fellowship a valuable contribution to international architectural education and a graceful recognition of our educational debt to France."

The fellowship will continue for an experimental period of three years, and will be administered by a committee of the Institute consisting of Chester Holmes Aldrich, Harvey Wiley Corbett, Julian Clarence Levi, and Lawrence Grant White, all of New York.

The jury to select the first fellow consists of: the president of the Society of Architects holding French Government diploma; the president of the General Society of French Architects; Prof. Pontremoli of the Ecole des Beaux-Arts, Jacques Greber, architect; Jean Hebrard, architect and chief of the Bureau of Teaching at the Ministry of Fine Arts; Paul Leon, director of Fine Arts at the Ministry of Education and of Fine Arts in France.

The fellow will spend part of his time in travel and part in employment in the offices of prominent American architects.

J. J. Schwarz has associated with S. A. Lichtmann to form the firm of Schwarz & Lichtmann, for general architectural practice. Mr. Schwarz was formerly in charge of the offices of Rissman & Hirschfeld and Mr. Lichtmann, a graduate of the University of Illinois, has been in the offices of Holabird & Roche. Offices are on the tenth floor of the Garrick building, Chicago.

The long standing and work-interrupting dispute between the bricklayers and plasterers, which was judged and awarded by Elihu Root, has been settled by acceptance of Mr. Root's arbitration pronouncement. The bricklayers agree to withdraw their "locals" from San Francisco, Terre Haute, and Dearborn, Michigan, and give up their assumed right to control the cement workers in New York. The plasterers have given up their contention of right to charter some thirty "locals" and also give up their assumed jurisdiction over terrazo workers.

According to Howard Greeley, and in reference to the impression received from the second Architectural and Allied Arts Exposition recently held in New York, "the significant thing shown by the Architectural Exposition of 1927 is that the American architect is using his brains rather than his books." Raymond M. Hood, who headed the exhibition committee, said, "this is the show of the modernist who is making strides in architecture in this country. The modernist has always been the under-dog, but when a distinctly modern structure like the Telephone Building wins the League's Gold Medal of Honor, his position and that of the classicist is reversed."

The 1927 Le Brun Traveling Scholarship Competition was won by Earl C. Norris, of Denver, Colorado, according to the announcement of Otto R. Eggers, Chairman of the Le Brun Scholarship Committee of the New York Chapter of the American Institute of Architects. First mention was awarded to W. Ray Winegar, of Detroit; second mention to Emil W. Kee, New York; third mention to Martin Beck, Astoria, New York; and fourth mention to Henry A. Cook, New York. Specially commended were Maurice Gautier, Brooklyn; and Albert W. Butt, Jr., New York. The subject of the competition was "A Community Mausoleum."

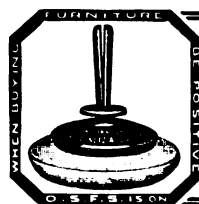
The College of Architecture of the University of Michigan will again conduct classes in architectural design and outdoor drawing and painting during the coming summer. The classes will run from June 27 to August 19.

Fred C. Medicus and John H. Samuels, A. I. A., architects, announce the formation of a partnership for the practice of architecture under the firm name of Fred C. Medicus-John H. Samuels, A. I. A., Ltd. Offices will be at 211 Chapel Place, Youngstown, Ohio.

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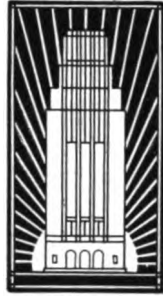


Kansas City Terra Cotta

1809 Manchester

Kansas City, Mo.

THE WESTERN ARCHITECT



ARCHITECTURE

ALLIED ARTS

Volume XXXVI

Number 5

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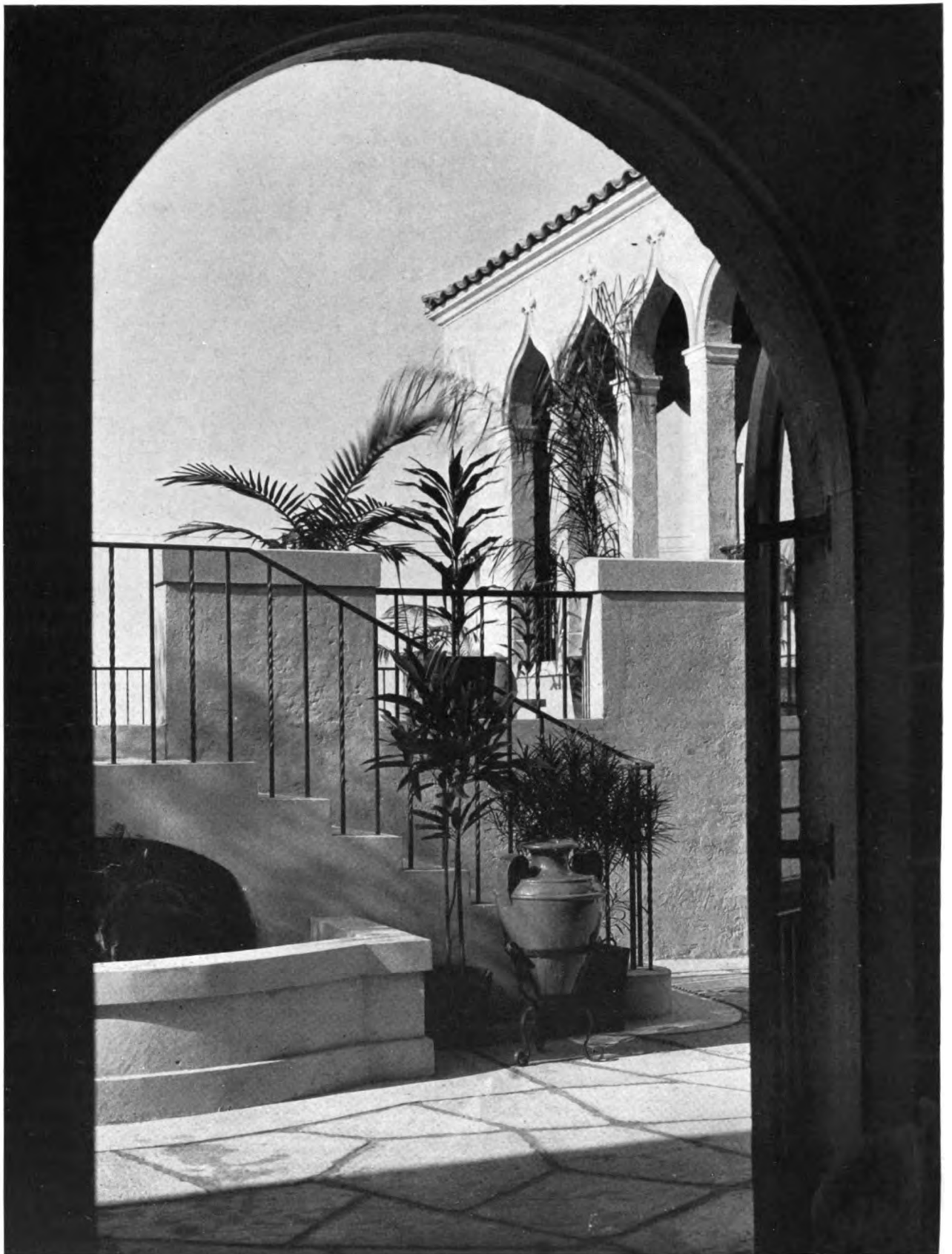
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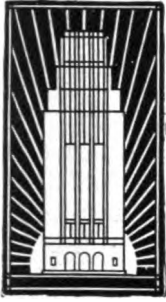
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THE WESTERN ARCHITECT

ARCHITECTURE

ALLIED

ARTS

Volume XXXVI

MAY, 1927

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A Union of Arts
Fostered by
American
Institute

In a nation alleged to hold that the accumulation of the mighty dollar is the sine qua non of human effort, there is an underlying sentiment that seems almost akin to "art", and among its chief protagonists are members of the architectural profession. A movement that has for its object the bringing about a union of effort, nation wide in its scope, has been inaugurated by the re-organization of the Committee of Allied Fine Arts of the American Institute of Architects, with headquarters in New York. With the prime object of guiding the thought and activities of the Institute as well as other societies devoted to fine art production, this committee has laid out a comprehensive plan of activity, its own special province being more specifically directed toward developing the interest toward architecture as an art. In the words of President Medary, "we wish to make it plain that we are more interested in contributing to the great architecture of the world than in standardizing the bricks and mortar of which it must be built." For the "first time in history" an Institute Committee includes workers in other departments of the fine arts. Headed by C. Grant LaFarge, architect, of New York as chairman, the Institute is represented by Paul C. Cret, of Philadelphia, J. Monroe Hewlett, of New York; George W. Kelham of San Francisco; Everett V. Meeks, Dean of Yale School of Fine Arts, and Sidney Lovell of Chicago. Sculpture is represented on this committee by C. Paul Jannewein of New York; mural painting by Eugene F. Savage, Fellow of the American Academy in Rome; landscape architecture by Ferruccio Vitale of New York, a trustee of the American Academy in Rome; and craftsmen by Harry Werne, president of the Arts-In-Trade Club of New York. Working with this committee will be committees in the fifty-seven Chapters of the Institute, and other art societies including the Society of Mural Painters, the National Sculpture Society, the American Society of Landscape Architects and the Arts-in-Trades Club. Thus in fifty-seven urban centers in the United States there will be active committees like the central one in New

York, combined in the effort to further raise architectural and other art standards but also forming a combined movement to "sell" architecture and the other fine arts to the public in the augmenting of a better understanding and higher appreciation for the things that fundamentally form the sources of the people's happiness.

High Buildings
and
Condensed Street
Traffic

Since the electric elevator and steel made it feasible for architects and engineers to erect buildings of unlimited height the high building has been a subject of controversy. Opponents to the "skyscraper," first objected because it seemed to be an encroachment on the renting value of the neighboring lower structure, and also that it affected urban health by shutting off sunlight from the street. Thus the "limiting of the height of buildings" was the subject of a merry war between the general public and the capitalist, and the public's representatives, the city councils, passed ordinances limiting the height. This height-limiting law was first made abortive through "special exceptions" and then repealed or "forgotten" and the construction of high buildings went merrily on. Then zoning laws were passed. These were accepted as beneficial to the mass of citizens, and the shading of streets being a real detriment to health and limitation being impossible, the "step-back" plan was introduced and accepted as a solution to the problem. This "regulation" of the high building was satisfactory until the last ten years has brought a "transportation" or traffic circulation difficulty that threatens to smother the people in a condensed mass of struggling humanity seeking to go somewhere. The increasing height of buildings, particularly in New York where the high building is higher and more concentrated than elsewhere, has again brought the old enemies of high buildings to the front and a controversy is on. Shall the skyscraper be restricted in height or completely abolished? It has been proved in practice that height cannot be successfully restricted, and abolition is impossible. Yet the situation is serious and calls for

remedy. The skyscraper is a business proposition and as there is no limit to the ability of architects to design and construct, the only limit, and it will prove the conclusive one, is, "will it pay"? Opponents assert that the high building causes the traffic congestion on the streets by concentration of a vast number of people in a small area. On the other side are those who assert with equal vehemence that it really relieves congestion by converting horizontal into vertical traffic. A survey of large cities must indicate to the unbiased observer that one fundamental cause of street congestion, which has nothing to do with the high building, is the automobile. London with its six-story buildings is facing a greater congestion problem than New York or Chicago. A single person walking on the street occupies ten square feet of space. With an automobile he uses an hundred square feet, and when he alights he pursues his way, vertically, to his place in the high building. The dream of hundred story buildings, with residences on the roofs and mid-air bridges, subway and elevated traffic ways is pure nonsense in practical operation. The real solution lies in the opening of attractive streets in new territory and thus, as there is no other practical way, inducing the spread of the high building territory. Within four blocks of Fifth Avenue and Broadway in New York the buildings are three or four stories and the condensation there is not necessary if the high building territory were spread, with adequate bridges to the plains of Long Island or New Jersey for residents of that district. While the condensed island position of New York has its limitations, Chicago has no real reason for concentration within the South Side loop. Indeed the zone of high buildings is extending itself in Chicago to the near North Side with an occasional essay in districts still further removed. The late mayor Cregier's advice to close the Chicago River to boat traffic and to build permanent bridges over the river, may eventually be carried out. Then if the new Court House and City Hall twenty years ago had been located in Union Park, thus moving the "center" a mile inland, much of the present congestion in the "Loop" district would have been avoided. Neither automobiles nor the high building can or should be abolished. But wise zoning on one hand and the addition of attractive transportation routes to suburbs as well as urban communities will eventually go far in the solution of the high building and traffic congestion problems in large cities.

The Work
of the
American
Construction Council

While the American Construction Council, organized some four years ago by Secretary of Commerce Hoover and the Council's president, Franklyn D. Roosevelt, has been engaged directly in the interest of finance, manufacturing, construction and other representative business interests and the solution of problems of public import, its sympathy with and relation to the architect are no less close and vital. Its program is in the nature of a direct partnership with that of the American Institute of Architects and the subsidiary Chapters which represent it locally. These members, both as professionals and as citizens, are vitally concerned in the endeavors of the Council in supporting and stimulating the construction development of the country along conservative and progressive lines. Without the patient and persistent effort of these two factors during the hectic onrush of a Nation to fill its demand for private and business buildings, it is more than probable that the present would witness an approach to chaotic conditions as well as an unreasonable slump in the entire field of construction both in volume, and what is more important, quality. The organization was quick to see that in such unparalleled activity as was inevitable, an enormous loss must result from the haphazard erection of buildings badly financed and constructed. Insistently it called public attention to the seriousness of the situation. It has, at last, not only achieved a public hearing and public confidence, but the support of those engaged in the industry in all parts of the country. In this work architects have not been idle. The work of the late Burt L. Fenner, of New York, and the activities of Stanley Parker in Boston and those of E. J. Russell of Saint Louis, to name only three who have given freely of their time and talent, to the support of the movement toward a better regulated building era, is outstanding. As the president of the Council has said, "the idea back of this movement, dealing as it does with the economic problems of the construction industry in its largest sense and in their relations to the permanent prosperity of the Nation, is one of the biggest conceptions ever inaugurated in modern industry." Aided by the Standing Committee on Industrial Relations of the Institute, the Council will prove a valuable factor in the orderly progress of readjustment that seems about to commence in the field of construction and its various adjuncts.



✓ Water Pictures and Their Relation to Primitive Art

By MARION THAYER MACMILLAN

NOTHING is more stimulating than the thrill of a new idea. It can come as a consequence of patient delving among related facts, or as a sudden flash that illuminates the handwriting on nature's walls and gives one a sense of revelation. It was in such fashion that the hieroglyphs painted on the rocky shores of the Canadian wilds disclosed to me this theory of the origin of design.

But let me tell you my experience and leave you to draw your own conclusions.

My mind, such as it is, has never concerned itself with art, with form and color, but it has been intent upon meanings—observing only to analyze—tracing the relation between cause and effect, striving to penetrate, to understand. In other words, my brain has been busy with the scientific side of life. I have revelled in classifications, pursued formulae, and even gloated over statistics. This is a fascinating pursuit, tracing the relationship between the essence of things instead of the outward form, finding a harmony in ideas rather than in colors; nor is it without an aesthetic appeal, for logic is a kind of pattern in imponderables. Yes, there is a wonderful flare to this quest but it is a wearying search, with its demand for concentration, an achievement of itself, in this saxophone age when the whir and clatter of machinery forever irritates the nerves. And thus it is, when the summer comes, I am tense and tired, and then it is, for seven seasons, we have turned our faces toward Canada.

Two days and a night we travel to reach the Point au Baril, every hour adding to the sense of remoteness which is a part of this joy. I get a feeling of difference as soon as we board the Canadian Pacific train. The courtesy of the officials, the easy-going, unhurried

manner of the Toronto travelers, something I can scarcely name, helps me to relax; and as the country becomes less populated and the scenery more wild, when the first pines and great rocks and patches of blue water appear, the strain yields until finally, when we board the little steamer which carries us to our destination, and the breeze comes fresh from the seven hundred miles of the glorious Georgian Bay, I draw deep breaths and realize that I have stepped out from under.

A few hours across the Bay and we arrive at the Ojibway Hotel with its vast stone fire places where the great pine logs burn and everything speaks of the woodland. Here, miles from the troubling telephone or the honk of a motor car—in utter stillness—we sink to sleep without even the sound of a voice to disturb, for often we are the first guests of the year. The next morning, forth from its winter quarters comes the "Sprinx," our beloved canoe, to us a symbol of all delights, with its graceful lines and polished cedar beauty. And so, up the Channel we go to a little boat-house set on its own bit of rock—three small rooms and a screened porch, primitive as an Indian tepee, but showing from every side a glorious prospect. The eastern windows give us our sun parlour, the western ones our moon parlour, while, from the piazza we watch the Aurora flame and flicker and fade. A few hours of adjustment and we are "all set." Then, toward evening we go for our first paddle.

There is no motion in the world so soothing and apparently effortless as the progress of a canoe through calm water. As we travel the shadows lengthen; the sun, striking piled clouds to the west, throws a gorgeous color upon the sky and sea; tall pines stand dark and rigid as wrought iron against an orange



"HIEROGLYPHS PAINTED ON THE ROCKY SHORES OF THE CANADIAN WILDS." DID THEY SUGGEST TO THE "ABORIGINAL ARTISTS" THEIR THEORY OF DESIGN, ARCHITECTURAL AND OTHERWISE?



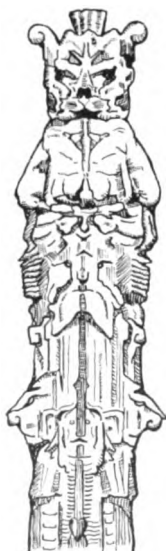
MOTIONLESS WATER REFLECTING THE EQUALLY IMMOBILE ROCKS, PRODUCE A LIMITLESS VARIETY OF PATTERNS

background. A crane paints itself upon the brilliance, then comes to rest, like an omen of victory on the tip of the tallest tree. Not a human being is in sight, the only evidence of man, a film of blue smoke rising from some Indian camp. Thus day follows day. We paddle down to the hotel for our food and then away to some favorite nook or to explore some new pleasure, for there are countless fairy islands each with its own enchantment.

However, it is nearly a week before my nerves quiet completely. During these first days I have periods of restlessness. Then comes the calm!

You see, we do not fish, we take no books, we are not with a party. Sometimes we talk, more often we are silent in the stillness of this world of beauty, and I seem to become one within the universe. I simply *am!* I have a strange sense of happy receptivity. The sea, the sky, the air, the rocks, and trees seem to flow through me and possess me and then—for the first time—I see. See, as perhaps the artist does or more likely, the aborigine—get just an intimate consciousness of form and color without turning it into a cogitation.

From the very first I began to observe in a way entirely new to me, but three summers passed before I saw anything unusual. Then, four years ago,



AGAIN AN INSPIRATION FROM THE ANCIENT ROCK WHICH "FLOATS DOUBLE, ROCK AND SHADOW," UPON THE PLACID WATERS. MAYAN IS THE RESULTING SKETCH, AND SURELY REAL ORNAMENT

HERE SKETCHED IS A DESIGN, ABORIGINAL IN EFFECT, SURELY, INSPIRED BY THE "REFLECTION" PHOTOGRAPH TO THE RIGHT. THE LATTER IS THE ROCK AND THE REFLECTION, AS THE CAMERA SAW IT



looking day after day at the landscape, I was struck by a curious semblance in the rocks along the shore. The wind dies as the sun sets and, as I looked, the level rays of brilliant color unified rock and reflection into a vivid artificial looking pattern. I called my husband's attention to the singularity of it, but he did not see it. The thing was somehow so incredible, that I dropped it from my mind until a few days later when I was carrying home an Indian box just purchased from a guide. The water was absolutely still, and as we passed a rock, there, pictured in the water, was the exact design, both in form and colour, that was wrought into my box. The rock was rounded with two tall spears of grass at the end, as shown in Fig. 1. The reflection added made this the form in Fig. 2; and the border on my box, done in green and white quills, was merely a repetition of the motif like Fig. 3.



FIG. 1

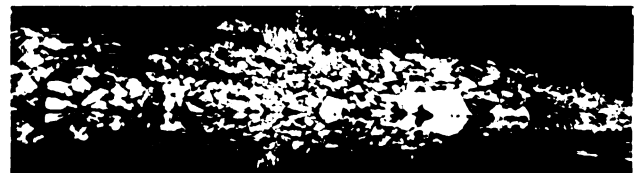


FIG. 2



FIG. 3

Then I knew there was no mistake, that I had really seen something, and I began to watch the reflections. I can scarcely describe the experience without seeming to exaggerate it, what I beheld was



MERELY TWO PHOTOGRAPHS TAKEN BY THE AUTHOR BUT
 INVERTED TO EMPHASIZE THE DECORATIVE SIGNIFICANCE
 OF THE PHENOMENON. PHOTOGRAPHS COPYRIGHTED
 BY MARION THAYER MACMILLAN



so extraordinary. Whenever the water was calm there appeared a limitless variety of marvelous patterns, no end to the number, painted vividly, delicately, somberly against the shore. And I! No one even believed I saw them, indeed it was sometime before even my husband perceived them. I had never made a sketch in my life. I had never taken a photograph. I had no camera, and here was this world of wonder, unseen, unknown, unbelievably.

Finally the urgency to represent it was so irresistible that I suddenly demanded my husband's memorandum book and there, with an eversharp pencil, while he steadied the canoe, I traced some outlines as best I could. By this time my husband was able to see the pictures, but he too was without artistic skill. There followed days of torment, for I

must have at least some reproductions of what I saw and I did not know how to get them.

My first help was from Mrs. Davis, whose husband is the proprietor of the hotel. She had done much in photography and she quickly detected the patterns; many of my best photographs I owe to her. Afterward I came into possession of my own camera and my husband's help, and finally obtained one hundred pale replicas of the splendid originals. One group was taken on an evening so still that every island shore appeared bordered and bastioned by these beautifully tinted sculptures. For it is not a matter of selecting pictures; while some are more interesting than others every tiny rock, as well as every great one, every group of stones, carries its pattern, its design. The rocks themselves are in color, red and black, pink, orange, grey, grey blue and grey green, and when lighted by the setting sun each tint and tone is deepened by the shadows of their own carving.

Naturally, my first thought was that the Indians saw and copied these designs. I think so still, but I also think much more. I wrote to Dr. Harlan Smith of the Victoria National Museum, an authority upon Indian Art, but he had never heard of such designs. He was interested, however, and turned my letter over to his colleague, Dr. Edward Sapir, the famous anthropologist, who wrote me at great length about the matter; but he had never seen, heard, nor read of these water pictures. I could not believe that I alone should behold what was perfectly obvious to all. I consulted people who were experts at the University of Michigan with the same result.

Robinson, in his "Mind in the Making," states that there are four historical layers underlying the minds of civilized men. The animal mind, the child mind, the savage mind, the medieval mind. It would seem as if I had reverted to the savage state. The

knowing, analytical mind is aware that a rock is one thing and its reflection another and so it sees them as two separate entities. My mind, bent upon nothing, with perfect naivete, saw the rock and the reflection as one impression, and so I believe primitive man looked upon them, not only in this country but wherever rocks line a water-lapped shore.

Studying the Mayan ruins and some of the old Indian temples, all sorts of exciting speculations occur to me; for instance, is it not possible that all design which has exact duplication as its essential characteristic had its origin in reflection, the only natural phenomenon that shows exact duplication?

Might it be that these water pictures which irresistibly impelled me (who had never made a sketch in my life), to attempt their reproduction, that they also urged primitive man to represent them?

May it not have been an earlier and simpler impulse to copy these designs, which appear as pictures, than to make pictures of external things seen as separate objects?

Is it difficult to conclude, since these pictures seem to be graven on rock, that they first suggested the use of stone for carvings and design?

Will the fact that these water pictures are completely unaffected by any type of human or animal life in the environment, but display every kind of feature and figure—will this explain the difference between the designs and masks found on the monoliths in Quirigua, a country of lakes, islands, and rivers, from the patterns made in the desert under brilliant sunshine? The one mysterious, intricate, entirely different from the actual environment; the other in sharp lines of contrasted color showing clear-cut birds and beasts and fights, comparatively simple and evidently made from observation of life.

Do not the water pictures explain the strange

heads, one above another which the archaeologists find so puzzling?

Can they throw any light upon the "Quirigua Mystery"? "Art and Archaeology" describes it as "A human face, set as a mask on the side of a vase, the features boldly modelled, but entirely un-Indian in type. The strange fact is observed that not one feature of the highly individual physiognomy is characteristically aboriginal. It is difficult to understand how an American potter could have conceived and carried out a work omitting from it every suggestion of the racial character known to him and conceiving a practically true type of an antipodean race."

It is very easy to fall back upon the explanation of "pure imagination," but psychology proves there is no such thing as pure imagination. We can only imagine in terms of some sense impression the brain has received.

Further, is it not conceivable that these curious images inspired a mythology of titanic monsters, grotesque masks—weird combinations of animal and human forms, moulded into a strange unity? It is not difficult to believe that these shapes, peering at primitive man from the moonlit stream or shadowed

pool, suggested supernatural creatures, deities, totems, and the like, and it would surely seem that they represent at least *one factor* that influenced "the mind in the making."

However, as Ernest Bruce Haswell, the sculptor, remarks, "The bearing of these photographs upon the origin of design is interesting and convincing, but I am concerned with the sheer beauty of these pictures. They represent precisely what modern art is striving for—pure design, unspoiled by any literary taint. And certainly for the jeweller, the maker of textiles, the sculptor, the architect, for any and all, here is an unlimited supply of models each one unique, a treasure for the artist which, like radium, is inexhaustible."

And, to the writer it seems worth while to be a savage or even a "cassowary on the plains of Timbuctoo," if that were necessary, to discover this unsuspected realm of wonder, which has lain half-submerged through the ages. Indeed, after considering the monuments in Central America produced by the so-called savages, one is willing to be a pagan if so, he can

"Have sight of Proteus rising from the Sea
Or hear old Triton blow his wreathed horn,"



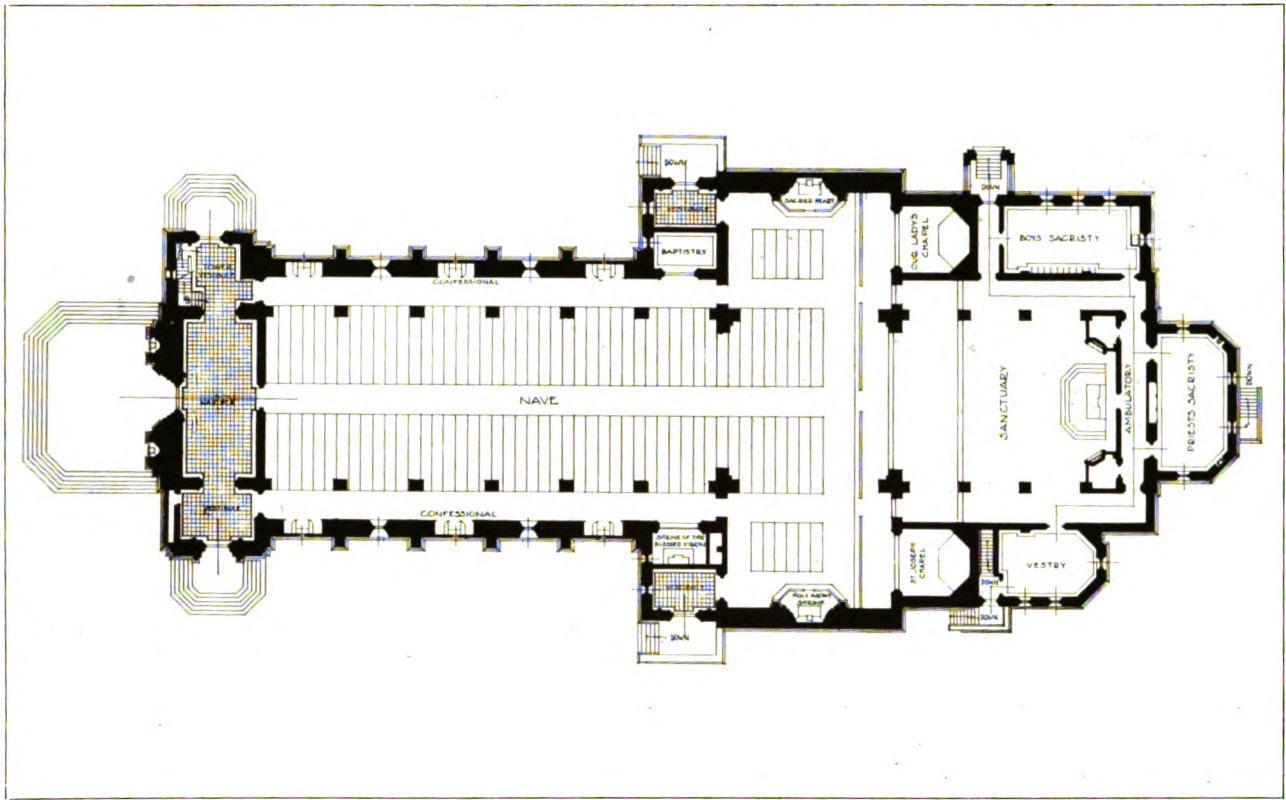
PHOTOGRAPH COPYRIGHTED BY MARION
THAYER MacMILLAN



✓ GENERAL VIEW
ST. VINCENT DE PAUL CATHOLIC CHURCH, LOS ANGELES, CALIFORNIA
ALBERT C. MARTIN, ARCHITECT :: :: :: :: :: :: :: ::



DETAIL OF MAIN DOORWAY
ST. VINCENT DE PAUL CATHOLIC CHURCH, LOS ANGELES, CALIFORNIA
ALBERT C. MARTIN, ARCHITECT :: :: :: :: :: :: :: :: :: ::



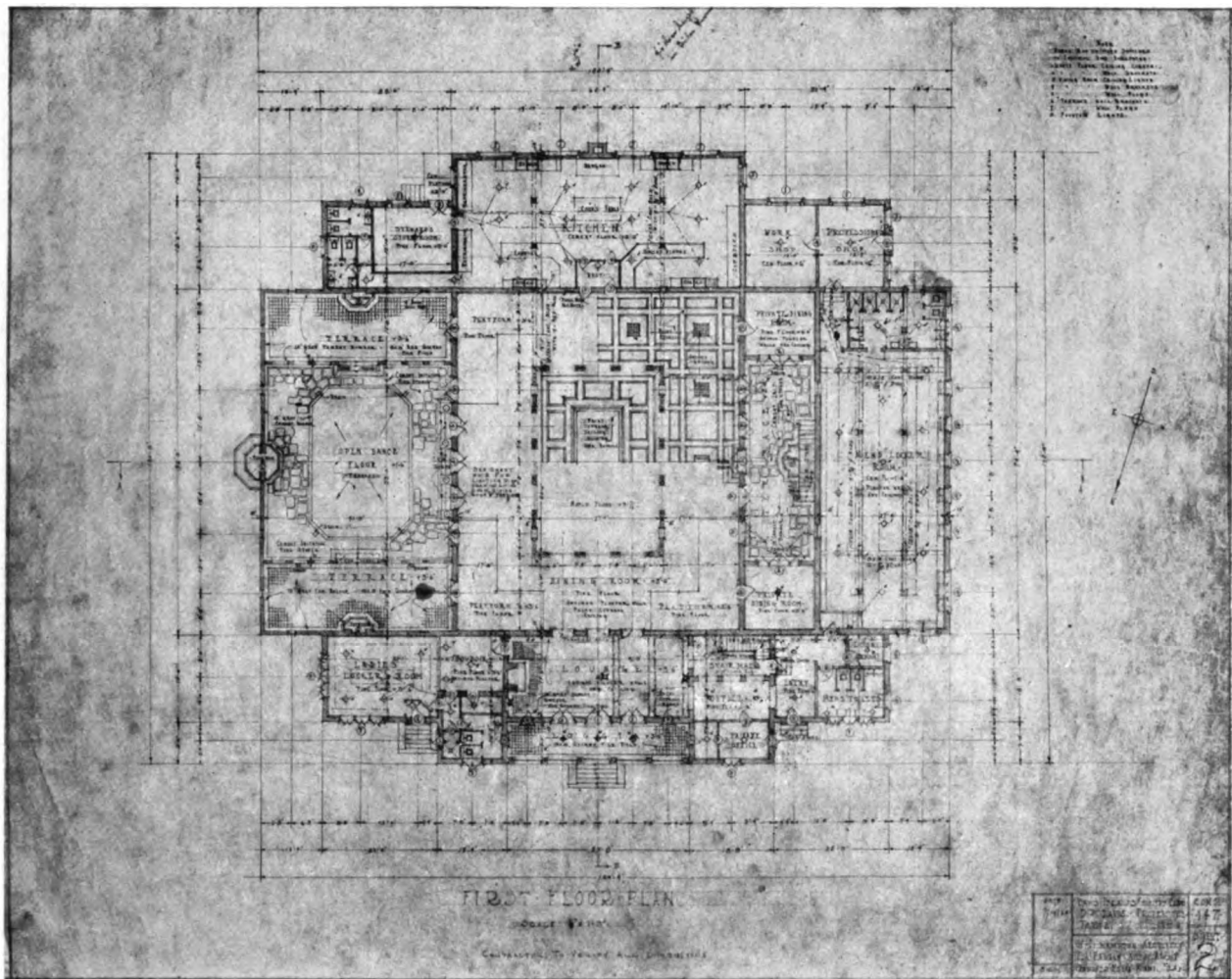
PLAN



DETAIL OF SIDE AND DOME
 ST. VINCENT DE PAUL CATHOLIC CHURCH, LOS ANGELES, CALIFORNIA
 ALBERT C. MARTIN, ARCHITECT



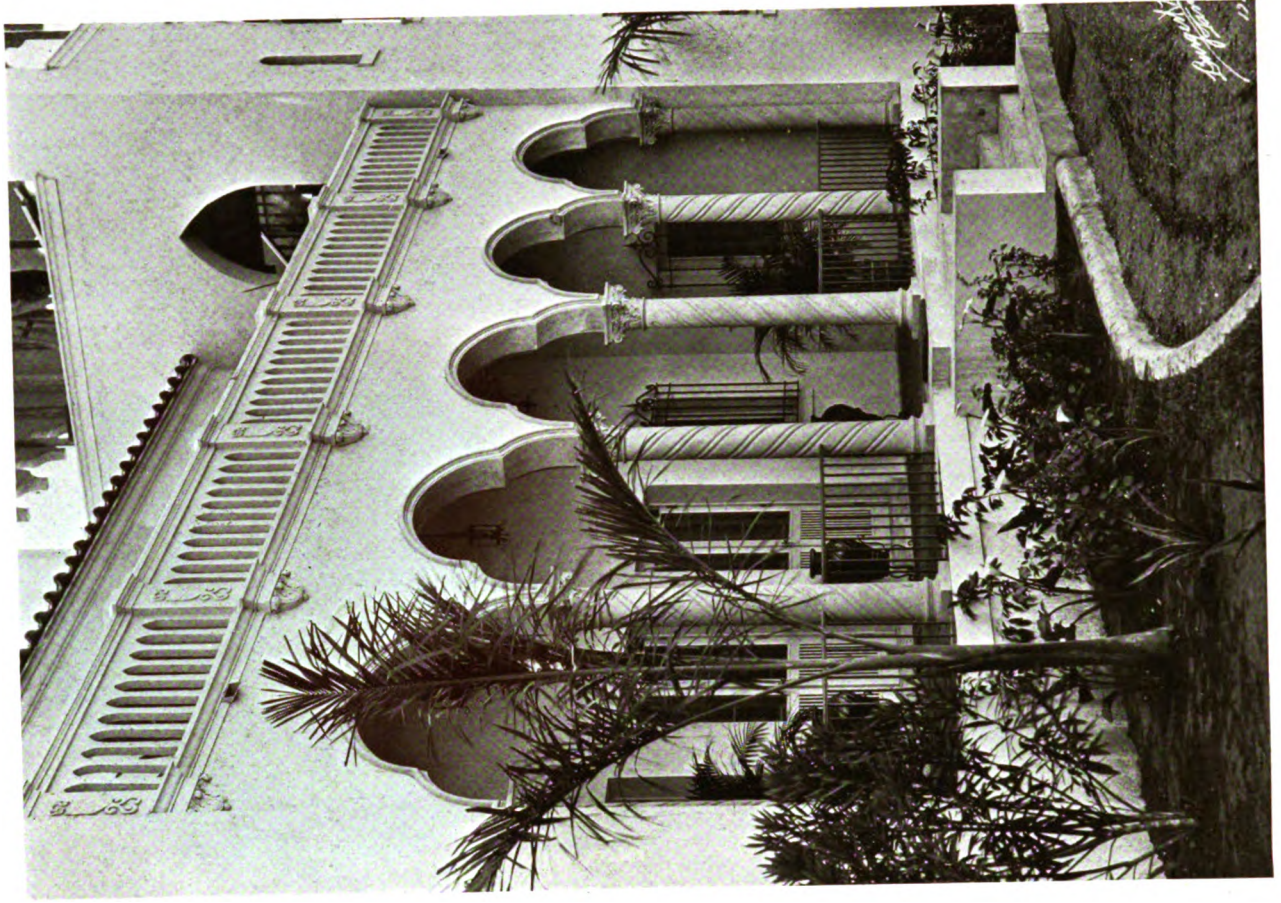
VIEW OF INTERIOR
ST. VINCENT DE PAUL CATHOLIC CHURCH, LOS ANGELES, CALIFORNIA
ALBERT C. MARTIN, ARCHITECT :: :: :: :: :: :: :: :: :: ::



PLAN



GENERAL VIEW
 DAVIS ISLAND COUNTRY CLUB, TAMPA, FLORIDA
 MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS ::



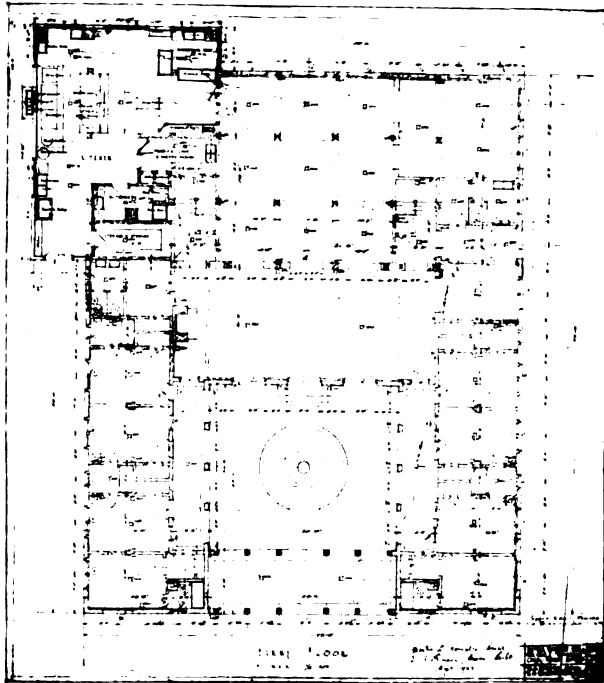
DETAIL OF ARCADE



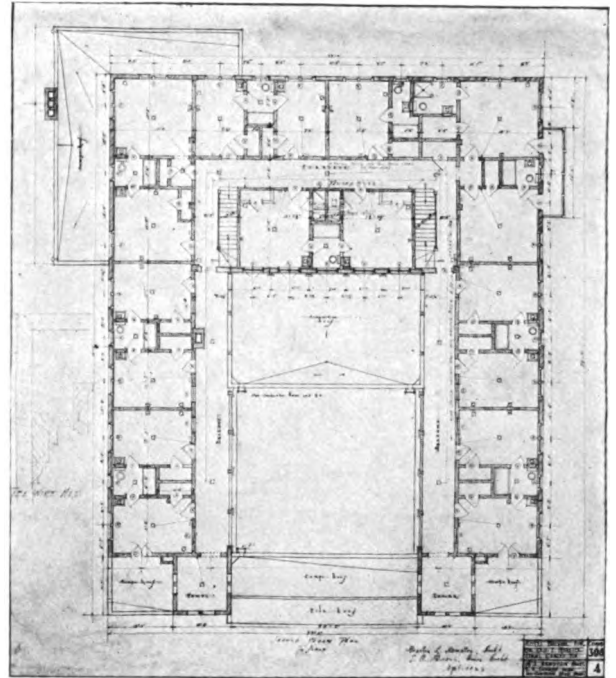
DETAIL OF ENTRANCE
 PALM ISLAND COUNTRY CLUB, TAMPA, FLORIDA
 MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS



VIEW IN LOUNGE
DAVIS ISLAND COUNTRY CLUB, TAMPA, FLORIDA
MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS ::



FIRST FLOOR PLAN



SECOND FLOOR PLAN



GENERAL VIEW
CORAL GABLES INN, CORAL GABLES, FLORIDA
MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS



A Distinctive American Architecture

No. 5 of a series suggest-
ing how color can be
utilized to secure such
distinction.



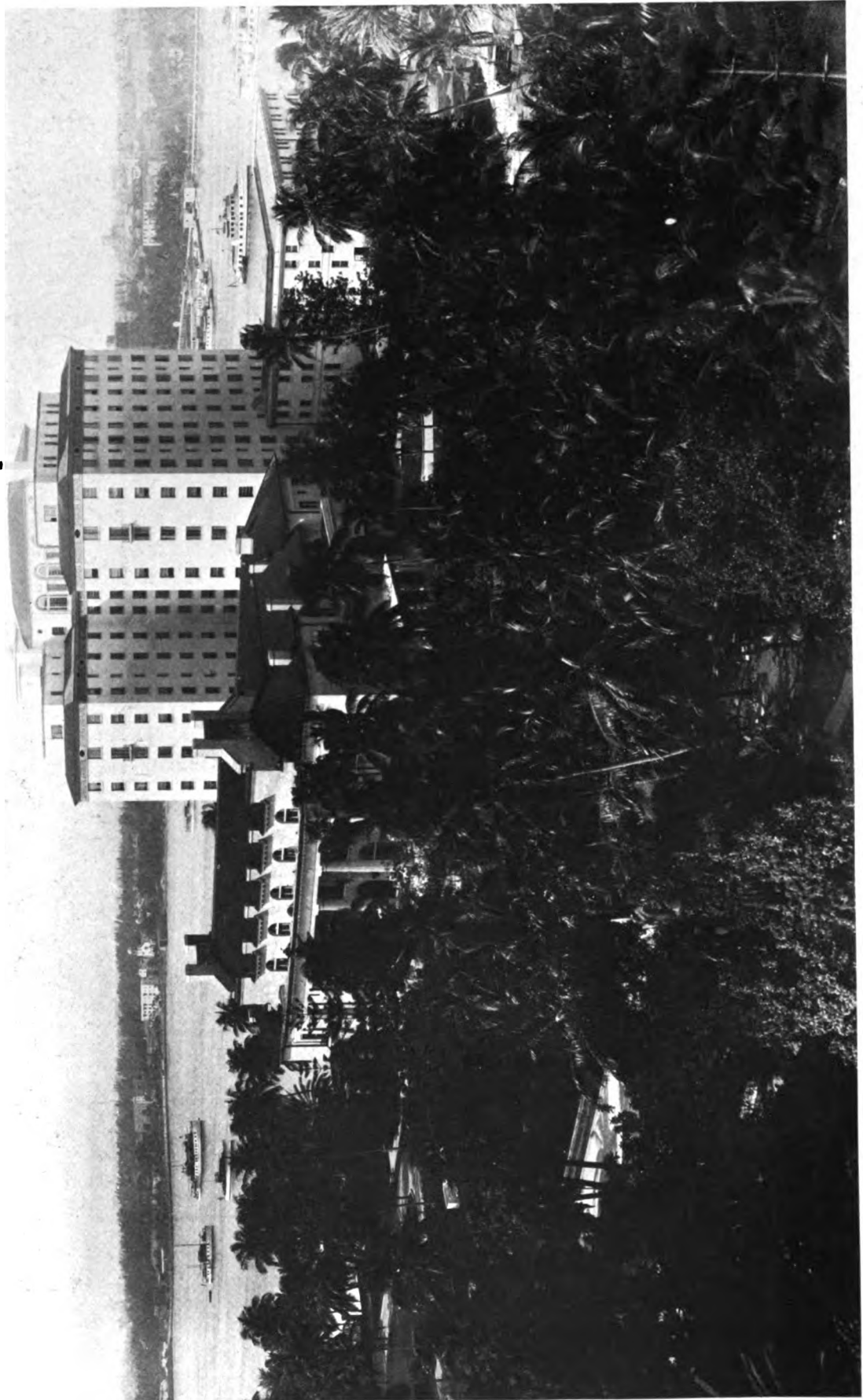
A Distinctive American Architecture

No. 5 of a series suggest-
ing how color can be
utilized to secure such
distinction.

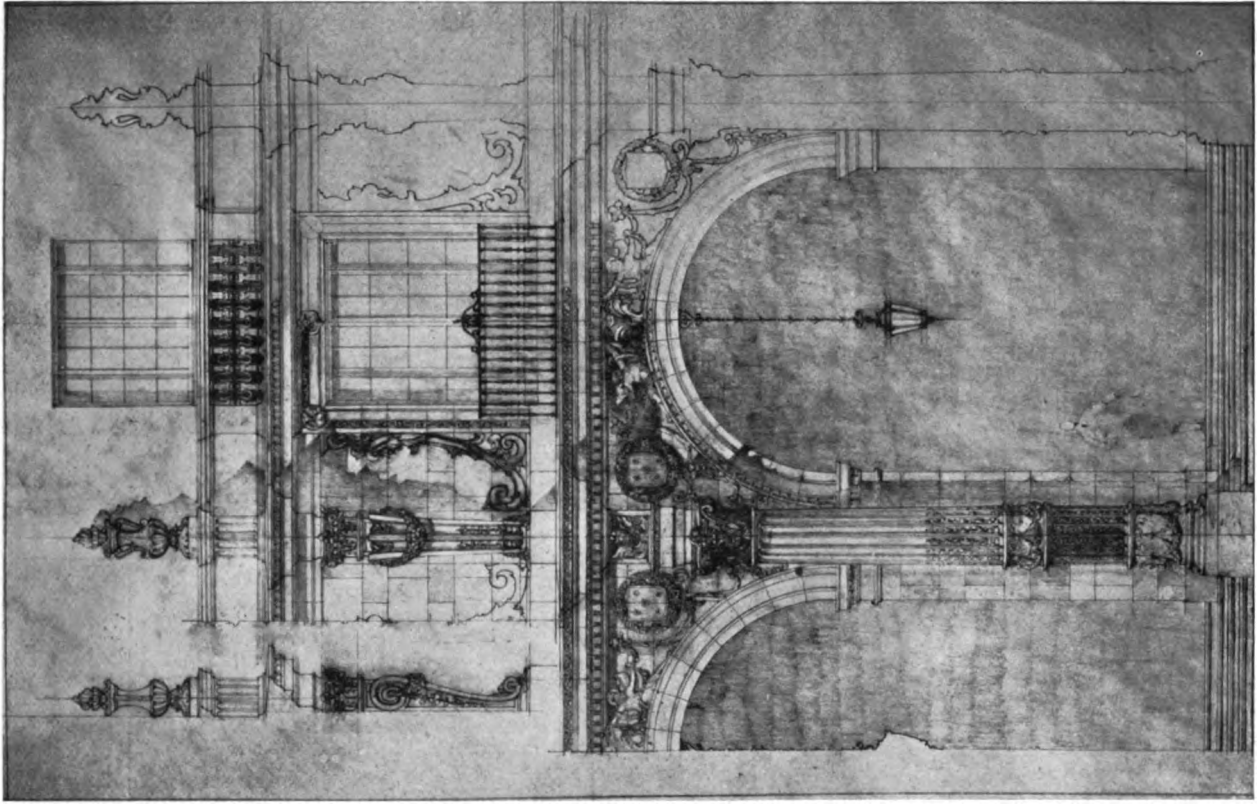


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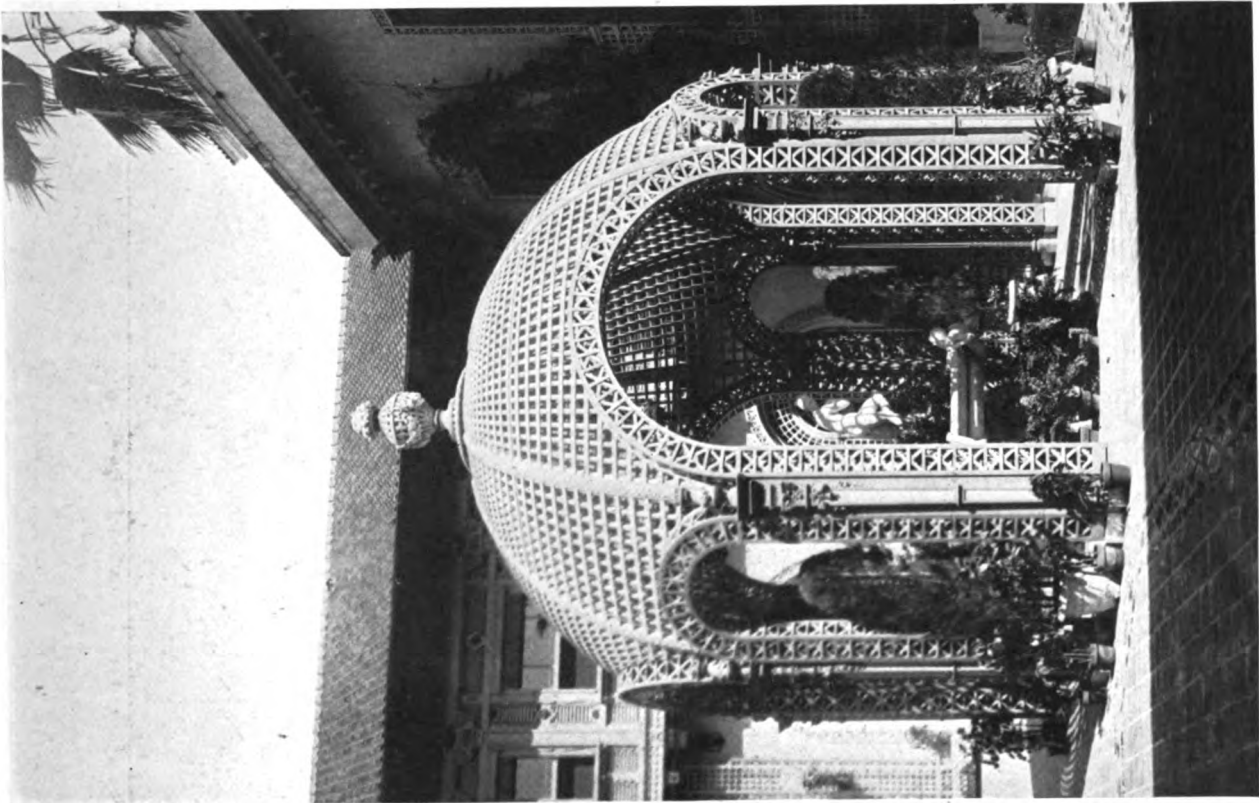
VIEW IN PATIO
CORAL CABLES INN, CORAL CABLES, FLORIDA
MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS



VIEW OF NEW WHITEHALL HOTEL, PALM BEACH, FLORIDA
(OLD WHITEHALL, ORIGINALLY RESIDENCE OF MR. HENRY M. FLAGLER, IN FOREGROUND)
MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS



DETAIL OF ARCADE, FACADE



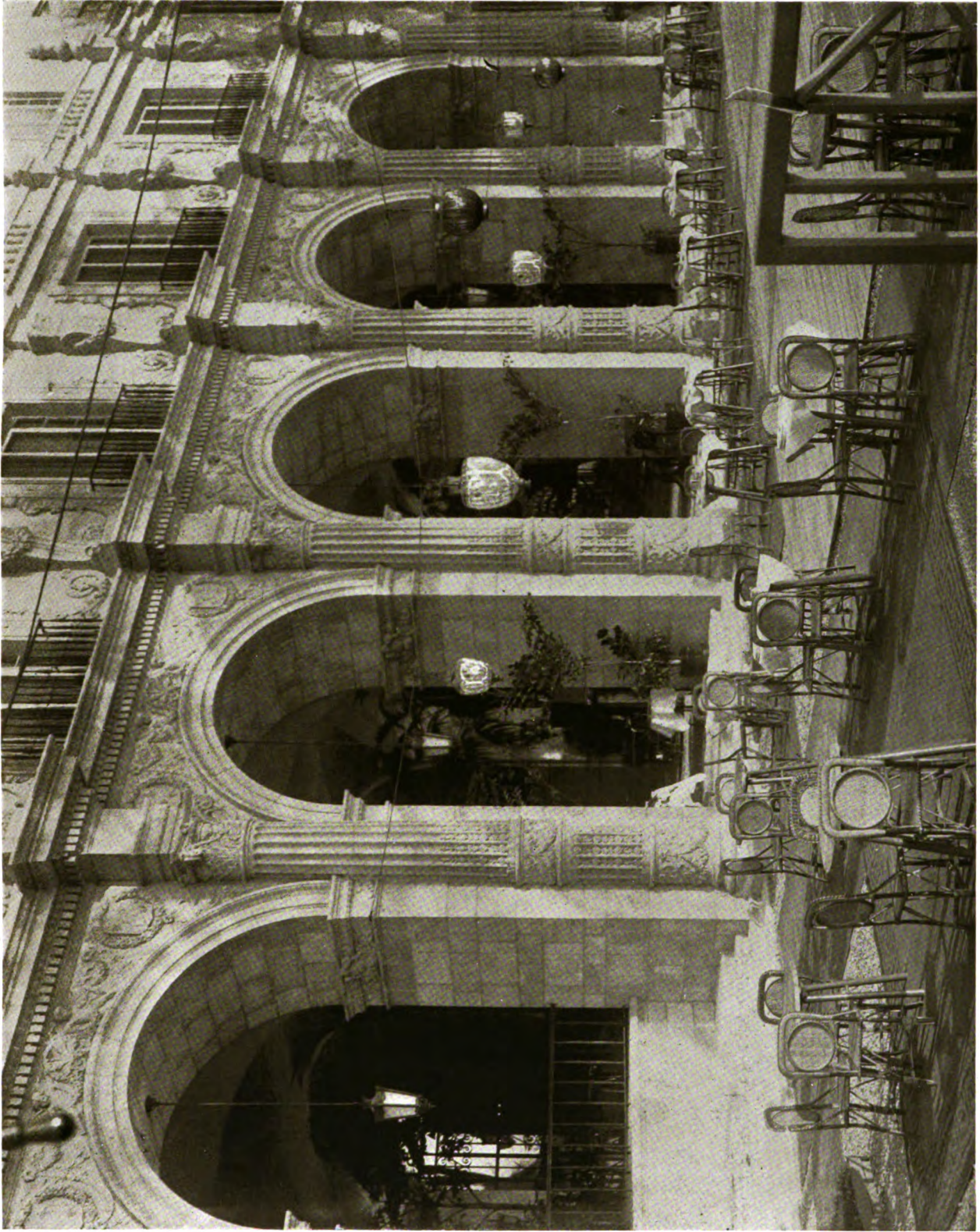
DETAIL OF SUMMERHOUSE IN PATIO
 NEW WHITEHALL HOTEL, PALM BEACH, FLORIDA
 MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS



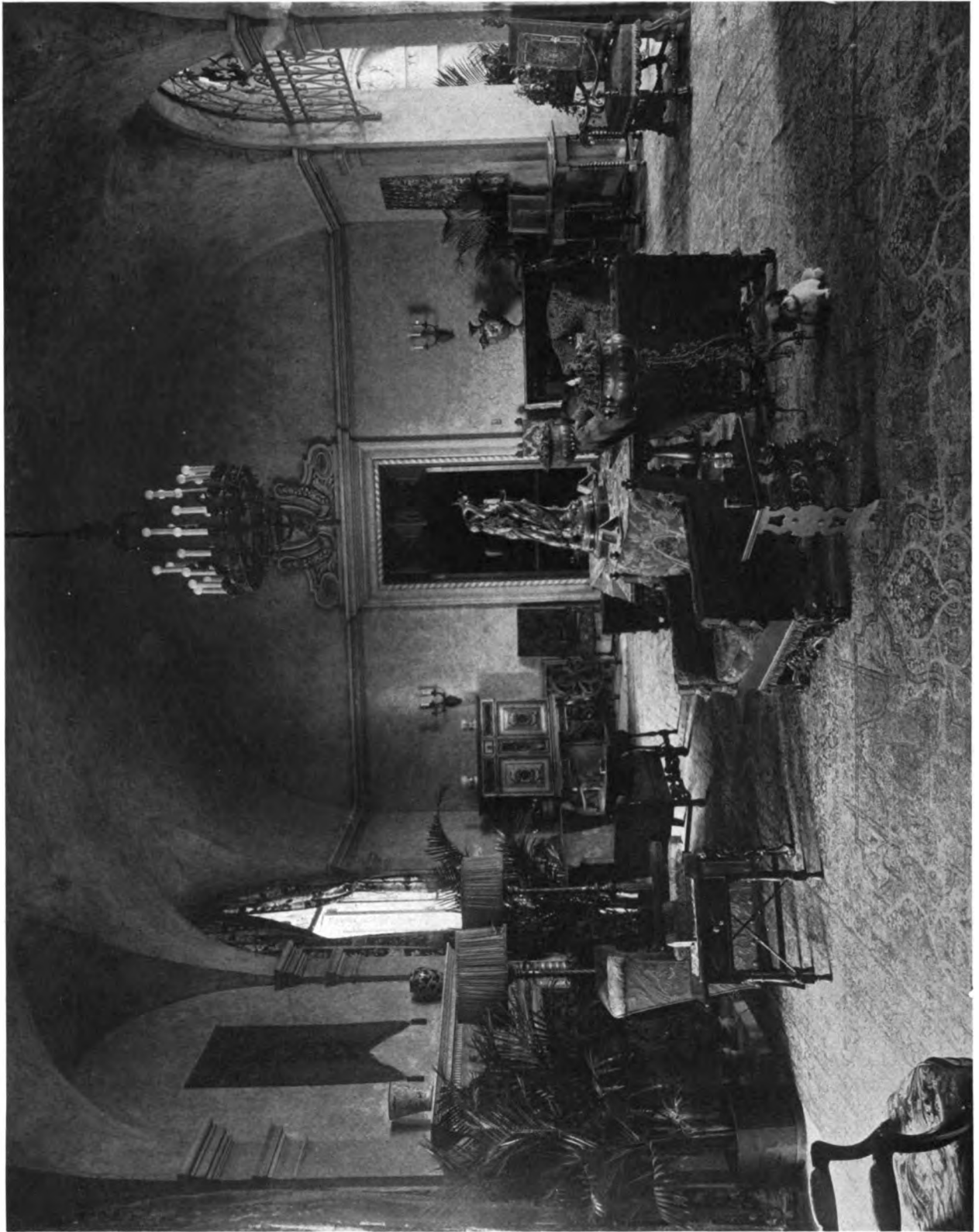
VIEW IN LOGGIA



VIEW OF PALM COURT
NEW WHITEHALL HOTEL, PALM BEACH, FLORIDA
MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS ::



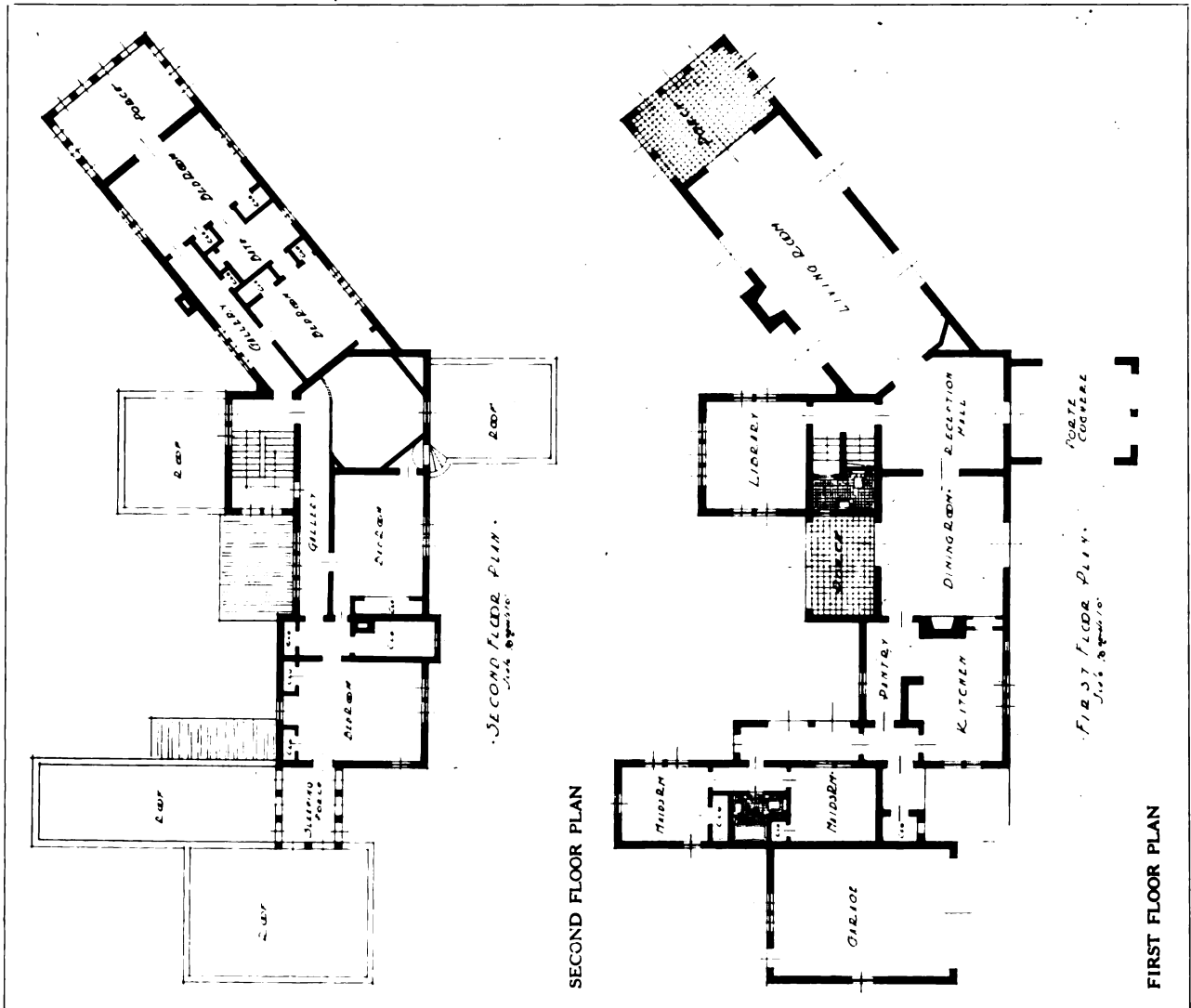
VIEW OF ENTRANCE COURT
NEW WHITEHALL HOTEL, PALM BEACH, FLORIDA
MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS ::



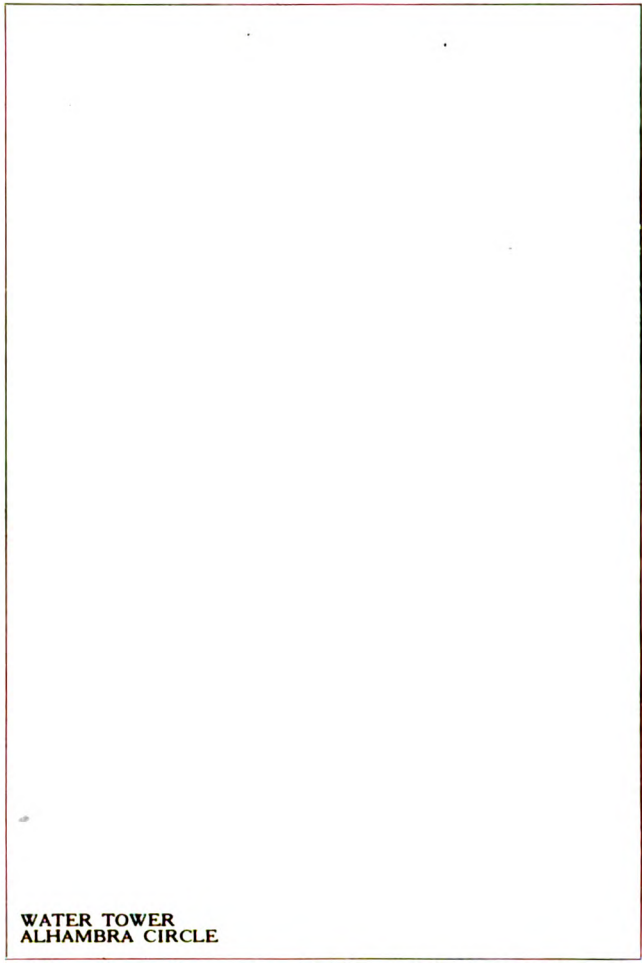
VIEW IN LIVING ROOM, APARTMENT FOR MR. W. J. MOORE
NEW WHITEHALL HOTEL, PALM BEACH, FLORIDA
MARTIN L. HAMPTON ASSOCIATES, ARCHITECTS



GENERAL VIEW



RESIDENCE FOR MR. DON C. PEABODY, CORAL GABLES, FLORIDA
 WALTER C. DE GARMO, ARCHITECT :: :: :: :: :: :: ::



WATER TOWER
ALHAMBRA CIRCLE



LAGOON, CASINO AND BRIDGE
DEVELOPMENT AT CORAL GABLES, FLORIDA

THE WESTERN ARCHITECT
MAY :: :: :: 1927

PLATE 90

The Passing Show

By ARTHUR T. NORTH, A. I. A.

WHEN Cass Gilbert did the Woolworth Building it aroused, as I recollect it, all kinds of emotions, lay and architectural. The lay expression, of course, was largely one of amazement caused by the world's tallest building, the appeal to America's complex for bigness. The architectural reception was varied, naturally.

The leaders of the "base, column and shaft" vogue for skyscrapers were shocked, especially so because no classic details were discernible. And then, it was incredible that Gothic should be applied to a commercial structure and the more envious simply classed it as a "commercial advertising stunt"—though they did not say "stunt" in those days. Other architects frankly liked it because of its beauty, charm and inspiring quality—it gave pleasure as all good architecture should. Now we appreciate more fully Gilbert's masterly solving of a most difficult problem, where a greatly disproportionate ratio of base to height was involved.

The Woolworth was epochal. Perhaps we did not fully appreciate it then, but now we can realize that it opened up a broader conception of the possibilities of architecture and from this milestone in the world's architecture others have come, slowly, then more frequently, until we are in full swing into a finer and better phase of architecture than we ever hoped for in the Woolworth days.

Corbett's Bush Terminal Building followed and then came a period of hesitation; then the Allerton Houses; Harmon's Shelton; Hood's American Radiator; McKenzie, Voorhees and Gmelin's Barclay - Vesey; Starrett and Van Vleck's Farmers Loan and Trust; Ludlow and Peabody's Johns - Manville—and now Cass Gilbert with his new New York Life.

The new New York Life Building has one of the finest possible settings in New York City for a commercial building, covering the entire block, formerly the site of the old Madison Square Garden. Madison Square will always permit an unobstructed aspect.

Somewhat more than a year ago Mr. Gilbert's design was printed in *The American Architect* and to me it was a great disappointment. It might be described as having a three part base. At the offset there is imposed a great rectangular hulk with walls of unbroken planes except for a slight projection on the north and south sides which serve as a base for and accentuate the top section of the mass.

What caused the feeling of disappointment, nay ennui, induced by the design? Perhaps it was caused by its age-old style and details. In the base, the

lower pilastered part is surmounted by the typical entablature and balustrade; then a squat story, similar to the filling in a layer cake; then a two-story colonnade with entablature and another balustrade. On top of this three section base is the huge warehouse for human beings, as uninteresting architecturally as Marshall Field's drygoods warehouse on the West Side (Chicago), but nevertheless a perfectly good human warehouse. The upper stories of this section are decorated with another row of columns, entablature and, horrors!, another balustrade. Then the third section, a kind of glorified penthouse, has more columns or pilasters—we are too dazed to be quite sure—entablature and a balustrade!

In a kind of weary stupor we could see the Indiana stone mills at Bedford turning out an endless number of columns in the giant lathes and millions of stone balusters in great banks of little lathes; stone planers making



DESIGN FOR NEW YORK LIFE BUILDING, ON SITE OF OLD MADISON SQUARE GARDEN; CASS GILBERT, N. A., ARCHITECT. FROM RENDERING BY F. G. STICKEL.

miles and miles of mouldings for the entablatures and cornices, turntables cutting label mouldings, billions of dentils, keystones galore—until we lost count of time, space and work. We got no emotion of joy—merely a tired feeling!

But, happy day! A second design was made, from which the building is now being constructed. It is four sections in height; rectangular on the ground, cross-shaped plan in the second and third sections and square in the fourth section—topped out with an octagonal-pyramidal roof and lantern.

There are no continuous cornices. There are, however, three faintly indicated belt courses. At the offsets the piers terminate abruptly and without ornaments; the vertical lines of windows have ornamented spandrel panels introduced sparingly and at the offsets there are panels of fret-work. Thus the building ascends without interruption to the base of the roof where the corner transition to the pyramidal roof is made by two stages of bartizan turrets and the wall to roof transition is made by a two-stage tracery screen on either side of a centered arch and gable.

The modeling of the masses is logical and finely proportioned, the sequence of its parts is uninterrupted and their complete harmony makes this design one of the finest yet produced. The ground area being so large, it was possible to make the correct ratio of base to height.

The placement of the ornamental details is most happy. The three belt courses are mere delicate traces compared with those ordinarily used and are so

placed that apparently they serve a real purpose; ornamental window spandrels are sparingly used and most often in connection with an arched windowhead, just sufficient in number to prevent monotony and also to accentuate the transition at the offsets. One studies this design in part and as a whole with complete satisfaction—and for what more can one ask?

As one bowls along up the Avenue in the early morning, he will see over the trees in the Square the great roof, the lantern and turrets glinting in the sun like a snow-capped Colorado mountain. Later, when the sun is more advanced, the lights and shades on the tracery and walls will ripple and sparkle like the cool blue waters of Lake Michigan on a cool summer's day. And as the sun goes down it will glow, illumined as with molten gold. The tower, sturdy, majestic and immovable, will gauge the speed of the fleeting clouds—always there, secure and dependable.

One sees new beauties, new lights and shades, new combinations with skies

and mists and storms; one is satisfied and contented with pleasurable emotions caused by the contemplation of a perfected beauty and withal is inspired with the knowledge that one of his fellows did this splendid thing.

The Woolworth still marks for all time a mile in architectural progress and now Cass Gilbert has set up another architectural milestone. Such an opportunity has come to many but few are chosen to mark one architectural mile and only a master to mark two.

The old is definitely discarded—the new has been accepted.



FIRST DESIGN FOR NEW YORK LIFE BUILDING: CASS GILBERT, N. A., ARCHITECT. FROM RENDERING BY HUGH FERRIS.

Color in Architecture

IV. Color Harmony

By REXFORD NEWCOMB, A. I. A.

ONE phenomenon of color behavior is the apparent affinity that certain colors have for one another and the equally potent antipathy they display with respect to certain others. This affinity we call "color harmony," and upon its underlying law most color theories are based. Now while the true artist does not evolve his color-schemes by rule or formula any more than he evolves pleasant form by the rules of geometry, certainly an understanding of the laws of color harmony cannot hinder and indeed may help him to explain the success or the failure of his work.

At the outset the reader must be warned against thinking of color "contrast" as color "harmony." Color "contrast," which is present when only a color and its complementary are used, is a very valuable aid to the architect, especially in the delineation of small forms which, by virtue of their distance from the eye, must be picked out in a most vivid fashion. Since each color is the exact negative of its complementary and its equal and opposite in effect, a color-scheme involving such a use, while pleasant, (doubtless because of the neutralizing effect of each upon the other) is in no sense a harmony and should not be classified as such.

During the period that man has been studying the effects of color a number of "systems" for obtaining color harmony have been evolved. These almost invariably hinge upon the arrangement of the colors of the spectrum either in a circular or in a linear configuration and, by means of masks or some other device, the colors of a "balanced" scheme are discovered.

The analogy of the color "scale" to the musical "scale" was pointed out early in this discussion, and indeed by pursuing this analogy it has been asserted by proponents of color "systems" that major triads and minor triads in color, paralleling the major and minor triads in music, were possible. This seems a convenient way of explaining color harmony, especially to one who has a common musical sense, and I have employed it for many years in introducing the subject of color to students of architecture.

Figure 1 will serve to show the analogy assumed between the two "scales." Now anyone with the most elementary musical knowledge knows that if C, E and G (a major triad) are struck simultaneously upon the piano a pleasant, harmonious result (chord) is obtained. The physicist will immediately explain, upon the basis of the respective vibration frequencies

of these tones (C = 256, E = 320, G = 384) the facts of their relationship and lay down the law that: *any three tones whose vibration frequencies are related to one another in the ratio of 4:5:6 will produce an harmonious effect*, such, as for example, D, F sharp and A, or G, B, D, etc.

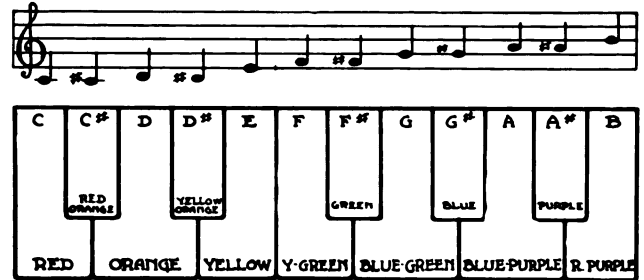


FIG. 1

Now assuming the parallelism of the musical and color scales, one may select the corresponding colors and get equally harmonious major color triads. Referring to Figure 1, the colors corresponding to C, E and G will be found to be Red, Yellow and Blue-Green; those corresponding to D, F sharp and A will be found to be Yellow-Orange, Green and Blue-Purple; and those corresponding to G, B and D will be found to be Blue-Green, Red-Purple and Orange; all of them major color triads but involving different colors.

By a similar process minor color triads may be found. Take for instance the triad for C minor. This is formed upon the piano by striking C, D sharp and G. Referring to our color scale we find this minor color triad to be Red, Yellow-Orange and Blue-Green. Other minor triads are equally easy to find.

But the reader will at once say, "Suppose one wished to use more than three colors in a scheme?" Again your musical analogy will suggest a solution. Refer again to Figure 1. Suppose we want a color-scheme in which Red is the dominant, the tonic, as one would say in music. Refer to the piano keyboard. The scale of C major is performed by playing the white keys as follows: C, D, E, F, G, A, B, C. Now the colors corresponding with these keys are: Red, Orange, Yellow, Yellow-Green, Blue-Green, Blue-Purple, Red-Purple, and Red. This gives us a complete "octave" of harmonized color which is analogous to the musical scale of C Major. This we may call the color scale of Red.

Now the colorist who knows his music can at once develop other complete "color scales" by following

the colors which correspond with his musical scales. As an illustration let us analyze the color insert for this month. (See Plates 82-83.) The dominant color (tonic) here is Yellow. Referring to our Figure 1 it will be seen that Yellow falls on the key of E. Now the musical scale of E Major consists of the following tones: E, F *sharp*, G *sharp*, A, B, C *sharp*, D *sharp*, E, and the color scale of Yellow corresponding with these keys will be found to be: Yellow, Green, Blue, Blue-Purple, Red-Purple, Red-Orange, Orange, Yellow. A reference to the color plate will discover most of these colors figuring in the color-scheme, and whatever else we might say about the plate's meaning, composition, or architectural import, we must agree that there is "scientific" color harmony here.

Now all are not well enough acquainted with even the most elementary musical conceptions to work out color-schemes upon this analogy, and therefore color "wheels," color "charts," and other expedients have been evolved which will furnish, by the turning of a cardboard disc or triangle or the simple manipulation of a prepared "mask," a number of color triads, *major* or *minor*. Figure 2 will show a very simple arrangement for the "automatic" production of such color combinations by the simple procedure of rotating the triangle about the central pivot and reading off the colors to which the angles of the triangle point.

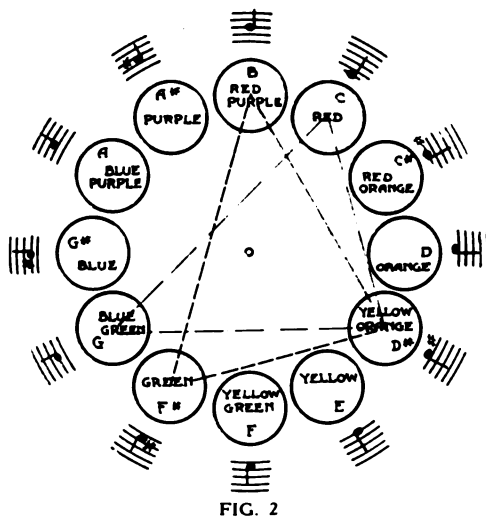


FIG. 2

Arranged as it is the triangle (as shown by the heavy dotted lines) indicates *major* triads, but, if it be turned in obverse (as shown by the dot-and-dash lines) and similarly rotated, it will indicate *minor* triads. Examination will reveal twelve such major triads and twelve minor triads, and one setting out to build up a color-scheme may start with any such triad as a basis and build upon them combinations just as he would if he set out to build up combinations upon the basis of the so-called primary colors.

Now while such an *automatic* selection of the basic colors of a color-scheme may serve as a beginning, it

will not by any means insure success, for the *areas* of the respective colors and their *intensities* are *not* thus determined. In any color-scheme, for unity's sake, *there must be a dominant* and for this the designer may select any color of a triad that serves his purpose or best expresses his idea. Once selected, the other elements of the triad *must recede in area, in intensity, or in both*. Some color charts have been developed with masks having sliding shutters which permit the designer, before he ever opens his color-box or lays a brush to the paper, to "try out" various triads and the various combinations of intensities of these triads.

The character of the design, however, determines the areas, but the *colors* these areas should take form the real crux of the whole problem. In some schemes the large areas should be delicate and the smallest areas intense; in others the reverse will be true. This the designer must ultimately determine for himself and so far as I know, there is no rule, no formula that would, even if one wanted it, suggest a solution. This the designer must find out by the "feel" of his design or determine by a "cut and try" process.

Now it will occur to the reader that all of these triads form what might be called "*balanced*" color-schemes; that is to say, they borrow something from all three of the so-called "primaries." But nature does not always present "balanced" color, and, under certain atmospheric effects, one sometimes sees that which may almost be described as a "*monochrome*"—similar in effect to that produced when one gazes at a landscape through a colored glass. Certainly some of the most satisfying color combinations that man has evolved are anything but "balanced."

At this point one recalls such color-schemes as these: deep Blue, light Blue, Black, White; deep Blue, delicate Yellow, and Black, from the Egyptian or Italian Renaissance as the case may be, and recalls them, moreover, with distinct pleasure and satisfaction. I remember a painting I once saw. Everything in it was of some variety of Blue but the one spot, and that almost infinitesimal, to which the artist desired to attract attention, and that was of Yellow-Orange, almost the exact contrast of the dominant of the picture. Now in this picture, while the Blues were all "of the same family" that is, "harmonious," the one spot was in "contrast." The composition was, however, a very satisfying, pleasant and unified thing.

But even in color "harmony" of the "balanced" type, the complementary of the tonic always appears. Take the C major triad: Red, Blue-Green and Yellow. Red and Blue-Green are true complementaries, but in the presence of Yellow, they no longer contrast but agree to become "harmonious." On the other hand, Red and Yellow are not "harmonious," when they dwell alone in close juxtaposition and in full intensity, but in the company of Blue-Green, they forget their antipathies.

I have spoken of the importance of a judicious governing of intensities. Colors in full intensity are likely to be less harmonious than those of lesser intensity. Now, nature apparently isn't careful about color distribution and one sees large patches of Yellow dandelions on areas of Green grass, but nature soon sees to it that the intensities are "greyed" down by an accumulation of dust or through an atmospheric haze, and thus she "harmonizes" schemes that man would scarcely elect for use.

Now in architecture also, color may be modified by weathering, the accumulation of dirt, smoke, and grime, and the beneficent intervention of dust, haze, or mist in the air. All of these agents may help to harmonize into tolerable schemes many that if left in their pristine freshness might soon become intolerable. In this connection it is well to call to the designer's attention the fact that many of our materials collect dirt and grime more rapidly than others. It is well to remember that brick and stones "go darker" in color and "value" as time progresses, while terra cottas, tiles and other glazed materials are not so completely affected. This change in your colors and the fact that all materials do not "scale down" in color intensity at the same rate must be taken into consideration. Especially is this true in cities where bituminous coals are burned.

I have spoken of "contrast" and its value in

helping to differentiate areas and forms that by virtue of their small scale or distance from the eye might otherwise be lost to us. In closing it may be necessary to point out that there are colors which are more antagonistic to one another than either is to its complementary. The Greeks understood this and where greatest differentiation of area was necessary they selected the most active color opponents. For instance they often opposed Red by Blue, a color combination which, when used in close juxtaposition, is sure to stir up a vibrating reaction between the members, a much more active opposition than would be generated between the complimentary: Red and Blue-Green. Red in close juxtaposition to Yellow again is very active and needs something in the way of a separator to keep them from violence. But often intense vibration is necessary and, when this is true, the more active color combinations should be used. One may observe that the stages of color activity may be catalogued as follows:

- a. Combinations giving strenuous and active reactions as Red and Blue.
- b. Normal contrast, as: Red and Blue-Green.
- c. Harmony, as : Red, Blue-Green and Yellow.

Each stage is necessary and useful in its place and the one to be employed the colorist must determine by a consideration of the problem in hand. The best that we can do here is to call attention to the general principles and suggest an approach to the problem.

Draftsmen, Craftsmen and Better Buildings

WITH the belief that better buildings will result when draftsmen are schooled in all the realities of building through a first-hand study of the problems of the craftsmen, the New York Chapter of the American Institute of Architects, through its committee on education, has inaugurated a campaign of visiting. Shops and studios of arts and crafts engaged in construction are being viewed by the drafting staff of architectural offices. First hand knowledge thus gained of all actual processes in the preparation of building material will result in better construction.

John Taylor Boyd, Jr., chairman of the Committee on Education, in a recent report sets forth the plan of his committee.

"We are convinced," the report declares, "that a constant effort must be made to assure contact between draftsmen and craftsmen, in order not only to maintain the vitality of our art, but to prevent a vast amount of wasted effort in the drafting room, due to a lack of understanding of the possibilities and limitation of materials and workmanship.

"The ignorance of the average draftsman of such operations as the sawing, planing and polishing of stone and marbles, the modeling and casting of bronze, or the forging of iron is abysmal, and is expressed in many an expensive detail drawing.

"There is in all architects' offices the constant tendency, produced by pressure of work, to hold the men so closely to the production of drawings that we believe we can discern the growth of a generation of designers and detailers who are losing all contacts with the materials of architectural construction, and with the arts and crafts which prepare them for use in our buildings. We have particular reference to the artistic aspects of our work, for we realized that the structural and mechanical aspects are most often handled by men who actually superintend at least a portion of their work in the field, and so maintain contact with the realities of production.

"Members of the New York Chapter of the American Institute of Architects are asked to arrange for the entire drafting force working on a building to visit, at least once during the course of the job, all the shops such as cut stone, terra cotta, marble and mosaic, decorative plastering, modeling and sculpture, bronze and ironwork, woodworking, decorative and mural painting, furniture and draperies, where work is being executed for that operation, when these shops are within a reasonable radius of travel. We believe that the knowledge of the possibilities and limitations

of materials and craftsmanship which will result from the carrying out of this plan will be most helpful to the art of architecture and all allied arts and crafts.

"To make a definite start on this program, the committee is now securing the co-operation of a selected list of shops and studios, within convenient reach of the offices, all representing high standards of artistic achievement, where members of the architects' staffs will be welcome visitors."

Shops and studios with which arrangements for expeditions have already been made include those devoted to marble and stone, metal work and lighting fixtures, cabinet work and furniture, modeling, carving, plastering and art stone, glass, mosaics, sculpture, mural painting and decorative design, leather, landscaping, and textiles.

"The plan," Mr. Boyd continues, "is to send the draftsmen in groups to the shops. There will be none of the architects present, so that draftsmen may talk freely with the craftsmen. There is no question about the willingness of the craftsman to co-operate. We have received an unexpectedly cordial response both from the architects of the New York Chapter and from craftsmen in the building trades. Over thirty architectural offices have replied and will send probably double that number of men to the shops for one or two visits a month. All of the craftsmen notified have responded favorably. Many of the City's most prominent architects are supporting the plan.

"No matter how fine a design is, in the last analysis it cannot be entirely successful unless it is carried out with an inspired and accurate execution of the smallest details."

The other members of the Chapter's Committee on Education are: William F. Lamb, 331 Madison Avenue; Frederick A. Godley, 522 Fifth Avenue; Gerald A. Holmes, 101 Park Avenue.

The Government is still clamoring for architects and engineers to assist the supervising architect in carrying out the new public buildings program authorized by the last Congress. Announcement is made by the United States Civil Service Commission that it has not received enough applications to meet the needs. Examinations are open for assistant architects, associate architects, assistant structural engineers and assistant architectural engineers with salaries ranging from \$2,400 to \$3,000 a year. Applications for these positions will be received by the Civil Service Commission until June 30th.

The Outlook for Building

A PREDICTION, that the building peak attained in Chicago and the Mid-west during 1926 will not stand for any considerable period of time is made by the Chicago Tribune Survey. The Survey quotes the building permits issued thus far in 1927, which far exceed those of 1926, as a verification of the truth of its survey.

"A number of professional business forecasters for some time have been floundering in bewilderment about the building industry," declares the Survey. "One business service last year saw the collapse of construction activity in the offing, and predicted that not only would there be a practical suspension of building toward the end of 1926, but a reaction in general business as a consequence. In the face of these forecasts, the building industry rose to new heights last year, measuring altitude by the actual contracts awarded, and the whole business structure was carried along to a higher plane.

"What led the prophets into error? There are two apparent explanations. One is the fallacious notion which prevails in some quarters that the business cycle is a 'teeter-totter' with business bouncing up and down. Those of this mind reason that since business has had a long bounce up, it must drop soon and stay down for a long time. This theory which may have described conditions when periods of money panics, booming price levels and overproduction occurred at more or less regular intervals is a false guide in these days of ample money, steady or moderately declining price and hand-to-mouth buying.

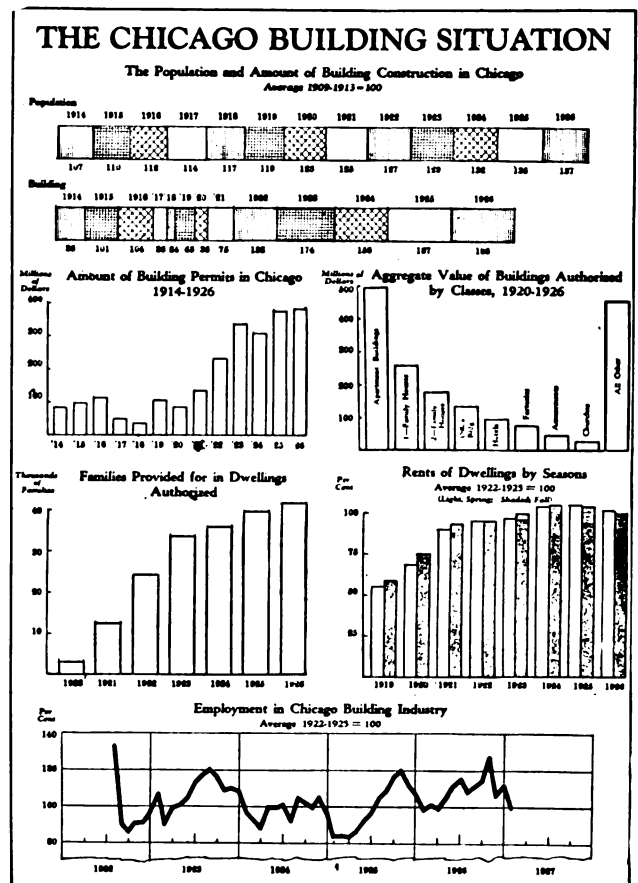
"A second source of error has been the failure in appraising the amount of building to be done, to make proper allowances for increased costs of building, growing population and the expansion in the income of the average wage earner.

"In order to make definite measures of the amount of building done and the amount to be done, a number of series of data has been developed or assembled and analyzed. The data are confined to the City of Chicago, partly because data for the country and for the zone (including Illinois, Indiana, Iowa, Michigan and Wisconsin) are not available, and partly because it is believed that Chicago reflects conditions in the Chicago Tribune zone if not in the country as a whole.

"The chart (reproduced) tells the story. Here is presented the race between population growth and building. In order to get a working basis an assumption had to be made that at some time a proper relationship existed between the amount of building

done and the amount of increase in population. For this purpose, the period adopted was 1909-1913, the five years preceding the outbreak of the war. The population which is charted for each year as a percentage of the population in the base years, is the United States Census figures for 1920 and the estimates by the municipal reference librarian for intercensal years.

"In order to reduce building valuations to building volume, since the dollar was of varying purchasing power during the period, each year's building valuation was divided by the index of building costs for that year. The cost index was derived from the method used by the United States Bureau of Labor Statistics and explained in their bulletin number 397. By this method with the building cost index standing at 215 in 1926, as compared with 100 in 1914, a \$100,000 building in 1914 is the equivalent of a \$215,000 one in 1926, and reciprocally, a building costing \$215,000 is calculated to be the same as a \$100,000 building at 1914 prices.



REPRODUCED FROM BULLETIN OF CHICAGO TRIBUNE SURVEY

"Applying the index numbers of costs to aggregate valuations it is discovered that the actual amount of building construction in 1917 was only 38 per cent of the average in the five-year, pre-war period and in 1918, 24.3 percent of the average. In each year from 1914 to 1922, the amount of building was less than the amount done in the pre-war era. Consequently there was built up a tremendous deficit in building operations evidenced not alone by the shortage of new building facilities, but also by the diminished replacement of old buildings by new.

"In each of the five years commencing with 1922, the amount of construction work has run ahead of the base years, but with the population also grown 36.8 percent the excess is less than at first appears. The average population during the 13 years from 1914 to 1926 was 22 percent more than the population in the five years used as a base, while the average building done was only 6 percent above that base.

"If the pre-war base is a sound one, it may be concluded that building can go on for four more years at the present rate without overbuilding. This of course is not to say that in some classes during the past few years, construction has not gotten ahead of requirements. What it does show is that the aggregate deficit of building of all kinds caused by the war has not yet been overcome.

"This method of analysis makes possible the calculation of the normal amount of building to be done in Chicago in any year. The average annual value of building permits in the five-year base period was \$94,250,000. Population in 1926 was 36.8 percent larger than the average in the base period, so that assuming no increase in building costs, an annual construction bill 36.8 percent larger would be normal. If prices had not risen the normal amount of building would have been \$128,934,000. But building costs were 2.15 times as high in 1926 as in 1914 so that it would require an expenditure of \$277,208,100 to produce, in 1926, the buildings of pre-war standard which could have been erected for \$128,934,000 in 1914.

"It is unlikely however that the people in 1926 are satisfied with buildings of the standard of the 1914 structures whether they be homes, office buildings, moving picture theaters or structures of some other kind. The fact is that the standard of living has increased greatly since 1914, and it would be the unnatural thing to expect no improvement in the types of buildings erected. In fact, it probably is not far from correct to say that as the per capita income has increased, there has been a proportionate increase in the standards of building construction.

"In a release on February 21, the National Bureau of Economic Research reported that, measured in terms of dollars of constant value, the per capita income increased in this country from \$318, the

average for the five years immediately preceding the War to \$455 in 1926, a growth of 43 percent. Applying this 43 percent increase to the estimate of \$277,208,100, the estimate for normal building of the pre-war standard, it is revealed that the normal amount of building to be done in 1926, based upon the pre-war level and making proper allowance for growth in population, cost of building and the standard of living, is \$396,407,583. With the actual value of permits estimated at \$366,000,000 in 1926, it does not appear that the year will stand as a peak for any considerable period of time. Verification for this prophecy comes in the report of building authorizations for the city of Chicago for the first three months of 1927. The permit total of \$108,452,730 is larger than for any similar period of the city's history.

"What is said for Chicago probably applies in varying degree elsewhere. Building construction is an industry of permanence, which will continue to grow as the country does and as people become dissatisfied with old buildings and make plans to replace them."

William Templeton Johnson, of San Diego, California, has been selected as architect for the United States Government buildings at the International Exposition, to be held in Seville, Spain, in 1928. The selection was announced by Thomas E. Campbell, Commissioner General to the Exposition. Mr. Johnson was trained at Columbia University, completing his studies at Beaux Arts and has travelled widely in Spain and Latin American countries. He has specialized in Southern California, in the Spanish styles of architecture and was architect for the Fine Arts gallery in San Diego, a building recently given an award for excellence by the Southern California Chapter of the American Institute of Architects. Mr. Johnson's preliminary plans have been passed upon by the Commission.

A competition program for a residence and garage sponsored by the Washington State Chapter of the American Institute of Architects and open to any architect, designer or draftsman, is announced by the West Coast Lumber Bureau. J. Lister Holmes, Seattle, A. I. A. is the Professional Adviser. Prizes consist of first prize, \$2,000; second prize, \$500; and ten mentions, each \$100. C. W. Stimson of Seattle is presenting the first and second prizes. The closing date is August 1st, 1927. The purpose is to develop the uses, applications, and methods of construction and finishing of the woods of the Pacific Northwest, including Douglas fir, West Coast hemlock, Sitka spruce and western red cedar. The jury will consist of five architects selected from representative sections of the United States. Copies of program and information may be had from Mr. Holmes, 1014 Alaska Building, Seattle, Washington.

Book Review

"HOMES OF CHARACTER": by Marcia Mead, A. I. A. Foreword by Daniel P. Higgins; illustrations by Otto R. Eggers. 235 pages, fully illustrated, 6x9, cloth. Published by Dodd, Mead and Company. Price \$3.50.

While Americans excel in the development of the modern dwelling house, the vast majority of modern houses show a lack of good design. One reason for this may be that a comparatively small number of buildings are designed by architects. By far the greater number are constructed after ready-made plans or those made by contractors. This condition evidences the fact that a large majority of builders or purchasers of dwellings have a lack of appreciation of good architectural design. They are too apt to follow a vogue which lasts for a period, after which another one will become the prevailing fashion. The contractor-designer has no regard, as a rule, for good designing; rather his only aim is to produce a house that is readily saleable and that is his only criterion. Home owners who build rather than buy are too apt to be influenced by the style which may be set up in the community in which they live, and these styles become prevalent for various reasons, none of which is based on architectural merit.

If the home builder or home purchaser were better informed as to the elements which constitute the different styles, and would select them with discrimination, the quality of modern houses would be improved. It is to serve the need for a better knowledge of the different styles of houses which are adapted to American standards of living that "*Homes of Character*" was written by Marcia Mead. Not only will this book be found especially valuable to those who build or purchase dwellings, but also to architects and builders. It should be incorporated in courses of study devoted to Home Economics, Sociology, Ethics, Architecture and Art.

The book is composed of ten chapters, six of which are devoted to the American Colonial styles. These are followed by chapters describing French, Italian and Spanish houses; the tenth chapter illustrates the adaptation of all these styles to modern needs. The book is concluded with a bibliography and index.

A few examples of each are given in the chapters devoted to the Colonial styles, not with the idea of showing the details of construction and ornamentation, but rather of explaining the form of the building which is characteristic of that style. The interiors also are illustrated. There are numerous illustrations of furniture peculiar to each of the styles of architecture.

A careful study of each chapter should inform the reader of the elements which constitute the style described, and they will have a knowledge which will

enable them to design or select with discrimination. The descriptive text is written in a non-technical manner but contains such charming and vivid descriptions that the reader readily visualizes the object.

The text is comprehensive and no essential factor is omitted. This book should have an important influence in developing the element of character which is so woefully lacking in the modern house, and this character can only be obtained by the exercise of a properly cultivated appreciation of relationship and a well-trained sense of discrimination.

The book contains an appropriate foreword by Daniel P. Higgins and is illustrated with original sketches by Otto R. Eggers, and photographs.

The Eleventh International Congress of Architects will be held in Amsterdam and the Hague, August 29th to September 4th. Among other subjects will be discussed international competition, legal protection of the title of architect, architectural copyright, architecture as practiced by the architect and by the architect-builder, and artistic development of architecture since 1900. The Congress was organized in Paris in 1867, the first three meetings being held there. The fourth was in Brussels in 1897, the ninth in Rome in 1911 and the tenth in Brussels in 1922. The international gatherings bring together architects from all parts of the world to discuss matters of prime importance to the entire profession. The program, of course, includes visits and excursions to architectural monuments. American architects are invited to attend the coming Congress by the American committee which is composed of Cass Gilbert, chairman; William A. Boring, Glenn Brown, J. Monroe Hewlett, William Rutherford Mead, C. Howard Walker, C. C. Zantzing, and Geo. Oakley Totten, Jr., Secretary. All information may be secured from Mr. Totten at 808-17th Street, Washington, D. C.

The Associated Tile Manufacturers has moved its headquarters from Beaver Falls, Pa., to the Graybar Building, forty-third Street and Lexington Avenue, New York City. The organization has been housed at Beaver Falls ever since its organization.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, ETC.

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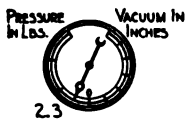
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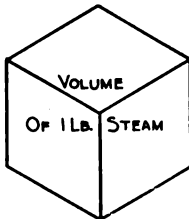
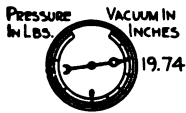
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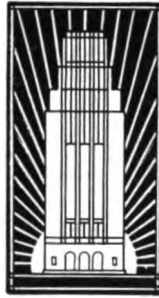
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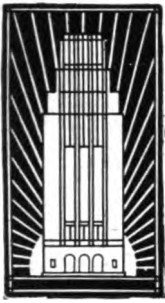
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DRAWING FOR A CHRISTMAS CARD
BY J. B. BENEDICT

*"Coming to pass, Coming to pass
At that thought, arose in me, a vision
Into things not called before to mind."*



THE WESTERN ARCHITECT

ARCHITECTURE

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The Proposed
Public
Auditorium
for Chicago

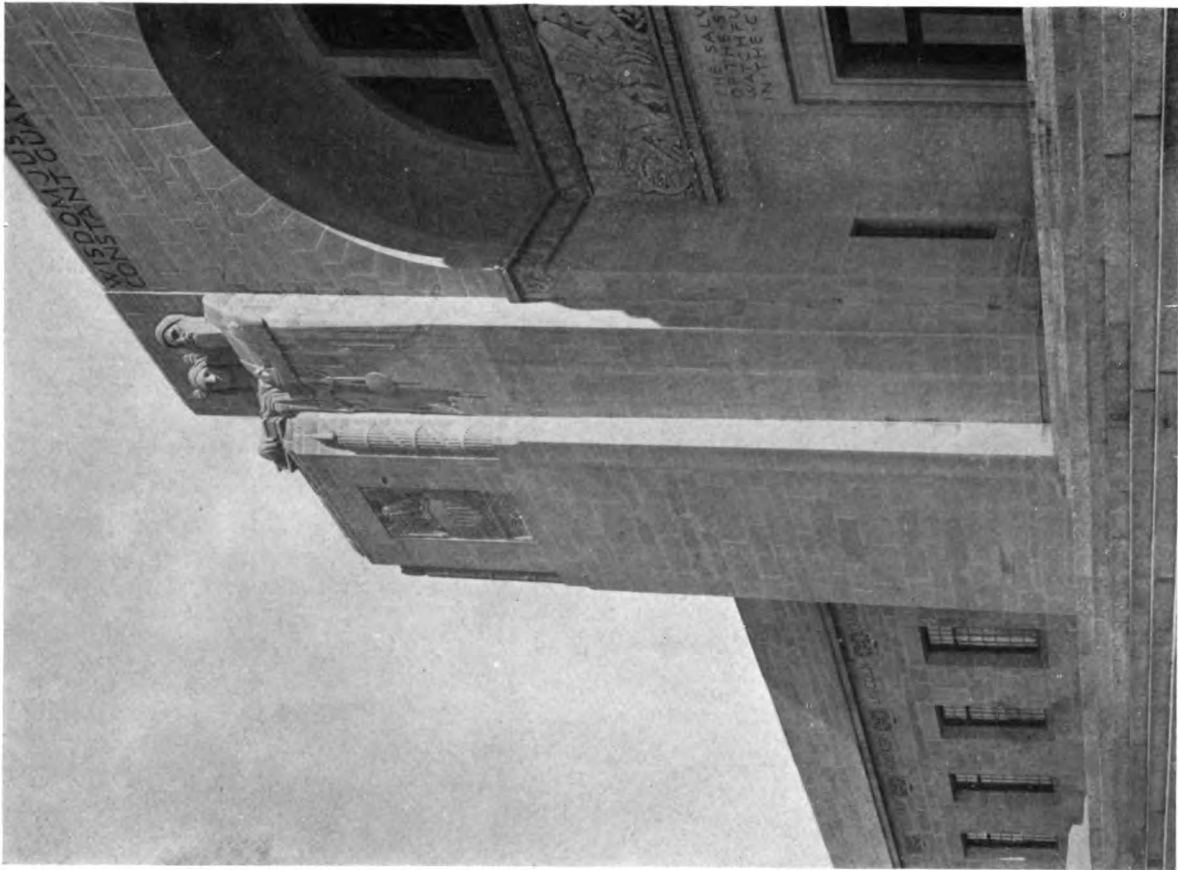
Through legislative enactment the city of Chicago is authorized to issue bonds for the building of a municipal auditorium or community center. A committee of Chicagoans is at work on the details of the plan. There is talk about organizing a competition for the selection of an architect for this monumental building. We use the term "monumental" in the general sense, believing that such a hall will be of a size and importance to warrant such a definition. The location, too, of this building is a matter of prime importance being discussed by those who are entrusted with the working out of the plan. Despite the fact that three outstanding buildings in the West have resulted from competitions, we believe there are architects in Chicago to whom the building of such a structure may be commissioned with the assurance that the result will be quite as satisfactory as any which might be presented in such a competition. Chicago newspapers have been publishing important structures which might serve as inspiration for Chicago's proposed auditorium. Most of these have been the well-known, classical examples. We were interested in a communication in *The Chicago Tribune*, suggesting that pictures of Goodhue's Nebraska Capitol building be included in such suggestive series. The latter resulted from a competition, but it was not an ordinary one. The program, written by Thomas Rogers Kimball, F. A. I. A., of Omaha, former president of the American Institute of Architects, was not the usual program. It was written with a definite purpose in view. That purpose came to fruition in the building not yet completed, but which has commanded attention the world over. It was Mr. Kimball, too, who wrote the program for the Kansas City Memorial, being completed by H. Van Buren Magonigle in that city. Another great achievement is that structure. It, too, resulted from the inspiring terms of the program. Chicago's Tribune Tower resulted from a competition, but the second prize design for that building has had

a greater influence upon American architecture than the winning design now an actuality on North Michigan avenue. If the new Chicago auditorium is finally to be subject to a competition, those in charge will do well to place the writing of its program in the hands of one who is possessed of imagination, of vision, of ability to inspire as is Mr. Kimball. In this connection it may not be out of order to state that Chicago's own I. K. Pond was an adviser of Mr. Kimball in the preparation of both the Capitol and Memorial programs, as we recall it. Certainly he was consulted in the former. And we commend to serious consideration, also, the well-weighed statement of Edward H. Bennett, architectural advisor of the Chicago Plan Commission, that the location of the auditorium on the lake front will not serve its purpose so well as though it were placed on the near West Side. Nor will it conform to the Burnham plan. And, finally it is sincerely to be hoped that if this project develops, it will be free from all taint of politics, and in location and architecture that it will represent the real, progressive spirit which, despite reports to the contrary, is Chicago.

A CORRECTION

Through error, credit for the modern mosaic work illustrated in the April issue of *The Western Architect*, was not given to Ravenna Mosaics, of 101 Park avenue, New York. It was through the courtesy and co-operation of this company, that the views of the modern application of this material were made available.

The work in the St. Louis Cathedral, the Chapel in the Church of the Holy Redeemer, Detroit, the Golden Hall in the new City Hall, at Stockholm, and in the Cathedral at Topola, Serbia, as well as in the Maccabees Building, Detroit, and the office building in New York by Buchman and Kahn, all was executed by Ravenna Mosaics, a concern that is reviving in America and Europe the best traditions of the art which is so important in architecture.



EAST PYLON OF MAIN ENTRANCE

Photos by R. V. Smutny



HAMMURABI
NEBRASKA CAPITOL BUILDING, LINCOLN
BERTRAM GROSVENOR GOODHUE, ARCHITECT
LEE LAWRIE, SCULPTOR

The Architectural Sculpture of the Nebraska Capitol

A REVIEW

By THOMAS ROGERS KIMBALL, F. A. I. A.

A WORK OF ART, an example of book-making reminiscent of the *Maison Quantin* of 1900 and those early personal productions of a century ago, with their hand-made, line-dried, so-called laid papers.

There may be others—it is enough for me that in the *Press of the American Institute of Architects* there is one, developed under the lash of non-appreciation; this child of the American Institute has arrived where it can produce a real book.

The Architectural Sculpture of the State Capitol of Nebraska—the title challenges comment—why architectural? Is it because it is of and for the architecture, and in just that reticence does it not proclaim the master hand? Will the tip be taken? Will those who follow really follow? Or will it be—back to the old competition for first place—sculpture to decorate architecture, or architecture as a background for sculpture, instead of each being of and for the other, and neither without the other?

The title-page presents the joint authors Charles Harris Whitaker and Hartley Burr Alexander.

To the readers of *The Western Architect* it is wholly unnecessary to introduce Mr. Whitaker. For the benefit of the reading public generally, however, let me say just a word. During the twelve years of our association—he as editor of the *Journal of the American Institute of Architects*, I as an officer of the Institute Press—I have watched his advancement as a writer with the growing conviction that much of the improvement in architectural English of the last decade is directly due to his personal contribution. His chapter in the volume under consideration is a good example of Whitaker English. I quote the opening paragraph in justification:

“The Capitol of the State of Nebraska is of the gossamer web of dreams. Let that be known and well remembered by all those who look upon its power and strength, its majesty of clean-lined solidity, its incomparable simplicity and its thrilling beauty. Only that is possible which can be imagined, and in all created beauty the dream must come first.”

The importance of dreams thus suggested as the beginning of all beauty, reminds me of another beautiful passage, by Dana Burnet I believe, which by giving to dreams ultimate permanence would seem to cede to the imagination credit for pretty much all

that we have come to recognize as beautiful. I quote:

“Who dreams shall live, and if we do not dream
Then we shall build no temple unto time;
Yon dust cloud whirling slow against the sun
Was yesterday's cathedral, stirred to gold
By the heedless footsteps of a passing world.
The faith of stone and steel are failed of proof.
The king who made religion of a sword
Passes and is forgotten in a day. The crown he wore
Rots in a lily's root,
And the rose unfurls her banner o'er his dust.
The dreamer dies, but never dies his dream.
Though death shall bring the whirlwind to his aid,
Enlist men's passions, stir their hearts with aim—
Still shall the vision live. Say never more
That dreams are fragile things. What else remains
Of all this broken world, save only dreams?”

Of the first chapter in the “Architectural Sculpture of the State Capitol”, Avery Abbott, a western contributor whose word carries weight, writes: “Now we have again the pleasure of reading an appreciation in Mr. Whitaker's exquisite prose. In the years when you sent us the *Journal of the Institute* we never missed a word of whatever Mr. Whitaker wrote.



MAIN ENTRANCE TO NEBRASKA STATE CAPITOL, LINCOLN;
BERTRAM GROSVENOR GOODHUE, ARCHITECT;
LEE LAWRIE, SCULPTOR

THE ARCHITECTURAL SCULPTURE OF THE STATE
CAPITOL AT LINCOLN, NEBRASKA, by Charles Harris
Whitaker and Hartley Burr Alexander; from the *Press of the American Institute of Architects*, New York; \$10.00.



THE EIGHT GREAT LAW-GIVERS, HAMMURABI, MOSES, AKNATON, SOLON, SOLOMON, CAESAR, JUSTINIAN, CHARLEMAGNE, APPEAR ON BUTTRESSES OF SOUTH MIDDLE ENTRANCE

Nothing gives us keener delight than the delicate perfection of his style. It always brings to me again the feeling I have had when I have listened to the distant tones of a sweet chime of bells. When I read it silently it has still the power to make me hear melody."

To Dr. Alexander, philosopher, writer, artist, poet, teacher, lecturer, and playwright, who contributes the second chapter of the book, one has to credit the symbology of the Capitol; and in so doing we must also credit him, through that splendid achievement, with much of the inspiration for the sculpture that not only furnishes the substance of this book, but which, in the Capitol at Lincoln, provided *the outstanding example of a sculptured architecture*.

The art of today lacks not followers—wherefore let us do honor to the pioneers when opportunity offers, for in so doing we recognize not only things accomplished, but pay tribute to the posterity of which they are the parents; and who can now measure the importance of the example set by the new Capitol of Nebraska?

Dr. Alexander has, in the text of his chapter, repeatedly called the Capitol a book, and as repeatedly proceeded to review it—therefore this screed might well be called a Review of a Review, which in turn should comfort me for the difficulty I find in simply touching the high places, where inclination urges elaborate comment.

Of those who are so fortunate as to secure this book, my thought is that it will bring to their libraries the visual record of one of the greatest of modern buildings, some forty-five odd full-page photographic reproductions of the architectural sculpture which is the new Capitol of Nebraska, and twelve pages of beautifully spoken English, setting forth that which many would miss without its thought-provoking guidance.

As architect and as Nebraskan my enthusiasm for the Capitol of Nebraska knows not limitation. As reviewer, however, one owes it to the reader not only to emphasize and repeat, but to modify some of the statements made, and to actually take issue with others. With the claim that in the union of monumental character with the housing of affairs, the equal of the Goodhue masterpiece is not elsewhere discoverable, either now or in previous times, one cannot take issue—neither can one fail to laud to the limit the recital of Goodhue's two convictions, that decoration must be significant, and that sculpture, whether image or inscription, should be of the substance of the building. It takes no great stretch of the imagination to subscribe to the claim that the Capitol of Nebraska is in a new architectural style or that its sculpture also affords "an adventure in style". It is, however, being a bit credulous to accept a three-thousand-year life for anything built to any considerable extent of steel; or, in the light of history, to count on any man-made



SOUTH MIDDLE BALCONY OF THE NEBRASKA CAPITOL, LINCOLN; BERTRAM GROSVENOR GOODHUE, ARCHITECT; LEE LAWRIE, SCULPTOR



LEE LAWRIE, SCULPTOR, OF NEW YORK, WHO WAS MADE AN HONORARY MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS



TOWNSEND PHOTO

DR. HARTLEY BURR ALEXANDER, OF THE UNIVERSITY OF NEBRASKA, NOW AN HONORARY MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

thing that rises so high above surroundings—escaping the attention of those recurrent strong-arm demonstrations that punctuate the world - story—unless indeed we are ready to believe that Woodrow Wilson's message has come to stay.

R. V. Smutny's photographs handle the various elements of the building with such playful imagination that one's impression is that gathered, not by a single visit but by many. We have the Capitol in all weathers, almost in all seasons, and at all times of the day. One would have to live with it for a month at least to as completely receive its message as it comes through the interpretation of these masterly photographs.

In the several plates of the main entrance, for example, we get not only the expected Wisdom, Justice, Power and Mercy, but by a happily caught change of light and a playful tilt of the camera Mr. Smutny has put a human touch into these stone images to such an extent that one sees Power in Wisdom and actually, Mercy in the stern features of Justice. And oh, how well Goodhue knew the difference between a mere wall and the "wall of dreams"! Seek this differentiation in the half-lights and liquid shades and shadows of these wonderful photographs!

Dr. Alexander's text takes the reader through the symbology of the building, and in so doing introduces him to the sculptor Lee Lawrie and to each of his splendid contributions to the whole—that is, in so far as they are completed, there being a number still to be done before this monument to the coming of so-

called law and civilization is finished. By the light of recent experiments in legislation and enforcement one might almost find something akin to irony in the particular panels devoted to the Declaration and the Constitution!

In endorsing much, if not all, of the praise offered to Lee Lawrie, I might go a little farther by asking, for his future output, careful study to determine whether or no Lawrie will stand alone, and to what extent, if any. Goodhue was essential to the sculptor of the Capitol. If, as I believe, Lee Lawrie will be found able to stand alone—then we may have to drop the modifying "architectural" from Alexander's claim of first place for him among sculptors of our time.

One element in the sculpture of the Capitol that seems worthy of special comment, is the success with which the human figure has been presented in modern clothes, and without loss of dignity. In the three balcony panels on the south front, the sculptor has gone a long way toward upsetting the toga tradition as an excuse for the shortcomings of modern sculpture.

In the Arms of the State which surmount the paneling behind the bench in the Supreme Court, and which are worked out in rather high relief and color, Goodhue has left a charming example of his ability as an interpreter of heraldic symbolism. The hesitation of the State authorities to adopt this beautiful creation in place of the ridiculous grotesque that has so far done duty as the Seal of the State, offers an interesting problem—in that one is unable to deter-

mine whether that hesitancy may be accounted for by sentiment or as a measure of the taste of Nebraskans in the year one thousand nine hundred and twenty-seven!

In the use of inscription for architectural features, local subjects for ornamental detail, and gold for background, we find nothing new, and comment favorably rather on the consistency of their employment.

One is tempted to wholly usurp the author's prerogative, so involving and so endless are the elements of the Capitol as brought out by this book. Wherefore, as a matter of precaution, I shall bring this paper to an abrupt ending.

However, in Mr. Whitaker's reference to the competition through which Goodhue became the architect of the Capitol, he omitted an interesting item—one justifying comment. I refer to the fact that the competition was the child of the Nebraska Chapter of the American Institute of Architects, born of the unselfish desire to have the best to be had in architecture made available to the State of Nebraska.

The way thus cleared for the participation of Goodhue and other prominent competitors certainly entitles the architects of Nebraska to credit for a rather fine display of citizenship.

From the pages of this book comes realization that the Capitol of Nebraska, in all "the majesty of its clean-lined solidity, its incomparable simplicity, and its thrilling beauty," is a thing accomplished—that to this State Goodhue has given his masterpiece, "one of the great buildings of all time".

That realization moves one to speculate on the varying emotions with which that masterpiece is being received.

How about those who frankly sought to obstruct the way? What of the legislators who made that way so cruelly hard?

One even wonders if those who helped, think that Bertram Goodhue received his full measure of sympathy and support, even at their hands?

It is borne in on me that there are some Nebraskans who must prefer not to think about it at all.

From a Christmas Card

By J. B. BENEDICT

(This verse appeared with the frontispiece in this issue)

"Coming to pass, Coming to pass
At that thought, arose in me, a vision
Into things not called before to mind."

Man thinks to raise himself
But one step at a time
Above the mire of the struggling mass
By conscious effort of his haughty will.
Hard labor! Keen discouragement!
Infertile fields! The wreck of his fair hopes!
And all for what? He triumphs over Time
Only to lose once more what he had thought to gain.

And yet, his inmost spirit needs but will
To lift itself above the present pain
Wreathing its adoration in mysterious folds
About the brim of a cathedral tower
Until he comes to see, that thought, unlike his acts
No longer slow, but swift as crystal arrow from a bow
Has power to pierce Life's topmost pinnacle
As near as it can ever hope to come
To Light, To Heaven and to God.

The Passing Show

An Unconventional Convention Report

By ARTHUR T. NORTH, A. I. A.

I HAVE never read an entire convention report; they bore me to death. Writing this one, however, compels me to read it in its entirety, and not being versed in convention report technique, this one must of necessity be unconventional. Attending the sixtieth annual convention of the American Institute of Architects, Washington, May 11-13, I was impressed into the report service, so here goes.

The convention was held in the U. S. Chamber of Commerce Building, the most attractive part of which appeared to be the interior open court. The convention hall is a large rectangular room of magnificent proportions, designed for architectural effect rather than utility. However, after the first session there was erected a tall trolley pole with four loud-speaking Gabriel's trumpets at the top and some "mikes" on the speakers' stand; then the addresses became hearable.

The keynote of the convention was the relationship between architecture and the allied arts of painting, sculpture, landscape architecture and the crafts. This feature of the convention was well staged by C. Grant La Farge, chairman of Committee on Allied Arts.

The importance of the collaboration of the architect, mural painter, sculptor and landscape architect is gradually being recognized by American architects. A greater culture among wealthy owners has provided some opportunities for American architects to enter into such collaboration and this country now has a few examples of a true and complete architecture. It is these few examples that are quite rapidly educating architects to the true sense of architecture. When they are impressed with the great beauty and dignity of these finer works, they will seek the cause. Then they will realize that architecture is a harmonious co-ordination of architecture, mural painting, sculpture and landscape architecture.

To accomplish this it is necessary that collaboration must function from the inception of the work. The architect alone, cannot design the structure and merely define the limits of the co-ordinate arts—these arts must participate in fixing the limitations and placement of the various elements of the design.

This is well demonstrated in the booking office in the Cunard Building, illustrated in *The Passing Show*, August, 1926. This room is probably the most impressive in America. Its satisfying completeness is due to the fine collaboration of Benjamin Wistar Morris, architect, the mural painter and the sculptor.

Mr. Morris' new Seaman's Bank is another fine example of such collaboration, and we confidently anticipate a masterpiece in his new Metropolitan Opera House which ought to shame the builders of the costly and vulgar theatres which disgrace our land today. Another fine example of co-ordination of the allied arts is in the Bowery Savings Bank, York and Sawyer, architects.

By developing an appreciation of what constitutes architecture and devising a plan for its achievement, the Institute will have been the initiator of that unsurpassed architecture which it is America's destiny to produce. Under President Medary's administration the first stand and the first great stride towards that end has been taken and loyal support should be given to the enterprise.

The movement to open the Institute membership to mural painters, sculptors, landscape architects and craftsmen was voted down. To do so would materially change the character of the Institute and architects would lose their organized identity. It is too soon to forecast the proper organized affiliation between the allied arts and architecture.

* * * * *

The Building Committee was formally authorized to make certain improvements on the Octagon property. The resolution was sufficiently broad to enable it to develop a comprehensive and desirable scheme.

During the discussion the well known Sob Sisters put on their act. The mere possibility that the sacred smoke house and stable might be destroyed was pictured as a horrific calamity. It was even suggested that the stuffed horses and an ancient carriage might be installed to preserve the historical setting. Why not go farther and set up a stuffed Uncle Tom and induce Coty to produce a synthetic "atmosphere?" The smoke house and the stable will be preserved.

* * * * *

The report of the Board of Directors laid out a procedure for the convention which was followed and its suggestion that "an ideal convention would be one devoted to the art of architecture and to a minimum of organization business," is well taken. Why should not the constitution be changed to place the entire administrative functions of the Institute in the hands of an executive committee of five persons?

As we study various conventions and even our Congress and state legislative bodies, we are impressed

with the weakness of delegate bodies. After all they merely serve as a carpet for the steam roller. Then why not give our Institute conventions over to Architecture and the joy of friendly intercourse with our brothers?

* * * * *

Can any vital, living art be developed by organization? Does not organization restrict the individual effort and tend towards a stupid standardization? As one walks or drives about Washington he is wearied with the standardized governmental architecture set up by an old time art commission and still followed by its successors. It is as boresome as the monstrosities of the pre-'90 days. No great architecture can be created with its metes and bounds prescribed by stylists and those incapable of "designing" without a scheme of modules.

Of the non-governmental architecture it is refreshing to study the new Washington Building by Coolidge, Shepley, Bulfinch and Abbott. Washington buildings are either a smooth Bedford stone box punched full of rectangular holes or are over-ornamental and disquieting. The Washington Building has a simplicity, a charm and a clean dignity that is fine—then go up the street and look at the mediocre National Press Club—it is to weep.

* * * * *

Oh, yes, the convention—one has to stray away occasionally—the Sixtieth Convention of the A. I. A. When the state of Illinois was about fifty years old they had a constitutional convention and made a new one, and about fifty years later Governor Lowden simplified the state machinery by dispensing with 57 varieties of commissions and other bodies.

The Institute has been a slow sailing boat going presumably somewhere and in its long voyage it has naturally accumulated a lot of barnacles on its hull. Perhaps it might profit by the example of Illinois and go to dry-dock and have its hull scraped and freshly painted. After losing those extraneous barnacles such as the Press of the Institute and Journal, the Architects' Small House Service Bureau—what a clean face the Institute would have and what an inspiration a clean slate is! These days are given over to fast sailing ships steered to a definite port and the race is to the swift.

* * * * *

During its sixty years the Institute has made some thirty-one Honorary Corresponding Members in

foreign countries and at this convention it made three more: an Austrian, a Swede and a Frenchman.

It has also, during that time, made seventy-five Honorary Members (Americans) and at this convention fifteen more such members. Even though quite familiar with American architecture, one is quite at a loss to identify the greater number of them. Perhaps there are so few outstanding names eligible for this honor that it has to be diluted or perhaps—it used to be the custom for a newly elected governor of an imperial state to set up a Governor's Staff of twenty to forty Colonels in gorgeous array.

But it is difficult to understand this lavish giving of Honorary Memberships and the meagre giving of Honorary Corresponding Memberships to foreign *architects* who are enriching the world's architecture. Is the Institute merely American and without the need of foreign friendships and connections? The United States has been compelled to become a factor among the world's nations and it is possible that the Institute will follow the fast spreading influence of its members on the architecture of other nations.

* * * * *

President Medary's first convention is somewhat of a departure notwithstanding the almost impossible barrier of customs and precedents and as one studies him in action, there is generated a hope that the course of the Institute will be definitely set for the new vision of American architecture. This can be accomplished by a wholehearted and loyal support to which he is entitled. He will have it and when the barnacles are scraped from its hull the Institute will sail like a swift clipper, under the clear skies and a stiff breeze through the bright, sparkling seas of a glorious American architecture.

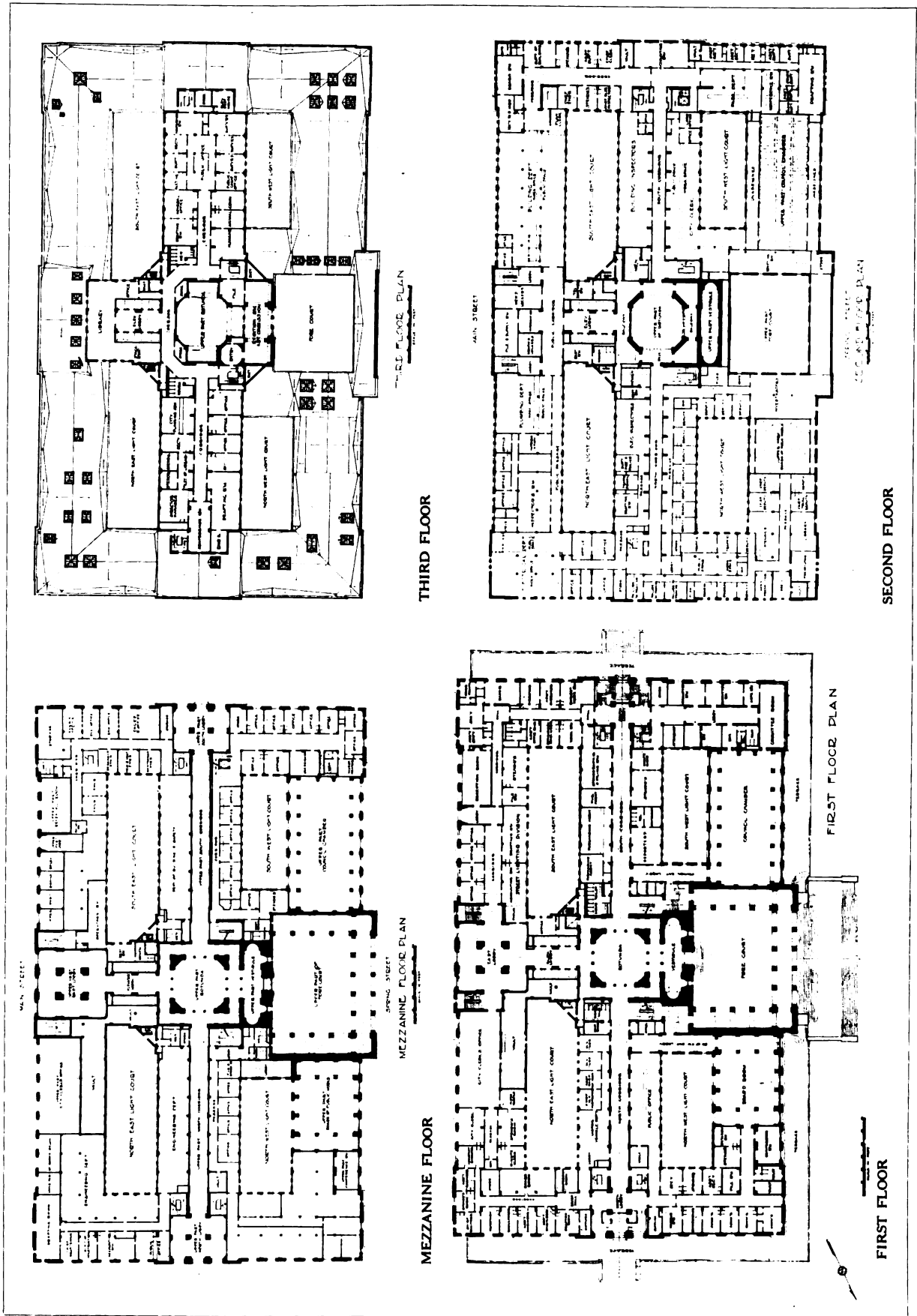
After all a convention of the Institute is a happy medium for renewing old and treasured associations and setting up new ones. It makes us more human and perhaps it has a remote and indirect influence on our architecture. It gives each of us an altered and better vision of tomorrow. For that, it is worthwhile.

* * * * *

Officers were elected, in the main re-elected, and medals given, the gold medal of the lamented Howard Van Doren Shaw to Mrs. Shaw. This intensely reminded us of the great loss to Architecture and the passing of a strong and delightful character.



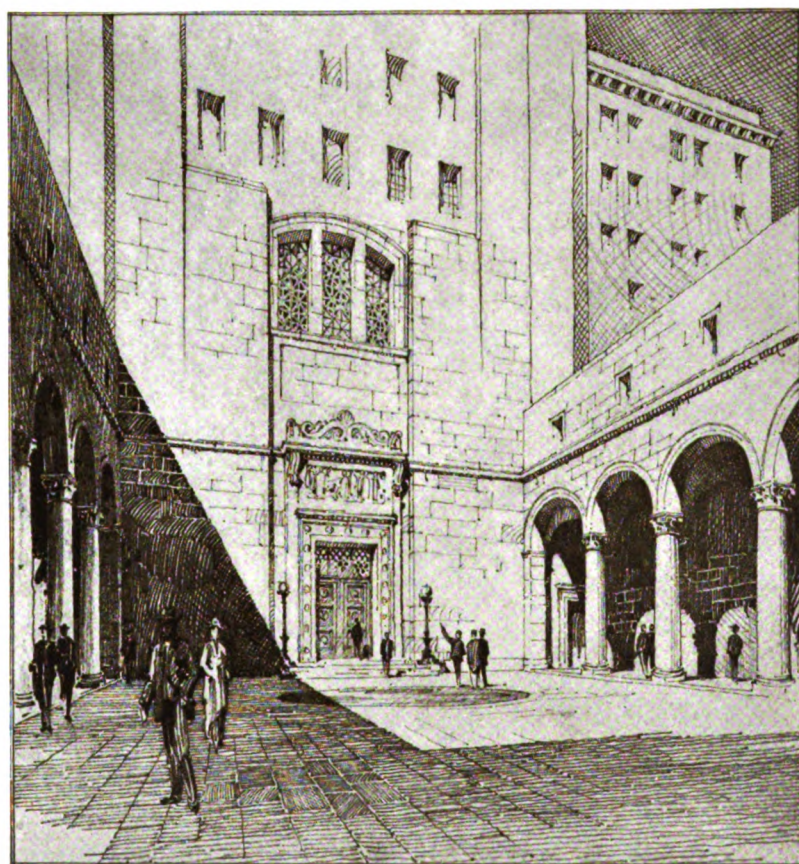
PERSPECTIVE, NEW CITY HALL, LOS ANGELES, CALIFORNIA
JOHN C. AUSTIN, JOHN PARKINSON AND ALBERT C. MARTIN, ASSOCIATED ARCHITECTS
AUSTIN WHITTLESEY, DELINEATOR



PLANS
 NEW CITY HALL, LOS ANGELES, CALIFORNIA
 JOHN C. AUSTIN, JOHN PARKINSON AND ALBERT C. MARTIN, ASSOCIATED ARCHITECTS

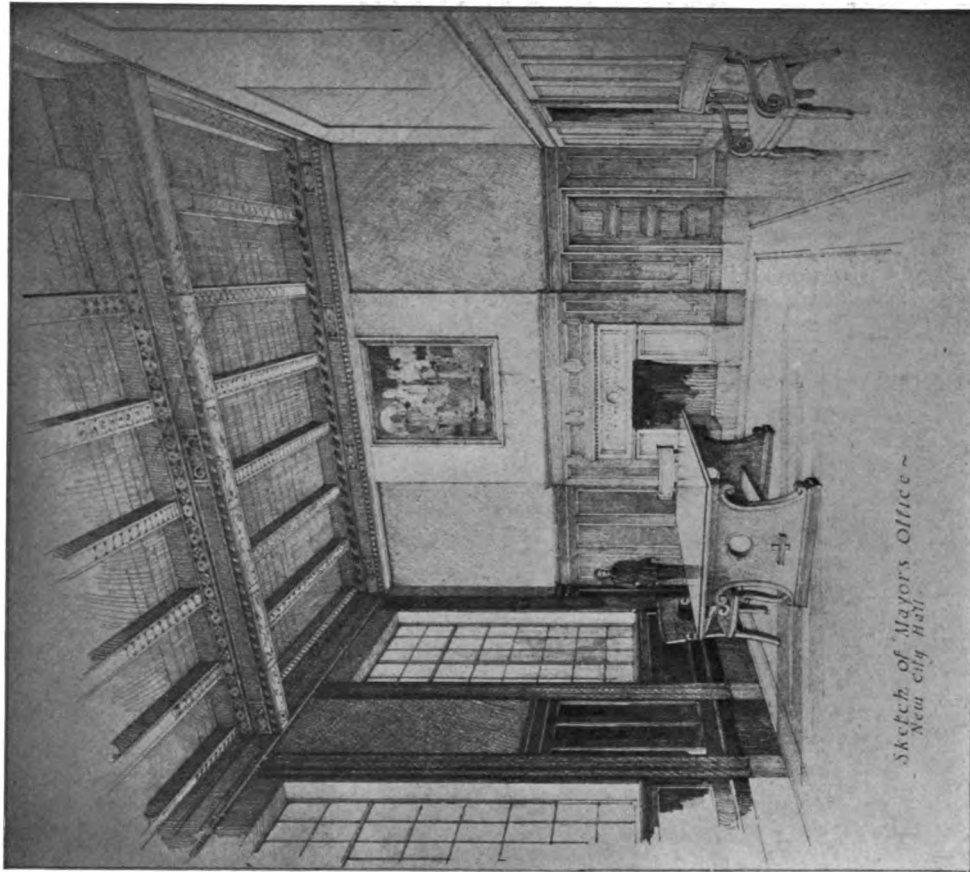


DETAIL OF FRONT

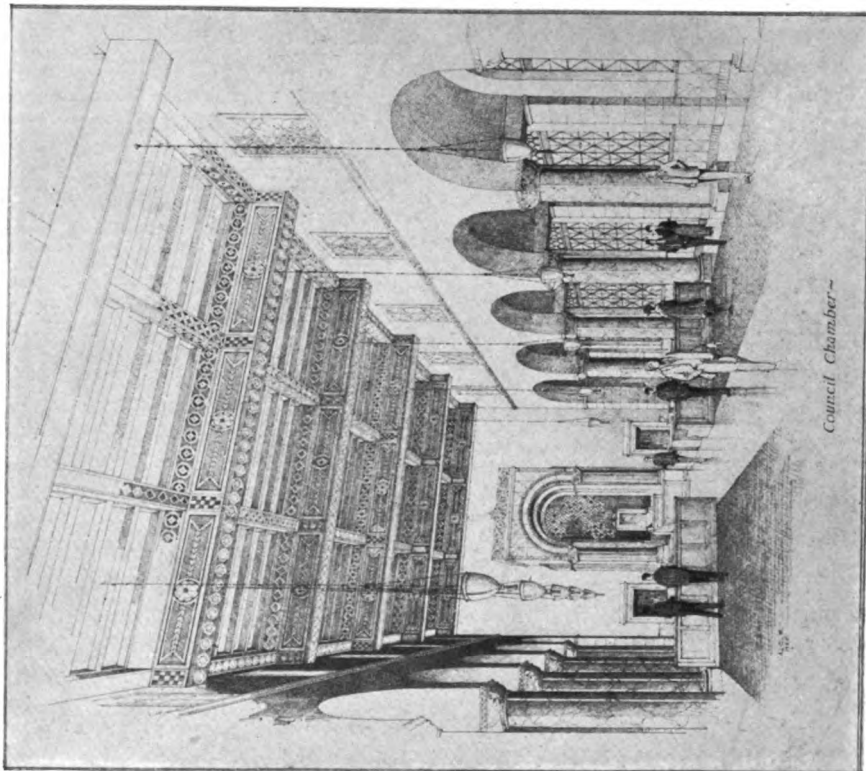


DETAIL OF FORECOURT

NEW CITY HALL, LOS ANGELES, CALIFORNIA
 JOHN C. AUSTIN, JOHN PARKINSON AND ALBERT C. MARTIN, ASSOCIATED ARCHITECTS
 AUSTIN WHITTLESEY, DELINEATOR



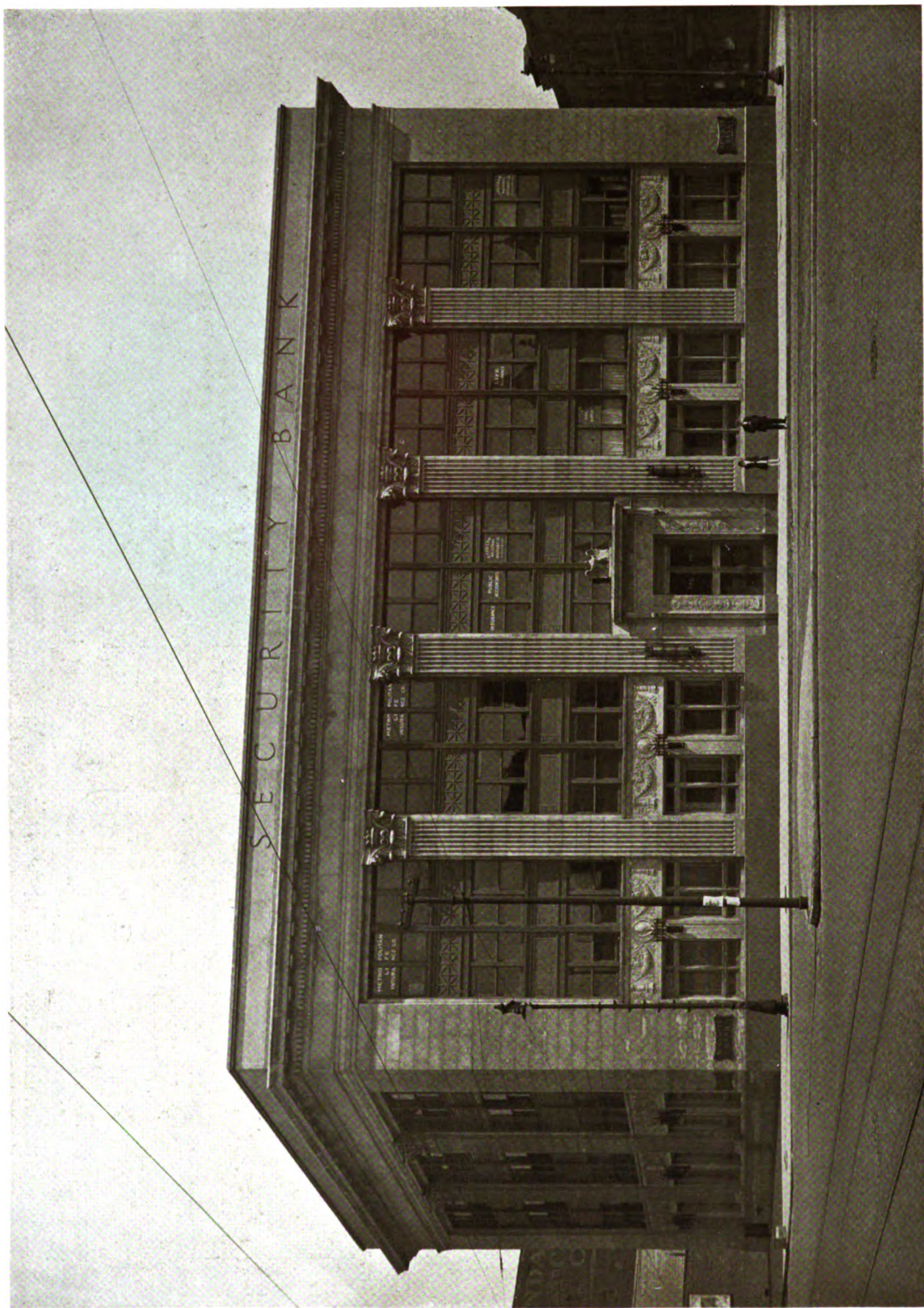
MAYOR'S OFFICE



COUNCIL CHAMBER

NEW CITY HALL, LOS ANGELES, CALIFORNIA
 JOHN C. AUSTIN, JOHN PARKINSON AND ALBERT C. MARTIN, ASSOCIATED ARCHITECTS
 AUSTIN WHITTLESEY, DELINEATOR

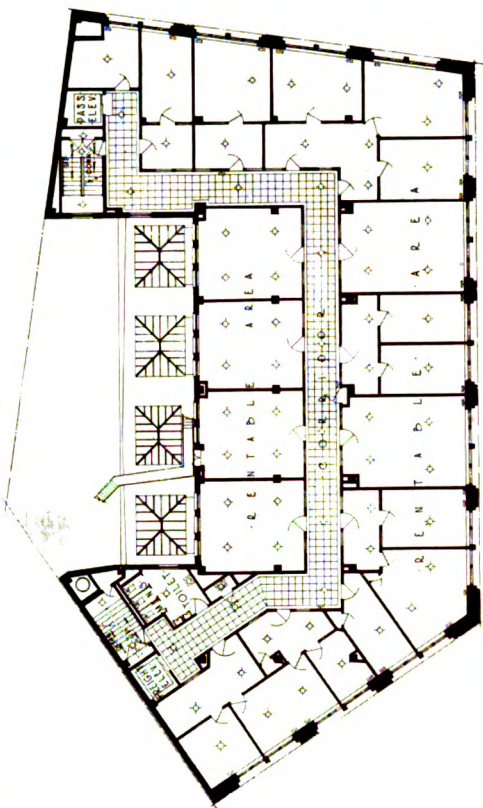
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SECURITY BANK, CHICAGO.
CHILDERS AND SMITH, ARCHITECTS

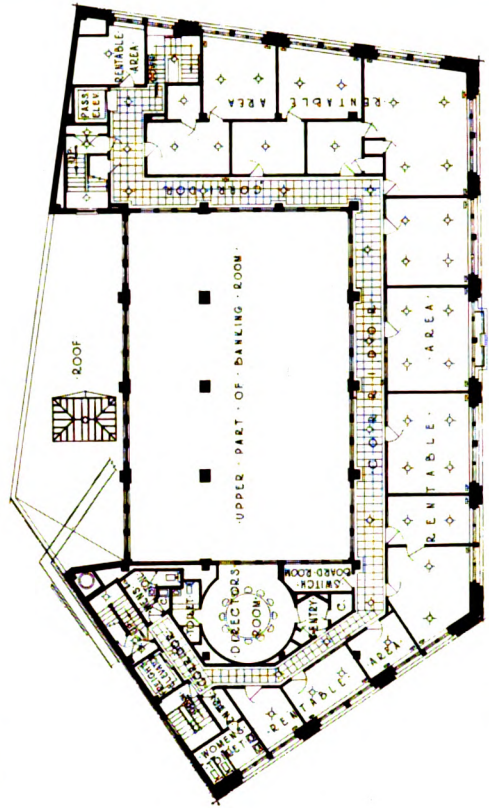


DETAIL OF ENTRANCE
SECURITY BANK, CHICAGO
CHILDS AND SMITH, ARCHITECTS



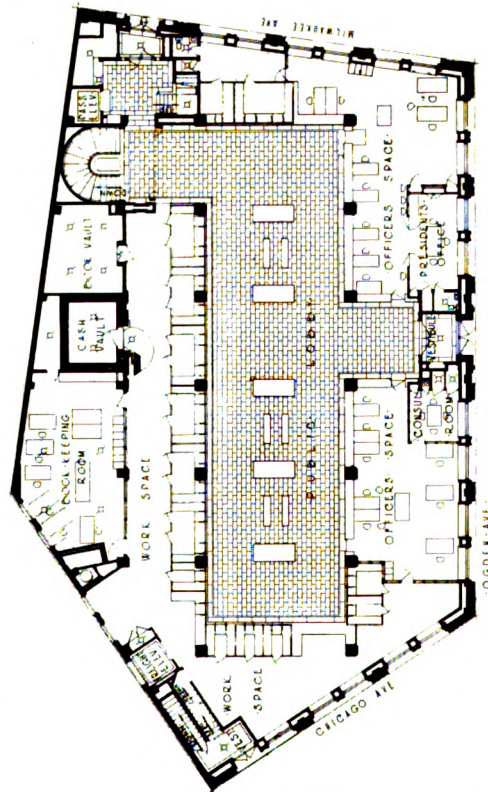
THIRD FLOOR - PLAN
- SECURITY - BANK -
CHICAGO - ILLINOIS -
CHILDS & SMITH - ARCHITECTS -

THIRD FLOOR



SECOND FLOOR - PLAN -
- SECURITY - BANK -
CHICAGO - ILLINOIS -
CHILD'S & SMITH - ARCHITECTS -

SECOND FLOOR



FIRST FLOOR - PLAN -
- SECURITY - BANK -
CHICAGO - ILLINOIS -
CHILD'S & SMITH - ARCHITECTS -

FIRST FLOOR



BASEMENT - FLOOR - PLAN -
- SECURITY - BANK -
CHICAGO - ILLINOIS -
CHILD'S & SMITH - ARCHITECTS -

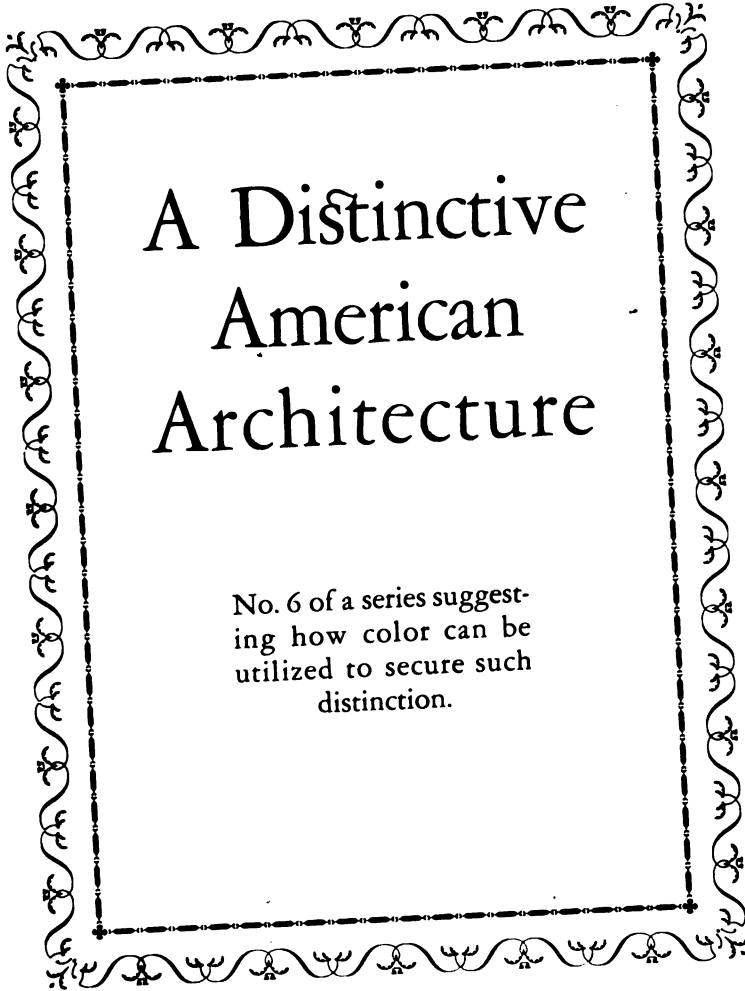
BASEMENT

PLANS
SECURITY BANK, CHICAGO
CHILD'S AND SMITH, ARCHITECTS



A Distinctive American Architecture

No. 6 of a series suggest-
ing how color can be
utilized to secure such
distinction.



A Distinctive American Architecture

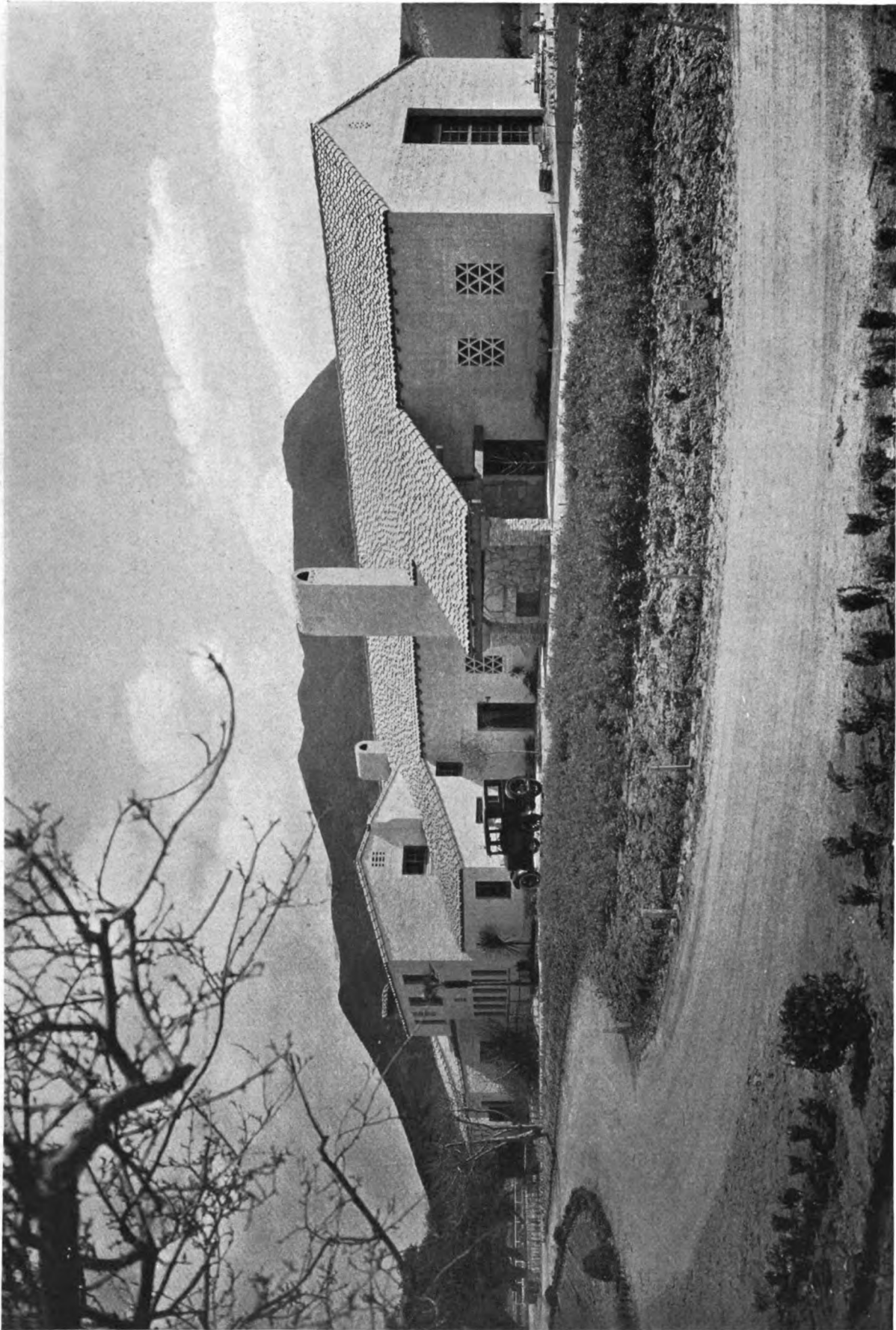
No. 6 of a series suggest-
ing how color can be
utilized to secure such
distinction.



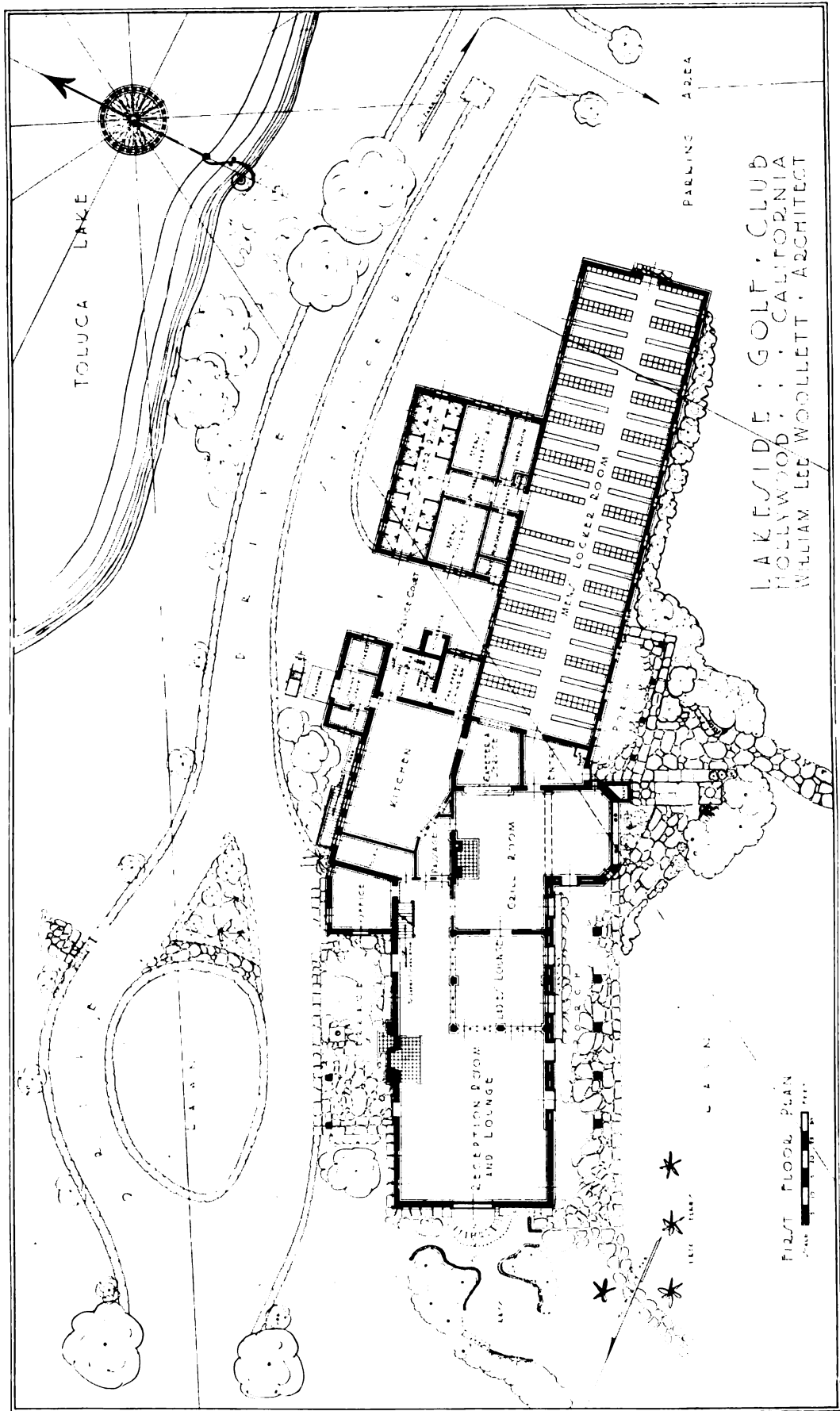
VIEW OF BANKING ROOM
SECURITY BANK, CHICAGO
CHILD'S AND SMITH, ARCHITECTS



DETAIL OF BANKING ROOM
SECURITY BANK, CHICAGO
CHILDS AND SMITH, ARCHITECTS

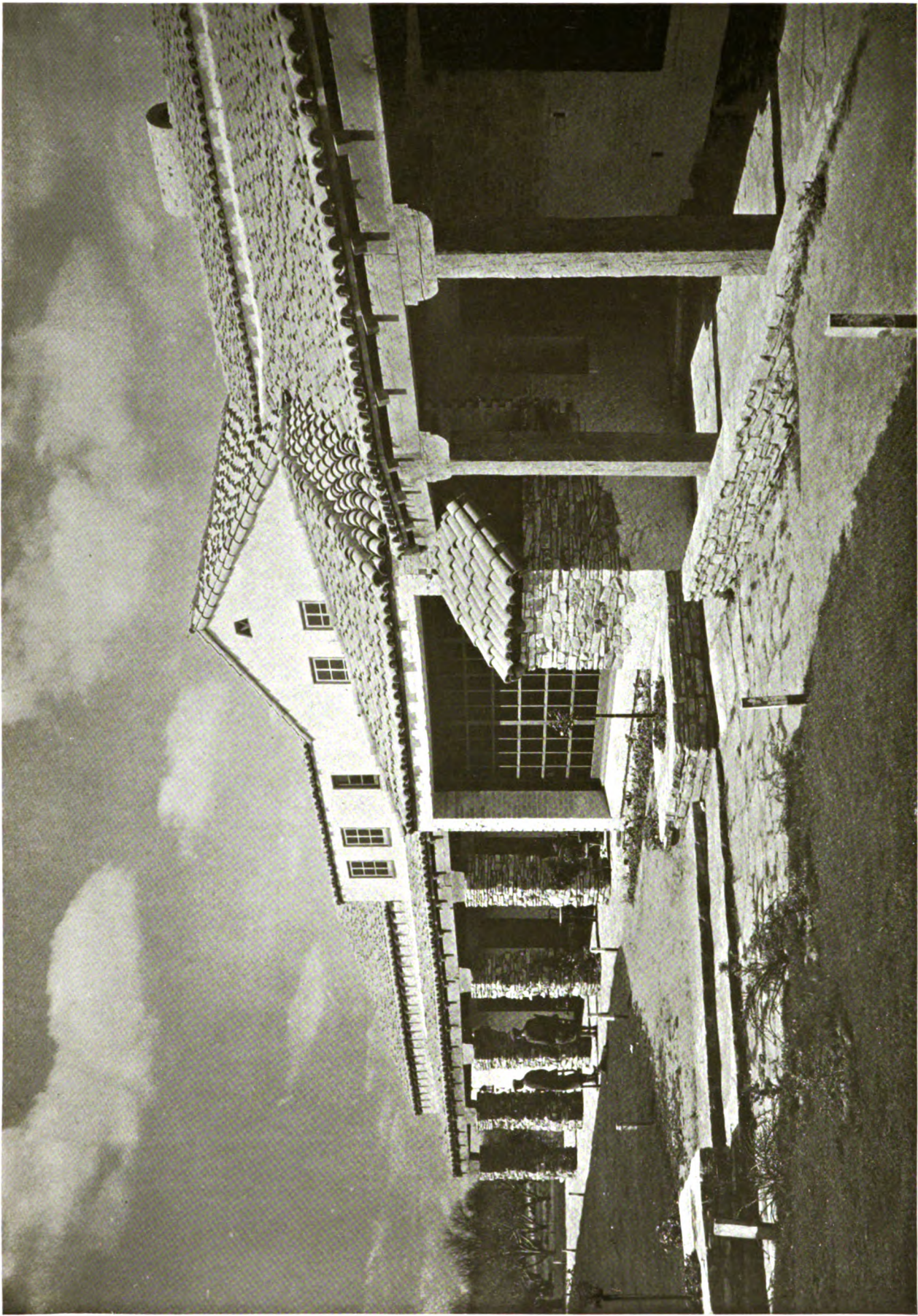


LAKESIDE CLUB, LOS ANGELES, CALIFORNIA
WILLIAM LEE WOOLLETT, ARCHITECT :: ::



LAKESIDE GOLF CLUB
 HOLLYWOOD, CALIFORNIA
 WILLIAM LEE WOOLLETT, ARCHITECT

PLOT AND FLOOR PLAN
 LAKESIDE CLUB, LOS ANGELES, CALIFORNIA
 WILLIAM LEE WOOLLETT, ARCHITECT



VIEW OF SOUTH ELEVATION
LAKESIDE CLUB, LOS ANGELES, CALIFORNIA
WILLIAM LEE WOOLLETT, ARCHITECT :: ::



VIEW OF DINING ROOM



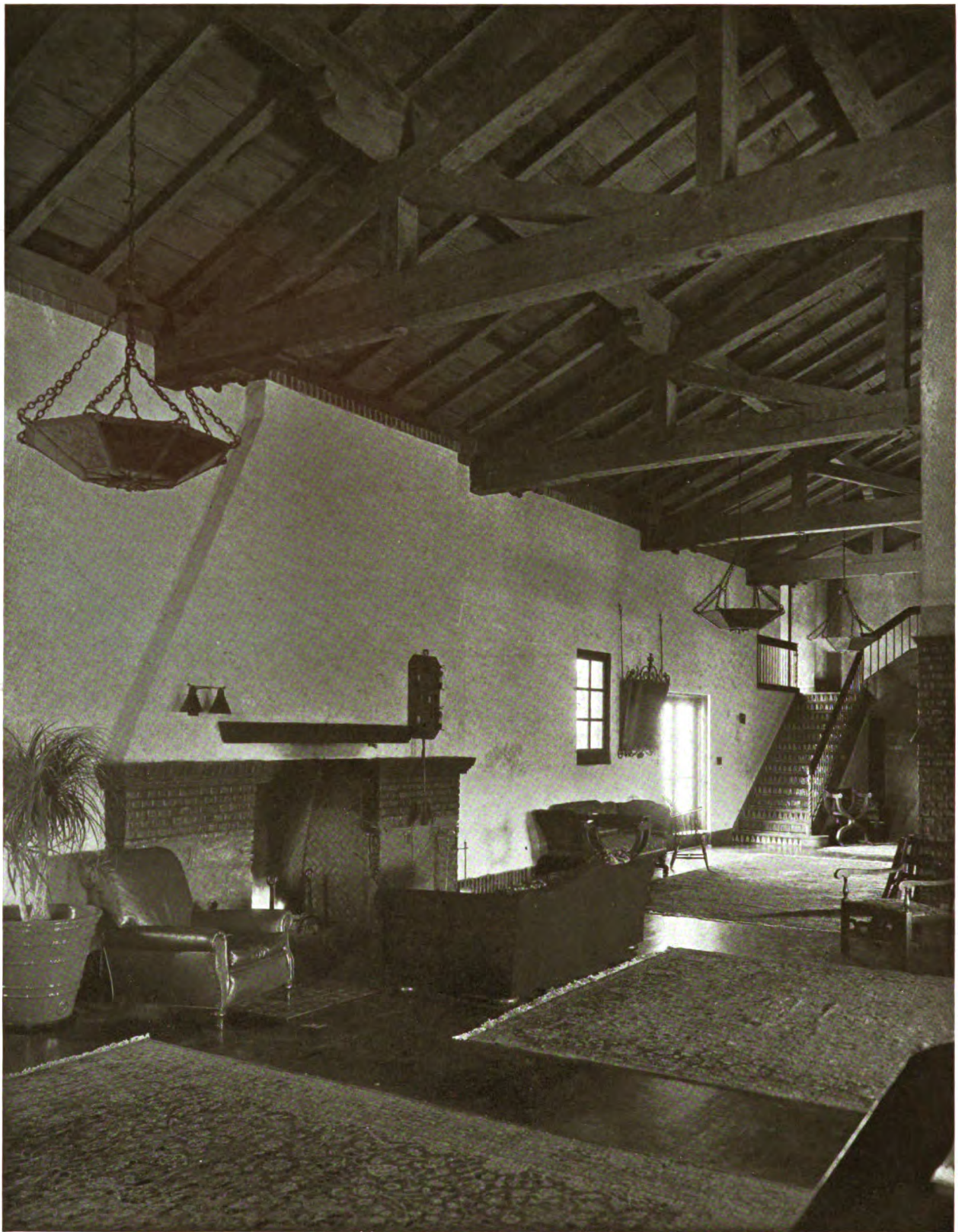
TERRACE
 LAKESIDE CLUB, LOS ANGELES, CALIFORNIA
 WILLIAM LEE WOOLLETT, ARCHITECT :: ::

THE WESTERN ARCHITECT
 JUNE :: :: 1927

PLATE 106



DETAIL OF STAIRWAY
LAKESIDE CLUB, LOS ANGELES, CALIFORNIA
WILLIAM LEE WOOLLETT, ARCHITECT ::



VIEW IN LOUNGE
LAKESIDE CLUB, LOS ANGELES, CALIFORNIA
WILLIAM LEE WOOLLETT, ARCHITECT ::

A Conventional Report of the Meeting of the American Institute of Architects

THOSE who conduct the destinies of the American Institute of Architects assigned to the sixtieth convention a definite subject. If one may borrow from the patter of the political convention the "key-note addresses" were those of President Milton B. Medary, and of C. Grant La Farge, chairman of the Committee on Allied Arts. Quoting from the report of the latter committee, read by Mr. La Farge, the major premise of the discussion may be stated as follows:

"That we shall now turn our attention to architecture as an art, having long debated it as a science, a profession. That we shall view it as an art in which all the arts of design are so interwoven, so interdependent, so essential, that unless their intimate relationship shall be clearly recognized and brought to fullness of realization, American architecture will not express the entire potentiality of American genius. Hence, that we must foster collaboration in the arts of design, the arts that in their sum compose what we call architecture."

In his opening address Mr. Medary discussed the same topic at length. This is quoted from that address:

"In schools and among professional artists, architecture is usually listed as one in a catalog of the arts. The crafts, for some indefensible reason, are classed separately, but certainly they are the very essence of art as applied to material things. Architecture has been called the mother of the arts, and this expression reveals recognition of a necessary relation of all the arts and their interdependence—in short, a family of the arts. I have come to the firm conviction that architecture can have no existence apart from the elements of which it is composed; that no architecture can be created or ever has been created which is not an assemblage of the arts; and that no truly great architecture ever was or can be except it be a complete fusion of all the arts into a perfect harmony, each dependent upon the others, the whole inspired at its conception by the appropriate beauty each holds ready for the enrichment of every other and of the whole. This is more than co-operation; it is the stimulation and cross-fertilization of all by the collective presence of a full orchestra of creative impulse. Who can read of the gatherings of artists in the gardens of the great art patrons of the Renaissance, or that earlier description of the building of Solomon's Temple, where the workers in stone and wood and iron, in gold and ivory and precious stones, were called to give their best to a glorious fabric,

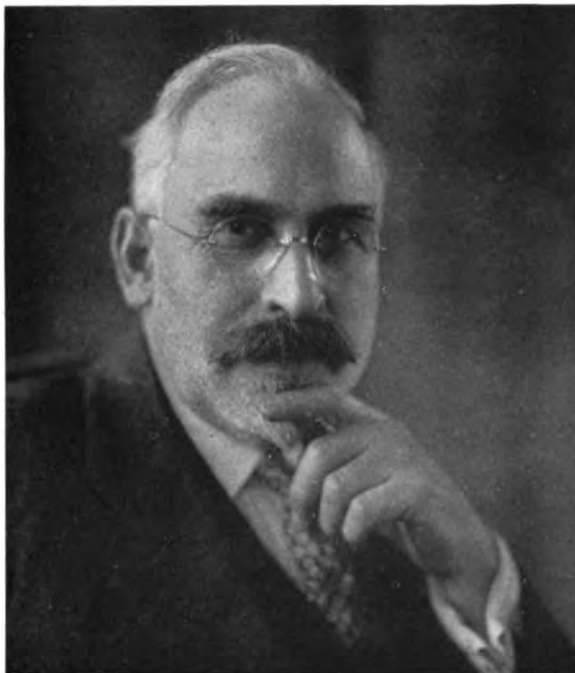
without feeling the influence these contacts must have had upon the whole? The objects taken from an ancient Egyptian tomb might have been the work of the cathedral builders of the thirteenth century, for both proclaim the presence of all the arts at their conception.

"Here, then, lies the trail over which we must travel, hand in hand, a happy company of the arts, each enriching the others with a power and vision none could hope to achieve alone.

"This convention has been planned to make such a theme its major motif; to inaugurate understanding co-operation of all those whose lives are dedicated to the service of the several arts, both in the schools and in the actual building of the fabric of the world; to help us to know each other better, that each of us shall be enriched by that knowledge, that in creating the material we may help each other to express the spiritual; that sculpture may once more be thought of as part of a parthenon without losing its dignity as sculpture; that painting may become again a vital part of walls and ceilings and altar-pieces; that the names of artists will recall their part in collective compositions as do the names of Della Robbia, Giotto and LeNotre. Upon this theme there have already been founded the American Academy in Rome, the American Federation of Arts, and the Architectural League of New York. Upon it our Committee on Education, backed by the Carnegie Foundation has launched its program for a wider understanding of the significance of the arts, and upon it I hope the American Institute of Architects will build a program for the future in which all the elements of architecture shall be represented in all our contacts with the schools and the public as well as within our own profession, the profession of architecture."

Both President Medary and Mr. La Farge had much to say, and pointedly did they say it, about the same topic. Further, as the meeting resolved itself more thoroughly than any other during the history of the Institute to this subject, business, as it is commonly conducted at such conventions, was suppressed to a minimum. Committee reports were published with comments of the Board of Directors on their findings. Discussions ensued. But not once during the sessions held in the main auditorium of the building of the Chamber of Commerce of the United States at Washington, May 11-13th was the key-note forgotten.

Without doubt the presentation of the Committee reports and recommendations by the Board of



MOFFETT PHOTO

HENRY K. HOLSMAN, CHICAGO, NEWLY ELECTED FELLOW, AMERICAN INSTITUTE OF ARCHITECTS



MATZENE PHOTO

CHARLES HERRICK HAMMOND, CHICAGO, ELECTED FELLOW, AMERICAN INSTITUTE OF ARCHITECTS

Directors marked a decided change in method, which for the most part met with the entire approval of the membership. It indicated the careful study made of the various committee reports and recommendations, and a definite expression of opinion on the part of the directors toward those recommendations. During the year, the chapters have had opportunity to discuss these various subjects and to express their views concerning them. These expressions had been considered by committees and by the Board of Directors, whose recommendations, in general, were adopted by the Institute. The second and third days of the convention were devoted to the presentation of these reports, their discussion and disposition. This method of handling the business permitted a more complete presentation of the program arranged on "The Relation of Architecture to the Allied Arts."

Following the discussion of architecture made by C. Grant LaFarge, of New York, Arthur A. Shurtleff of Boston, discussed landscape architecture. Arthur Sinclair Covey of New York, president of the Society of Mural Painters, led in the discussion of The Relation of Mural Painting to Architecture, while John Gregory, sculptor, had as his subject The Importance of Sculptured Decoration in Architecture. Craftsmanship in Architecture was discussed by Lorentz Kleiser, also of New York.

So impressive was this presentation of the allied arts that at a later session a resolution proposed that prominent and honored representatives of the allied arts and crafts should be admitted by the Institute to membership in that body. The resolution was referred to the Committee on Allied Arts, without action.

And following out the same general program, at the banquet which closed the convention Institute, awards were made to craftsmen and others who had performed services of outstanding importance to architecture. The gold medal awarded last year to Howard Van Doren Shaw, of Chicago, who died the day of the award, was presented to Mrs. Shaw by D. Everett Waid, former president of the Institute and personal friend and associate, at one time, of Mr. Shaw.

At the same time gold medals were awarded, one to Lee Lawrie, sculptor, of New York, whose achievement in the Nebraska Capitol and other of Bertram G. Goodhue's work have brought him honor as a sculptor. Frank G. Holmes, art director and pottery designer, of Trenton, N. J., was given the other medal for excellence in craftsmanship. Both were presented by C. Grant La Farge.

Significant also in this connection was the list of those nominated to honorary membership for distinguished service in the interest of the Fine Arts. They included Dr. Hartley Burr Alexander of Lincoln, Nebraska, who played so important a part in the selection of the ornament for the decoration of the Nebraska State Capitol; Arthur Sinclair Covey, Arthur A. Shurtleff and John Gregory of New York, who were speakers at the convention; Ferruccio Vitale of New York, landscape architect; Charles Henry Wacker, so long chairman of the Chicago Plan Commission. A complete list of those elected to such membership follows:

- Thomas Adams, New York
- Dr. Hartley Burr Alexander, Lincoln, Nebraska



(Left) LOUIS STEVENS,
PITTSBURGH,
ELECTED FELLOW,
AMERICAN INSTITUTE
OF ARCHITECTS



(Right) H. A. OVERBECK,
DALLAS, ELECTED
FELLOW AMERICAN
INSTITUTE OF
ARCHITECTS

Charles Dickey Armstrong, Pittsburgh
Arthur Sinclair Covey, New York
John Gregory, New York
Carl Paul Jennewein, New York
Lorentz Kleiser, New York
Dr. Wm. Alexander Lambeth, Charlottesville, Va.
Charles Jacob Livingood, Cincinnati
Eugene Savage, New York
Samuel L. Sherer, St. Louis
Arthur A. Shurtleff, Boston

Ferruccio Vitale, New York
Charles Henry Wacker, Chicago
Harry Wearne, New York
Ten members of the Institute were elected as
Fellows. A list follows:
Theodore E. Blake, New York
Lindley M. Franklin, New York
Sullivan W. Jones, New York
H. Hobart Weekes, New York
Henry K. Holsman, Illinois



KOEHNE PHOTO

CHARLES HENRY WACKER, CHICAGO, ELECTED
HONORARY MEMBER AMERICAN INSTITUTE
OF ARCHITECTS



FERRUCCIO VITALE, LANDSCAPE ARCHITECT, ELECTED
HONORARY MEMBER, AMERICAN INSTITUTE
OF ARCHITECTS

Charles Herrick Hammond, Illinois
James O. Betelle, New Jersey
H. A. Overbeck, Texas
George I. Lovatt, Pennsylvania
Louis Stevens, Pennsylvania

The Architects' Small House Service Bureau of the United States is one of the activities connected with the Institute which has received a maximum of consideration. It has been discussed pro and con in all the last conventions. This convention approved a report of the Board of Directors which reaffirmed its endorsement of the Bureau on the ground that "the good the Bureau is doing in its contribution to a better type of small house far outweighs the objections."

To the activities of the Structural Service and Scientific Research Department the Board of Directors gave high praise. Under the resolutions adopted the Structural Service Department is to be continued as an essential part of Institute activities; the contact with the Producers' Council encouraged and continued, the Structural Service Committee being discontinued as a standing Committee, its duties being assigned to the Structural Service Department.

The Institute decided to authorize its Community Planning Committee to make a special study of the problems of land development and regulation and report its findings to the next convention.

A report was approved which recommends that in states which maintain a state architect's office, this department be separate from all others, the architect to be appointed by the governor and the department to act in an advisory capacity on all public works, a Commission of Fine Arts being created under the state architect's office.

In the matter of fellowships, which has been under discussion for some months in chapter and in Board meetings, the convention decided that they should be continued. The awarding of such honor, however, is hedged about by restrictions which are intended to protect that honor in every way.

As is the custom, the president was re-elected for a second term. The result of the election was announced at the banquet. For the coming year the Institute will be under the direction of the following officers: President, Milton B. Medary, Jr., Philadelphia; first vice-president, William Emerson, Boston; second vice-president, Charles Herrick Hammond, Chicago; secretary, Frank C. Baldwin, Washington, D. C.; treasurer and director, Edwin Bergstrom, Los Angeles.

William H. Lord, Asheville, N. C.; Olle J. Lorehn, Houston, Texas, and Myron Hunt, Los Angeles, were elected as members of the Board of Directors.



R. T. DOONER PHOTO
WARREN POWERS LAIRD, DEAN OF
SCHOOL OF ARCHITECTURE,
UNIVERSITY OF
PENNSYLVANIA

Warren Powers Laird, D. Sc., Dean of the School of Architecture, University of Pennsylvania, has been appointed by the American Institute of Architects as one of its four delegates to the Pan-American Congress of Architects to be held in Buenos Aires, July 1-20, 1927. The other delegates are Frank R. Watson, Philadelphia, Kenneth M. Murchison, New York, and John Galen Howard, San Francisco.

Dean Laird will present a paper entitled "Public and Private Competitions". He has probably conducted more competitions than any other American architect and is particularly competent to discuss this important phase of architectural practice. Dean Laird will also act as delegate of the Association of Collegiate Schools of Architecture which also will be represented by an extensive exhibit of students' work; and he will represent the School of Architecture, University of Pennsylvania.

This congress promises to be one of unusual interest and value. The personal contacts made and the exhibition of American architectural scholastic work, exemplifying American architecture, should yield benefits to the architecture and the architects of the South American countries. The profession of the United States will be well represented.

Charles W. Barrett, 513 Sixth Street, East Las Vegas, New Mexico, has re-opened his office after an absence of two years, and will resume practice of architecture.

Color in Architecture

V. Color vs. Form

By REXFORD NEWCOMB

IN THE various preceding chapters I have made reference to the many aspects of color and its behavior under varying conditions. Something was set forth in our last (May, 1927) issue regarding the general question of "color harmony." As an approach to the problem, an analogy between the "chromatic" color scale and the "chromatic" musical scale was drawn, not with any intention that such a mechanical procedure would serve to derive assuredly successful color-schemes but merely as an introduction to the "attack" of the problem. As artists we have finally to depend upon our own native sense to tell us what color qualities and combinations are pleasant or, as we should say, harmonious.

To be sure Chevreul, ("Color," 1835) the French chemist, nearly a hundred years ago, set forth some general laws regarding "color harmonies." These he designated as "harmonies of analogy" and "harmonies of contrast," the general character, if not the exact form, of which most students of the problem agree upon. In my May article I mentioned these laws and must here again insist that they are little better than broad generalizations. We must, therefore, continue to "feel" our way out, as is the case in most artistic processes, and arrive at success in color problems by an artistic rather than by a scientific procedure. By the use of the term "scientific" in this connection, I am well aware that the drawing of an analogy between the color "scale" and the musical "scale" is anything but scientific. In fact, it seems to me that the present state of scientific knowledge regarding color scarcely warrants what may be called a "scientific" approach to the problem of color harmony. Certainly the attempt to form color harmonies by formulae, as championed by Field and others, appears as anything but sound. On the other hand, the more the artist may know of whatever secure scientific fact or even plausible color theory exists, the surer will be his grasp upon the artistic problem.

But I did not set out in this paper to write further upon color harmony. Its laws are so general and as yet so vague as to require little more than the treatment that we accorded them in our last chapter. The problem of the relationship of color to form would make the theme of the present discussion.

Now color is naturally antagonistic to form. In the March issue I referred to this peculiar antagonism and there anticipated in a general way the problem involved in the color treatment of external architectural forms. Part of the havoc that color wreaks upon

form is doubtless caused by the varying degrees of visibility exhibited by the several colors. As was pointed out there, it would be possible to destroy the essential mural character and proper architectonic value of a flat wall by working out on the surface thereof a pattern in two colors of different visibilities. Another way in which color interferes with form consists in the manner in which it negatives shade and shadow. Now form is largely appreciable by virtue of the gradations of shade and the shadows it occasions. If color interferes with the detection by the eye of these shades and shadows it ruins the appeal of form and therefore negatives its intention.

These facts alone may serve to show how dangerous color may become when used in conjunction with architectural forms, especially if the reaction of color upon the architectonic properties of our forms is not perfectly understood. As long as architecture is considered merely a problem in form, the solution is reasonably easy; the moment, however, that color is introduced the problem, by virtue of the interference that color sets up to the appeal of form, complicates itself.

I am not sure that one can set down categorically the properties of the various colors in this connection. So many variables introduce themselves in all considerations of color treatment that each problem must be considered upon its own special merits. I think, however, that we can all agree upon the approach to the problem of architectural polychromy and I believe further that all would agree that, since we are dealing with architecture, architectural intention, rather than scenic effect or pictorial interest, should guide us in all our operations. With this the basic plank in our platform, let us then proceed to the consideration of a specific problem.

Suppose we desire to treat with color the facade of a structure which has in its make-up a colonnade. Now, every designer will immediately appreciate the architectonic value of a colonnade and agree that the supporting function of the columns is a quality with which no liberties may be taken. Suppose, however, we give to these very supporting elements a color that, by virtue of its visibility, causes the supports to recede in relation to their neighbors or to resemble the inter-columnar voids; the structural sense of the facade would be destroyed and its meaning made valueless. Thus it will be seen that color possesses properties which will, if incorrectly handled, not only seriously impair but absolutely destroy architectural intention.

On the other hand, if correctly used, color may become a ready ally of the designer, aiding him materially in setting forth his message.

Now, since, as we have pointed out, *form* is made sensible to the observer largely through the agency of the lights and shadows which it generates, any architectural polychromatic treatment that interferes with or makes less obvious these lights and darks tends to defeat the success of the design. Since also most colors have values that are lower than the *lights* upon a structure, it is the shades and shadows with which color most insistently competes. The designer must therefore be very careful in assigning color to parts which by virtue of a forward position would catch the light because, by giving color to such parts, he immediately pulls them back into the realm of shaded areas and therefore defeats the purpose and meaning of his forms.

From the above observations we may deduce a general law that will serve to clarify our thought and determine our action. *Color allocation and emphasis must accord with and remain subservient to architectonic, i. e., structural values.* This means that the designer must strive to discover the effect of color upon architectural form and never allow that color to interfere with or negate the architectonic import of his design.

From this basic law certain important corollaries follow. One is this: *colors which by virtue of low visibility, bear a resemblance, either in hue, or value, to the voids of a design should never be used upon those elements of the design that have definite weight-carrying or supporting functions.* This corollary to the above enunciated law is illustrated by the color-plate (Plates 99 and 100), where it will be noted that color of the highest visibility is imparted to the supporting elements of the structure, while those of lower degree are assigned to the spandrels between the windows and the "supported" elements generally.

In view of this effect we may immediately distinguish between those parts of a structure that *carry the loads* and those parts which are *carried*, and indeed we may consider them as susceptible of different polychromatic treatments. But the reader will ask, "what of those elements of a design that have *no* functional value and serve a *purely decorative* purpose? What should be their polychromatic treatment?"

From the foregoing it would seem that the elements of an architectural design may be, after the fashion of Ruskin, tabulated in three classes as follows:

- a. Supporting elements.
- b. Supported elements.
- c. Purely decorative forms.

The essential differences in function of these three classes would seem to call for a distinct variety of polychromatic treatment for each, and indeed a consideration of historic example coupled with modern

experiment would seem to dictate the treatment set opposite each class here:

a. *Supporting elements should be given the least amount of color and that of the highest visibility.* This in view of the fact that structural parts must have *substance* and adequately distinguish themselves from the *voids* which are invariably the *lowest* values in a design.

b. *"Supported" elements may receive more color and lower values than the supports.*

c. *Purely decorative forms, having no structural significance, may be the most colorful of the whole design.*

That is to say: *as structural significance diminishes, color may increase, or vice versa: as forms assume structural value, color must recede.*

It is always to be remembered that any portion of a design which receives a color that approaches in hue or value the quality of the voids tends to resemble the voids and therefore "punches holes" in the design. Deep color is *not* compatible with substance and in architectural design *substance must maintain itself unimpaired.*

In the polychromatic treatment of tall structures another consideration injects itself, and sooner or later the designer realizes that: *those elements of a design which are small in scale or far from the eye must be treated in fuller color than those large in size or near the eye.* Moreover, the angle at which colored form is viewed has considerable to do with its effect upon the eye. The color at the top of a structure, like a skyscraper, loses a large measure of its potency when viewed at the angle at which it must be seen from the street below. Therefore, both distance and the angle at which tall structures are viewed would seem to demand a fuller polychromy, at the top. In fact we may almost say that: *exterior architectural color should be graded upward, the most brilliant hues being used at the top.*

This color necessity harmonizes well with the whole architectural import of the tall structure, the accentuation of the aspiring qualities of which is, after all, the real aesthetic problem. Thus polychromy comes as an aid to make sensible and therefore meaningful many of the smaller elements at the top of our tall structures that would otherwise be lost to the eye. A growing color interest as we approach the top tends to pull the eye upward and therefore heighten the interest and joy that pure form alone could not accomplish. Thus again color comes to the aid of form, imparting to the architectural inventions demanded by modern urban life an interest and a beauty that pure form, under these same conditions, could not supply.

With the growth of modern street types in an upward direction has come the demand that wide

Book Review

THE SPANISH HOUSE FOR AMERICA; ITS DESIGN, FURNISHING, AND GARDEN. By Rexford Newcomb, A. I. A.; Illustrated. J. B. Lippincott Company, Philadelphia. 1927. Pp. 164. \$3.50.

THE present popularity of the Spanish type of house has led Professor Newcomb, recognized as the authority on Hispanic-American architecture, to set forth, in a very readable and beautifully illustrated volume, the characteristic features of the style.

The author has presented the material in his usual thorough and scholarly manner. Beginning with the evolution of the Spanish house, he traces the development from its earliest beginnings in the Mediterranean area to its advent into Mexico with the *conquistadors*, this Spanish-Mexican style forming the prototype for the local variants in the then isolated regions of California, Arizona, New Mexico, Texas, the Gulf Coast, and Florida.

The Spanish house itself is then discussed at length, the author first establishing the important point that "the salient message of all Mediterranean architecture is its reaction to climate, its essential sunniness, its emphasis of light and shade," and moreover, that "wherever we seek the handiwork of the Spanish artisan, in America or Spain, his forms are always conceived with regard to the contrasts afforded by brilliant sunlight or deep shadow." The author also makes clear that the Spanish house, while turning a relatively bare *fachada* to the street, reserves its charm and beauty for the interior, particularly for the *patio*, and that "a 'Spanish' house without its *patio* is no longer a Spanish house."

The discussion covers practically every detail of the subject and may be but briefly outlined as follows: plans, with typical Spanish examples and typical Spanish-American examples; materials of construction, those which were used in original Spanish examples and the corresponding ones which are manufactured in this country today; exterior walls with regard to stucco and wall textures, the arrangement of doors and windows, and the use of ornament about these openings in contrast to the relatively bare walls; roofs, and their tile coverings; doorways, historical examples and various types which have been found appropriate for American use; windows, and the use of grills; and other details, including balconies, colonnades, arcades, the stairway, both exterior and interior, and chimneys.

The concluding portions of the discussion are given over to the Spanish interior, emphasis being placed on the simplicity and restraint which characterize the style, and to its furniture and furnishings. The work closes with an appropriate chapter on Spanish patios and gardens. A bibliography of books on Spanish and Spanish-American architecture, gardens, and furnishings is appended.

overhangs be abandoned. The result is a "flatter" type of facade than the world has seen since the days of the Egyptians and the Assyrians. With flattened facades and "stepped-backed" masses, some other means for the differentiation of areas become absolutely necessary, if our architecture is to maintain a high degree of interest. Color is the only other architectural agency that can fulfill the demand, and color, as time progresses, will find an ever increasing role in modern architecture. As we learn how to handle it, this quality of the variable visibility presented by the colors of the spectrum may be turned to good stead in making more interesting architectural essays which, robbed of the good office of projecting forms and the shadows which they occasion, would otherwise be deadly insipid.

In closing it might not be out of place to set down in order the various determinations which in the course of the foregoing remarks have been brought out:

- a. Color is naturally antagonistic to form.
- b. Colors possess varying degrees of visibility, which fact imparts to them a power to destroy architectural intention.
- c. Architectonic import should dictate our action in color application; form must dominate color.
- d. Color allocation and emphasis must accord with and remain subservient to structural values.
- e. Colors of low visibility (in relation to the other parts of a design) should never be used upon the supporting elements of the design. Color tends to destroy the *substance* and *strength* of a support.
- f. The "supported" elements of a design may receive a larger (moderate) amount of color than do the "supports."
- g. The "decorative" elements may be most glorious, polychromatically.
- h. Small elements and those a great distance from the eye require a fuller measure of color than do larger or nearer elements.
- i. The gradation of color upward upon a design produces a splendid aspiration which harmonizes well with nature's intentions and makes for a certain unity in the design.
- j. Color is the only agency by which flattened and projectionless facades may be given interest.

These, then, are some of the considerations that must engage the attention of the designer who would successfully introduce a larger measure of polychromy into architecture.

The John Stewardson Memorial Scholarship for this year was awarded to Alfred C. Wingold of Pittsburgh, one of this year's graduates of the Carnegie Institute of Technology. The scholarship, valued at \$1,000, entitles the winner to a year's study in Europe.

The text is admirably illustrated with many splendid photographs of Spanish and Spanish-American houses, exceptionally well-chosen, the latter representing some of the most interesting work being done today by the architects in this country; there are also several measured drawings, which, with the colored frontispiece, are by the author, himself.

Professor Newcomb has presented here a work not only very useful but one that represents the first serious study of the modern development of Spanish-American architecture.—*Prentice Duell*

"THE SPANISH INFLUENCE ON AMERICAN ARCHITECTURE AND DECORATION"; by R. W. Sexton, Associate Editor, *The American Architect*. 264 pages, 9x12 in., profusely illustrated, cloth. Published by Brentano's, New York. Price \$10.00.

The influence of the Spanish on American architecture is undeniable, and its measure is well recorded in this book. It is not an historical record in any sense. It does illustrate, however, by carefully selected examples, the manifestation of the Spanish influence in different sections of the country. The examples are confined to American designs which are quite diversified, as would be expected because of the wide geographical distribution of the subjects.

In making up this book Mr. Sexton has departed from the usual method. The first three of the four chapters are devoted to plans, exteriors and interiors, respectively. The fourth chapter is devoted to roofing materials, walls, tiles, iron work, and furniture. The advantage of this arrangement is that the reader is enabled to study the different elements of a design without being distracted by the others.

For instance, in the chapter devoted to plans one can make a study of those things which are characteristic of Spanish architecture as relating to the plan. In the same way the exterior design can be studied without reference to the plan, and also the interiors. This enables the reader to acquire a definite knowledge of the three essential factors of the design, each without reference to the others. With this knowledge the designer is able to solve his problem without the hindering influence of executed designs; in other words, he knows the style. This arrangement is helpful in the same way to the layman.

It is obvious that the adaptation of Spanish architecture to American uses must be made with the greatest of freedom to comport with American standards of living and to be suitable for the wide diversity of climate in this country. It is this freedom which can be exercised in the use of this style that makes it so attractive. Not only is the diversity of American demands satisfied by this freedom of design, but the Spanish style itself is distinguished by that characteristic. It is one of the styles which is not symmetrical and therefore can possess the quality of individuality. This is not found in any other except the Elizabethan and cognate styles.

The chief characteristics of the domestic Spanish architecture are simplicity and dignity. When these are properly interpreted in terms of American architecture there results a decided relief from the overdone buildings which are all too numerous in this country. This freedom of design makes it possible to adapt the Spanish style house to its surroundings, and this when properly done is its chief charm.

This book is essentially one of illustrations. The text is carefully prepared and imparts a distinct understanding of the subject. It is comprehensive and usable, which makes it a valuable addition to the architect's working library.

COLOR SKETCHES IN SPAIN, FRANCE, ENGLAND; by Charles L. Morgan, A. I. A.; thirty sketches reproduced in color in portfolio form, with introduction by Rexford Newcomb, A. I. A.; published by *The Western Architect*, Chicago; \$7.50.

When Charles L. Morgan, known in Chicago for his work as a delineator, went abroad in the summer of 1926 on a month's sketching trip, he took with him unbounded enthusiasm for the subject, and an ability with which his friends have long been familiar, to capture in swift strokes, the charm of the subjects that interest him. From the large number of sketches in pastel, produced on this trip, thirty have been selected for reproduction, the majority in full color. They are excellent examples of the printers' art and plate making, also. The original drawings have been faithfully reproduced.

In his introduction Mr. Newcomb compares the talent of Mr. Morgan to that of the great Brangwyn, whose admirer Mr. Morgan is, and to whom he showed his sketches during a visit to the great artist in England. The portfolio in which the sketches are contained, is designed, as well, by Mr. Morgan, from Spanish motifs. It is a delightful part of the whole.

The author of these sketches is a firm believer in the art of sketching, and his contribution to the subject undoubtedly will inspire others to engage in this delightful and resultful avocation from which architects have been too much weaned.

C. L. Hutchisson, N. H. Holmes and C. L. Hutchisson, Jr., have associated under the firm name of Hutchisson, Holmes and Hutchisson, to practice architecture and engineering at 400 State Office Building, Mobile, Alabama.

Eugene Fuhrer has opened an office for the practice of architecture at 64 West Randolph Street, Chicago. He would be glad to receive manufacturers' catalogs and other data for his files.



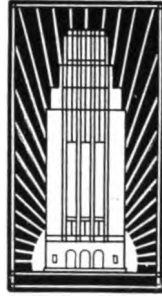
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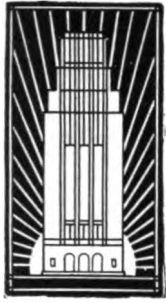
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"A MOST HIGH MAYA PRIEST AND HIS ATTENDANTS"
A MURAL IN THE HALL OF MAYA CULTURE, SAN DIEGO MUSEUM, SAN DIEGO, CALIFORNIA
HENRY LOVINS, MURAL PAINTER

COLOR SCHEME

Background, rich cobalt blue, figures in copper colors, reds, greens, gold, blues, purples and ivory. Border in astronomical symbols carried out in gold browns.



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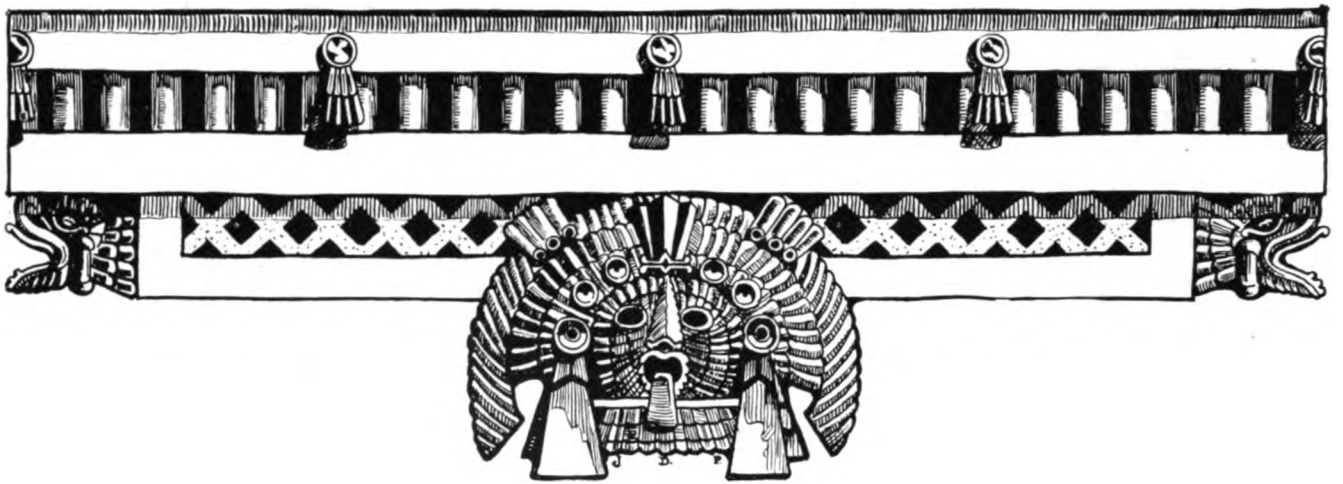
Number 7

Enormous
Forest Fire Losses
and the
Federal Government

The saying that "Nature works five hundred years to produce a sequoia forest and then a fool comes along with a cigarette," becomes more than an epigram when backed by the yearly reports of destruction of hundreds of millions of feet of the lumber resources of the country. These losses are annually reported from private, state and national forestry sources. Annually the cry goes out that "something must be done," but with an all too inadequate result. That only sporadic efforts are made to control, much less to abolish forest fire waste, is due to a general public indifference, reflected in the attitude of representatives sent by that public to Washington. It is only the private citizen living in proximity to a forest area that ever thinks, much less acts, in the direction of establishing effective fire-control measures. Seeing the danger of his holdings being swept by fire he is strongly in favor of preventive measures and the expenditure of adequate money to obtain immunity. Where this direct danger to private interests does not exist the citizen is indifferent. He might wake up if he should see that the high construction costs on his bungalow can be charged in an appreciable extent, to the fire loss in the lumber sections. In our cities enormous sums are yearly expended to support fire extinguishing measures. The congested population sees the necessity for protection and is willing to pay the price. Yet the fire loss in any city can never measure with that of a forest. The city building at best lasts only a few years; the forest is perpetual in its lasting quality if cared for with the diligence that its productive importance warrants. In the city, restoration can be made immediately; a hundred years will not suffice to restore a forest swept by fire. With these facts patent to all, it is hard to see how we can claim to be an intelligent people. True, laws have been passed in which the Federal authorities indicate some concern. Appropriations have been made for the use of various departments, but there is no uniformity of action, no reference to their relation, or effort to co-operate with outside agencies. Of course the result can only be an

inadequate if not a wholly useless expenditure of money, that, properly directed, could do a measurable amount of service. In the forest area, year after year, local organizations have made demands for adequate protection. States have passed laws, sporadic and parsimonious at best, for such protection. But these have not stopped in any adequate way the yearly conflagrations in our pine forests. It is pre-eminently the business of the Federal government not only to aid but to assume the larger burden as to expenditure and supply the fire-fighting forces as well as the even more necessary measures for prevention. Co-ordination is imperative of all the several Federal appropriation items now submitted separately by different departments, with the States, under the Clark-McNary law, and with Weather Bureau and Air Service assistance. The forest fire hazard must be brought under one capable head. By reason of conflicting authority, conflicting though each gave its earnest endeavor, seventy-six hundred and eight forest fires in the northwestern lumber states during the past year caused a loss of nearly a billion feet of lumber. Of this amount eighty percent was Government timber, belonging not to private owners but to the Nation at large. This loss is largely treated as a definite, present loss, such as the burning of a city would be. In fact, it represents a standing loss that profoundly affects coming generations. At this critical time, when conservation of our lumber sources, water supply and future electric power is the vital need, the millions spent upon war armaments and in the support of fanatical laws would indicate a nation absolutely devoid of the intelligence of which it is wont to boast.

The American Art Annual, Volume XXIII, for the year 1926, has recently been issued by the American Federation of Arts. This is a complete book of reference on contemporary American art, containing directories of art museum workers and craftsmen, directory of art dealers throughout the country, a list of publications which devote space to art news and important happenings in the art world during the year.



Aboriginal American Architectural Types

By REXFORD NEWCOMB, A. I. A.

IF THE reader will consult a map showing the geographical distribution of the sedentary population of America in the centuries before the coming of the Spanish *conquistadors*, he will find that a great cultural area extends from our southern Utah and Colorado down through New Mexico and Arizona, Mexico, Yucatan, and Central America to Columbia, Bolivia, Ecuador, Peru and northern Chile. The groups of population distributed over this area may be considered as roughly contemporaneous, not in the sense of being exactly synchronous, but rather in the spirit of the newer conception of history in which cultural evolution is recognized as the dominant factor in human development. The difference in time of a mere century or two does not disturb the continuity of this slowly evolving culture.

Here is the picture which this map will recall for one who is conversant with the fascinating story of pre-Columbian culture in the New World. In the upper valley of the Rio Grande in New Mexico are forming the communities that are later to become the settlements that we know today as Jemez, Taos, Pecos and Gran Quivira. All along the Gila, from its headwaters in New Mexico to its mouth in Arizona, are the towns of the Cliff Dwellers. In Central Mexico, the pre-Aztec culture is flourishing; in Yucatan the earlier Maya chiefs are building great cities. Further south the great temple-cities of Guatemala and Honduras are in their prime, while in distant Peru the capitals of the Incas are teeming with a splendid if barbaric life.

What does it all mean? Simply this; that our American aborigines, to whom we often attribute so little of value, had, through a long period of experience in a given environment, developed a culture that can be favorably compared with that of any of the world's peoples preceding the Hellenic Greeks and that this

culture had arisen, flourished and was far upon its decline when our European forefathers first reached these shores.

The development of such a culture in so isolated a part of our planet argues a long, long evolution extending over untold centuries. These original Americans, like primitive man in all parts of the world, had passed through the various stages in the direction of a true civilization. They had long since ceased that early frugal, improvident, hunting life; had learned to domesticate certain plants and animals and had taken up the life of an agricultural people. When man advances to the point that subsistence is derived mainly from the soil by agricultural processes, it is a matter of vital interest to him to secure his land in permanence, to insure its water supply and to build permanent structures near it for residence, defense, and religious purposes. Thereupon arises, and not before, the true art of architecture.

Now there is a similarity of resources throughout this entire early cultural region of America. From its northern to its southern extremities corn (*maize*) was the common factor of cultural evolution. While rainfall is so unevenly distributed as to make irrigation necessary to agricultural pursuits in certain places, the conditions of climate and subsistence in the great centers of population were sufficiently alike to produce a general type of social fabric, a religion which was practiced with great zeal, and an artistic expression that manifested itself in the ceramic arts, weaving, sculpture and architecture in all centers.

It is the artistic expression, and especially the architecture of these people that now engages our attention, but, before turning to this phase it will be necessary to preface our remarks with some background facts. Many questions arise concerning these people, one of the most insistent being that regarding

their origin. This is a question that can scarcely be answered as yet. There are some resemblances in bodily structure as well as similarities in art that seem to point to a derivation from Eastern Asiatic peoples and it would seem that the presence of these peoples of the Americas in a very remote age can be best explained by the proximity of north-eastern Asia to our own Alaskan islands.

When did these peoples flourish? According to the best of our authorities, who are now able to read the Maya number glyphs, the peoples of Central America and Yucatan emerged from barbarism about the second century A. D. They claim that the Mayas, who, considering all phases of culture, may be regarded as having developed the highest aboriginal civilization in the New World, enjoyed a *first brilliant period* which came to an end with the sixth century and a *second brilliant period* which extended from the opening of the eleventh to the middle of the fifteenth century. The Aztec culture of Mexico was somewhat later and is now known to have had its most brilliant period between the years of 1376 and 1500.

It would seem that in each of the sections in which civilization existed, it arose, flourished and declined in exact obedience to the same laws that make for the



rise and decline of societies in other parts of the world. *Famine, pestilence and war* all played their part in the history of these peoples but in general these societies came to full development, softened under culture, and decayed as human society has done since the beginning of the world. These peoples were, then, obedient to the same laws that have ruled the world since the beginning of human-kind.

A study of these peoples would lead one to characterize them as being intensely religious, resourceful in meeting environmental conditions, imaginative and prolific builders, artistic, masterful at ceramics, the manipulation of stones and some of the metals, dependent upon agriculture primarily but secondarily upon the spoils of the chase. They were great social, political and military organizers. This last was particularly true of the

Aztecs, Incas and Mayas, who built up powerful and highly organized central governments. The Indians of the cliff cities and pueblos of the southwestern United States were, however, pastoral, liberty-loving and democratically ruled.

The Mayas

I have mentioned the Mayas as having reached the most developed stage in this culture. Just who were the Mayas? They were a people who, while



FIG. 1—COPAN, HONDURAS, FROM A PAINTING BY CARLOS VIERRA IN THE SAN DIEGO MUSEUM

being great political and religious organizers, were for long periods during their history given to the peaceful pursuits of agriculture, architecture, art and astronomy. In contrast to the Aztecs and Incas, who dwelt in the highlands, they were, generally speaking, a *low land people*, dwelling upon the Atlantic Coast plains of southern Mexico and northern Central America. *First* building cities in the well watered and luxuriantly vegetated portion of Guatemala and Honduras—(great cities like Copan, Quirigua, Seibal, Tikal and Palenque), at the end of the sixth century A. D. they seem to have transferred their centers of power to the less well watered peninsula of Yucatan, where they in their *second period* (1000-1450) erected another set of great religious cities like Chichen Itza, Uxmal, Mayapan, Chakanputun, Bakhalal, *et cetera*. (See Map). The *first* period of building activities was characterized by brilliant and highly developed *sculptural art*, the *second* period (although sculpture still persisted) by an equally brilliant *architecture*.

About the year 1000 a triple alliance was formed between the rulers of Chichen Itza, Uxmal and Mayapan. This was the period in which universal peace made possible a high development of the arts and especially that of architecture. This era came to an abrupt end about 1200 when the ruler of Chichen Itza plotted against Mayapan in an endeavor to become the paramount ruler in the land. Hunac Ceel, the ruler of Mayapan, called in Nahuatl allies (foreigners) from the west and Mayapan became the dominant city.

In the fourteenth century the Mayapan rulers were very arrogant and succeeded in ruling only with

the aid of the foreign allies. The unrest came to a climax about the middle of the fifteenth century when the Mayan lords under the leadership of the ruler of Uxmal sacked Mayapan and killed its ruler. After that date there was never a strong central government in Yucatan and the petty wars and feuds rent the land into many small warring factions. Thus a great people found themselves helpless at the coming of the Spaniards in 1519.

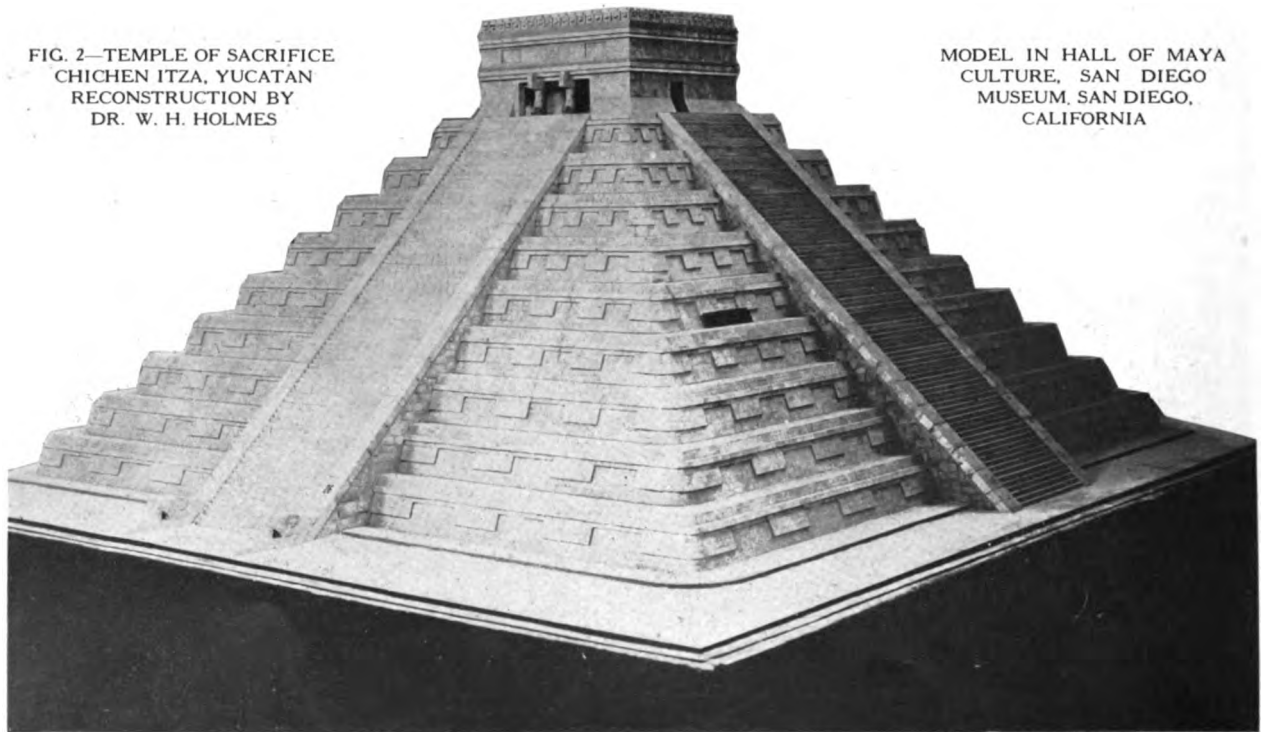
The Mayas were an extremely religious people and worship seems to have been the most important feature in their scheme of existence, a fact attested by the elaborate provisions for temples, priestly habitations and open squares for great religious pageants and celebrations in their cities. But the numerous gods of their pantheon and the intricate orders of their priesthood, while intensely interesting, are *not* pertinent to our present discussion. Religion was indeed the very fountain-head of their civilization, and upon the rites and observances they lavished a devotion rarely equalled in the history of mankind.

Since the plate illustrations of this issue are devoted to modern adaptations of the architecture of the Mayas it may be worth while to summarize the characteristics of the architecture of this people. One of the most striking features of the Mayan city is the splendid way in which it is laid out. The planners of these cities almost always display a remarkable regard for monumental civic arrangement, disposing their buildings around great plazas or squares and making use of grand stair-cases, terraces of great area, and many pyramids. (Fig. 1).

The pyramids almost invariably were used as

FIG. 2—TEMPLE OF SACRIFICE
CHICHEN ITZA, YUCATAN
RECONSTRUCTION BY
DR. W. H. HOLMES

MODEL IN HALL OF MAYA
CULTURE, SAN DIEGO
MUSEUM, SAN DIEGO,
CALIFORNIA



Courtesy San Diego Museum

bases for temples and while many of these great truncated structures appear without temples at the present time, it is generally held that in such cases the temples have perished. These pyramids are almost always terraced, the favorite number for such terraces being almost invariably nine (Fig. 2). Steep stair-cases ascend one or all faces of such pyramids, these in some cases being flanked by serpentine balustrades as in Figure 2. Often at the foot of such stair-cases priestly quarters are found upon a broad terrace, this giving rise to the idea that such temples were for sacrificial purposes. Temple structures proper and the residences of priests and rulers are the principal types that come down to us, this leading to a conviction that, as in Egypt, the houses of the masses were of an ephemeral nature.

The Mayas never developed the true arch and depended upon the means for spanning distances offered by beams of wood or stone, or various corbelled expedients. As a result great, unobstructed areas were unthinkable and few if any spans reach fifteen feet. After the "vaults", built upon a corbelled principle, were in place, they were backed up by concrete and thus incorporated into a monolithic block (Fig. 3). These corbelled "arches" and vaults varied considerably, one variety at Palenque approximating in shape the trefoil arches of the Saracens.

The walls of Mayan buildings are of considerable thickness because of the fact that outer shells or box-like enclosures of ashlar masonry were constructed around the corbelled inner faces and the intervening voids were filled with rubble "concrete". Under such a system of construction it became possible to give the outer wall faces a decorative treatment, various geometric frets and keys, conventionalized natural forms and religious subjects being used (Fig. 4). (Something of this geometrical decoration Mr. Stacy-Judd has utilized upon the parapet of his Aztec Hotel at Monrovia, California, Plate III.)

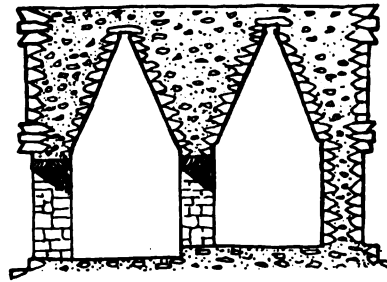


FIG. 3—CORBELLED VAULTS BACKED WITH CONCRETE

These box-like structures are usually flat roofed, but in some centres, the internal character of the vaults was given external expression in what has come to be called a "roof comb" which usually consists of a perforated decorative parapet in the form of a wall, or in some cases a box, at the very crown of the building. The purpose of these superstructures is not definitely known but it is asserted by some that incense burners, and indeed even torches, were placed in these at night to illuminate the city. Whatever their utilitarian purpose, they have definite decorative value, those of Tikal, Guatemala, being, perhaps as developed as any (Fig. 5).

The Mayas did not develop columnar forms until a late date, although apparently they were acquainted with the square pier (perhaps inspired by the stele) from the earlier period, as will be seen at Palenque and elsewhere. A great variety of columns is to be found at Chichen Itza and the later cities of Yucatan, but perhaps the most elaborate and commendable is the "feathered serpent" type found on the "Temple of the Tigers" and the "Sacrificial Temple" both at Chichen Itza. Figure 6 shows plaster replicas of the columns from the latter as found in the San Diego Museum. (There is a similar model to be seen in the National Museum, Washington.) These columns are believed to have received polychromatic treatment, the general body color being green, the teeth white, the mouth and fangs red, the lips and spiral disk at corner of mouth, together with the triple bands at the angle above, of yellow. The lintel was of *chico sapote* wood.

Mayan decoration is interesting as that on the early steles (Figures 7 and 8) or that on the "Great Turtle" (Plate 121) will testify. In the early period the carving was naturalistic, becoming more and more conventional as time progressed. In the later periods various geometrical forms make their appearance, as our head-piece will show.

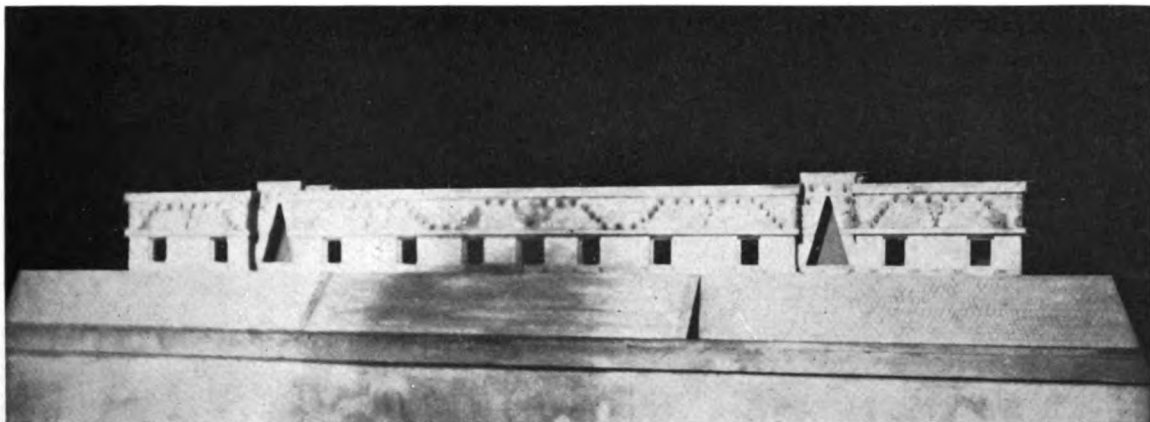


FIG. 4—SO-CALLED "PALACE OF THE GOVERNOR" AT UXMAL, YUCATAN. FROM A MODEL IN THE SAN DIEGO MUSEUM, SAN DIEGO, CALIFORNIA

Sculptural ornament varied from the flattest bas-reliefs (Figure 9) to full round statues.

The Incas

The Incas who established their power in the highlands of Peru developed a government almost equal to that of the Mayas but they were not so brilliant artistically. As with the Mayas agriculture was the chief occupation of the people and since lands were wealth, an elaborate system of communistic land division and tenure was evolved. There were:

- a. Church or temple lands;
- b. Royal family lands;
- c. Lands for the common people, issued by the state to each head of family in proportion to the size of his family.

Cultivation of the land was supervised by the state and every citizen was required to give agricultural or military service. Good land being scarce it was necessary to amplify the cultivatable area by terracing, irrigation and fertilization. Necessity then made the Peruvians good engineers and their prowess at dam and aqueduct building, terracing and road construction had its effect upon their architectural forms which were severe, rarely adorned but excellently constructed of perfect masonry.

The principle of the arch was unknown, hence they were unable to carry their aqueducts across ravines of any great width. Therefore, long detours were frequently necessary. The absence of arched or vaulted forms materially affected architectural ex-



Courtesy San Diego Museum
 FIG. 6—ENTRANCE DETAIL, TEMPLE OF SACRIFICE, CHICHEN ITZA, YUCATAN. FROM A RESTORATION BY DR. W. H. HOLMES IN THE SAN DIEGO MUSEUM

pression which was as a result completely "static" in its reactions. Some corbelled "arches" and "vaults" have been found but wooden timbers derived from the *algarroba* tree formed the chief means of spanning distance.

Stone was almost invariably used for walls, some tremendous blocks (17' x 12' x 7' and 13' x 7' x 5') giving evidence of their prowess as engineers. As with the pre-Hellenic Greeks, they developed polygonal masonry and "angle" joints. Often no mortar was used but joints were so perfectly made that a knife blade cannot be inserted. T-shaped copper clamps were upon occasion used to hold stones together.

Adobe (sundried) bricks were used in the lowlands and "*pilca*" a sort of clay-pebble "concrete" block was developed. Doors and windows were narrower at top than at bottom and interior wall surfaces inclined inwardly. Stone rings cut near the top of the walls served as anchors to which roofing timbers were lashed by thongs. Roofs seem to have been generally of thatch.

They knew and used copper tools and utensils; had much gold and silver; perfected a pottery furnace; knew quicksilver but did not know how to use it in the refining of gold; made substantial progress in astronomy and surveying even going so far as to record land surveys by means of clay relief maps of the provinces; used the balance in weighing, and conducted schools for the upper classes.



Courtesy San Diego Museum
 FIG. 5—TIKAL, GUATEMALA, FROM A PAINTING BY CARLOS VIERRA IN THE SAN DIEGO MUSEUM



FIG. 7—MAYAN STELE IN THE SAN DIEGO MUSEUM

Some years ago (1911-15) expeditions into the Inca country headed by Professor Hiram Bingham of Yale University explored the ruins of Machu Picchu, located Uiticos, the last capital of the Incas, and gave scientific confirmation to many unsubstantiated notions regarding these interesting people. Machu Picchu proved to be a terraced highland city with many broad staircases leading from terrace to terrace, an aqueduct, fountains, "baths", and a moat-surrounded citadel. The ancient sun temples were located

appeared from the land as silently as they had come.

With the disappearance of the Toltecs came a tribe from the northwest known today, at least, as the Chichimecs and these were in turn succeeded by the Aztecs. The Aztecs seem to have lived a migratory life for some time after their arrival in the Mexican Valley, but at length they settled in 1325 upon the borders of the principal lake. Here they built Mexico City, named in honor of Mexitili, their wargod. Aztec dominion in the early sixteenth century reached from the Atlantic to the Pacific. Spinden dates the principal historic facts as follows:



FIG. 8—MAYAN STELE IN THE SAN DIEGO MUSEUM

and dials for telling time were discovered.

The Nahuatl (Mexican) Stocks

The Nahuatl or Mexican stock divides itself into several divisions prominent among whom were the Toltecs, the Aztecs, the Miztecs and Zapotecs. The Toltecs and Aztecs dwelt in the famous Valley of Mexico (near the present capital of the republic) midway between the Atlantic and the Pacific and at an elevation of seven thousand feet. The Toltecs seem to have preceded the Aztecs into the land of Anahuac, coming probably about the close of the seventh century A. D. We know little of the Toltecs, since they left no written records, and what we do know of them comes to us through the legends of them transmitted by their successors to the early Spaniards.

They are said to have been well skilled in agriculture and most of the useful arts; nice workers in metals and the inventors of a calendar. Their capital was Tula, north of the Mexican Valley, and at the time of the conquest in 1519 remains of their city were plainly visible. After a period of four centuries the Toltecs who had extended their sway to the remotest borders of the land of Anahuac, having been greatly reduced, it is said, by famine, war, and pestilence, dis-

- Toltecs establish a government . . . 726 A. D.
- Toltec power broken 1070 A. D.
- Chichimecs in ascendancy . . . Twelfth Century
- Aztecs reach Tula 1168 A. D.
- Aztecs found Mexico City 1325 A. D.
- Cortez conquers the Aztecs 1519 A. D.

The Aztecs were an efficient, highly organized, military people who put great stress upon religion. They recognized the existence of a supreme being, a Lord of the Universe whom they addressed in their prayers as "the God by whom we live, Omnipresent, that knoweth all thoughts, that giveth all gifts, without whom man is nothing, invisible, incorporeal, one God, of perfect perfection and purity." But these

ideals do not tally with their practice for it is plain that a god of this nature would need no inferior ministers to execute his purposes. On the contrary they had a host of deities who presided over the elements, seasons and occupations of man. There were thirteen principal gods and over two hundred inferior, each with a feast day. A key to their nature is gained when we learn that their chief god was Mexitili, the god of war. His image was loaded with costly orna-

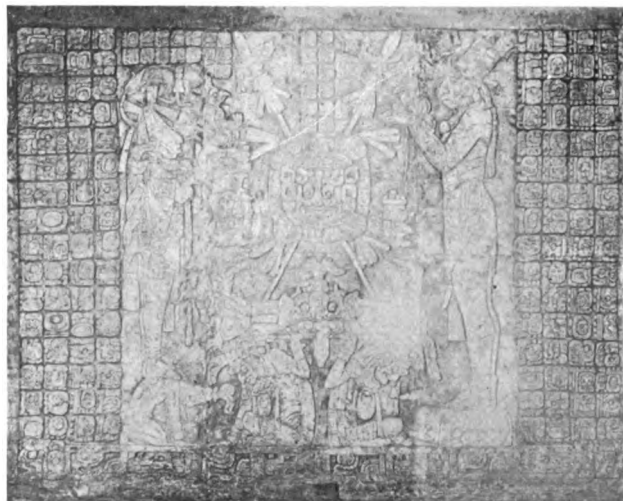


FIG. 9—TABLET OF THE SUN IN THE SAN DIEGO MUSEUM



FIG. 10—MODEL FOR FIGURE IN DINING ROOM OF PRESIDENT HOTEL, KANSAS CITY, MISSOURI. MODELED AFTER A FIGURE OF COATLICUE.

ments, his altars and temples were the most magnificent and brilliant of the public edifices, and his services and celebrations reeked with the blood of human beings in every city of the land.

Of ancient Mexican architecture we are gradually learning much, but this rather recently. The pyramids of the Toltecs seem to exceed in size those of the Mayas but they are of no such excellent construction, *adobe* bricks with a cement or stucco facing taking the place of the Mayan rubble and cut stone facings. Their temples were less solid and, although they occupied the same relative position on top of the pyramids, no single example comes down to us intact.

Vaulted ceilings do not seem to have been used but timbered coverings and perhaps even thatched roofs were in evidence. Often columns ran down the centre of a room to support the roof. The ground-plans of buildings other than temples show small rooms arranged around courts in irregular fashion. Courts for a ceremonial game resembling basket-ball are in evidence. This game seems to have had a wide geographical distribution extending as far away as Yucatan, where at Chichen Itza similar courts are found. The solar discs of the sun-worshipping Toltecs are a frequent ornamental motif.

Toltecan architecture is today represented by the Temple at Xochicalco near Cuernavaca, the pyramids of Teotihuacan and Cholula, and the ruins of their last great city, Tula, about fifty miles north of Mexico City. The Mexican Government has restored the Temple at Xochicalco. It is a low structure standing upon a low platform which is faced by elaborately

carved bas-reliefs involving plumed serpents, seated human figures and hieroglyphic inscriptions.

The ruins of Teotihuacan comprise two great pyramids, together with a straight pyramid-flanked avenue and several groups of ruined structures. The large pyramid, the Pyramid of the Sun, is about 180 feet high and composed of four superimposed sloping terraces; the smaller, that of the Moon, is located at the end of the roadway which is known as the "Avenue of the Dead."

Cholulu is famous for its great pyramid which, although irregular in shape, approximated 1000 feet on a side and was nearly 200 feet high. The structure is composed of *adobe* bricks laid in mud mortar and was doubtless at one time faced with a thick veneer of cement, patches of which remain. Cholulu was still a sacred city when the Spaniards arrived, being dedicated to the worship of Quetzalcoatl, whose effigy is frequently noted. A Spanish church now crowns the mound originally the base of a great Toltec shrine.

Tula, the ancient Toltecan capital exhibits many affinities with the late Mayan work especially that of Chichen Itza. Here the serpent columns find a Toltecan counterpart and the ball courts (*tlachtli*) are particularly in evidence.

Aztec history is mixed with legend, but the establishment of Tenochtitlan (Mexico City), their capital, is rather securely placed at 1325 A. D. About 1350 water rights at the springs of Chapultepec were obtained and a double *terra cotta* aqueduct was laid from the springs to the city. By a process of dredging the lake and throwing the silt into wicker enclosures, series of islands were formed, making the place a city of canals and islands not unlike Venice. When the Spaniards came three causeways connecting the city with the shores of the lake were in use. Each was protected by a drawbridge. In addition protection was afforded by a city wall upon which lighthouses for the guidance of the lake fisherman were erected. The houses of the city were built around great *plazas* and market places and at the centre was the great religious *plaza* known as Tecpan with the principal temples.

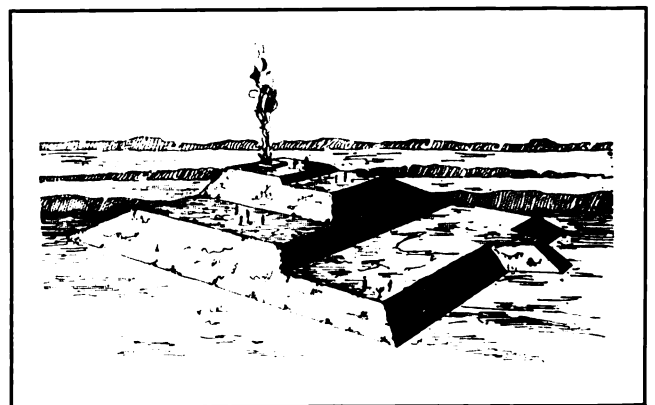
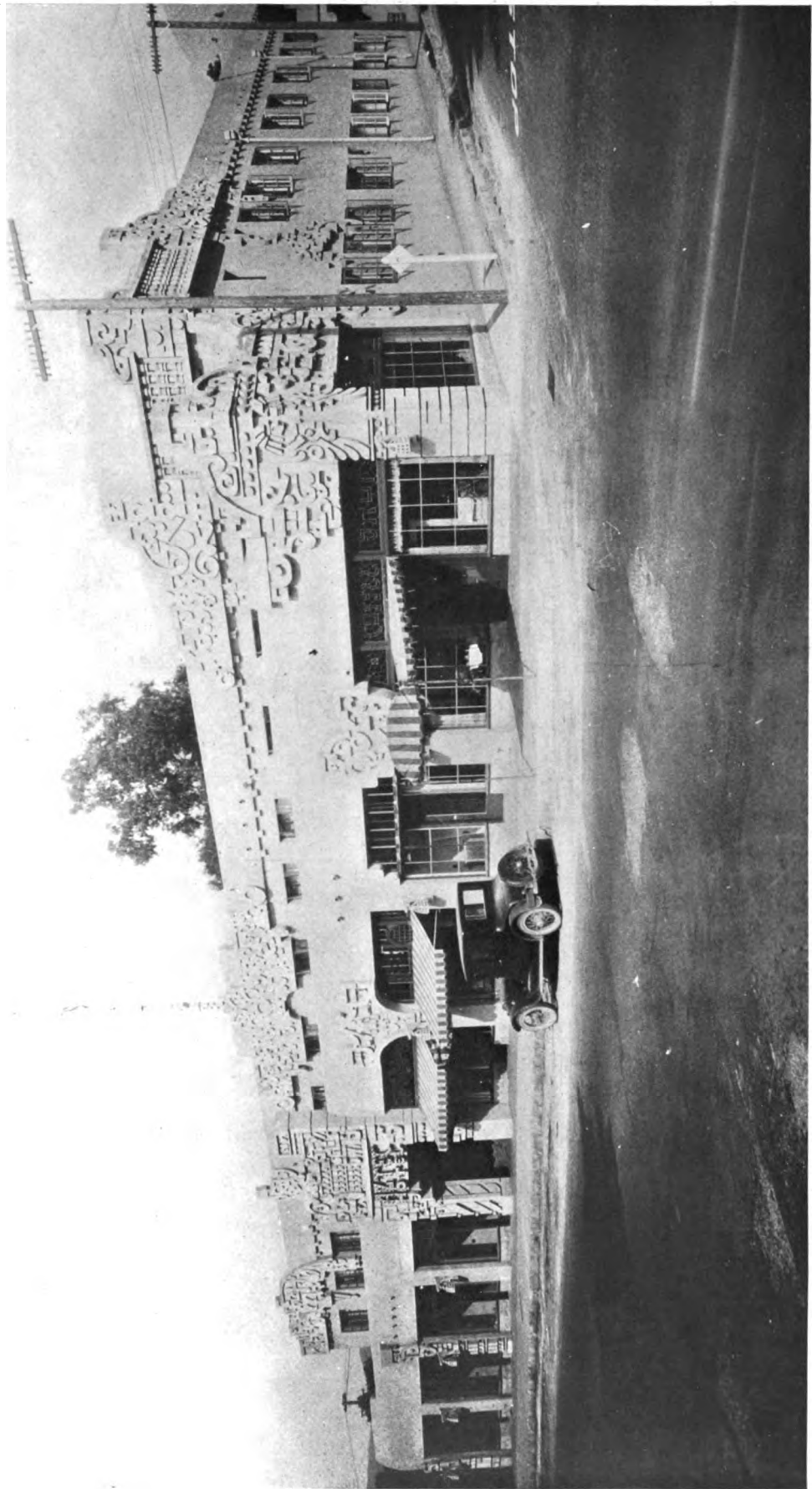
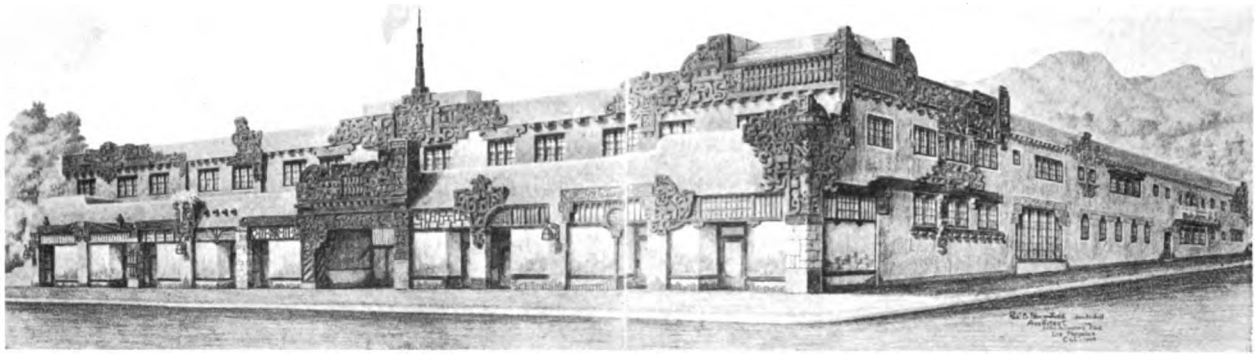


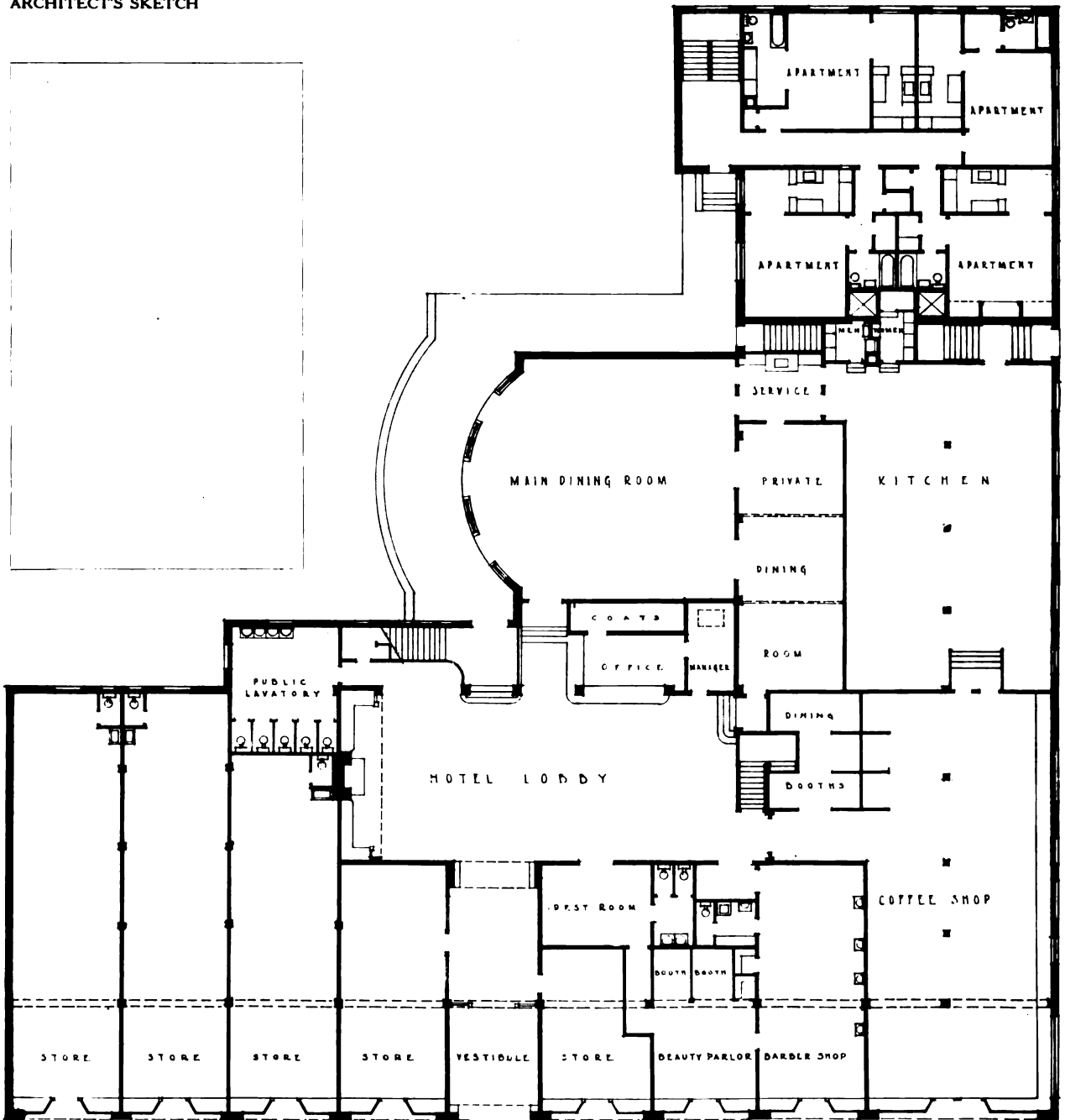
FIG. 11—PERSPECTIVE FOR RESTORATION OF MONK'S MOUND



GENERAL VIEW
AZTEC HOTEL, MONROVIA, CALIFORNIA
ROBERT B. STACY-JUDD, ARCHITECT ::



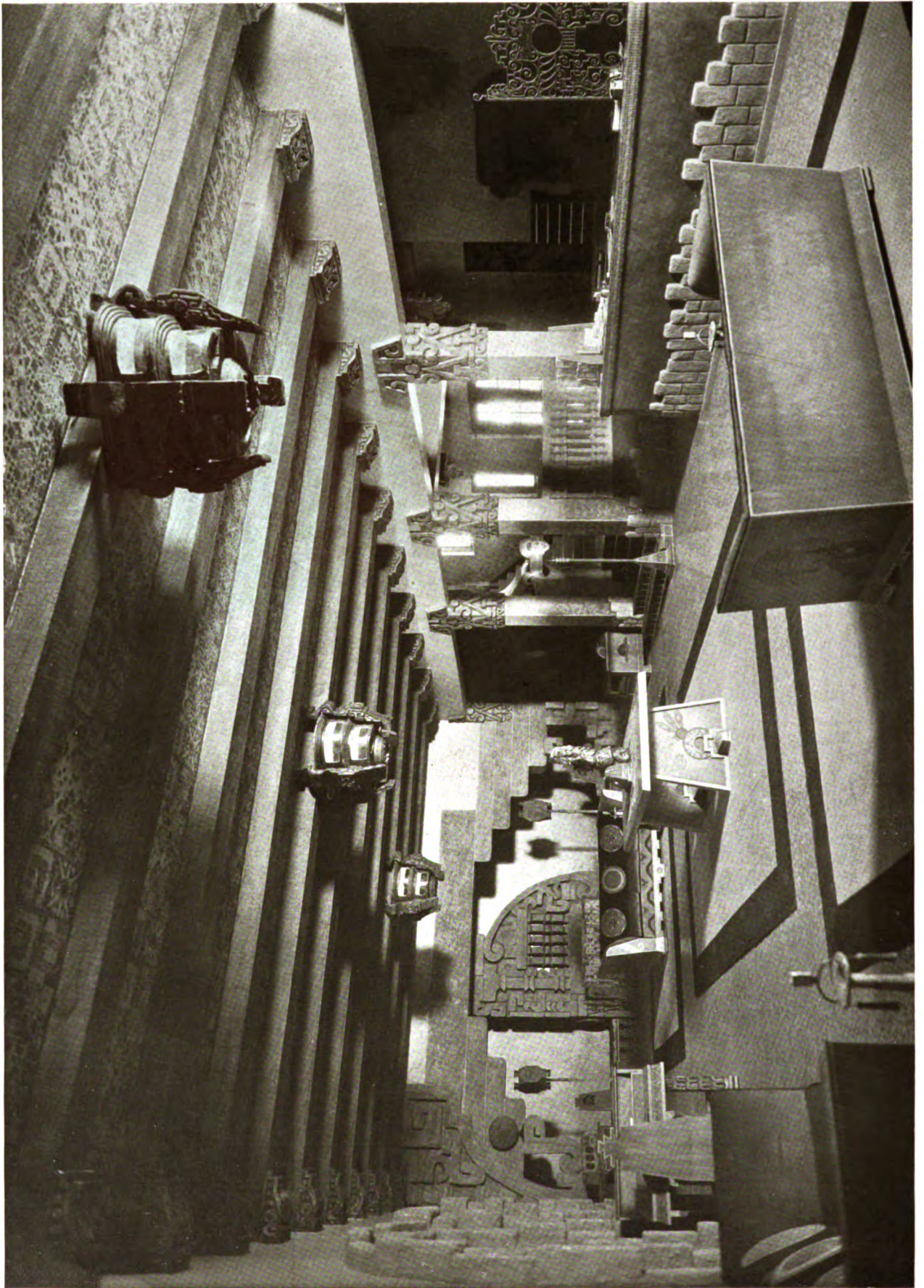
ARCHITECT'S SKETCH



FIRST FLOOR PLAN
 AZTEC HOTEL, MONROVIA, CALIFORNIA
 ROBERT B. STACY-JUDD, ARCHITECT ::



DETAIL OF CORNER
AZTEC HOTEL, MONROVIA, CALIFORNIA
ROBERT B. STACY-JUDD, ARCHITECT ::



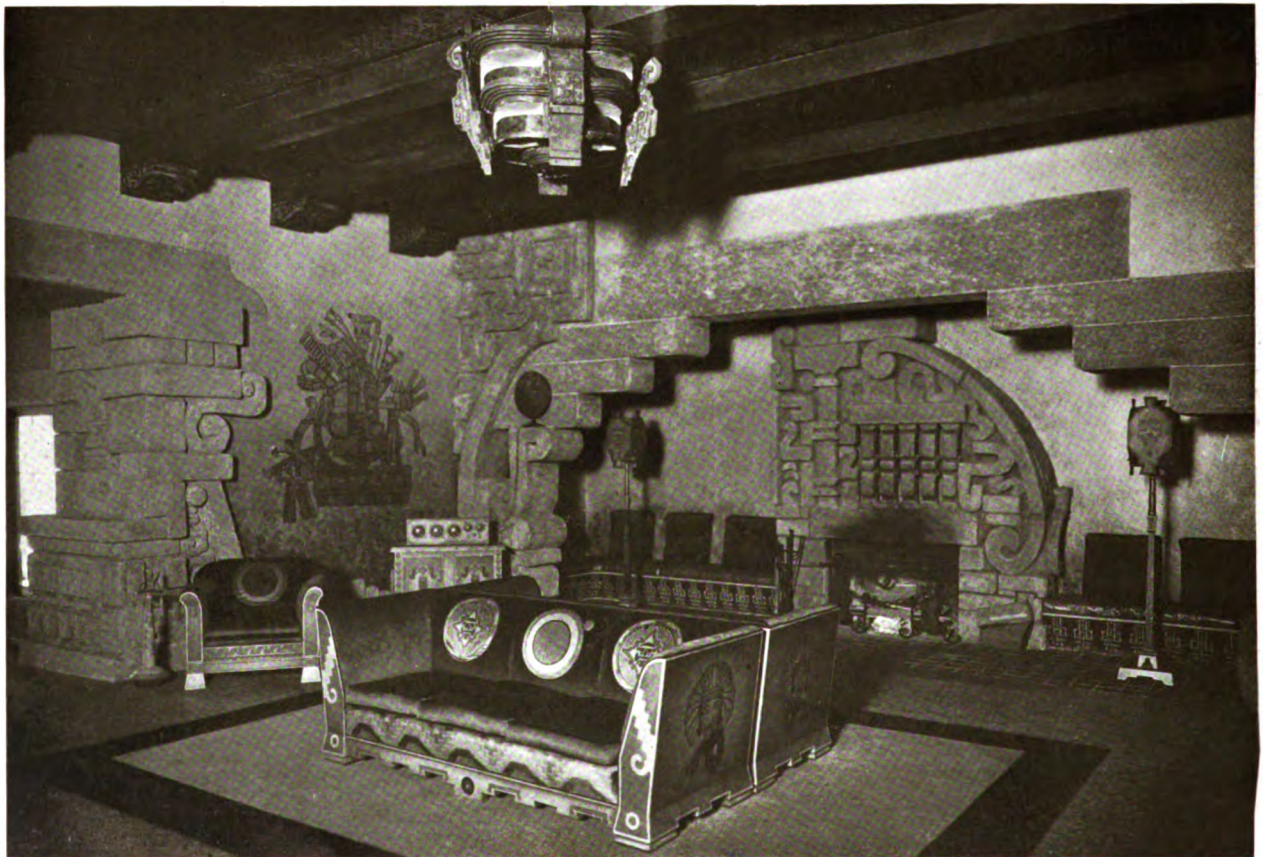
VIEW OF LOBBY
AZTEC HOTEL, MONROVIA, CALIFORNIA
ROBERT B. STACY-JUDD, ARCHITECT



LOBBY AND STAIRS
AZTEC HOTEL, MONROVIA, CALIFORNIA
ROBERT B. STACY-JUDD, ARCHITECT ::



DETAIL OF LOBBY



FIREPLACE IN LOBBY
AZTEC HOTEL, MONROVIA, CALIFORNIA
ROBERT B. STACY-JUDD, ARCHITECT ::



VIEW IN DINING ROOM
AZTEC HOTEL, MONROVIA, CALIFORNIA
ROBERT B. STACY-JUDD, ARCHITECT ::



A PRIVATE DINING ROOM ✓



A TYPICAL BED ROOM
AZTEC HOTEL, MONROVIA, CALIFORNIA
ROBERT B. STACY-JUDD, ARCHITECT ::



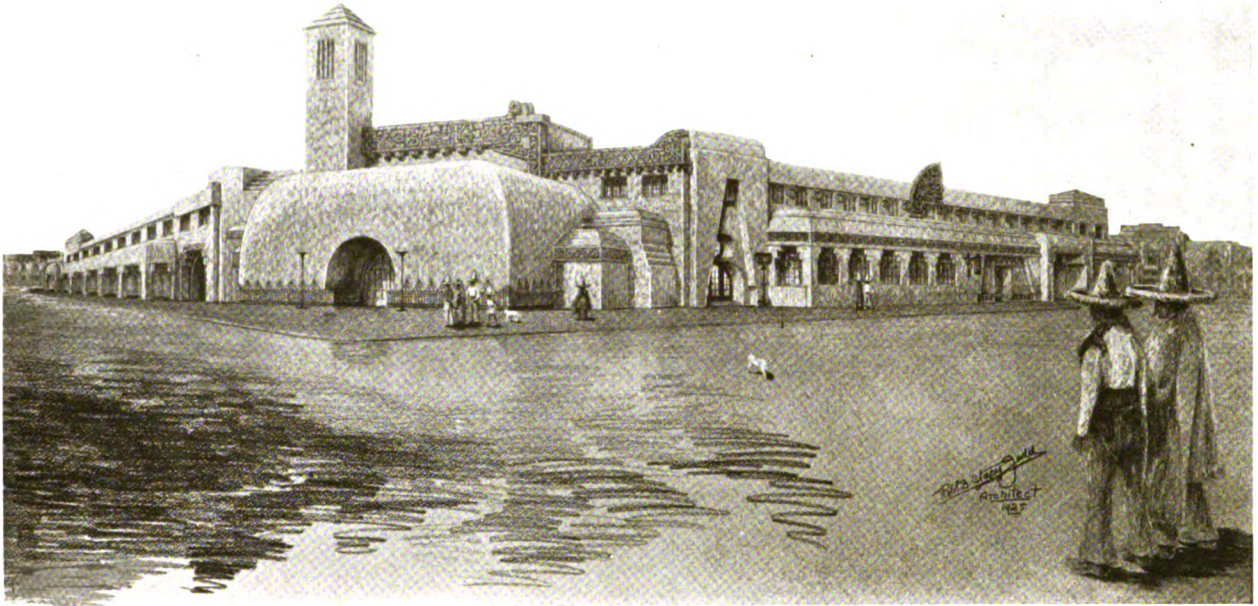
A Distinctive American Architecture

No. 7 of a series suggest-
ing how color can be
utilized to secure such
distinction.

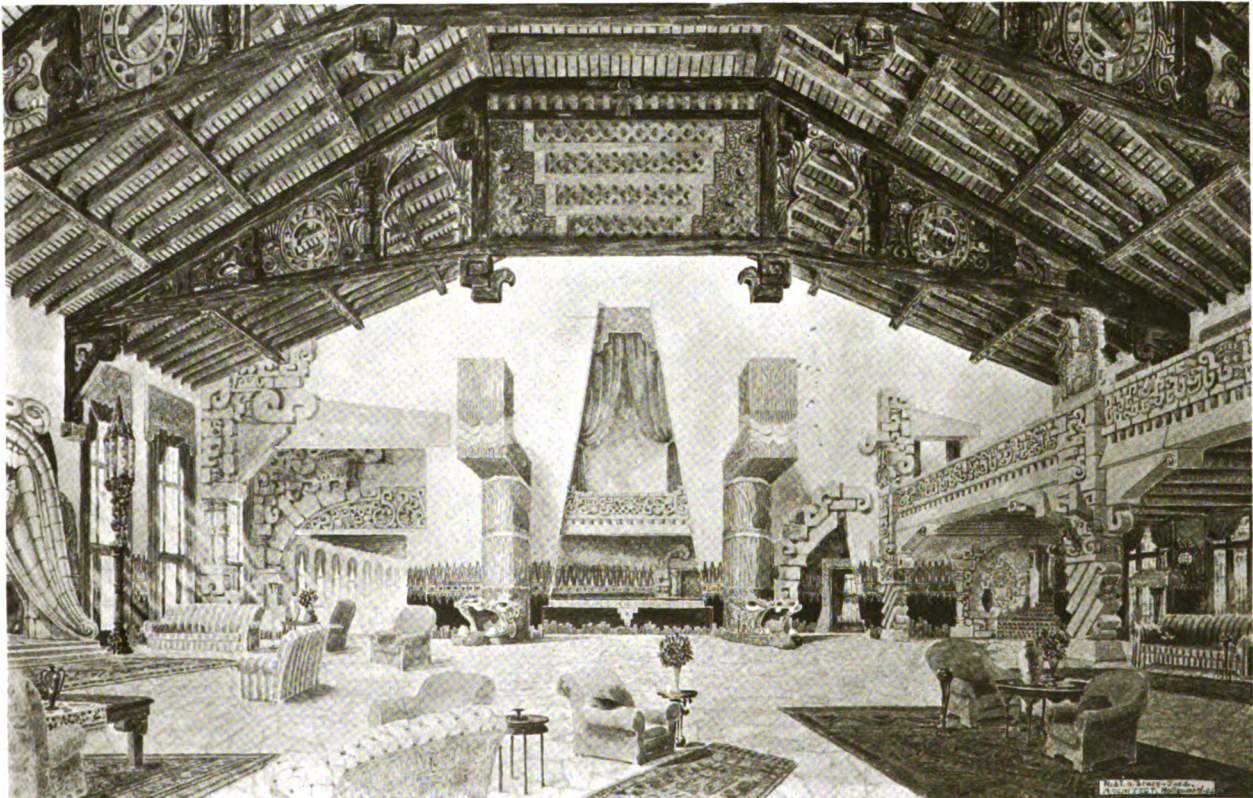


A Distinctive American Architecture

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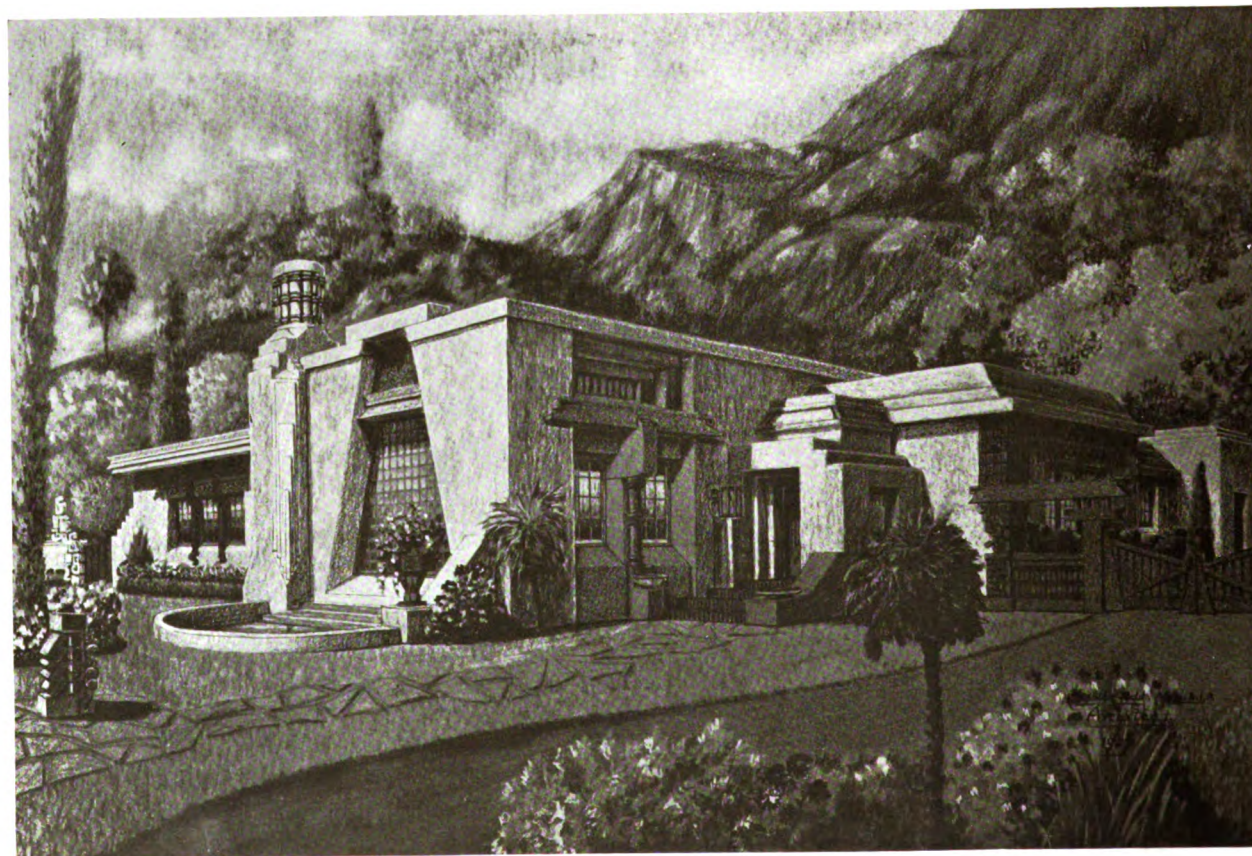
DESIGN FOR A HOTEL IN MEXICO
ROBERT B. STACY-JUDD, ARCHITECT



DESIGN FOR LOBBY
LA JOLLA BEACH AND YACHT CLUB, LA JOLLA, CALIFORNIA
ROBERT B. STACY-JUDD, ARCHITECT :: :: :: :: :: \::



DESIGN FOR A RESIDENCE IN MAYAN STYLE
 ROBERT B. STACY-JUDD, ARCHITECT :: ::



DESIGN FOR A RESIDENCE IN MAYAN STYLE
 ROBERT B. STACY-JUDD, ARCHITECT :: ::



RUIINED TEMPLES AT PALENQUE, CHIAPAS, MEXICO
 MURAL PAINTING BY CARLOS VIERRA :: :: :: ::



CARVED FIGURE ON "GREAT TURTLE"
 QUIRIGUA, GUATEMALA :: :: :: ::



MAYAN HIEROGLYPHS
 EAST FACE OF A STELE
 QUIRIGUA, GUATEMALA



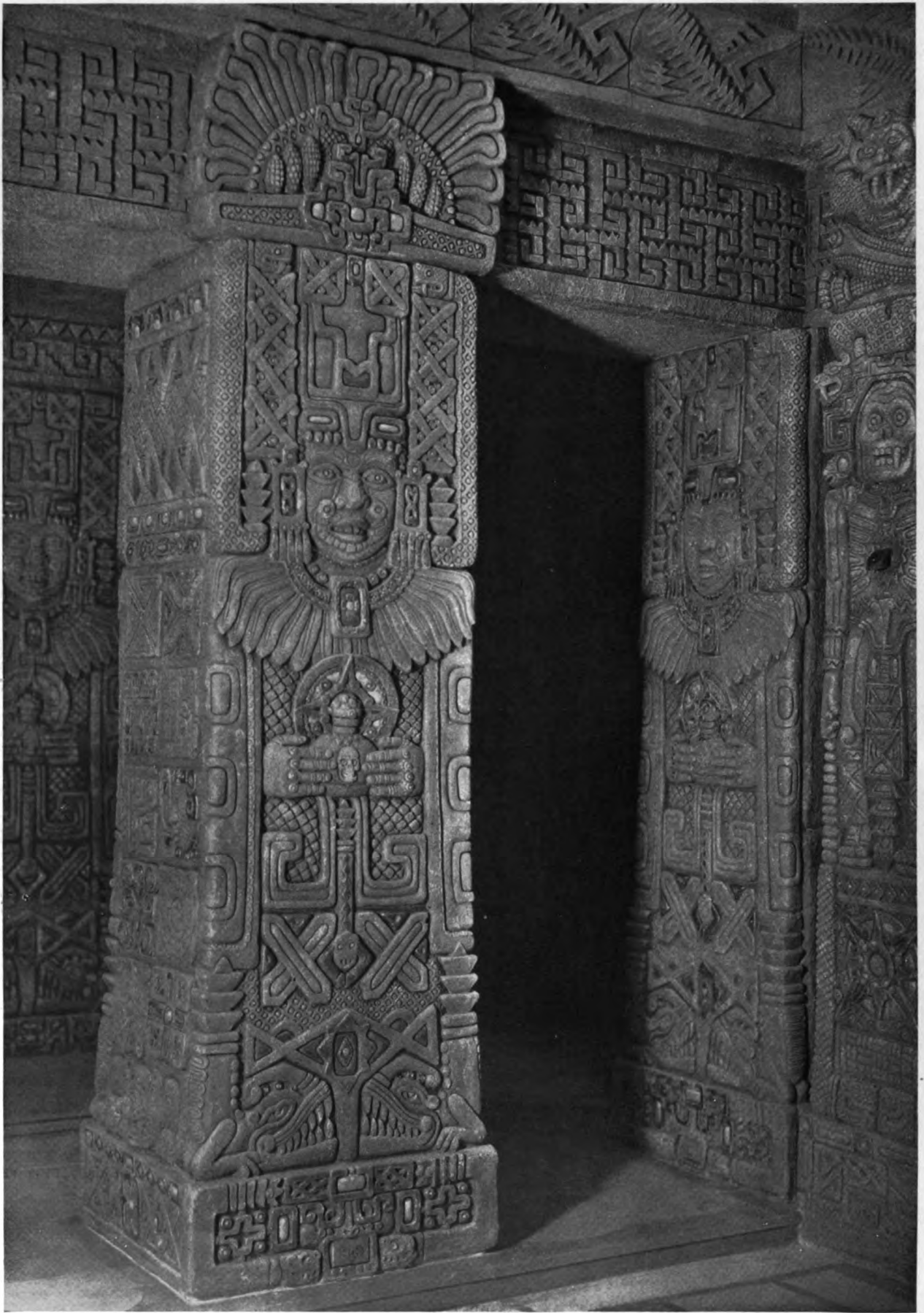
DINING ROOM
HOTEL PRESIDENT, KANSAS CITY, MISSOURI
SHEPHERD AND WISER, ARCHITECTS



DETAIL IN DINING ROOM
HOTEL, PRESIDENT, KANSAS CITY, MISSOURI
SHEPHERD AND WISER, ARCHITECTS :: ::



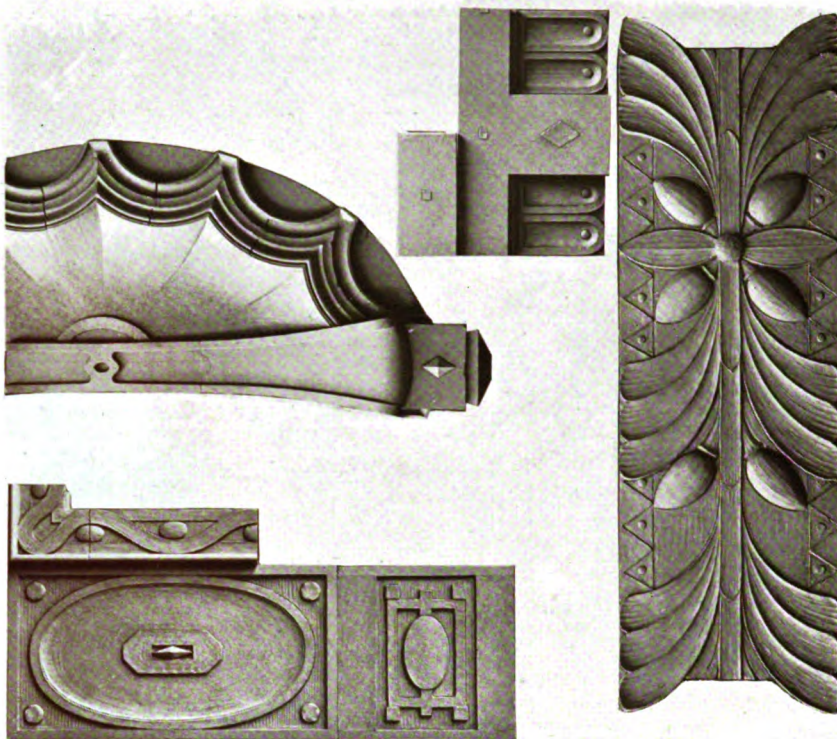
DETAIL OF DINING ROOM
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SHEPHERD AND WISER, ARCHITECTS :: ::



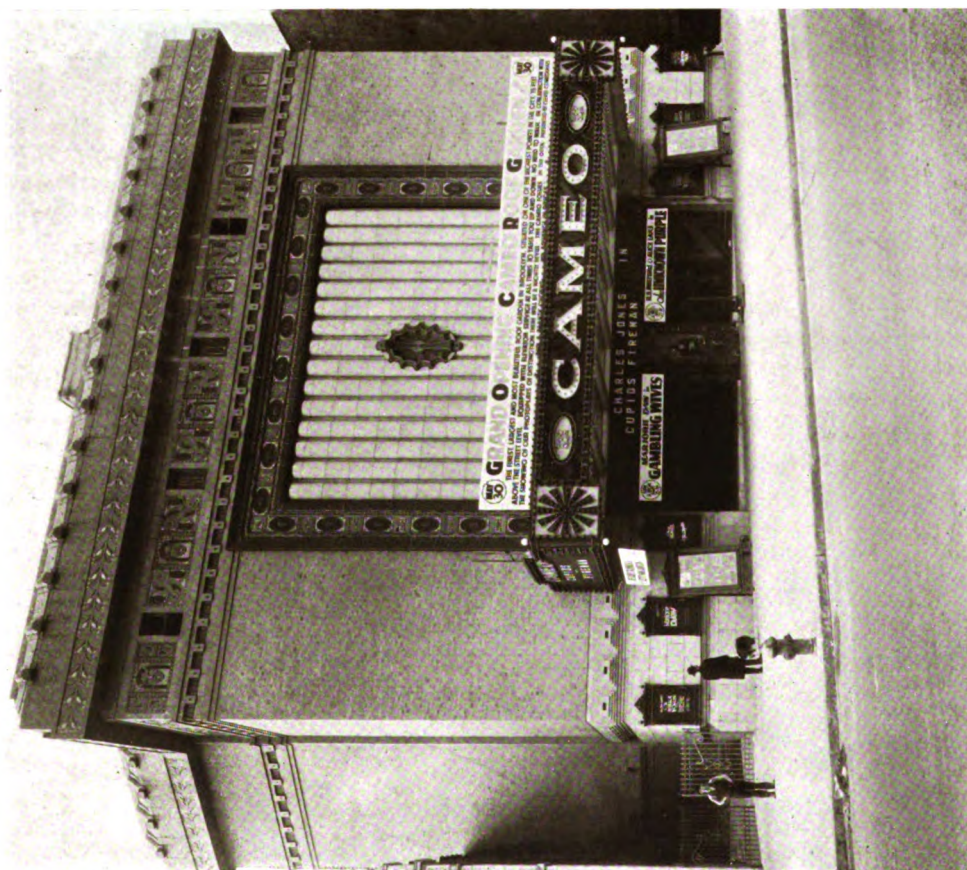
DETAIL OF PIER IN DINING ROOM
HOTEL PRESIDENT, KANSAS CITY, MISSOURI
SHEPHERD AND WISER, ARCHITECTS :: ::



FOUNTAIN IN DINING ROOM
HOTEL PRESIDENT, KANSAS CITY, MISSOURI
SHEPHERD AND WISER, ARCHITECTS :: ::



TERRA COTTA DETAILS FROM AZTEC MOTIFS
CAMEO THEATRE, BROOKLYN, NEW YORK
HARRISON G. WISEMAN HUGO TAUSSIG, ARCHITECTS



CAMEO THEATRE, BROOKLYN, NEW YORK
HARRISON G. WISEMAN, HUGO TAUSSIG, ARCHITECTS

It was this ceremonial centre of the ancient Aztec capital that the Spaniards transformed into the *plaza* or civic centre of the present Mexico City. Within the serpent walls of the ancient enclosure there were, according to Sahagun, "twenty-five pyramids, five oratories, sundry fasting houses," a great terraced altar, seven skull racks, two ball courts (for sacred games), two enclosed areas, a well, three bathing places, a dancing area, nine priests' palaces, a prison for the gods of conquered peoples, arsenals, *et cetera*. These structures Cortez and his *conquistadors* destroyed when he conquered Montezuma II.

Prescott tells the story of Cortez' resolve to destroy the Aztec capital. "Every breach, every canal in the streets," he says, "was to be filled up in so solid a manner that the work should not be again disturbed. The materials for this were to be furnished by the buildings, everyone of which . . . whether public or private, hut, temple or palace, was to be demolished . . . in the Conqueror's own language, 'the water should be converted into dry land.'" Prescott also tells us that "Cortez came to this terrible determination with great difficulty. He sincerely desired to spare the city, 'the most beautiful thing in the world,' as he enthusiastically styles it, and which would have formed the most glorious trophy of his conquest." Military expediency prevailed however and thus passed from earth the architectural splendor of the great Aztec capital.

However, a drawing in Sahagun's manuscript gives some notion of the arrangement of Tecpan. A great pyramid in several terraces occupied an almost central position in the enclosure. This was surmounted by twin temples, with appropriate images and altars to the gods worshipped. "The walls," says Spinden, "were encrusted with blood of human victims whose hearts still beating had been torn out for divine food and whose bodies had been rolled down the steep flight to temple stairs." The famous "Calendar Stone", the "Stone of Tizoc", or sacrificial stone, and the Statue of Coatlicue (See Fig. 10) now in the National Museum, Mexico City, all originally graced the sacred enclosure.

The Zapotecs in the present state of Oaxaca were another people who reached a high degree of artistic expression, but examination of their works proves

beyond doubt that they were indebted both to the Aztecs and the Mayas. The Isthmus of Tehuantepec indeed proved to be the meeting-place of the Aztec and Maya cultures and at Mitla and elsewhere are unmistakable evidences of the arts of both peoples. Aztec supremacy in this area is established by the tribute rolls of Montezuma II, which list more than twenty Zapotecan cities as tribute payers.

In closing this admittedly brief sketch of aboriginal American architecture it is perhaps fitting to call attention to the fact that as far north as our central United States the pyramid-building cults at one time extended, and in Tennessee, Ohio, Indiana, Illinois and other central states are today to be seen evidences of these "mound builders". Within recent years considerable attention has been paid to these great temple bases and at a recent session of the Illinois legislature money was appropriated to form a state park of a portion of the group near East Saint Louis. The famous "Monk's Mound" of this group, so-called because the Trappists erected thereon a group of monastic structures about 1806, is the largest of the group, measuring according to the investigations of B. J. Van Court, a surveyor, 998 feet from north to south, 721 feet from east to west and arising to a height of 99 feet. In Figure 11 I show a perspective based upon the plan restoration of Dr. Patrick, an investigator of the last century. The purpose of Monk's Mound remains still to be established but it may have been, as I show, the base of a fire altar and indeed, if analogies can be drawn between the pyramids of Illinois and those of other ancient American sites, this would not be an illogical conclusion.

Pyramidal structures throughout the world have almost invariably had some religio-astronomical significance, and, if it were necessary to build terraced pyramids on the alluvial plains of the Tigris-Euphrates Basin, were it not as logical to find primitive man in another of the world's great alluvial plains building similar structures? Perhaps it will turn out, after all, that this great mound was the site of an ancient altar of the sun, a mute testimony to the *eternal miracle of light*, recognized and commemorated in the worship, religious festivals, and literature of mankind from the beginning of civilization and celebrated today in the Church's "Canticle to the Sun"!

The Passing Show

A Hexagonal Court of Justice

By ARTHUR T. NORTH, A. I. A.

IT SEEMS like a long time ago that the news came west that New York City was to build a circular court house. Pending the arrival of architectural journals which illustrated the competition drawings, one's fancy turned to San Angelo or the Roman Coliseum as the only round or elliptic buildings of a monumental character. Of course, court houses just must be monumental and in order to be so, they must be designed in a classical style. This is one of the curious architectural complexes that retard our architectural development. These monumental buildings are monuments to what? County commissioners' stupidity, an architect's kotow to a precedent, or to justice?

Back to the story, I do not recall any particular thrill when the competition drawings were published. Curiosity is not sufficiently impelling to cause a search in the old files to look them up. One impression remains through the years as to why a model as inspiring as a pasteboard round hat box was chosen. Even though the site is criss-crossed with streets, some of these could have been shunted to one side or another and a suitable building site provided.

At any rate, the circular court house was not built. In the course of time a hexagonal court house was built and completed in the late spring. It is too small, as usual, because New York City has grown vastly since the competition was held. Another new court house will be needed before many years pass. The type of structure chosen is not susceptible to expansion; monumental buildings seldom are.

Whether a hex court house is better than a round one is indeterminate, because we have no round ones for a basis of comparison. Obviously, San Angelo is no basis of comparison because it was built for a tomb and the Coliseum for a Roman circus. If there is any analogy between a tomb or a circus and a court

house, I am not prepared to say. Judges sit in court houses and contempt of court may be made uncomfortable, so we let that remain unanswered.

After studying the two illustrations and the building itself, one wonders if the architect made a model of the building before completing the design. The elevation of the portico front indicates a satisfactory

emplacement of the portico. The portico in perspective, however, appears to have a certain dissociation from the building. We are accustomed to see porticos of this type attached to rectangular buildings and it is commonly done in a satisfactory manner, but that should not influence our opinion in this case. Is this a successful asso-



GENERAL VIEW—NEW YORK COUNTY COURT HOUSE, NEW YORK CITY.
GUY LOWELL, ARCHITECT

ciation? It seems to be an inharmonious combination. The main entrance, in another or no-style design, could have dispensed with a portico and in its place used a large opening buttressed with pylons or some such feature. Of course, this could not have been done in the classical style selected, but it has been done, notably in the new Nebraska State House.

Why the portico at all, except the standardized American court house *cliche* demands one. In this particular case, the rather barren and uninteresting building without the portico might have been mistaken for a jail or penitentiary like the new one at Joliet. To have been really consistent, a galvanized iron dome painted green, surmounted with a sheet-zinc statue of Justice made in Salem, Ohio, should have completed the ensemble.

On the five remaining sides of the building the lines of the portico entablature and base are carried through with a perfectly good T-square. The entablature and the eight pilasters are very thin and appear to be pasted on the wall. This elevation is, perhaps, more confusing than the principal elevation. Does the imposed pilastered order fit the elevation



FRONT VIEW—NEW YORK COUNTY COURT HOUSE.
GUY LOWELL, ARCHITECT

and does it indicate any purpose? It seems to be an intrusion without coherence or harmony. If the first view of the building was from the rear, one might well question the purpose of the design and would have to walk around the building and see the portico to find its ostensible reason. Six porticos would have been as ridiculous as the five pilastered orders, and the reasonable solution might have been to discard the order entirely and treat the five walls as walls. To treat a wall as a wall is the most difficult problem in architectural designing and but few do it successfully.

This design has many hidden meanings that are plain to the political mind. Like all good classical designs, there are three stone images standing on the pediment of the portico in attitudes of watchful waiting. Whether they represent prominent Gothamites, are men or women, is immaterial. Someone has to stand unprotected from the rain, sleet and snow or the burning heat of summer so as to impress the Tammany workers with the desirability of an inside job with all of its luxuries of protection and an easy job. So the votes are counted and the boys do not stand out in the cold. It is very appealing. Also the tympanum has its regular group of pagans, standing upright at the center, through successive degrees of distortion to the reclining attitude of repose in the acute angles at the ends.

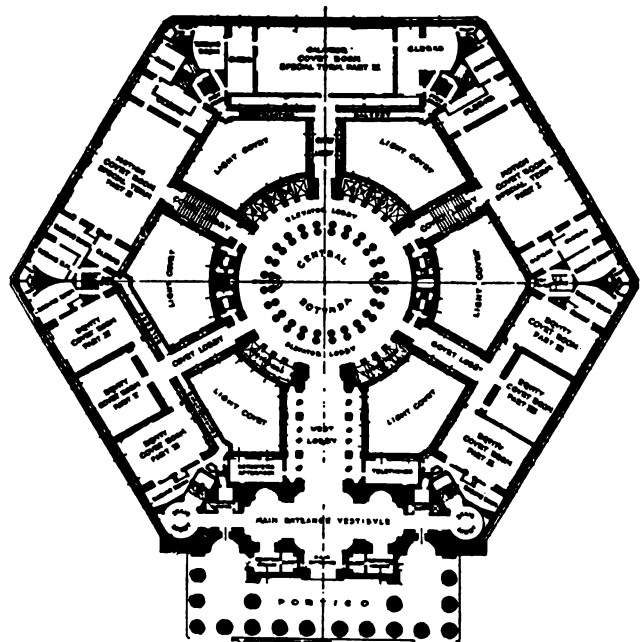
A fine sense of political economy is displayed in placing the two penthouses for the accommodation and access of two custodians of the sacred flags. It would be inconceivable that one custodian should come out of one penthouse and handle two flags, so the fact that two flag raising jobs are available is indicated in the two penthouses.

A little measuring of the plan and inspection of the building indicate that if the cube of the portico were enclosed, it would accommodate at least six court rooms, which are even now so sadly needed in this new-old court house. This portico cost a considerable sum of money and its practical value is reduced to giving employment to other custodians who will

shovel off the snow and clean up after the sparrows who have already pre-empted the sixteen Corinthian capitals for nesting and breeding purposes. It is a fine consideration which has been shown to the sparrows.

I have always had an idea that both comfort and economy resulted in rectangularity of plan. Men and appliances seem to fit better into spaces enclosed with 90 degree angles. There seems to be lost space in this hex plan that could have been better utilized in even a circular plan. The floor area given over to circulation in lobbies, corridors, elevators and stairs seems to be wastefully disproportionate to the working areas. A maximum of costly exterior and court walls seems to have been sought and attained with fine success. Economy and convenience of plan seem to have no relation to our monumental structures and the reason is clear. The original buildings serving for the basis for the classical styles, which we unthinkingly apply to our monumental buildings, were intended for pagan ritualistic uses and they were probably entirely suitable for that purpose. What is the relationship then between the ancient uses of monumental buildings and the modern uses?

Courts are set up to interpret the law and administer justice. It is, primarily, a public business procedure and entitled to a dignified housing. Many phases of private business are essential to society as it is now constituted and are housed in structures planned for efficient operation and at the same time worthy and dignified. Why should not public business be carried on in office buildings of a distinctive character and at the same time be planned for efficient operation and economical maintenance?



FIRST FLOOR PLAN—NEW YORK COUNTY COURT HOUSE.
GUY LOWELL, ARCHITECT

It is interesting to compare this wasteful and extravagant plan with the new city hall building in Los Angeles. The latter building has all of the characteristics of a modern skyscraper office building and is the antithesis of the awful city halls that disfigure our cities. The Los Angeles city hall, the Nebraska state house and the Sioux City court house, presage, let us hope, the ultimate breaking down of the classical, monumental court house complex.

Book Review

MAYA ARCHITECTURE. By George Oakley Totten, The Maya Press, Washington, D. C. 1926. \$25.00.

From those days in the early 40's of the last century, when John L. Stephens gave to the world its first glimpse of the splendid art of Mayas of Central America and Yucatan, an appreciation for things native American in origin has been slowly developing. My own interest in pre-Columbian American architecture dates from the time when as a lad I ran across those interesting volumes of Stephens, illustrated with Catherwood's fascinating drawings, made by means of the old *camera obscura*, for this was before the days of photography.

I well remember how diligently I studied those drawings and how I longed to go to that far-off jungle-land of the south to see for myself those fabulous cities which had flourished so long ago and had been forgotten. I do not recall ever having heard of these splendid cities before I ran onto these dust-laden volumes in a small town library, and I remember how eagerly I sought for information and hoarded clippings that occasionally appeared in the press concerning the expeditions of the Peabody Museum. Eventually and long after publication, I was enabled to read Charnay's "*Ancient Cities of the New World*", Lumholz's "*Unknown Mexico*", Maudslay's works, Dr. Holmes' writings, and much later, Joyce's "*Mexican Archaeology*", Spinden's "*Study of Maya Art*", and the publications of Sylvanus Morley.

This is probably a typical story of the activity of the interested reader. On the other hand, the general public, after the flare that Stephens' books occasioned, promptly dismissed the matter of a worthy and beautiful indigenous American art from its mind. Within recent years, however, the activities of these scholars have been popularized through such agencies as the *National Geographic Magazine* and *Art and Archaeology*, and thus the American public is becoming slowly but generally informed upon this our splendid artistic heritage. Again a genuine popular interest has arisen.

It has always seemed strange to me that American architects have rarely turned to our native American

types for inspiration, especially when so splendidly versatile and colorful an architecture as that of the Mayas and Aztecs form for us so rich a background. I may be misinformed but I judge that perhaps the earliest structure in the United States to utilize Mayan inspiration was the Pan-American Union Building in Washington, by Messrs. Kelsey and Cret. That was in 1912 and even today little work utilizing American precedent has presented itself. The architect who today uses Aztec or Mayan precedent is, I presume, even yet, something of an innovator.

Now, generally speaking, before there can be books devoted to the architecture of a people there must be a demand for the ripe scholarship qualified to produce such books. If architects are not interested in Mayan architecture there is little demand for books upon that subject. Yet in spite of a "backward market" there has appeared a very splendid and commendable volume on Maya Architecture by Major George Oakley Totten, A. I. A., architect of Washington, D. C.

Major Totten tells us that his interest in Mayan architecture dates from a commission to design a museum for a collection of American Indian curios. Lucky are we, his readers, that a "demand" for such knowledge was forced upon him, else he may never have taken the trip to Yucatan and his splendid and illuminating book would never have been prepared. From the notes and photographs made upon his trip in 1919, together with other photographs and drawings made by research organizations like Peabody Museum of Harvard University, Carnegie Institution, and the University Museum, Philadelphia, and many excellent engravings selected from various monographs on Central America, he builds up a body of illustrative material upon Mayan art and architecture which cannot be duplicated elsewhere and which is of inestimable value to the student of the style.

His chapters cover completely, if not at great length, the following: *An Outline of Maya History*; the *Architecture*, discussing its characteristics, tools, materials, planning, construction, ornamentation, polychromy and present-day condition; *Cities of the Classic Period*, like Copan, Tikal, Quirigua, and Palenque; *Cities of the Renaissance Period*, like Chichen Itza, Labna, Uxmal, Mitla, etc. He closes with some illustrations of modern adaptations and appends a complete bibliography. Eight handsome color plates, setting forth some notion of the application of pigment both to architectural and sculptural forms, constitute a feature of the book. While, doubtless, as time goes on, a more complete knowledge of Mayan polychromy will arrive, these initial plates by Major Totten form a very considerable contribution at this time to this vital subject of architectural polychromy.

REXFORD NEWCOMB

Color in Architecture

VII. Color Media, I.

By REXFORD NEWCOMB

COLOR is introduced into architecture in two ways: a. Through the intrinsic color of the structural units; b. By the application of decorative color. In the primitive architecture the intrinsic color of the materials imparted whatever polychromatic variation a structure had to offer. However, very early in the history of the race the love of color for color's sake led man to introduce a measure of that color by one means or another. That is to say, very early the impulse to decorate primitive structural forms with colors foreign to the materials of construction made itself felt. To be sure the color of stones, of bricks and of other structural units continues, as ever, to impart a certain color to our structures and doubtless as long as man builds this will be the case, but the normal desire to introduce *ideal* color into architecture is the impulse that, after all, accounted for most of our historic architectural polychromy.

By applied decorative color I cover a large range of activity. I include not only those rude marks or daubs of colored earths in primitive habitations, but that long line of attempts down through the ages which culminated in the encaustic painting of the pure white Pentelic marbles of ancient Hellas, the veneering of those sun-dried brick temples and palaces of Assyria and Persia by means of splendidly decorative ceramic envelopes, the encasing of the brick and concrete walls of imperial Rome with a skin-deep beauty of marvellously marked and gloriously colored marbles, brought from the ends of the known world of that day, and the plating of such structures as Sta. Sophia and Saint Marks with a wealth of colorful mosaic. All of these artistic activities came to fruit through the functioning of the elemental decorative impulse of man, an impulse born, in a measure, out of an intense love for color.

As taste for and discrimination in the use of color varies widely with individuals today, so down through the ages, the use of color has varied with the races. Indeed each race has developed a palette of its own and in accordance therewith has instituted a racial color symbolism. The meanings of these colors to

various peoples has, indeed, a great deal to do with their use of color in the arts, and therefore we should not be too quick to judge the color-sense of a race without paying due attention to that race's environment, its history, and the material resources with which the people were acquainted. Most of all we should not judge them by the measuring-stick of our own personal preferences. Color, like everything else, is subject to variable interpretations, and color preferences and meanings are as likely to vary with geographical and historical conditions as are religion, language, and other human expressions.

That color in *all its varieties* was *not* possible in previous ages is well borne out by the paucity of color-terms in many languages and the backward color-sense of many previous peoples. Former peoples did not enjoy the leverage that we today have upon the color problem due largely to the fact that before the industrial age man was almost completely dependent upon the raw materials of nature. Thus upon the Palestinian coast a splendid purple was available because of the presence of a certain squid, but this was unknown in India where, on the other hand, was to be found indigo, a splendid blue not to be seen at Tyre and Sidon.

Environment and the resources which that environment offered controlled the available color supply, and therefore shaped the color-sense of the people. Art in utilizing available colors thus came under the same rule, and art color, like art forms, developed in obedience to environmental conditions until the age of commerce made possible an exchange between peoples.

Within recent years the prowess of modern chemistry and industry generally has made possible, often in the most permanent form, practically all the colors known to the peoples of all times, and as a result, color means far less to us symbolically than it did to past races. To be sure black is still the color of mourning and death, and, in a certain sense, the old color symbolism of the Church still remains with us. But these symbolic uses of color have to do largely with ecclesiastical forms and do not apply to architecture generally. In fact, symbolic color seems to mean far less to us of today than to earlier civilizations.

As an example of the varying use of symbolic color between different races it is interesting to note that with the Chinese yellow has been a sacred color, while with Christians, yellow has often meant jealousy and

EDITOR'S NOTE—Beginning with this issue and throughout the series of Professor Newcomb's color articles, the color plates appearing each month will be rendered by Charles L. Morgan. This conforms with *The Western Architect's* policy to give its readers the best there is. These renderings are wonderful examples of color application and modern architectural design—and we are quite sure Mr. Morgan needs no introduction as an architectural delineator.

shame and, in a dingy hue, signified inconstancy and deceit. In France of the tenth century, according to Luckiesh (*The Language of Color*), the doors of the abodes of felons, traitors and other criminals were painted *yellow* and Judas was often represented in the church windows, with a *yellow* robe, this signifying his inconstancy, jealousy and deceit. Imagine the reaction of a tenth-century French ecclesiastic to the lavish use of *yellow* in Chinese Imperial architecture, where the roofs especially were covered with acres of brilliant *yellow* tiles!

Later on it will be my purpose to distinguish the architectural polychromies of the various important peoples and at that time racial distinctions may be drawn. This paper has to do rather with the *media* by which we of today may introduce *ideal* color into architecture. I have spoken of the "*intrinsic* color of structural units". This is imparted to architecture by two classes of materials: (a) Naturally occurring materials such as stones, granites, slates, etc.; and (b) Man-made materials, like bricks, concretes, stuccoes, terra cotta and similar materials.

From the earliest of times man has selected building stones not only for strength and permanence, but also for pleasing color. Indeed, it has almost always been customary to utilize stones of contrasting colors for various parts of a structure. During the Romanesque period in the south of France this sort of polychromatic variation of stones reached a splendid level and our own H. H. Richardson in adapting such a spirit to American expression utilized in a similar manner the colored stones and granites of New England (*vide* Trinity Church, Boston). In such states as Wisconsin and Minnesota, to say nothing of many others, are to be found splendid deposits of both stone and granites of a great variety of colors, the possibilities of which form a tremendous resource for architectural polychromy. Let us hope that in the future these states may give us architectural expressions to which their natural endowments so well entitle them.

In mentioning Nature's gift of "ready-made" materials one cannot omit the splendid wealth of colorful marbles, use of which man has made from early times. The Egyptians had some knowledge of decorative marbles and even the pre-Hellenic Greeks selected marbles and other stones for color variation. With the Hellenes, however, and more completely with their Roman successors came a full appreciation of marble as a color-medium, while the Byzantines

brought marble veneers to their highest glory as an architectural decorative material. America is rich in marble and besides this the quarries of the world are ready to dump their wealth in our lap, if we will but use it. We are far, however, from having exhausted our own indigenous varieties.

Slate, too, of gray, green, black, blue, purple and red, and of many shades and combinations, is ready to make glorious a roof with its more sombre polychromy. Then, too, as flagging, as sills and even as base-courses, slate offers its strength and its color in a splendid way.

The metals, especially lead, zinc, copper and bronze are not without appreciable capacities for introducing a measure of color into our buildings. These are all full of possibilities, albeit their color is not so intense as many of our newer man-made materials, unless perchance the action of our sulphurous coal-smoke may, by the agency of moisture, be precipitated upon copper or copper-bearing alloys. Then a handsome copper-green appears.

With bricks man has been conversant from the earliest of times and during the ages he has developed brick units of varying sizes, qualities and colors. While *red* is the traditional brick color, in view of the development of modern ceramic chemistry, bricks may, like tiles, take on a large variety of color. Brick, it is safe to say, will always maintain its position as a structural material and therefore largely influence the color of architecture.

Long since have we left off the artificial sorting and selection of our bricks for uniform color, with a result that our brick walls present today an interest equal to that of any time. Nothing is handsomer than the accidental play of color that results in the utilization of kiln-run bricks which vary all the way from deep *lavenders* and *purples* up through the *reds* to the *salmons* and *pink*s. Then too, the splendid *tans*, *taupes*, *golds*, *russets* and other colors now available in brick, and a splendid variety of textures make possible a polychromatic range never before realizable in brickwork.

The grading of the general color of a brick wall to produce an aspiring effect or to heighten color interest at the top is in some quarters now practiced, and with good results, it seems to me, unless such grading should become so marked as to appear artificial. A splendid example of such gradation is to be found upon the exterior walls of the Ceramics Building at the University of Illinois.

Martin Roche, F. A. I. A.

AN OBITUARY

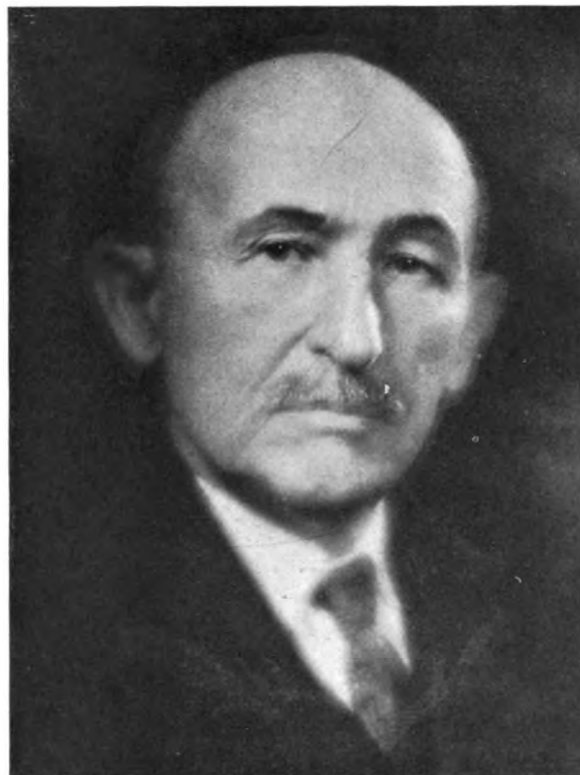
By ROBERT CRAIK MCLEAN

ALL too frequently, of late, has the chronicler been called upon to record the passing of one after another of those architects, who, possessing designing and construction talent of a high order, through the past forty years of architectural progress have built the wonder cities of America. Chicago, of all the favored cities, has been most fortunate in that its physical greatness has expanded under the direction of a group of architects who were draftsmen in the first days of this great era. Their genius was directed early in their careers by architects of sterling character of whom they were pupils first, and to whom they later became assistants. This group of art-endowed draftsmen, succeeding to practice, have carried out successfully each demand for height, dimension, plan and design in appropriate and scholarly forms. And it is to those masters under whom they worked, as well as to the development of their own innate talent, that Chicago owes its distinction in architecture.

Of this group was Martin Roche, who died in harness, on June 4. He was born in Cleveland, Ohio, August 15, 1855. Two years later his parents moved to Chicago where he received his early training and spent the remainder of his life. The productiveness of that life in architectural accomplishment received its initial impulse when in May, 1872, only eight months after the great fire, he entered the office of Major William LeBaron Jenney as a draftsman.

Educated as an engineer in the Engineering School of France, Major Jenney had returned from Paris at the opening of the Civil War, and during that period was Chief of Engineers on the staff of General Grant. Following peace, Major Jenney taught engineering and architecture at the University of Michigan, and later opened an office for architectural practice in Chicago.

Possessing a wide knowledge of structural engineering Mr. Jenney was also an architect of ability, a student of architecture as an art. Beyond this he had a sympathetic and kindly nature that ever urged him to give freely of his knowledge to others. Thus his draftsmen became his pupils. This writer, before he even had heard of Mr. Jenney, knew one of his draftsmen who brought home to his admiring parents, not plans and elevations, but drawings of busts and capitals that would more surely suggest an art class student than a cub in an architect's drafting room. The effectiveness of this training of his employees is today evidenced by the long list of those who came under its influence. And that list includes D. Everett



MARTIN ROCHE 1855-1927

Waid, Daniel H. Burnham, John W. Root, William Holabird, William Bryce Mundie, W. A. Otis, Howard Shaw, Alfred Granger, James Gamble Rogers and others whose names have been nationally known as among Chicago's foremost practitioners.

In 1881 the firm of Holabird and Roche was formed. With the engineer, Holabird, and the designing skill of Roche the success of the firm was immediate. To the present time it has maintained a leading place in production of works of superlative importance. While the use of structural steel in skeleton framing, and the abandonment of cast iron for all but quiescent loads was first practiced by Major Jenney in the construction of the Home Insurance building, it was by Mr. Roche in the designing of the Tacoma building that the "skeleton frame" construction was first introduced and developed as it is used today.

A student of design and an eclectic producer, Mr. Roche gave to Chicago the delicate Gothic of the University Club, and the massive strength of the old Tribune building at Dearborn and Madison streets in which it was necessary to develop sub-basement construction. He designed the present City Hall and County building, and the Grant Park Stadium for which he produced the winning design. Indeed,

through the past thirty years Mr. Roche has steadily added to his architectural accomplishments in building after building that stand as monuments to his quality of design.

His industry was great; his ability was directed to the conquering of difficulties resulting from erecting massive buildings on a treacherous soil. But it will be rather in the kindly nature of Mr. Roche that he will be remembered by those who were so fortunate as to come into contact with him. This is particularly true of those who have worked under him. His regard for the education of his draftsmen was evidenced when the Capitol of Minnesota was completed over twenty years ago. His firm chartered a special train and took the entire office force to Saint Paul to see Cass Gilbert's symphony in form and material.

His interest in the education of all who aspire to architectural practice is indicated in his will. In this he directs that his considerable collection of paintings and etchings shall be sold, the proceeds to be placed in charge of the Art Institute of Chicago for the endowment of scholarships to enable students of architecture to study abroad. His books on architecture are placed in the Art Institute-Burnham Library and his office library is given to John A. Holabird, son of his late partner, William Holabird.

Mr. Roche joined the Western Association of Architects upon its organization in 1884, and became a Fellow of the American Institute of Architects when the two National associations consolidated in 1889. He was a member of the Chicago Art Institute and a director member of the University Club of Chicago.

"THE SPANISH INFLUENCE ON AMERICAN ARCHITECTURE AND DECORATION"; by R. W. Sexton, Associate Editor, *The American Architect*. 264 pages, 9x12 in., profusely illustrated, cloth. Published by Brentano's, New York. Price \$10.00.

The influence of the Spanish on American architecture is undeniable, and its measure is well recorded in this book. It is not an historical record in any sense. It does illustrate, however, by carefully selected examples, the manifestation of the Spanish influence in different sections of the country. The examples are confined to American designs which are quite diversified, as would be expected because of the wide geographical distribution of the subjects.

In making up this book Mr. Sexton has departed from the usual method. The first three of the four chapters are devoted to plans, exteriors and interiors, respectively. The fourth chapter is devoted to roofing materials, walls, tiles, iron work, and furniture. The advantage of this arrangement is that the reader is enabled to study the different elements of a design without being distracted by the others.

For instance, in the chapter devoted to plans one can make a study of those things which are character-

istic of Spanish architecture as relating to the plan. In the same way the exterior design can be studied without reference to the plan, and also the interiors. This enables the reader to acquire a definite knowledge of the three essential factors of the design, each without reference to the others. With this knowledge the designer is able to solve his problem without the hindering influence of executed designs; in other words, he knows the style. This arrangement is helpful in the same way to the layman.

It is obvious that the adaptation of Spanish architecture to American uses must be made with the greatest of freedom to comport with American standards of living and to be suitable for the wide diversity of climate in this country. It is this freedom which can be exercised in the use of this style that makes it so attractive. Not only is the diversity of American demands satisfied by this freedom of design, but the Spanish style itself is distinguished by that characteristic. It is one of the styles which is not symmetrical and therefore can possess the quality of individuality. This is not found in any other except the Elizabethan and cognate styles.

The chief characteristics of the domestic Spanish architecture are simplicity and dignity. When these are properly interpreted in terms of American architecture there results a decided relief from the overdone buildings which are all too numerous in this country. This freedom of design makes it possible to adapt the Spanish style house to its surroundings, and this when properly done is its chief charm.

This book is essentially one of illustrations. The text is carefully prepared and imparts a distinct understanding of the subject. It is comprehensive and usable, which makes it a valuable addition to the architect's working library.

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The United States Gypsum Company has moved from the offices it has occupied for twenty-five years, at 205 West Monroe Street, to the new building at 300 West Adams Street, Chicago, where it occupies three floors. The offices are finished throughout with the company's products, including Sabinite acoustical plaster, developed for the company under license from Dr. Paul E. Sabine of Riverbank Laboratories. The acoustical efficiency of this product results from its ability to change a certain portion of the sound energy into heat.



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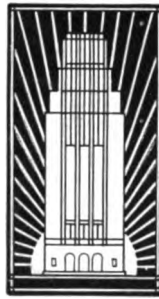
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THE WESTERN ARCHITECT



ARCHITECTURE

ALLIED ARTS

Volume XXXVI

Number 8

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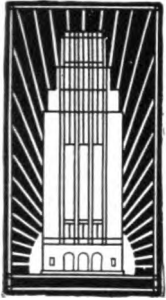
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CAUDEBEC, NORMANDY
BY GEORGE F. SPINTI



THE WESTERN ARCHITECT

ARCHITECTURE

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ARTS

Volume XXXVI

AUGUST, 1927

Number 8

Height
Versus Area
in High Building
Problem

It is with the standpoint of the public which uses them, and more to the point, those who use the streets adjacent, that the high building problem is most directly concerned. To the architect in the large city it means a plethoric commission and an opportunity to solve an interesting problem. In fact, now that traffic congestion seems to have reached the saturation point in all the larger cities, dwellers therein are beginning to realize that there is a direct connection between skyscrapers and crowded streets, especially when area is added to height in individual buildings. Yet it is to the architects, to whom the high and bulky building is an asset rather than a liability, that the public's representatives come with their troubles and their solution. That is in instances in which the architects, as has long been the case, have not taken the initiative in promoting measures for securing what is called a livable condition in cities. For more than thirty years consideration of the limitation of height and following this, the proper zoning of cities has occupied the thought; and the securing of municipal and state action, the endeavors, of the leaders in the architectural profession. Now that a stalemate is fast approaching, if it has not already arrived, and it is at last recognized that congestion inevitably grows out of increased bulk in buildings, architects are called upon for expert advice of remedial nature. To quote Mr. Harvey Wiley Corbett, who is an ardent advocate for and champion of the high building, and who has used effectively, if he did not originate the set-back: "While I am personally a believer in concentrated business zones, I still feel strongly that the future city (speaking of New York) will depend on a more comprehensive zoning regulation in which due consideration is given to the necessary relation between street capacity and bulk of buildings." An expert in model apartment house planning, Andrew J. Thomas, claims that in the larger building operations the law should limit the extent of the ground actually covered to fifty per cent of the entire area included in the site, this being advisable both from an economic standpoint and in the interest of sunlight and ventilation. A structure so planned he declares, in addition to smaller construction costs, has a more readily rentable aspect. His opinion is that where the building is bounded by

four streets only forty-six percent of the total area should be occupied. This to the average, speculative builder probably seems almost confiscatory. He regards it as a plan to be resisted along with laws requiring windows in all rooms and admission of sunlight and air, prohibiting living rooms with only borrowed light, together with opposition to height and zoning ordinances generally. While these expert and unbiased opinions are voiced by the profession, solely in the interest of those who engage their services, it seems strange that only through strenuous and persistent reiteration is attention secured to their observance.

Institute
Delegates Attend
Pan-American
Congress

The third Pan-American Congress, which met at Buenos Aires, July 1 to 10, was attended by five delegates appointed by the American Institute of Architects. These were Frank R. Watson, Philadelphia, chairman of the delegation; Kenneth M. Murchison, New York; John Galen Howard, F. A. I. A., San Francisco; Professor Warren P. Laird, F. A. I. A., University of Pennsylvania; W. L. Plack, F. A. I. A., Philadelphia. Too strong an emphasis cannot be placed on the value of sending a group of representative architects from the United States to the gathering of representative architects of the Republics of South America, and thereby drawing closer the already amicable and fraternal relations, both professionally and politically, of the two western hemispheres. With our delegation went a considerable and varied collection of drawings and photographs illustrative of present phases of our architecture as practiced, and drawings from the architectural colleges, demonstrating the systems of education in vogue in these institutions, and were presented in an exhibition in connection with the Congress. This exhibit was collected and arranged by the Institute's Committee on Foreign Relations, of which William Emerson, F. A. I. A., is chairman. It is said to be the most comprehensive that has been sent to an international exhibition. A return exhibit of South American work, presented at the next Institute Convention would be valuable and interesting that our architects who were not so fortunate as to be delegates might study at first hand the design point of view of the South American architect and compare with ours his practices and methods.

√ Glencoe's School Building Program

By WALTER R. McCORNACK, A. I. A.

GLENCOE approached its school building program with careful consideration of the growth of the community, studying the locations of the buildings, determining the present requirements, and carefully estimating the maximum number of rooms to accommodate the ultimate growth.

Following an informal meeting of the residents of the Village, a general committee of forty was appointed to study the various problems involved and to make recommendations. At the first meeting of this committee the general subject was discussed and the problem of what and where to build and how to finance was discussed. The result of the discussion was the appointment of three committees to study the three important phases of school development:

1. A committee to study the school requirements for the next ten years.
2. A committee to recommend an adequate number of rooms for the school enrollment up to and including 1928.
3. A committee to report an available means for financing a school building program.

The first committee went into the question of school population growth very thoroughly and gathered information from all available sources in order to accurately estimate the future school population. The final report included an estimate of the school population up to the year 1950 or for a twenty-five year period, which in this case, was the estimated saturation point of the population of Glencoe. Therefore, under the present building restrictions of the Village the school problem was disposed of until such time as building laws might be changed to admit apartments or two family houses. This was an extremely valuable report and was the result of the kind of study of school needs which should be undertaken by all school communities.

The second committee made a careful survey of the immediate needs and made a definite recommendation which formed the basis for the consideration

and determination of an immediate construction program.

From the reports of the first two committees sufficient data was secured to outline a program.

Under the present school laws of Illinois the Village has its own grade school system depending on the central or township high school for its high school facilities. The present laws do not permit a junior high school, but time is likely to bring changes enabling each village to maintain junior high schools.

The Village limits are such that a central building could accommodate the junior high school pupils with the smaller schools providing school rooms for the lower grades and in case the distance to these outlying schools proved to be excessive for some of the smaller children in the central district they could be provided with school facilities at the central building.

The study of school population showed that in addition to the present

central school site, two additional sites would be necessary—one on the north side and one on the south side—and these were purchased, with ample area to accommodate the largest building necessary for future growth and with ample recreation space.

This leaves the central site to provide school space for the children in the central district and to provide also for the future possibility that junior high school facilities may be required.

With the outline of a plan the Board of Education then received the report of the Committee on Financing which reported that the available funds were not sufficient to carry out the building program necessary to house the present enrollment and furnish an auditorium on the central site which would form the nucleus of a new building. Consequently, it was decided to seek a building fund for the Auditorium by public subscription. This was done.

Plans were then made for the South School Building. The first construction consisted of six rooms



FRONT ELEVATION, SOUTH SCHOOL, GLENCOE, ILLINOIS. FRANZ C. WARNER AND W. R. McCORNACK, ARCHITECTS. ARMSTRONG, FURST AND TILTON, ASSOCIATED ARCHITECTS

and an assembly playroom. The building can be extended to its ultimate capacity of twenty-four rooms as desired. The funds were restricted and the requirements in excess of the available money. An interesting study resulted from the attempt to include too much in the building. The table below and the drawings show the results obtained by restudy without reducing the school room area or the area of the building which is its reason for being. The extra activity and administration areas were reduced and this is the stumbling block of most school systems. The actual instruction area is generally lost in the numerous additional features which are always advocated and defended by some individual or group.

TABLE

| | Abandoned Plan | | Adopted Plan | |
|----------------------------|----------------|-------|----------------|-------|
| Corridors..... | 2,254 sq. ft. | 13.0% | 921 sq. ft. | 8.0% |
| Toilets..... | 274 sq. ft. | 1.7% | 340 sq. ft. | 3.0% |
| Storage..... | 2,188 sq. ft. | 12.6% | 799 sq. ft. | 6.8% |
| Heating..... | 2,154 sq. ft. | 12.3% | 1,090 sq. ft. | 9.5% |
| Administration..... | 520 sq. ft. | 3.0% | 256 sq. ft. | 2.2% |
| Class Rooms..... | 5,064 sq. ft. | 29.0% | 5,064 sq. ft. | 44.2% |
| Auditorium, Gymnasium..... | 2,612 sq. ft. | 15.0% | 1,870 sq. ft. | 16.3% |
| Walls..... | 2,329 sq. ft. | 13.4% | 1,154 sq. ft. | 10.0% |
| | 17,395 sq. ft. | 100% | 11,494 sq. ft. | 100% |
| Class Rooms..... | 5,064 sq. ft. | | 5,064 sq. ft. | |

Adopted Plan has 5,901 less square feet.
 Adopted Plan has 174,000 less cubic feet.
 Adopted Plan has \$63,000 less cost.
 Adopted Plan has the same class room area.

There is a story told by Glenn Frank which is well worth repeating. He says, "Two names have persistently flitted through my mind as I have spent the evenings going over the details of a projected building program. George F. Babbitt, the apostle of outside size and show. Peter Abelard, the apostle of inner significance.

"In twelfth century France there lived a great and gifted teacher—Peter Abelard—who tried to run away from the world by going into a desert place where he built himself a hermit's cabin of stubble and reeds. Here was no administrative go-getter seeking to add wheel after wheel to some big educational machine. Here was a teacher running away from teaching. But he was a great teacher! And when the secret of his hiding place became known, students flocked to him by the

thousands from Paris, and covered the wilderness around him with tents and huts erected by their own hands.

"Here was an ideal educational building program. Here was a building activity that came as the natural flowering of an educational activity. Here was no forced flowering of building for building's sake; Babbitt would think Abelard a poor booster. But I suspect society will be better served if all of us who direct the fortunes of publicly supported institutions follow Abelard rather than Babbitt.

"Certainly the most important part of a university is not its buildings. A university's buildings are but the tools of its spirit.

"It would be better to have creative educational processes going on in ramshackle buildings than to have money and magnificent buildings in which, as in a tomb, the spirit of creative education lay sterile and dead. The only justification for great buildings at a university must be great teaching, great investigation and great public service."

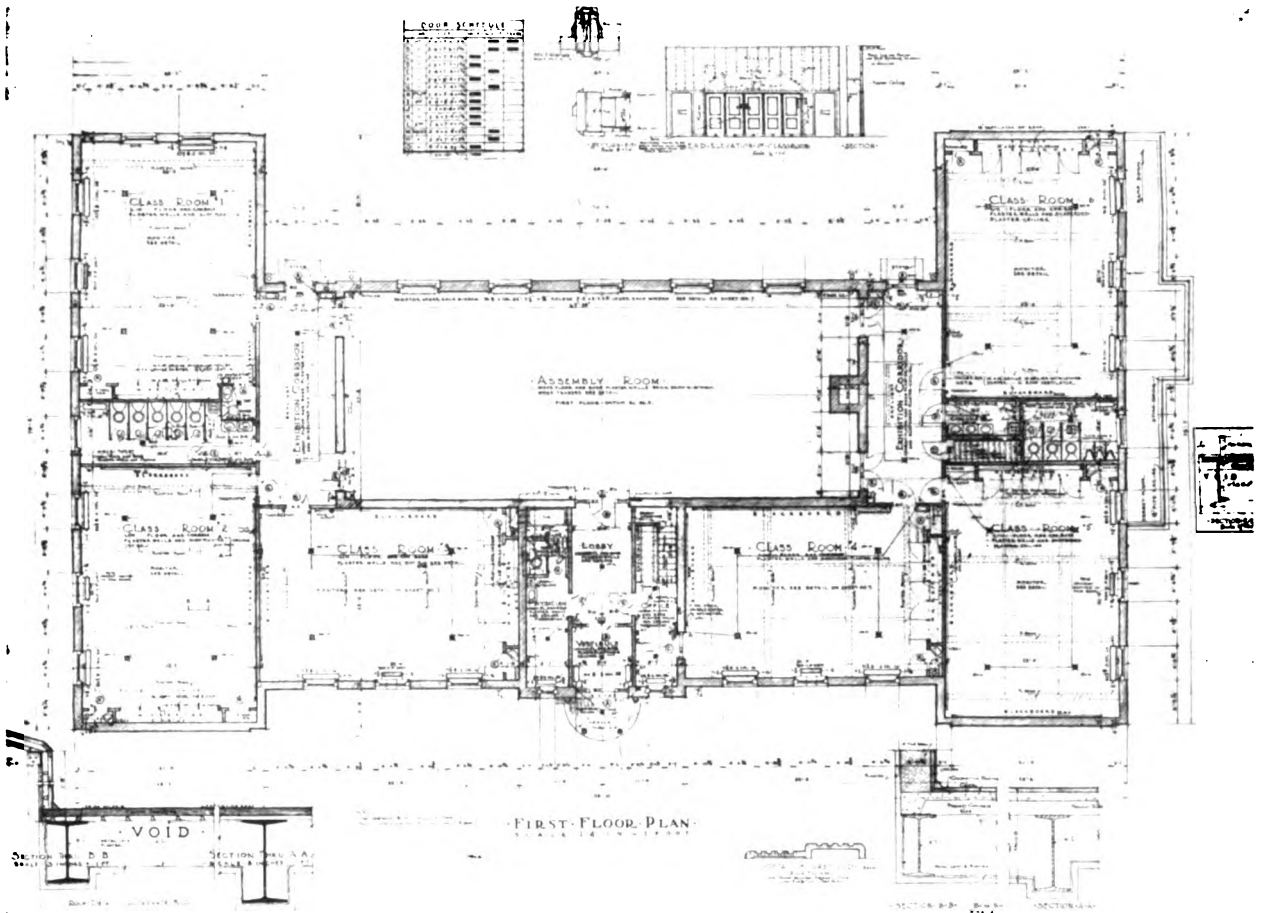
In the first set of drawings a larger and more elaborate auditorium was provided as well as the larger administrative quarters for the completed structure and a great deal of storage and bicycle space. The plans contained 300,000 cu. ft. and the cost was \$150,000.00. The plans were revised with the stipulation that the class rooms were not to be reduced in number or size. The result as shown in the table and on the plans was a reduction of 174,000 cu. ft. and a cost of \$87,000. Thus the real purpose of the building was maintained at a great saving in money.

This is the story of many schools. Many things are considered essentials which are not. This money saved and placed at compound interest would create an endowment fund in the years to come which would help to establish and maintain great teaching methods.

The auditorium building was planned to accommodate one thousand and the size was determined as the best size to meet the average needs. An auditorium to seat all of the ultimate capacity of the school at once was not deemed necessary as such an additional cost cannot be justified on the number of times it would be filled to capacity. Better an



ENTRANCE DETAIL, SOUTH SCHOOL, CLENCOE, ILLINOIS
 FRANZ C. WARNER AND W. R. McCORNACK, ARCHITECTS
 ARMSTRONG, FURST AND TILTON,
 ASSOCIATED ARCHITECTS



FLOOR PLAN, SOUTH SCHOOL, GLENCOE, ILLINOIS. FRANZ C. WARNER AND W. R. McCORNACK, ARCHITECTS
 ARMSTRONG, FURST AND TILTON, ASSOCIATED ARCHITECTS

auditorium that is small enough to be filled most of the time than one only filled occasionally.

Other rooms such as a well lighted stage and large community room are provided to take care of the various meetings and use of the school and its patrons.

This auditorium is the center of a building which will ultimately accommodate the elementary and junior high school grades of the central district, and

the plan was also worked out to insure the proper location of the building for the future.

Glencoe has a building program carefully worked out for the next twenty-five years, built for present needs and planned for the future, but so planned that the changing requirements can be added to the present plans because they present no barriers to the future growth.



The Passing Show

Bank Buildings—Past, Present and Possible Future

By ARTHUR T. NORTH, A. I. A.

THERE is no other American business that I know of, unless it is the motion picture business, that houses itself so inappropriately as the American bank. In the main, they are planned with a fine regard for utility and serve the process of banking admirably. In everything else they fail. Perhaps this subject is an obsession of mine, but some others are similarly afflicted. There are two phases of the subject, interior and exterior.

The interior "atmosphere" of the typical bank is awful. It is well described by Anne W. Armstrong, *Harpers Magazine*, April, 1926: "Perhaps banks, together with kindred institutions, whether metropolitan or small-town, have achieved the most inhospitable of all business atmospheres. The type of structure is itself forbidding. Only money and the dead are housed so austere. And it takes a tremendous amount of human warmth to offset the suggestion of a morgue or mortuary chapel." This is the best and most accurate description of an American bank building I have ever read. The glittering white marble columns and pilasters and wainscotings; the heavy over-ornate beams across the ceiling with their counterpart corniced around the walls; the elaborate coffered ceiling; the rows of cages of marble and bronze; the heavy marble and bronze check desks and often the glittering steel bars and gates leading to the safe deposit vaults—all tend to give that inhospitable "atmosphere" which we all know. They are as warm and inviting as the large toilet rooms of a great hotel or passenger terminal. But fashion decrees that they must be just that way and perhaps the bank could not function, in the opinion of its owners, in a humanized atmosphere. In truth, however, it is an "atmosphere" founded on bunk. Banks can be human, warm and beautiful.

On an unforgettable fall day, I took a bus from Madison, Wisconsin, to Fond du Lac. The trees had not yet turned but the sparkle of fall was in the air. Harvesting was over and the hillside grain fields were yellow with wheat and oat stubble. The bottom corn fields, pumpkin spotted, were turning from green to yellow and the meadows and pastures, woodbordered, were in luxuriant grasses, flecked with deep uddered black and white Holsteins. Along the roadways and in wild places, the gloriously colored autumn weeds were in yellow, red and purple bloom. It was a picture of a life satisfying and of well-being.

We came to Columbus, Wisconsin, of perhaps twenty-five hundred persons. Glancing down a side street I saw a most unusual building—and what is more exciting than a glimpsing promise of a beautiful building? Fortunately, at the next corner the bus laid by for twenty minutes and the building was eagerly sought and the two short blocks quickly covered. Yes, it was an unusual building, Louis H. Sullivan's Farmers and Merchants Union Bank. A quick survey of the two fronts, brown brick and typically Sullivan green terra cotta.

And what an atmosphere inside! The walls and counters were faced with a golden brown Roman brick, tight joints of harmonious colored mortar. There was only one enclosed cage for the teller at the far end of the counter, near the vaults. The counter top was a wide black marble slab about four inches thick. Evidently these bankers had no mysteries to conceal from their clients, neither had they fear of them. It was a place for a friendly transaction of business and of course the one teller's cage was properly protected.

Back of the banking room, on the street side, was a large lounge for women, carpeted and furnished with easy chairs, rockers and a couch. A



NATIONAL BANK OF COMMERCE, PHILADELPHIA
DAVIS, DUNLAP AND BARNEY, ARCHITECTS

handsome wood - burning fireplace was opposite the group of five windows facing the street and at the rear, windows opened on a yard. A toilet room was conveniently in connection. At the side of this was a man's room, with windows opening on the rear yard. It was plainly furnished, had a wood-burning fireplace and toilet room. Both rooms had well selected pictures on the walls.

It was not these lounge rooms alone that made this bank inviting. There was a warmth of color, a fineness and simplicity of detail, a lack of the usual banking room barricades, a harmony that gave the hospitable atmosphere. Observing me, a stranger, the banker kindly showed me about and let it be known that they were the proud possessors of a Sullivan bank. Going to the door with me, he pointed to a bank mid block on the opposite side of the street and said, "You can see that in every city in America, but you can only see my bank here." "That" was a smooth stone front with skinny Ionic pilasters and entablature, all out of scale but it was a classical style bank just the same. It just had to be.

How did this classical vogue in banks originate? I have always thought that one day some big New York bank, an outstanding leader in capital and resources, hired a socially well connected Beaux Arts architect to do the job. Having no imagination or creative ability, he did the obvious thing—a classical style bank. Certainly he could make no great error for he had a full set of measured drawings, "safe and sane" was his architectural policy. And what luck! Were there not five orders that would constitute variety in bank design? Then the lesser banks to the least aped the big bank in the riot of the classical bank vogue, just like the little movie operator apes the big movie operator in building movie houses of incredible horror and badness. Of banks, Anne W. Armstrong truly said, "only money and the dead are housed so austere."



TENTH NATIONAL BANK
CENTRAL CITY BRANCH, PHILADELPHIA
DAVIS, DUNLAP AND BARNEY, ARCHITECTS

There have passed, perhaps, two generations of "hard - headed business men" bankers who knew how to make money and, probably, sensing their own lack of architectural knowledge, felt perfectly safe in following the leader, equally "hard-headed". But a new generation of bankers are here and that is becoming evident. Many of them are men who have acquired some degree of artistic sense through education, travel, association or otherwise. At least, we see in increasing numbers, bank buildings that possess architectural merit. I have already, in THE PASSING SHOW, called attention to York and Sawyer's Bowery Savings Bank and Benjamin Wistar Morris' Seaman's Bank. By rare good fortune I have seen Davis, Dunlap and Barney's National Bank of Commerce and Tenth National Bank, Central City Branch, Philadelphia. As a matter of personal privilege, I ask permission to bring Philadelphia into

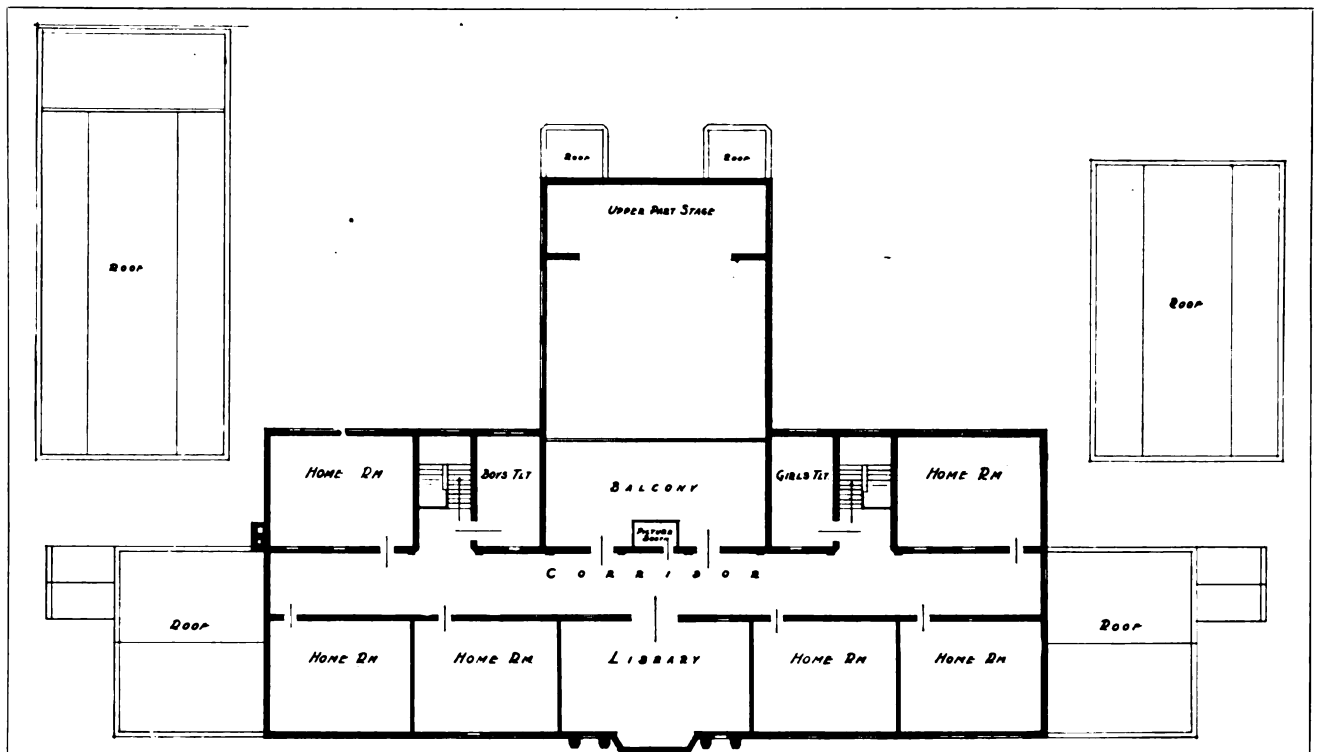
THE PASSING SHOW.

The National Bank of Commerce is a reconstruction job, consisting of a new facade and interior alterations. In the old building there was a mass of construction above the ceiling which was retained and had to be concealed. The height was determined by the adjoining building on the left for which the architects "wanted to show a gentlemanly consideration" and it is a fine example of architectural amenity such as we discussed in THE PASSING SHOW of April. The facade is remarkable because the height of wall above the top of the arched opening is about fifty-four per cent of the total height of the building.

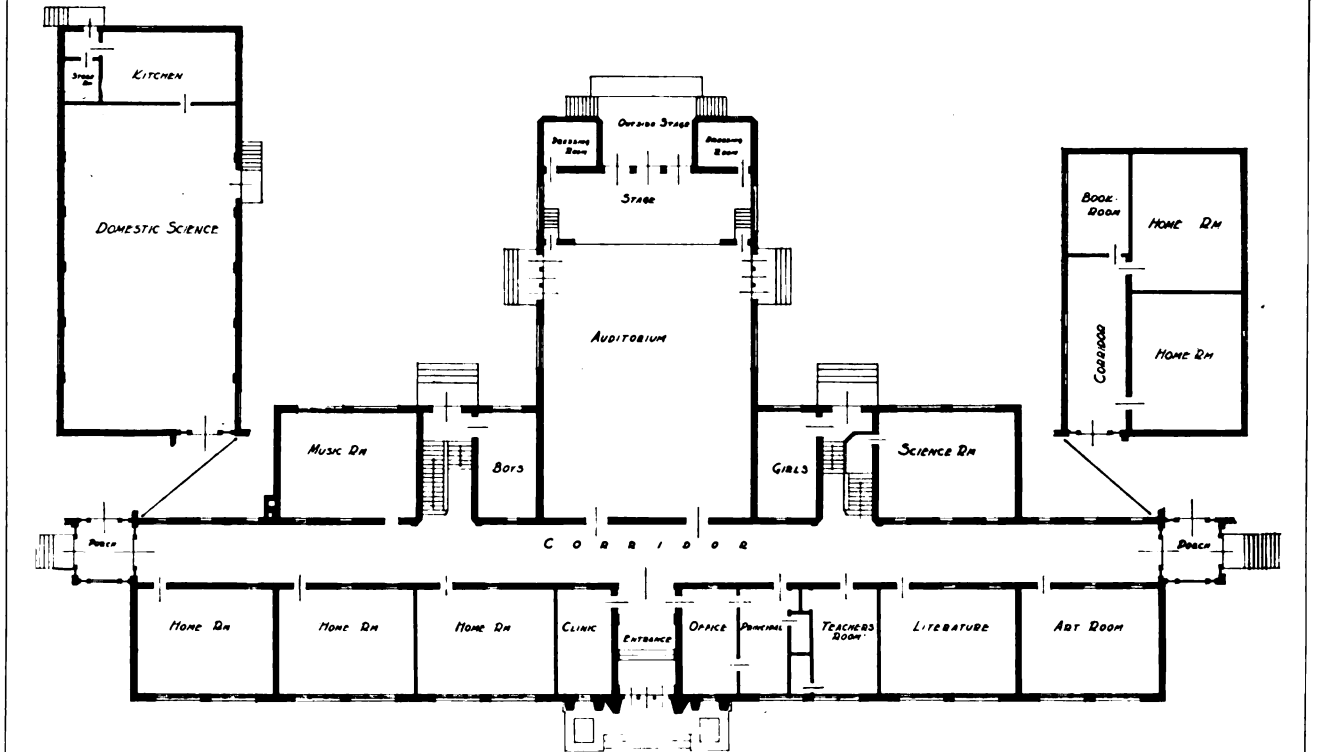
The one arched opening, aside from the two minor openings, is about twenty-five per cent of the total area. To treat that amount of blank wall space is a most difficult problem and it was most admirably done. Simplicity and correct proportions are the keynote of the design. The large expanse of wall is broken by the carved name of the bank; an elliptical medallion of slight projection and carved in low



ENTRANCE
MADISON SCHOOL, SANTA MONICA, CALIFORNIA
F. D. RUTHERFORD, ARCHITECT :: :: :: ::



SECOND FLOOR PLAN



FIRST FLOOR PLAN

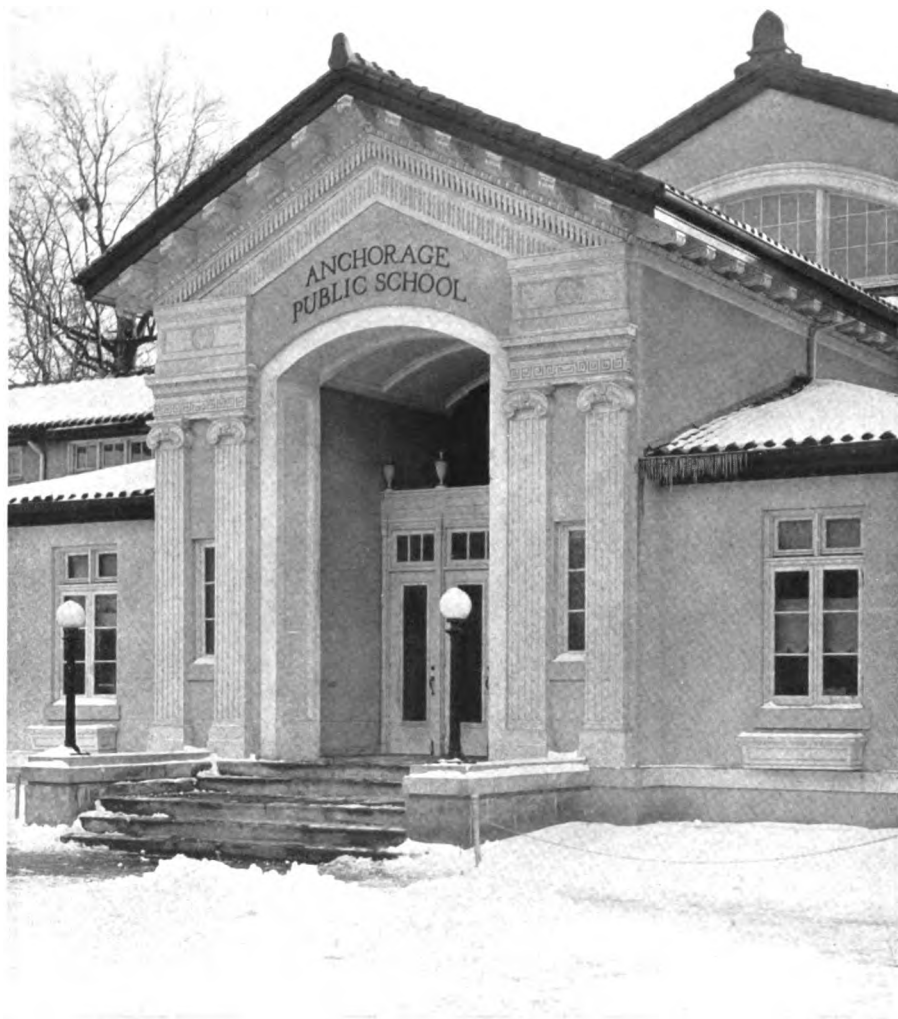
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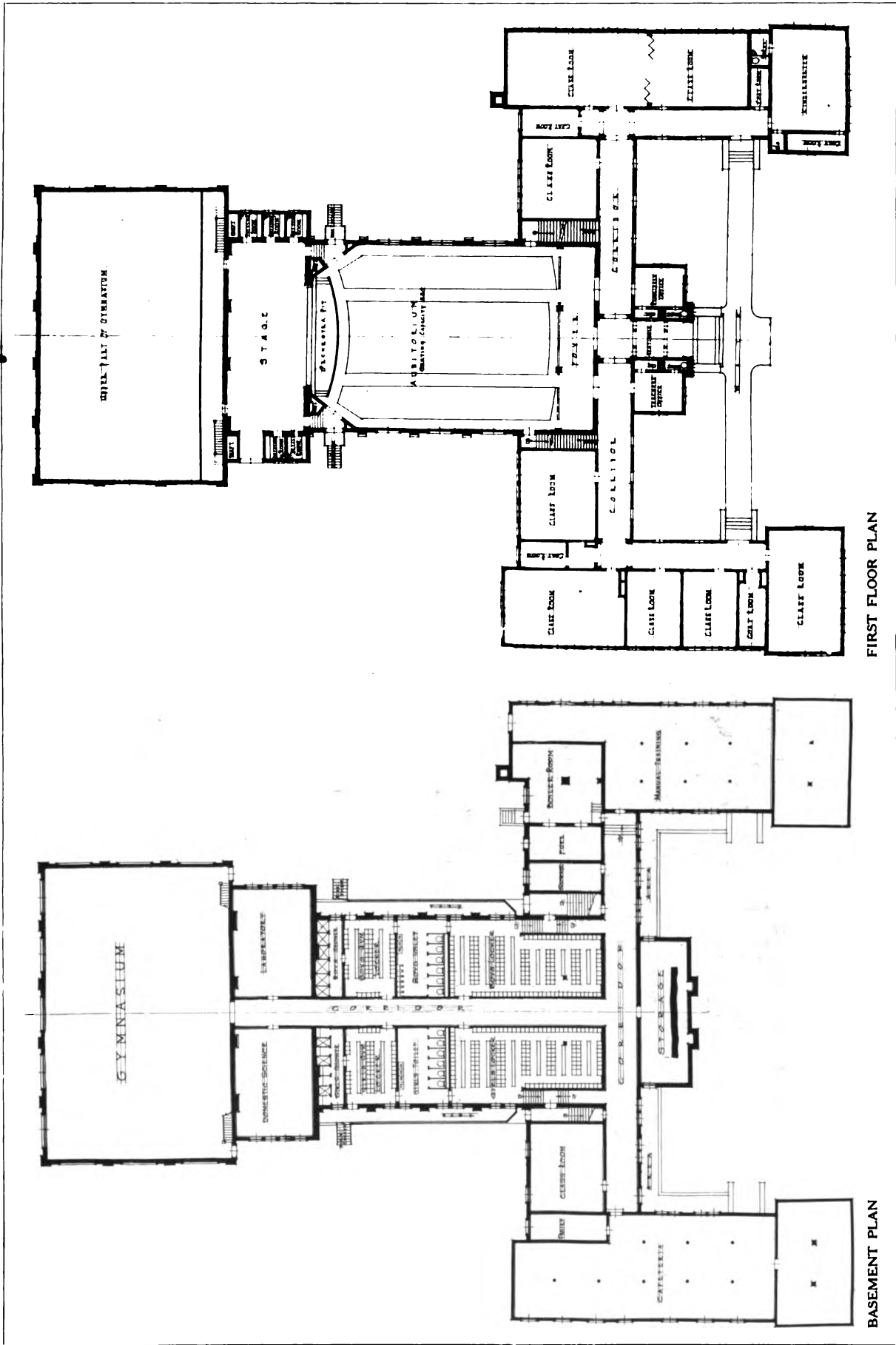
GENERAL VIEW
MADISON SCHOOL, SANTA MONICA, CALIFORNIA
F. D. RUTHERFORD, ARCHITECT :: :: ::



GENERAL VIEW



DETAIL OF ENTRANCE
ANCHORAGE PUBLIC SCHOOL, ANCHORAGE, KENTUCKY
OSSIAN P. WARD, ARCHITECT :: :: :: :: ::



FIRST FLOOR PLAN

BASEMENT PLAN

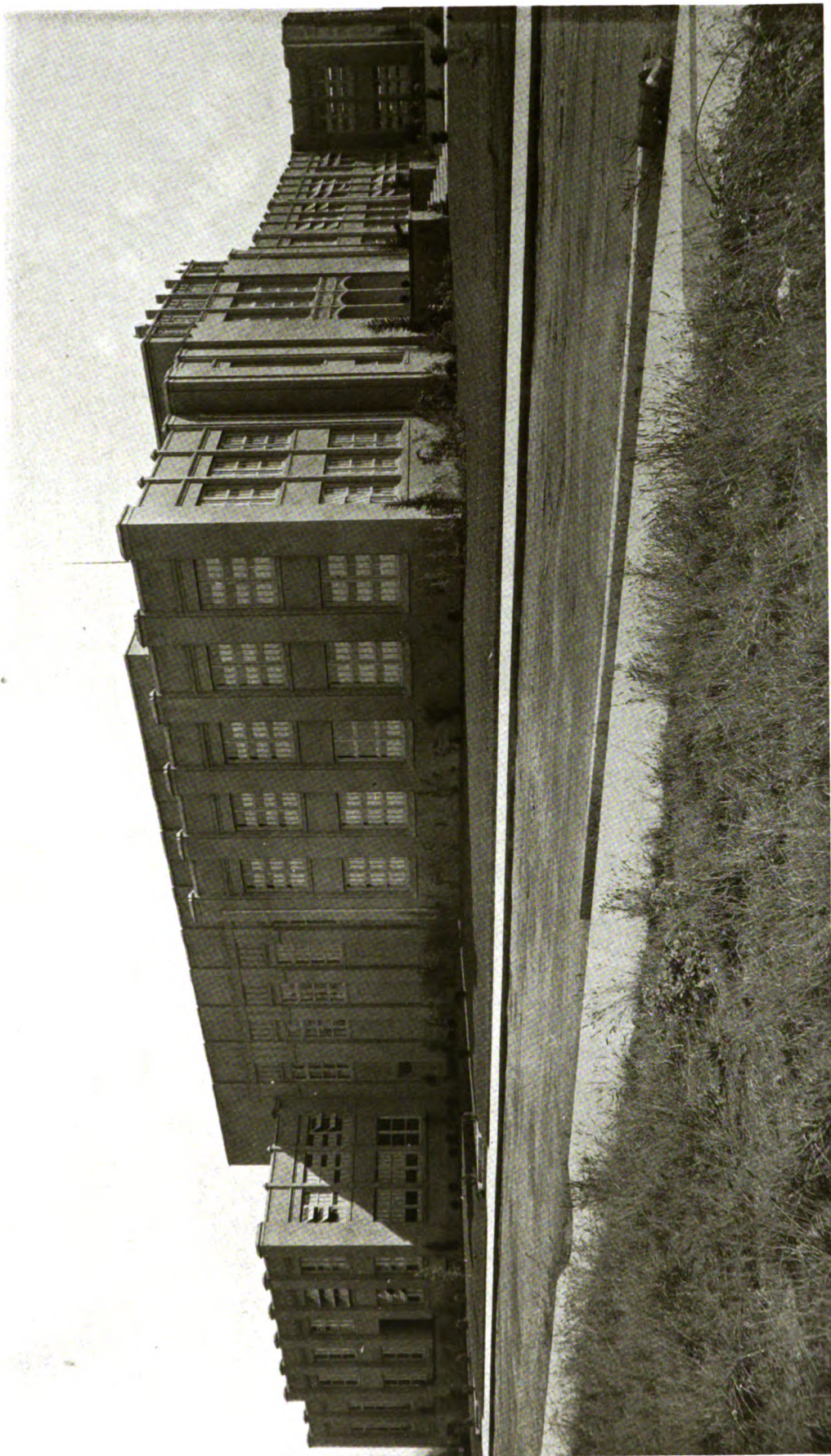
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 OSSIAN P. WARD, ARCHITECT



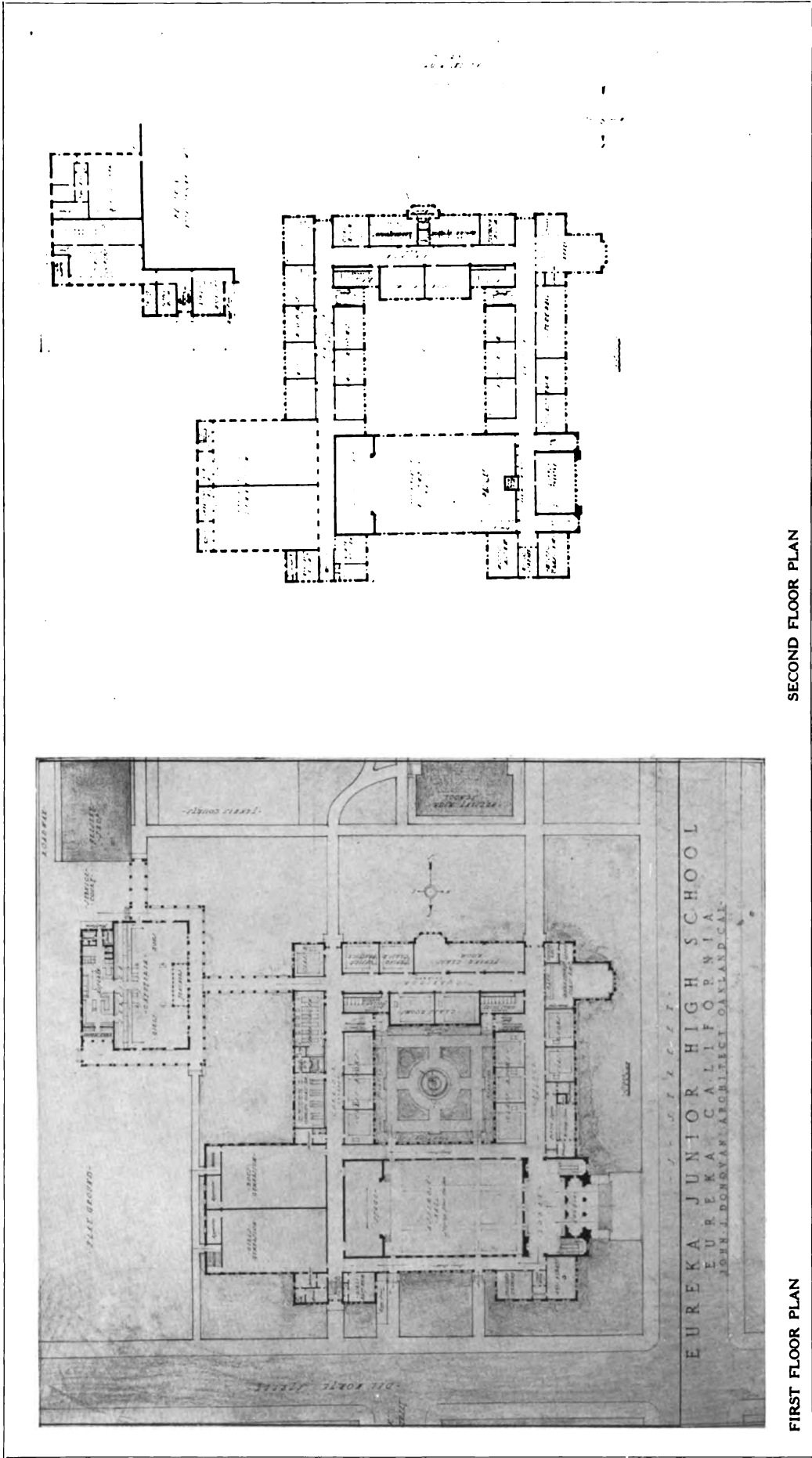
VIEW FROM DRIVE



AUDITORIUM
ANCHORAGE PUBLIC SCHOOL, ANCHORAGE, KENTUCKY
OSSIAN P. WARD, ARCHITECT :: :: : :: :: :: :: ::



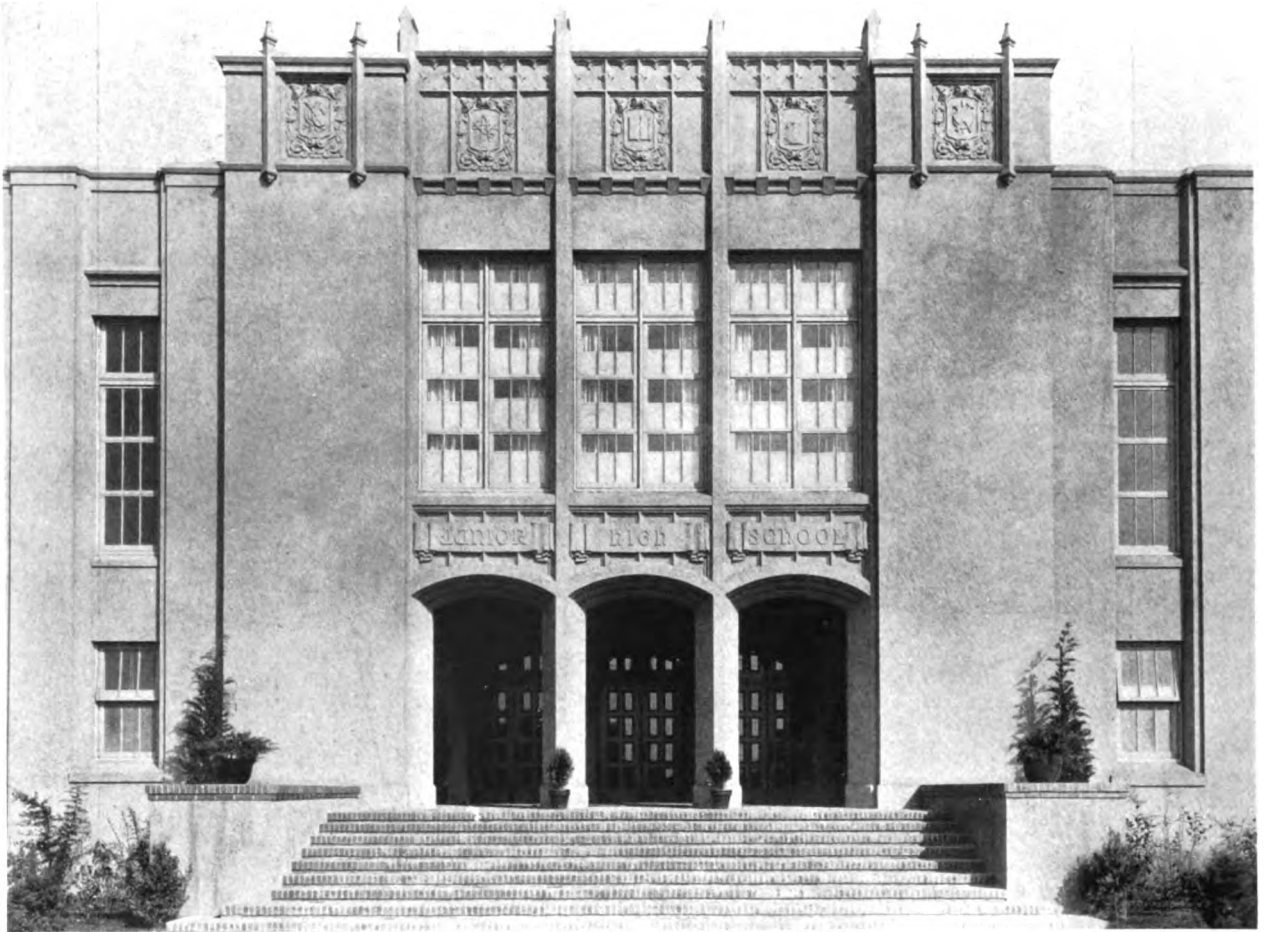
GENERAL VIEW
EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA
JOHN J. DONOVAN, ARCHITECT



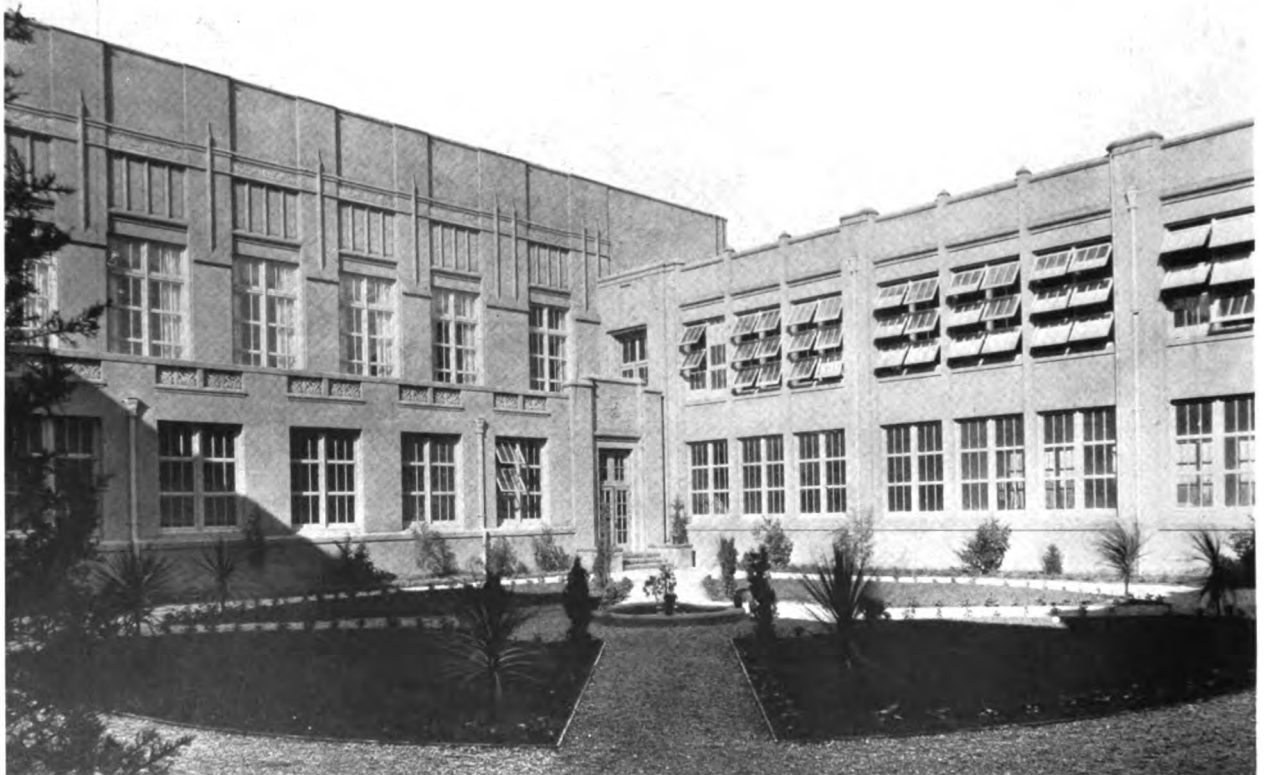
SECOND FLOOR PLAN

FIRST FLOOR PLAN

EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA
 JOHN J. DONOVAN, ARCHITECT



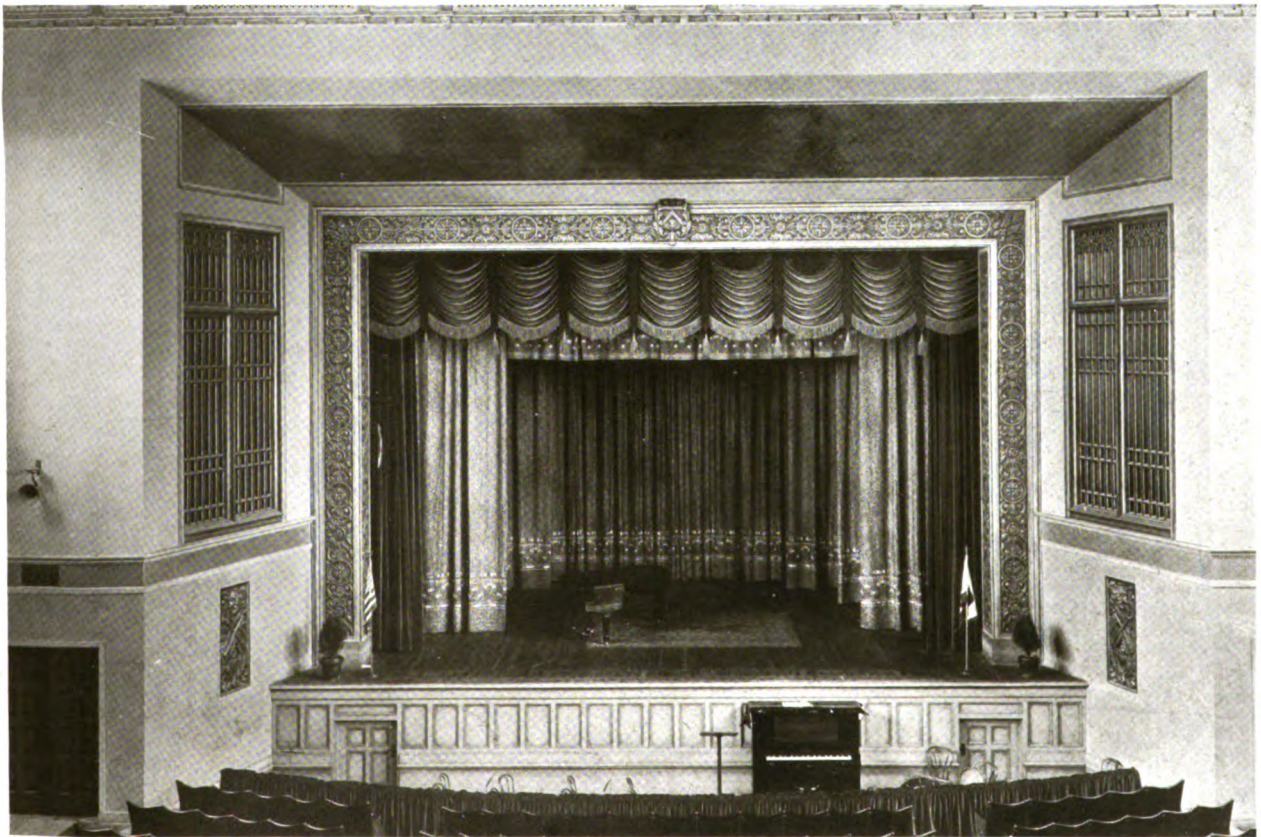
ENTRANCE DETAIL



VIEW OF COURT
 EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA
 JOHN J. DONOVAN, ARCHITECT :: :: :: :: ::



MAIN FOYER



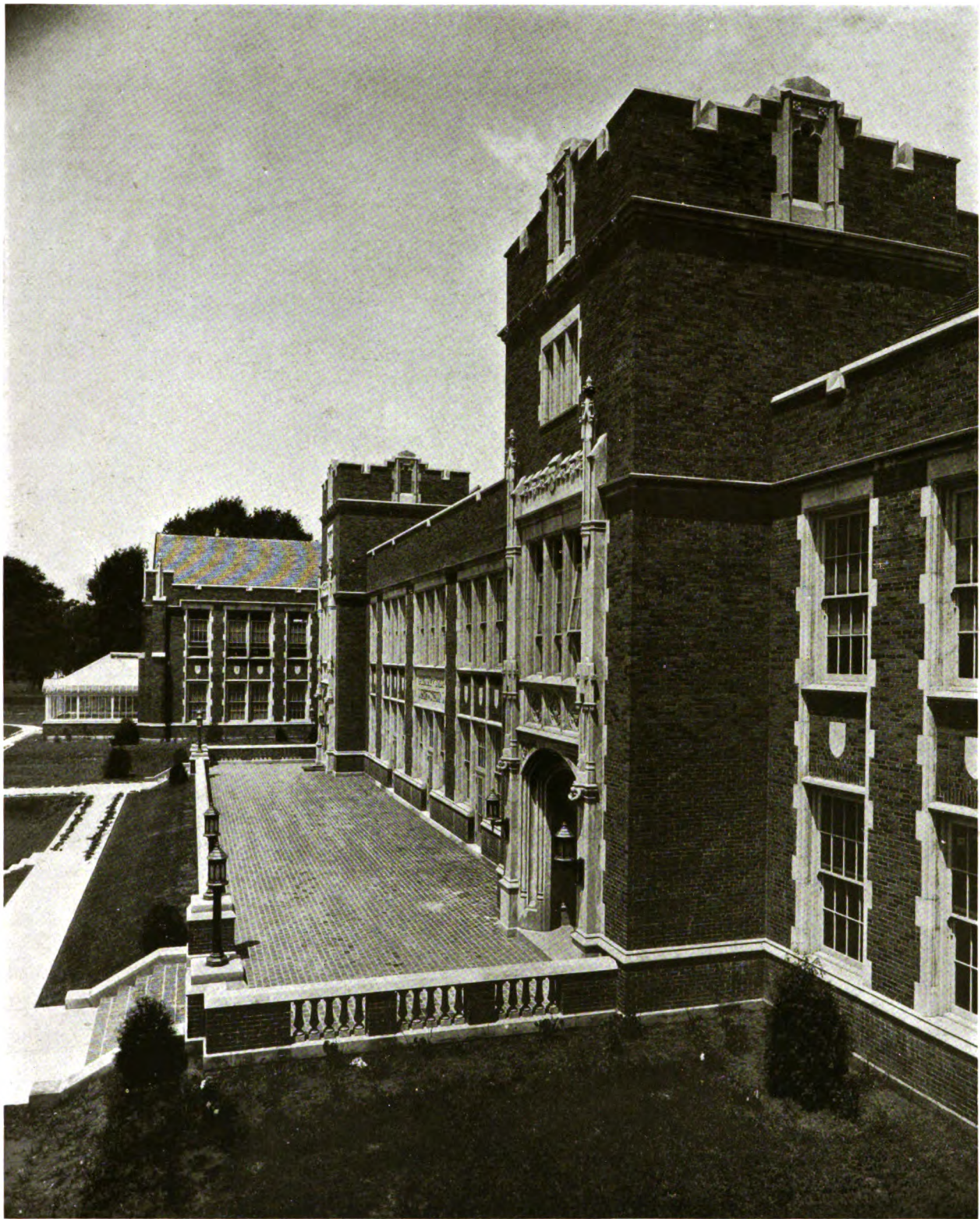
VIEW IN AUDITORIUM, SHOWING STAGE
EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA
JOHN J. DONOVAN, ARCHITECT :: :: :: :: ::



DOMESTIC SCIENCE ROOM

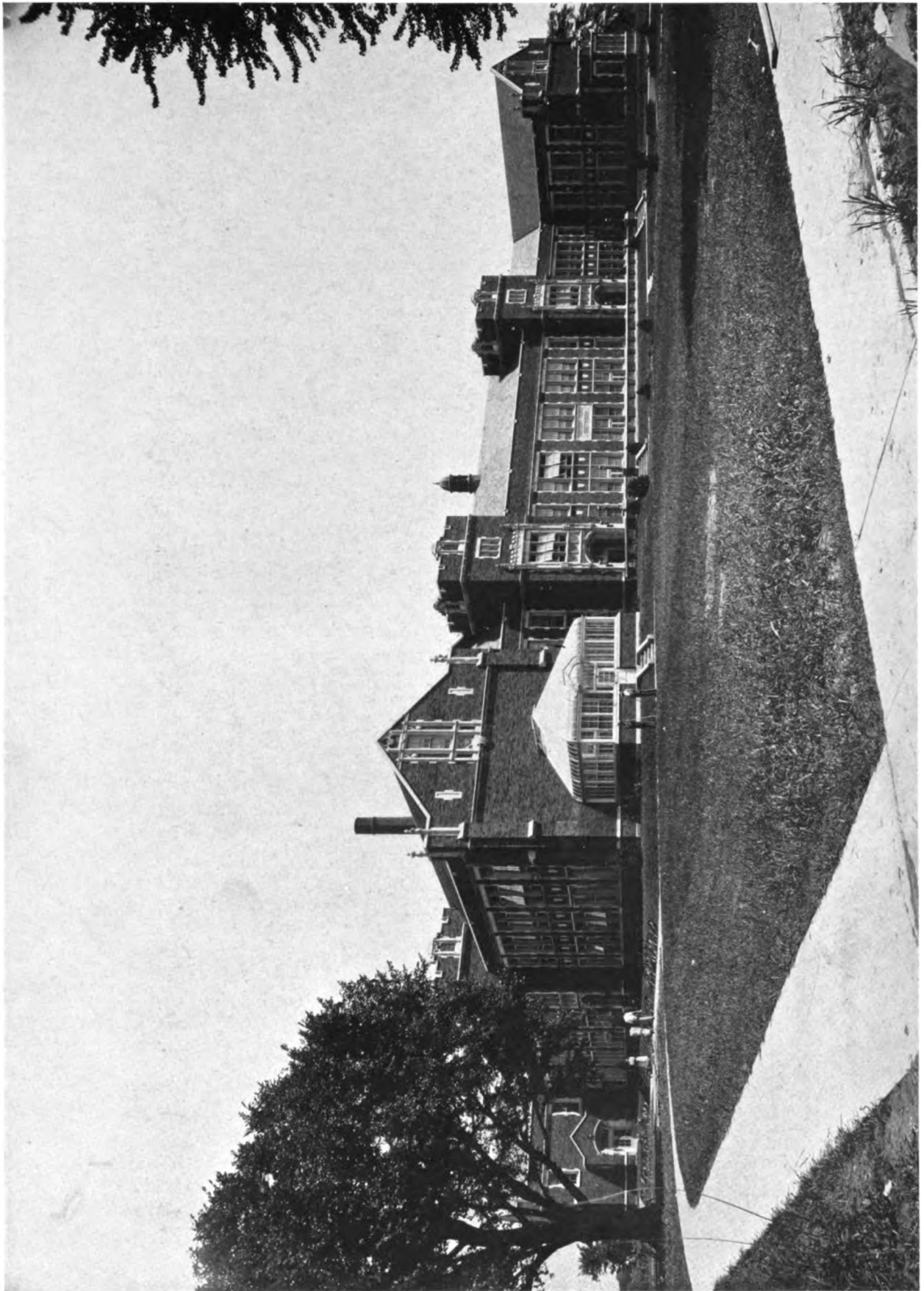


SEWING AND MILLINERY ROOM
 EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA
 JOHN J. DONOVAN, ARCHITECT :: :: :: :: ::

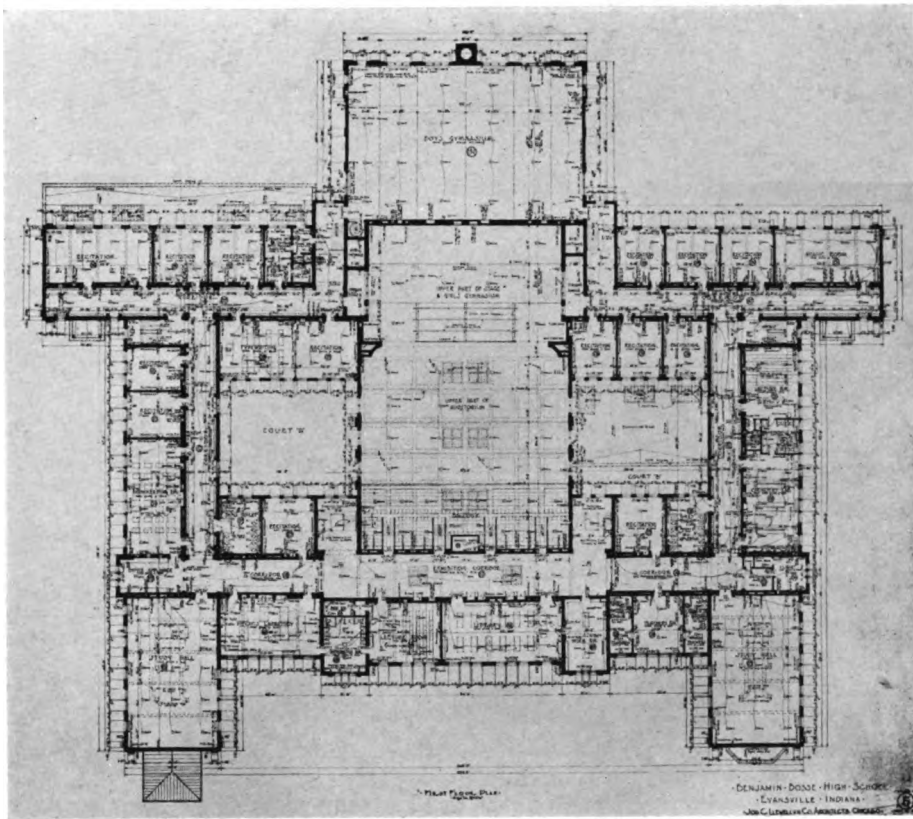


VIEW ACROSS FRONT

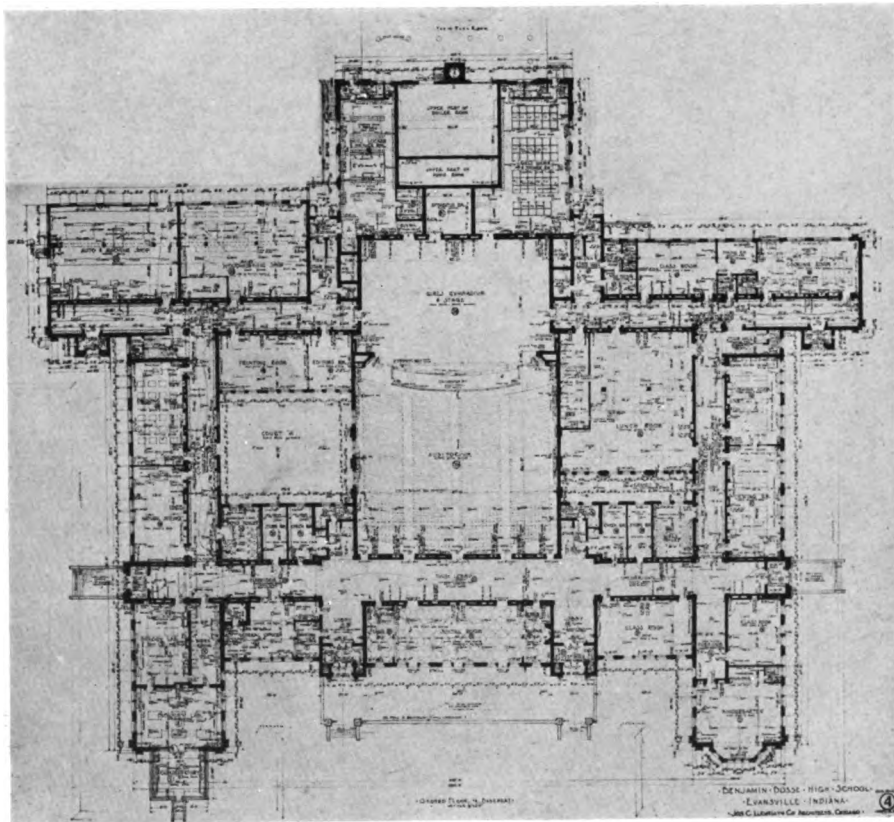
BENJAMIN BOSSE HIGH SCHOOL, EVANSVILLE, INDIANA
JOSEPH C. LLEWELLYN COMPANY, ARCHITECTS :: ::
CHARLES L. TROUTMAN, ASSOCIATE :: :: :: ::



GENERAL VIEW
BENJAMIN BOSSE HIGH SCHOOL, EVANSVILLE, INDIANA
JOSEPH C. LLEWELLYN COMPANY, ARCHITECTS
CHARLES L. TROUTMAN, ASSOCIATE

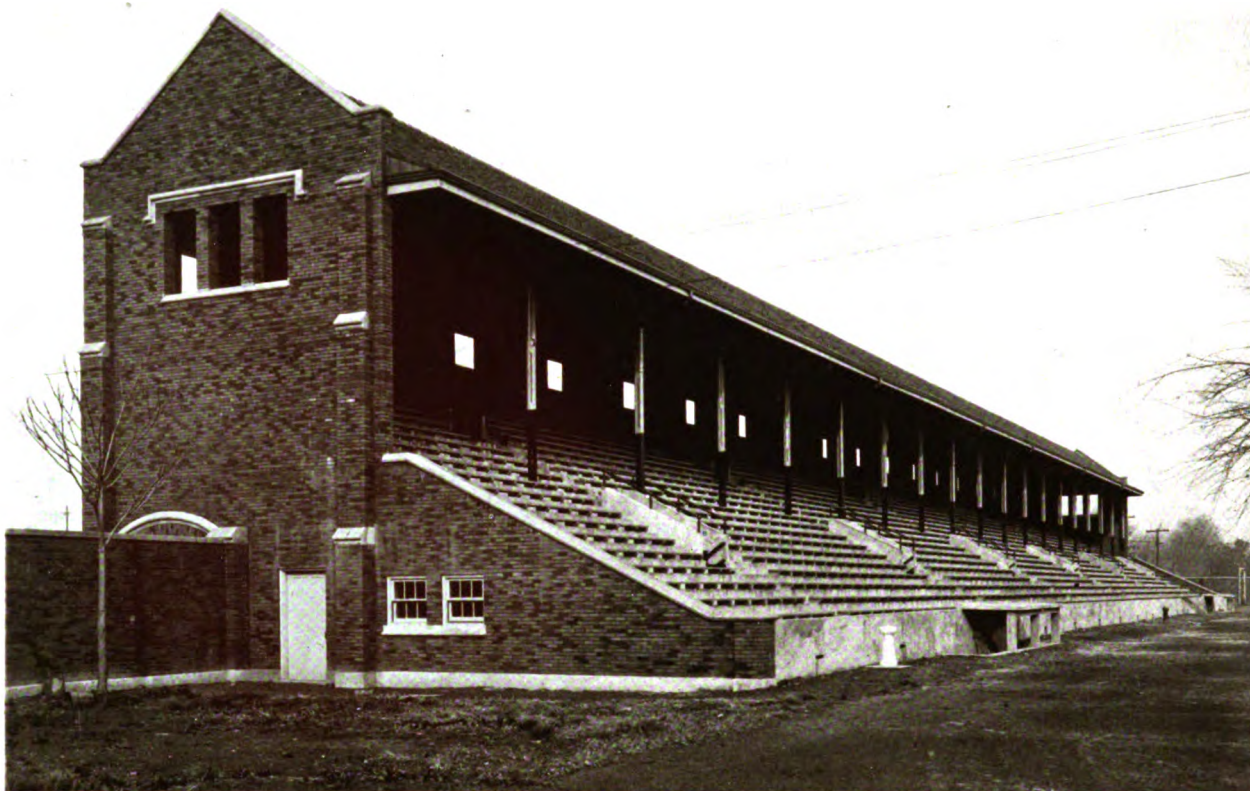


FIRST FLOOR PLAN



GROUND FLOOR PLAN

BENJAMIN BOSSE HIGH SCHOOL, EVANSVILLE, INDIANA
 JOSEPH C. LEWELLYN COMPANY, ARCHITECTS :: ::
 CHARLES L. TROUTMAN, ASSOCIATE :: :: :: :: ::



STADIUM, ENLOW FIELD



REAR VIEW OF STADIUM
 BENJAMIN BOSSE HIGH SCHOOL, EVANSVILLE, INDIANA
 JOSEPH C. LLEWELLYN COMPANY, ARCHITECTS :: ::
 CHARLES L. TROUTMAN, ASSOCIATE :: :: ::

relief; a long narrow carved panel that does not project beyond the face of the wall giving a surface effect; a plain belt course; a slightly depressed panel; a slight series of offsets and mouldings below the severely plain copings. Note the delicacy and the relative widths of the horizontal shadows. The more one studies this structure, the more one senses the great care and study given to its designing and has a growing appreciation of a thing finely executed.

Compare it with the structure at the left. Note the base; the plain pilasters with moulded caps; the entablature with its dentils and carved frieze and the heavy projecting coping. The large windows have heavy metal muntins, both horizontal and vertical. The effect is disquieting because of a stiffness, coarseness and brutally heavy shadows. It could have been done differently and greatly improved. It is academically correct, of that we are quite sure. And what a pleasure, a real joy it is, to turn to the National Bank of Commerce and feast one's eyes on its beautiful face. It never enters our mind that it could be changed or improved—it is done.

The Tenth National Bank is a different problem in which the area of plain wall is much smaller proportionately to the one large opening than in the National Bank of Commerce. The black granite base and wainscoting, the round bronze medallion which slightly breaks the soffit of the flat arch over the opening, the small carved panel on the center line and the carved coping are the "high lights" of the

wall. There are but three projections, the black granite base, the black wainscoting and the carved parapet, and but one slender shadow, under the coping, except those associated with the one large opening. Perhaps this was the more simple and easy problem, but be that as it may, it is as splendidly done.

I cannot refrain from calling attention to the building on the right—a mere fragment is enough. Note the partially fluted composite pilaster in the first story, the plain Ionic pilaster in the second, they forgot to put one in the third and we see the base of one in the fourth story and just what style it is we do not know and neither do we care because we see enough as it is. This is a case of architects who are not afraid of a plain wall and another one who had no conception of a plain wall's beauty or how to utilize it. He did the thing he was taught to do—use all the columns, pilasters, entablatures and orders that the traffic would bear.

How fine it is to approach a building with anticipations of keen pleasure, knowing that a cheerful, simple, beautiful and dignified structure will greet you; one that does not disturb but inspires the most friendly impulses. Perhaps we go close and look at the carved mouldings and intimate details of the entrances, touch them in appreciation of their beauty and have a growing affection for the things that give us pleasure. Buildings are like people in many respects.

Let us hope that the day is passing when a bank building is the "suggestion of a morgue or mortuary chapel."

A Public Lesson in the Stone Mountain Fiasco

THE fiasco that ended the hopes of the South for a memorial carved on the face of Stone Mountain in Georgia is still agitating the people of that state, though but ten months remain of the twelve years that were allowed by the owner's lease for its completion. Through the bumptuousness of the president of the Memorial Association its great designer and sculptor, Gutzon Borglum, was "dismissed" and his place taken by a sculptor of sorts named Lukeman. This individual, who violated every ethical canon by accepting the position, has evidently shown his measurement as a sculptor, by his assay into the higher atmosphere of the art. Mr. Julian Harris of the Columbus Enquirer-Sun calls the present design "a tangle of horses' legs, waving headgear and stilted figures, obviously, too obviously, posed for the occasion; this is the present design with which the coterie of selfish politicians and shysters, considering only their own self-aggrandizement and who seem to dominate the association, are supplanting arbitrarily in place of Mr. Borglum's dignified conception." Strong lan-

guage, but not too strong, and though by a layman probably accurate, as it is conceivable that the mere acceptance of "the job" under the circumstances would perforce indicate a mediocre talent, for to be great in genius indicates a substantial character behind it. The sympathy of the public is with the Daughters of the Confederacy whose enterprise sought to place this great memorial of the "lost cause" in stone for all time, and because the sculptor's art has lost the presentation of one of its most stupendous conceptions. Fortunately for that art expression, the state of South Dakota has risen to the opportunity and on one of her mountains Gutzon Borglum with a corps of assistants is now carving the effigies of those of our greatest, who have during the past, done most to establish and preserve this American republic. It is time that the lesson, so often repeated, when failure has marked the conclusion of a great art enterprise through the interference of ignorant men in authority, be learned that it is wise to give the artist, sculptor or architect, a free hand when he is once engaged on the project.

Eureka Junior High School

JOHN J. DONOVAN, *Architect*

SITUATED on the Northern Coast of California and bordered on the South and East by a forest of gigantic Sequoias is the quaint but active city of Eureka—a little nation unto itself. So complete an entity is this community of 18,000 people that almost absolute isolation from the rest of the world would hardly be sensed were it not for its own keen interest in what the world is doing.

It is just a night's ride on the sleeper from San Francisco and was first settled by white men in 1849. Until about ten years ago when the railroad was extended, transportation was only by water and highway, but what a city it is now. There is something about the people which appeals strongly to those who have lived with them, which stirs reflections and memories as we look back and try to fathom why good-will is with them and I can't help but believe that it's almost entirely due to their buoyant confidence not only in themselves but in their destiny.

The average reader may be astounded to learn that this city bonded its real values to the tune of \$450,000.00 to build a Junior High School—mark you, a Junior High School—it is no wonder that a sense of amazement follows acquaintance with the fact. No wonder the Mayor of Boston a few years ago picturously and expletively inquired, "How in hell did they do it?"

No less picturesque is the very able and tireless superintendent of schools, Mr. George B. Albee, a man 64 years of age, born in Eureka, educated at Stanford University, graduating from the Department of Pedagogy and very much alive and alert to the progress of education. It is to the credit of his vision that Eureka has a modern Junior High School which is equal to any of its kind in the country. It was that same vision which directed the purchase of sufficient land additional to what the high school previously owned so as to have 30 acres for secondary school activity.

Close examination of the Plot Plan (Plate 134) will disclose the scheme. The center or small building is the present High School and Junior College; the building to the left is the new Junior High School; while the building to the right, marked "Future High School" is for that purpose. Industrial shops are shown to the rear directly back of the present high school. The 30 acres of land includes a huge gulch which has since been converted into a stadium encircled by a quarter-mile track. Between the shops and the bleachers is the proposed swimming pool with

dressing rooms on either side for boys, girls, men and women. Then to the south end of the stadium is the proposed open-air theatre stage with dressing rooms, which with the swimming pool pavilions will be built of rustic lumber or of logs, halved and spiked together, neatly and sanitarily finished on the inside.

The level of the upper ground where the high school buildings are located is approximately 120'; while the grade of the floor of the stadium is 65'. It is a most impressive view to stand at the heights and to look down at this stadium occasionally spotted with stumps of redwood trees, ten, twelve and fifteen feet in diameter, mute historians of the great forest which prevailed there years ago.

Returning to the story of the scheme—from this plot plan one can see that Mr. Albee's vision for an educational center has been fairly well executed. First the Junior High School provides for the pupils of the seventh, eighth, ninth and tenth grades of the school district. The present High School serves the pupils of the eleventh and twelfth grades of the high school and the first two years of the Junior College. Then to the right, when the center building becomes overcrowded, which will probably occur in the course of ten years, a new high school will be built leaving the present high school for Junior and Commercial College work.

The first floor plan (Plate 137) of the junior high school shows the classrooms around three sides of an interior court. The north side of the court is formed by the assembly hall, east of which are the boys' and girls' gymnasium. On this floor are nine classrooms averaging 22'x27' and each capable of seating 35 pupils. Six additional rooms are used for the present as shops, later to be converted into classrooms, as the enrollment may warrant. One study hall 22'x58'; library 27'x49' with a stack room 14'x22'. Two mechanical drawing rooms, each 22'x31'; two general science laboratories; administration suite; teachers' rest room; and the boys' and girls' gymnasias each 41'x75'. The latter are so arranged that by means of folding doors they may be converted into one room. These folding doors extend the entire length of the room and are 15' high. It is so planned that portable bleachers can be placed in the girls' gymnasium back of the line of the folding doors thus making available the entire floor of the boys' gymnasium for indoor games.

The second floor contains eighteen classrooms; one sewing room; one domestic science room; typing

and bookkeeping room; two art rooms; and one ensemble room with stage, having a seating capacity of 150. This room is now much used by students and citizens of the community.

In the basement are boys' and girls' locker rooms, showers and dressing rooms; also the heating plant.

A summary of the above for educational purposes shows that there are thirty-three classrooms and fifteen departmental rooms. All of which is interesting to observe, for it shows the percentage of the total number of rooms used as departmental rooms. A matter which throws into the discard any rule of thumb method of computing the cost of schools by the cost per classroom (a very misleading method of estimating the cost of proposed school buildings.)

The assembly hall is quite a feature. The orchestra floor is 63'x100' long. The stage additional to this is 26' deep by 63' wide. The balcony is 38'x63'. The total seating capacity is 1200 seats. For once the architect has had a fair opportunity to develop a school auditorium in a manner which has eliminated the usual barn-like interior treatment of school auditoriums. This is largely due to the vision of the members of the Board of Education and the superintendent of schools, as it was their intention to place this building at the disposal of the people of Eureka for operas, musicals, etc.

The photograph of the auditorium (Plate 139) looking towards the stage shows that provision has been made for an organ. The stage is completely equipped in the way of drapes, hangings, curtains and equipment in order that the auditorium may fully function as a theatre. Strange as it may seem the acoustics are almost perfect and yet nothing very special was done beyond that of giving form to the room and a rough texture surface to the plaster and providing velour curtains for the windows.

At this time, I wish to pay my respects to Dr. Frank W. Hart and Dr. Lars H. Peterson of the Department of Education, University of California,

whose contribution of the preliminary survey for this building aided materially in the formation of the plans.

The cost of this building which follows no doubt will prove interesting to the readers of this article, but I should like to emphasize the fact that the bids we received on the general and electrical work were in my judgment unusually low and while the cost per cubic foot is 23c and the cost per square foot is \$4.62 I most heartily recommend that in preparing a preliminary estimate for similar work that at least 20% be added to these figures as a matter of safety. This statement, I believe, is due the readers of this article who may be influenced by this cost data.

| Contract | Low Bid | 2nd Bid | 3rd Bid |
|--|---------------------------------|--------------|--------------|
| General..... | \$347,511.26 | \$349,111.26 | \$361,311.26 |
| Heating..... | 28,947.00 | 28,947.00 | 28,947.00 |
| Plumbing..... | 16,409.46 | 16,409.46 | 16,409.46 |
| Electrical..... | 20,075.00 | 20,075.00 | 20,075.00 |
| | <hr/> | <hr/> | <hr/> |
| Architect Fee 6%..... | \$412,942.72 | \$414,542.72 | \$426,742.72 |
| | 24,776.56 | 24,872.56 | 25,604.56 |
| TOTAL COST..... | \$437,719.28 | \$439,415.28 | \$452,347.28 |
| General Contract Percentage of whole..... | \$347,511.26—79.4% | 437,719.28 | |
| Heating Contract Percentage of whole..... | 28,947.00—6.6% | 437,719.28 | |
| Plumbing Contract Percentage of whole..... | 16,409.46—3.7% | 437,719.28 | |
| Electrical Contract Percentage of whole..... | 20,075.00—4.5% | 437,719.28 | |
| Architect's Fee Percentage of whole..... | 24,776.56—6.0% | 437,719.28 | |
| 1,895,899 cubic feet in buildings—94,590 sq. ft. floor area. | | | |
| Cost 1st Proposal | \$437,719.28—\$.23 per cu. ft. | | |
| | 1,895,899 | | |
| | 437,719.28—\$4.62 per sq. ft. | | |
| | 94,590 | | |
| | 437,719.28—\$364.77 per pupil | | |
| | 1,200 | | |
| Cost 2nd Proposal | 439,415.28—\$.231 per cu. ft. | | |
| | 1,895,899 | | |
| | 439,415.28—\$4.64 per sq. ft. | | |
| | 94,590 | | |
| Cost 3rd Proposal | 452,347.28—\$.238 per cu. ft. | | |
| | 1,895,899 | | |
| | 452,347.28—\$4.79 per sq. ft. | | |
| | 94,590 | | |

The Eleventh International Congress of Architects

AS THE delegates sent by the American Institute of Architects, are returning from the Third Pan-American Congress, held at Buenos Aires July 1 to 10, the delegates appointed at the Sixtieth convention of the Institute to take part in the eleventh International Congress of Architects are departing. The Congress this year will be held at The Hague and at Amsterdam, Holland, August 29 to September 4. Those appointed by President Medary are; William Emerson, Boston, head of the Architectural Department of the Massachusetts Institute of Technology;

Frank E. Wallis, Paris, France; Charles Butler, New York; George Oakley Totten, Jr., Washington; Clement V. Fairweather, Metuchen, N. J.; Egerton Swartout, New York. The American Section of the Permanent Committee of the International Congress, to be held under the auspices of the Government of Holland is composed of Cass Gilbert, Chairman; William A. Boring, Glen Brown, J. Monroe Hewlett, William Rutherford Mead, John Russell Pope, C. Howard Walker, C. C. Zantinger, and George Oakley Totten, Jr.

Color in Architecture

VIII. Color Media, 2

By REXFORD NEWCOMB, A. I. A.

IF BRICK is an old medium, its sister ceramic material, tile, likewise has had a distinguished and age-long career. The tile, however, has never posed as a structural unit and from the day of its early advent in Egypt has always functioned as an applied decorative material. In fact some of the oldest tiles in existence, those found in the Stepped Pyramid at Sakkara (a structure of the Third Dynasty) were advanced enough in form to be equipped with "dove-tail" lugs at the back through which a copper wire might be inserted to facilitate the bond between the tiles and the cement ground in which they were set. These interesting and colorful decorative units of *blue-green* glaze, used by that famed early architect, Imhotep, to grace the tomb-chamber of his monarch, King Zoser, have in our time been carried away to the Berlin Museum and there they still bear mute witness to the innate color urge of early man.

Down through the ages, ceramic tiles have, in most lands where architecture has distinguished itself, been the ever-ready hand-maids of architecture for the purpose of introducing ideal color into that art. Whether as pavements, wainscots or wall revetments, the distinguished contribution of permanent color contributed by imperishable ceramic tiles has been very great. Sometimes and in some lands the palette has been restricted but, due to the splendid contributions of the Saracens, who undoubtedly built upon the tile art of the ancient Persians and their Sassanian successors, a fair color range has for centuries been possible. The strides, however, which ceramic chemistry has made within our own time, makes available to us of today practically all known colors, and these in a great variety of textures and glazes. The flexibility of the material, its color-range, the splendid part which the joints play as "separators" of brilliant color, and its essential "mural" character make ceramic tiles one of the chief means for writing a fuller measure of color into modern architecture.

When speaking of tiles one must not neglect to pay his respects to the important role that the roofing-tile plays in the general color-scheme. The roof, in some respects one of the most important "elements" in the composition, must needs have careful and adequate consideration as to color. While roofing-tiles, like face bricks, at one time suffered artificial selection for uniform color, today we know that the "kiln-run" of sound tiles will give us a play of color and a texture interest not to be matched by any amount of artificial selection. Nothing is more fascinating than just the

natural color variation that one sees in the commonest tile roofs of Spain or Italy.

The color of roofing-tiles, moreover, is not so restricted as it once was and, while our conservatism rather confines us to two standard colors, *red* and *green*, there is no reason why other well defined and natural ceramic colors, especially in glazed tiles, might not one day make their appearance. I have mentioned the *yellow* tiles of China. One might also imagine *cobalt* or *ultra-marine blue* tiles, *black* tiles and other varieties, as some day figuring in our skylines.

Terra cotta is another material whereby a full measure of ideal color may be introduced into architecture. Terra cotta architectural features date back in history to a very early time and indeed a large measure of the polychromy introduced into Greek architecture of the *archaic* period made its appearance through the role of terra cotta revetments, which were applied to and, by means of copper nails, held upon the wooden substructure. Those splendid early triumphs in architectural terra cotta, achieved by the Greeks on such structures as the Heraion at Olympia, come down in fragment to our own time to attest alike the splendid quality of the ware and its capacity for writing into architecture a large amount of color.

The palette of these early terra cotta manufacturers was restricted to *browns*, *reds*, the natural *terra cotta* color, dark *green* and *black* but, during the Renaissance in Italy, the revival of glazed decorative terra cotta by the immortal Luca della Robbia and his successors led to new triumphs so far as color was concerned. Less architectural and more sculptural, the Della Robbian ware utilized the realistic colors of the subject-matter of their essays which of course had to do largely with the representation of human forms, fruit, flowers and similar objects. Their colors were therefore, *cobalt blues*, *maroons*, *white*, *apple green*, and *cadmium yellow*. Almost invariably, however, the *white* and *blue* predominated, as in those medallions on the *Ospedale degli Innocenti* at Florence.

The same prowess that modern ceramic chemistry has made possible to the tile industry has likewise borne fruit for the modern terra cotta industry and today American manufacturers are making better ware, in a fuller variety of color and glazes than has ever been possible before in the history of the world. Although modern *polychrome* terra cotta is little more than thirty years old in America, some very splendid contributions have been made to the art of architecture by this modern, plastic, ceramic material which



A Distinctive American Architecture

No. 8 of a series suggest-
ing how color can be
utilized to secure such
distinction.



A Distinctive American Architecture

No. 8 of a series suggest-
ing how color can be
utilized to secure such
distinction.

holds within its grasp a full orchestral expression both in *form* and in *color*. Certainly the brilliant success recently achieved by Messrs. Trumbauer, Zantzinger, Borie, Gregory, Jennewein and Solon upon the new Philadelphia Museum of Art in Fairmount Park will go far to make secure the splendid reputation that this material now enjoys and to anticipate the large color contribution that this ware may still make to architecture.

Some manufacturers, however, have sought to imitate stones and granites, even in their rougher rock-face phases. This, it seems to me, is a mistake and a course that in time will hurt terra cotta. Stone is stone and terra cotta is terra cotta. Each has a noble place in modern architecture, but neither can take the place of the other. Imitation of one material by another is wholly irrational and inartistic, and the designer should guard against this tendency.

For some years now we have been acquainted with the claims that Portland cement and concrete have upon the attention of the architect. While this noble modern plastic has been widely used in the structural phases of architecture, it has, as yet, not received the attention due it as a material for the expression of the aesthetic impulse. This, doubtless, has been because of its color which, uniformly drab, has not appealed to the architect. This problem of the color of concrete is now in process of active solution, both artistic and scientific studies being made regarding it. To date two means of color introduction in concrete have been employed: (a) The use of colored *aggregates*; (b) The intermixture of *mineral pigments*. To this one may add the incorporation of color by means of ceramic tiles embedded in the concrete, as was used with excellent effect by Goodhue upon the California Building at the San Diego Exposition, and the painting of concrete surfaces either solidly or in stencilled patterns.

The real solution of the problem, it would seem, however, lies within the scope of the two means first mentioned and to this problem Mr. John J. Earley, the architectural sculptor, has seriously addressed himself. In collaboration with Mr. Taft on the Fountain of Time in Chicago and upon the Parthenon at Nashville, Tennessee, and in association with the architects of the new Louisiana State University group and of the Shrine of the Sacred Heart in Washington, D. C., he has produced a splendid new variety of architectural polychromy. In the Shrine of the Sacred Heart the wonderful and far-reaching possibilities of the use of colored aggregates, be it of stone, granite, or glass, are adequately realized, and

those interested in architectural polychromy look forward confidently to new triumphs from Mr. Earley's hand.

As in other fields the imitative urge apparently actuated early concrete expression. The true character of the material, however,—its *plasticity*—is now beginning to be sensed. A full recognition of this quality, coupled with the wonderful polychromy of which the material is capable will doubtless eventually make of concrete one of the most adequate materials for the expression of both form and color that we possess. Its economy, moreover, is a phase which the architect who must get the *maximum* of effect with the *minimum* of outlay will do well to study.

What applies to concrete as a substance may in a sense be equally true of stucco where polychrome variation is being obtained both by the use of colored aggregates and by the use of mineral pigments. Mr. Raymond Wilson is addressing his attention to the testing of colors for Portland cement mortars, as are one or two others. It would seem that certain mineral pigments are the proper means of giving to stucco a larger measure of color without impairing its structural value. Organic pigments, on the other hand, are not generally suitable for permanent effects.

Certainly one of the most beautiful types of architectural polychromy is that introduced by the use of mosaics. Architects in general are acquainted with this type of color variation but, sadly enough, so often lack the appropriations of money to make possible so splendid an architectural polychromy. There is, however, a growing appreciation and an increasing tendency to use this age-old decorative medium in American buildings, and something of that old splendor that was "the glory of Rome" and the grandeur of Ravenna, Venice and Constantinople may one day be more completely realizable in our own land.

I had thought also to mention glass as a colorful material but the designer is well aware of this capacity of glass, and the story has so often been recounted. In closing, however, one must mention the tremendous numbers of new colorful materials that almost daily make their appearance upon the market—materials formed of asbestos, asphalt, cork, and I presume in the near future, of cornstalks, vie with one another to present their claims to our attention as means for a fuller architectural polychromy. Thus in a thousand ways and in *media* as varied as architecture itself the urge to use more color in architecture is upon us!

Comment--Architectonic, Mostly

By F. W. FITZPATRICK, *Consulting Architect*

"AT LAST there is hope of being freed from a blemish upon the face of our beloved Paris. The quicker the operation is performed, the better pleased will we be. They tell us that the Eiffel Tower has not been properly protected and is so eaten up by electrolysis and rust that it is no longer safe and will have to be taken down.

"There never was any reason for it anyway. Had a great beacon been needed or some other practical purpose served, well and good, but it was just a freakish, useless eye-sore.

"It did serve a half purpose once, for it was the highest piece of work fashioned by the hand of man. If that be glory then we had some reason to tolerate the monstrosity. But even that doubtful virtue has been taken from it for the Americans have useful (and we are told beautiful) buildings now that exceed that height. So farewell to the latticed horror and good riddance to it. Sic transit, etc."

So expatiates a leading editor of *Paree*. And, for one, I applaud the contemplated extinction of that "latticed horror". Most out of place in its surroundings, a discordant note in a beautiful symphony.

Mussolini, they tell us, was contemplating as grievous a sin in Rome, for his ambition was to erect some sort of a memorial skyscraper there, a tower 1,100 feet in the air, of modern Italian architecture at that. Think of what they would do with their new-art on such a theme and scale! Some sort of huge barbaric totem-pole, as be-deviled and ghastly as anything to be seen in Alaska.

Well, Cass Gilbert protested to His Nibs in most delicate manner. Anyway the story comes that Mussolini's ambitions have taken another slant. Instead of building a great tower of steel and concrete, he will bust up the Masons or something, just like that, a snap of the fingers! But, glory be, there is to be no Tower of Progress in Rome! If he is patient we will build him one at Ostia, when Andersen's Peace City materializes there upon land donated to the cause by Mussolini, for which, of course, we are duly grateful.

Mentioning Cass Gilbert, one always thinks of the Woolworth Tower, certainly the most beautiful tall building of its day, graceful, well-studied, successful. I don't like his New York Life design nearly as well. The first step back at the sixth floor is too abrupt, looks as if a taller building had been sawed-off there. The second step should be carried a trifle higher, the side wings above that cut off a bit and the equivalent floor content added to the main tower and the latter

finished off squarishly without the pyramidal roof, would vastly improve the mass composition.

My respectful suggestion to Mr. C. G. as he respectfully suggested to Mr. B. M. No offense. You're quite welcome.

* * * * *

I have heard and read a lot lately coming from the engineers, mostly from the British contingent, criticism of the architects, complaints against the latter's mistakes in construction, lack of structural ability, ingenuity, etc. All of which has some basis in fact but it hardly seems to be up to the engineers to ha-ha too loudly.

The architects are not without sin but, good gosh, are the engineers of immaculate conception? Fizzled bridges, crumbling concrete buildings, tunnel entrances too low for locomotives to pass under, a dozen bridge-piers carried three feet higher than the contemplated floor. Heavens, we could write chapters more on bungled engineering work than we can upon Bungled-Buildings, and the latter are numerous enough Heaven knows.

And as for the ingenuity they say is missing in our construction, what have the engineers contributed to building? They have done the arithmetic, yes, but who devised the tall building, the steel frame, the stepped-back building, all the progress in modern structural work? It was not the engineers.

What always amuses me about the engineer is his complete assurance and his grand stand play of positive accuracy and profound erudition. It "goes", too, with most people.

Not so long ago on a great building project half a dozen nabob engineers were called in to consult about the foundation. Mark you, it was to be a three-story structure, but covering a vast area. The architects had a couple of engineers, the owners had some, the city, everyone was ably represented and the assembled talent devised a wondrous foundation, it was figured to the dot, just so many pounds on each of the three floors, the pounding of the trains, the vibration of passing motors, everything was calculated to a nicety. Well, the foundation was laid with much exactness and supervision.

Then, lo and behold, the owners thought they would rather have a twenty-storied building instead of a three-storied one. But how about the foundations?

The same galaxy of talent was assembled, someone suggested sinking caissons between those already in place. Much figuring and consultation and wise

confabs. At last a conclusion was reached. Ah, it had been awaited in breathless expectancy—the foundation so carefully figured for three stories was ample for the twenty!

Wouldn't it seem to you any junior draftsman could have made as good a guess?

When we were building the Chicago post office, floating foundations were all the fashion, but the loads were so uneven, the "terrain" (as the engineers say) so mushy it was planned to use piles. The Government, at the behest of some senators, sent for the greatest foundation engineer in the world, as consultant. He appeared, a most impressive old gent, puffed his chest out and declaimed just what we must do and how, and that was that. I got hold of him that evening and told him why we couldn't use a floating foundation; next day he said that he had investigated and studied and determined we should not use a floating foundation but a pile one, and the piles to carry not over so much per pile—that was the ultimate limit.

Again that evening I got hold of him and explained that if we stuck to his dictum we would have to drive piles out in the street and on adjoining property for half a block; the lot wasn't big enough to contain that many piles! Well, how much did we figure per pile? A load three times heavier than his. But we could count upon adhesion or friction as well as penetration. One could drive the first twenty feet almost a foot a blow, but if one didn't complete the driving but held up for a day or two on a pile, only 10 feet in, you couldn't budge it with twenty blows. He slept on it and next day wrote a ten-page report, loaded with technical terms, learned arguments and wise deductions, really a work of art, but recommending piling and loaded as we had started; collected a fee equal to about a year of my salary and went home. Everybody happy for now had we not dependable authority to work upon?

And by the way too, that same building has a rather wonderful dome, if I do say it. The dome seen from the inside is not that seen from the outside. The latter is eight stories farther up, the space t'wixt the upper and the nether domes is cut up into eight stories of offices, a separate elevator, etc. And it was a dickens of a job to make an engineer figure out the dimensions and so on of its framing. Such a thing never had been done before (nor since) the only dome of its kind, so no precedents. It couldn't be done and so on. I literally had to fight an engineer into making the working drawings.

Oh, sure, they are all right and fine fellows, but, like us all, there is a lot of bluff and bunk about their "science".

The National Association of Ornamental Iron and Bronze Manufacturers will hold its Twentieth Annual Convention at West Baden, Indiana, September 20-22. Probably the outstanding feature of this year's gathering will be the outlining of a national publicity and advertising campaign to further the education of the general public in the new uses of ornamental iron, bronze and wire.

The Fifth Annual Convention of American Institute of Steel Construction will be held at Carolina Hotel, Pinehurst, North Carolina, October 25-29.

Omission

Due to an oversight the name of Mr. Waylande Gregory, designer and modeller of the plaster decorations in the Aztec Room of the Hotel President of Kansas City, Missouri, was omitted in the captions of the plates in the July issue which showed this work. So excellent and careful in archaeological spirit is this work that the author's name should, by all means, have been given.



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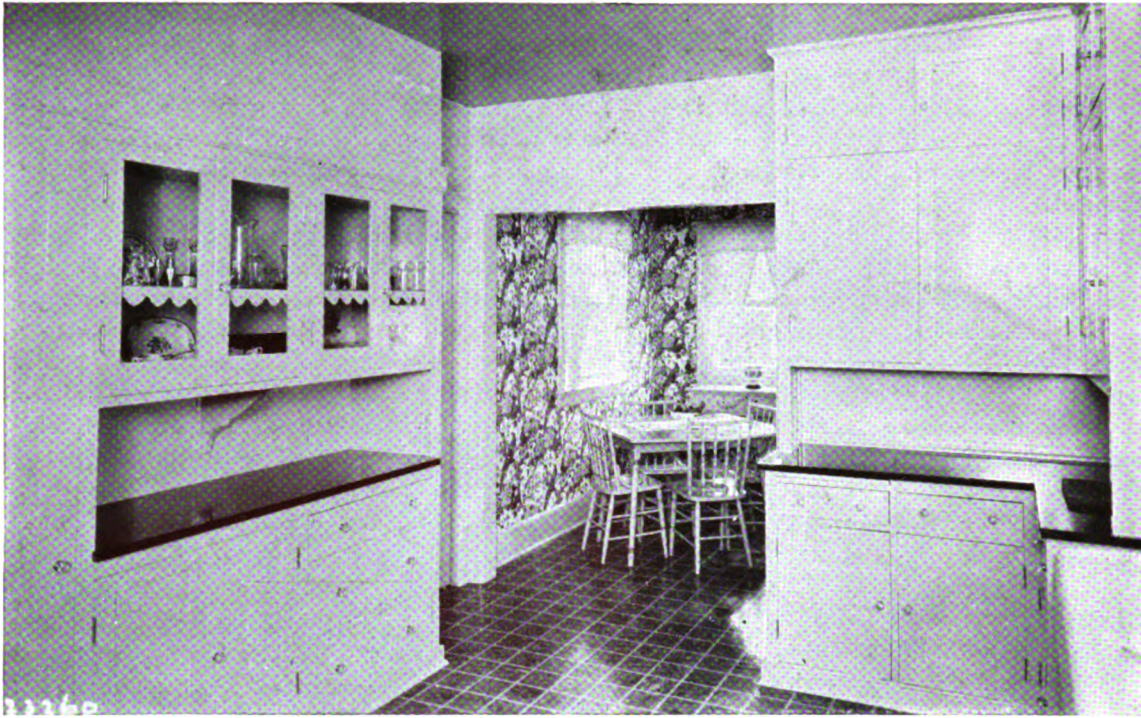
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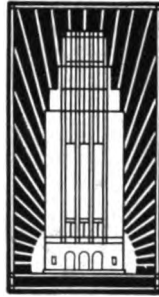
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ALLIED ARTS



Volume XXXVI

Number 9

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GEORGE R. HORTON, BUSINESS MANAGER

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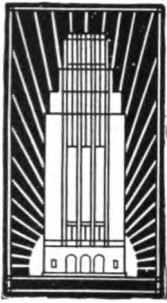
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THE WESTERN ARCHITECT

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Volume XXXVI

SEPTEMBER, 1927

Number 9

Aesthetic Utility in
Roof Tanks
and
Fire Escapes

While the building public has pretty generally come to see a general reasonableness in face-bricking rear walls in its acceptance of the long agitated proposals of the profession, the marring of the best efforts in design in exteriors is still in evidence, through the towering water tanks on roofs and the destruction of all harmony in facades by the steel fire escapes that traverse them from top to the first story. The necessity for the one is established by the water supply requirements and the other by the municipal laws in regard to fire protection. Both are as necessary to the building and its operation and the safety of its occupants as any other feature in its construction. At best the "fire escape" tacked on to the exterior (and too often in positions where they are comparatively useless and even dangerous, though they comply with the law) are but makeshifts. The unsightliness of the roof tank is another matter, but both are based on the owners' desire to save expense. The Chicago Tribune has commented frequently upon the ugliness of fire escapes and unsightliness of tanks, virtuously referring to its recently completed tower building as an example of a building containing fire-shield stairways to replace exterior excapes with their distinct hazard. It has erred woefully in saying: "Architects who continue to employ the old method are chargeable with indifference to the appearance of their work. They owe it to their clients, and particularly to the community to keep abreast of the times, even though a slight increase in cost is involved." Saving unnecessary costs and giving the owner "the most for his money" is part of an architect's function. It is a libel on the profession to intimate that its members will willingly spoil the exterior of their designs with fire escapes or roof tanks if the owner will pay for the more necessary fire shield stairways and enclosed water supply tank. The latter, in fact, apart from its utility becomes part of the design. The owner, and his satellite the "efficiency expert", who sees nothing but a maximum of rentable or usable space, is the direct and only cause for these aberrations that offend the eye of the public, and what is of more importance, prevent the architect from giving a real instead of

fancied security in case of fire and a safer receptacle for the water supply. It might be pointed out that in the case of the Tribune building these "improvements" were part of Mr. Hood's accepted design. He was lucky to have the innovation accepted with other "expensive" details, (hardware, for instance, which is usually cheapened for "something just as good"), by the owners. There are sound and practical reasons for the abolition of the external fire escape and the roof tank but it is up to the building laws to force the change. Their abolition every architect will welcome both to improve architectural lines and to promote public benefit.

Obituary
Philip
Martiny

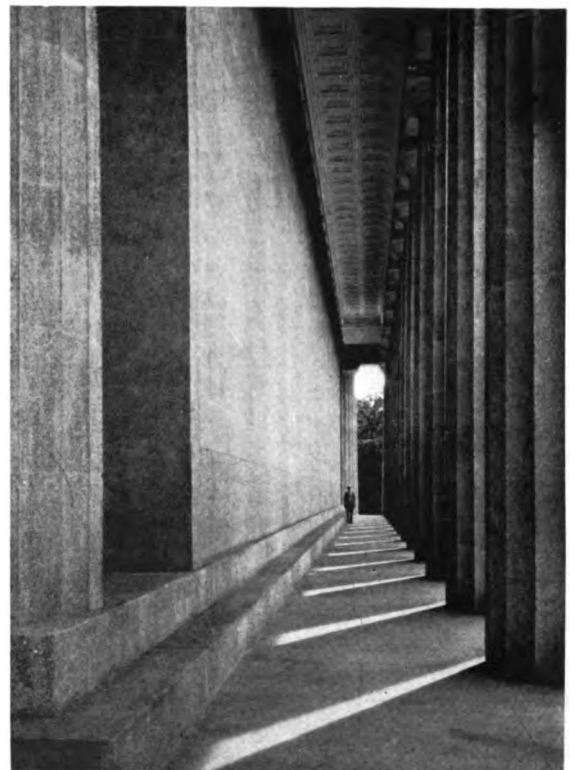
American Sculpture, in its highest and best sense, has lost one of its most valuable exponents in the death of Philip Martiny, who died in New York a few months ago. A pupil of Saint Gaudens and one of that deathless group of artists, who in Architecture, sculpture and mural painting made the Columbian Exposition at Chicago the wonder of the art world and established a renaissance in the United States. He had been an invalid for the past six years, since a stroke of paralysis destroyed the use of his right hand and side. His works are many and distinctive, yet the mind goes back to those evenings at the cabin on the island in Jackson Park during the formative days of the Exposition building. Here, it now seems, gathered those young, talented and enthusiastic artists who in the past quarter of a century have elevated American art to its now permanent position. And it is now to be registered that at no other time in the history of this or any other country was the best that had been produced in artistic talent and training so gathered as a united force as was represented by this band of artists who made the Columbian Exposition structures a "dream City", that seems in retrospect, "not made with hands". To have belonged to this band, and through the years since to have worked with his companions toward a National reputation, each in his chosen line, is an honor that will best mark the memory of Philip Martiny.



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FRONT PERISTYLE, THE PARTHENON



PERISTYLE, THE PARTHENON

The Architectural Theory of Concrete Design*

By FREDERICK L. ACKERMAN, F. A. I. A.

AT THE outset it seems no more than fair to explain that I do not wish to pose as an expert in the field of concrete design. Experience in the design of structures where concrete has been employed in both a structural and decorative sense has been limited. Concrete comes into the view of the architect as one of an ever increasing list of building materials with which he has to deal. The very wealth of materials available tends to confuse rather than simplify his practice and clarify his point of view. Except in rare instances, the architect's knowledge of such a material as concrete is derived from a few isolated experiences such as occur in the course of his varied practice. So that the point of view from which my observations issue may be assumed to be that of the average architect. Naturally I am not attempting to speak for the profession: but I may voice what my contacts indicate constitutes a general opinion.

Concrete is not a new material in the world of building. Indeed, it is a material of great antiquity. But the conditions under which it is now employed, the technology of its use under the strict guidance of scientific insight and knowledge, shifts it over definitely into the category of something new. We may well pause for a moment and consider the significance of this change.

When a new material, device or process takes definite shape out of our experimental fumbings, there follows, particularly when the invention is of a revolutionary character, a long train of blundering effort in our attempt at adoption, use and development. The act of discovery and invention does not set us free: our habits and preconceptions bind us to our old techniques and applications. Recall how, in the transition from handicraft to machine technology, machines were first made to simulate the motions of the hands using the simple tools of handicraft. The conscious aim was the reproduction of manual operations on an enhanced scale, scope or pace. A century and a half has only partially freed us from the handicraft concept of production.

So long as the idea obtained that the new devices and processes were in the nature of substitutions, both the devices and the things produced retained the characteristics of what had gone before. The field of industry is filled with illustrations of how reluctant we have been to abandon the forms that had served, although under radically different circumstances.

*An address delivered at the 1927 convention of the American Concrete Institute.

The first locomotives and first automobiles bore their heavy loads of features characteristic of the horse drawn vehicles for which they served as substitutes. Many years elapse, following the first application of new mechanical principles, before we are able to clear away what later seem like the most obvious of hampering features carried over into the new technology by habits of thought that continued to run in terms of the process that had so given ground.

Without resorting to illustrations, we may say that much in the same way that the form of tools, the technique of use and the forms produced by handicraft industry were carried over into the era of machine technology, but to retard development, so the rules of thumb, the empirical formula of the handicraft period were carried over into the era of science but to hamper an objective handling of the facts under scientific inquiry.

All this may seem remote from the subject in hand: but it has a direct bearing on the case. For the use of this new material is now seriously hampered by the condition that the present objective with respect to its use centers in the utilization of it as a substitute. It is to be used as a substitute for wood, for brick, for stone or for steel, as the case may be. This holds true as regards structural and decorative use. This is not to suggest that concrete might not properly take the place of these several structural elements in so far as it is warranted by its properties. It is rather to note that its application is first conceived in terms of the fully developed, functional application of materials whose properties differ in a fundamental way. The designers of limousines and motor trucks are no longer hampered by preconceptions in the shape of victorias and lumber wagons. But the designers of lighting fixtures still think in terms of candles and oil lamps. Designers of concrete are as yet handicapped by what has gone before, much in the same way as are the designers of lighting fixtures. Structural engineers are not in the enviable position of the designers of aircraft: the science of aviation was not retarded in its development by the drag of habits and archaic techniques. Once the principles had been established there was a fair field ahead for development.

I have referred to concrete as a new building material. What serves to place it in a category by itself is the comparatively recent expansion of its structural functions. This expansion of functions was due to the application of science. I am not here referring to our modern methods of handling it: these



CONCRETE CHURCH AT LE RAINCY, NEAR PARIS
A. AND G. PERRET, ARCHITECTS

are products of the machine process. I refer to the multitude of structural uses to which it is now put. No longer is its use confined to weight bearing. It now serves in tension as well as compression. Not only walls and piers but beams, girders, slabs, arches and vaults are all rational expressions of its properties.

This is, of course, but to state the obvious. But it may be worth while to emphasize it. For during the early phases of development, those engaged in experiments and those intimately associated with the use of an invention, a new material or process, are not likely to fully appreciate the significance of what they do as a matter of course.

The introduction of a single material that will serve a wide range of uses hitherto served by a variety of materials is significant from the standpoint of architectural expression. For it constitutes no less than the foundation of a revolutionary change in design.

We must not overlook the fact that the traditional divisions of architectural composition were derived from the properties of the materials used. And the traditional forms of architecture with which we are familiar grew out of the necessity of acknowledging such things as the limiting dimensions of materials available, convenient size, shape and weight to handle under handicraft technique, hardness, durability,

limiting strength. These played a definite part in giving form and character to whatever was built.

The building of structures, stone by stone, brick by brick, gave rise to a pattern. Under the spirit of workmanship the utilization of this pattern and the development of it into a decorative expression was a matter of course. In the same way the development of certain horizontal lines and divisions were derived from the process of building. Corbels, brackets, the decorative features of cornices, architraves and the decorative treatment of doors and windows expressed both structural procedure and decorative aims. In the early expression of what we characterize as the Styles of Architecture it is gratuitous to attempt to fix the point at which aims passed from those centered in the matter of fact logic of construction to those involving decoration. The history of industry offers nothing which indicates more perfectly than the structures of the Gothic period how it is that out of an unhampered, workmanlike handling of materials, forms of a decorative character emerge, architecturally expressive of the materials dealt with.

But to return to the subject of concrete design. I am not now referring to that phase of design that concerns itself merely with loads and stresses but to a larger point of view which includes both the structural and decorative use of the material—that is to say, its architectural use.

For the purpose of more clearly exposing the problem of design let us assume that we have developed a surface of intrinsic value—a surface durable and pleasing. What would then constitute a rational use of this material? Instead of first proposing a theory, we may, to better advantage, suggest its underlying thought by proposing that we erect forms, such as would be used in the case of a concrete structure, about certain historical structures. We might try, for example, to erect concrete forms about the structures upon the Acropolis at Athens; we might also try to enclose one of the great Gothic cathedrals of Central Europe or we might again attempt to build a concrete form about St. Peters at Rome.

It is hardly necessary to dwell upon the difficulties involved in such a procedure; the very nature of the processes involved points to the absurdity of it and at the same time illuminates the first article of a theory of concrete design. Our theory of concrete design resolves itself immediately into a theory of building the preparatory structure, the form. The preparatory structure—the form—is the beginning and the end of concrete design.

We are dealing with a plastic material. But as such its use as a building material differs in a fundamental way from that of clay when it is built up and worked into definite form by the hands of the modeller. In the erection of concrete structures we are not dealing with a process as simple and direct as modelling.

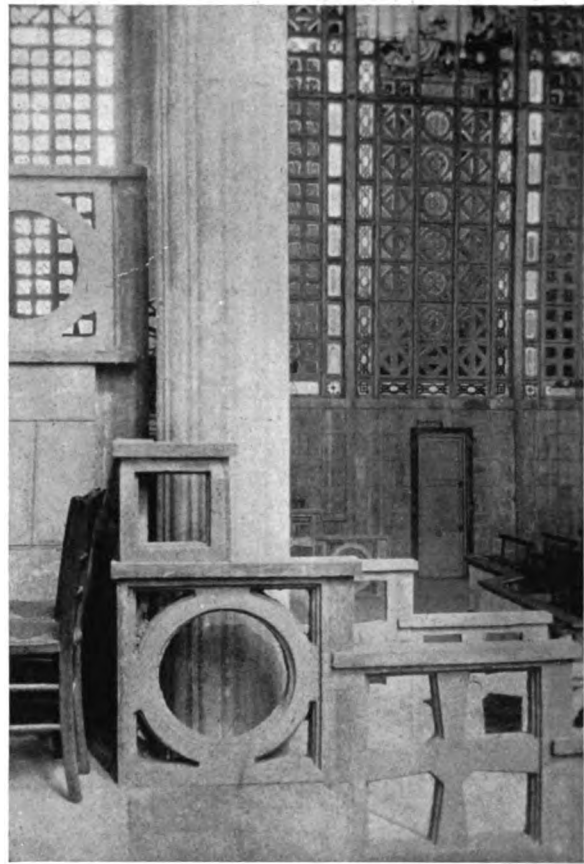
But I suspect that the fundamental difference between the process of erecting concrete structures and modelling in clay has been overlooked in the same way that we have overlooked the fundamental difference as between concrete and stone. For in the case of many concrete structures, where the designers have sought consciously to depart from the whole range of architectural forms and masses that had their origin in stone or brick, it would seem that the underlying thought of the designers was the production of forms and masses that would indicate first of all the plastic quality of the material used. This is true in particular of the experimental work about the shores of the Baltic where many of the revolutionary designs suggest that they had been modelled in clay and baked in the sun like ancient pots.

In concrete we are dealing with a plastic material. But its use differs from that of clay in that it serves our structural and architectural ends only when it is rigidly confined within a preparatory structure—the form. So, I repeat for sake of emphasis that the construction of the form constitutes the beginning and the end of concrete design—the theory of concrete architecture centers in the theory of form building.

A new architectural expression of a revolutionary character cannot be generated at will. There must be, apparently, if we may draw upon the history of industry, a period of experimental work—a period of transition. And the outcome depends, not so much upon the potentialities of the case as it does upon the thought that guides exploration and creates definite aims. At most all that we can do is to work toward such aims as seem rational to us in the light of our experimental effort.

To state in broad outline the theory of form building we have: the form should be composed of simple planes such as would enclose the volumes required by our structural theory and as dictated by our general concept of what should constitute the mass as a whole. That is to say, our mass would be conceived in terms of simple planes. This gives us obviously something quite different from the architectural examples previously referred to.

Our simple masses may be modified in silhouette and in surface treatment in an endless variety of ways and for reasons that have little or no bearing upon the structural theory from which we derived our masses. Refinement and embellishment fall within the scope of concrete the same as other materials. We may properly introduce lines, secondary planes and ornamentation. But in the modification of our masses we must bear in mind that we are neither building in stone nor modelling in clay: we are building a form. And so whatever we do to achieve variety and interest must commend itself as a perfectly rational procedure with respect to the building of the form itself.



INTERIOR OF CHURCH AT LE RAINCY, NEAR PARIS
A. AND G. PERRET, ARCHITECTS

Without going into the details of form building we may mention a few of the steps which would constitute a rational procedure. By secondary forms built into the angles of our preparatory structure we may produce champfers of endless variety and detail. Thus the silhouette of piers may be modified and shaped to our aims. In the same way the enrichment of openings—doors, windows, rectangular and arched—may be secured. These secondary forms in nowise complicate the construction of our primary form: nor do they weaken it. They strengthen the form and at the same time eliminate the sharp arrisses from the structure.

The simple planes of our primary form lend themselves to endless modification by the application of secondary forms which will appear in the finished structure as incised lines, sunken panels, plain or molded. Again these in nowise weaken or complicate the building of the primary form which remains undisturbed. Nor need we stop with the introduction of champfers, lines and panels. Still working within our form we may proceed to the treatment, in intaglio, of the secondary planes and even lines and champfers.

As a theory of form building, nothing could be simpler. But the difficulty arises in its application, for we are not accustomed to proceed to our end in this way. By a mental process more or less similar to that

out of which the broad outlines of architectural masses have been established we may proceed to the design of the main outlines of our preparatory structure. But having established that, the process that follows must be that of the worker in intaglio. We may score the surfaces of our monolithic structure into imitation stone joints; we may indicate voussours over our openings to suggest stone arches, but when we do these and other similar things we merely expose our inability to think out the design in terms of the preparatory structure and this plastic material which takes its form by being confined.

The application of this theory of form building would give us an expression—a character similar in many respects to those which arose when the arts of building were young. For the use of simple planes, and ornamentation by incision, were characteristics of nearly all early architectural expressions. We may or we may not draw upon such sources for our inspiration. But it would seem sufficient if we were guided in our design by the thought that the process and material would be expressed in something like an ideal sense, were the greatest projection of our decorative features kept within the broad planes which serve to define the mass.

No reference has been made to the use of concrete cast in forms prior to placement in the building. So far as concerns the effect and hence, so far as concerns design, it can make but slight difference whether the material used be stone or cast concrete. Shapes and the dimensions of individual pieces might differ; and

what has already been said of form building would apply with some force to the preparation of forms for individual blocks of concrete. But even so, a theory of an architecture rendered in pre-cast concrete would differ in no material way from the theory of an architecture rendered in stone. For the technique of erection would be essentially the same in either case.

No reference has been made to a preferential category of structures which would lend themselves to a logical handling under this theory. Such an act would be entirely gratuitous; it would be to arbitrarily set an artificial limitation upon the application of the theory and it would be to prophesy an outcome which of a necessity must be the product of an evolutionary application. The types and kinds of structure that may be erected of concrete turn upon the development of a technique that will serve whatever utilitarian or aesthetic demands are ultimately laid upon the designers of buildings.

And finally: I have made no reference whatever to the matter of cost in discussing the architectural theory. It may be said that cost is a controlling factor. A rational design is one that achieves rational ends by direct and simple ways and means. A theory, therefore, that is based upon the use of simple, direct methods need not concern itself with other than the technology of the operation. Preoccupation with cost is likely to leave no room for exploration into the technological possibilities. This is well illustrated in the development of concrete.

A Glance at the Building Industry

AT THE peak of the year's building program it seems well to survey the field and from several authoritative reports deduce an average of the conditions, both as to present status and future indications. In most of the principal cities there seems to be little unemployment in the building trades, indicating that the "saturation point" spoken of by the pessimistic for the past five years has not quite been reached. It is probable that building has reached a normal volume and will be increased or diminished year by year for some time by the "prosperity" or its opposite as marked by farm or commercial conditions. This will apply to wages as well as to demand though the trend of wages will seek lower instead of higher levels as demand fluxuates in different localities. At present wages have decreased in Florida through the subsidence of the "boom" period, and on the whole average of the country a decrease of about two percent in building costs is indicated. In Canada where building is taking an upward trend, strikes for higher wages prevail, particularly in Montreal, and in some American cities increases in wages is demanded but

with less success than has been the rule since the armistice. The prospect is that building activity will continue in sufficient volume to preclude any widespread radical downward revision of workers' compensation. Wages are now averaged at twenty-six percent under the peak of June 1920, though one hundred and three percent above the average of 1913, and skilled labor rates five percent higher than a year ago. Demands for higher wages are the basis of more or less seriously interrupting strikes in over thirty cities impartially distributed from New Haven to Seattle, about the same number of cities and equally distributed, have granted increases, probably under pressure of works that must be finished before fall. The "American Plan," non-union city of San Francisco and the Landis decision effect in Chicago leaves these cities tranquil, while New York with its thoroughly organized, close-corporation unions would be except that there, the labor unions, having demanded and obtained as high wages as the traffic will bear, stir up jurisdictional disputes that tie up work more effectively than a mere wage dispute could.

The Reinforced Concrete Style

By DR. F. S. ONDERDONK
University of Michigan

IT IS one of the tragic elements of history that contemporaries of great achievements and events generally do not know of their existence. The Roman historians record nothing of Jesus of Nazareth; very few people of Columbus' generation knew that America had been discovered; the Gothic style evolved but its contemporaries were too absorbed in other matters to notice its gradual ascent. In our age, likewise, only a comparatively few realize the great developments that are underway—the growth of an auxiliary international language (Esperanto), the development of a United States of the World (League of Nations) and the final outlawry of war. In architecture a new life can be detected which promises to mature in a still more marvelous way than did the Gothic. This is due to reinforced concrete which originated about 30 years ago. Although the new material has wonderful possibilities, the architects of our generation scarcely realize what a treasure has fallen into their hands.

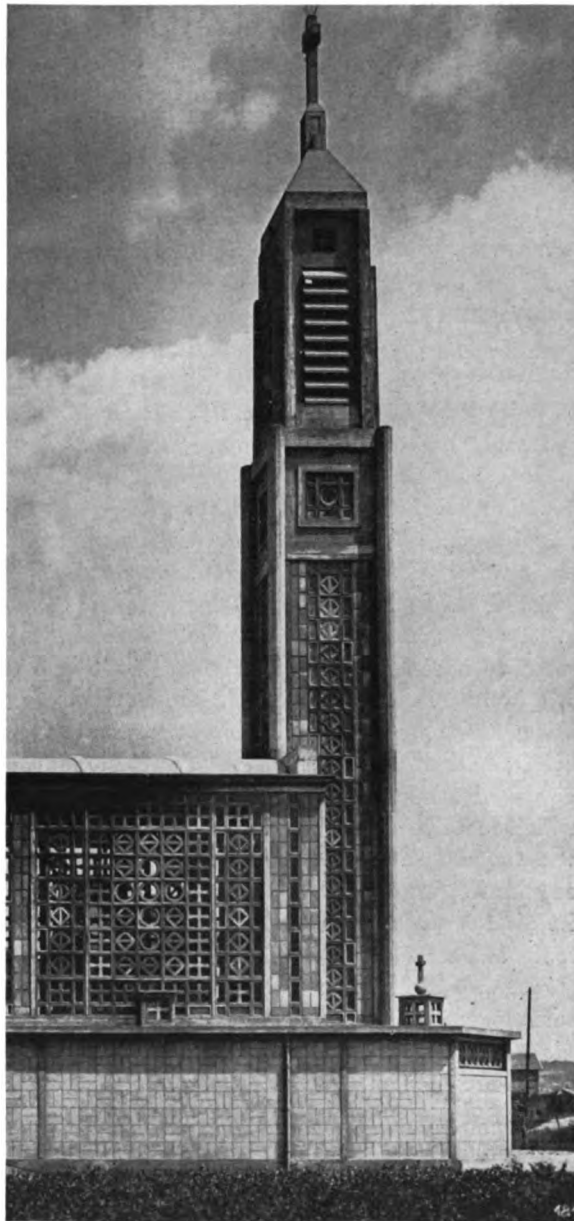
As all parts of a concrete building are inwardly tied together by steel reinforcing rods, joints as well as minor moldings which separate bases, shafts and caps from each other in the traditional styles are no longer necessary or desirable. Large smooth planes, contrasting with openings piercing the concrete wall, are the result. The openings can have any desired outline as concrete is poured into curvilinear quite as easily as into the rectilinear molds. This must result eventually in the creation of a "Concrete Tracery."

The French church at Le Raincy is one of the most remarkable examples of concrete tracery so far developed. It is as yet, however, very primitive, the windows being resolved into simple geometric patterns. The recently completed St. Theresa church at Montmagny near Paris, built likewise by A. and G. Perret, introduces a new epoch as the entire wall surface consists of concrete tracery. As can be seen in the photograph of the interior (Plate 162), the

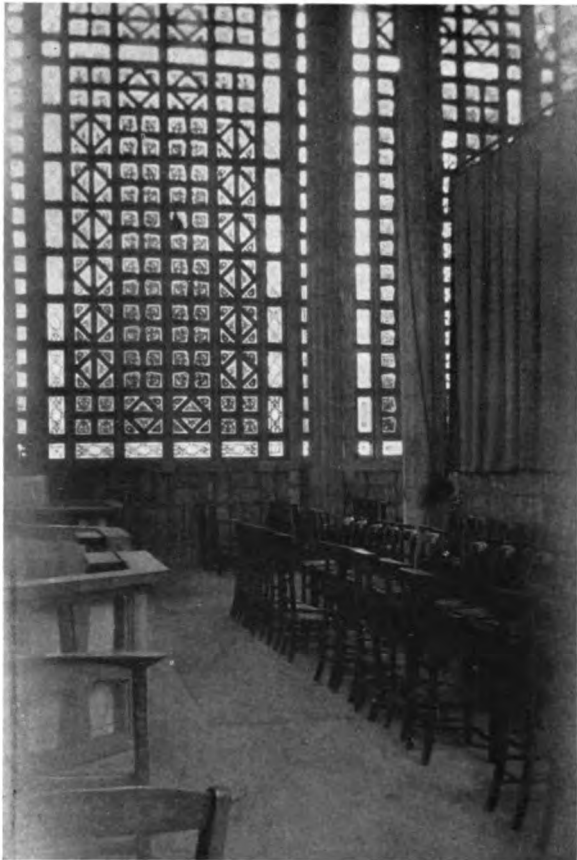
concrete columns are placed inside, behind the concrete tracery walls, so that the exterior walls appear like an uninterrupted "frozen" lace-curtain. The geometric pattern of this curtain is rather crude—but were the beginnings of Romanesque less primitive?

The photograph of the facade cannot reproduce the most astounding effect of this stone-lace. The light shines through the many openings of the far wall so strongly that it pierces the colored glass of the near wall, revealing its brilliant colors—in this case blue and yellow—to the observer on the outside of the church. In a Gothic church the beauty of colored glass can only be appreciated upon the interior; from the outside no colors are seen as the light inside the church is too dim to shine through the colored glass to the street. In the Montmagny church the glass-area of the walls is so large that the church as a whole has the effect of a great lantern, the hues of the shade of which brilliantly shine forth.

The Montmagny church can be considered as the first example of a new style for two reasons: the entire



CHURCH OF ST. THERESA, MONTMAGNY, FRANCE
A. AND G. PERRET, ARCHITECTS



INTERIOR OF CHURCH AT LE RAINCY, NEAR PARIS
A. AND G. PERRET, ARCHITECTS

upper wall surface, in addition to being completely of pierced tracery, presents on the exterior a continuous field of brilliant colors which excel the effects of colored tile and approaches those of mosaic. Before condemning the crudeness of the forms of this building the extreme economy with which it was built should be considered: it cost less than \$30,000, being cheaper even than the Le Raincy church.

Inspection of the columns seem to indicate that the drums of the fluted shells were poured in a mold, and, when set up, served as a form for the cores of the columns. The lower portion of the wall consists of concrete blocks, while the tracery consists of pre-cast units of five ornamental shapes which recur in various combinations on the walls, in the tower and in the balustrades, as well as in the segmental, transverse vault-supports of the nave. The aisle is reduced to a low, narrow side-passage; its roof of dense concrete serving as the sole protection against water. In fact this church is an all-concrete building, even the tower and winding gallery-stairway being of concrete.

As you turn your back on St. Therese to return to Paris, a magnetic power seems to force your eyes once more in the direction of the edifice. The Montmagny church, a glowing, concrete-lace lantern, predicts great things to come: a colorful, brilliant, impressive architecture. Shall we call it "*The Concrete Style?*"

James Goold Cutler

1848-1927

Art, the physical expression of an ideal in design, is the normal province of the architect, and his talent lies in this direction. But there are notable instances in which the scientific trend enters and the possessor of this side-line talent places a utility in the front rank of accessories that add to human happiness or convenience. Three of these for over half a century have been in general use, and each bearing the inventors' name: Mansard, the Frenchman, who evolved a roof; Hansom, the Englishman who invented a non-capsizable vehicle; and Cutler, the American, who invented the mail chute, and who died at Rochester, New York, last month. James Goold Cutler was born in Albany, April 24, 1848. In 1869 he began his architectural career in the office of Nichols and Brown in Albany. He moved to Rochester in 1872, and a few years later commenced an architectural practice in which he was most successful and enjoyed an extended patronage. In 1884 he abandoned practice to develop the mail chute that has become a permanent accessory in every office building throughout the world. Retaining his membership in the Western Association of architects, which was organized at Chicago in that year, Mr. Cutler assisted in the organization, at Rochester, of the Western New York State Association of Architects, being elected as its president, and re-elected for two succeeding years. He was elected an honorary member of the American Institute of Architects in 1907. Mr. Cutler later became an integral part of Rochester's civic life and his career was diversified and important. He served for twelve years as President of the Lincoln-Alliance Bank, and chairman of the bank's board, and also was a trustee of the Rochester Savings Bank. In 1897 he was consulting architect for State Capitol buildings. In 1900 he became Commissioner for Public Safety, and from 1904 to 1907 was Mayor of Rochester, being twice elected to that office. The leading part which Mr. Cutler took in the city's commercial history made him President of the Rochester Chamber of Commerce, Director of the Chamber of Commerce of the United States and chairman of its executive committee. He was a trustee of the Rochester University, trustee of the Bureau of Municipal Research, director of the Community Chest, and active in his membership in many social and scientific organizations and clubs. It is not too much to assume that his sterling character and diversified talent became available and brought great good to the city of his adoption through his early training in and practice of architecture and a grounding in the ethics and tenets of that profession.

The Architectural Uses of Concrete*

(With Incidental Reference to Cement, the Tie That Binds)

By IRVING K. POND, C. E., F. A. I. A.

SOME few years ago, as chairman of a committee of the American Institute of Architects, I submitted a report on the uses of concrete in architecture which met with favor and was published separately by the Institute and widely distributed. I refer to that report as it was responsible for my giving a paper along lines suggested therein before a convention of this organization (American Concrete Institute) shortly after its appearance. I have only a vague recollection at this time of what was contained in either the report or the paper; only a detail here and there of either standing out in my memory. I am very certain no one in this audience remembers as much as I do of the content of the paper, not even be he one of the few who heard it. For, as I recollect, on the afternoon when it was presented there was an excursion to Mooseheart and every delegate who could get away went on that excursion; so that there remained for an audience only those who of necessity were conducting the meeting and those others who themselves had papers to present. Of course the papers were printed in the proceedings; but I imagine they are few, besides the proof readers, who scan the text of printed proceedings. So every one who appeared on that particular occasion might repeat his paper, quite certain that it would be "new stuff" to this audience. When the proceedings of this convention are printed anyone so minded can compare the records to ascertain if, unlike Shakespeare, the present authors have repeated themselves.

While in repeating verbatim whatever I may have said heretofore I would be showing scant courtesy to my hearers and would lower myself in my own estimation, I am frank to say that I shall deal now, as I dealt before, in great measure in generalities, leaving the specialists to deal with details both as to manufacture and application. Basic in all design and construction, and in the application of methods and materials, and broad general principles which should be understood and acted upon if there is to be a permanent advance in the building arts. It is with one or more of these principles that I am concerned in this paper which will touch upon details only as they may be made to clarify the general proposition.

The Material which acts as a cohesive and binding element in this organization, the material which is common to all the products, the manufacture and application of which brings this body together, is

*An address delivered at the 1927 Convention of the American Concrete Institute.

cement; a material procured by mechanical processes from natural, or from artificially produced rock, clay, or mineral elements. With cement as a binder the choice of an indefinite number of other materials is presented to form what is known as the aggregate; so that according to the will of the producer bodies hard, soft, smooth, rough, in monotone or rich in color, pervious or impervious to moisture, defiant of the action of fire or of frost, are forthcoming for employment in structures of a wide variety of use and beauty. Cement materials thus produced form the basis, according to the required characteristics, of structure, of exterior or of interior walls, of floors, of ceilings, structural or ornamental, either or both. The field would seem limitless. With all this seemingly infinite variety in use and potentiality one would think that there might come some originality of expression; one would expect something intrinsic in the material itself, something of an inner nature, which might be demonstrated upon the surface; something so *sui generis* that even a designer with but a superficial mental and spiritual equipment would hesitate to use it in imitation of other materials, or to leave the marks of other materials upon its surface. The possibilities of texture, the possibilities of color inhering in the product make it a thing through which the sensitive designer can make his feelings flow;—so that to have this product made the medium of a wonderfully expressive art all we would seem to need is a wonderfully sensitive designer! But wonderfully sensitive designers do not grow upon every architectural bush; that is, wonderfully sensitive designers who feel the power and the rhythmic flow of structure.

It is especially with the aesthetic possibilities inhering in structure that I, personally, am most deeply concerned and, therefore, it is with the potentialities of concrete in this rich field that I wish particularly to deal in this paper and so without further to-do I am going to plunge into, what to me is, one of the most fascinating and soul-searching of the psychological abstractions surrounding building in general and treat it in its especial relation to concrete as a medium of expression as well as of construction.

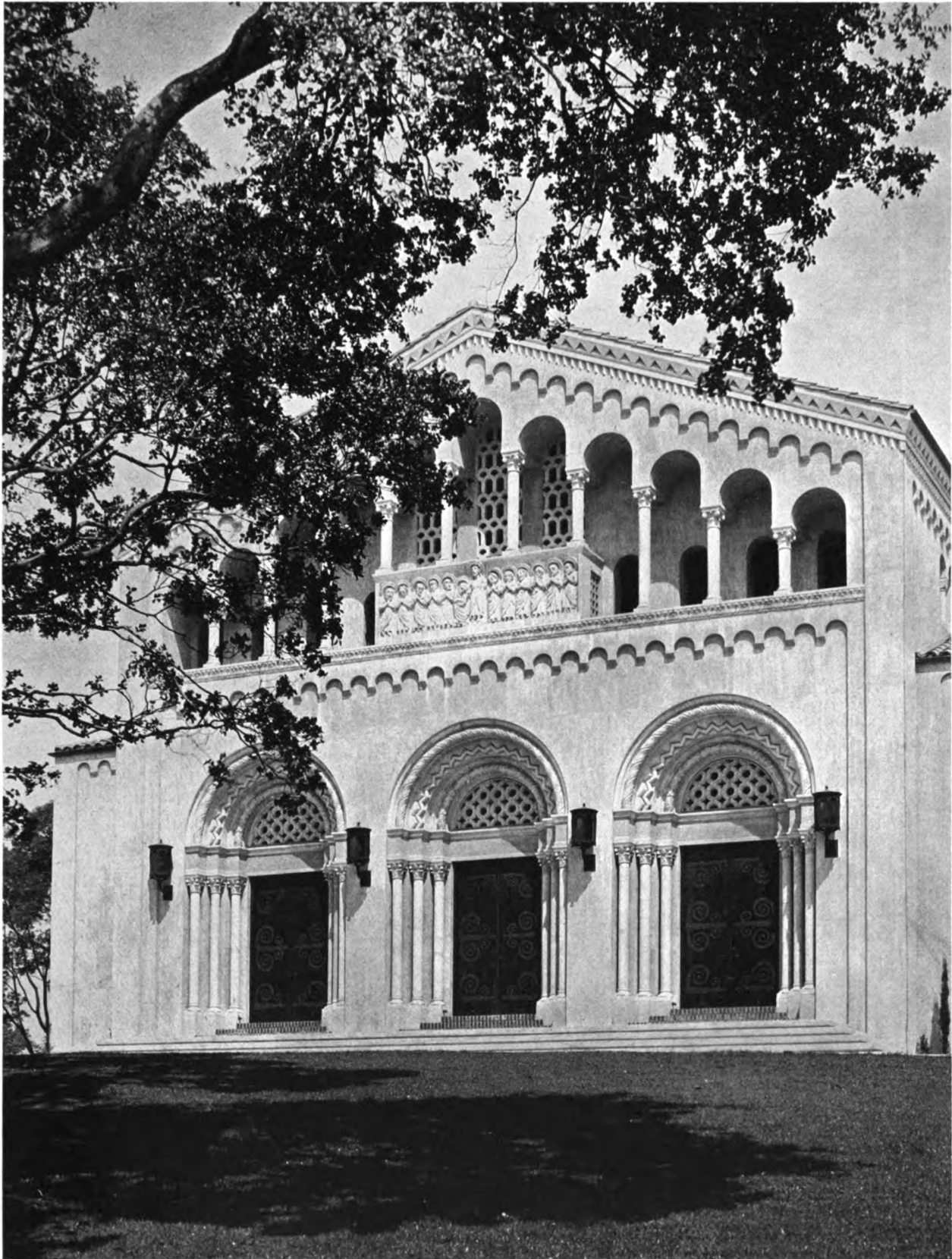
There are two methods of introducing concrete into structure; one is by setting precast units, as stone is set, and the other is by pouring the material in liquid or semi-liquid form into moulds which characterize and define the form. The first method may be enlarged upon to a degree and in a manner to put

it away beyond the simple placing of structural unit upon structural unit with the idea of producing a complete and harmonious whole. One ingenious writer upon what he terms the "Super City" takes his reader down an avenue in the making and shows him gigantic trucks laden with the precast sides of rooms with exterior and interior surfaces completely finished and decorated; and slabs with ceilings below and floors above ready to be lifted up and set in place by huge derricks when the preliminary work of setting up the pre-prepared walls shall have been accomplished. Whole towns are to be built as we when children used to build our card houses; except that deft powerful machinery is to take the place of our clumsy little childish fingers, and great elaborately fashioned slabs of concrete are to stand in the stead of cards, "Beautiful" ball rooms for the restless, "beautiful" theatres for the tired, "beautiful" dining rooms for the hungry public; a public which need no longer hunger for "beauty"—for "beauty" will be met at every turn! Some cement association must have put the idea into the author's head. All that is needed to complete the picture are concrete men with natures capable of sympathetic acceptance of the concrete mass. The city may be traversed from end to end through freight and service tunnels in the basements; and, too, upon the house tops which will furnish landing stages for aeroplanes, parking places for baby carriages, and breathing spaces for all, above the dust and grime of the ground level streets; though without doubt some element will be found, if it does not now exist, which, combined with the mix or spread upon the surface, will eliminate the element of dust. This picture, not of my own creating but borrowed from an enthusiastic author who says the dream is about to be realized, is something for the concrete man,—not for him who is made of, but for him who works in concrete;—to whet his imagination on. What a field of color and form is opened up to him; where ever his eye rests is "beauty"! But is it beauty? and if it is beauty how does it come about? or, better, how is it brought about? For the concrete mix does not of itself slump down into forms of beauty. Those forms are preconceived forms emanating from the hand and brain of man.

So we come face to face with a fundamental abstraction, a fundamental proposition of life. Life feeds upon life; beauty feeds upon beauty. There can be no life unless life is given to it; there can be no beauty unless beauty be sacrificed in the making. A God is crucified and buried that a God may be born. The grain is cut down and the seed buries in the earth that a new harvest may come forth. The masonry arch which spans in any grace the rushing torrent was built upon a centering which was just as beautiful in its own way and in its own way just as much as a work of art, but which had to be destroyed that the

arch of stone might function. Even more so does this proposition hold with concrete structures which are to function for use and beauty. If the concrete product is to be perfect the form or mould must be perfect. That the concrete may be perfect the forms must be destroyed, that which was in itself perfect must be destroyed that the ultimate and permanent perfection may be achieved. A poignancy as of grief must accompany the contemplation of the loss and destruction which must attend the creation and production of any structural object—the waste of hand power and brain power and heart power which must accompany the production of any object of structural beauty. Leaving out of account the dreary hours of toil and drudgery in forests and mines and over weary trails that materials in the rough may be at hand, note a few of the elements of artistic craftsmanship which, only to be lost to the sight and knowledge of the general observer, must enter in that the exposed concrete of the structure may be a finished product; carpentry and cabinet making, metal working and modeling. Each of these is accompanied by work in other trades. To my way of thinking it takes a deal of moral stamina for a carpenter or a craftsman in wood, or for a sculptor working in the clay, to carry out conscientiously a piece of work which he knows is to be destroyed that some other and less worthy material may come to exist in perfection of form—that his work must be lost that some other may come into being. The designer in concrete must be made to realize, if he does not, how much he owes to other arts and crafts and consequently how much he owes it to himself to treat material for which he is designing with respect and bring out its intrinsic potentialities to the best of his ability. He is not doing this if either in surface treatment or in structural form he imitates the characteristics of another material. If concrete is to be used it must be treated on its merits and handled with respect.

We have, in this country, developed a wide variety of textures and surfaces which may be applied to walls to make them look like concrete, though the background may be flimsy lath or clumsy bats of brick. We have in small measure as yet developed the constructional side as has been done in other lands particularly in Germany and France. Our structure, outside of certain massive engineering works, has been confined to post and beam types, though arched structures are in evidence. But we have not spanned great spaces with structural vaults and ribs which take of themselves pleasing forms while following and containing the paths of structural forces, as has been done abroad. This is a field in which the structural imagination may well be allowed to play; a field in which our designers, with their material instinct for bigness and spiritual instinct for simplicity, should be eminently successful. Of course the interplay of



FACADE OF AUDITORIUM

FIRST CONGREGATIONAL CHURCH, OAKLAND, CALIFORNIA
JOHN GALEN HOWARD AND ASSOCIATES, ARCHITECTS ::

CEMENT PLASTER ON MONOLITHIC CONCRETE WALLS—DOORWAY ORNAMENTATION PRE-CAST

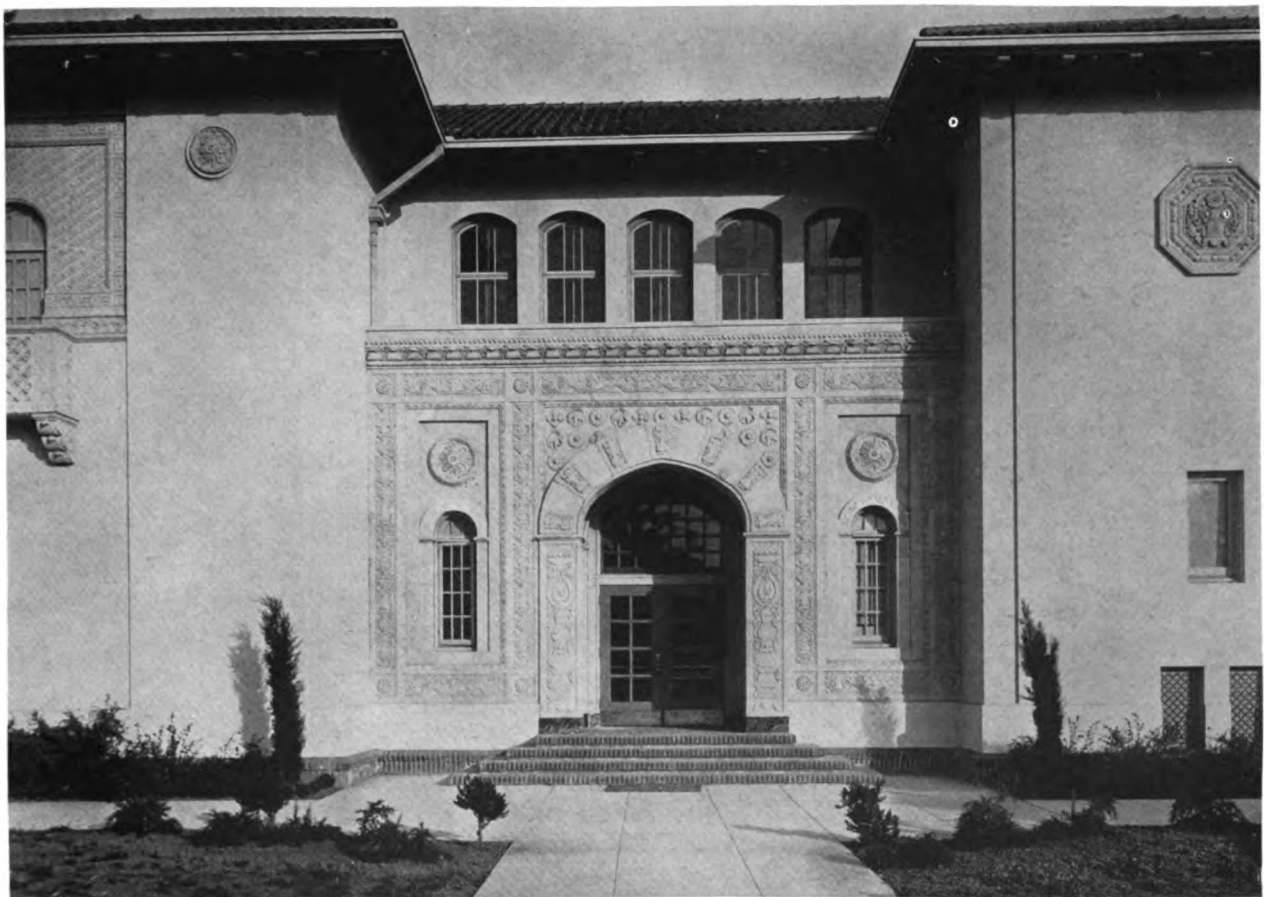


DETAIL OF ENTRANCE PORCH

FIRST CONGREGATIONAL CHURCH, OAKLAND, CALIFORNIA
JOHN GALEN HOWARD AND ASSOCIATES, ARCHITECTS ::

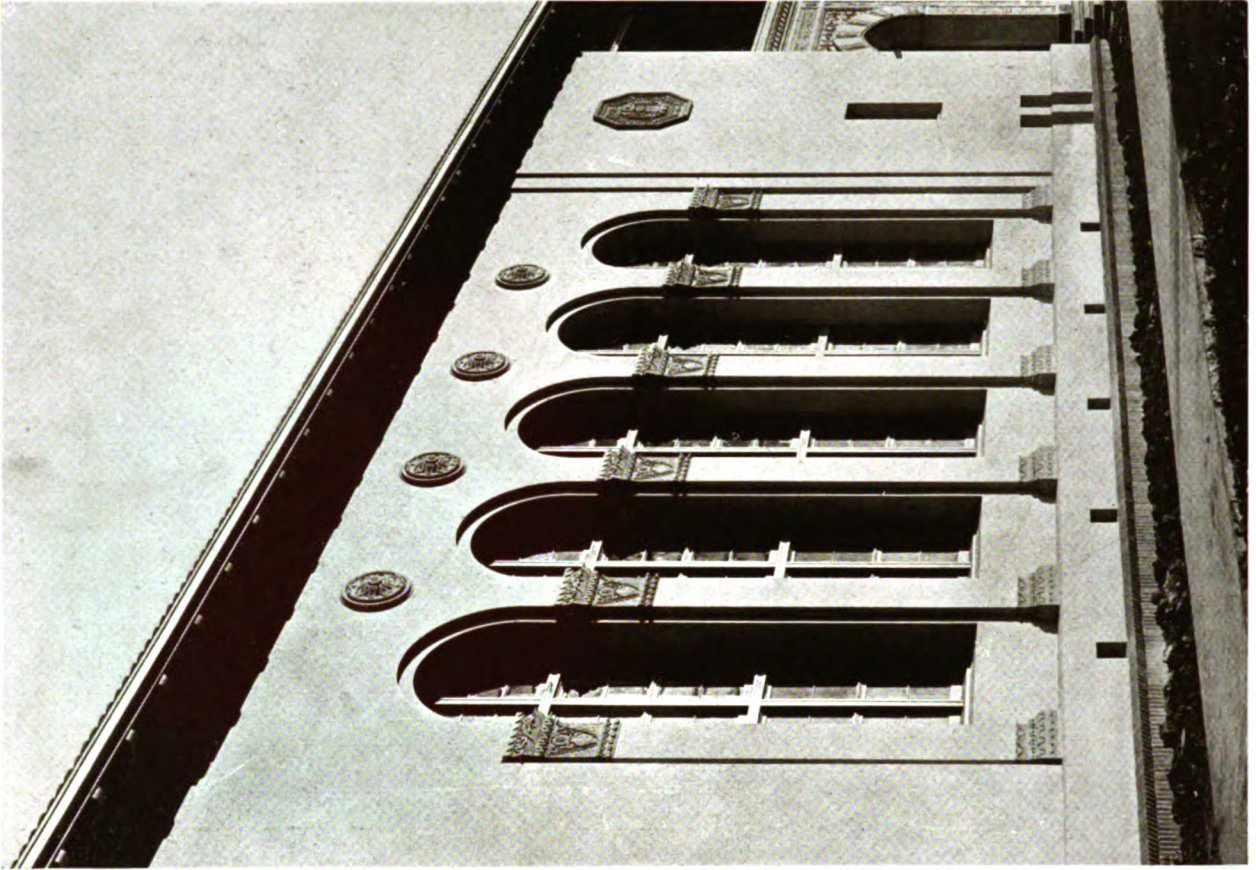


PANEL OVER PORCH
 FIRST CONGREGATIONAL CHURCH, OAKLAND, CALIFORNIA
 JOHN GALEN HOWARD AND ASSOCIATES, ARCHITECTS ::
 SCULPTURE BY ROBERT HOWARD :: :: :: :: :: ::

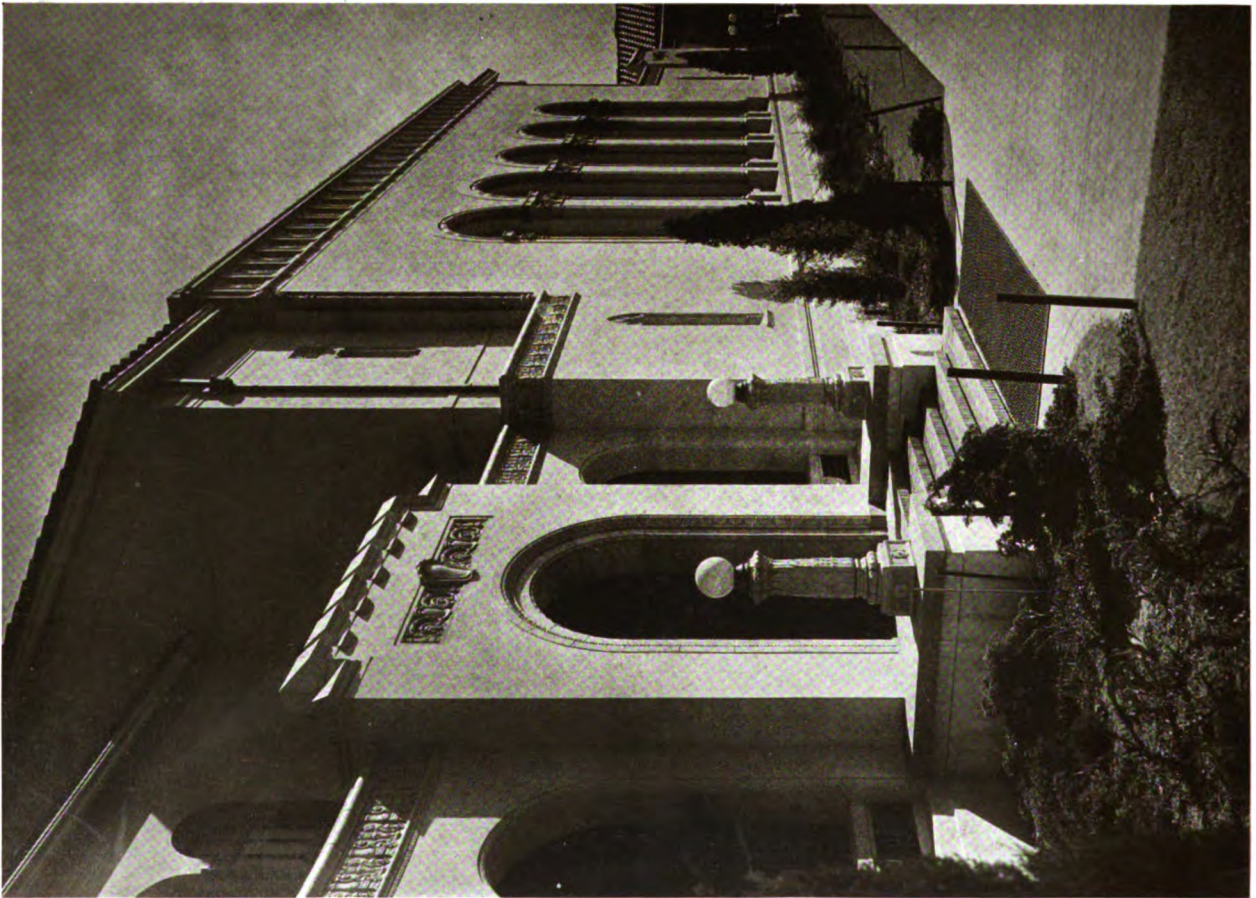


WATSONVILLE HIGH SCHOOL, WATSONVILLE, CALIFORNIA
 W. H. WEEKS, ARCHITECT :: :: :: :: :: :: ::

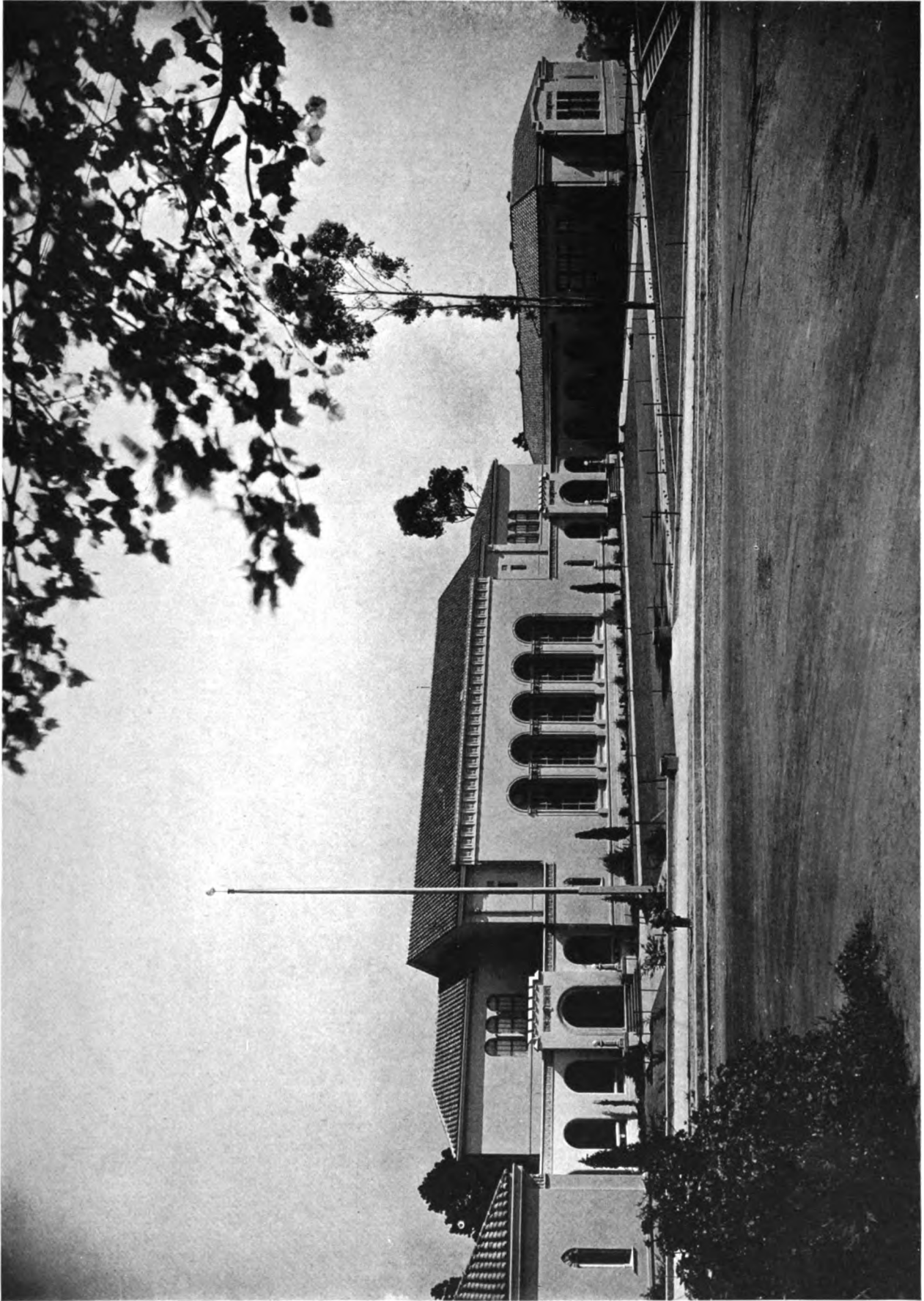
CEMENT STUCCO OVER MONOLITHIC CONCRETE WALLS—ALL ORNAMENTATION PRE-CAST



DETAIL - ASSEMBLY ROOM WINDOWS
 WATSONVILLE HIGH SCHOOL, WATSONVILLE, CALIFORNIA
 W. H. WEEKS, ARCHITECT



FACADE DETAIL, PIEDMONT HIGH SCHOOL, PIEDMONT, CALIFORNIA
 W. H. WEEKS, ARCHITECT
 CEMENT STUCCO OVER MONOLITHIC CONCRETE WALLS, TERRA COTTA TRIM



GENERAL VIEW
PIEDMONT HIGH SCHOOL, PIEDMONT, CALIFORNIA
W. H. WEEKS, ARCHITECT :: :: :: ::



COLONNADE AND END PAVILION
PALACE OF THE LEGION OF HONOR, SAN FRANCISCO, CALIFORNIA
GEORGE A. APPELGARTH, ARCHITECT :: :: :: :: :: :: :: :: :: ::

CAEN-STONE COLORED CEMENT STUCCO ON MONOLITHIC CONCRETE



ROTUNDA
PALACE OF THE LEGION OF HONOR, SAN FRANCISCO, CALIFORNIA
GEORGE A. APPLGARTH, ARCHITECT :: :: :: :: :: :: :: ::

CAEN-STONE COLORED STUCCO ON MONOLITHIC CONCRETE. ALL BAS-RELIEF AND STATUARY IN CONCRETE FROM PLASTER CASTS TAKEN FROM ORIGINALS IN FRANCE



ELKS CLUB, LOS ANGELES, CALIFORNIA
CURLETT AND BEELMAN, ARCHITECTS

MONOLITHIC WALLS WITH BUFF COLORED CEMENT STUCCO. CORNER ORNAMENTATION PRE-CAST



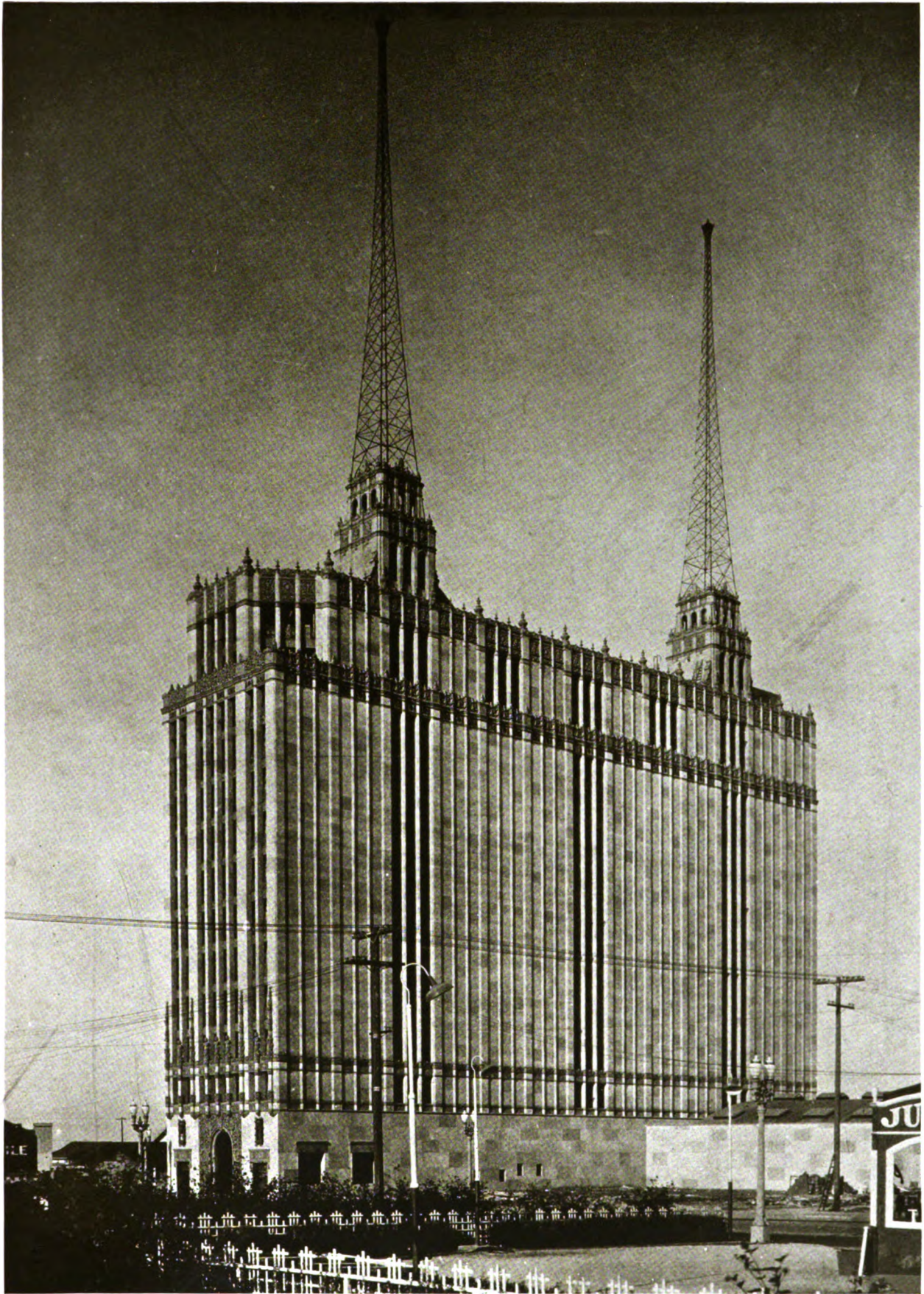
A Distinctive American Architecture

No. 9 of a series suggest-
ing how color can be
utilized to secure such
distinction.



A Distinctive American Architecture

No. 9 of a series suggest-
ing how color can be
utilized to secure such
distinction.



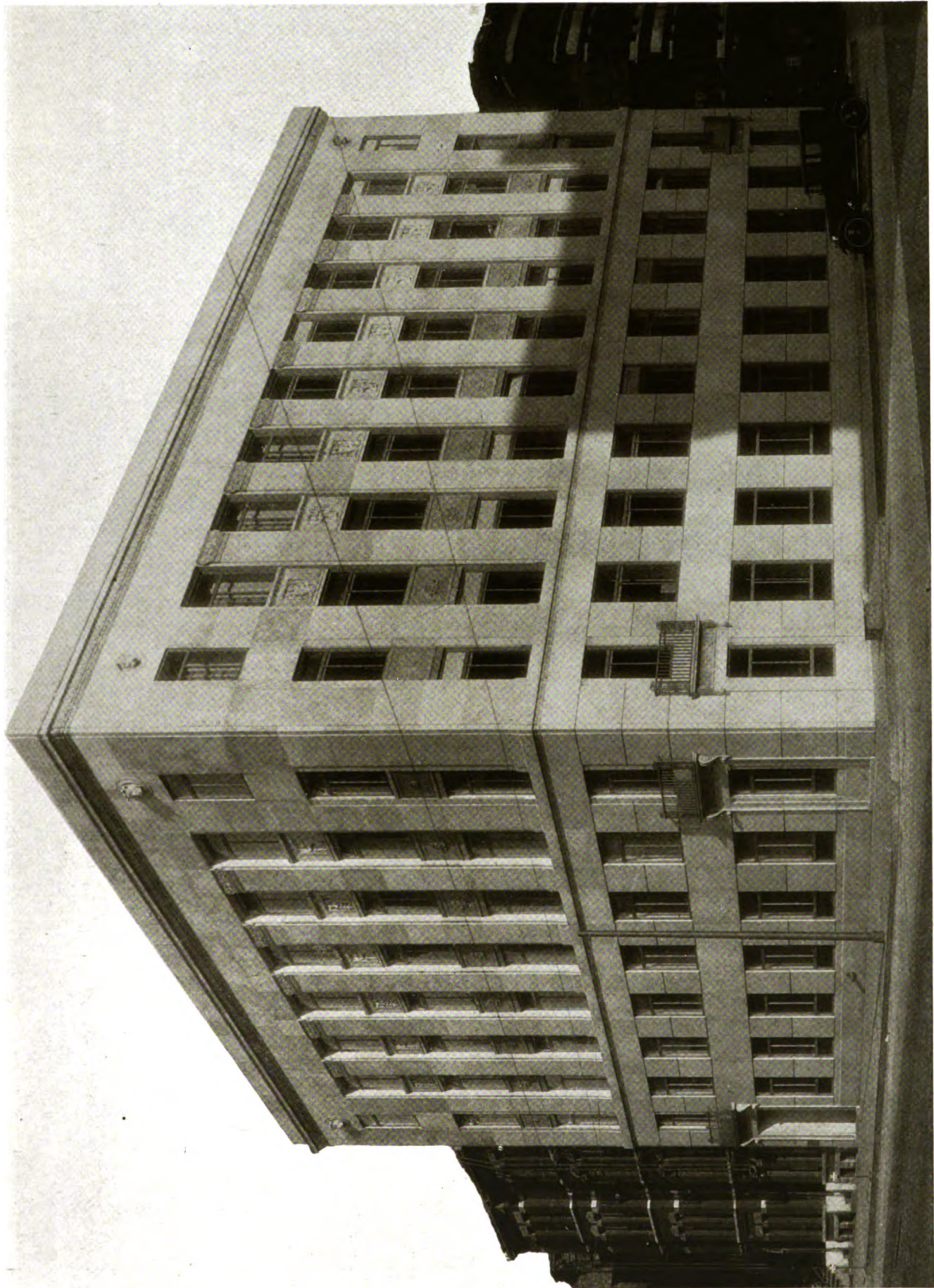
HOLLYWOOD TERMINAL AND WAREHOUSE, HOLLYWOOD, CALIFORNIA
MORGAN, WALLS AND CLEMENTS, ARCHITECTS :: :: :: :: :: ::

BUFF COLORED CEMENT STUCCO ON MONOLITHIC CONCRETE. MARKED
INTO STONE AND COMBED IN DIFFERENT DIRECTIONS TO GIVE TEXTURE



TOBEY BUILDING, CHICAGO (IN FOREGROUND)
HOLIBARD AND ROCHE, ARCHITECTS :: :: ::

PRE-CAST UNITS ON RE-INFORCED CONCRETE SKELETON FRAME.



PORTLAND CEMENT ASSOCIATION BUILDING, CHICAGO
HOLIBARD AND ROCHE, ARCHITECTS :: :: ::

PRE-CAST BUFF COLORED CONCRETE UNITS



LOBBY, PORTLAND CEMENT ASSOCIATION BUILDING, CHICAGO
HOLIBARD AND ROCHE, ARCHITECTS :: :: :: :: :: :: ::

WALLS AND PILASTERS PRE-CAST AND CUT CONCRETE UNITS—CAEN-STONE COLOR. FLOOR, LIGHT STANDARDS
AND SWITCHBOARD ENCLOSURE OF CONCRETE "ART-MARBLE," PRE-CAST WITH MARBLE AGGREGATE IN CEMENT

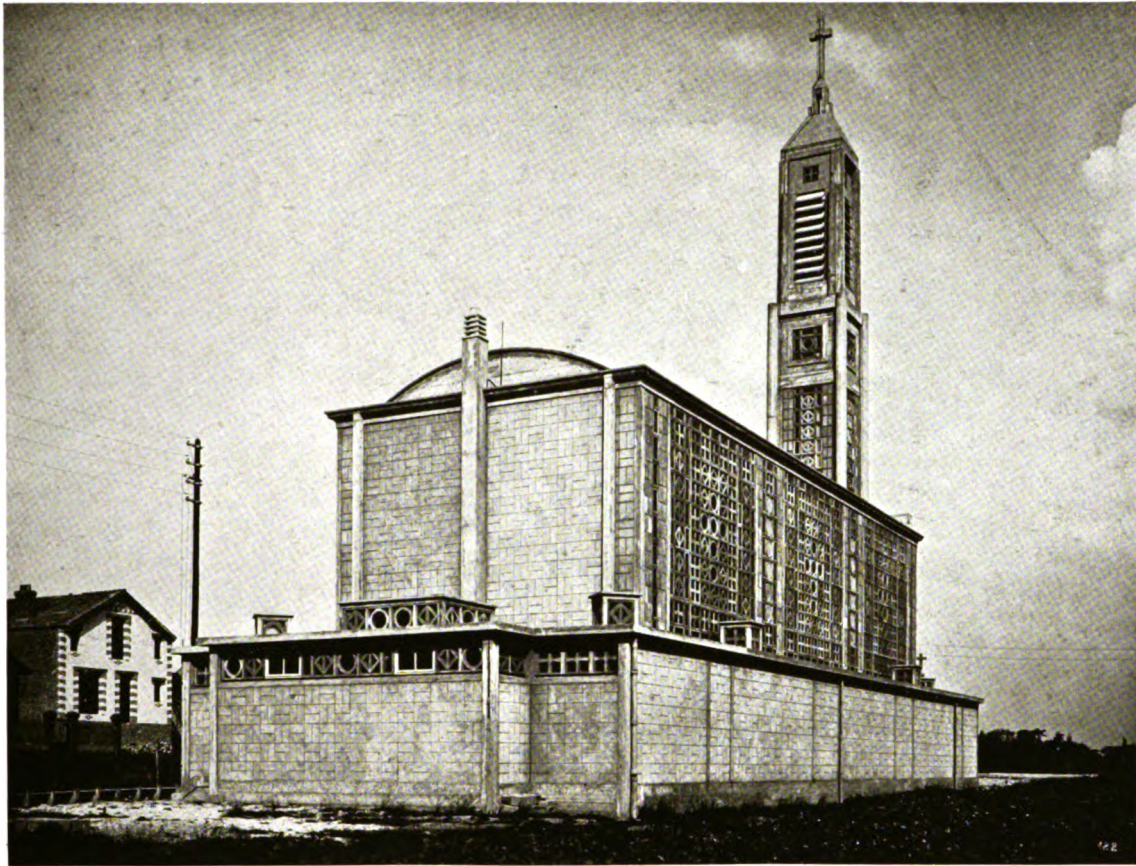


MILTON G. COOPER DRY GOODS COMPANY BUILDING, LOS ANGELES, CALIFORNIA
CURLETT AND BEELMAN, ARCHITECTS :: :: :: :: :: :: :: :: :: ::

LIGHT PINK CEMENT STUCCO OVER MONOLITHIC CONCRETE WALLS



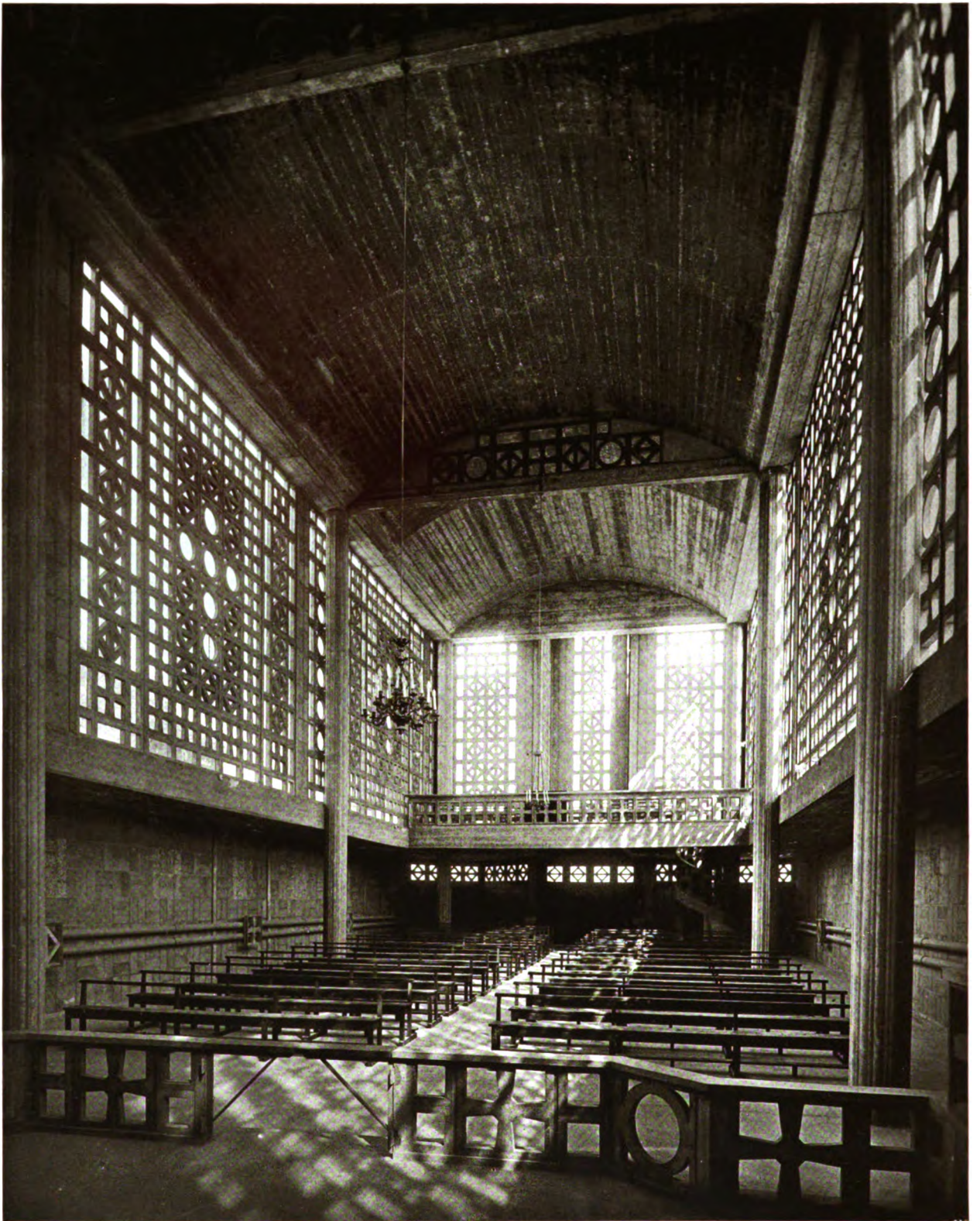
ST. ANN'S PARISH CHURCH, WOLLASTON, MASSACHUSETTS
WILLIAM B. COLLEARY, ARCHITECT



VIEW OF REAR AND SIDE



INTERIOR LOOKING TOWARD ALTAR
CHURCH OF ST. THERESA, MONTMAGNY, FRANCE
A. AND G. PERRET, ARCHITECTS :: :: :: ::



INTERIOR LOOKING TOWARD REAR FROM ALTAR

CHURCH OF ST. THERESA, MONTMAGNY, FRANCE
A. AND G. PERRET, ARCHITECTS :: :: ::

stress and strain in many structural exigencies is not simple and if left unresolved would lead to an involved pattern which would not satisfy our desire for simplicity or directness of statement. But it is a part of the problem of the designer so to resolve the forces, so to direct the stresses, that unity shall appear and that an ordered simplicity shall characterize the design.

In the Old World permanency is a characteristic of structure generally; a characteristic sought to be obtained and expressed in concrete as in other structural materials. Where civilization is old a certain poise has entered men's minds; and haste, even speed, is not considered to be so vital an element. With us there is feverish haste and it evidences itself in our design. The pioneering spirit is still strong within us and we raise structures which will serve our temporary needs and which shall indeed be razed when we go westering—when we "go West" either in the literal or in the figurative or poetical sense. Our structures are leveled even by ourselves. Perhaps from the view of our developing art this is a happy state of things; for it gives us a chance to experiment without too much material loss. It gives us a chance to try out new forms and so the better to determine that which will best express us; will best exhibit our real character to ourselves; best help us to develop that character. But that character, if it be character, is not to be developed by easy processes; it is to be achieved through process of stress and strain; through process of work done, well done, and obliterated; through scaffoldings built and demolished; through worthy forms constructed and destroyed. Our national art is to be achieved as our objects of in-

dividual art must come—through death and disintegration that life may be beautiful and abundant. If that which must ultimately be destroyed be substantially of a permanent nature, such as structures in concrete necessarily are, it is all the more necessary and desirable that we design with due regard to the characteristics of a material which lastingly presents its forms before the eyes of our impressionable minds.

This idea that I have been elaborating is beautifully expressed in one of William Watson's art maxims:

"No record Art keeps
Of her travail and throes,
There is toil on the steeps,—
On the summit repose."

Concrete may well be made the basis of the design; not simply the skeleton to support and to be filled in by other materials. I am just as conscious of the difficulties and just as keen as to the possibilities now as when I wrote that report years ago. Time alone will develop all the potentialities. Not time alone, but time aided by creators of processes, inventors of methods, and designers who are sensitive to the nature of the material. It is a long road and the end is not yet. But there is no need to be pessimistic, in spite of other words of William Watson's which I quote. Watson again is speaking of art:

"The thousand painful steps at last are trod,
At last the Temple's difficult door we win;
But perfect on his pedestal, the god
Freezes us hopeless when we enter in."

We need not worry seriously just yet as to that hopeless chill; for we have a long, long period of struggle in the sunshine of the concrete before we reach that difficult Temple door of the abstract.



The Passing Show

The Shot of Acestes, 1926

By ARTHUR T. NORTH, A. I. A.

LAST year, The Passing Show appraised the New York buildings of 1925. The appraisal of the buildings of 1926 has been made and the same criterion has been retained. To refresh our memories and avoid the necessity of searching the old files, let us recite again the story of the tournament held at the tomb of Anchises.

Aeneas, on his return from the wars, decided to hold a tournament to rest and refresh his weary soldiers. The races and the boxing bouts were over and the archers were next in order. The target was a tall mast to the top of which was tied a dove. Four archers entered for the event: Hyrtacus, Mnestheus, Eurytion and Acestes, to shoot in the order named.

Hyrtacus, first up, was a skilled archer and the winner of many prizes. He was a crafty competitor and took every possible advantage permitted by the rules. His policy was to make the easiest shot first and thus force the others to make the more difficult ones, increasing the odds against them. Hyrtacus was a favorite among his fellows and when his arrow pierced the mast dead-center, quivering from the force of its impact, the crowd shouted its approval and joy. Obviously the others could not win by a similar shot because he made it first; and he felt sure of the prize.

Mnestheus, a generous lad, could not bring himself to shoot a captive dove and with perfect control of his bow, gauging the force of the wind, shot the arrow and severed the cord which tied the fluttering dove to the mast head. The crowd was silent as it watched the dove soar into the sky.

Eurytion, with his bow already drawn, sped his arrow and the dove left its life among the stars, and its body, falling, fluttering, brought back the arrow to his hands.

And Acestes. With no target at which to shoot and display a skill greater than the others, could only shoot to win the favor of the gods. A fleck of a cloud, scarcely discernible, lazily vagranted across the blue. The bow, bent to its utmost by the strength of his brawny arms, was released and the arrow, passing through the cloud, burst into flame and left a long trail of light in the heavens. The Trojan crowd silently awaited the awards of Aeneas.

The first prize with gifts and temples bound with the sacred victor's laurel, was to Acestes. The second and third to Eurytion and Mnestheus. The crowd's applause was the only reward to Hyrtacus. He did the obvious thing.

This is a mechanistic age. It is deplored by those who today attempt to live in yesterday—the architectural Tories who can see no good in the different. They prate of the old craftsmanship with its individuality and decry the machine made product. The machine is a tool and its product is just what its control desires. Do not censure the machine but rather the man behind the machine. These Tories, successful and honored in their day, cannot understand

why the great volume of business flows to the younger men who live in today and eagerly anticipate the future. They deplore the speedy, "unstudied" designs which they cannot comprehend.

Looking over the works of the past, it is difficult to see wherein they were especially "studied". Details were most elaborately drawn, every surface was treated, all openings received special treatment, the elaborated cornice was the crowning glory. The greatest "study" apparently consisted in determining which particular "order" to use, which particular details to copy and to find enough to completely cover the building.



GENERAL MOTORS BUILDING, NEW YORK CITY
SHREVE AND LAMB, ARCHITECTS

A well known architect has written within the month: "Here in modern America our cities are heaved high in jagged peaks; some strange energy seems constantly to force the piled buildings into the air. Steel and concrete and brick mount up into a fantastic and unreal romanticism. And their foundations are driven deep by clattering drills or throbbing, straining steam shovels, as though modernity sought as much the depths under the earth as the air above. Steel are the drills; the steam shovel is steel; steel the girders and the columns that lace the sky as the building rises, and the plumes of steam or the acrid exhaust of gasoline engines are everywhere.

"Something has happened to us. Change—of environment, of temper, of our ways of living—is forced on us, with apparently ever increasing speed, by a relentless industrialism of steam and machine. We are breathless in our continued effort at adjustment, all our ideals seem sliding and shifting under the impact of novelty, like a breaking sea fog in a southerly breeze. What is beauty in such a changing world? Where in the strange new forms shall a man look to feed his eyes and his soul?

"Some of us turn back, bewildered, and from the city of ten thousand elevators retire in our newest motor to the white colonial house (its austerity buttressed on one side by a Tudor cottage and on the other by an Italian villa) to spend the evening before a gracious colonial fireplace, in gracious anachronistic Queen Anne chairs. Others swing as blindly away from all that has been; to them anything is bad, impossible, absurd, that was made, painted, written, or composed ten or more years ago. In their ludicrous arrogance they love ugliness only because the past loved beauty, and worship the devil because the past worshipped God. Both these flights from reality are twin absurdities grown of a single bewilderment."

The writer quoted above well describes the minds of many as being confused in an attempt at adjustment to today. This confusion of mind is relative. Some of us have seen the yokel much confused at a small town fair and he reminds us of the architectural yokel whose mind is confused when out of sight of a peaceful colonial dwelling or a placid classical bank building.

Something *has* happened to us. Building and architecture *are* in a state of swift changes. It is the natural result of the machine. It took the pagan Greeks perhaps several decades, with slave labor, to build a structure that we can duplicate as well within a twelvemonth. The machine has lifted the intolerable burden of unceasing manual labor from the craftsman, the slave has disappeared and the freeman has come. In fact, modern architecture expresses freedom—the passing of the requirement of using architectural precedent.

"What is beauty in such a changing world? Where in the strange new forms shall a man look to feed his

eyes and his soul?" Again the pleading cry of the man of yesterday who cannot adjust himself to today. Beauty is our idea of perfection, hence entirely an individual conception. It is all about us and discernible to those who are not blinded by prejudice. True, there is a vast welter of ugliness in modern architecture, but there was just as much architectural ugliness in the past and there probably always will be world without end. And then again there are degrees of relative ugliness.

I would quote from Elie Faure, THE NEW YORK TIMES MAGAZINE, July 17, 1927:

"If Rome appears to have been doomed by her pursuit of the enormous—if it was really the tremendous mass of stone piled up across deserts and torrents that finally crushed her—what must we think of America, whose gigantic bridges, whose factories covering hundreds of acres, whose buildings, mounting fifty or sixty stories and eclipsing Chaldean temples, all reveal a similar obsession with size? Is America destined, like Rome, to discover that in her stretching out her arms of cement and steel to distant peoples she has called forth a reflux of those peoples toward her own centres of activity, so that their mass stifles her energy?

" . . . I confess that I am one of those who ardently admire what America is doing; who see in its enterprise and energy, as in those of Rome, the expression of a nation's esthetic genius and who earnestly hope that it will go on and produce the harmonious fruits of its development.

"I hope, in the first place, that the American engineer will never take note of the beauty of the utilitarian structures that he builds. It would prove his undoing! For when the conception of the beautiful qualifies the conception of the useful, utility misses its mark and beauty is done for. . . .

"The trend of interest today is therefore gratifying. The theorists first resolved to deliver us from habits of profuse and useless ornamentation with which we have been encumbered since the Renaissance. . . . Then they turned their attention to the engineers of modern America and the builders of ancient Rome, who never had any intention of striving for the beautiful but rather for the useful and—since it is necessary—the enormous. For it is necessary to America, as it was necessary to Rome. Extensive social responsibilities demand a corresponding amplitude in architectural creations."

This essay by M. Elie Faure, tempts one to quote in its entirety. It evidences a growing appreciation of evolution of that American architecture whose milestones *The Passing Show* aims to mention. The contention that "when the conception of the beautiful qualifies the conception of the useful, utility misses its



VIEW FROM UPPER BROADWAY. GENERAL MOTORS BUILDING, NEW YORK CITY. SHREVE AND LAMB, ARCHITECTS

mark and beauty is done for" is the only true basis for architectural designing.

Architecture must serve its purpose. Commercialism and industrialism are here to stay for an indefinite period, and excepting residential, governmental, ecclesiastical and educational buildings, they comprise architecture. They demand utility which is reflected in net income, however shocking that may be to those gentle architectural souls who ostensibly abhor the word money in connection with beauty.

The problem today, then, is to first plan for utility to the greatest degree. It is a mathematical and engineering problem as it includes the factors of operation, maintenance and initial cost. Professor Peter Behrens has aptly defined architecture as the enclosing of space. When the utilitarian plan and construction is made, then architecture is applied and if in it "beauty qualifies the conception of the useful, utility misses its mark and beauty is done for."

There is then a fine beauty attached to utilitarian architecture—beauty because it is an expression of and does not detract from utility. It may not be beauty in the generally accepted academic concepts

based on the past. The past had no industrialism and commercialism in our sense, hence they simply could not evolve an architecture or scheme of ornamentation adaptable to today—so why not forget it? Surely there is among us an architectural genius who can solve the problems of today by creation. Creative genius certainly did not perish with the past ages, we have it today in all of the manifestations of engineering, and, yes, of architecture.

* * * *

THE PASSING SHOW is not one of those architectural anarchists who would "swing as blindly away from all that has been . . ." as noted in the first quotation, but rather a conservative who swings to today and tries to find a rational solution for the problems in hand. THE PASSING SHOW has no sympathy for the new simply because it is different, the bizarre or cubistic conceptions that afflict Europe today and it hopes they will never find a foothold in America.

* * * *

THE PASSING SHOW awards the prize of Acastes for 1926 to the General Motors Building—Shreve and Lamb, Architects. It is the best example, in its opinion, of that architectural fitness which is so well described by M. Elie Faure. It combines harmoniously, the element of utility with beauty.

In its designing the architects were handicapped by an existing three-story structure which was designed to support future stories. The original layout was intended to have an exterior court on the Eighth Avenue front in the lower part of which was to be constructed a theatre. The present owners, on acquiring the property, abandoned the theatre feature. After a careful study of the conditions, the architects decided to adopt an H plan with exterior courts on both Eighth Avenue and Broadway. This necessitated a rearrangement of column loads and the reinforcing of some of the existing columns and their footings. This was done and the superstructure erected without interference with the tenants. From the construction standpoint it was also a notable performance.

The original design consisted of a three-story Ionic colonnade with entablature and cornice. The lower story of the new superstructure is faced with stone which makes a suitable transition to the brick structure which is carried through the remaining twenty-one stories. The design is exceedingly plain and is notable for the absence of horizontal lines. The window sills are made of cast iron and are scarcely discernible, thus eliminating the usual annoyingly conspicuous window sills which tend to break up the surface of a building.

Verticality is secured by setting back the spandrel panels from the face of the pilasters which are unbroken except for a slight horizontal accent at the sixteenth floor and at the setbacks. Above the

seventeenth story the structure is squared with the Eighth Avenue line and the obtuse and acute angles of the Broadway frontage disappear. The successful placing of a rectangular tower-like structure on an irregular plot of ground is always a difficult matter. In this case it made the designing of the Broadway front especially difficult, but it was done in the same fine manner that distinguishes the Barclay-Vesey Building of the New York Telephone Company.

Some cities have especially fine sites for buildings and New York has quite a number. On many of these, the architect has failed to realize his opportunity even when abundant means were available. The position of this building adjacent to the crossing of Broadway and Eighth Avenue, offered a fine opportunity to design a structure which would be in every way suitable for a splendid site.

Broadway changes direction at this crossing and the street apparently terminates. Obviously a building on this site could dominate the vicinage, and this one does. From upper Broadway it presents an imposing appearance, it bulks majestically. It has a rather severe dignity because of its utter simplicity. And it should be so. Utility in the highest degree is secured and clearly indicated by its housing. It is a harmonious coordination which must and does yield a satisfying beauty. The design shows a fine sense of restraint which characterizes the new architecture. To add one line or detail would spoil the whole thing.

Unstudied? Perhaps so. The architectural Tories

who must perforce study their designs until they become a confused, muddled mess, are the exact contrary to the modern architect who keeps pace with machine production. The latter is trained in this age, he analyzes his problem, thinks logically and quickly and has but the right thing to do. When the mass is determined by utilitarian needs, the enclosure is but a logical conclusion. The mass determined, it is then the master mind and the master hand that disposes of its architecture in the only way possible to good architecture—logically and reasonably.

It is amazing that for two successive years we should have notable examples of architecture. It almost leads one to believe that the American architecture for which we have waited so long and patiently has arrived. Indications were noted along the way which we have called milestones—ten, eight, five years apart. Now with regularity they come, possessing a uniformity of *quality*, non-stylistic and variable in designing, the fine architecture of today giving promise of that of tomorrow.

It is noted that good architecture is more and more the result of intelligent ownership which carefully selects its architects. Great corporate ownership is as desirous of an adequate architectural expression as it is of its other material manifestations and in this instance the General Motors Company is to be congratulated for its selection of its architects, its possession of a notably fine building and its contribution to American architecture.

Book Reviews

"SYMBOLISM FOR ARTISTS" by Henry Turner Bailey and Ethel Pool, The Davis Press, Worcester, Mass.

This usable little handbook will be a boon to many an artist and architect concerned with the various symbolical forms which so often make their appearance in art work. Alphabetically arranged and full, if brief in statement, it makes an admirable "dictionary" to have at one's finger tips upon all occasions where "symbolism" or "meaning" may have a place. A very useful dictionary of college and university colors together with a splendid and usable bibliography are appended. The illustrations are assembled upon plates and are not distributed through the text. While some saving in manufacture is thus accomplished, it cuts down the efficiency of the volume. However, this is not as serious as it might at first seem.

We have on our desk a "Brochure of the Work of William Ward Watkin, Architect." Mr. Watkin went to Houston, Texas in collaboration with the late Bertram Goodhue in the construction of the Rice

Institute buildings and has remained to practice in that state. This is a representation folio of Mr. Watkin's best work wherein are shown the Museum of Fine Arts, the Chemistry Laboratory at Rice Institute, Trinity Church, studies for the new Texas Technological College at Lubbock, the Houston Public Library and a number of commercial buildings and residences in that city. Mr. Watkin is accomplishing some splendid work.

CATALOG OF COLLECTIONS—II. National Gallery of Art, Smithsonian Institute. By William H. Holmes, Director. Government Printing Office, Washington, 1926.

This illustrated catalog, while it does not show all the pictures listed, gives a very good idea of the value of these collections. It is further valuable for the biographical data it gives regarding the artists represented. Too bad it is that a great country like our own should not make adequate provision for the housing of whatever art collections are now in existence at Smithsonian and in the national capitol.

REXFORD NEWCOMB

Color in Architecture

IX. Color Preference and Affective Value

By REXFORD NEWCOMB, A. I. A.

THE preferences that people exhibit for color and the effect that these colors have upon them should form a serious part of the study of anyone attempting to use color in any full way in architecture. Color preference is a very interesting phenomenon and, at first, its variability among individuals might lead one to conclude that there are no laws to be deduced with respect to it. Two ways are open to a discovery of the facts in the matter, however, and these are:

A—Observation of the colors used in dress, decoration, etc.

B—Tests upon a sufficient number of individuals, under uniform conditions, to determine what colors are preferred for their own sake and the order in which they are preferred.

In a study of color preference one realizes at once that environment, association, and heredity have much to do with the preferences discovered in *class a* and therefore that such preferences vary with race, time, and geographical situation. Under geographical situation would of course be embraced *climate* (*sunshine is a prime factor*), material resources and other considerations. I recall once, while studying the Indian types of New Mexico, I was seeking a certain *pueblo* and was told to watch for the church. I all but missed the place because the color of the architecture was so nearly identical with that of its environment that it was scarcely distinguishable. I judge that this is an example of what, in the natural world one would call "*protective coloring*". Even within a country, it should be pointed out, color preference varies widely because of the variability of climate and the other factors mentioned. Therefore what one might do *colorfully* in Los Angeles or Miami might prove disastrous in St. Paul or Boston. Color varies as widely as does form in architecture, and indeed it is quite possible to show that each of the world's great architectures have had distinctive colors as well as distinctive forms. But these we shall discover in subsequent studies.

While the data gained from an observation of the colors used may be of little value, because of the inertia of custom and other environmental factors, certain general deductions are possible. It is an observed fact *that the warmer colors are employed more frequently than the colder colors for interior decoration*. The explanation of this fact is not plain. There may be many reasons. Perhaps the sense of warmth and shelter which a building is supposed to afford, especially in temperate zones, induces an appreciation

of the element of *cheer* and this the warm colors supply. Again *sombre interior* surroundings are depressing and this effect apparently the race desires to avoid. *Homo Sapiens* prefers to be gay if possible.

On the other hand he does not care to be too gay, especially since he has advanced in culture, and instead of *large areas of pure color*, he prefers *tints and shades*, reserving strong, pure colors for those portions to which he desires to give emphasis. Generally speaking, the more highly civilized a people, the less frequently does it use pure, brilliant color *in large areas*. But this is, after all, the lesson that nature teaches, for Nature paints most of her scenes in tints and shade, and reserves her most brilliant notes for the rare occasion.

Exterior architecture, generally speaking, has almost invariably been more brilliantly colorful in the sunnier climes, grading almost uniformly as one goes northward. This again, the alert observer will note, parallels Nature's processes; brilliant Birds of Paradise do not appear in the *sombre sylvan shade* of a northern forest. In architecture, however, an exception to this rule is upon occasion encountered, the Greek Orthodox churches of Russia, which are far more colorful than those of neighboring lands, forming an example. Often too, in brilliantly lighted lands white-wash is employed lavishly upon buildings, as in North Africa, Bermuda and in parts of our own land, this almost invariably in contrast to a brilliant environment. In brilliant lands the heat demands *cool* interiors and therefore *cool colors* are used inside while in colder climates the interiors, as pointed out above, veer to the *warm* end of the spectrum in order to produce an effect of cheer and warmth.

The experiments upon large numbers of people for the determination of popular colors (i. e. color preferences) are carried out in the following manner. The subject to be tested is put into a situation as neutral in character as it is possible to make it. Standard colored papers in pairs are then compared upon a neutral ground; the subject makes his choice and the results are tabulated. Usually all the hues of the spectrum, together with a tint and a shade of each are offered the subject in combination with each of the others, so that he is required to make a large number of choices. If R.O.Y.G.B. and V are used, together with a tint and a shade of each, it will be seen that each color comes under the subject's scrutiny seventeen times. The first choices are tabulated and a summation of these indicates the relative popularity of each color tested.

Such tests have been performed upon relatively large groups of subjects by several investigators with general results as follows:

(a) It is plainly demonstrated that *pure hues* rather than *tints* or *shades* of these are, under such conditions, preferred. This, it will be seen, is in exact contradiction to the observation of color usage as we sense it in Nature and in the man-made things about us. The controlling factor here is the *area* in which the color is presented. Moreover, the exposure is momentary. The story would be quite different, were the subject "exposed" to large areas for long periods of time. Such data have, however, a vital message as to the general color preference of educated humans and are therefore of great value, theoretically and practically.

(b) The color preferences of men and women, as classes, differ, the men giving chief place to *blue*, the women to *red*.

(c) The summation of all data (male and female) results in a preference order as follows: red, blue, violet, green, orange, yellow, blue and red being almost equal in rank. Shades of yellow are the least preferred of all colors. In other words, the colors at the terminals of the spectrum are more popular than those in the middle.

It must be remembered that all these deductions refer to the conditions under which such tests are made, that is with small areas of color in neutral environments. Under the conditions named under *Class a*, exactly opposite results might result. Such tests remain yet adequately to be performed with sufficient numbers of subjects to insure safe results, and, as yet, we must rely upon color preference as displayed by the use men make of color in the arts. Here, as early pointed out in this paper, the balance stands in favor of tints and shades as over brilliant pure color when large areas are involved.

Architecturally, it seems to me, the tests made some years ago at the University of Illinois by the late Professor Newton A. Wells and reported in *Psychological Bulletin*, Vol. 7, p. 181 (1910), are of great value and interest. Professor Wells ran this test upon a group of college students of which I happened to be one. Two-inch squares of the following colors were mounted horizontally and about three inches apart upon a large neutral (gray) background: crimson, scarlet, deep orange, orange-yellow, yellow, yellow-green, green, blue-green, blue, violet-blue, violet and purple. These colors were arranged in their order in the spectrum. The chart was hung before the subjects and the following word-list was written upon the blackboard:

| | | | |
|---------|----------|---------------|-----------|
| quiet | exciting | depressing | peaceful |
| sad | solemn | loud | dignified |
| lively | neutral | heavy | gloomy |
| sombre | gay | light or airy | energetic |
| restful | cheerful | noisy | dainty |

Each was then requested to write one of these adjectives to describe the feeling or mood suggested to him by each color. The purpose of these answers, it was explained, was to ascertain *why* one *liked* or *disliked* the colors involved as well as discover *what* he liked and disliked. Sixty-three subjects participated in the test and the results thus obtained were then tabulated under three headings under which, it will be observed, the adjectives of the above list may be classified: *exciting*, *tranquil* and *subdued*. The mood-reactions of the group are shown by the following table.

| | Exciting Influence | Tranquilizing Influence | Subduing Influence |
|---------------|--------------------|-------------------------|--------------------|
| Crimson | 41 | 0 | 10 |
| Scarlet | 56 | 0 | 0 |
| Deep Orange | 59 | 0 | 0 |
| Orange-Yellow | 55 | 6 | 0 |
| Yellow | 53 | 6 | 0 |
| Yellow-Green | 14 | 39 | 5 |
| Green | 28 | 32 | 0 |
| Blue-Green | 32 | 23 | 6 |
| Blue | 11 | 21 | 30 |
| Violet-Blue | 0 | 17 | 45 |
| Violet | 0 | 6 | 54 |
| Purple | 3 | 1 | 48 |

From an examination of the table, it will be seen, that the *warm* end of the spectrum is the *exciting* area, the *middle* zone the *tranquilizing* area and the *cool* end the *subduing* area. Purple, it will also be noted, affords slight excitation, while scarlet and deep-orange afford a maximum. Yellow-green is more generally tranquilizing but green and blue-green excite some subjects. The exciting and tranquilizing capacities of green apparently almost balance one another. The tranquility zone is well defined and exhibits a maximum with yellow-green, while violet claims a maximum subduing capacity.

A further interesting record along this same line was Professor Wells' own reactions to these same colors. I set them down here as being interesting, normal human documents.

"Crimson, or deep red with a trace of blue in it, when standing alone, or seen in large quantity always" gave "vague impressions of passion, rage, blood."
Scarlet, or red with trace of yellow, "the blare of trumpets."

Deep-Orange, flame heat, excites "a feeling of suffocation."

Orange-Yellow, warm, glowing, lively.

Yellow, joyous, gay, merry.

Yellow-Green, cheerful, smiling.

Green, peaceful, neither sad nor cheerful.

Blue-Green, sedate, sober.

Blue, cool tranquility.

Violet-Blue, stern, hard, unyielding gloom.

Violet, subduing, serious to the point of melancholy.

Purple, stately, pompous, impressive.

While such results and reactions are only ap-

proximate, they serve to indicate in a general way the *affective value* of color, and the architect desiring to produce specific moods and reactions in his beholders will find such knowledge of service. The use of color in schools, hospitals, insane asylums and similar institutions may be governed by such data, and the impression of the character or function of a building may very well be expressed by its external color.

In connection with color study it is a valuable

thing for the architect or anyone else using color to analyze his own color preferences and the effect that the various colors have upon him. Certainly by such a process he will acquaint himself with the variables involved, and therefore better understand the seriousness of his problem. The *physiological* and *psychological* effects of color are as yet little understood and much must be done in these fields before the architect and decorator can proceed with assurance.

Comment--Architectonic, Mostly

By F. W. FITZPATRICK, *Consulting Architect*

OUR profession is noted for its public spirit. Well, why not start out upon still another great uplift movement? It's worth while.

Half the infelicity, marital complexes, conjugal rows and what not that beset married life come from too much intimacy. A man and wife are too much together; they get upon each other's nerves. The common bed-room is largely to blame; there they are, walking all over each other's toes, a most fruitful cause of dissension.

Architects should preach and plan a separate bed-room for the old man. Let the family chamber be as fine as possible, places for all the good dame's doodads, mirrors in doors, cupboards ad lib and so on, the best ever. The male of the species gets only a closet door knob for his accoutrements anyway.

Cut down on the living room, (you can't cut much off the kitchen, especially in the apartment building,) but skimp down wherever possible so as to provide a bit of a cell, if nothing more, where a poor chap may hang his breeches on the light fixture and put his shoes on the bed; where he can breathe or snore in any key he chooses, where he may have some liberty, some privacy, with no one to hog the bed clothes, a place really all his own, however humble and tiny it may be, but his own, where he can dignifiedly retire into solemn state and solitude after a family jangle, or to the privacy of which he may hastily beget himself when a jangle seems ominously near. I tell you, it is one of the important movements of the era. The architects can make it a success or break it. It is up to them. They can let the divorce evil grow at the pace it is now traveling, toward national disaster, or they can put on brakes and cut it down by half.

I see many plans in a month's time. The average architect who lands a hotel or restaurant assigns a certain space to the kitchen and lets the kitchen experts loose in planning its equipment. That's all very well, but the space itself is too often ill-chosen. The kitchen is still thought of as a sort of necessary evil, anything is good enough for it. Try and re-

remember that 35 percent of our people eat out, that there are 17,797 hotels—of over 25 rooms—that employ 1,500,000 people, and 92,500 restaurants employing 1,387,500 people. Those figures may impress us with the importance of the eating problem and the necessity that exists for properly and adequately planning the kitchen.

Yet that, too, may be overdone. One set of plans I went over last week had four separate and widely remote kitchens for dining room, cafe, grille and banquet hall. Of course, the kitchen experts loudly approved, and licked their chops over the prospect of four complete equipments in one building.

* * * *

Some offices are making a practice of sending their junior draftsmen off on tours of inspection of planing mills, machine shops, stone cutting shops, terra cotta factories, etc., etc., to see how things are done. A splendid scheme. But why restrict it to junior-draftsmen? Send out the seniors, the designers and detailers especially, yea, the archeeteks themselves, bejabers, it would do 'em all good!

So many plans show fine draftsmanship, good taste, cleverness, but woeful ignorance or lofty ignoring of established, customary and easy ways—stock ways—of doing things. Why will so many insist upon painfully detailing moldings in wood work instead of picking stock molds? Why specially design and specially make doors 7.7½ high when there are perfectly good 7.6 doors, just as handsome too, in stock at half the price? No, everything is especially detailed, and different.

A while ago I happened to know of an extra terra cotta eagle that had been made, a great big costly fellow. Another job came along where an eagle of almost exactly similar size and action was shown. Do you suppose I could get No. 2 architect to use No. 1's eagle at half price? Not on your life! No. 2 had to have his eagle modelled exactly as he thought he wanted it.

And why in Heaven's name will a man ask for and insist upon cornice and other ornamental work of

finest and most minute detail twenty and more stories high? It is all lost, labor wasted; swirls and indications of pattern, coarse detail is all that is needed, indeed, it makes a hundred percent better show than the finer stuff. Anyway why put so much ornament away up high and leave it out near the eye, on the lower stories? Are we planning for air-traffic and do we expect people to go skimming along at roof levels looking for a likely place to park?

And why will young architects resort to the pitiable bluff of putting a big stamp on their plans, "job No.; made by; checked by;" and so on, such as they have seen in the larger quantity-production offices? A set came in the other day "job No. 7316" and made by, checked by, attested by the same initials, the architect's—a pushing young chap who has done perhaps the 16 jobs but whose "7300" is purely "atmosphere," so dinged obvious too.

And, lastly, why can't architects work together in some unity and amity? Other professions do, but not the architects. I can remember but one instance where a bunch of them did do something worth while as a bunch. But that was under a master-executive, the equal of whom, as an executive, has never been known before or since his time. I mean Burnham and the way he handled and kept in leash the architects who worked on the Chicago's World Fair. Others have attempted a like feat but none has been as successful as he.

Here is one little instance in my own experience. A friend of mine lost his wife, and he, bereaved, but blessed with much lucre, wished to build a suitable

monument to her memory. We talked it over and he was persuaded to make the memorial a library in the very select suburb to a great city where he lived. He suggested I do it for him, but I knew that four of the leading architects of that city were his neighbors in that suburb, so counter-suggested he get one of them to do it. That would incur the displeasure or jealousy of the others, said he. So I had a brilliant thought and flashed it at him. Why not invite the four to lunch or breakfast and suggest that together, as co-citizens they study and plan this library for their town, let it be known as the product of their joint talent, elect one of the number to carry on the work and cut up the fee between themselves all to the greater honor and glory of their town. He thought it a fine idea, suggested it to them, and they thought it so too.

I didn't see him for some time and when I did he was rather grumpy and chill.

I had forgotten the incident but it appears the dear boys of the profesh, as usual, quarreled, and the affair was all snagged up. He got mad, paid them off and it took him a year to forget I had been the author of his woes with my bright suggestion!

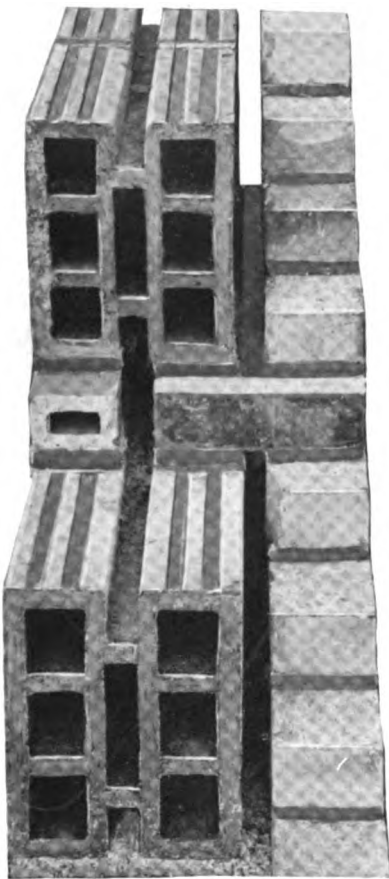
So never will I again advise a composite commission of architects. Indeed, one never knows exactly how to handle them or one's self in any transaction with them. Talk about the temperamentality of poets and actors, great guns, it seems to me every architect has enough temperament for half a dozen actors or prima-donnas!



RUSSELL E. HART, ARCHITECT
 GEORGE D. NEVINS,
 ASSOCIATED ARCHITECT
 BELLE KINNEY AND
 LEOPOLD F. SCHOLZ,
 SCULPTORS OF PEDIMENT

FRONT COLONNADE AND
 PEDIMENT
 PARTHENON
 NASHVILLE, TENNESSEE

Why Denison Load-Bearing Tile are Better Back-up



Wall section Showing Denison Load-Bearing Tile No. 47 used in backing up face brick with fifth course headers backed by No. 11. By using a combination of No. 47, No. 35 and No. 23, headers may be laid any course from the fifth to the ninth.

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A thirteen inch brick veneered wall contains four air blankets. One of these air blankets also insulates all bed joints and header courses. The various horizontal members of this tile are so placed with reference to each other that no one of them extends completely through the wall. Each ends in a dead air space.

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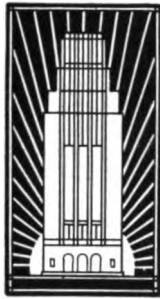
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MASON CITY BRICK and TILE COMPANY

310 Denison Building

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THE WESTERN ARCHITECT



ARCHITECTURE

ALLIED ARTS

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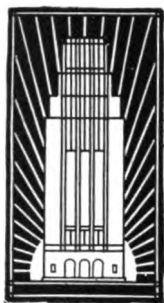
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RESIDENCE OF MR. BEN HARWOOD, LOS ANGELES, CALIFORNIA
EVERETT H. MERRILL, ARCHITECT



THE WESTERN ARCHITECT

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ARTS

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Number 10

Educational Requirements in Legal Registration

The logical relationship existing between architectural education and architectural registration, practically unrecognized in the first essay into the institution of a legal requirement to practice by legislative action in Illinois, has only recently taken that higher form in which a certain measure of general education is held to be an integral part of the registration requirement program. While the National Registration Board and the Institute Committee on Registration advocate, and, in a measure, insist that candidates shall display familiarity with the three Rs and something more beside a technical knowledge of construction, it is in the Institute Committee on Education that the germ of such accomplishment lies. The practical work in this direction accomplished from year to year by this committee of which George C. Nimmons has long been chairman, has established lines for a grounding upon which study of the profession and the subsequent legal right to practice may be based. This probably was the purport of the rather ambiguous and perfunctory report of the Institute's Committee on Registration, though it bore on the necessity for the promotion of university schooling only. The educational program, carried on from year to year by Mr. Nimmons and his able committee members, in a marked degree has won the attention of the colleges. Its report to the sixtieth convention stated that the committee had recently devoted its principal activities to the development of art instruction in the colleges with funds provided by the Carnegie Corporation. This movement during the past year was centered upon a summer term at The Art Institute of Chicago, in which faculty representatives from twenty-three colleges took part, and carried back to their classes the results which will be passed on to the students. This effort alone will indicate the importance as well as the advanced and practical character of the work of the Committee on Education, which is also in cooperation with the Beaux Arts Institute of Design, and the architectural department of the American Academy in Rome. While this program is wholly applicable to those architectural aspirants who have the means to acquire a college education, Mr. Nim-

mons, before the Convention, made a strong plea for the draftsmen, the architects of the future, who must depend upon individual effort and office schooling to advance their innate talent. He used "the opportunity for education, for the benefit of architecture, which touches every practicing architect—the education and improvement of draftsmen who are under the control of the architect and under his influence and guidance." It is in this plea, supplementing his report, that Mr. Nimmons brings before the architects of the United States the most important part of his educational program, for Mr. Nimmons doubtless recalls in his own youth that personal contact as a young draftsman with Normand S. Patton and John W. Root that encouraged and inspired a talent that has contributed to the Middle West one of its most valued architects. His was a plea in behalf of the draftsmen already employed in offices, but who are unable to pursue a college course. This is not a special plea for the exception, because only a large minority of practicing architects, even among Institute members, are college graduates. Many members of the profession who today stand at its head, outside the possession of inherent talent, owe their success to the architects whom they served as draftsmen thirty or more years ago. These men, however, would acknowledge only that they have been handicapped by reason of the lack of training along academic lines. As Mr. Nimmons declared, "none of us knows who of the young men working in our offices, may be the leading architects of the next generation. A boy who has not had the advantage of a college education, coming in to an architect's office, is greatly in need of help and there are many things that an architect can do, without taking up much time, that might be of infinite benefit to that young man." It is here that the work of the Committee on Education joins most closely to that of the Registration committee and the work of the State Boards in those states where registration laws are in operation. It is too soon for these boards to demand general education of an advanced character, but it should be on the future program for a perfect registration law, national in its scope. Such a law should be formulated by the best minds in the profession and with adequate legal assistance.

The merry war over traffic congestion and the effect which the high building has upon it, the latter being the main controversial point, still finds new fields for argumentative action. Those who contend that the vertical compensates for the horizontal are met with the poser that "London, which has not a single high building, nevertheless has a traffic problem worse than ours." But one fact stands out clearly; that is, that while Bessemer steel made practical the construction of tall buildings, the "elevator" or "lift" made the convenient use of tall structures possible. And both conform to the evolutionary theory of construction. As T- and channel-beams were forged for the specific use of the skeleton steel frame and design was met by manufacturing ingenuity, the elevator advanced from the crude plunger form to the present perfect combination of electric power and mechanical adaptness. In the Tribune Building of the Chicago fire period and the old Howland Block in that city, the plunger type of elevator with its steel-lifting shaft was used. It was a prominent but puzzled architect in London who inquired of John Root; "How do you get a hole deep enough for the elevator in the eleven-story Rookery?" But the Hale hydraulic elevator seemed then to be the last word in elevators. Then came the development of electric power. There are architects who remember riding in the first electric elevator, invented by one Mitchell, and installed in the Postal Telegraph building, in New York, at the invitation of the inventor. The more recent history of elevator improvement is too familiar to need repeating. As invention solved the problem of the high building which crowds the adjacent streets with pedestrians, who in turn are crowded by motor vehicles; so with ramps, elevated walks and bridges the pedestrian will be served and the demands of commerce met by the architect in the design and construction of required "skyscrapers".

When, shortly after the close of the Columbian Exposition at Chicago in 1893, "five citizens who owned three-fifths of the property on the South Side" told Daniel Hudson Burnham that "by the Lord Harry" his plan for Chicago would go through, that favorably located and superlatively endowed city became prospectively the premier metropolis of the United States. His plan, when made and presented to the people for ratification, was called "a dream"; yet, in the following quarter of a century it has been found to be not inadequate but only the beginning of further daring advances into

urban orderliness and social advancement in living conditions. When the delegates to the fifty-sixth convention of the Institute were taken from the Chicago Beach hotel near Jackson Park and carried for thirty-five miles northward to Lake Forest, and, returning, dined at the Indian Hill Golf Club on the edge of the Skokie at Winnetka, they surveyed only a narrow strip of the present and future Chicago, that along the Lake Michigan front. After passing through the lake front boulevards of the city of the past, this party entered the thirty-five-mile long drive called the Sheridan Road, which completed the dream of Burnham when he walked and drove over this route before the days of the motor car and laid out a coach road to Fort Sheridan. Subsequently he drew the lines of extended thoroughfares in other directions. Today these "dream roads" are connecting boulevards between outlying villages and the city. Along them the expanding city spreads. Today to south, to west, to north, the hegira of the suburbanite has linked by continuous building each district with the city. Winnetka, only yesterday a quiet and remote village with a sand hill that once was an Indian grave from which this writer dug flint arrow heads sixty years ago, now the famous golf course, is connected in all but government to the great city to the South. Similarly the half-circling towns north, west and south are becoming an integral part of Chicago's life, connected as Burnham saw they would be, by transportation facilities and residence growth. This development of a great plan is never fully realized by the average citizen, but its reality and its greatness is spread before all citizens and visitors alike in the stupendous work of encroachment upon the lake at the city's front door. Here, where a few years ago the lake shore was bordered by Michigan Avenue, and the waters of the lake washed the piles supporting the Illinois Central railway tracks, there reaches outward for more than half a mile a park of hundreds of acres, upon which is the Field Museum and a stadium that has no superior in size in the country. This was a part of the Burnham Plan. What was not contemplated by the author of the plan even in his most fantastic of dreams, was an island constructed still farther eastward in the lake upon which a landing field for airplanes and sea planes is in the making. Only ten minutes distant from the heart of the city this will form an air station nearer to a city center than is possible in any other metropolitan district in the country. These park accessories are of immense importance. But it is a thorough accord between realty developers and the city planning commission in its suburban extensions that will complete the dream of an orderly and livable community that its great projector contemplated.

✓ The Early Architecture of the State of Ohio

Early Houses in Milan

By THOMAS E. O'DONNELL, A. I. A.

IN THE late 'twenties and early 'thirties when Cleveland and Chicago were as yet but small villages, Milan was the chief city of the Western Reserve, in northern Ohio. So great were the interests centered there and so bright were her future prospects that her citizens built a canal connecting the town with Lake Erie, eight miles away, thus making her a lake shipping-port. For a time her growth was more rapid than that of any other city in northern Ohio, while her grain shipping industry is said to have been proportionately greater than that of any other city in America. That was many years ago, and one would today look in vain to find any trace of this one-time commercial prowess.

The site of Milan is a beautiful one,—on a high plateau surrounded by picturesque hills, valleys and a winding river. It lies within the western portion of the old Western Reserve area, known as the "Firelands". The first white men to live on the site were the Moravian missionaries who established a mission here as early as 1789. The first permanent settlers in this area were Colonel Jared Ward, Jabez Wright and Almon Ruggles, the last named being the surveyor of the Firelands sent out from Connecticut. The town of Milan was laid out and named by Ebenezer Merry, who had lived there two years previously and had erected a grist mill and sawmill.

Milan's rapid rise to a place of prominence was due largely to her geographical position and to the topography of her immediate vicinity. She was located at the northern edge of a great wheat-growing area and was a natural gateway, by wagon road, between that region and the lake shipping ports. Before the advent of canals and railroads the haulage

of grain from these great inland areas to the lake ports was an important factor in the economic growth of this section of the state.

It soon occurred to the enterprising citizens of Milan that their town occupied a strategic position with respect to the transportation of grain and other products to and from the lake ports. The problem was to make Milan a port, and thus save the long haulage over bad roads from there to the lake. Milan was situated on the south bank of the Huron River, but it was not navigable all the way from the lake to the town. In the year 1828 a company of citizens was formed and a charter obtained to improve the Huron River and build a canal. This was accomplished by dredging and otherwise improving the river for about five miles from its mouth and constructing a canal for the remaining distance. This work was begun in 1832 and completed in 1839, and the canal was one of the first to be put in operation in Ohio.

This canal being largely owned and controlled by the citizens of Milan, it brought considerable wealth and prosperity to the community. An era of building activity set in and many fine houses, churches and other buildings were erected. Business

enterprises of all kinds sprang up. It became a center of trade as well as for marketing grain. Because of the abundance of timber, the presence of sawmills, blacksmith shops and the general needs of the shipping industry, Milan became a natural center for boat building. Canal and lake shipping vessels were constructed and it is on record that several U. S. Government revenue cutters were built here.

But Milan's prosperity was to be short-lived for the canal was scarcely completed when the railroad development in Ohio began. The railways were



FIGURE 1. THE LOCKWOOD HOUSE, MILAN, OHIO. SHOWING THE INFLUENCE OF A CONNECTICUT FAMILY UPON THE EARLY ARCHITECTURE OF OHIO. DATE ABOUT 1830.



FIGURE 2. DOORWAY OF THE LOCKWOOD HOUSE, MILAN, OHIO. AN EARLY OHIO RENDERING OF A CONNECTICUT COLONIAL TYPE.

destined to connect directly the inland towns of Ohio with eastern cities and markets, thus naturally causing a decline in river and lake shipping, of the type Milan was interested in. A railway was proposed, to connect Milan and other northern Ohio towns with the East. But the canal was owned and operated by the Milanese themselves; to permit the railroad to pass through would be to ruin the canal business. To save their canal and shipping interests the citizens of Milan refused to let the railroad enter and it passed, instead, through Norwalk, a neighboring town a few miles to the south.

From that day to this Milan has declined. Disastrous fires have swept away portions of the business section. The town square seems unusually large and quiet. Great gaps now exist in what were once solid ranges of business buildings about the square. All about the village are many fine old homes, silent reminders of former days of prosperity. A few are much neglected but many of them are carefully cared for by descendants of the original owners. Over all there is an air of quiet dignity and pride in the past,—for Milan lives in the glory of her past.

Many of the earliest settlers in Milan came from Connecticut, some coming from the vicinity of Danbury. The Lockwoods from Connecticut were among the early prominent people of the town and were the leaders in the canal and other development projects. The old Lockwood home, built about 1830, is still standing (Figure 1). It is a fine example of the *Post-Colonial*, and shows a direct reflection of the New England types of the Connecticut Valley. No doubt the workmen who erected this house were trained in Connecticut for there is a striking re-



FIGURE 3. DETAIL OF CORNICE OF THE LOCKWOOD HOUSE, MILAN, OHIO. SHOWING THE USE OF HAND MADE, BORED AND GOUGED MOULDINGS AND DETAILS.

semblance in the treatment of the architectural details of this house and those of Connecticut in and around Danbury. The refined details of the doorway (Figure 2) and the cornice (Figure 3) show the gouged and bored mouldings so common in the early work in parts of Western Massachusetts and Connecticut. The interior details of stairway, mantels and trim are also of the Connecticut *Post-Colonial* type, and show a refinement that suggests the work of New England-trained carpenters. Scattered throughout the town are many houses showing this same type of work.

The Ebenezer Andrews House (Figure 4) is of the same general type as the Lockwood house, but much larger and more pretentious, especially the details of the entrance but particularly upon the interior. However, it lacks the refinements of architectural detail. Although *Post-Colonial* in its general design and disposition, it shows a strong tendency toward the *Classic* and *Greek Revival* in its details, especially the doorway, the mantels and the interior trim. The doorway (Figure 5) shows evidence that the designer or builder used Benjamin's handbook, "*The Practice of Architecture*", for its details match those shown on Plate 29 of that publication.

Mr. Andrews was a graduate of Harvard, came to Milan at an early date, and apparently acquired considerable property and wealth, but in common with many others of the town, lost heavily during the period of decline of the shipping interests. The estate is still owned by descendants of the family and the house with its furnishings is well preserved. The house is situated in a large and beautifully wooded lot on the outskirts of the town and has about it the air



FIGURE 5. DOORWAY OF THE EBENEZER ANDREWS HOUSE, MILAN, OHIO. SHOWING THE INFLUENCE OF THE GREEK REVIVAL.



FIGURE 4. THE EBENEZER ANDREWS HOUSE, MILAN, OHIO. A LATE POST-COLONIAL TYPE IN OHIO. DATE ABOUT 1835.



FIGURE 6. THE SMITH-TURNER HOUSE, MILAN, OHIO. DATE 1840-45. A FULL BLOWN GREEK REVIVAL TYPE. VIEW SHOWING TWO-STORY WING ON SOUTH SIDE.



FIGURE 7. THE SMITH-TURNER HOUSE, MILAN, OHIO. VIEW SHOWING ONE-STORY WING ON NORTH SIDE.

of a depleted aristocracy comparable to that of some of the old southern plantation homes.

Perhaps the finest of all the old houses of Milan is the Smith-Turner home (Figures 6 and 7). This is of a much later date, about 1845. It is of the full-blown *Greek Revival* type and represents the climax of the style in this part of the state. It follows the usual *Greek Revival* formula of the more pretentious house, consisting of the two-story temple central portion, with massive pediment and portico of four Ionic columns which extend the full height, this mass flanked with a wing and porch on either side. This type-plan and exterior was a favorite one and was illustrated in the various carpenters' and builders' handbooks of the time. The portico, pediment, columns, pilasters and other architectural details are all of the massive stone proportions, indicating that in detail, at least, Greek precedent was closely followed. The proportions are all pleasing and in complete harmony with the size and purpose of the building, and more refined than most structures of the period, being free from the crudities often met with at the hands of the carpenter-builder in rural situations. The house is of brick with wood trim,

the red of the brick and the white wood trim and details forming a pleasing contrast. The columns of the portico are especially well designed and executed, and are of the Erechtheion type. The details of the cornice, doorways, window-trim, mouldings and all other exterior architectural elements are based directly upon pure Greek forms.

Milan's canal, her "shipyards", mills, docks, warehouses, shops and all signs of commerce have apparently disappeared for all time. But in spite of all her vicissitudes, she was destined to become renowned, not through commercial supremacy as her citizens thought, but by virtue of the world-wide fame that was to come to one of her native sons,— for Milan gave to the world the noted inventor, Thomas A. Edison. He was born here on February 11, 1847. His boyhood home, a modest brick cottage located on a quiet side street, where he spent the first seven years of his life, is still standing. (Figure 8). As the years go on this will become a shrine of ever increasing popularity and will bring to the modest little town a distinction of which any large city might well be proud.



FIGURE 8. BIRTHPLACE OF THOMAS A. EDISON, MILAN, OHIO. A MODEST BRICK COTTAGE WHERE THE GREAT INVENTOR SPENT THE FIRST SEVEN YEARS OF HIS LIFE.

The Passing Show

The Shot of Eurytion, 1926

By ARTHUR T. NORTH, A. I. A.

EVERY building makes its own appeal, perhaps unconsciously, but inevitably. It rarely happens, however, that two buildings appeal to one with equal power. When this happened to The Passing Show and a choice had to be made as to which one were the better in awarding the prize of *Acestes* for 1926, the task was most difficult. Declare it a draw? No, that would not be sportsmanlike, a decision must be made.

One can view the General Motors Building (*The Shot of Acestes*, *The Western Architect*, September, 1927) from all directions and under all conditions and be profoundly impressed by it and feel quite confident that it must be the best of 1926. Then an unexpected glimpse of the Savoy-Plaza from the far end of the Park, or, desecrating its green roof, white chimneys and dormers up the Avenue, lures us to a close inspection and to fall a victim to the magic of its charm—and surely *it* must be the best of 1926. And so it went and the decision not made. Excursions far afield yielded nothing that would solve the problem, and to settle the matter definitely, the time of judgment long past, a scheme of ratiocination was set up.

Wherein was one building architecturally superior to the other? Did one better indicate its purpose; was the usability of one greater than the other; was one more skillfully modeled, proportioned or bulked; was one superior in the refinement of line, detail, color or texture? Each was equally satisfying in itself.

What is the purpose or use of each structure? The Savoy-Plaza is a residential building—a glorious embodiment of homes; and homes are as old as man. Throughout time homes have been constructed, each kind in its age being the current expression of the existing civilization. The Savoy-Plaza best typifies

a congregation of homes in one structure, in accordance with our vogue. But, again, homes are as old as man.

* * * * *

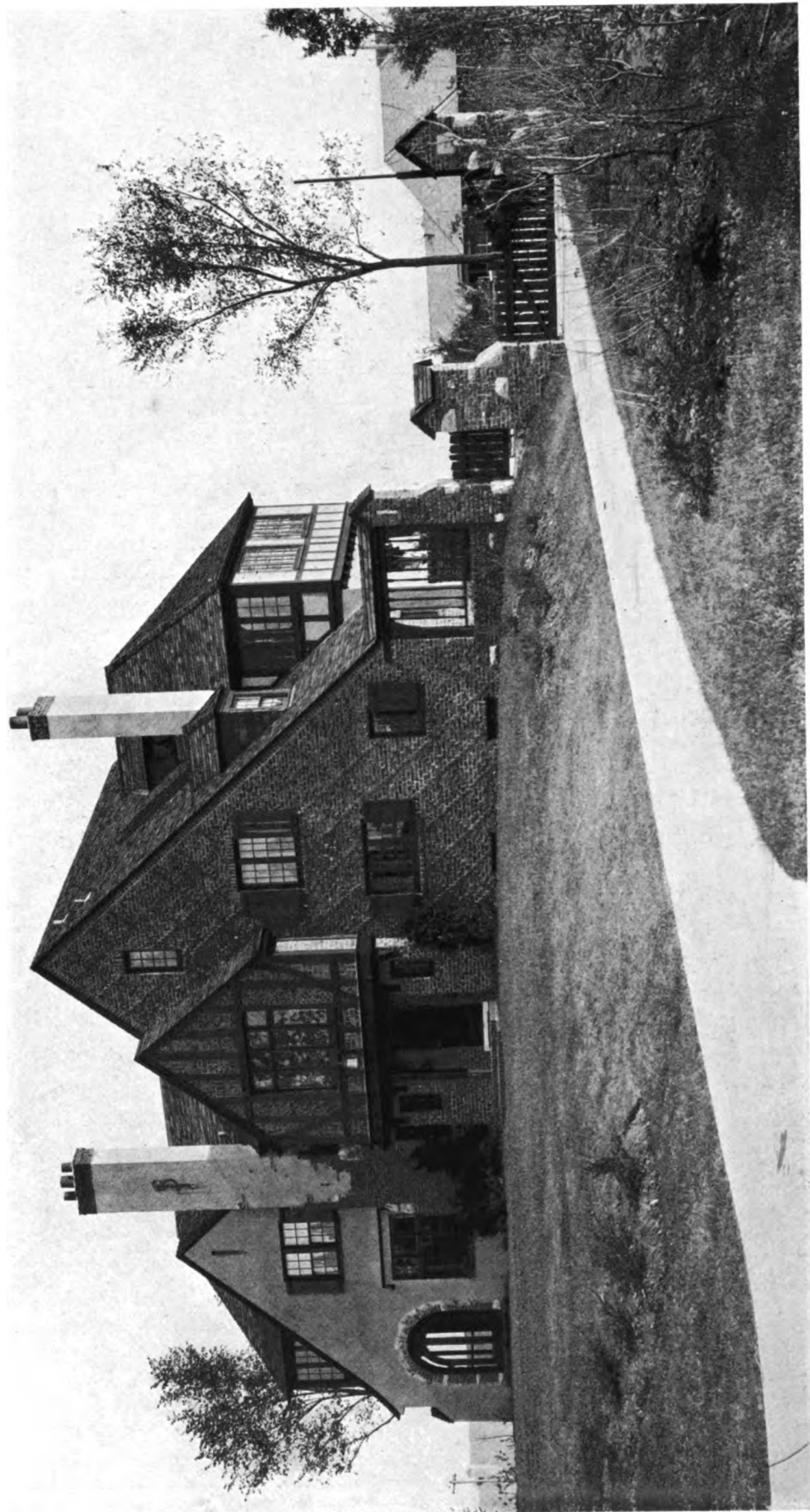


ARCHITECT'S PERSPECTIVE, THE SAVOY-PLAZA, NEW YORK. McKIM, MEAD AND WHITE, ARCHITECTS.

We talk of modern industry and commerce, but they have always existed; and but for one factor the ancient and the modern would be alike. Steam and electricity make quick bulk or commodity transportation possible. That created new and extended markets which could only be supplied by mass production. Production, in former times, was an individual undertaking, carried on in the home or workshop. The sales were made to the immediate community or to the wayfaring buyer whose camel or mule caravan transported the wares to the larger bazaars, markets or trade fairs. With the advent of modern transportation the individual producer disappeared, as the greater markets could only be supplied by corporate, mass production. This phase of industry and commerce, comparatively new, demanded suitable buildings

and as a consequence a new architecture. Architecture does not respond to new demands as readily as engineering because engineering and modern industrialism and commerce are co-eval, while architecture is throughout time.

Architectural utility is largely engineering. It is but very recently that an adequate industrial and commercial architecture—exterior enclosure—has appeared. It is our best modern expression because of the difficulties of discarding the past and making a frank and honest expression of the present, specific, usable and beautiful. The General Motors Building is an example of the best product of industrial and commercial architecture in 1926 and for that reason took precedence over the Savoy-Plaza, a congregation of homes—each of its kind equally as good. The

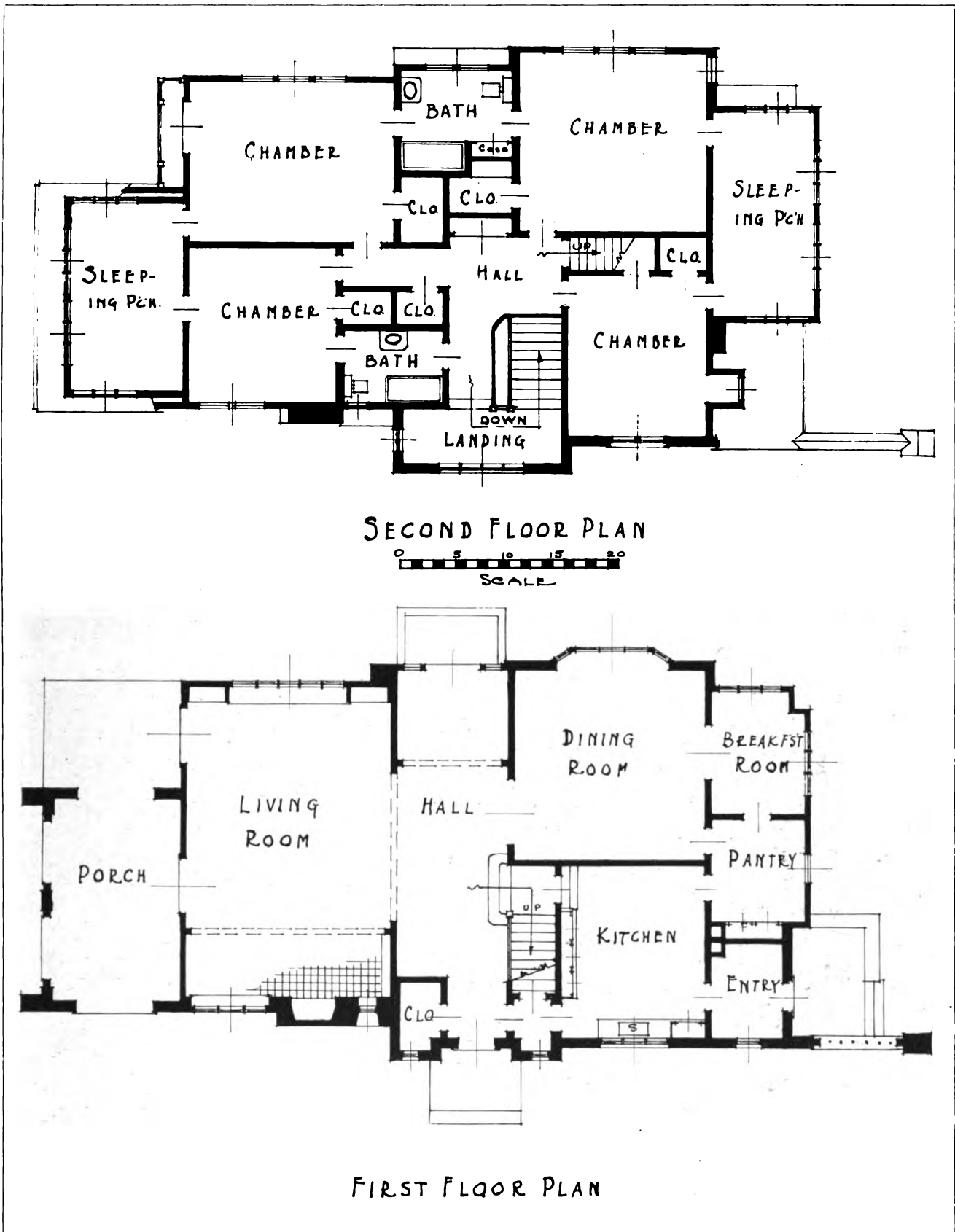


GENERAL VIEW
RESIDENCE OF MR. FRANK SCHOPFLIN, KANSAS CITY, MISSOURI
CLARENCE E. SHEPARD ARCHITECT :: :: :: :: :: ::



DETAIL OF ENTRANCE

RESIDENCE OF MR. FRANK SCHOPFLIN, KANSAS CITY, MISSOURI
CLARENCE E. SHEPARD, ARCHITECT :: :: :: :: ::



PLANS

RESIDENCE OF MR. FRANK SCHOPFLIN, KANSAS CITY, MISSOURI
CLARENCE E. SHEPARD, ARCHITECT



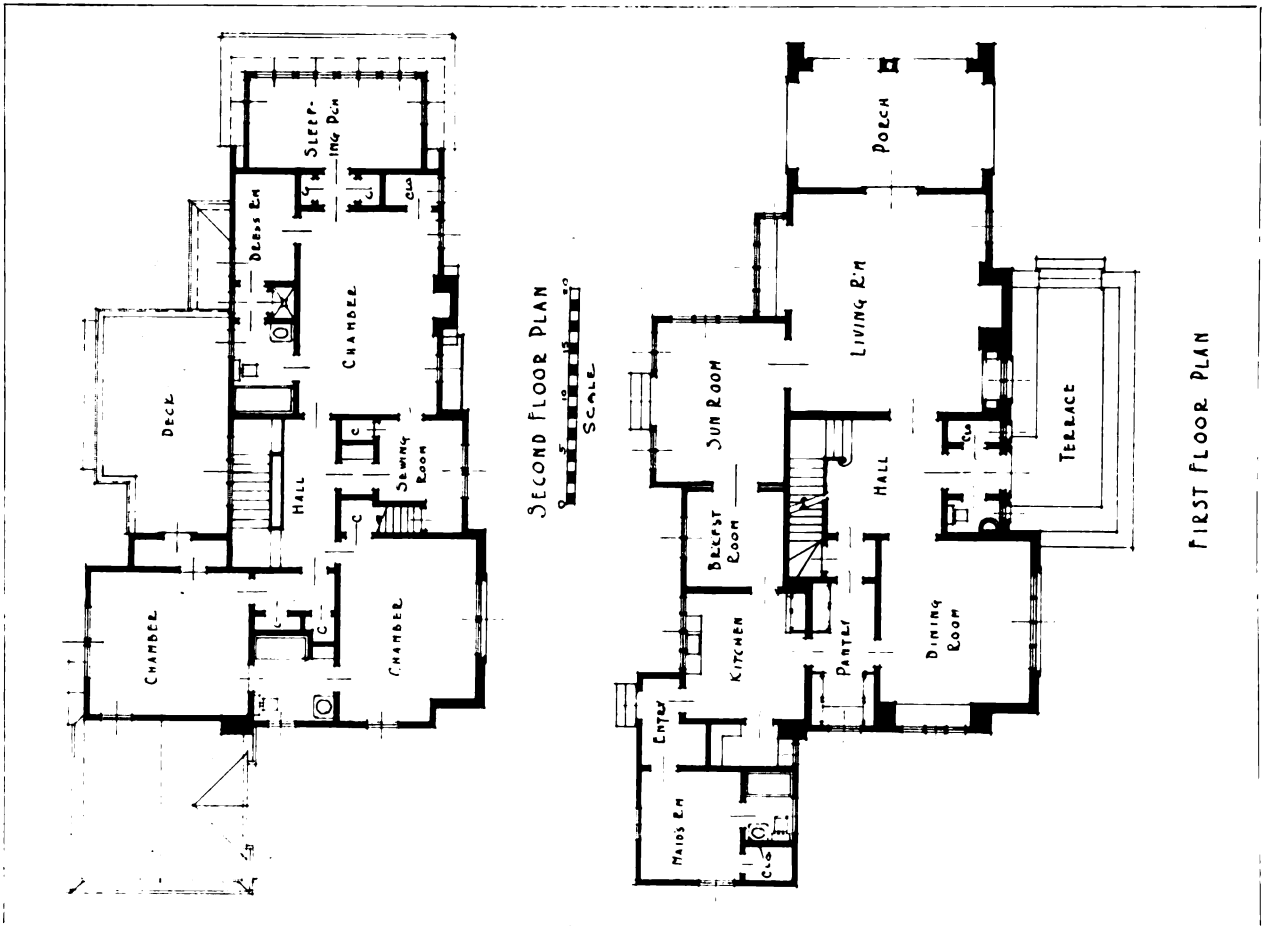
VIEW FROM LAWN



LIVING ROOM
RESIDENCE OF MR. FRANK SCHOPFLIN, KANSAS CITY, MISSOURI
CLARENCE E. SHEPARD, ARCHITECT :: :: :: :: :: :: ::



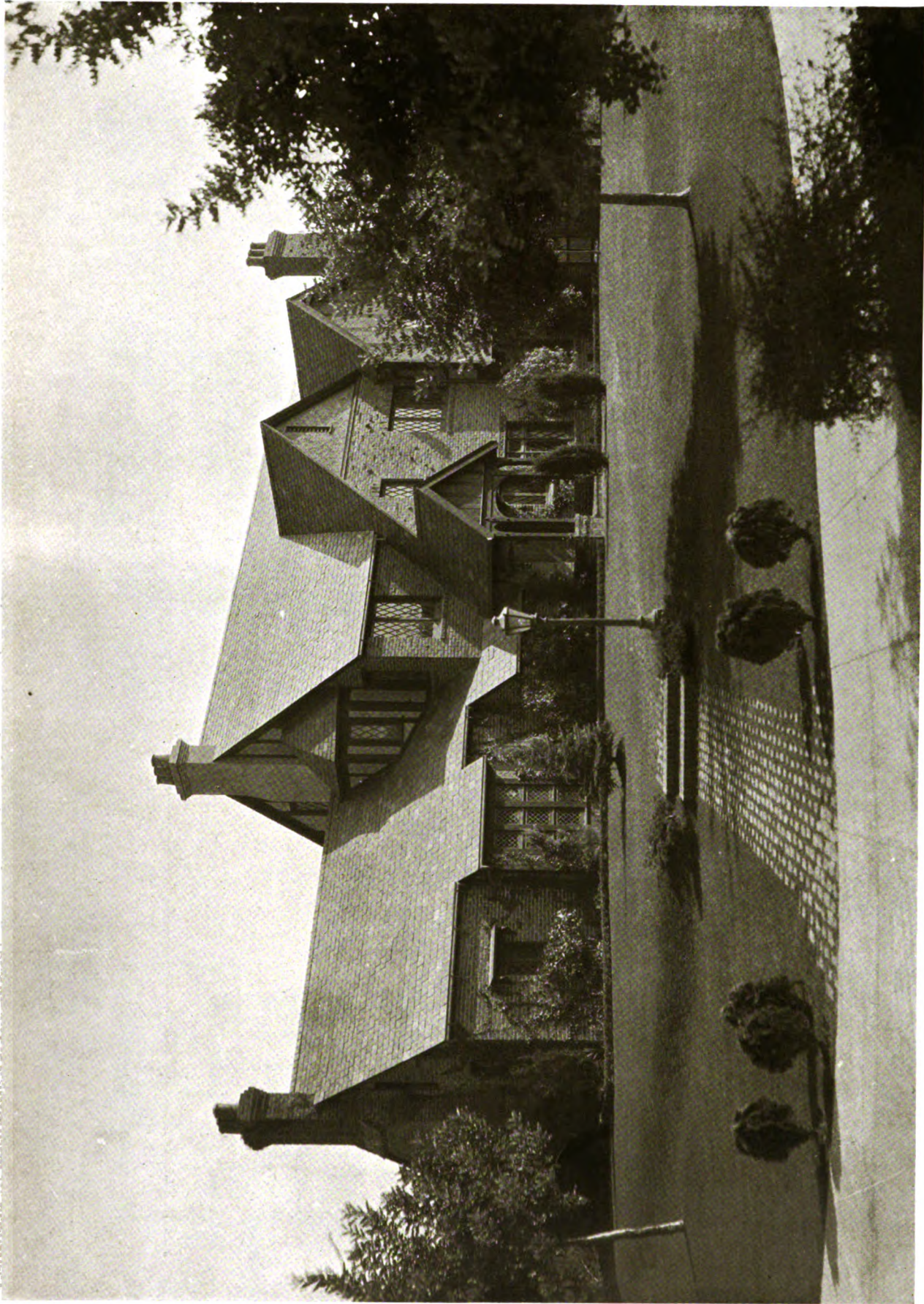
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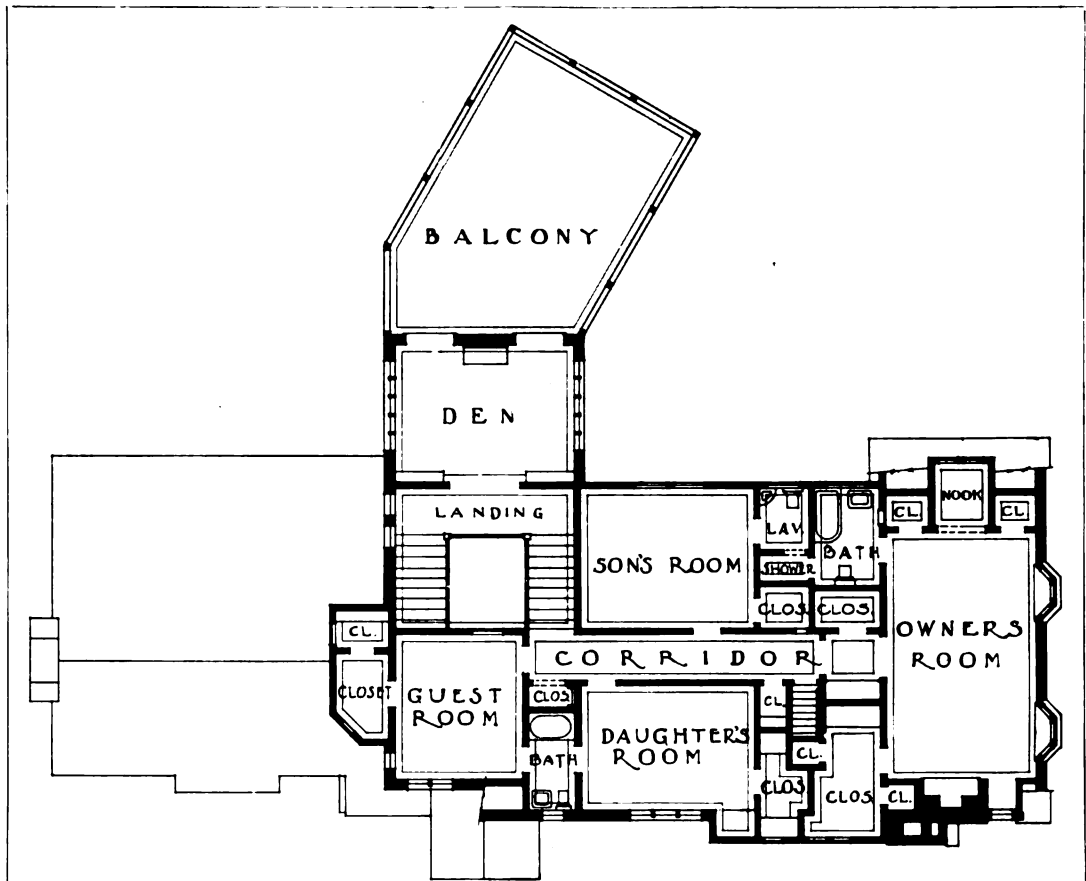
PLANS



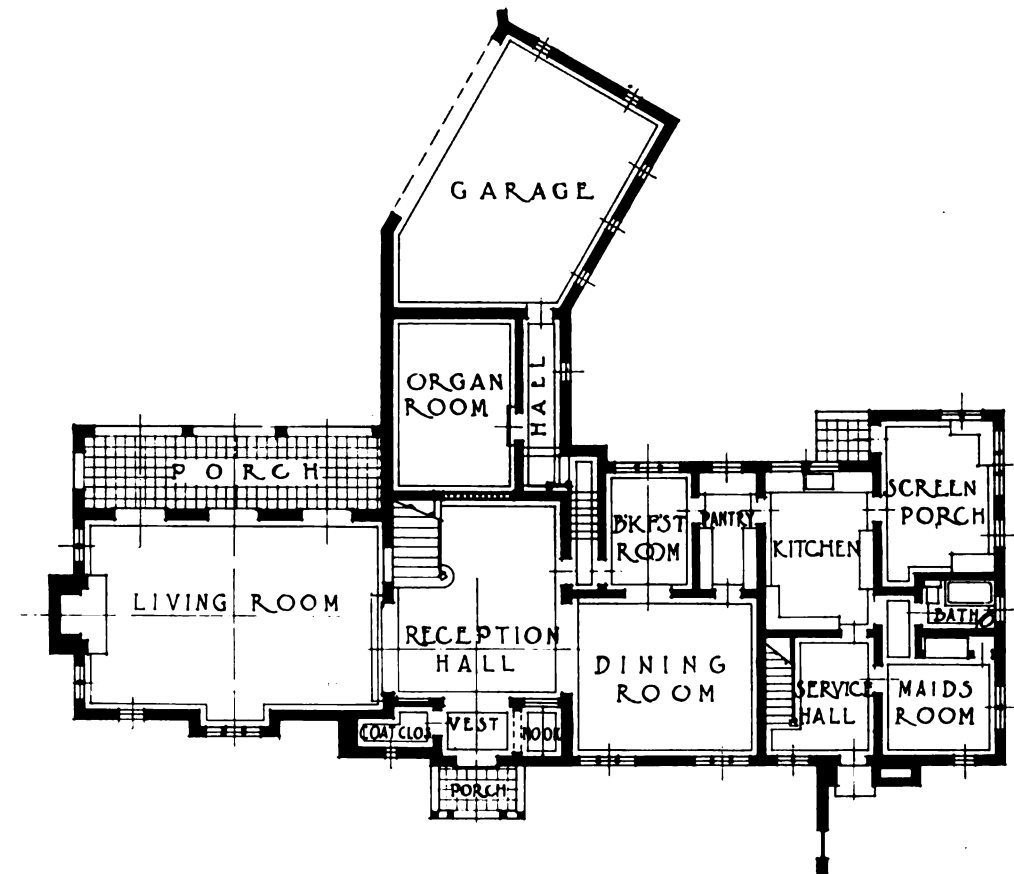
ENTRANCE DETAIL
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 CLARENCE E. SHEPARD, ARCHITECT



GENERAL VIEW
RESIDENCE OF MR. BEN HARWOOD, LOS ANGELES, CALIFORNIA
EVERETT H. MERRILL, ARCHITECT :: :: :: :: :: ::



SECOND FLOOR PLAN



FIRST FLOOR PLAN

RESIDENCE OF MR. BEN HARWOOD, LOS ANGELES, CALIFORNIA
 EVERETT H. MERRILL, ARCHITECT :: :: :: :: :: ::



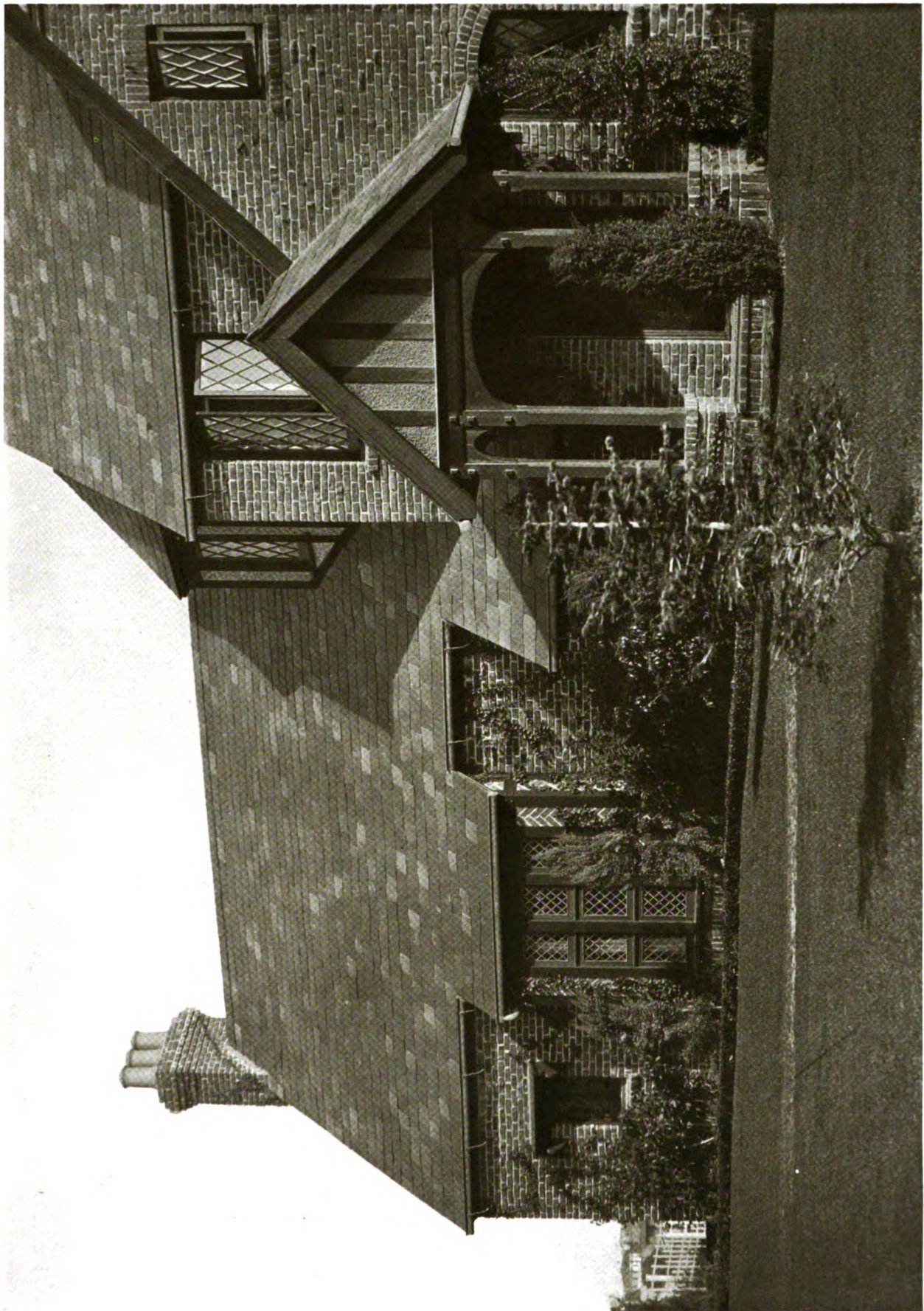
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A Distinctive American Architecture

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ENTRANCE DETAIL
RESIDENCE OF MR. BEN HARWOOD, LOS ANGELES, CALIFORNIA
EVERETT H. MERRILL, ARCHITECT :: :: :: :: :: ::



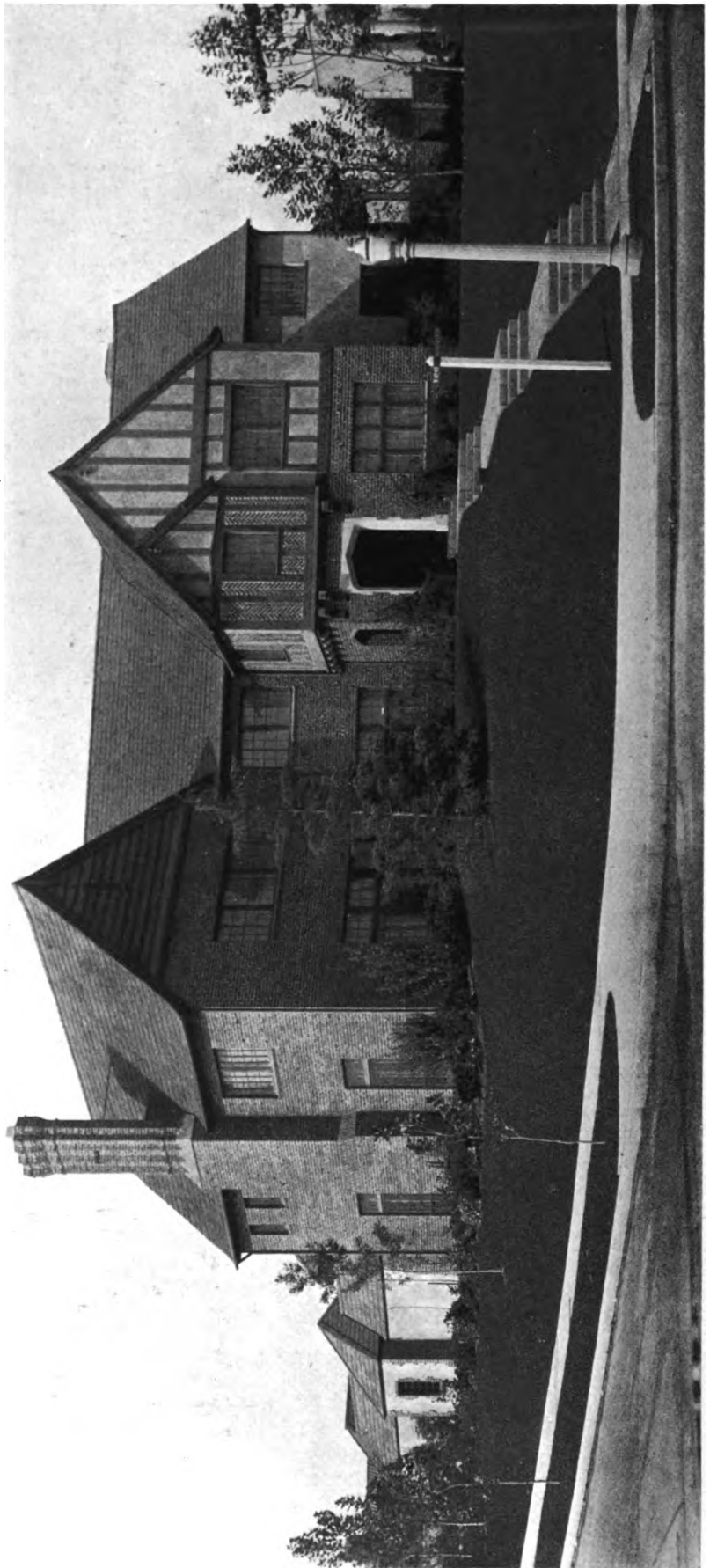
FACADE DETAIL
RESIDENCE OF MR. BEN HARWOOD, LOS ANGELES, CALIFORNIA
EVERETT H. MERRILL, ARCHITECT



REAR PORCH



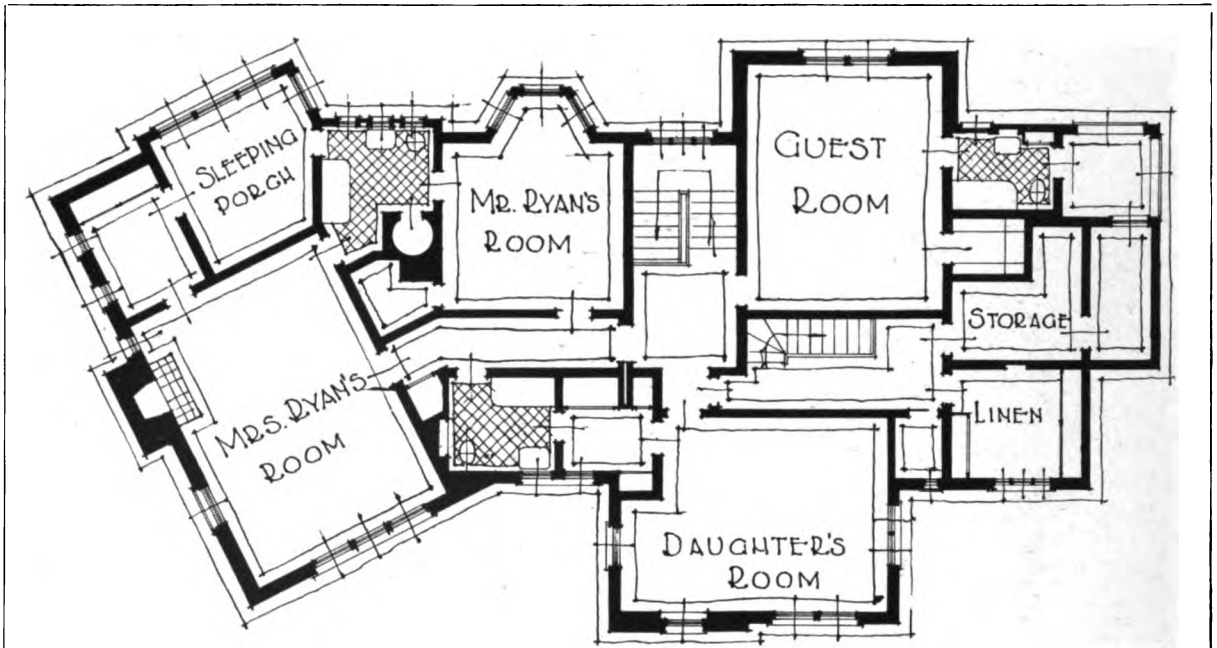
VIEW OF GARDEN FROM REAR PORCH
RESIDENCE OF MR. BEN HARWOOD, LOS ANGELES, CALIFORNIA
EVERETT H. MERRILL, ARCHITECT :: :: :: :: :: :: ::



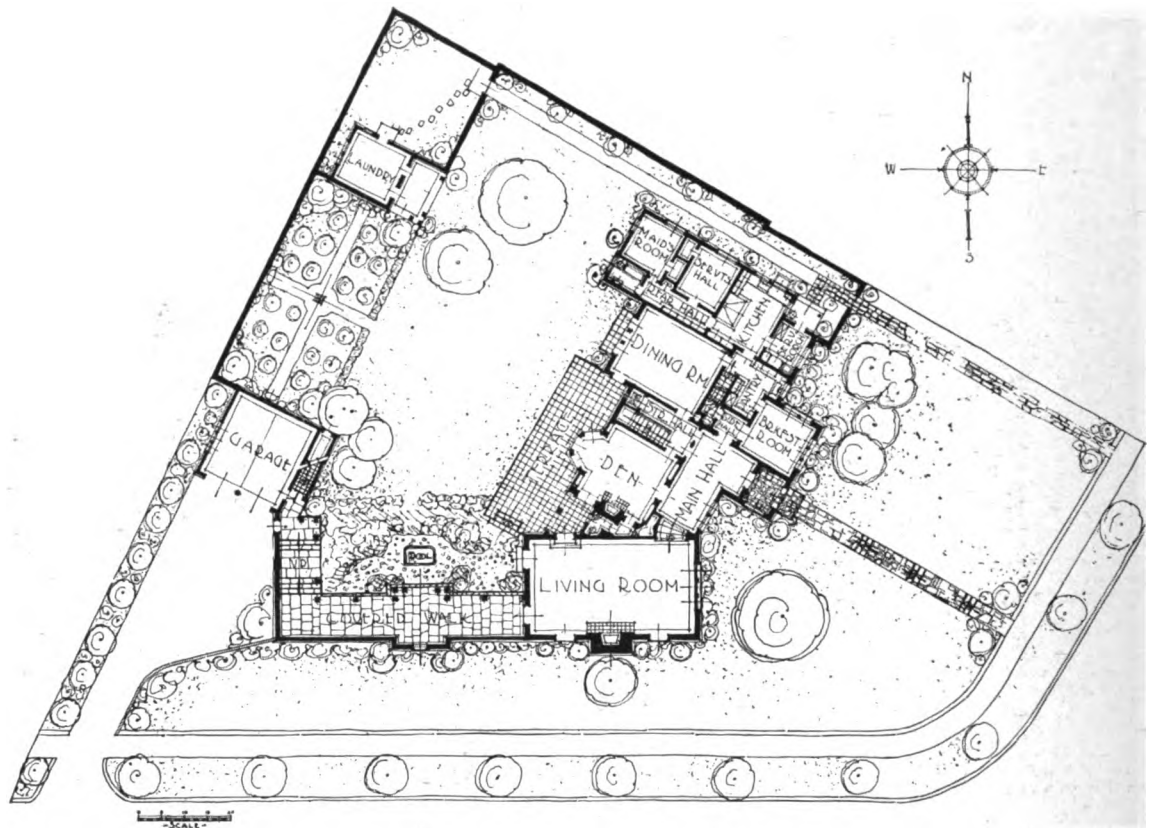
GENERAL VIEW
RESIDENCE OF MR. FRANK RYAN, LOS ANGELES, CALIFORNIA
WITMER AND WATSON, ARCHITECTS



ENTRANCE DETAIL
RESIDENCE OF MR. FRANK RYAN, LOS ANGELES, CALIFORNIA
WITMER AND WATSON, ARCHITECTS :: :: :: :: ::



SECOND FLOOR PLAN



PLOT PLAN

PLANS

RESIDENCE OF MR. FRANK RYAN, LOS ANGELES, CALIFORNIA
 WITMER AND WATSON, ARCHITECTS :: :: :: :: ::



KITCHEN GATE
RESIDENCE OF MR. FRANK RYAN, LOS ANGELES, CALIFORNIA
WITMER AND WATSON, ARCHITECTS :: :: :: :: ::



LIVING ROOM
RESIDENCE OF MR. FRANK RYAN, LOS ANGELES, CALIFORNIA
WITMER AND WATSON, ARCHITECTS :: :: :: :: :: ::

Passing Show when with one forgets the other—an architectural polygamist, as it were.

* * * * *

The Savoy-Plaza is distinguished by its extreme simplicity, beautiful and majestic proportions, refinement of line and detail and its texture and color. It is white except for its green roof—white brick and terra cotta with a surface texture that makes its whiteness not only enduring but pleasant to the eyes. It is a happy effect. The green roof is of that shade and texture that not only harmonizes with the whiteness below but finds always an agreeable association with the sky. The offsets are not unduly accentuated and the long sweep of the main body of the building carries the eye up, uninterrupted, to the terminating roof. The balconies, the three-story motif at the topmost stories, the exceedingly simple and fitting white dormers, and the two great structural chimneys, are the features that give life to the immense mass of the structure.

The Savoy - Plaza is expressive of its use. It does not have the flamboyant appearance that has been attached to American hotels intended to satisfy the vanity of our traveling public. Our public likes to associate with an *appearance* of wealth, opulence and ease expressed in loud, ornate and apparently costly construction; it likes to think that it belongs. It does belong to what it buys and pays for.

But the congregated homes of a certain class demand a sense of quietness, refinement and security. Security is sensed in the Savoy-Plaza. It is sturdy and solid, touched here and there with the spot, line or brushmark which enlivens its evident stability with a vitality that attracts. Every building should attract, but more especially should a home, as it is indicative of social life, which is always civilization's measure.

The Savoy-Plaza has an important and conspicuous placement, equal to any in Manhattan. It is in the open, so to speak, at the principal entrance to Central Park. It can never be submerged within a

densely built-up section. It is, and may be further, associated with other sizable structures. Its architectural supremacy can never be lessened, but rather it is now enhanced by its surroundings.

One does not study it to discover some indication of a style, historical detail or source of architectural treatment. The detail is incidental as it should be to a fine structure, honest, simple, dignified and refined.

* * * * *

The year book of the architectural department of the University of Pennsylvania has come into our cubicle. In looking it over one is impressed with the change in student drawings within recent years. While they are still rather over-given to monumental structures, the designs are distinguished with a finer proportioning and greater simplicity of treatment. In this age of jazz, noise and publicity, it is difficult to exercise restraint and it is noteworthy that the teachings of this school are evidently centered on designing which embodies refined strength, simplicity, dignity, vitality and utility. These year books



THE SAVOY-PLAZA, NEW YORK. McKIM, MEAD AND WHITE, ARCHITECTS. PHOTO BY AMEMYA.

of our architectural schools are indications of architectural progress and compared with those of other years foretell the attainment of architecture to its rightful place among the fine arts. The students of today are the architects of tomorrow and the promise is most encouraging.

* * * * *

It is unfortunate that this day's craze for publicity should extend to architecture. Fortunately it is confined principally to theatres although "stunts" sometimes contaminate office buildings or apartment houses. It is the theatre owner who is the greatest offender. The quickly acquired fortunes of the "movie magnates" have gone to their heads and each new theatre must outshine the latest in size, alleged cost and atrocious architectural vulgarity. Running true to form, they have played below the average of even this jazz age. The pity of it is that they did not play above the average. The riot of extravagant ornateness and size may appeal to their patrons and

be accepted as the proper and correct mode and in that event it is an untruthful expression which will be hard to rectify. As crude and trite as the majority of American films are, they can be rapidly replaced by better ones, but the theatre is unfortunately permanent and its atrocities of form, design and ornamentation must remain with us.

Our national vice—Publicity—is well characterized in a recent poem, in part:

“Our Wits now swarm from Bedlam, and our Wise
Stare on each other with a wild surmise,
While furious Propaganda, with her brand,
Fires the dry prairies of our wide Waste Land;
Making the Earth, man’s temporal station, be
One stinking altar to Publicity.
Touts from the housetops bawl their wares abroad,
From Sex to Service, Cigarettes to God;
These bang the drum and those the cymbals clash
For Righteousness and Comfort, Christ and Cash;
While, crowding through dull booths for trade designed,
All dead to Shame, and moribund to Mind,
Science and Art turn mountebanks and shriek
‘This way for Beauty! Truth is cheap this week!’”

“What ails the world, my Alexander, say!
Slumber no more in listless holiday.
Fly to one poet’s aid whose stammering pen
Would emulate your poise and point again.
Mask our pert manners, morals, and one loss
That dulls the sun and dwindles gold to dross,
Our lack of civilized humility:
For, sure, God laughs when fishes scorn the Sea.
Yet Man, mad Reasoner, reasons Mind to nought,
And, curs’d with wordy arrogance of thought,
O’erlooks a small, still flame within his breast
Whose wordless beauty makes God manifest”.

This poem, addressed to the late Alexander Pope, Esq., delightfully pictures this Publicity-crazed age. That it should have prostituted architecture through the movie infection is deplorable. In time the actuating accumulated money may attain a “civilized humility”, but it is doubtful as the ruling characteristic is racially inbred.

Then, in order to prevent Architecture’s further debasement in this riot of theatre construction, cannot architects restrain their brothers from its further defilement? Is there no defense against the debauching of Architecture by the “movie magnates”?

An Amende Honorable

To the Stone Mountain Confederate Monumental Association

IN OUR issue of August, 1927, page 129, was printed an article entitled “A Public Lesson in the Stone Mountain Fiasco”. *The Western Architect* has made a thorough investigation of the matter as to the employment of Augustus Lukeman, sculptor, and the present condition and prospective progress of the project.

The project consists of carving a colossal bas-relief on the face of Stone Mountain, near Atlanta, Georgia, as a memorial to the Confederate armed forces. This project was initiated by the United Daughters of the Confederacy and later the completion of the work was undertaken by the Stone Mountain Confederate Monumental Association. The work was started, the contract with the original sculptor was terminated, and on August 27, 1925, Augustus Lukeman, New York City, was commissioned to complete the work.

As the models and designs for the bas-relief were destroyed by the original sculptor, Mr. Lukeman made a new design and models. He also made a thorough survey of the situation and extensive investigations to determine the methods and technics to be used in the mechanical production. The designs and models for the bas-relief have been made and approved. The bas-relief has been divided into three sections and the probability is that the first section will be completed within two years. The new plans also

include a large Memorial Hall cut into the body of the mountain with suitable approaches and entrance appurtenances.

After a thorough investigation of the matter *The Western Architect* finds that: (1) the employment of Mr. Lukeman as sculptor to complete the project and his acceptance of the commission was proper and that Mr. Lukeman did not violate any of the ethics of his profession; (2) Mr. Lukeman’s designs and models are acceptable to the Stone Mountain Confederate Monumental Association and to those qualified to appraise such works; (3) the quotation in the article before mentioned is misleading, unjustifiable and biased, evidently instigated for personal, political and religious reasons; (4) the Stone Mountain Confederate Monumental Association is proceeding with this great undertaking in an orderly, business-like manner, giving assurance of its satisfactory and timely completion; (5) Augustus Lukeman, sculptor, is an artist of high standing, and has produced works of the finest quality which are highly appraised by his fellow sculptors and an appreciative public.

The Western Architect regrets the inadvertent printing of the article above referred to and disclaims any desire or intention to misrepresent the facts resulting in injury to or the distress of Augustus Lukeman, sculptor, and the Stone Mountain Confederate Monumental Association.

Color in Architecture

X. Egyptian Polychromy

By REXFORD NEWCOMB, A. I. A.

IN THE first article of this series I referred to the fact that, from the beginnings of the art down to the late Renaissance, color had played an important role in architecture, and that each great nation of antiquity had developed a polychromy as characteristic and as expressive as were its architectural forms. That the appreciation of historic *color* should have been neglected in favor of historic *form*, is only one of the accidents of history. Our architectural training for nearly a hundred years has *emphasized form* and *minimized color* with the result that recent architecture, as compared with the great *historic* styles, seems almost colorless. In response to a number of requests and with a view of giving accurate information on this important aspect of historic architecture, I have decided to devote the remaining articles of this series to a discussion of historic architectural polychromy, pointing out thereby any lessons these manifestations may teach.

The great *early* centre of civilization was the Valley of the Nile—Egypt. How long man has inhabited this unique geographical situation we can only guess. That he has been here a very great time is indicated by the findings of geologists and historians who claim that he located here before the Nile found its way northward to an outlet into the Mediterranean. That Egypt had produced a worthy architectural expression by 3500 B. C., argues a long period of preliminary development, and that she produced, as well, a characteristic and conventional architectural polychromy indicates an age-old experience in this direction.

The reader is generally familiar with the form of Egyptian architecture. Its static, eternal, massive, reposeful, and mysterious character is well known. Its vivid polychromy, on the other hand, while guessed at, is not generally appreciated except by the Egyptologist or the historical specialist. Egyptian architecture was, however, perhaps the most brilliantly colorful that the world has seen and of a type that relied upon polychromatic variation for its effects more completely than any other that the world has as yet brought forth.

The tremendous importance of color in Egyptian architecture is perhaps most completely accounted for

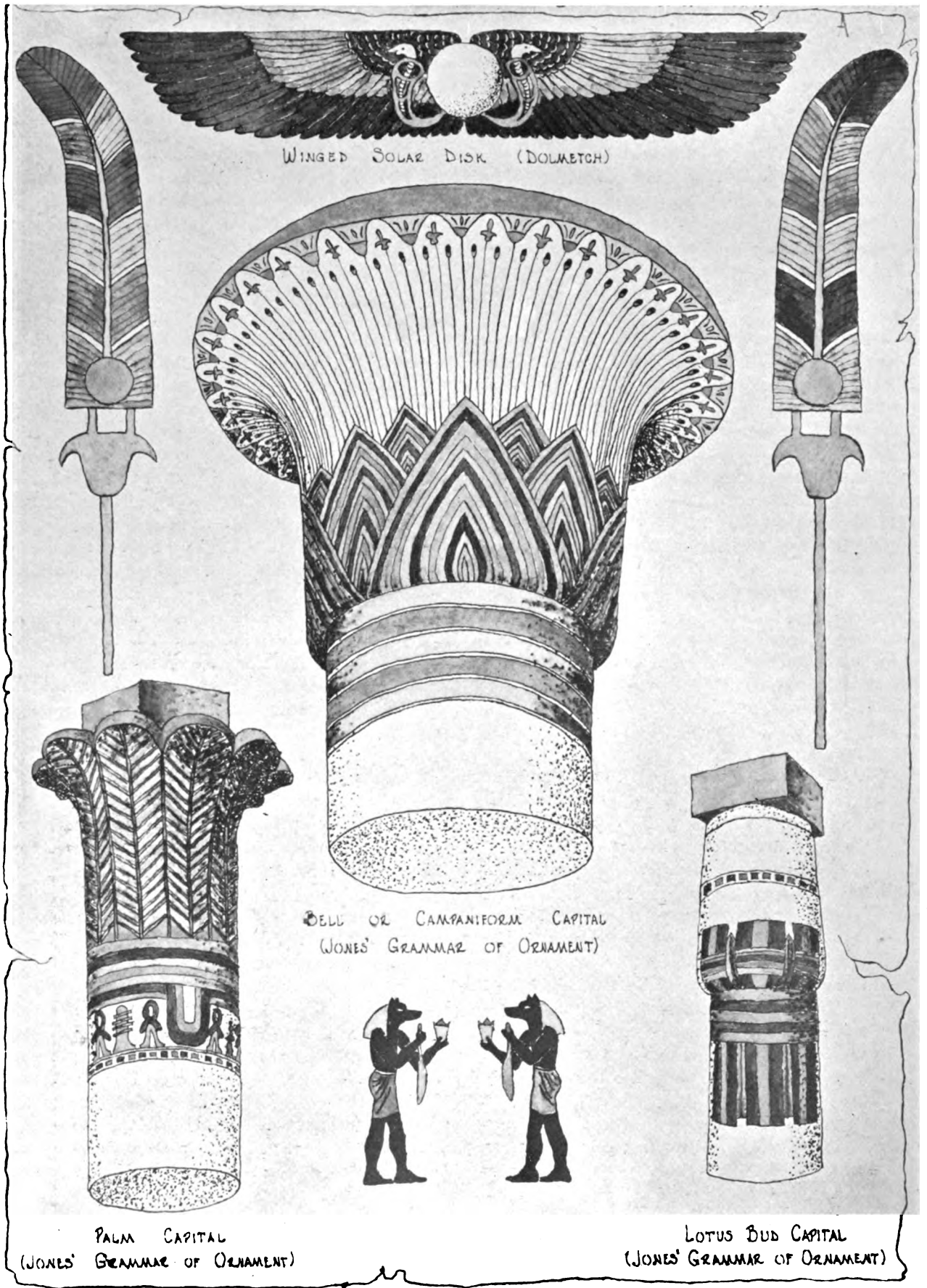
by the peculiar geographic and climatic conditions of the country. National Egypt was a country hemmed in by natural barriers: on the west the great, impassable Lybian or Sahara Desert, the very sun-burnt and shifting sands of which encroach upon the narrow but fertile green ribbon of the Nile valley; on the north the Delta offered an almost impassable, swampy barrier to external influence; on the east were the Red Sea and the Nubian Desert, and on the south the ever-menacing black hordes of Ethiopia. By virtue of this isolation the Egyptians became a highly individualized people, racially and nationally, and their art and architecture were equally peculiar and individual. Perhaps no more striking racial individuality has the world known than that of the Egyptians, and so characteristic is their art that even the least versed can at once identify a piece of Egyptian work.

Climatically, Egypt is a country of strange contrasts. Blue, cloudless skies, a powerful and brilliant sunshine with little rainfall ($1\frac{1}{2}$ inches annually at Cairo), and high temperatures produce a warm, dry desert atmosphere. Conditions such as these maintained uniformly and unbroken for indefinite periods of time and coupled with the geographical isolation, inevitably produced a static, conventional and highly peculiar treatment of both form and color. The bright sunshine, the eternal glare upon the yellow-white sands of Egypt, accounts largely for the Egyptian use of the all-over, brightly colored, "*calico*", architectural decoration and the corresponding neglect of mouldings or other projections that, in less vibrant atmospheres, form the life of architectural design. The sunshine was so reflected that shaded effects and shadows were destroyed and hence were valueless in defining form. Thus, this climatic state of Egypt conditioned the whole art-scheme of the country.

Now, where shadows are destroyed, clearly the only differentiation of surfaces possible is to be made by polychromatic variation. Therefore, in Egypt, forms were necessarily uninvolved. Masses were simple and balanced. The style, though columnar, restricted the use of columns to the interiors and courtyards, while the exteriors exhibited simple inclined walls, unrelieved by windows or other projections, crowned by the simplest of conventional cornices, and vividly colored.

Color, then, rather than form, predominated both because of its great areas and its brilliance. It was not the intrinsic color of the structural materials, however, but a highly idealized and conventional color applied in pigmental form to the various parts of the

EDITOR'S NOTE: In the first nine articles of this series, Professor Newcomb has set forth the salient characteristics of color and the general considerations that accompany its application in architecture. The succeeding articles of the series will treat of the historic applications of color to the great styles of world architecture, thus supplying to those who work in Period Styles accurate and definite information upon this important phase of architectural history.



EGYPTIAN ARCHITECTURAL POLYCHROMY. SOLAR DISK IN BLUE, RED, GREEN, WHITE. CAPITALS IN RED, BLUE, GREEN, YELLOW AND WHITE. DRAWN BY EDMUND FRANCIS TOTH, UNIVERSITY OF ILLINOIS.

structure. They used crude, bold colors, with few tints and variations. These heavy colors, unbearable in large areas elsewhere, were here, however, necessary to rest the eye from the glaring whiteness of an intense sunshine. The absence of delicate polychromatic effects is explained by the fact that in such intense sunshine delicate variations are not appreciable.

But the Egyptian artist well understood the question of color *versus* form, and as color was brought to prominence, form, as I have pointed out, was minimized. Egyptian bas-relief became therefore the flattest and most delicately projecting sculpture of this category that the world has ever seen. As a relief it all but ceased to exist, but as vivid polychromatic decoration it functioned in a very telling fashion.

As has been true in all societies previous to the recent great development of chemistry, the Egyptian was dependent upon naturally occurring earths and other materials—organic and inorganic—for his pigments. As a matter of fact, we, even today, still rely pretty largely upon naturally occurring mineral pigments, although synthetic dyes of one sort or another are rapidly finding a place in industry and art. Many of these newer materials, it should be said, are scarcely so permanent as the old, naturally occurring pigments.

The Egyptian knew a crude, bold, palette embracing pigments of red, yellow, blue, green, brown, black and white. The reds, yellows, and browns were obtained from ochreous earths; the bright blues were mineral colors composed of copper filings, sand and a

sub-carbonate of soda. Some colors, such as indigo, were of organic origin. Ultra-marine was made by powdering lapis-lazuli, which was, especially during the later periods, imported from central Asia. The greens were formed by mixing blues and yellows; blacks were obtained from carbon (charcoal, burned ivory, etc.), while whites were made from lime or gypsum. Gold leaf also found a place in Egyptian decoration. Violet, apparently, was unknown as pigment until imported from other lands, although there is definite evidence that it was known in pottery.

These pigments seem to have been mixed with water and some flexible gum such as tragacanth. Doubtless also a size of animal glue was used in some cases, and there is also evidence that some pigments were ground or mixed with honey, a material still used by the manufacturers of water-color paints. Again the white of egg is sometimes cited as a vehicle. Several existing mummy masks and other objects prove beyond a doubt the occasional use of encaustic painting, that is the mixing of the colors with wax. This process, however, seems not to have antedated the Macedonian conquest, and was doubtless imported from Greece where it was well known. On the whole, however, Egyptian color work can generally be described as distemper.

While most of the polychromatic effects in Egyptian architecture were introduced by painting, yet some accompanied the use of ceramic tiles, the art of which extends backward to a very remote period in that country. So far as I know, none of these as used



AN EGYPTIAN INTERIOR. FROM AN OLD ENGRAVING

exteriorly, yet they did figure in interior decoration, the many fragments picked up in the *debris* of Egyptian cities proving this fact beyond a doubt. One particularly interesting ceramic revetment was that which graced a tomb-chamber in the Stepped Pyramid of Sakkara. The walls of this chamber were plated by *blue-green* tiles and the door was enframed by beautifully painted, figured tiles inscribed with the titles of King Zozer, a Pharaoh of the Third Dynasty. The hieroglyphs upon these figured tiles were worked out in *blue, green, and yellow*, upon a *fawn-colored* background.

In applying color to the wall, the Egyptian generally prepared a surface of smooth gypsum plaster upon which the cartoon to be colored was scribed in charcoal, the usual process of laying-out being accomplished by means of squares. Thus the full-sized decorations were "enlarged" directly from the smaller sketches. The figures were then drawn in with bold dark outlines and the colors spread between these outlines.

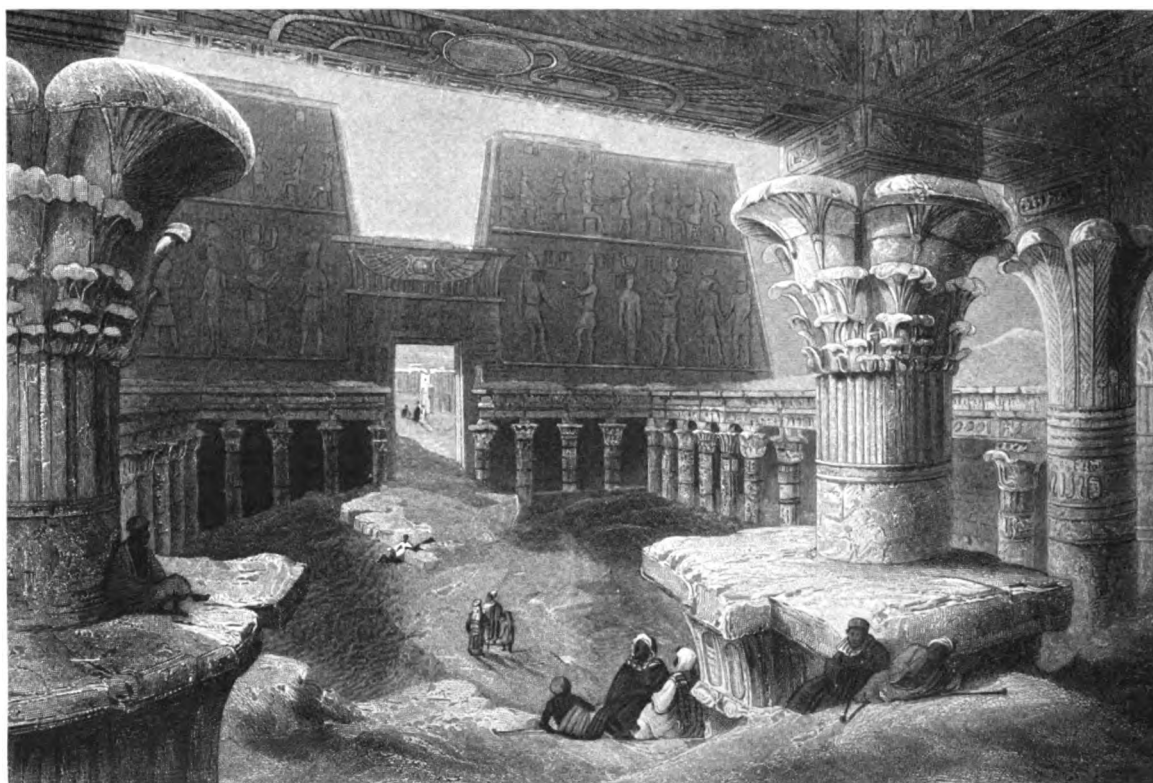
In my third article of this series (March, 1927) I referred to these outlines as "separators", pointing out their analogy to the leads in a stained glass window. In the colored areas there was no attempt at modulation or shading and nothing of the effect of depth or perspective. Thus Egyptian painting partook of the nature of "illumination" rather than painting as we know it, while the painter was more of an artisan than an artist.

In the application of color to full-round statues, bas-reliefs, and architectural details, the Egyptian was as conventional and ritualistic as in his painting, and here, as in painting, he employed a standardized set of color combinations which, for one reason or another, had become traditional. If one analyze Egyptian color-schemes he will note a frequently occurring set of color *triads* and a traditional set of color *tetrads*. Perrot and Chipiez, who made a wide study of Egyptian decorative processes, remark that "no people have spread more color upon stone and wood than the Egyptians; none have had a truer instinct for color harmony". I give herewith a number of typical Egyptian color triads, many of which, in a day when a richer and fuller color is appreciated, may not be without suggestion for use:

- (a) Black, yellow, red.
- (b) Red, blue, white.
- (c) Dark blue, light blue, white.
- (d) Delicate yellow, blue, black.
- (e) Dark red, medium yellow, dark turquoise.

The following tetrads are also frequent in Egyptian work:

- (a) Red ochre, yellow *ochre*, blue-green, black.
- (b) Black, blue, green, red.
- (c) White, blue, green, red.
- (d) Black, white, turquoise, yellow.
- (e) Pale orange, turquoise, dark rich blue, warm white.



EGYPTIAN WALLS, COLUMNS AND OTHER ARCHITECTURAL FEATURES WERE COMPLETELY COVERED BY ORNAMENT, FLAT OR IN LOW RELIEF, AND ILLUMINATED BY A VIVID AND STRIKING POLYCHROMY.

Used in relatively small areas of individual color and "separated" effectively by black or white outlines, these combinations, which in close juxtaposition might prove inharmonious, were combined for striking and effective use in a land where a brilliant and vibrant atmosphere and a burning white sun called for bold and audacious measures. Considering the limitations of their palette and their methods of execution, it is remarkable how well the Egyptians managed to obtain and preserve the fine sense and expression of color harmony that generally characterized their work.

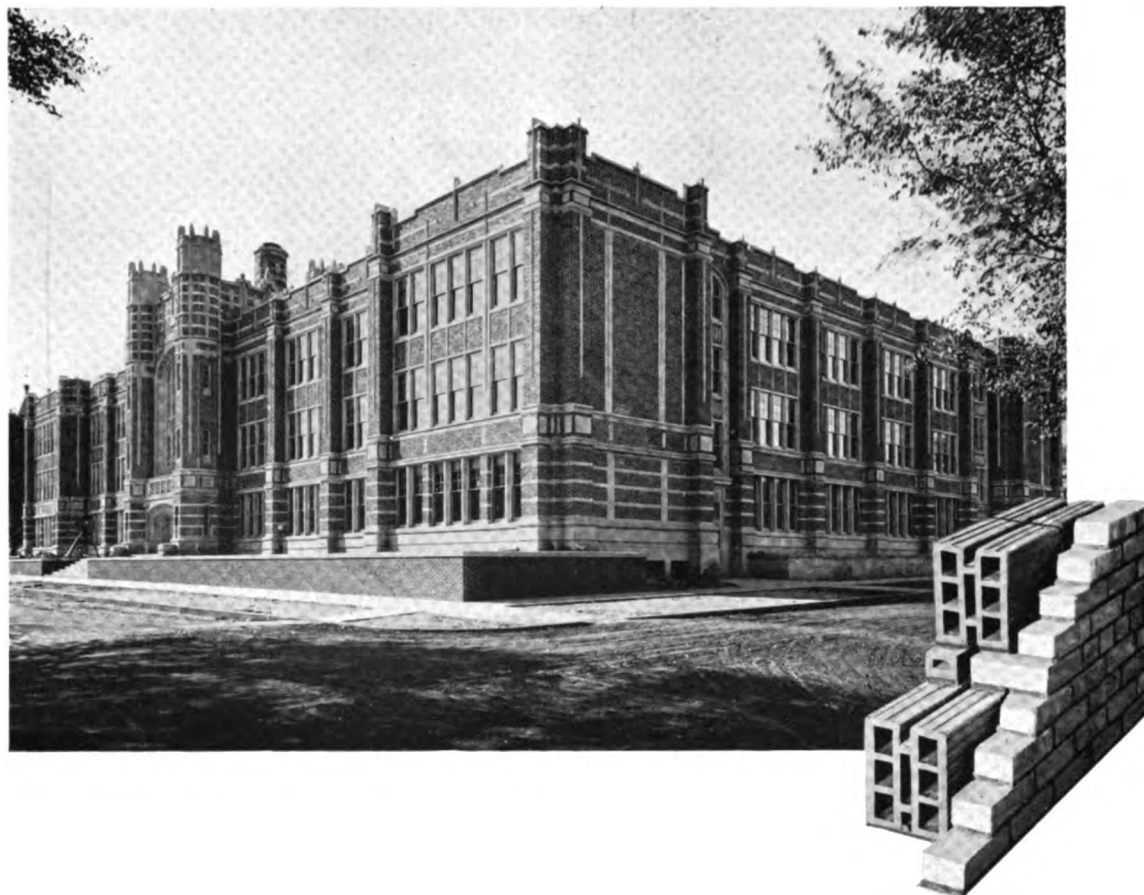
Whatever else we may say of Egyptian architectural polychromy, and I think we may agree that the all-over, bill-board fashion in which the Egyptian decorated the walls of his structures seriously detracted from the architectonic value thereof, nevertheless, the Egyptian, either through a developed taste or through the effect of climate, never tampered with the essential "mural" quality of the wall which he

decorated. This is a lesson that many an ancient (and indeed many a modern architect) has never learned. The Pompeiians took serious liberties with the walls which they decorated and many a design today is ruined by a polychromatic or pictorial effect that absolutely belies the *flat* surface which it is supposed to enhance.

Since the Egyptian building had no windows, and therefore presented vast areas of flat surface, it is not surprising that these walls, in a sense, should have become the "books of the people." Low relief decorations in brilliant color, that would tell at a distance and hold their own in reflected light, or simple wall painting, therefore, seemed logical and appropriate. The Egyptian artist possessed, moreover, the ability to combine color and relief in a very intimate relation without ruining either means of decoration—a feat which, it seems to me, deserves our commendation.



Artistic Details



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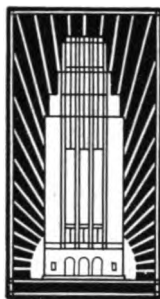
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THE WESTERN ARCHITECT



ARCHITECTURE

ALLIED ARTS

Volume XXXVI

Number 11

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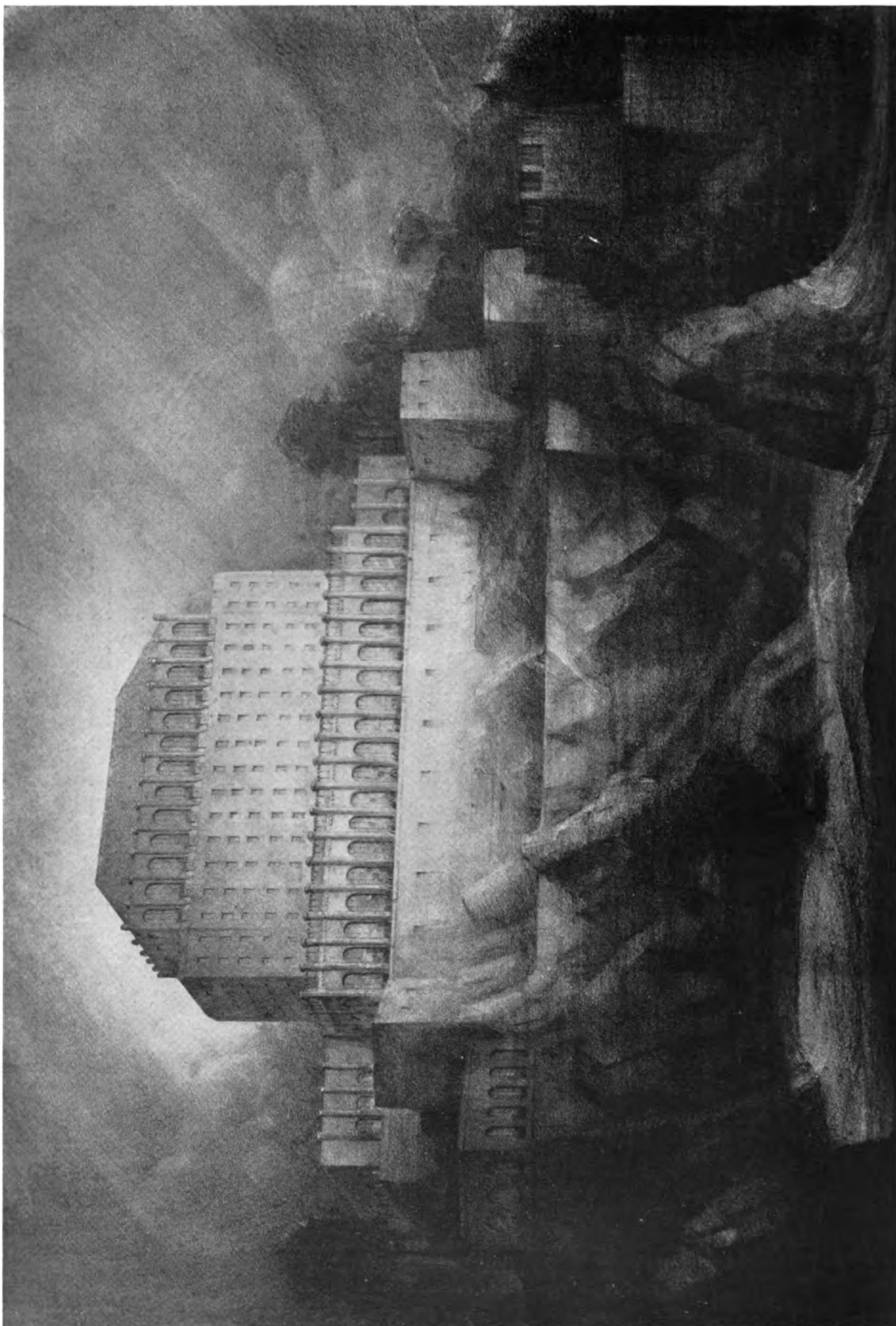
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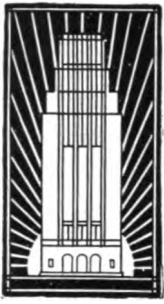
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THE WESTERN ARCHITECT

ARCHITECTURE

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The Necessity
for a Committee
on Practice
in the Institute

That the American Institute of Architects has a Committee on Practice is only another way of saying that to keep the body politic of the architectural profession, both in and out of the organized society in a healthful condition, a physical examiner is needed to investigate unhealthful practices. Further, it functions to advise, warn and perhaps discipline those who indulge in such practices. It is generally accepted that the "professions," including architecture, law, medicine, painting, poetry, the product of which is called Art, strive for an ideal that has in it nothing so mundane as the almighty dollar. It is fundamental, too, that this must be not only a theory but a practice; otherwise all work in that realm will be abortive. It is the result which must be striven for with all the innate genius of the practitioner. Accomplishment must be the inspiration, unmindful of the material recompense if the highest reach of individual talent is conserved. Fortunately, among architects at least, this condition of practice very largely obtains. It is the result of architectural training that the practitioner learns to place a high estimate upon his mission. The thought of the ideal and observance of the ethics which have become fundamental in the profession are ever present. The endeavor to render the artistic vision in the concrete must perforce lead to honesty, sincerity and good citizenship. If this spirit is absent in one who has reached a high plane in accomplishment; if he fails in his private life or business practice to adhere to conventional standards it is the exception that proves the rule. Yet there are fields of architectural activity which may be termed debatable ground. There the weeds may be called dishonesty by the purest, or flowers of exceptional ability by others who look largely at results. It is for the guidance of the latter, it is presumed, that the Committee on Practice is established. It goes farther to pass judgment upon practices directly inimical to the general good of the profession with the public, or an encroachment upon the prerogatives of other practitioners. This is rightly called "Bad Practice." Since the foundation of the Institute sixty years ago by those fathers of architectural art in this country the fundamental basis of the Golden Rule has not changed. But there has been a steady advance in the general ethics which are supposed to govern the relations of one architect to another and in what is "good practice" in general.

In the early history of the Institute it was doubted if it were proper to discuss so mundane a subject as a schedule of charges in an Institute meeting; it was believed that competitions were taboo and for an architect to advertise was to venture far beyond the realms of ethical practice. Today the Institute allows advertising in any dignified form; it has a competition code and its schedule of charges is almost a basis of practice. Yet, after over forty years of observation of Institute life, it can be said that neither in the past or now has there been any danger of a dropping down from fixed standards. Today the ethical standards which rule the judgment and procedure of the Committee on practice are those by which any practitioner of architecture in or out of Institute membership successfully can govern himself.

Industrial Unity
a Supreme
Institute
Effort

While the last convention of the Institute was definitely given over to the consideration of those phases which affect the practice of architecture "as an art," and the report of the Committee on Industrial Relations received scant notice, this phase of architectural endeavor is as vital as any art advancement can be. In fact, without the combination with it not only of skilled but sympathetic labor the whole field of architectural advancement is handicapped. For, unlike the devotees of the other arts, which involve largely personal performance, the architect must rely upon the workman to execute and make complete his design. It is in this field that those most prescient are earnestly engaged. The contact is secured through individual effort, in association, as members of the Institute's Committee on Industrial Relations and as Directors in the American Construction Council, of which Franklin D. Roosevelt is president. The organization has also the support of, rather than direct connection with the Department of Commerce, under Secretary Hoover. The Council, which holds its sixth annual convention at Saint Louis, December 1-3, has already accomplished many reforms and stabilizing measures in the building industry. The American Institute of Architects is represented in its Directory by William Drewin Wight, of Kansas City, Sidney F. Heckert of Pittsburgh, Robert D. Kohn of New York and George C. Nimmons of Chicago, comprising one of the most representative combinations to be drawn from Institute membership.

✓ The Viking Spirit and Architecture

By ERNEST O. BROSTROM, A. I. A.

WITH what boldness are the European architects attacking their problems! And as courageous as any, stand forth the architects of Sweden. In the battle for individualistic, if not to say, nationalistic expression, the Swedish architects have found a way. That way is the way of the viking of old, who, boarding his stout dragon (his ship), battled his way through the waves. With strong arm he met his opponents man to man, dying or conquering, roaming, getting his fill of strife, tiring of the taste of Southern wines, returning with gifts from the distant sunlit climes, to enjoy the heavy Northern mead, and at last, to be buried seated upright with face turned toward the never-resting, boisterous sea!

The Northern architecture strikes one thus; strong limbed, sometimes threatening of visage, at others like unto the billowing sail always ready to be furled in case of storm. Here one finds the influence of France, there of Italy, and again of Britain, Germany, Russia.

It is as if a Frithiof* had again placed his hand upon the golden hilt of an Angurvadel and drawn it flashing from its scabbard, the flashing gleams crystallizing into new power! As if he, Frithiof, had once again gone a-viking, composed a new "vikingabalk," left astern the choppy waters of the Northern fjords, scoured the brilliant shores of the blue Mediterranean, stormed the fastnesses of ancient culture, become satiated with adventure, and, seized with longing for the Northern headlands, had bent his oars and set sail toward the rugged homeland, there to build anew, a splendid temple to Balder, the God of Light.

Prof. Ivar Tengbom grasps an order (the Concert Hall, Stockholm) and draws it and molds it to please a fastidious eye. He makes of a Corinthian form an unusual new thing with new life and fresh power. L. I. Wahlman takes hold of arch forms (Engelbrekt's Church, Stockholm) and they spring into vigorous supporting elements alive with energy. Need men-

*See Esaias Tegner's "Frithiof's Saga." Quotations are from the translation by the Rev. W. L. Blackley.

tion be made of the new City Hall (Stockholm) by Ragnar Ostberg and the work of numerous others? *Nej!* (Swedish for no!) They have been amply pictured in these pages.

Now comes to the writer's attention one of a younger generation, Gerhard Pusch, trained in the German school. It shows in his work. His studies are most interesting. How would the *villa* (cottage)

go in America? It is European indeed. But it is not as *Stockholmsk* as the apartment building. Here may be seen the influence upon wall areas of short Northern summers and cold winters, especially in their relation to the fenestration. In its simplicity it belongs in Frithiof's land, in spite of the Greek acroteria and Renaissance influence plainly visible in the design. You would *not*

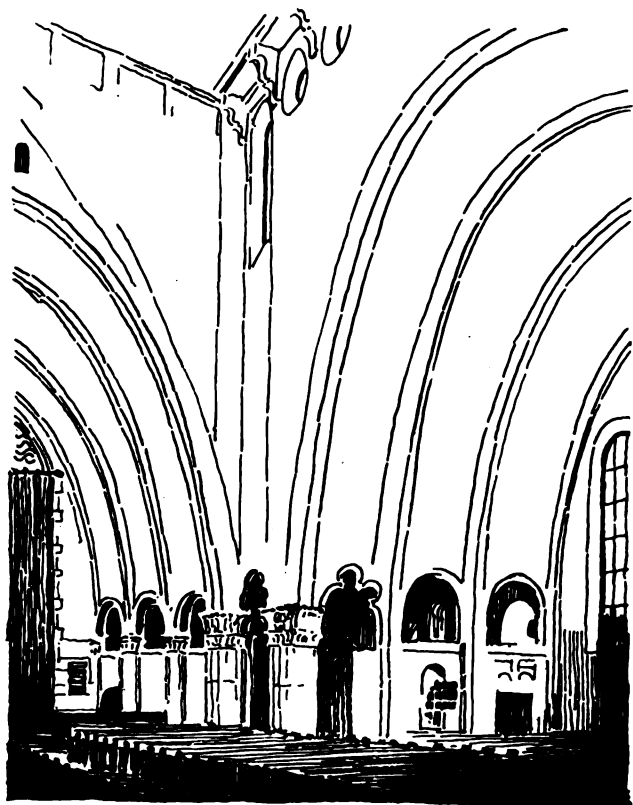


CONCERT HOUSE AT STOCKHOLM, SWEDEN, PROFESSOR IVAR TENGBOM, ARCHITECT.

be especially surprised to see the viking *casque* of a Bjorn, (who was Frithiof's blood-sworn brother) reflect the gleam of a sunbeam as he looked forth through a muntined casement to espay whether it were friend or foe approaching.

Gerhard Pusch writes of his sketches: "I have not written explanations of the works I sent you, because I think that you will understand them. The warehouse and the church show so evident a structure and are so grave in character, that they speak for or against themselves. The vertical structure of the warehouse is perhaps remindful of the warehouse Wertheim at Berlin (Architect Alfred Messel), but the architectonic forms and the monumental character of the gable have been created by me personally and were given birth after a long and hard struggle.

"I have shown in the project study of a church interior that it is possible to build a church so that its monumental character is in agreement with the words spoken therein, and the ceremonies or acts which take place there. A church interior should be such that the people who stand outside of the religious sphere shall be drawn again to the church through the architectonic relationship of the religious spirit to the architectural expression of its form. (In Swedish: 'Genom det gemensamma i den religiösa och arkitek-



ARCHITECT'S SKETCH OF INTERIOR, ENGELBREKT CHURCH, STOCKHOLM, SWEDEN. L. I. WAHLMAN, ARCHITECT.

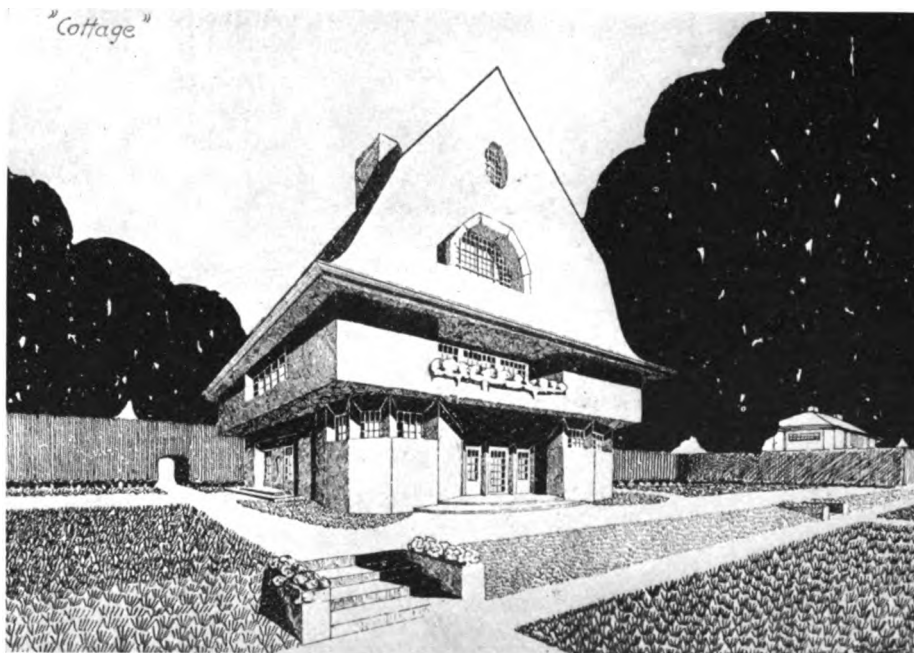
toniska upplevelsen..) That is, in my opinion, a very high ideal which architects should try to reach."

The warehouse stands, indeed, symbolically commercial, even threatening in its facial expression, me-thinks, (see the drawing, Page 188) reflecting well some of the goings-on of the day, in politics and in

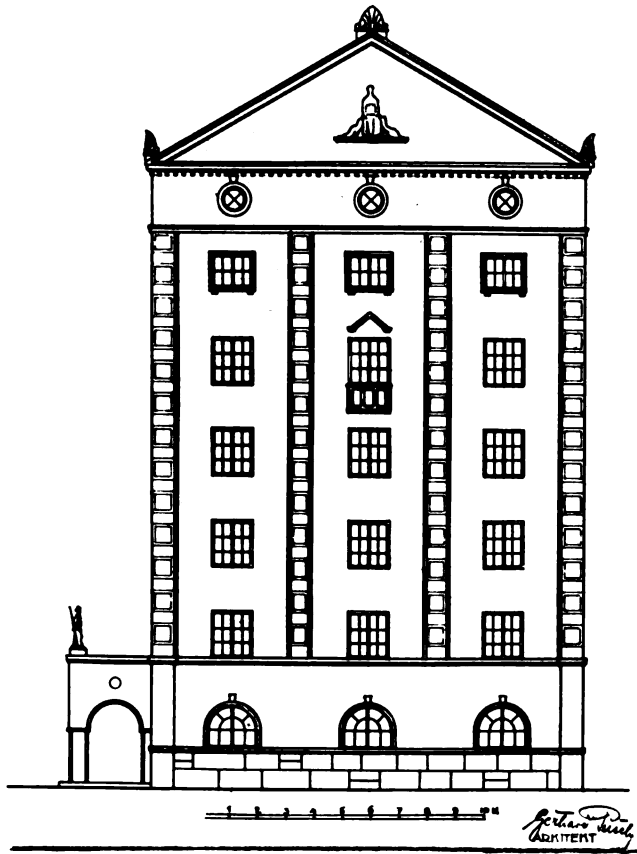
commerce. *I'll give it* to Herr Pusch; he has made this design speak powerfully of the structure's purpose. Of such should be the kingdom of architecture.

About the church—room for thousands of people to assemble in memory of and for the purpose of paying homage to one who gave His life that they might have life more abundantly. Three ways—huge arches leaping across mammoth openings which admit the light from the skies. Overhead—a tremendous vault springing from pendentive to pendentive, a screen to protect the worshippers from the thunders of Thor, the chilling blasts of the Berserkir furies, and Ham and Heyd, the storm-demons. Under a fourth wide-flung arch stand huddled and bundled together the means so of torturing the enslaved winds of heaven that they moan, mutter and rumble, whine, ring and whistle, softly sigh, shout, whisper, pray and sing, until they stir the very innermost depths of man, sinking him deep into introspection, only to fling him into ecstasies such as may have been known only to a battling Viking as he was seized in the strong clasp of a *Valkyrie* and pressed to her breasts while she rode with him into *Valhalla*.

Before the audience, in the midst of it in fact, stands the altar upon a triple-stepped dais, which is built upon a two-terraced approach. Lifted high in the symbolic East is erected the memorial to Golgotha. Is this Swedish? Yes! Insofar as it brings into the *light* that which was kept behind the iron grills or *rejerta* of Spain, hidden by the massive rood-screens of England, or set deep within the distant apses of France. Here is room for the processional and the drama too; room to enact the acts of men and the acts of Gods, if you will. In accents bold they may be staged that



ARCHITECT'S SKETCH OF A COTTAGE, GERHARD PUSCH, ARCHITECT



SKETCH OF APARTMENT BUILDING AT STOCKHOLM
GERHARD PUSCH, ARCHITECT

they might inspire men to live brave lives. Thorsten (the father of Frithiof) speaks to his son: "Honor the Gods; for every good and harm comes from above,

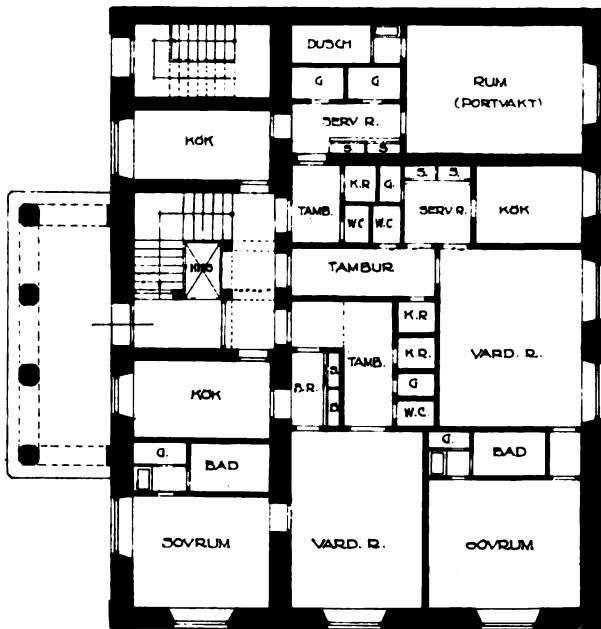
like sunshine and like storm. Deep into hearts they see, and many mourn in lifelong sorrow for one short hour's scorn." Take that to heart. It is apropos of architecture too.

Here also is freedom to worship as the conscience dictates. No drab aisles in which shadows lurk. No deep sanctuary where mystic services only are visualized by means of gleaming tapers and made audible through the chant of intermediaries. Nay, here in full view, the servant of the Lord breaks the bread. Hosannas spring through lusty throats from faith-filled breasts, and heads bow deep with humility, only to be raised again with eyes turned to the light—to bend low before Calvary, yes—but yet to leap like new lambs before the opened tomb. He is arisen!

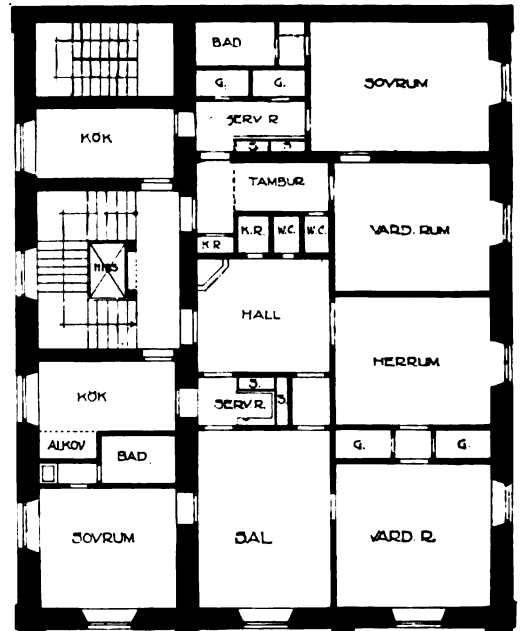
Does this church interior (Page 177) by Gerhard Pusch speak thus to you? Surely the plan does, with its excellent circulation, its capacious seating, with its visibility, which is indeed desirable in all Protestant forms of worship. It is regretted that we cannot show an exterior.

Ingeborg, Frithiof's childhood sweetheart, speaks to her lover as they part: "Oh! Frithiof, thou art happy! Following no man, thou canst forward go, like thy swift vessel; at the rudder stands thy will alone; and so thou steerest forth with steady hand, above the angry waves."

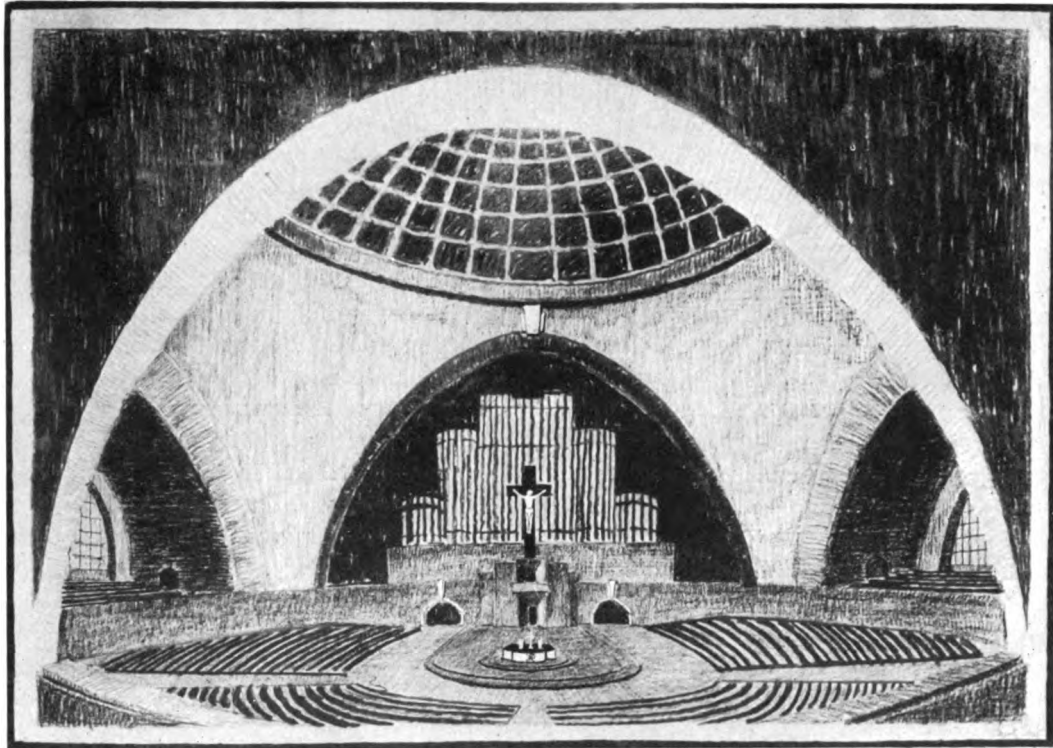
Architecture, *thou art not bound*. Thy destiny assuredly lies in the hands of men! Forth then, men! Scour the seas; take forth thy Angurvadel; sail in thy wonder-ship Ellida but come back to build a new temple to the Gods of Light!



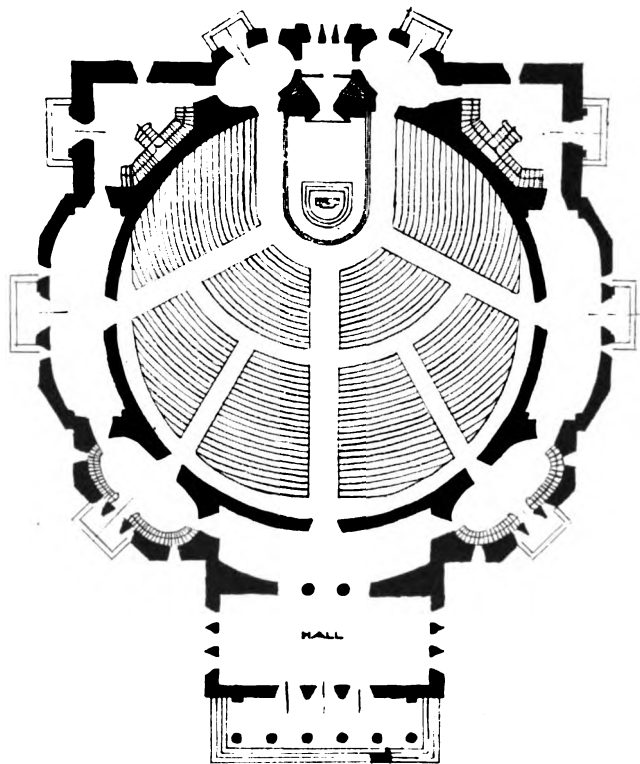
GROUND FLOOR PLAN OF ABOVE APARTMENT BUILDING



FIRST FLOOR PLAN OF ABOVE APARTMENT BUILDING.



ARCHITECT'S SKETCH—INTERIOR



FLOOR PLAN, PROTESTANT CHURCH, GERHARD PUSCH, ARCHITECT

✓ Acoustic Design of Churches*

By DR. F. R. WATSON
Professor of Physics, University of Illinois

NEARLY everyone at some time has had the discomfort of not understanding a speaker. And under this circumstance, one promptly inquires why wires were not stretched or a sounding board used to remedy the trouble. But these devices, according to modern science, are practically of no use, in spite of the fact that they are generally regarded as the means of correction.

The acoustic adjustment of rooms is a subject of modern development, and became an acute problem when large auditoriums were built with steel and plaster constructions. As a result, only a few architects are informed concerning the scientific progress in the subject, not only because the development is comparatively recent—since about 1900, with instruction given in less than a dozen schools—but also because many published accounts of acoustics are not easy for them to understand, and because of their aversion of being obliged to consider a new element in the already complicated problem of buildings, with an additional expense.

Active progress in the acoustic adjustment of rooms has been stimulated by commercial companies, who have developed various products that have acoustic merit in greater or less degree, and who present the matter by modern sales methods to the parties involved. It appears important at the present time to set forth discussions of the subject that are based on scientific investigations and yet which are simplified as far as possible for the information of the layman who is confronted with the necessity of acoustic installation.

What is desired for ideal acoustics is that the sound reaching an auditor in any part of a room shall be of suitable loudness and distinctness for comfortable hearing, with an elimination or control of echoes, reverberation, "dead spots" and other faults. To a great extent, it is possible to secure such ideal conditions; and it is the purpose of this paper to explain some of the fundamental actions of sound and to show how church auditoriums may be adjusted so as to have good acoustic properties.

In the open air, the utterances of a speaker progress with practically no distortion, and perfect acoustics are obtained. But only a few people standing on the level ground around the speaker can hear him, because a large part of the sound proceeds up-

ward and is lost, and the sound proceeding sideways is rapidly absorbed by the auditors' clothing. An auditorium improves this condition. A raised platform for the speaker allows all the auditors to see him and hear him. By means of a balcony the auditors at the outside edge can be brought nearer. The enclosing surfaces serve to reflect the sound going upward and thus increase the loudness for auditors in all parts of the room. While the auditorium thus produces some advantages, it also creates defects. For instance, the reflected sound, which is the chief difference between open air acoustics and auditorium acoustics, may produce serious trouble; so that a study of its action is the most important consideration in obtaining good acoustics in a room.

Sound travels out in spherical waves from a speaker or a musical instrument with the great velocity of 1120 feet per second at ordinary temperatures,—about as fast as a rifle bullet. As a result, sound will be reflected back and forth in an auditorium about 30 times a second between walls 40 feet apart and because of these rapid reflections, will fill an auditorium of usual size in a small fraction of a second, thus insuring a *loudness* in every part of the room. A speech sound, such as any one of the words uttered by a speaker, requires about one-tenth of a second for its completion, and travels 112 feet before the word is finished; which means, in the open air, that a speaker would be at the center of a sphere of 112 feet radius that would be filled with the sound of the word. In an auditorium, the sound waves would be reflected several times in traveling 112 feet so that, instead of a sphere, there would be overlapping bundles traveling in every direction, that completely fill the room with the sound of the word before the speaker finishes saying it.

These overlapping sounds may produce confusion. For instance sound is reflected from the wall behind the speaker in much the same way that light is reflected from a mirror;—that is, the speaker has a fictitious image behind the reflecting wall that imitates his speaking. It is then the same as if two speakers said the same words at the same time. Imagine the effect on an auditor. If the two speakers are close together, the effect is beneficial, but if far apart,—as would be the case if the speaker were some distance in front of the reflecting surface—a blurring of speech sounds occurs and it becomes difficult to understand. Not only is sound reflected from the wall behind the speaker, but from all the other walls,

*An address given October 6, 1927, in Chicago, at a meeting of the Church Bureaus of Architecture and the Committee on Church Building of the Home Missions Council.

so that an auditor listens not only to the real speaker but to a large number of fictitious speakers due to the reflecting walls. The possibilities of confusion are easily imagined.

Modern investigation shows that walls at a distance of about 25 feet or less from a speaker produce beneficial reflection of speech sounds. This shows the importance of having a speaker located near reflecting walls. Walls more than 25 feet distant are sources of trouble, but fortunately their effect gets smaller with increasing distance, because the imaged speaker is now farther away from the auditor. If a wall, particularly a curved wall, is at some distance from the auditor, the reflected sound may arrive long enough after the direct sound to produce an echo; that is, a distinct, disturbing repetition of the direct sound. Reflecting walls that produce noticeable defects may be padded.

The most serious defect of reflection is the prolongation of sound in a room, called *reverberation*. When sound arrives at a wall or ceiling, it is reflected, absorbed and transmitted in varying amounts depending on the nature of the reflecting surface.

A hard plaster wall, for instance, reflects 95 per cent or more of the incident sound, and therefore absorbs but little; whereas a layer of hair-felt, one inch thick, may absorb 55 per cent with a correspondingly smaller reflection. If a room is bounded by plaster, glass and wooden surfaces, very little absorption takes place and the sound may be reflected 200 to 300 times before it becomes inaudible. This means that the utterances of a speaker will overlap and produce confusion for listeners. What is desired is to have each utterance rise to a suitable intensity and produce its effect on the listener and then die out so as to leave the field free for the succeeding utterance.

The use of carpets, hairfelt and similar materials increases the absorption, and furnishes the means for controlling the reverberation in a room. An audience is an excellent absorber of sound, due to the clothing worn. In the winter time, when overcoats and heavier clothing are used, the absorption is greater

than in the summer time. An auditorium filled with a large audience may be satisfactory, but it is the modern practice to install absorbing material to avoid defective acoustics for small audiences or for rehearsals in the empty hall.

An all important question arises as to the amount of sound-absorbing material that should be installed for good effect, and this has been answered by obtaining the opinions of auditors regarding auditoriums already possessing good acoustics. It is found for best effect that a standard sound should die out in two seconds or less depending on the size of the auditorium. Calculations can then be made to determine how much material will be needed for the auditorium to secure the required time of reverberation.

Having determined the amount of material needed for optimum acoustics, the question arises as to where it should be placed. Experience shows that some walls are more likely to give troublesome reflections than others. For instance, a rear wall may reflect sound to an auditor near the speaker and produce an echo; that is, a repetition of the direct sound that is noticeable.

This result follows if the time interval between the direct and reflected sounds is about one-tenth of a second or more, for which the difference in path of the two sounds is at least 112 feet, and the reflecting wall is about 56 feet distant from the auditor. With the wall at a greater distance, the echo will be worse. If the reflecting wall is curved, which is often the case, a focussing action follows and the echo is more pronounced. To reduce this defect, it is desirable to place sound-absorbing material on such reflecting walls, particularly those at some distance from the stage. This practice finds commendation for another reason. Experiment has shown that better acoustics are obtained if the walls about the speaker or musician are left reverberant while the absorbing material is placed on the walls nearer the audience. Under these circumstances, the speaker or musician finds that it is "easy to speak or play," and the auditors find the listening satisfactory.

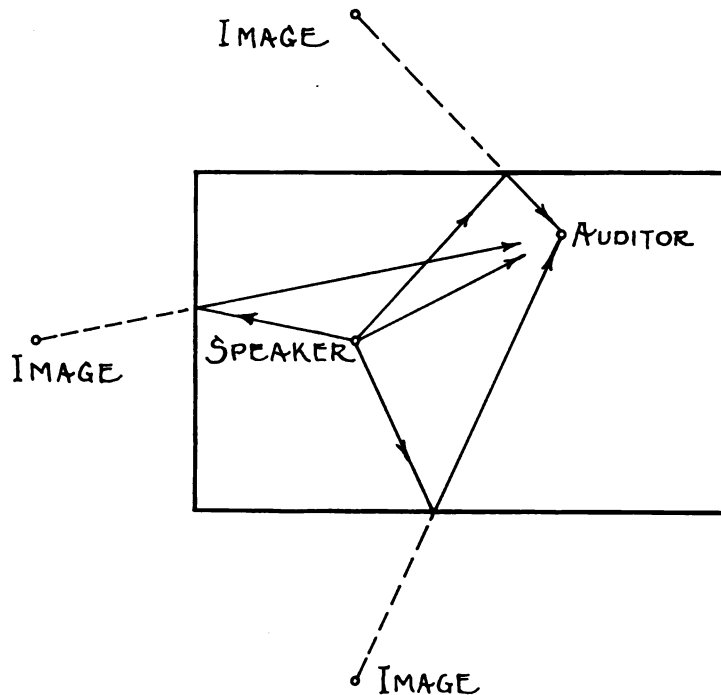


FIGURE 1—DIAGRAM SHOWING REAL SPEAKER AND THREE IMAGE SPEAKERS, ALL SAYING THE SAME WORDS AT THE SAME TIME.

The shape of an auditorium is a matter of consideration. Generally speaking, a rectangular shape is preferred. Curved walls produce eccentric actions on sounds and may set up bad echoes. Balconies are usually advantageous acoustically, since they tend to break up sound in the otherwise large space. Gothic ceilings are beneficial to acoustics, because they reduce possibility of echoes, and because sound-absorbing material is more effective on such surfaces than on a flat ceiling.

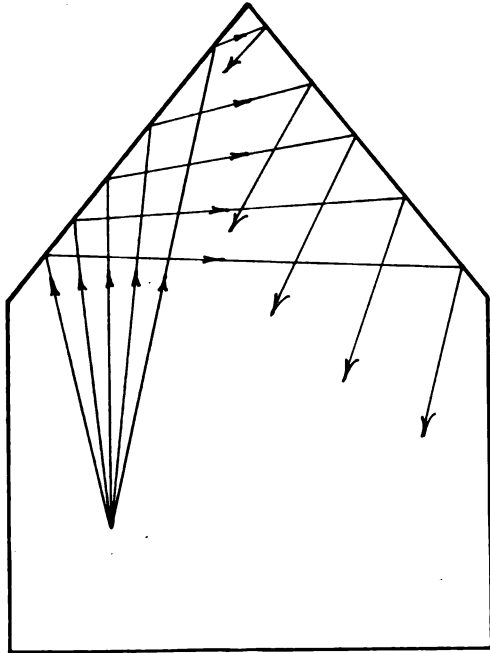


FIGURE 2—SHOWING SOUND REFLECTED TWICE FROM MATERIAL IN GOTHIC CEILING.

Large auditoriums are more difficult for good speaking than small ones. The reflecting walls are some distance from the auditors, with possibilities of echoes and blurring of speech. Electric loud speakers serve to amplify a speaker's voice, but they may produce some distortion. Music is an advantage in large rooms, more so than a speaker, because musical instruments have possibilities of greater volume of sound.

Music requires the same acoustic adjustment of auditoriums for optimum conditions as speaking. Increasing the sound-absorbing material beyond the optimum makes the room dead, so that music sounds dry and lifeless, but the speaking becomes more distinct. If less sound-absorbing material is used than required for the optimum, music still sounds good, but speaking rapidly gets worse.

The important requirements for good acoustics in a room may be enumerated as follows:

1. The reverberation, or prolongation of sound, should be controlled by installing an amount of sound-absorbing material in proportion to the volume of the room.

2. The sound in a room should have sufficient loudness; a condition that is brought about by reflection from the various surfaces of the room which re-enforces the direct sound. If the speaker or musical instrument produces only a weak sound, no arrangement of the room will increase the loudness, except by the use of an electric loud speaker.
3. Speaking should be distinct. For this purpose, it is desirable to arrange the reflecting surfaces near the speaker, and to apply absorbing material to selected walls.

Calculations by Which the Acoustics of a Room May be Adjusted.

Reverberation and its Control. As already explained, the sound energy in a room will persist too long if the surfaces are not sufficiently absorbing. The continued reflections under such circumstances prolong the sound and produce what is called a *reverberation*. Speech is then distorted and music does not have the qualities desired by musicians. Some idea of the absorbing value of different surfaces is given in the following table.

TABLE I. Absorbing Co-efficients of Common Materials

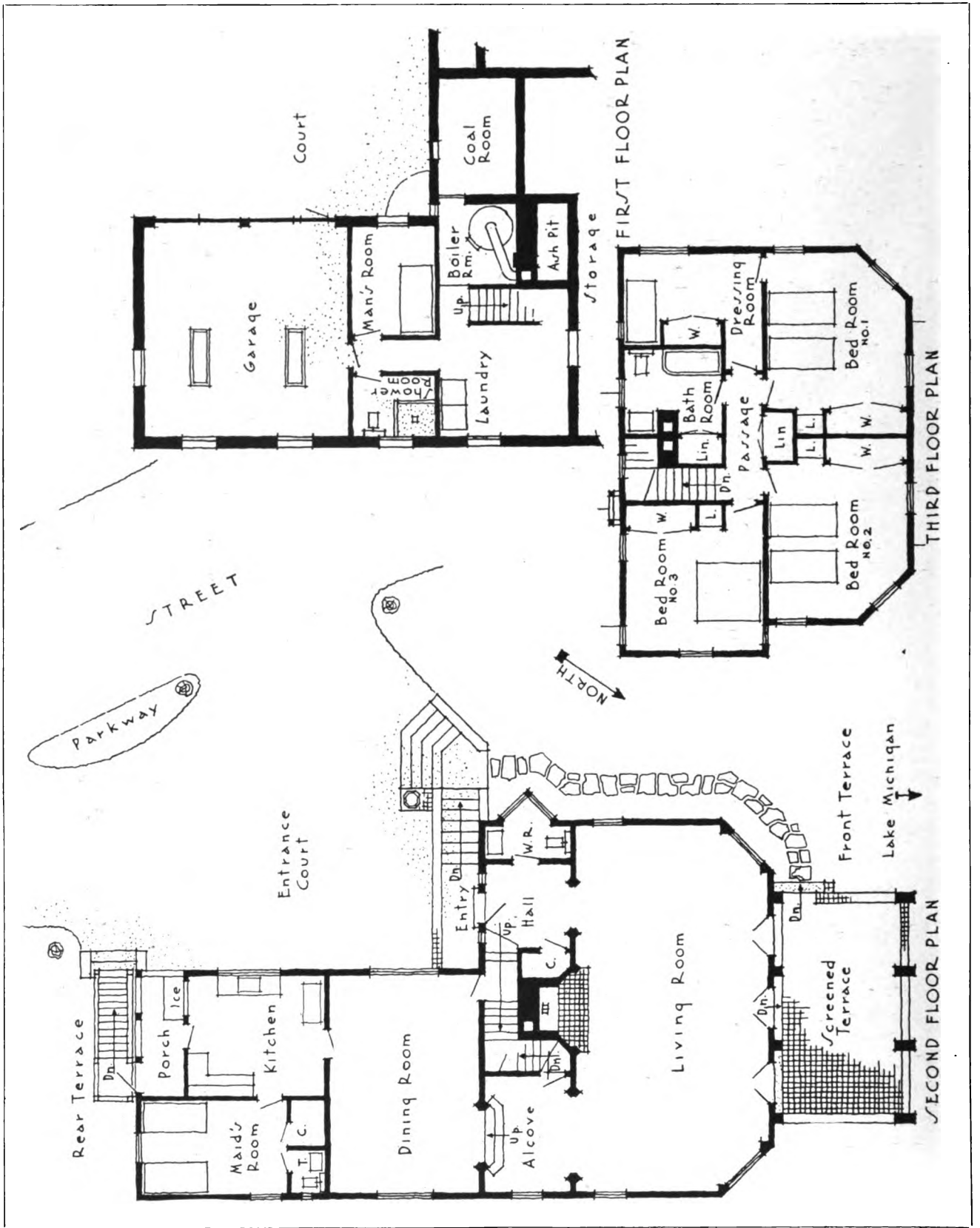
| | Co-efficient per sq. ft. |
|--|--------------------------|
| Open window (absorbs all sound falling on it)..... | 1.00 |
| Hairfelt, one-inch thick..... | .55 |
| Plaster walls..... | .025 to .034 |
| Glass..... | .027 |
| Concrete..... | .015 |
| Varnished wood..... | .03 |
| Carpets..... | .15 to .25 |
| Audience (per person, about 15 ft. of clothing)..... | 4.7 |
| Wood seat..... | .2 |

Inspection of this table shows why a room lined with plaster, glass and wood is reverberant,—the surfaces absorb but little and the sound will persist several seconds before becoming inaudible.

An all important question arises as to the amount of sound-absorbing material that should be installed for good effect, and this has been answered by obtaining the opinions of auditors regarding auditoriums already possessing good acoustics. Before discussing the answer to this question, it should be stated that the reverberation depends also on the *loudness* of the sound and on the *volume* of the room. Larger rooms, with the reflecting walls farther apart, will have a longer reverberation. These factors may be put into the statement: the time of reverberation t is directly proportional to the loudness of the sound and to the volume V of the room, and inversely proportional to the absorbing material a present. Putting this in



GENERAL VIEW
SUMMER RESIDENCE OF MR. AND MRS. W. A. ZUMPF, LONG BEACH, INDIANA
JOHN LLOYD WRIGHT, ARCHITECT



PLANS
 SUMMER RESIDENCE OF MR. AND MRS. W. A. ZUMPFER, LONG BEACH, INDIANA
 JOHN LLOYD WRIGHT, ARCHITECT



ENTRANCE DETAIL

SUMMER RESIDENCE OF MR. AND MRS. W. A. ZUMPF, LONG BEACH, INDIANA
JOHN LLOYD WRIGHT, ARCHITECT :: :: :: :: :: :: :: :: :: :: ::



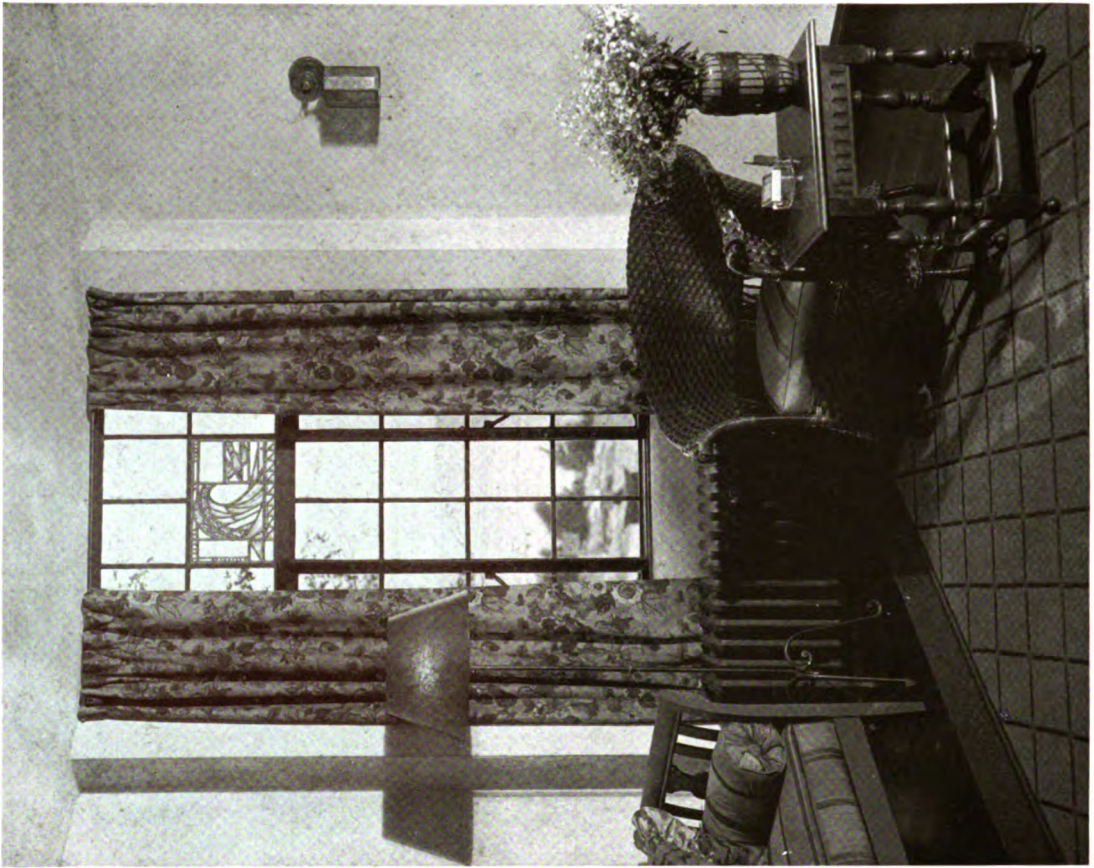
LIVING ROOM FROM HALL



VIEW OF ENTRANCE COURT
 SUMMER RESIDENCE OF MR. AND MRS. W. A. ZUMPF, LONG BEACH, INDIANA
 JOHN LLOYD WRIGHT, ARCHITECT



LIVING ROOM
SUMMER RESIDENCE OF MR. AND MRS. W. A. ZUMPF, LONG BEACH, INDIANA
JOHN LLOYD WRIGHT ARCHITECT :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::



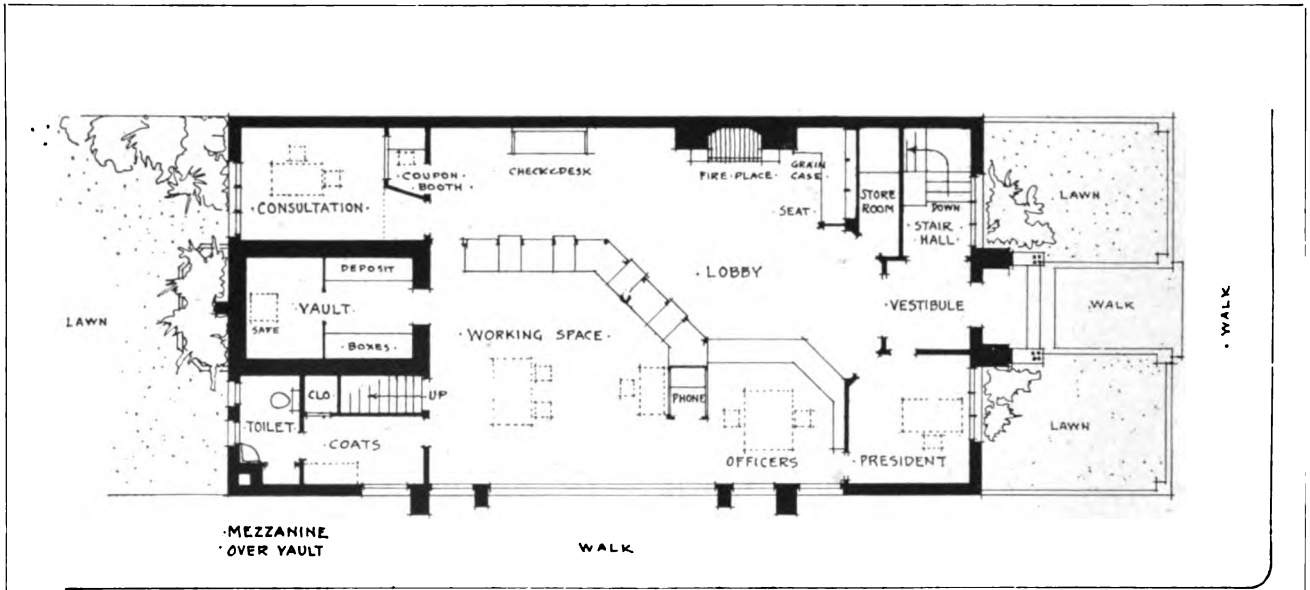
CORNER OF LIVING ROOM



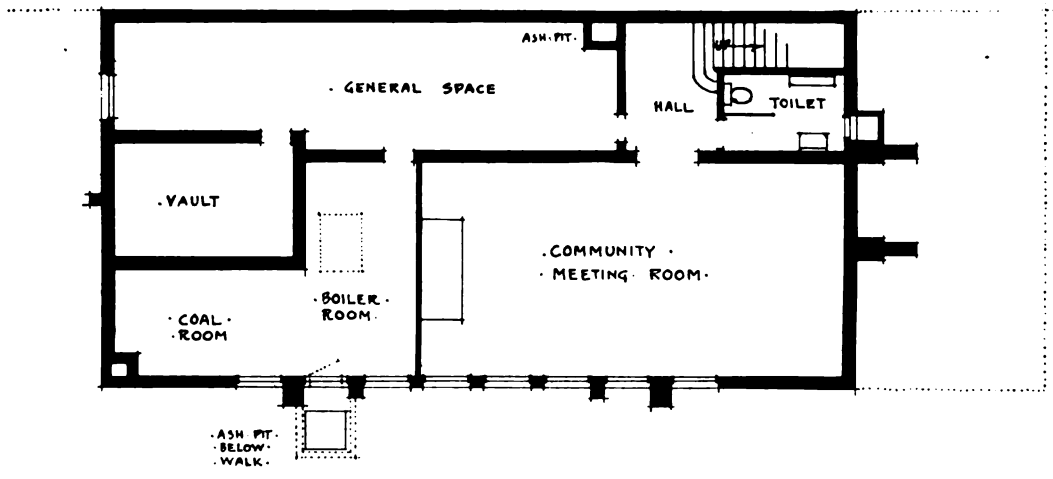
"FANTASY OF THE DUNES"
SUMMER RESIDENCE OF MR. AND MRS. W. A. ZUMPF, LONG BEACH, INDIANA
JOHN LLOYD WRIGHT, ARCHITECT
A. TANNELL, SCULPTOR



GENERAL VIEW
FIRST NATIONAL BANK OF ADAMS, MINNESOTA
GEORGE C. ELMSLIE, ARCHITECT
F. A. STRAUDEL, ASSOCIATE ARCHITECT



FIRST FLOOR PLAN



BASEMENT PLAN

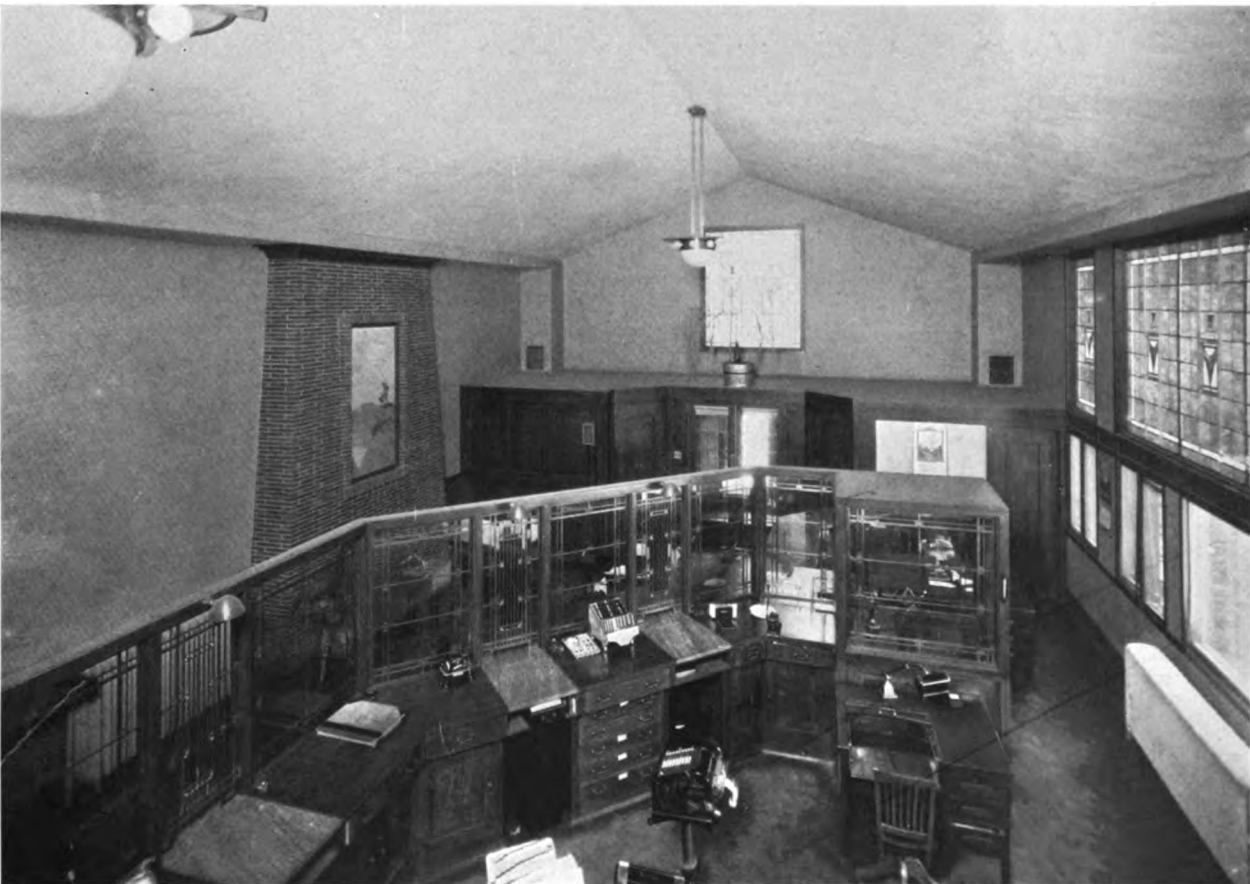
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PLANS

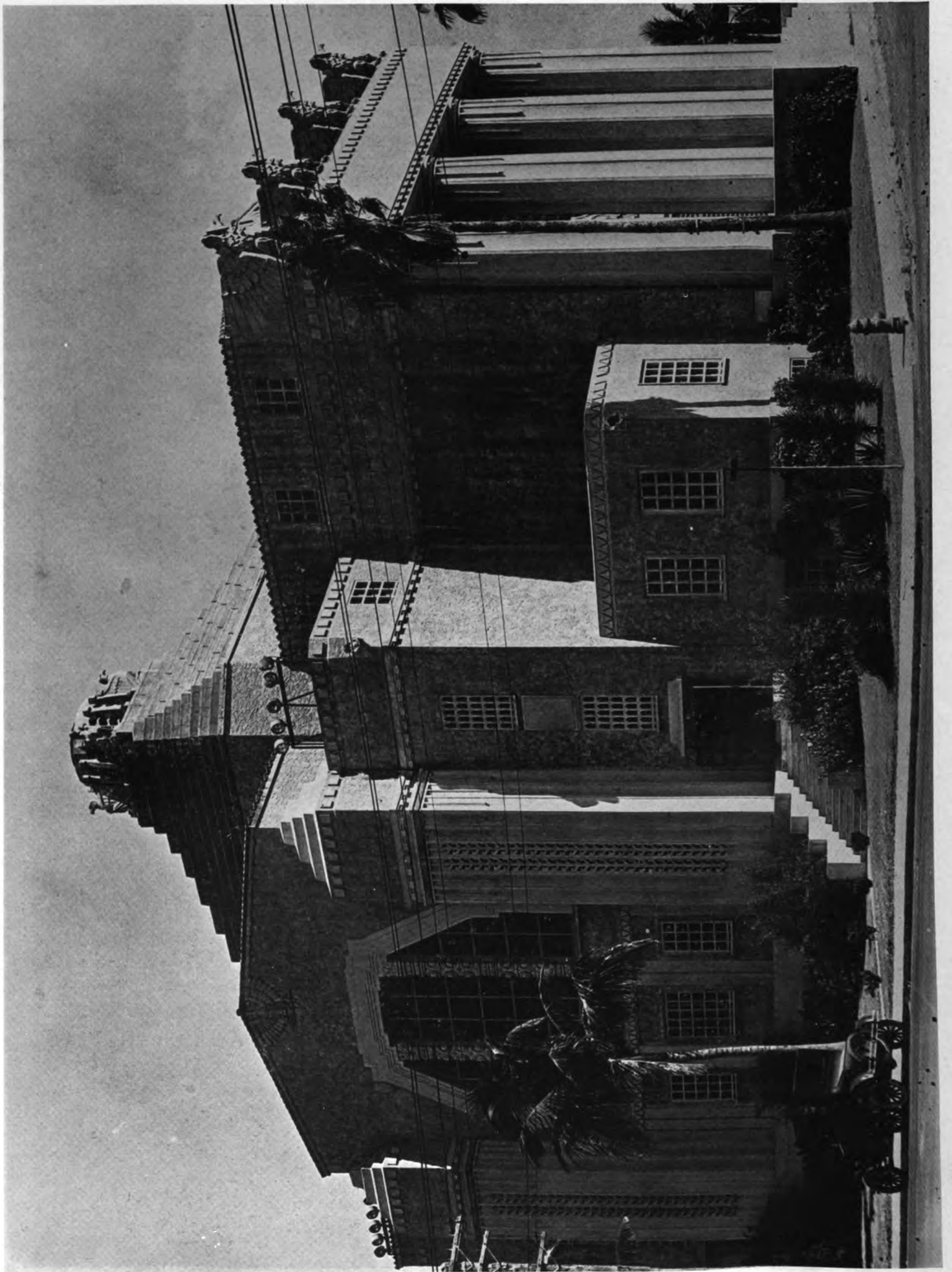
FIRST NATIONAL BANK OF ADAMS, ADAMS, MINNESOTA
 GEORGE G. ELMSLIE, ARCHITECT :: :: :: ::
 F. A. STRAUDEL, ASSOCIATE ARCHITECT :: :: :: ::



INTERIOR LOBBY



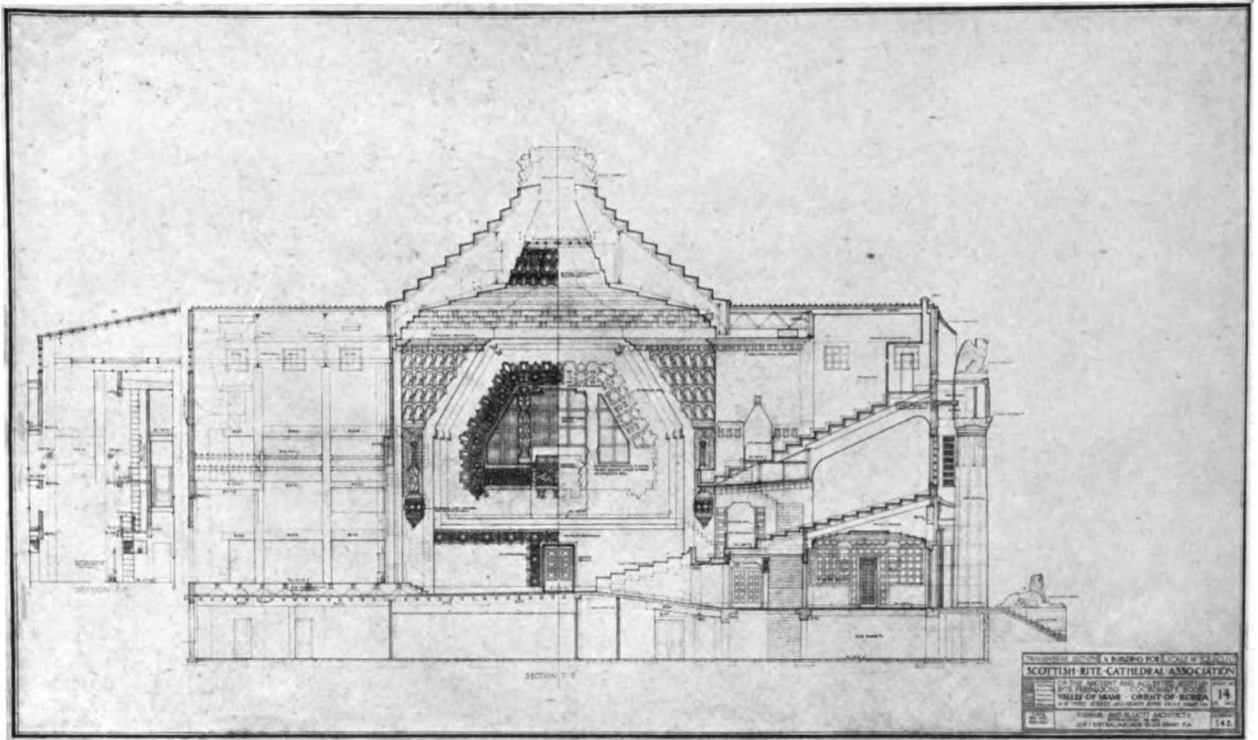
VIEW OF INTERIOR SHOWING WORK SPACE
 FIRST NATIONAL BANK OF ADAMS, ADAMS, MINNESOTA
 GEORGE G. ELMSLIE, ARCHITECT :: :: :: :: ::
 F. A. STRAUDEL, ASSOCIATE ARCHITECT :: :: :: :: ::



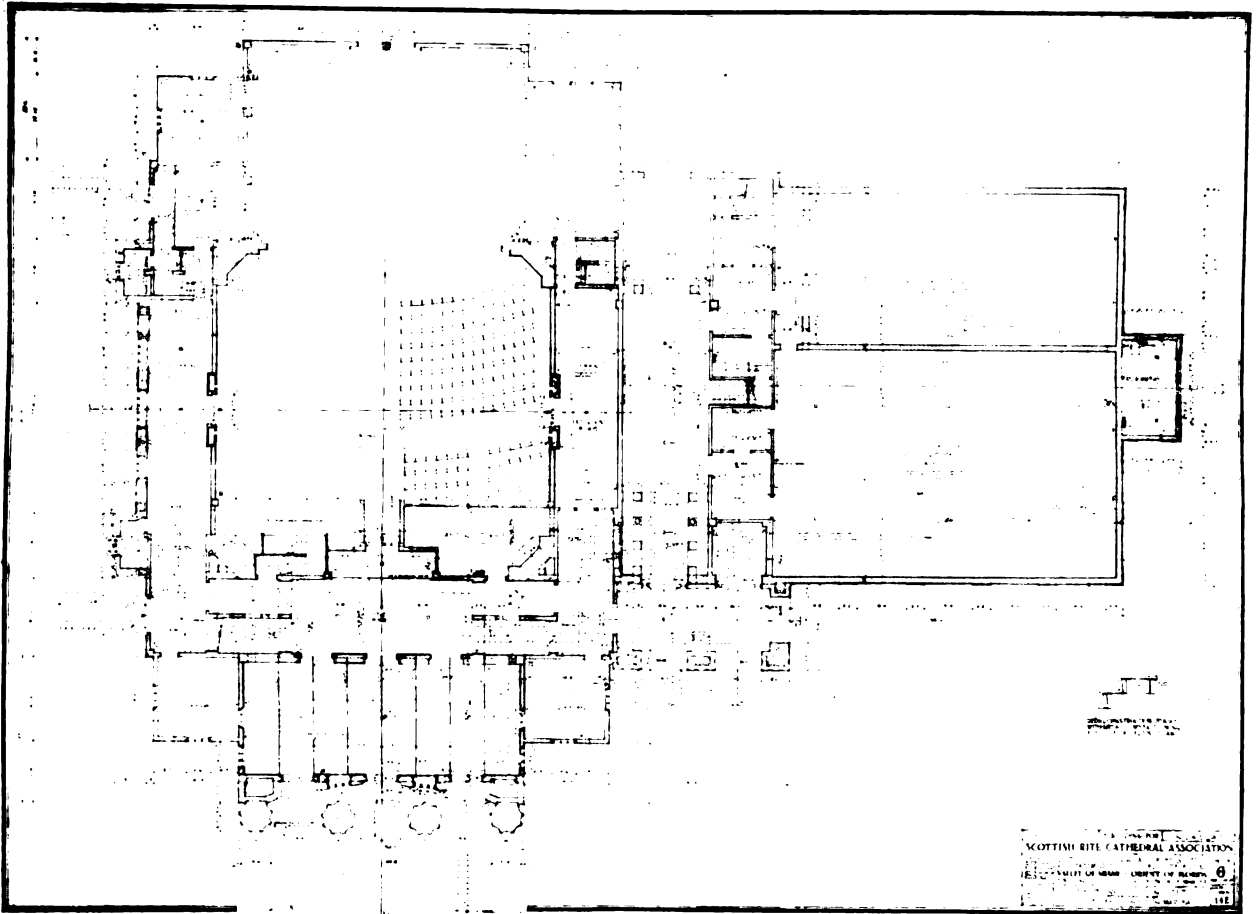
GENERAL VIEW
TEMPLE, MIAMI, FLORIDA
SCOTTISH RITE
KIEHNEL AND ELLIOTT, ARCHITECTS



VIEW OF FRONT
SCOTTISH RITE TEMPLE, MIAMI, FLORIDA
KIEHNEL AND ELLIOTT, ARCHITECTS ::

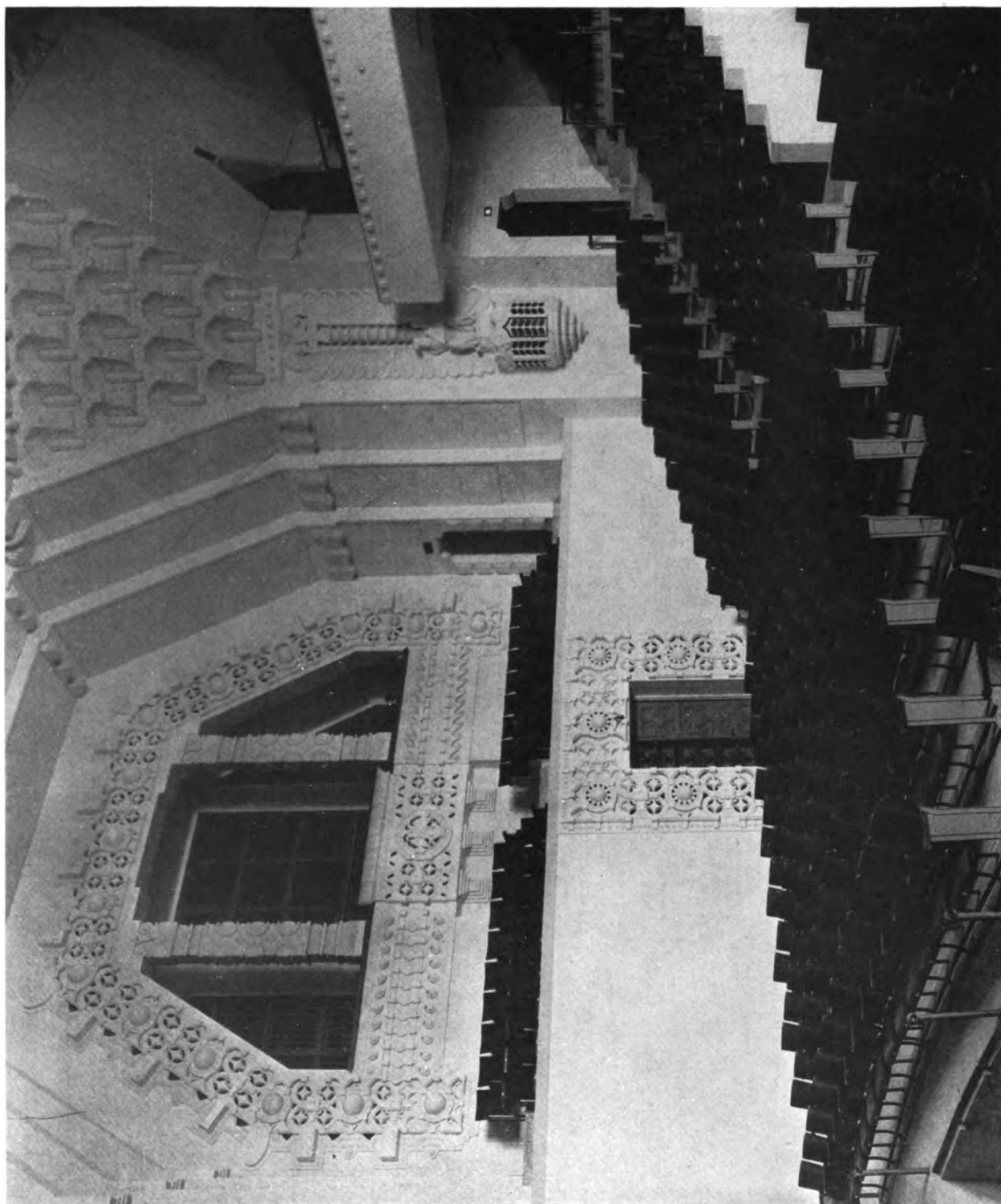


TRANSVERSE SECTION

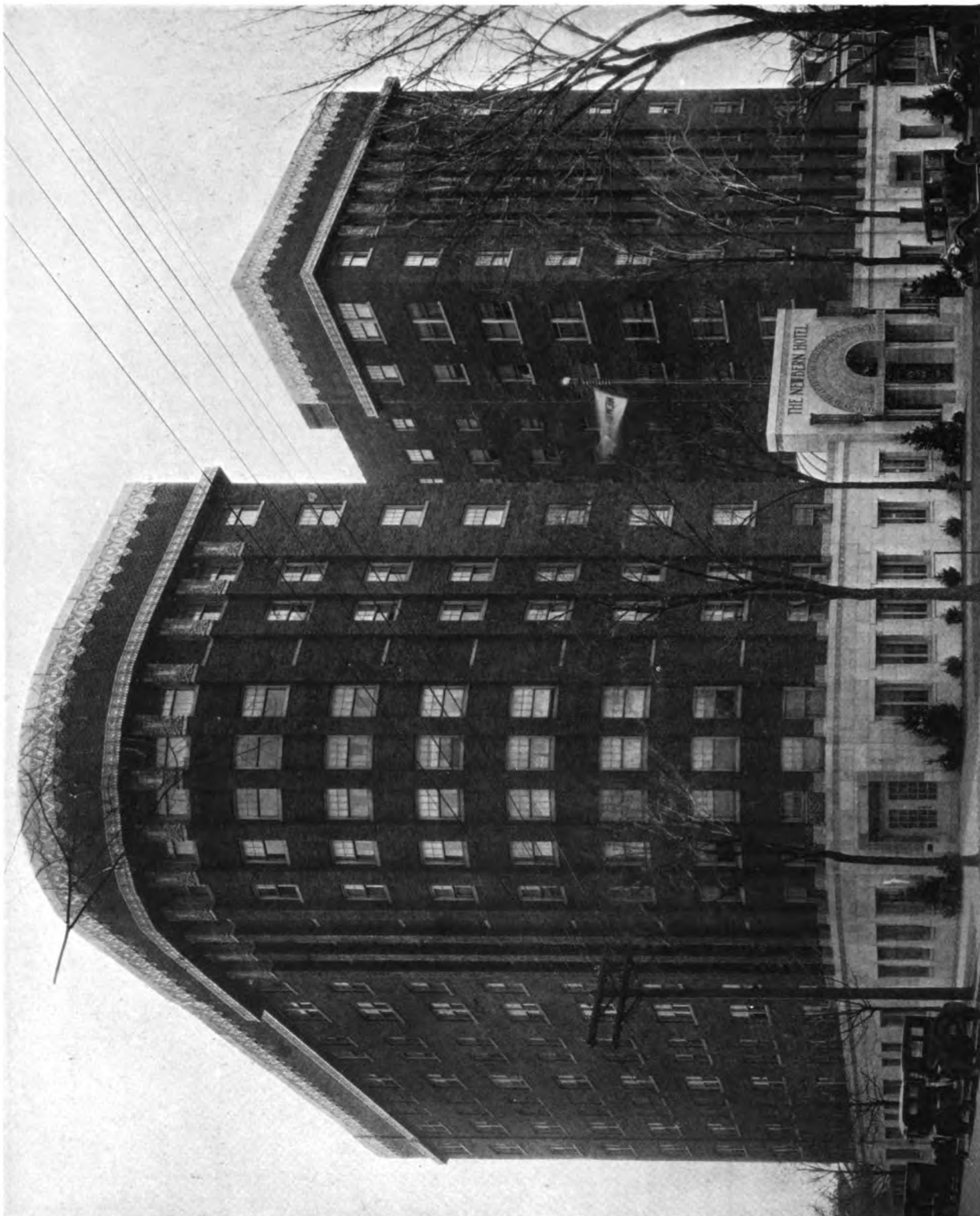


FIRST FLOOR PLAN

SCOTTISH RITE TEMPLE, MIAMI, FLORIDA
KIEHNEL AND ELLIOTT, ARCHITECTS ::



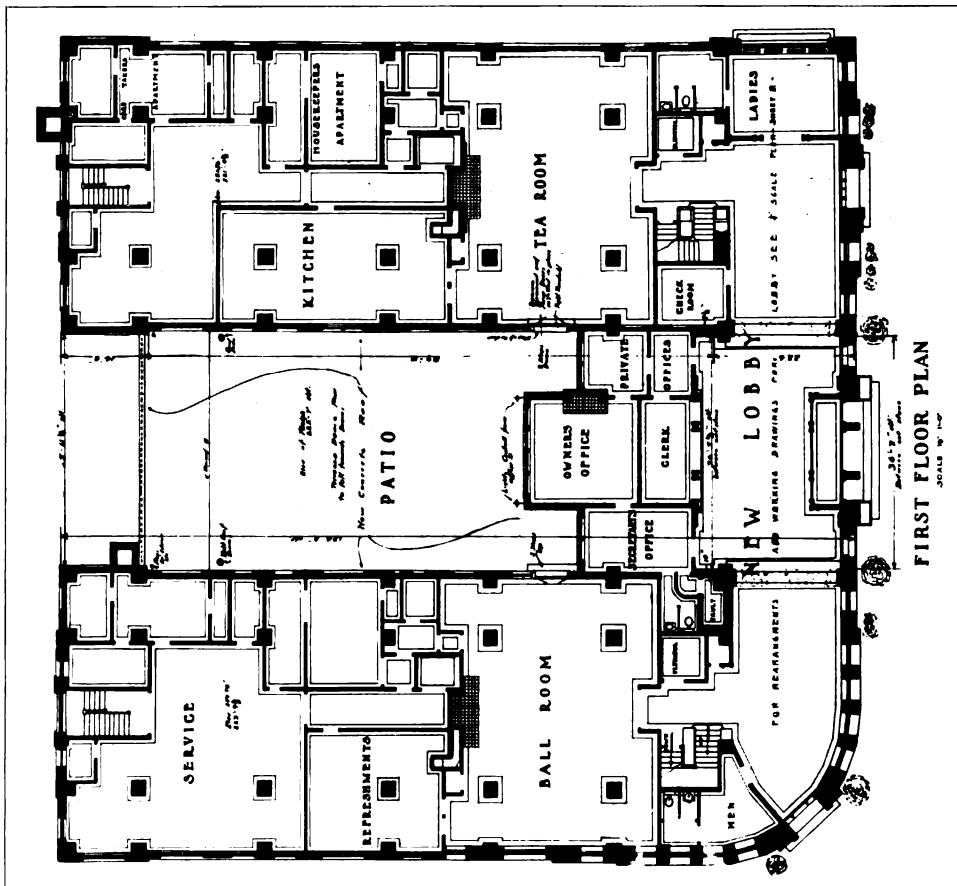
VIEW OF INTERIOR
SCOTTISH RITE TEMPLE, MIAMI, FLORIDA.
KIEHNEL AND ELLIOTT, ARCHITECTS ::



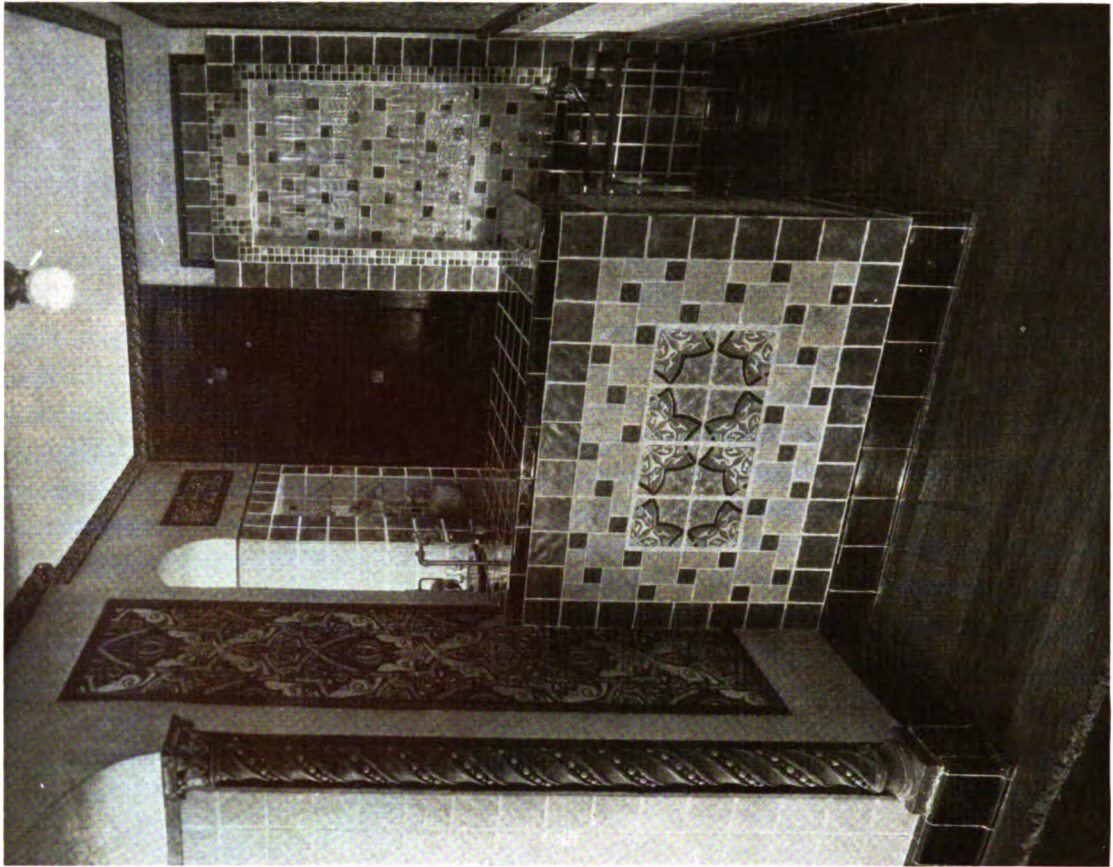
GENERAL VIEW
THE NEWBERN HOTEL, KANSAS CITY, MISSOURI
ERNEST O. BROSTROM, ARCHITECT



DETAIL OF ENTRANCE



FIRST FLOOR PLAN
 THE NEWBERN HOTEL, KANSAS CITY, MISSOURI
 ERNEST O. BROSTROM, ARCHITECT



BUFFET



VIEW OF INTERIOR, LOBBY
THE NEWBERN HOTEL, KANSAS CITY, MISSOURI
ERNEST O. BROSTROM, ARCHITECT

the simplified equation, we get: $t = .05 V/a$, where the factor .05 represents a standard loudness.

As a simple example, take an actual room 148 feet long, 57 feet wide and 23 feet average height; the volume being approximately 194,000 cu. ft. The absorption a in the room is calculated from the co-efficients in Table I as follows:

| | | |
|-----------------------|----------------------|-----------|
| Wood floor | 8436 sq. ft. at .03 | 253 units |
| Plaster ceiling | 8436 sq. ft. at .033 | 278 units |
| Plaster on tile walls | 9430 sq. ft. at .025 | 236 units |
| 1,000 seats | at .15 | 150 units |

| | |
|-------------------------------|--------------|
| Absorption for the empty room | 917 units |
| Average audience (330 people) | at (4.7-15)* |
| | 1500 units |

Absorption with average audience 2417 units
 *When an auditor occupies a seat, its absorption (.15) is subtracted.

It should be noted that the absorption of the audience is nearly twice that of the surfaces in the room. This is due to the clothing worn. Continuing with the calculations, we get the time of reverberation for the empty room to be:

$t(\text{empty room}) = .05 \times 194,000 / 917 = 10.6$ seconds
 and for the average audience,
 $t(\text{average audience}) = .05 \times 194,000 / 2417 = 4.02$ seconds.

That is, a standard sound will persist 10.6 seconds in the empty room and 4.02 seconds with an average audience present. Comparing these results with those for auditoriums having good acoustics, it is found that the times are too long and that the room will be too reverberant so that sound-absorbing material must be introduced to make the reverberation less. For guidance in such installation, the following table of optimum values of the time of reverberation and absorbing material has been prepared.

TABLE II. Optimum Time of Reverberation and Optimum Absorption

| Volume of Room | Optimum Time | Optimum Absorption Units |
|-------------------|--------------|--------------------------|
| 3,300 cu. ft. | 1.0 seconds | 165 units |
| 12,900 cu. ft. | 1.1 seconds | 585 units |
| 33,000 cu. ft. | 1.2 seconds | 1,380 units |
| 63,000 cu. ft. | 1.3 seconds | 2,400 units |
| 117,500 cu. ft. | 1.4 seconds | 4,200 units |
| 186,000 cu. ft. | 1.5 seconds | 6,200 units |
| 276,000 cu. ft. | 1.6 seconds | 8,600 units |
| 407,000 cu. ft. | 1.7 seconds | 12,000 units |
| 550,000 cu. ft. | 1.8 seconds | 15,300 units |
| 750,000 cu. ft. | 1.9 seconds | 19,700 units |
| 1,000,000 cu. ft. | 2.0 seconds | 24,800 units |

Inspection of the table reveals one important fact, —that the optimum time is short, not exceeding 2

seconds for an auditorium of 1,000,000 cu. ft. Defective auditoriums usually have too long a time of reverberation.

Apply these optima to the case of the room first described. The volume is 194,000 cu. ft., which would require an optimum time of about 1.51 seconds, and this will be obtained when approximately 6,420 units of material are in the room. Suppose optimum acoustics are wanted for a two-thirds capacity audience. The room already has 917 absorbing units for the empty room, to which should be added 3,000 units for a two-thirds audience, giving a total of 3917 units. To this must be added 2,500 units to give the optimum of 6,420 units. If hairfelt is selected as the sound-absorbing material, the 2,500 units will require 5,550 sq. ft. (5,550 at .55 = 2,500 units), which may be applied in panels on the ceiling. Summing up, the times of reverberation for the corrected room will be:

| | | |
|--------------------------------------|--------------------------------|---------------|
| $t(\text{empty corrected room})$ | $.05 \times 194,000 / 3,420 =$ | 2.82 seconds |
| $t(\text{with one-third audience})$ | $.05 \times 194,000 / 4,920 =$ | 1.97 seconds |
| $t(\text{with two-thirds audience})$ | $.05 \times 194,000 / 6,420 =$ | 1.51 seconds |
| $t(\text{capacity audience})$ | $.05 \times 194,000 / 7,920 =$ | 1.23 seconds. |

Optimum acoustics will be obtained for two-thirds audience, but the conditions will be good for the capacity audience and also for the empty room, when used for rehearsals and organ practice.

Caution should be exercised in taking the size of audience for the optimum. For instance, in the preceding example, if the optimum is taken for only one-third audience, the amount of sound-absorbing material needed will be 4,000 units, or 7,272 sq. ft. of material, thus increasing the expense of correction. The optimum values given in Table II have been found satisfactory for audiences of from two-thirds to capacity. In case of doubt, it would be desirable to consult the acoustical engineer for the company whose material is to be used.

It has been announced that Geisecke & Harris, Architects, of Austin, Texas, have recently opened a Houston office in the Second National Bank Building and they shall be glad to receive copies of catalogs and manufacturers' literature at their new office.

D. Leonard Halper would also be glad to receive manufacturers' catalogs and other data for his files at his new office, 7016 Euclid Avenue, Cleveland, Ohio.

The Passing Show

By ARTHUR T. NORTH, A. I. A.

THE Passing Show is of the opinion that the best architectural literature is written by laymen. At least such writings are more thought provocative—and vastly more interesting. The layman, unlike the architect, has the advantage of not being steeped in the traditions of the art. Architects, when they essay literature, seem to have a fear of possible non-conformity with the conventional code and the result is a mass of descriptive matter entirely neglecting the "why or how." Of course, if the buildings described are old and decrepit enough they become, pro forma, fit for adaptation in America.

It is not the building that entirely constitutes architecture. Architecture is relative; but, blinded by his technique, the architect does not sense its relativity. It is thus with particular interest that we read the layman. One exception is in Louis Sullivan's "Autobiography of an Idea," but many fail to get the idea and their work makes the reason clear. And then came Louis Mumford with his "Sticks and Stones," making clear the relation between architecture and the social order. It is not altogether flattering to us and neither is his recent article "American Taste" (Harper's Magazine, October, 1927).

Mumford humanizes architecture and associates it with living people. At last we have a writer who discards the "frozen music" idea and such silly blah. In the article mentioned we read: "Architecture disintegrated; instead of building *with* style, the architect sought to design *in* a style; sculpture and painting ceased to be integral parts of the building." Any sophomore can design (adapt) *in* a style, but a real architect designs *with* style and how pitifully few they are!

Again quoting: "Unfortunately, we lacked both the

spirit of adventure and confidence; and in the nineties the scaffold of taste collapsed again We took the easier way. Horrified by the ugliness around us, and unable to command the forces that were producing it, American taste retreated from the contemporary stage and sought to build up little ivory towers of 'good taste' by putting together the fragments of the past. The architects led this retreat, particularly the successful Eastern architects; but they were anticipated by the great patrons of art, like Mrs. Jack Gardner; and presently our homes and our buildings ceased to have any fundamental relation to the American scene: they became fragments of the museum."

It is undeniable that the "successful Eastern architects" did and do now largely influence American architecture. They even fastened their vogue on Washington, making it the most deadly monotonous city, architecturally, in America. Successful for why? Wealth, social connection, a certain Beaux Arts acquired facility and the Beaux Arts prestige, lack of creative ability and "the spirit of adventure and confidence"—and perhaps, most of all, an uncultured, new-rich clientele.

Even today our architectural schools lack this spirit of adventure and confidence and stifle the creative instinct by worshipping the fetish of Beaux Arts cult and "the successful Eastern architects." We cannot even produce our own teachers but must import them from Paris, genuine importations like Neuchatel cheese.

* * *

Perhaps our better architecture will come through the client. Our most notable buildings are the result of a fine cooperation between the owner and architect. Owners are becoming more selective



THIS BUILDING STRADDLES ONE OF NEW YORK'S MOST PROMINENT STREETS, ACTING AS AN APPARENT STREET TERMINAL ALTHOUGH VEHICULAR TRAFFIC PASSES THROUGH IT ON THE STREET LEVEL.

in employing architects as they acquire a better appreciation of architecture.

Mr. James T. Lee had a conception of what he wanted and he selected Arthur Loomis Harmon to design the Shelton; Clarence M. Woolley chose Raymond M. Hood to design the American Radiator Building; the New York Telephone Company chose Voorhees, Gmelin and Walker to do the Barclay-Vesey Building; the General Motors Company chose Shreve and Lamb to do the General Motors Building. In each case the owner contributed splendidly to American architecture by employing an architect who had the spirit of adventure and confidence—and withal gave a fine co-operation.

The question arises, is it easier to educate, architecturally, the client or the architect?

* * * * *

Our illustration is taken from a daily paper advertisement of offices for rent in about a year from now. This building will straddle one of New York's most prominent streets. It will be a conspicuous termination from either direction. Vehicular traffic will pass through it on the ground level. The openings for this traffic are lost in a kind of thin, quadruplex, pseudo-Roman arch. The first stage terminates abruptly and the central tower portion has a rather fussy top-works culminating in a canary bird-cage-like affair. The whole thing seems to be decidedly stiff and mechanical and lacks a certain dignity and majesty that should be found in the termination of a great thoroughfare.

The Passing Show once expressed the idea that the world's best architecture had never been built. We were privileged, not long ago, to see a design for this selfsame building that was not accepted. It was an inspiration and entirely practical. The proportions of the first stage and the tower were finely balanced, the tower was imposing and majestic with walls having an apparent batter and a simple termination. It was clean cut, with long sweeping lines drawn by a master hand, a design worthy of the site and architecture. The traffic passed through the great arches of masonry apparently able to support the great tower above. The arches were not weakened by a mess of frivolous accessories but were bold, stark openings of splendid proportions in harmony with the whole concept.

It is true that the illustration offered is a daily paper advertisement and perhaps the finished drawings may be better. But even so, this illustration must be accurate enough to cause a slight feeling of resentment that such an important site is to be so treated.

* * * * *

The Principles of Professional Practice, A.I.A., Article 9, reads: "An architect will not advertise for the purpose of self-laudatory publicity, but publicity of the standards, aims and progress of the profession

is to be commended. He will take no part or give any assistance in obtaining advertisements or other support towards meeting the expense of any publication illustrating his work."

This is a wise measure in that it will stop the practice of sand-bagging and coercing contractors, manufacturers and material men into buying absolutely worthless advertising. The ethics of architects "pack hunting" for work has been discussed quite freely and a divided opinion still exists. Can a "pack of architects" indulge in practices which are considered as questionable for the individual?

Architectural organizations are constantly soliciting, sometimes with coercive intimations, advertisements in pageant and ball programs, annual exhibit catalogs and what not. The contractor, manufacturer and material man has the same resentment towards such solicitation. Architects' favors, whether individual or pack, which are bought with money contributions are worthless in the long run. Architects of that kind, like cracked politicians, will not stay bought.

The Passing Show believes that this is a subject well worth the attention of the Committee on Practice, A.I.A.

* * * * *

Let us quote another layman, Bertrand Russell: "Traditional art is impregnated with emotions which men's new powers are rendering antiquated We must suppose, therefore, that the older art forms will lose their vitality as the newer attitude to life acquires strength There is no reason to suppose that art will die out, though it must change. Skyscrapers and railway bridges are already beginning to develop aesthetic forms appropriate to the pride of scientific men. But the other arts lag behind because they have no immediate economic motive for adaptation to industrialism But good aesthetic results will not be achieved until men with the requisite artistic capacity have lived from early infancy in a modern atmosphere. For it may be said broadly that an artist can only express the attitude which he learned during the first years of life We may expect, therefore, that America will also emerge sooner, and will be the first to create the new art forms appropriate to modern life."

Here is the challenge written by an eminent Englishman. Undoubtedly the prophecy will materialize in time as to America. Would not the materialization come quicker and finer if we prepared for it rather than just let it grow? Should not the spirit of this age be explained to our students rather than to have them learn it through the demands of the owners? Mr. Talbot Faulkner Hamlin wrote of the late Guy Lowell in a recent issue of *The Nation* (yes, I read it occasionally to get the radical viewpoint). He spoke of Mr. Lowell's classical saturation

and intense love for Europe; that Europe was the source of his inspiration. Is not that the attitude of our schools and all of our architects? I am not an America-first bug like Big Bill Thompson for vote-getting purposes, but it seems only right that our American needs, customs and civilization should be studied intensely and liberally and their relation to architecture adequately expressed. Will it be by a blind, emotional reversion to Europe, as in the case of Mr. Lowell, or by meeting the architectural situation with a "spirit of adventure and confidence"?

* * * * *

The Gymnasium for the University of Illinois has been illustrated in a recent journal. Being an alumnus I was interested. Except for the caption, this building would make an acceptable community house, elementary school building, village town hall, preparatory school, home for incurables, country club or what-not in New England. What is there to indicate such a use? The fence on the roof might indicate an outdoor running track; otherwise the gymnasium is lost to us.

This University is located on our finest prairies; it is in close contact with three great industrial cities. Its architecture should be somewhat in accord with the life of its students. It has one of the oldest and largest architectural schools in America within its confines. It seems inappropriate that this institution should be invaded by a New England architecture with nothing to differentiate it from the monotonous and uninspiring Harvard School of Business.

They are both perfectly lady-like architecturally but imagine this Gymnasium turning out a John L. Sullivan, if you can, or the Harvard School of Business a P. D. Armour, Marvin Hughitt or Marshall Field. It may turn out some socially well-trained bond salesmen. The great Corn Belt has missed its great opportunity to be even moderately distinctive.

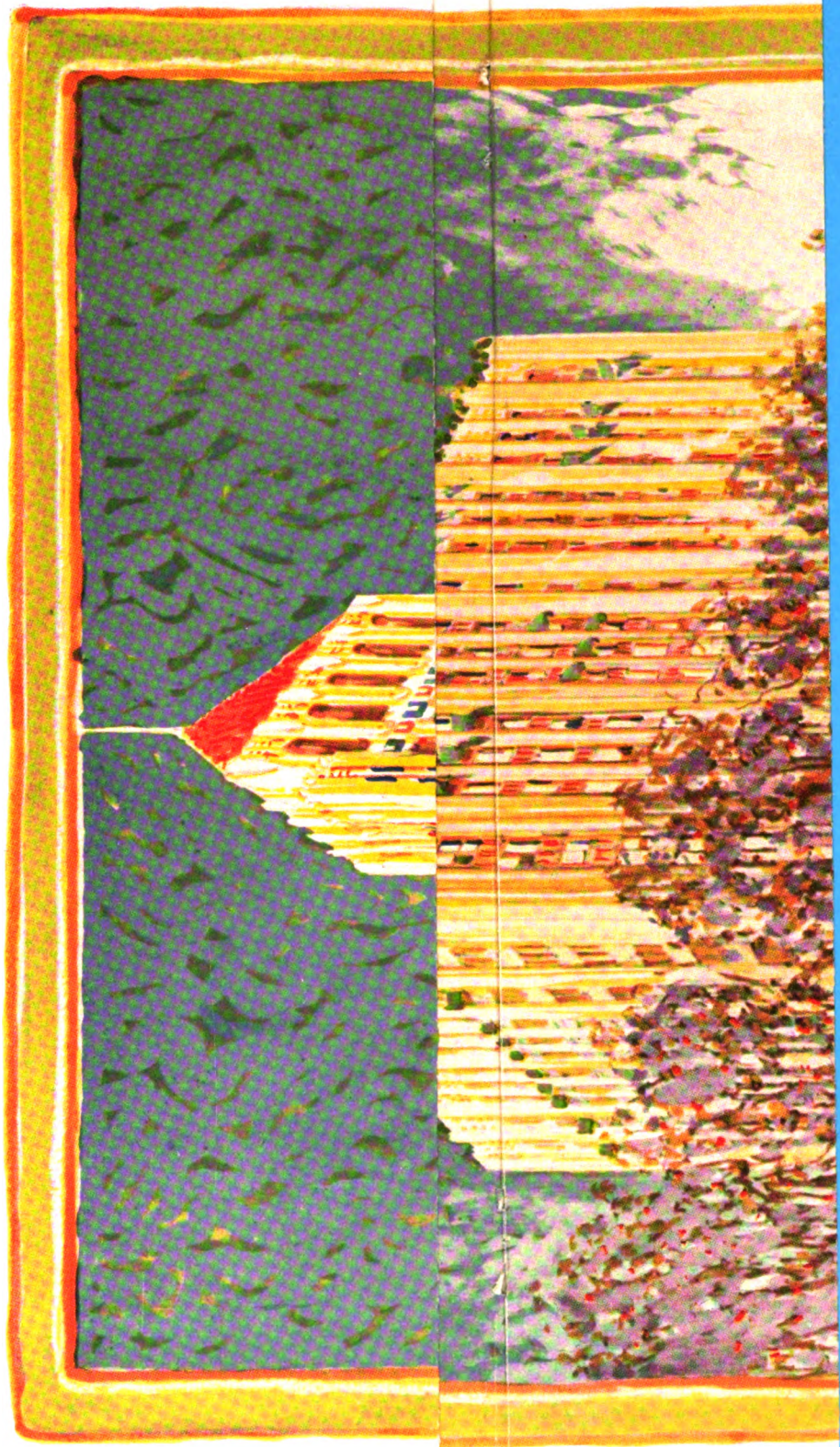
A gymnasium? Let us go to Evanston and look at that gymnasium designed by the late George Maher. How strong and sturdy, what vigorous lines and bold conceptions—truly a man's building. Then return to this effeminate structure at Urbana. What is the answer?

Book Review

WORSHIP IN WOOD. By Thomas M. Boyd. Published by American Seating Company, Chicago, 1927. Illustrations by Harold Smalley.

In purpose, this volume advertises the church furniture and finishings produced by the publishers. But in content it is among the most authoritative resumes of church building, both in a material and spiritual sense, that has been recently placed before architects who design and the church public which they serve. It is professedly not a history, but "a modest effort to tell what the temple builders of the ages undertook to do in honor of the Deity or the Gods they worshiped, and an attempt to draw from the record of the past more sure guidance for the temple builders of today." And it is well done, both in the subject matter which outlines the history of worship from the grove temples to the greatest cathedrals, and in its book presentation, which is typographically superb. The illustrating photographs present interior details from American churches, and

the embellishments, profuse throughout the volume, are interesting drawings depicting in broad outline or thumbnail sketches the ancient phases of worship, both pagan and conventional. In nine chapters the history is most briefly, yet visually, sketched, from "The dawn of worship in the heart of man" of Chapter I; to "Early American Churches" and "Comfort and Repose in Worship," "Approaching the Ideal in Church furnishing," and a "L'envoy" of reflections upon the beauty of surroundings in relation to and influence upon devotion. As the volume is probably a presentation one, it should find a place in the libraries of those architects who are favored with a copy. It is neither critical nor technical in its composition, but presents, particularly to the church committees who wish for that atmosphere in the new church, an adequate idea of how such possibilities are reached through the advice and co-operation of the architect.





A Rendering in Color by Charles L. Morgan

Courtesy the Terra Cotta Service Bureau, Chicago

THE ARTISTIC DEVELOPMENT OF COLOR—IN A DISTINCTIVE AMERICAN ARCHITECTURE

(Illustrating article on Color in Architecture by Rexford Newcomb, A. I. A.)

Color in Architecture

XI. Color in Babylonian-Assyrian Architecture

By REXFORD NEWCOMB, A. I. A.

WHILE the palette of the Egyptian was *warm*—predominating in *reds* and *yellows*, that of his contemporary in the valleys of Mesopotamia was significantly *cool*, giving a dominant place to *blue*.

Perhaps no two lands on the face of the earth contrast so markedly in physical features as do Egypt and Mesopotamia—the valleys of the Nile and the

developed, were faced with a veneer of burned bricks to offer protection from the torrential rains that at certain seasons descend upon that country. The absence of limestone precluded the use of lime-and-sand mortar, but oil asphalt springs in the vicinity of Hit made possible a bitulithic mortar which was frequently used in laying up such walls.

It was through the medium of the ceramic revetment, however, that *color* was introduced into Babylonian architecture. The earliest example of this seems to appear at Warka (Erech), where the walls were relieved by vertical reedings, and upon these, various mosaic-like patterns—diapers, chevrons and triangles—were produced by inserting cones of *terra cotta* into the sun-dried brick walls. The exposed bases of these cones were enamelled in various colors which thus distinguished the patterns.

The old Babylonian Kingdom flourished previous to 1750 B. C. when the country was over-run by Kassite conquerors. At this time, however, a power was arising in the northern (upper) portion of these valleys and thus the Assyrian kingdom came to great strength in the 8th century B. C. While near an available stone supply and the cedar groves of Lebanon, the Assyrian kings still employed the

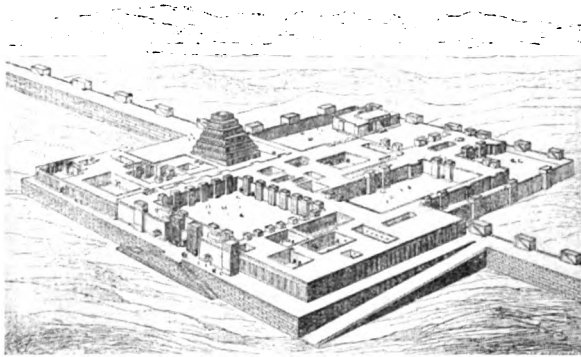
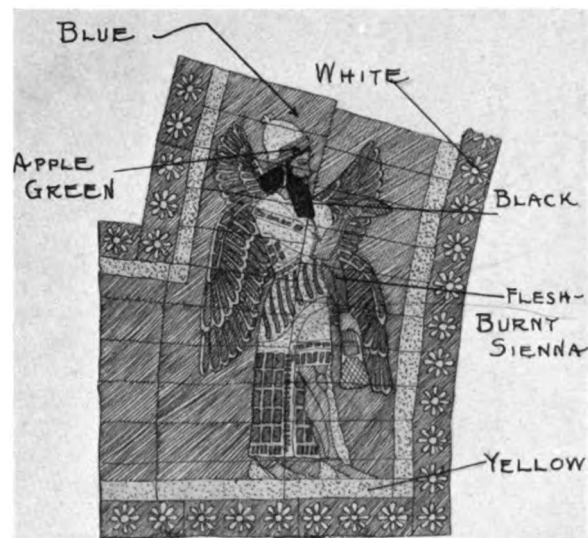


FIGURE 1. PALACE OF SARGON AT DUR-SHARRUKIN (KHORSABAD) ASSYRIA. SUNDRIED BRICK CONSTRUCTION FACED WITH GLAZED BRICK REVETMENTS.

Tigris-Euphrates. Egypt is a land of little rain and brilliant sun, with almost perpetual desert conditions, except along the verdant strip of valley land skirting the Nile. Mesopotamia, on the other hand, is an alluvial area; marshy in parts, level and without the splendid resources in limestone, sandstone, marble or granite found in the bluffs along the Nile. In fact the lower Tigris-Euphrates Basin—Babylonia or Chaldaea—is geologically a silted-up area that once formed the head of the Persian Gulf. Eroded material from the hills along the upper reaches of these rivers has for ages been deposited at the head of this gulf and thus an alluvial area, not unlike that at the lower end of our own Mississippi River, has been built up. This process of silting goes on so rapidly that Eridu, a town which in 3000 B. C. was a seaport, is now 125 miles inland.

In a land so young geologically no great forest growth worthy of the name is possible, and thus without either stone or timber, Chaldaea found it necessary to rely upon the soil of mother earth as a building material. This means that earthen units, either burned or unburned, will form the material of architecture and any *color* which results will be of ceramic origin.

The system of construction early developed in Chaldaea was one of sundried brick walls. These, however, as time progressed and the art of ceramics



- CERAMIC DECORATION -
- KHORSABAD -

FIGURE 3. WINGED FIGURE FROM ARCHED GATE SOUTHEAST ENTRANCE OF THE ROYAL CITY OF DUR-SHARRUKIN, (KHORSABAD) ASSYRIA.



FIGURE 2. FRAGMENTS OF DECORATION—TIGRIS-EUPHRATES BASIN.
LOW BAS-RELIEFS AND ENAMELLED BRICKS.

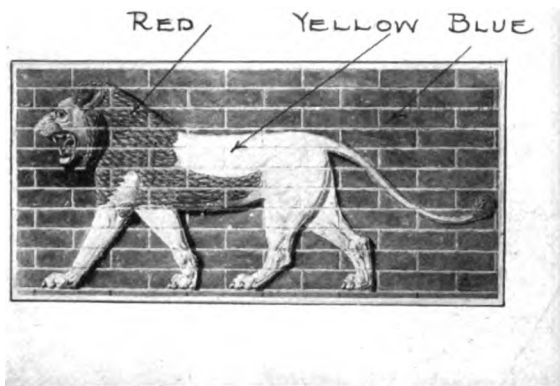


FIGURE 4. LION FIGURE IN MODELLED ENAMELLED BRICKS FROM THE PROCESSIONAL STREET, BABYLON. COLORS ARE INDICATED. SOME LIONS WERE WHITE WHERE WE SHOW YELLOW AND YELLOW WHERE WE SHOW RED.

structural methods of their progenitors and under such monarchs as Sargon the Great, the decorative ceramic revetments for sun-dried brick walls were brought to a splendid climax.

Sargon built for himself a magnificent palace (Figure 1) in his royal city, Dur-Sharrukin, and in the halls of this palace and upon the walls of the city he caused to be erected splendid panels in enamelled and glazed bricks, showing protecting genii, lions, fig-trees, plows, and guards, in *yellow* and *white* upon a ground of *deep blue*. Victor Place in his book "*Nineve et Assyrie*" gives excellent plates showing these decorations (Figure 2.) In these panels the *blue* so thoroughly predominates that the whole sense of the decoration is pleasantly cool, but one is conscious of the considerable amounts of *yellow* and relatively small amounts of *white*. Upon closer analysis one also notes small and occasional bits of *apple green*, as in the head-dress of the figures. The hair is always *black* and the skin *burnt sienna* in color. The central south-east gate of this city was particularly interesting, decorated as it was with figures of winged deities and solar symbols (Figure 3).

Place also figures a bit of fresco decoration from the interior of the palace and here one notes *red, green, black, white, and yellow*. It is to be noted that neither this color combination nor the subject which

it depicts in any sense approaches in distinction or beauty the ceramic revetments already mentioned.

At Nimroud glazed enamelled bricks have been found decorated with the guilloche, palmettes and fleurettes in *blue, black, yellow, red-brown* and *white*. Dr. Samuel Birch in his "*History of Ancient Pottery*," (pp. 89-90) gives the analyses of these colors as determined by the Museum of Practical Geology, London:

White (opagne) from tin.

Yellow from antimoniate of lead (*Naples yellow*).

Red-brown from iron.

Blues and greens from copper.

The transparent glazes were made of silicate of soda, aided by lead, that is, it was a "lead glaze." At Nineveh, Sir A. H. Layard found a similar polychromy. Here, as at Dur-Sharrukin, the *blue* of the background predominates.

When the power in Assyria weakened a strong hand again arose at Babylon and under Nebuchadnezzar something of the splendor that had once belonged to this old Chaldaean city returned. It was during his time that the far-famed "Hanging Gardens," a new royal palace, the Ishtar Gate and the Processional Street leading to the restored temple of Marduk, the principal deity of the city, were constructed. In Figures 4, 5 and 6, I show restorations of colored, enamelled ceramic decorations from the Processional Street and the Ishtar Gate. The high walls that lined the Processional Street were decorated with low bas-relief lion figures, some of them *white* with *yellow* manes, others *yellow* with *red* manes (Figure 4). In speaking of the reds used at Babylon, Dr. Koldewey, the German archaeologist says: "The *red* has now everywhere the appearance of *green* but where this color is thickened . . . a

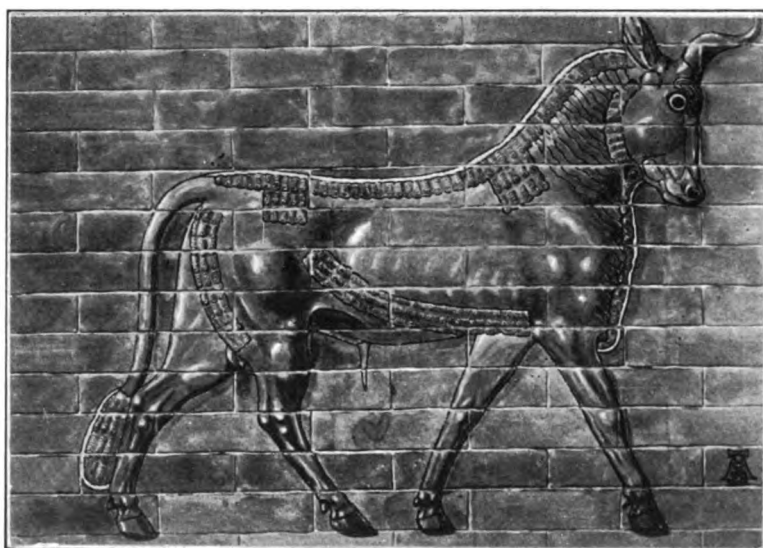


FIGURE 5. BULL FIGURE IN MODELLED ENAMELLED BRICKS; ISHTAR GATE, BABYLON. BULL IN BURNT SIENNA UPON A BLUE BACKGROUND, MANE, TIP OF TAIL AND OTHER BITS IN BLUE; HORN IN GREEN.

core of brilliant *red* is found, coated with *green*, which must be the result of a superficial change of color that has occurred during the course of ages." The decorations on the Ishtar Gate consist of alternating bull and dragon figures, while the top of the wall was finished with a cresting of the daisy-like sun symbols seen in Figure 6.

Another Babylonian monument of which we have definite color

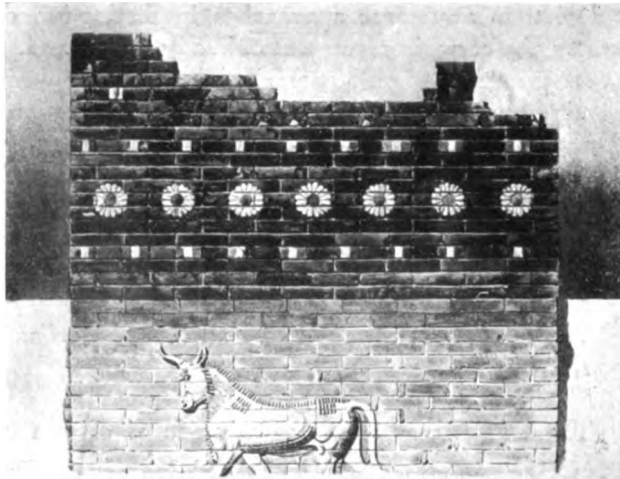
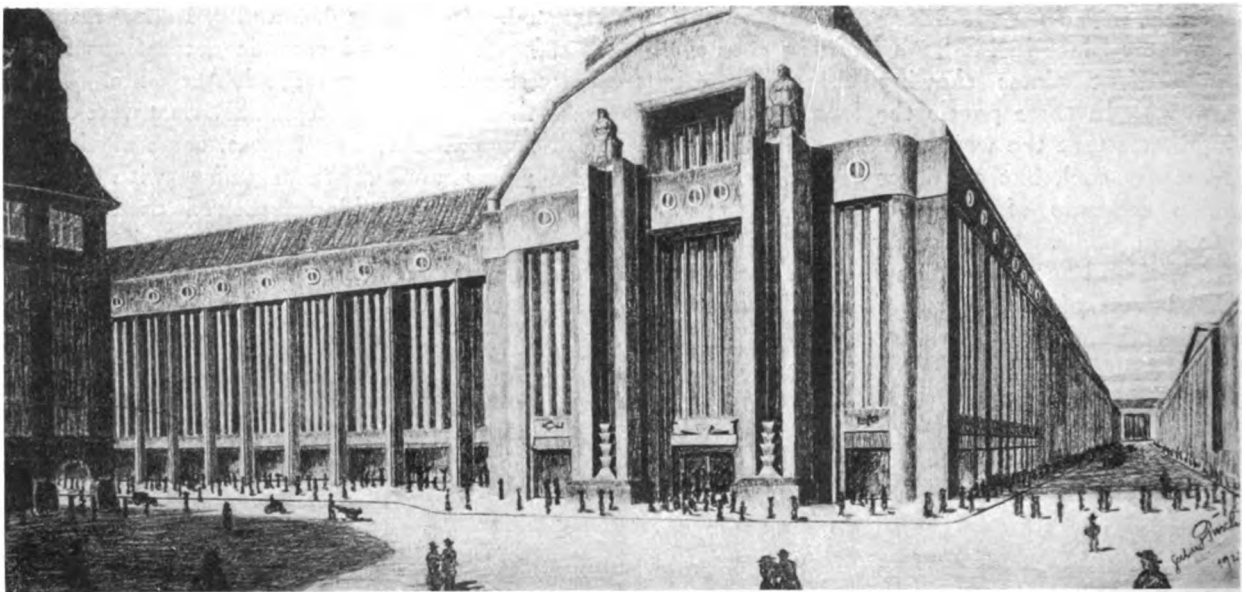


FIGURE 6. CERAMIC REVETMENT, ISHTAR GATE, BABYLON. ROSETTES WHITE WITH YELLOW CENTRES ON GREEN GROUND WITH BANDS OF YELLOW AND GREEN BELOW AND ABOVE. BULL IN MODELLED BRICK, NATURAL COLOR.

data was the famous *Temple of the Seven Spheres* at Bers Nimroud near Hillah, about 70 miles south of Bagdad. Here in 1854 Sir Henry Rawlinson directed the excavations that uncovered the structure

on the traditional site of the *Tower of Babel*. The seven terraces of this great stepped pyramid were constructed of brick in heights of about twenty feet and some forty feet smaller in breadth than the one below. These terraces, each one of which was dedicated to one of the seven planets then known, was faced with glazed and enamelled brick of a color symbolical of the particular planet. Henry Van Dyke in his "*Story of the Other Wise Man*" gives an interesting picture of this monument, ruined of course in the days of early Christianity. He makes his hero scan the great mound of the *Temple of the Seven Spheres* with its "many-coloured terraces of black and orange and red and yellow and green and blue and white, shattered by the convulsions of nature, and crumbling under the repeated blows of human violence, still glittering like a ruined rainbow in the morning light."

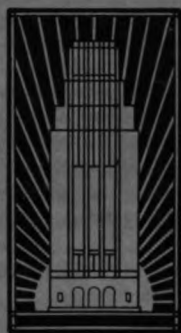
Thus the people of the Tigris-Euphrates, Assyrian and Babylonian alike, saw architecture in full polychromy and the colors they used were permanent colors—ceramic colors, the like of which we of today have at our finger-tips, if we will but use them.



ARCHITECT'S SKETCH OF WAREHOUSE. GERHARD PUSCH, ARCHITECT.

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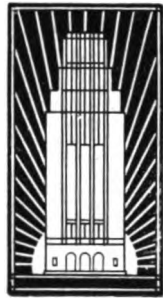


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Volume XXXVI

Number 12

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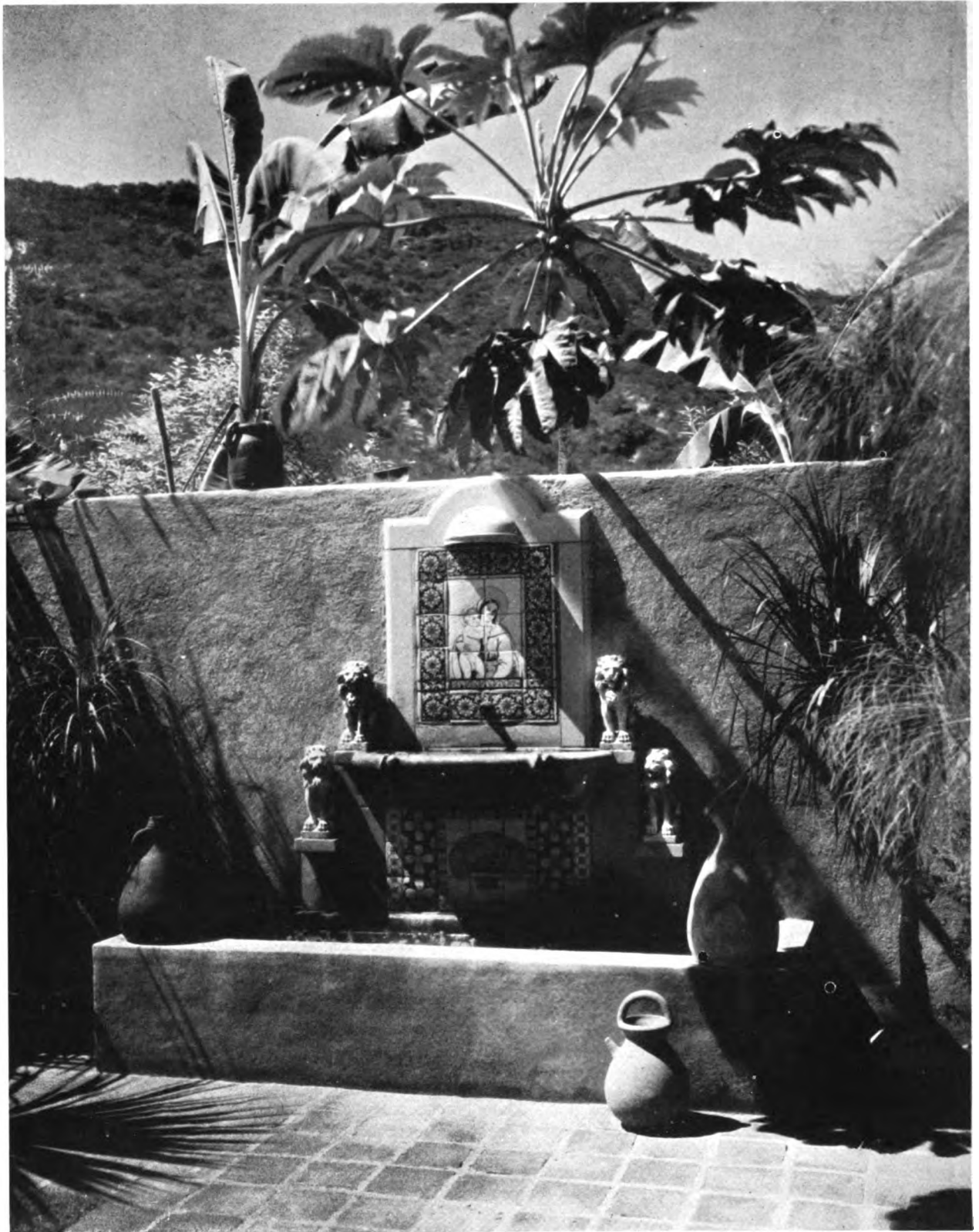
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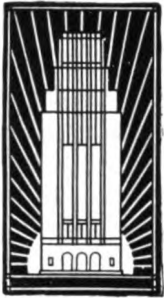
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THE WESTERN ARCHITECT

ARCHITECTURE

ALLIED

ARTS

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Number 12

The National
Producers' Council
and
the Institute

It is largely due to the constructive work of N. Max Dunning, Director of the Institute's Structural Service Department, that architects have come to realize the necessity of making closer contact with manufacturers who supply building materials and accessories. The Institute is an active member of the Producers' Council with its thirty-nine affiliating manufacturing bodies. During what might appropriately be called the reconstruction period of the past ten or fifteen years the Institute has laid aside many of its ethically conservative notions and has clasped hands with those factors which translate in enduring form the dream of the designer. This position was long held as being at variance with good ethical practice. But this movement of the Institute in joining with the National Producers Council, through its Structural Service Department, is the most advanced move toward a unity with commercial elements that has occurred in its history. As Mr. Dunning explained at the last convention of the Institute, "this is a contact that makes it possible to bring together the professional mind with the business mind. In this movement we are the fore-runners of an idea that will be followed by professions and industries pretty generally through the United States. It is entirely in accord with the spirit of the times. We have pointed the way that others will follow so that in the solution of these great economic and social problems that confront us today we will have the co-operative effort of the professional man and the business man working together and applying their particular points of view and training to these problems." The fourth semi-annual meeting of the Producers' Council was held at Detroit, October 19 to 21. At this meeting the resolution passed at the last Institute convention continuing the contact with the Council was amplified by a special endeavor to secure added membership from manufacturers and associations of manufacturers of materials and devices used in the building trades. The standardizing of specifications; abolition of substitutions after specifications are written; economic introduction of new materials and processes; improvement of advertising copy furnished the architectural magazines and circular literature were among the subjects which

received consideration. Manufacturers generally have followed the Institute suggestion of standardizing circular literature in a given size convenient for filing. This is the beginning of a general exchange of co-operation between architects and material producers. Adoption of the Institute's Standard Filing System by eight hundred manufacturers, resulting in some reduction of waste and securing a freedom from misstatement in advertising has created a spirit of understanding and co-operation between architects as professional, and manufacturers as business men that augurs well for the continuance of this spirit of co-operation, once so revolutionary, but now accepted as part of the system of interchange between the profession and those who cater to their creations in materials and processes. There may be a danger, though remote, that this spirit of affiliation may reach so far as to become confused. But with all factors of the building industry working in harmony and understanding with the creators of design there is certain to be a vast improvement in both design and execution which will be passed on to the "ultimate consumer," the public.

Building Congresses
and
Better
Craftsmanship

The work of the Institute Committee on Industrial Relations during the several recent years of its activities seems to be bearing fruit. While its action is that of a committee it is, and has been, largely through the earnest, self-sacrificing and understanding work of individuals that progress is being made. Burt L. Fenner has gone, yet his mark on industrial New York remains, and that city has still that indefatigable force in the person of Robert D. Kohn to carry it on. Boston has William Stanley Parker; Philadelphia, David Knickerbocker Boyd, who probably has won the hearty co-operation of the mechanics in the building trades more wholeheartedly than any other architect. Across the continent at Portland, Oregon, Ellis F. Lawrence for several years has worked in unison with those of the East toward recognizing and encouraging superior craftsmanship in the building trades. To this end building congresses have been developed, notably by Mr. Lawrence in Oregon, Mr. Parker at Indianapolis, Mr. Boyd at Philadelphia and Mr. Fenner and Mr. Kohn at New York. The plan will not be

thoroughly comprehensive until the local Chapters in every city take up and carry through the objects for which the Congress acts as a clearing house. For, after all, the Congress is in effect a clearing house. Its program must be carried out by the work and efforts of interested individuals, work that is constant and performed along true constructive lines. In forming the coming season's program this industrial phase of the architect's fraternal work should receive concentrated and energetic support from every Chapter member. Securing the co-operation in each community of the several groups in the building industry in advancing better craftsmanship, promoting apprenticeship training and meeting the work of the brains in design with competent hand-work in execution will result in an advancement in architectural art accomplishment beyond any that has prevailed in the past.

A "Who's Who"
Record
of Institute
Members

When a member of the Institute wrote recently to the Executive Secretary asking "if the Institute had a record giving names of western architects who were born and raised" in an Eastern State, in the absence of such a record the enquirer was referred to this writer, "believing that he could give as interesting a list as any one." The results were almost nil, as, even with forty-five years of continuous acquaintance with a large group of the profession it was found that birthplace, or previous condition of servitude seldom came up in conversation, and usually was learned only in the preparation of obituary notices. Since John M. Van Osdel went from New York to Chicago in the early eighties to design the Ogden residence, and was Chicago's first architect, there has been a steady migration of Eastern born architects westward; and, because of their training in Eastern offices they occupied a leading position wherever they established themselves. From their offices, they sent out draftsmen equipped with the knowledge they had acquired in the East and this knowledge they, in turn, passed on to their successors. When Professor William Roach Ware of the Columbia School of Mines in New York, and the School of Technology, at Boston, began to turn out architecturally trained students, many of these, looking for new fields, migrated westward and became valuable protagonists for a more advanced and better equipped profession. Becoming in time indigenous, these migrants from the Eastern states were known by their works, and their place of birth was not a matter of inquiry or concern. The sons of these "pioneer" architects and a host of the draftsmen from their offices have graduated from the largely increased number of architectural schools and are gradually, yet completely, changing the general trend in design and assimilating the construction knowledge that the vastly changed demands of fast-developing social necessity calls for. As the profession of architecture

in the United States may now be said to be stabilized, the inquiry of an individual for definite information regarding a record of nativity in one instance, is it not time that such a general record be gathered from all members of the Institute and placed on file at the Octagon? There it might serve as a sort of "Who's Who" of the members, and might be also extended to all non-member architects, at least those who are registered and admitted to practice in the several registration controlled states. The details required could be gathered by the members of the Committee on Practice, of which Abram Garfield is chairman. To him this suggestion is respectfully submitted.

The Hobby
In Relation
To Architectural
Practice

Blessed is the architect who has a little hobby in his home. Or so it seemed when at a recent meeting of the Pittsburgh Architectural Club the members disclosed the dark secret of their inhibitions. They not only declared the fatal fact but exhibited the several methods by which they banished the dull care and enervating atmosphere of the drafting board and sought the romance of searching into the realm of fancy and the exercise of inherent lust for strange acquisitions. These exhibited hobbies ranged from a collection of cigar wrappers through many and various pursuits that included the making of furniture "with a watchmaker's lathe that could do anything but talk," boat models, lantern slides; to the most original of all, a collection of envelopes showing fifty-three ways the addressee's name had been spelled by correspondents. Attention was not called to a box of discs in blue, white and red that occupied an unobtrusive corner. The absence of a golf club was noticeable, as golf is rated by these pencil pushers as an obsession rather than a hobby—which is singular as there is a preponderating number of Scotch in the Club. But there is a serious side to this pursuit of a hobby which architects who have not acquired such may consider with profit. It is one of the attributes of this, as with other professions where a talent and a strong liking for accomplishment absorbs the individual, that no rest is given to the human machine and it too early wears out. The tradesman leaves his work behind when he leaves the place of employment. The architect, interested, absorbed, in his design, takes it home with him mentally, and because he enjoys the study imagines that he is not harmed by the continuous concentration on one subject. This, it is probable, would serve as one explanation why so many of our greatest and best architects have had their designing hands arrested at their greatest period of usefulness. A recreative and absorbing hobby side-line might have saved the wear and tear on the machine and prolonged lives that the country and its architectural art could ill afford to lose. Then it contributes also to domestic harmony by keeping the hobby devotee at home evenings.

Concerning Architecture in Porto Rico

By ANTONIN NECHODOMA, A. I. A.

HOW vividly I remember the great earthquake in the year 1918, which practically destroyed the city of Mayaguez and many smaller towns on the west side of the island. Most of the fine Spanish churches and the oldest buildings in other parts of the island were so damaged that great repairs were necessary, and their original beauty was thus marred.

As I now amusingly recollect, I came as near praying in gratitude as I ever shall. I was madly glad when the earth shook, believing firmly that all my past work and sins against art would be wiped out and that I should again begin on a clean slate and with smothered conscience. But it was *not* to be, for my "medium of expression" was "reinforced concrete," in its genesis at the time it is true, and really the only material, besides wood, that resisted these terrific seismic upheavals.

Therefore, I was bitterly disappointed, for the solidified thoughts for which I was responsible, stood among the ruins and *debris* like so many lone transgressions. Some rogue told me at the time, perhaps as a matter of consolation, that the great difference between the physician and the architect was that the former buried his mistakes. However this may be, it seems that even most sincere atonement has no effect, and that I am ever doomed to gaze with black and destructive thoughts upon these voluptuously pretentious creations conceived and designed in profound and sinful innocence.

This earthquake wiped out or more or less damaged nearly all of the ancient buildings on the island; and as it then forcibly dawned upon us that our geographical location was within the so called "seismic belt" and that other disturbances were not only possible but probable, reinforced concrete came into vogue as a matter of logical consequence. In fact it is practically the only material now used on the island for all construction purposes.

The ancient fortifications of the Spaniards, "*El Morro*," "*San Cristobal*" and "*San Jeronimo*," lend most poetic touches to the ancient city of San Juan. These are now occupied by the United States Army, and are being modernized to accommodate the soldier of the present day. An effort was made by these uniformed men, whose business is to destroy on provocation but who are exceedingly innocent of aesthetic values, to beautify and to preserve the fortification walls of thousand hues, by plastering their exquisite time-marred surfaces with cement and by painting them with *waterproof paint* in suitable and

even tones of dark grey. But unfortunately money soon gave out and this wonderful aesthetic project was abandoned, but not before many charming surfaces were ruined. However, no further appropriation of funds was made and we are spared the humility of cynical criticism of thousands of annual visitors to this "Island of Enchantment" from all parts of the world.

Here I will mention in sheer justice that the "Civic League" composed of public-spirited women, whose self-imposed duty is to beautify the city, and to plant trees and parking places, and to certain extent look after our morals—was *not* as yet organized.

It seems that "utility" and not beauty, was ever the primary consideration of the old city dweller. Perhaps for this very reason there is an unsophisticated charm and dignity in these unique buildings of Porto Rico. None of them is refined or marred by good taste, but in each is manifested certain courage and strength. Walls, never less than 24 inches thick, are made of "mamposteria" and these for centuries were coated with tinted lime of various tones. Now, being neglected, hundreds of coverings are peeling off in irregular spots. Sometimes the peeling off of century-old covering reveals wondrous colors; again perhaps coating dating a few years back falls off, revealing hues entirely different. The effect, of course, is that of marvelous mosaic and vibration of a thousand tones.

None of these buildings is ill at ease in Porto Rico; all are happily content in their cloaks of profound simplicity. The secret of their happiness we have yet to discover; they seem like an organic thing from which life is ever radiating. They represent no law, no order and yet they stand for Beauty in its genesis, and in essence, which to most of us is as mysterious as life itself. Just imagine their charming *patios* filled with luxurious tropical flowers replete with exaggerated color exhaling intoxicating perfume; their *azoteas* with their *miradors*; their front balconies in color of old copper, often enhanced by some dark-eyed *senorita* leaning over the rail and lovingly gazing down on some Romeo. Each of these old dwellings is indeed a picture of domesticated harmony and lasting organic beauty.

Our public buildings are mostly designed by the Department of the Interior, and are very correct. There is here, as elsewhere in the States, a persistent notion that the *five orders* are the whole of architectural scale, and that without these notes our "*frozen music*" would be but a jarring jazz. Consequently, none of our public buildings is genuine without a label, and



PEACOCK HOUSE, SAN JUAN, PORTO RICO
ANTONIN NECHODOMA, ARCHITECT ::



SCHUCK RESIDENCE, SAN JUAN, PORTO RICO
ANTONIN NECHODOMA, ARCHITECT :: ::

we do go in for the correct thing. There is a snobbish fear to divert an *iota* from the prescribed stock patterns. Our numerous school buildings of latter period, mostly built with precepts of *Beaux Arts School*, are gorgeous exterior facsimiles of classic mausoleums and branded with genuine aesthetic guarantee.

Our Capitol, now under construction, is a composition of still sterner virtues, being a replica, with deviations, of all other Capitols in the States, except of course that designed by Goodhue for Nebraska. It is simply a forest of Corinthian pillars, a mile or so of railings and cornices, about sixteen or so of vases, and endless platitudes in design and interminable *cliches* in ornament. It is equipped with the usual dome and on its very top is constructed what seems to be a dancing pavilion or Choragic Monument of Lysicrates.

Recently built, our Institute of Tropical Medicine in San Juan is indeed an unhappy departure from our snobbish and dignified classics. Like the prostitute of the street, overdressed and appalling in her cheap finery, this building has similar likeness and similar appeal to ignorance. Its many-colored terra cotta ornaments, fake gargoyles that spout no water; its numerous meaningless shields representing perhaps some former dynasties of ancient Spain; its rigid lions stuck up on the wall above the second floor ostensibly as the means of support to a shield; its lookout towers with senseless, filigree terminations; its apparent unfitness for its designated scientific purpose; call to you in no uncertain terms.

So-called American architecture arrived ready-to-be-served during the American occupation, and is still arriving. So that now we have architecture in abundance and with spirit of hostility to what is really beautiful and charming. We borrow this ready-made architecture anywhere, and we copy these wondrous masterpieces created in the fertile brains of these modern Michael Angelos very correctly. In the spirit of aesthetic devastation we cut down our tall lovely palms to put up "wedding cake" architecture of Renaissance buildings and bastard Spanish and Pueblo-Indian villas, converting our enchanted island into a parade ground of ostentation and vulgarity. If changes are made at all in these bargain plans, these consist usually of elimination of chimney fire-places

and winter sash. That these changes are necessary is evident even to the most ardent fakir and most sincere imitator.

This absurdity of copying buildings from the northern climate was amusingly demonstrated by our all-efficient Federal Government, when, to our utter amazement and glee, we received plans for our new Post Office from Washington, completely equipped with "up-to-date" steam-heating system. After vigorous protestation that we do not need any more heat in Porto Rico and reserved mental suggestion that we would rather have a refrigerating plant instead, the government architect, perhaps due to the heated argument of our representative to Congress after unrolling a sufficient amount of red-tape, finally consented to leave out the heat. But, idiotic as it may seem, no other change was made in the plans.

But here I must descend from my throne of critical cynicism and enter into a realm of constructive thoughts. A law has been passed which took effect July 26, 1927, regulating the practice of architecture and engineering in Porto Rico. The architect here as elsewhere must be licensed. Indeed this is the first important step in checking architectural prostitution in this sunkissed land—the first obstacle to the flow of absurdities copied from third rate American magazines by third rate draughtsmen, or purchased direct by the owners, ready-made and guaranteed to fit.

There is no uncertainty in my mind that an entirely new architecture is gradually coming to this wondrous island—organic architecture based upon the needs of the people who live in our tropics today, under entirely different climatic conditions from those in the frozen north; architecture whose basic principles must be *utility* and whose beauty and charm shall be born in simplicity and in proportion. Even in this tiny island of a million-and-a-half souls, *rebel* ranks are forming, which are determined to *break with tradition*. They believe, and justly so, that art must grow out of the life we live today and not out of life of a dead-and-gone era, and that the chains of tradition with which our thoughts are ever bound must be broken, our imagination set free. With such thoughts these advanced iconoclasts are creating a new art reflecting the present day. They are the pall bearers of dead tradition; they will bury her gently and without ostentation, and they will pay the price.

What Price Architecture

By F. W. FITZPATRICK, *Consulting Architect*

"THE past fifty years have seen greater progress in more diversified lines than did the previous five hundred years." So writes a great editor. And he's right to a degree. Yet we are prone to forget some of the outstanding major items of those past ages: the discovery of a new half world, for instance. We're all too apt to be carried away by the glamour of to-day's achievement and to belittle that of yesteryear—especially if it was achieved by the other fellow.

But we can safely say that these last fifty years have seen great improvement in our American buildings, the development of the sky-scraper, and later obliging it to be a set-back or stepped-back structure, forced a new form of architecture upon us. But we must admit that the mechanical rather than the aesthetic part of the sky-scraper has been emphasized.

Yes, we have designed some very beautiful sky-scrapers, but for every one such there are a dozen poverty-stricken ones, poor copies of the successful ones, or awful originals, or just plain, uninteresting masses of stone, brick and steel, characterless towers.

Two things are very much to blame. One is our commercialism, our intense hurry to get a thing up and paying interest and the consequent lack of opportunity properly to study the problem in hand. The other is the milk-and-water tone of most of our architectural press.

There is so little healthy criticism today. Week by week, we are served up exquisite reproductions of fair, bad and indifferent architectural examples and painfully measured drawings of antiques that mean so little to the majority of us. The cuts and the letter press may be marvels of presswork. You will find more or less learned treatises on subjects more or less connected with building, scholarly, academic, true, but seldom of o'ertopping importance to us in our work. There are beautiful obituaries anent us when we shuffle off: this, that and the other symmetrically asteriskized paragraphs—and there you are. Never a good sound drubbing of a fellow who has perpetrated something particularly bad; never a wholesome criticism of an award in competition that is notably unjust and in poor taste; never a good punching up of the profession in general, an urging to do better. Oh, no, some disgruntled brother might cut off his subscription.

Architects as a profession can't bear to be criticised, and as individuals are always absolutely correct and perfect. All this has its baneful influence. The daily papers naturally take their cue from the architectural papers. The latter convey the idea that everything is well, that we are moving along nicely, thank you,

and the daily editor, per se, doesn't know any better, lauds pretty much everything that is done. The great mass of people follow along in the lead of the papers and think everything is all right, passively unexact in their aesthetic demands; and Mr. Architect, never being touched up, nor criticised, nor prodded, grows fat and grinds off so many yards of architecture as conditions seem to demand.

The truly successful brother is the one who has married well, has powerful social connections, is a good entertainer, and gets the work to do. It's no longer a profession, nor an art, and it is a cruel farce to call it so—it is a plain business. In the big offices there are undoubtedly men who design entrances all the time, others who design windows, others who think up fittings. There is no particular rhyme or reason in putting the things together. More like a big mill, where the fellows are specialized. The things fit together mechanically, but when it comes to the *architectural* part of the program, how on earth can you expect a thing to be well brought out, well designed, when the commercial exigency demands that all the plans and details and contracts be made within a month or so of the time when the building was first projected!

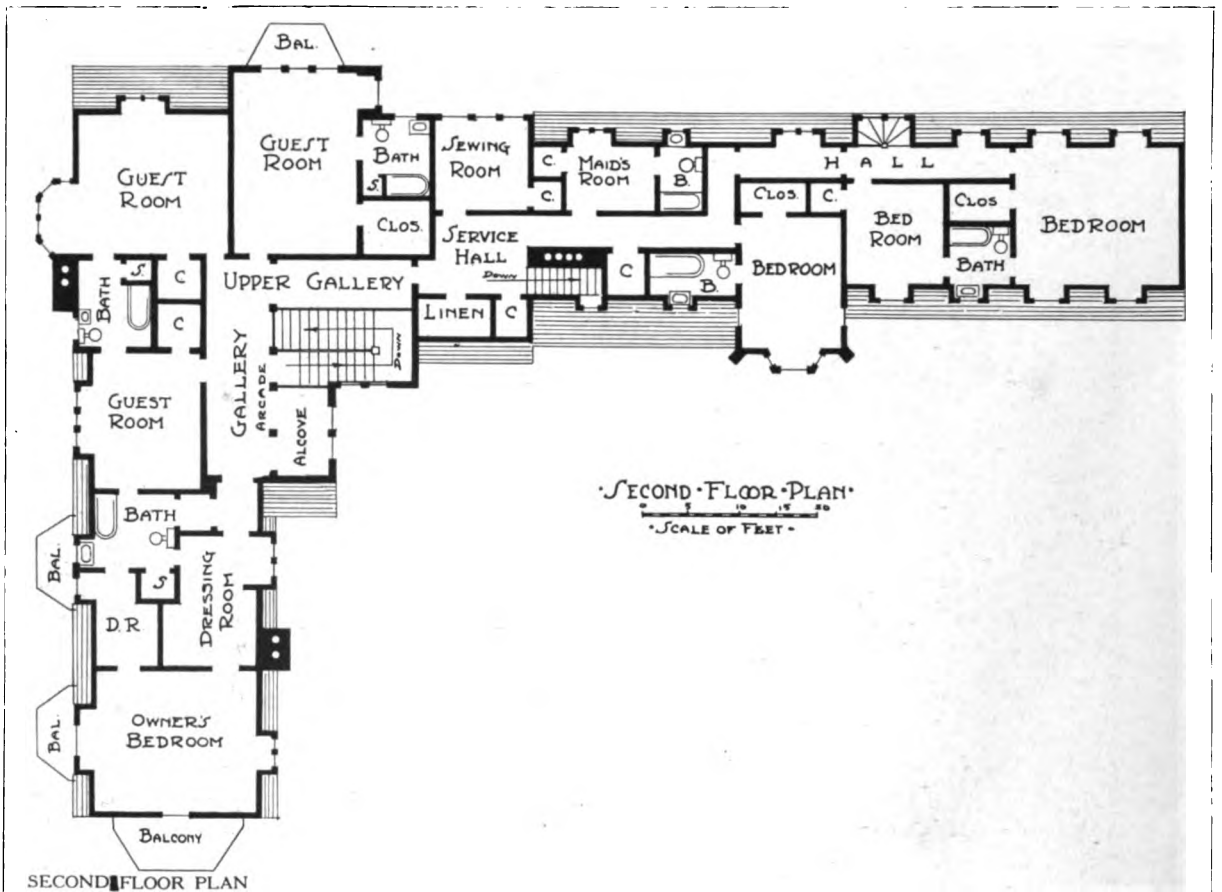
I ran across an extreme case just the other day. One of our big offices, too, where much and important work is turned out. A draftsman was ordered to design an exterior of a \$400,000 building directly on tracing-cloth—a working drawing. He was even urged to dispense with pencilling it and to rush it through in ink, ready for the prints. He protested that he had no plan, nothing to go by. But tut! tut!, what was the use of a plan? They'd have a plan worked out in due time and he need not be too particular about dimensions; differences or errors of a foot or so would be taken care of by the builder. But they must have the elevations so as to order the terracotta and other materials at once.

The result of such conditions is the utter inappropriateness, one may say, of buildings. The average, even the top-notch brother, doesn't seem ever to stop and consider the fitness of what he calls a design for the situation and purpose of the building he is called upon to create.

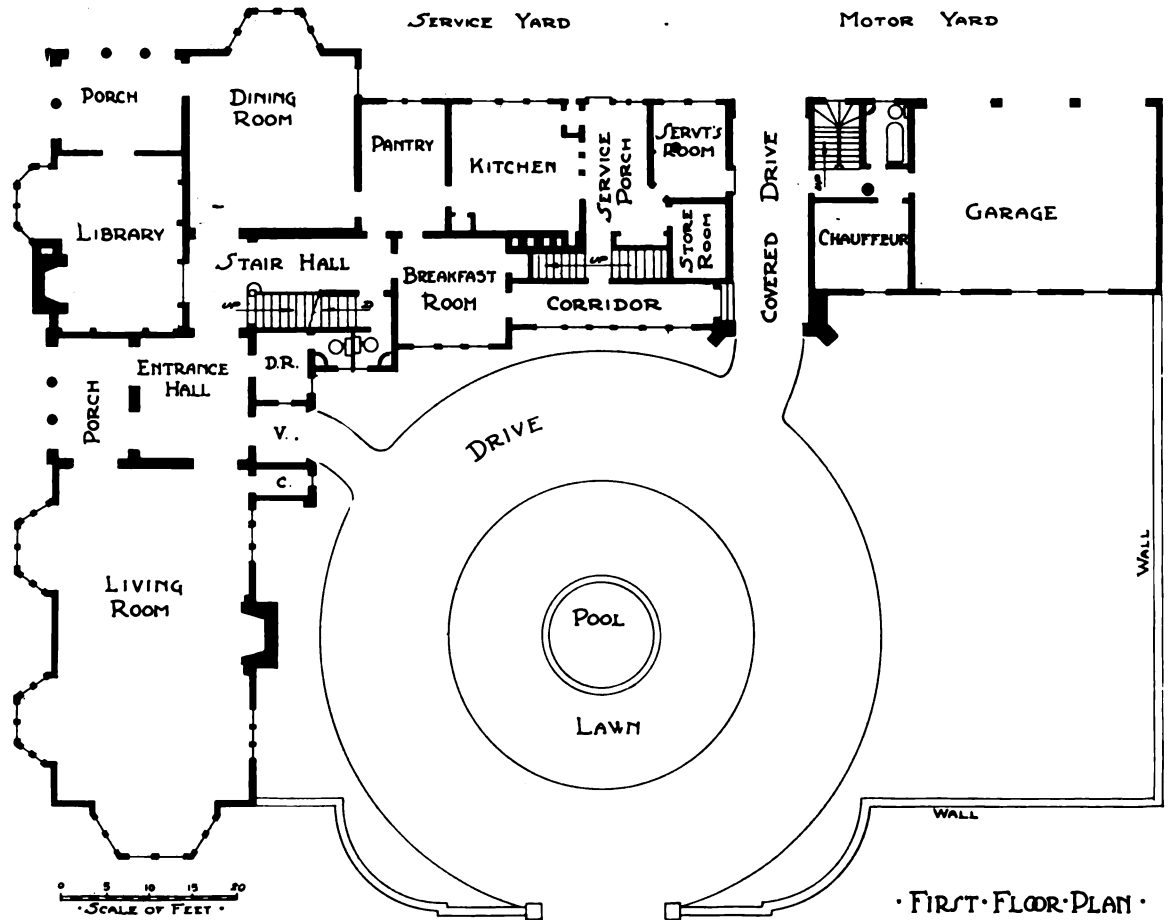
You find residences planked down on a twenty-foot street lot that ought to be in the country at the end of a fine avenue of grand trees, with gardens all about, trailing vines and the other et ceteras. Out in the suburbs somewhere, with an elegant opportunity and plenty of grounds for a little stretching out and rusti-



GENERAL VIEW
RESIDENCE OF MR. W. J. LEWIS, BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
ALBERT FARR, ARCHITECT :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::



SECOND FLOOR PLAN



FIRST FLOOR PLAN

RESIDENCE OF MR. W. J. LEWIS, BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
 ALBERT FARR, ARCHITECT



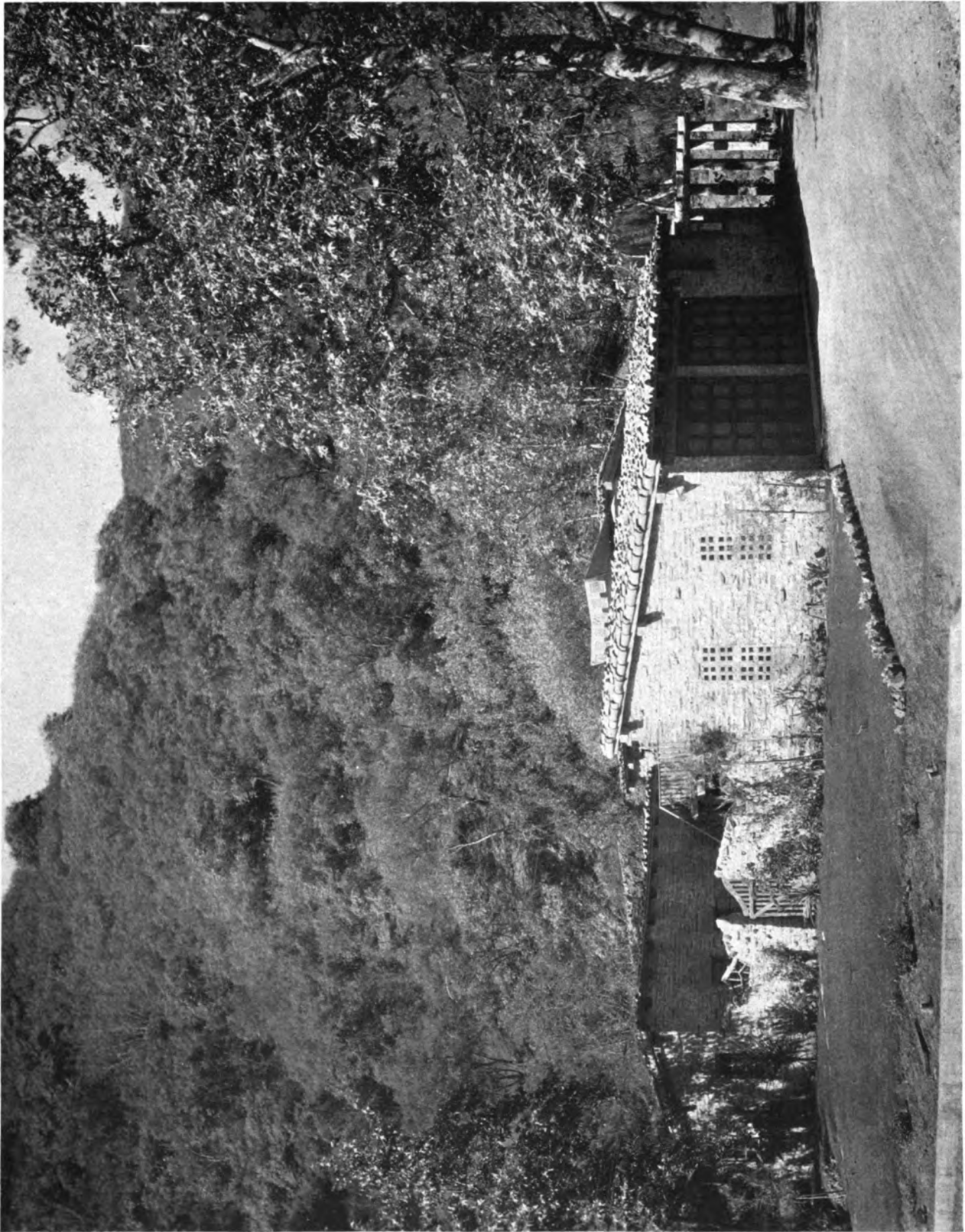
DETAIL OF ENTRANCE

RESIDENCE OF MR. W. J. LEWIS,
BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
ALBERT FARR, ARCHITECT :: :: :: :: ::



GARDNER'S LODGE

RESIDENCE OF MR. W. J. LEWIS,
BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
ALBERT FARR, ARCHITECT :: :: :: :: ::



RESIDENCE OF MR. H. F. BAKEMEYER,
BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
W. ASA HUDSON, ARCHITECT :: :: ::



FRONT DETAIL

RESIDENCE OF MR. H. F. BAKEMEYER,
BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
W. ASA HUDSON, ARCHITECT :: :: :: ::



PATIO

RESIDENCE OF MR. H. F. BAKEMEYER,
BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
W. ASA HUDSON, ARCHITECT :: :: :: ::



VIEW OF LIVING ROOM, SHOWING FOUNTAIN
RESIDENCE OF MR. H. F. BAKEMEYER,
BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
W. ASA HUDSON, ARCHITECT



A Distinctive American Architecture

No. 12 of a series suggest-
ing how color can be
utilized to secure such
distinction.



A Distinctive American Architecture

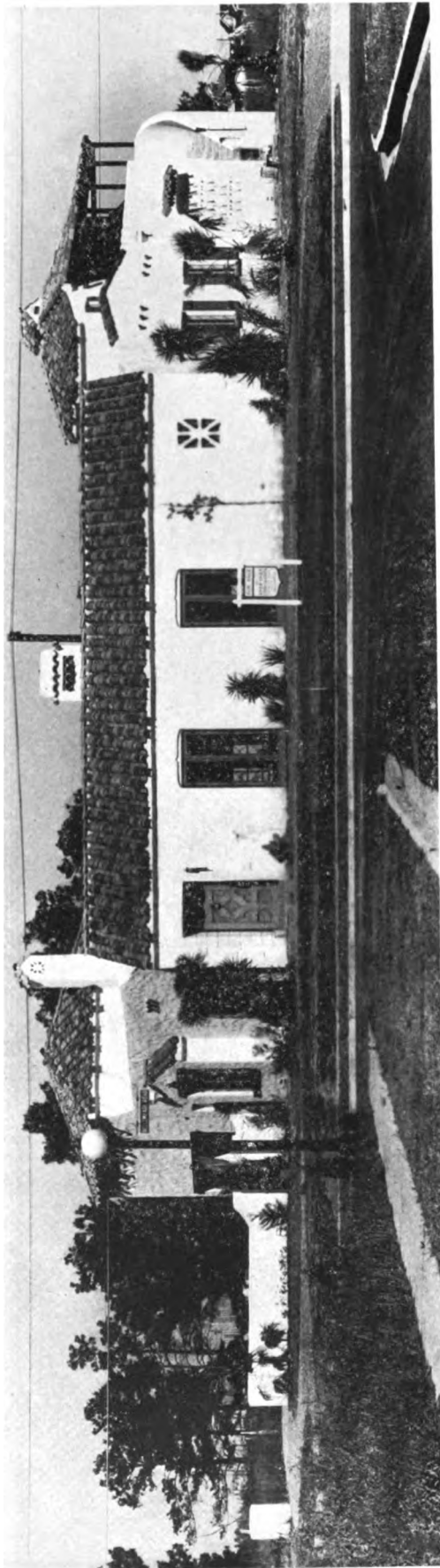
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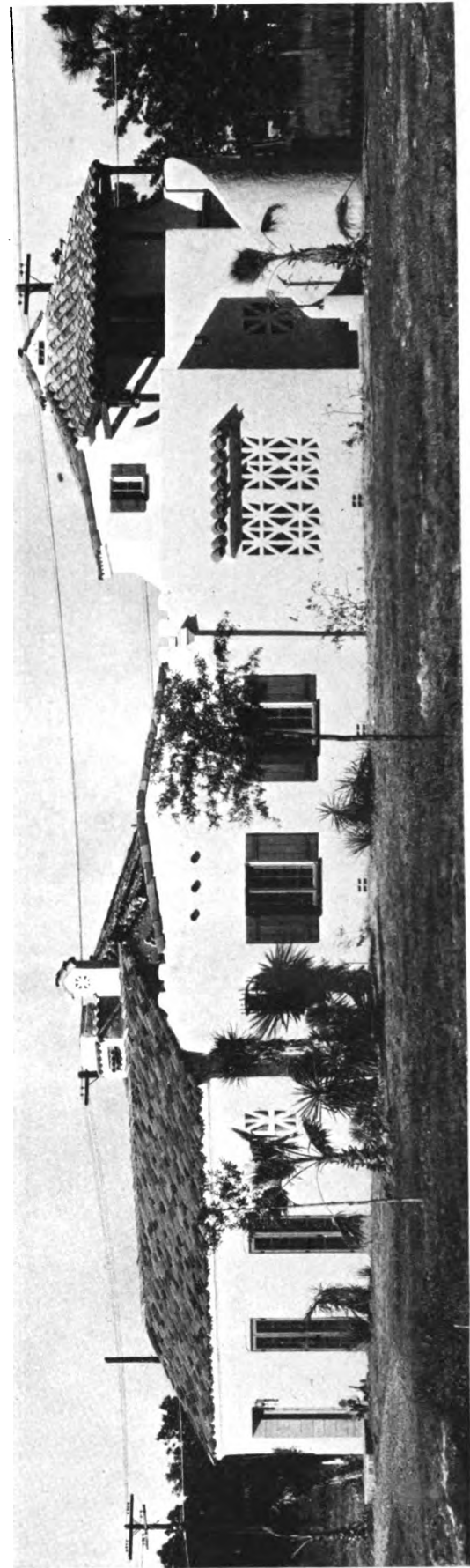
FIREPLACE IN LIVING ROOM



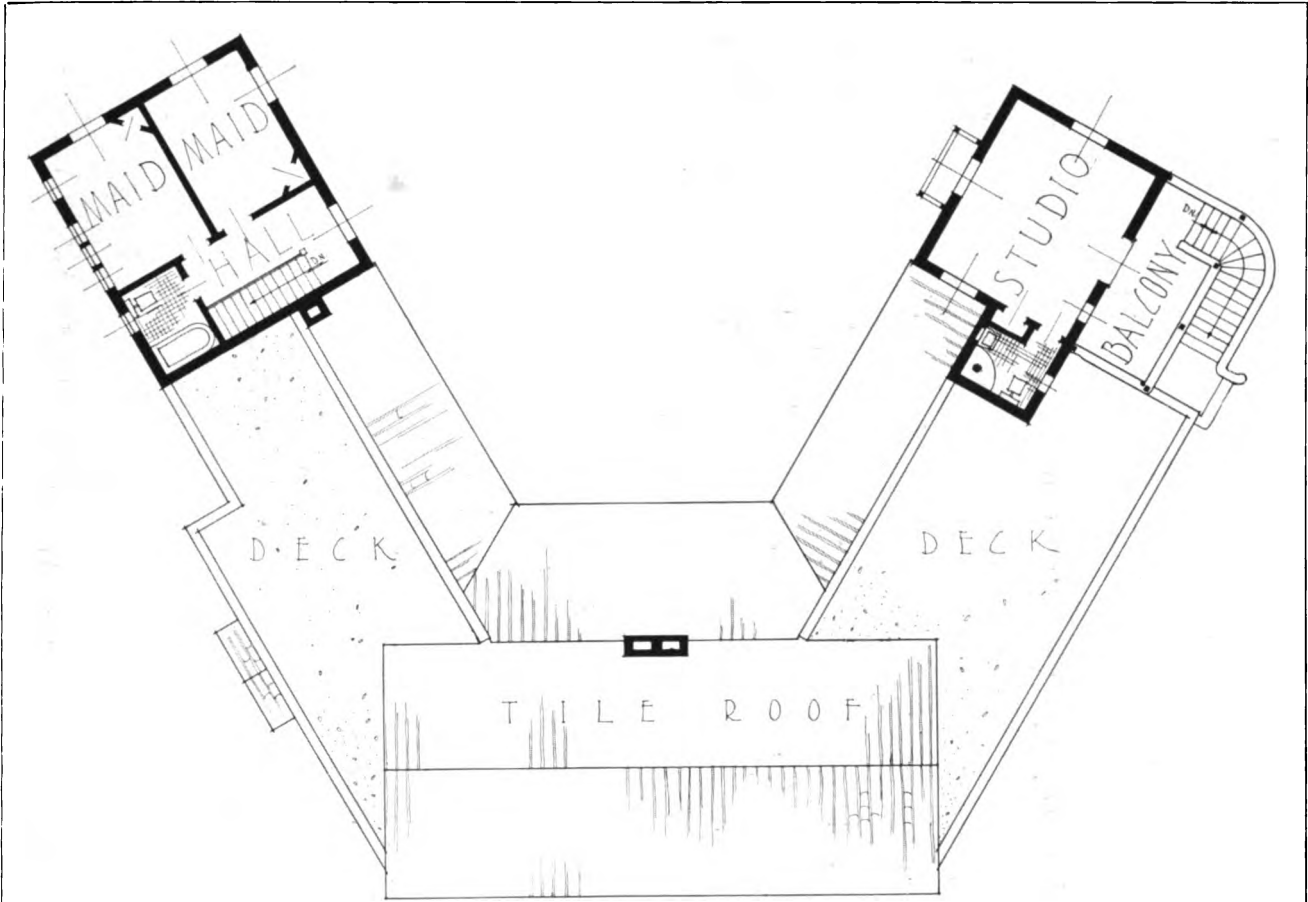
BEDROOM
RESIDENCE OF MR. H. F. BAKEMEYER,
BENEDICT CANYON, BEVERLY HILLS, CALIFORNIA
W. ASA HUDSON, ARCHITECT :: :: :: ::



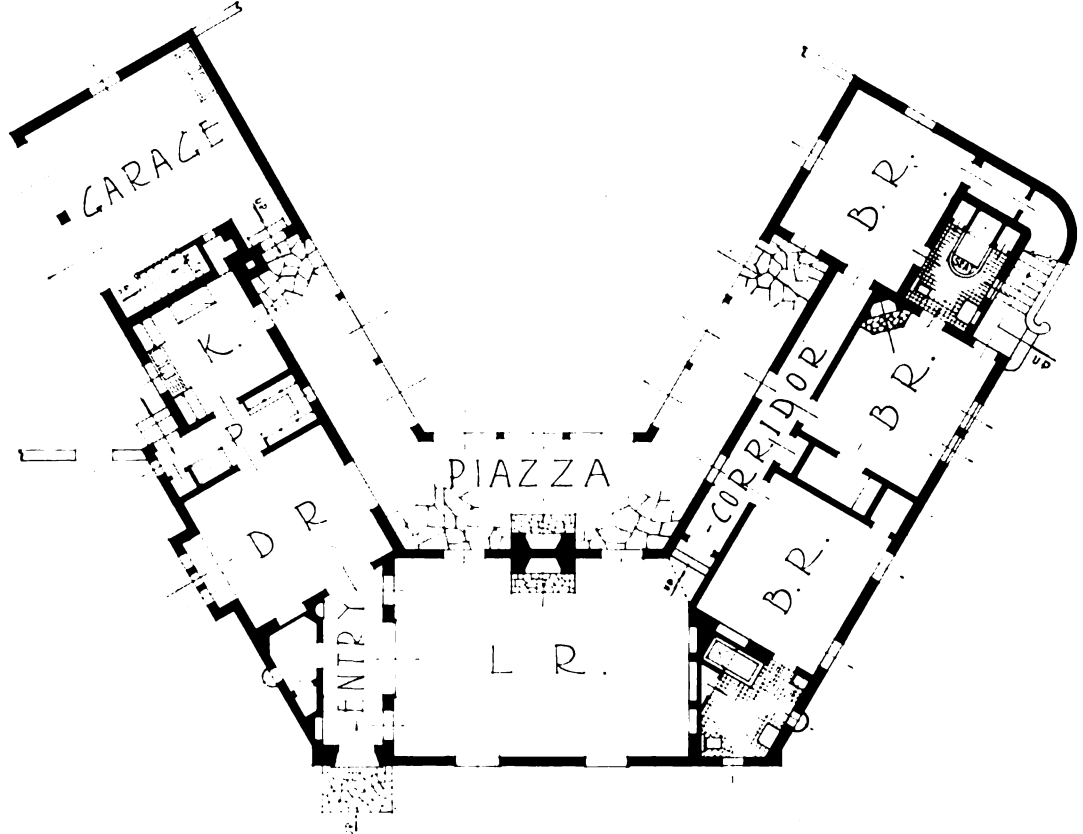
GENERAL VIEW



FAÇADE "RIVER OAKS" MEDITERRANEAN VILLA, HOUSTON, TEXAS. A U-SHAPED RESIDENCE BUILT OF HOLLOW
TILE AND COVERED WITH OLD SPANISH TILE. THIS HOME IS REplete WITH UNUSUAL FEATURES.
CHARLES W. OLIVER, ARCHITECT

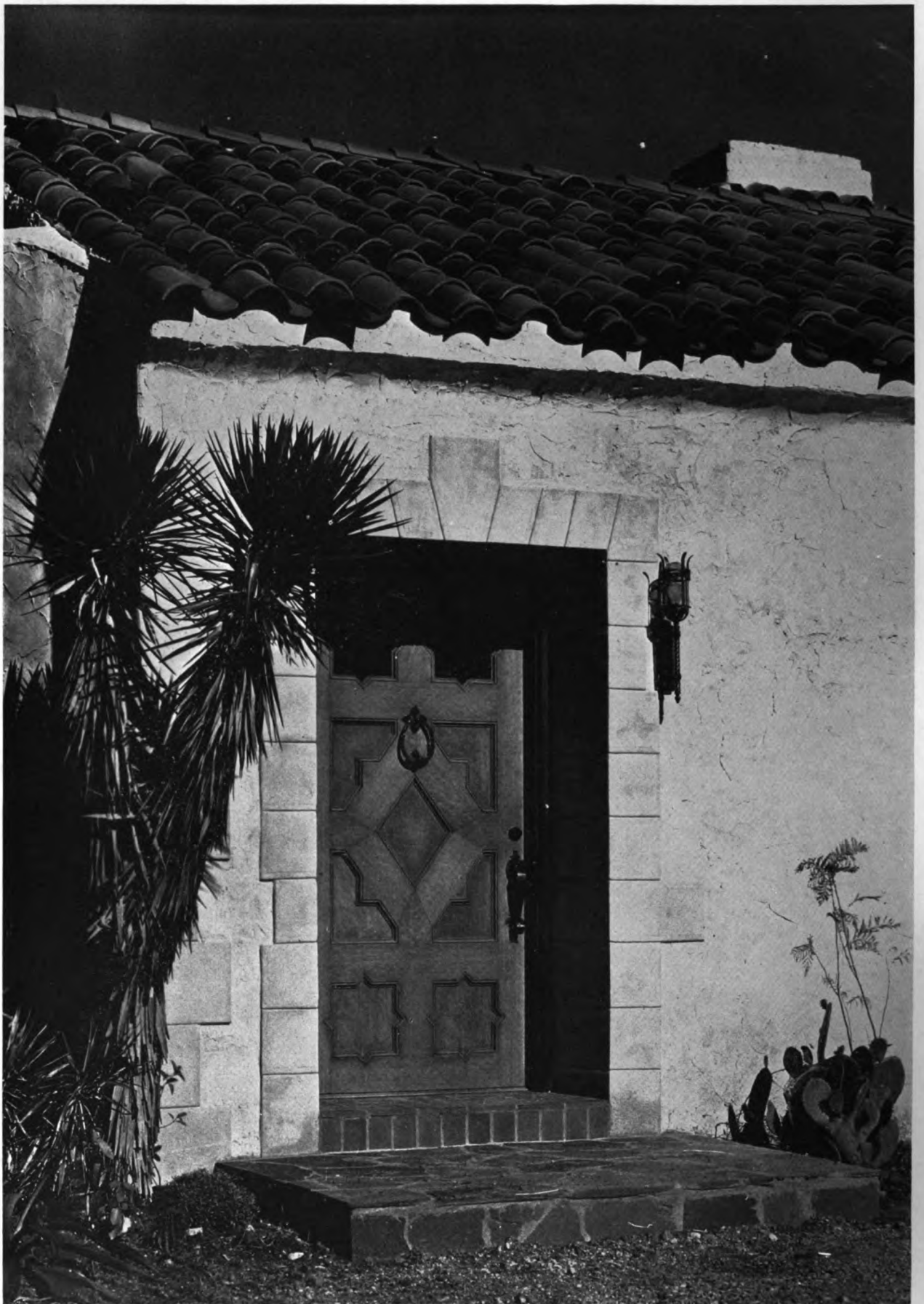


SECOND FLOOR PLAN



FIRST FLOOR PLAN

PLANS
 "RIVER OAKS" MEDITERRANEAN VILLA, HOUSTON, TEXAS
 CHARLES W. OLIVER, ARCHITECT



DETAIL OF ENTRANCE
"RIVER OAKS" MEDITERRANEAN VILLA, HOUSTON, TEXAS
CHARLES W. OLIVER, ARCHITECT :: :: :: :: ::



PATIO



GATEWAY
 "RIVER OAKS" MEDITERRANEAN VILLA, HOUSTON, TEXAS
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EXTERIOR STAIRWAY

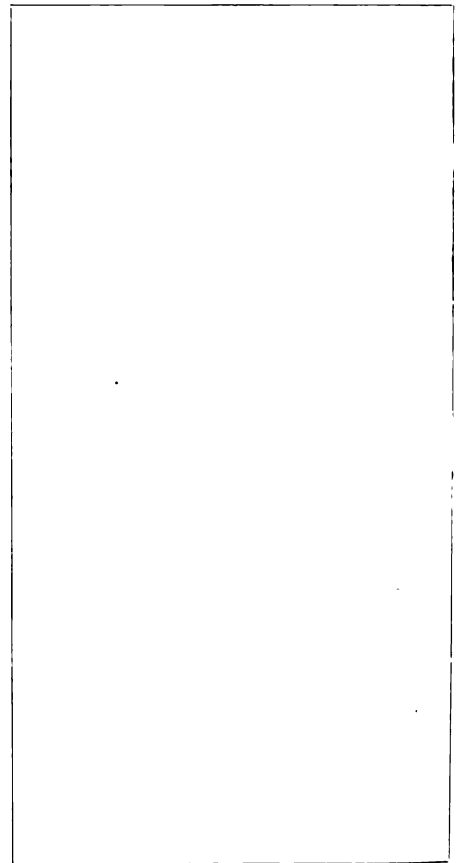


GENERAL VIEW



DETAIL OF ENTRANCE

RESIDENCE OF CHARLES W. OLIVER, HOUSTON, TEXAS
CHARLES W. OLIVER, ARCHITECT :: :: :: ::





GENERAL VIEW
RESIDENCE OF DR. JOHN H. FOSTER, HOUSTON, TEXAS
CHARLES W. OLIVER, ARCHITECT :: :: ::



PATIO



ENTRANCE DETAIL
 RESIDENCE OF DR. JOHN H. FOSTER, HOUSTON, TEXAS
 CHARLES W. OLIVER, ARCHITECT

city, you'll find a stiffly formal, narrow, three- or four-storied brown stone front; and, if the artistic spark is not dead within you, you'll wonder why under heaven the two fellows didn't copy the right thing in the right place.

In the commercial building you will find a much-ornamented basement with a plethora of balconies, much rustication in stone, wonderfully carved keys, and then a tall shaft of comparatively plain structure, and the whole surmounted with a beautiful Greek temple two or three stories high. Why the Greek temple should be telescoped up on top of that candlestick affair is something beyond my ken—but that's your commercial building; they all do it just about that way. Why more of us don't frankly encase a steel structure and treat it as a tower-like affair, which tall buildings are bound to be, without going through the farce of great classic columns which carry nothing and that everyone knows are actually kept from falling out by wonderfully complicated engineering devices, is also something I do not know.

That Greek Temple idea, by the by, is much in vogue these days. In fact, I believe it was the Chicago World's Fair that brought it forth, and as architects are worse copyists than dressmakers, it has grown and grown, until everything has to be classic. Your government building is classic, your church is classic, your Masonic temple, your house, your stable, your factory, your chicken coop, all must have fluted columns and pediments. No man loves a beautiful example of classic more than I, but I do like to see it correctly placed. I don't want a dog kennel or a dove cote to be facsimiles of the Parthenon or St. Peter's at Rome. It is a fad and is about due to change or be supplanted by something else soon.

Years ago the great Richardson did some very good work. I suppose it is heterodoxy to say so, but even some of his work, while very beautiful as reproductions of medieval castles, donjons, rathhouses, etc., was certainly most cruelly forced to serve remotely foreign, modern purposes. Well, the architects of the time liked it and they followed suit, and lo! every statehouse, church, barn, cotton factory and house had for its prototype the Pittsburgh courthouse, of Richardsonian Romanesque. It was a little bit new to some of the fellows, and they did everlastingly twist that rather fine example into strange, misshapen forms. There are few cities in the country today where I do not feel cold shivers running up and down my perhaps supersensitive spine as I pass some of the wonderful miscarriages of the Richardsonian fad.

Broadly speaking, the architects don't seem to think enough. We noted above that they have pandered so to commercialism that they are not given the time to think. Then, too, they attempt to do too much. They carry on too many buildings at the same time to be able to do full justice to any one.

Years gone by the architect would be satisfied with one good, important building at a time. He lived with it, thought out its every detail; it became a part of himself, he logically reasoned out everything he did. How can you logically reason out a building that perhaps twenty draughtsmen are working upon separately and in a factory-like mode and spirit?

The result is that the architects take something which has been done before, that seems to fit the passing fancy, however remotely connected it may be with the subject in hand, and they use it, utterly without regard to the purpose of the building or the propriety of the clothing. They don't live up to the changes, the conditions, that have been brought about by our new ways of living and doing things.

In his solution of the commercial building problems, for instance, the average architect finds possibilities for architectural treatment in the upper stories, but the commercial exigencies of the case demand that the store fronts offer as much space as possible for the display of goods. So we see great, alleged-massive granite walls, ten, twelve, twenty stories high, resting upon beautifully polished plate glass supports. And so with everything else, up and down the gamut of architectural composition; lack of thought, a maudlin attempt to fit some habiliment of prehistoric date, trammeling in its folds, inappropriate in its shape, to our modern requirements, absolutely unsightly, farcical, a burlesque in its new surroundings.

What sense is there in planting a facsimile of an old Italian palace down in the busy part of New York to do service as a newspaper office? And that is really a minor offense, comparatively speaking, when we note the great mass of illogical, ill-adapted buildings that confront us everywhere at every turn. Really, I can think of but one class of building where we can borrow boldly from olden times without opening ourselves to severe criticism (that we never receive). Ecclesiastical work may be along the old lines. You can antedate your churches as far back as your creeds. There is justification for it.

What we need is good training in architecture, in the fullest sense of the term, not merely the measuring of old examples by any odds and the copying of ancient capitals. Then we need a good course in logic, something to develop our power of concentration and the ability to grasp the real meaning of things, to comprehend the actual requirements of a subject and to do it justice. And then we need a virile, unhampered, straight-from-the-shoulder press that can and does not fear to tell us where we do right and when we are on the wrong track. There is nothing better than good healthful criticism; it is an incentive to do better, a retardant to conceit, a spur that may irritate our ribs, but that sends us on with redoubled energy. Continual whitewashing is not good for the soul.

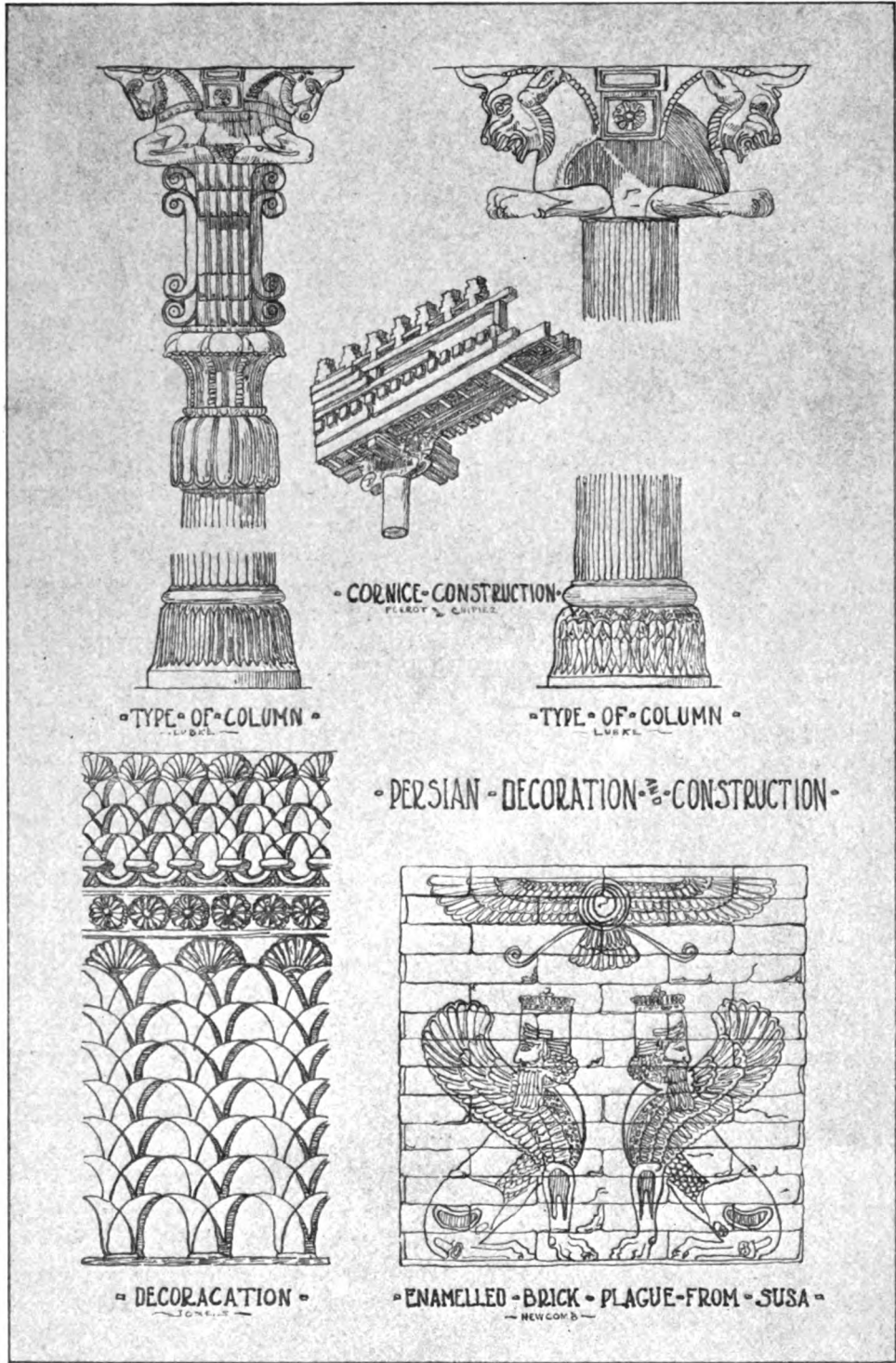


FIGURE 1. PERSIAN DECORATION

Color in Architecture

XII. Persian Polychromy

By REXFORD NEWCOMB, A. I. A.

IN THIS paper I shall use the term "*Persian*" to mean that variety of polychromy developed under and appertaining to the Achaemenian or "*Old*" Persian Empire, which, founded by Cyrus the Great, flourished between the years 558 B. C. and 333 B. C., being overthrown in the latter year by Alexander the Great. Thus we shall *not* here discuss the polychromy of the "*New*" Persian or Sassanian Empire (226 A. D.-641 A. D.) or that brilliant polychromy which arose under the Saracens in Persia (644-1736), reserving these for later consideration.

When Cyrus conquered the Tigris - Euphrates peoples and thus made the Persians supreme in Western Asia, Persian art and architecture was only in the ascendant. A crude architecture of sundried brick walls, wooden columns, and turf-covered roofs had long been extant in this area, but with the power and wealth that resulted from Persian domination came a desire for a more luxurious life for the royal family, and thus a finer type of palace was demanded.

The conquering of the Tigris-Euphrates area with its splendid palaces at Babylon and Nineveh, its great temples like that at Borsippa, the colorful walls of the Processional Street and Ishtar Gate and the splendor of the far-famed Hanging Gardens at Babylon operated to show the virile and as yet uncultured Persians how glorious architecture may become. Like those French nobles who followed Charles VIII and Francis I to Italy only to learn how antiquated and crude had become their own medieval castle-like *chateaux* in comparison with the splendid early Renaissance palaces of Florence and other north Italian cities, these Persian nobles could no longer be satisfied with the older types which they knew. Thus began an appropriation of the building methods and forms that they saw in Babylon and Nineveh, and later, as the Empire stretched westward to include Ionia, we sense likewise an appropriation of Ionian ideas and motifs. With the capture of Egypt by Cambyses certain decorative influences from the Valley of the Nile begin to be sensed in the Persian style.

The reader must not be influenced to believe, however, that the Persians were mere appropriators of the culture and arts of their subject peoples. This notion is sometimes implied by writers on Persian architecture, but it is far from the truth. While there are unmistakable evidences of foreign influence in Persia, the principal forms of Persian architecture

are essentially indigenous and the result of the translation of their attenuated primitive wooden forms into marble, stone and ceramic materials. The "*saddle-back order*" (Figure 1) developed in Persia, and never used in any other country, was the result of a logical development of the earlier wooden columns. Moreover the typical Persian palace plan is very different in idea from those of

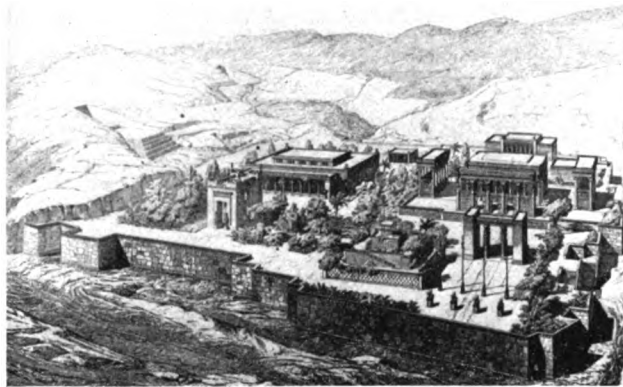


FIGURE 2. PALACES AT PERSEPOLIS, PERSIA

either the Tigris-Euphrates Basin, Egypt, or Greece. To be sure, we sometimes find a frank copying as in the Palace of Darius I at Susa, but these are rare and to be accounted for on the ground that they are in close juxtaposition to the old Babylonian culture and constructed by captive architects. Even at Susa the throne-room or "*apadana*" is a normal or typical Persian structure as contrasted with the harem which is frankly Mesopotamian.

But while the general structural or architectural forms in Persia are characteristically racial or national, (Figure 2) often the ornament is frankly appropriated. Thus at Persepolis and elsewhere we find the colossal winged-bull figures at the entrances that one finds in the Assyrian palaces and upon the walls of such a palace as that of Darius I at Susa we find envelopes of decorative bas-reliefs executed in glazed and enamelled bricks very similar in idea, but *not* identical in handling, to those upon the walls of the Processional Street and the Ishtar Gate at Babylon. In fact these ceramic revetments show beyond the shadow of a doubt the virile creative instinct of the Persian and, while his *motifs* and *media* may be identical with those of his neighbors, he indelibly stamps his product with a spirit and feeling that at once sets it apart as characteristically Persian. At Susa, for instance, he essays a frieze of lions, but they are so different in

spirit that the merest novice would not mistake them for Babylonian or Assyrian work.

We owe to M. Dieulafoy, who excavated at Susa in 1884-5 a large part of our knowledge regarding Persian polychromy as it expressed itself in ceramics for here he found those famous bits, the "Lions' Frieze" and the "Archers' Frieze," which are among the cherished possessions of the Louvre in Paris. During the time of Cyrus, Susa was only the winter residence of the Persian kings, but under Darius I it became their principal capitol, due no doubt to its greater accessibility to all parts of the now greatly expanded national domain, and here the king constructed the great palace in the ruins of which Dieulafoy discovered these great ceramic panels.

The "Lions' Frieze" is particularly interesting, both on account of its "modelling" and because of its variety of color. At Khorsabad we have seen (November issue) a plane *yellow* lion upon a *blue* ground; at Babylon we found plane and modelled *white* lions with *yellow* manes and *yellow* lions with *red* manes upon *blue* grounds. Here modelled lions in a variety of colors (*buff*, *blue*, *green*, *yellow* and *burnt sienna*) upon a *blue-green* panel, bordered by chevrons in *blue* and *buff* and crowned by a loti-form cresting in *buff* and *burnt sienna* upon a *blue* ground (Figure 3). Note also the extreme accentuation and conventional handling of the muscles, hair and face. Surely this is highly Persian both in color and technique.

The "Archers' Frieze" of which Dieulafoy reconstructed nine of the figures is shown in Figure 4. Here, it will be noted, the archers, spears in hand, march along the wall as a body-guard. They symbolize the armed strength of the king to possible adversaries and console him by reminding him of personal safety through the offices of a well-trained army. The archers, *brown* of skin are robed in true Persian fashion, some in coats of *yellow* relieved by *blue* rosettes, others in garments of *white* relieved by *blue* and *yellow* decoration. The quivers are *brown* and *green*; the head dress *yellow*; the leathern shoes *yellow*; the background *blue*; the spears *yellow* with *white* tips. The hair and beards of the figures are in *blue* and *green*, while their bows are *white*.

Another medium for the introduction of color into Persian architecture existed in the bricks with which Perrot and Chipiez ("Histoire de l'Art, Vol. 5—Perse") and others, in their restorations of Persian architecture, cover the wall-cores of sun-dried brick (Figure 5). Since most of the walls of old Persian work have disappeared, leaving the stone door and window frames and tall marble columns stark and bare, we must conclude that those walls were of a less durable material than the stone portions of the structures. No doubt these walls served as a source of material for the building of many a less worthy subsequent structure. Whether, as was held by Fergusson, these walls of sun-dried brick were faced with plaster, then

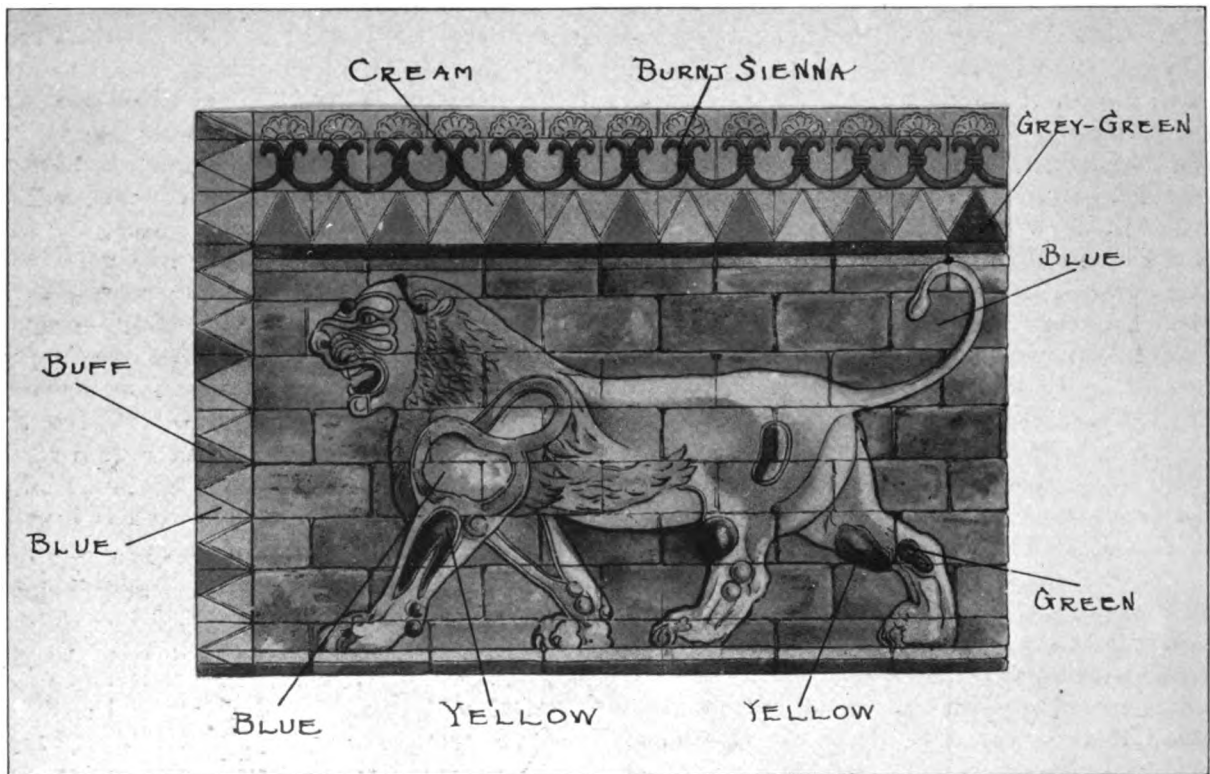


FIGURE 3. PORTION OF THE LIONS' FRIEZE FROM SUSA NOW IN THE MUSEUM OF THE LOUVRE, PARIS



FIGURE 4. ARCHERS' FRIEZE, FROM PALACE AT SUSA NOW IN THE LOUVRE, PARIS

painted, or enclosed with a veneer of plain burned bricks, has been an open question. Certainly at Susa Dieulafoy collected a number of fragments of *red* stucco which he thought was used to line the internal walls of the rooms. The delicacy of the details (columns, windows, doors) at Persepolis, however, would seem to indicate a more complete development of wall surfaces than that suggested by Fergusson, therefore Perrot and Chipiez do not hesitate to restore these structures with a-burned brick veneer upon the rougher wall cores (Figure 3).

Little or no evidence has been found to prove that the Persian architect utilized pigment, to enhance his marble or stone details, be they of architectonic import or decorative inference. While color illumination of lithic forms which was prevalent in both Egypt and Greece was not used in Persia, there is evidence that gilding, not only of inscriptions but also of other features, was practiced. Moreover, the sheathing in bronze of many architectural features like doors, cornices and the smaller decorative parts was, apparently, widely practiced. Often also the ears, horns and other smaller portions of the sculptural forms were executed in bronze, then gilded.

Herodotus tells of the tribute of ivory sent to Persia from Egypt, thus leading Perrot and Chipiez to conclude that "the creamy whiteness of ivory was everywhere mingled with the brilliant hues of metals, the *reds, blues, yellows* and *greens* of stuccos and

enamels, and the more sombre tints of precious woods; cypress, cedar, ebony. These in the interior of the building were left to their natural colour; externally, however, timber, when not overlaid with stucco, clay or bronze, received a coating of paint, which had the double purpose of preserving it more or less from the destructive action of the weather, and inducing contrasts that were not without charm. The flagging of the principal rooms was made of tinted stones, cut and put together so as to form patterns whose hues and designs were in imitation of those textile fabrics which the artisans of Fars and Khorasan at the present day, with but a few well chosen colours, know so well how to weave."

We must not forget the color note contributed by the splendid hangings, canopies and awnings, rendered possible by the developed, above mentioned textile art. In the Book of Esther (1: 5-7) we have mention of the hangings in the palace of Ahasuerus (Xerxes). He says: ". . . the king made a feast unto all the people that were present in Shushan the palace, both unto great and small, seven days, in the court of the garden of the king's palace; where were *white, green* and *blue* hangings, fastened with cords of fine linen and *purple* to *silver* rings and pillars of marble: the beds were of *gold* and *silver*, upon a pavement of *red, blue* and *white* and *black* marble." Thus through the age-old art of ceramics, the contributions of the textile art, the glint of gold, bronze and silver and applied pigment, used sparingly upon wooden details, Persian architecture, like all architectures of antiquity, presented ever a vari-colored picture.



FIGURE 5. GATEWAY, PALACES AT PERSEPOLIS, PERSIA NOTE POLYCHROMATIC VARIATION IN THE BRICKWORK

The Passing Show

Architectural Salesmanship, A One-Man Show, Antiques

By ARTHUR T. NORTH, A. I. A.

WE HAD dined and were resting at ease when an ever-welcome friend came over to our table and joined up. He told a story of a recent sale of architectural service.

Three architects or firms, A, B, and C, with the owner O, are involved. Architect A is a competent architect so far as "architectural design" is concerned and more. He knows the economics of architecture. Architects B and C are old, established firms with national, even international, reputations. Owner O lives in another city and possesses a costly building that never made a profit. When he decided to erect another structure to cost several millions, he intended to employ an architect and contractor of national repute and thus safeguard his investment.

A friend tipped the job off to A with the assurance that O had not yet employed an architect, whereupon A procured a letter of introduction to O and took the night train. He encountered considerable "sales resistance" with O, which called into play all of his diplomatic resources. Occasional remarks about the relation of the plan to cost of construction, operation costs, maintenance costs, gross and net income, aroused O's curiosity. Then O displayed the plan of his million-dollar "white elephant," and A made an analysis of it and demonstrated the reason why it could never pay dividends. This led to a showing of the tentative sketch plan of the projected building made by B. A cursory analysis showed that the economical laws of planning were all violated. There was a large excess of exterior wall for the floor area, excess corridor area, wasteful arrangement of rentable areas, necessity for costly heating and plumbing and other items. O then invited A out to inspect the site which invitation was not accepted, being regarded as non-essential at that time. He was then told that both B and C inspected the site and immediately set their imagination to work on the landscaping of the grounds, discussed availability of vistas, style of design and other artistic features, but not a word about income, operating expense or any other such gross things involved with mere money.

Briefly, that day week A received a contract to design a structure for O to cost several million dollars, which B expected to secure and missed by twenty-four hours. The lamentable fact is that B and C fail utterly to realize why they were not chosen, with all their prestige as architects whose names are recognized by everyone.

Architecture is indissolubly linked with economics.

The architect who does not recognize this fact and prepare himself accordingly cannot expect to succeed in designing those structures where investment is an element, such as factories, warehouses, stores, office buildings, hotels and apartment houses. This condition is recognized by Dr. Canby in a recent editorial in *The Saturday Review*. In discussing literary criticism and critics, he says: "Like our architects, he (the critic) must work with steel and industrialism, or produce *pastiches*, lovely and erudite perhaps, but neither vital nor significant."

In truth, the architect must work with steel and industrialism. Architecture is just becoming aware of that fact and the further fact that the architecture based on the traditions of the passing generation, consisting mainly of *pastiches*, does not yield dividends under today's conditions. The nature of architectural service has changed and with it the character of architectural salesmanship.

* * * * *

Grosvenor Atterbury had a one-man show at The Century Association, November 6-30, including work in association with John Tompkins and Stowe Phelps. It is a good show and after several visits to enjoy it, one wonders why more architects do not have them. We ordinary ones notice in some architectural publication the occasional illustration of a completed structure designed by a named architect. Perhaps we see a building which appeals to us and after much inquiry may learn who designed it. These are incidental as far as the architect is concerned. The published illustrations in architectural journals are of the greatest value, indicating the development and trend of architecture; without them architecture would find itself groping blindly for the light. These occasional illustrations of an architect's work do not give us a true sense of his attainments and it is the one-man show that enables us to appraise him.

The catalog lists 340 exhibits consisting of photographs of works, notes, studies, models, designs and sketches in oil and other media. The exhibition is so diversified and complete that one comes away from it with comprehension of Grosvenor Atterbury as reflected in his work. To us, he excels in country house architecture and his Higgins house at Worcester, Mass. (1921), his James Surprise Valley Farm, Newport, R. I. (1917), and his Mrs. Jean Schmidlapp house at Cincinnati, (1925), are notable achievements. To study them, as reproduced by excellent photography, is a real joy. The latter one mentioned has perhaps

the greater appeal to us. Interest never flags in the ever-present charm and infinite variety of the structures—an always consistent variety.

Stylistic architecturally not as we see them, but stylistic individually of Grosvenor Atterbury, they are, and that is the basis of a living architecture. It is good and has no *pastiches* to make it "neither vital nor significant."

The smaller residences possess the same quality of charm and variety, the whole exhibit being a consistent performance. We are for the one-man show because we can better know the exhibitor. We hope they will become more common and, as in this case, as satisfactory.

* * * * *

Quoted in *The New York Sun*, (Nov. 1, 1927) Tyge Hvass, famous Danish architect, nominates the New York Telephone Building as the exemplar of skyscraper architecture at its best, and the Woolworth Building as the worst example. "The horizontal lines, the 'terrace' effect of the Telephone Building and the new Savoy-Plaza are not only beautiful, majestic and dignified in themselves, but they are, according to Mr. Hvass, 'honest.' The Woolworth Building, on the other hand, is like a man in fancy dress—a pirate masquerading as a bishop and therefore incongruous."

It is pleasing to *The Passing Show* to have its

nominations for architectural excellence appraised in the same manner by others.

Of a certain phase of Americanism, this visitor-critic says: "They are apparently antique mad, and will accept nothing that is new, and for that reason there is little stimulus for creation. This seems to me to show that they lack faith in their own judgment. Only if enough people in the past have pronounced it good are they willing to trust it. There can be no development that way."

This criticism of the American "antique complex" strikes a responsive chord in *The Passing Show*. It is with no disrespect to our colonial ancestors of 300 or more years ago, that we personally prefer some modern things. They did the best they knew how, but after three centuries with better facilities for culture, a more easy existence and greater means, we ought to excel them. Unfortunately, we do not have the stimulus for creation in architecture and its accessories, such as furniture, because we have been taught that creative architecture reached its culmination in the past and we can only adapt.

But in this age, when architects "must work with steel and industrialism" and are developing "a faith in their own judgment," it is to be hoped that it will extend to those things now controlled by the quality of "antique" and free us from the inhibitions of the antique complex.

Book Reviews

CARILLION MUSIC AND SINGING TOWERS OF THE OLD WORLD AND NEW. By William Gorham Rice. Dodd, Mead and Company, New York. \$3.00.

"In the ancient town of Bruges
In the quaint old Flemish city,
As the evening shades descended,
Low and loud and sweetly blended,
Low at times and loud at times,
And changing like a poet's rhymes,
Rang the beautiful wild chimes
From the belfry in the market ..
Of the ancient town of Bruges.."

—Longfellow
"The Belfry of Bruges."

To all lovers of this wonderfully musical poem of the beloved Longfellow the charm and beauty of carillon music has an appeal. For me bells—any bell from a tinkling sheep's bell up to one the size of a *Big Ben*—have a perennial interest. The wonderful overtones, the splendid deep-throated resonances have a charm that nothing in the world can equal. Every time I go to Riverside I spend hours in that admirable collection of bells that have been gathered together from the ends of the earth by that picturesque campanilist, Frank Miller, Master of the Mission Inn. After a feast in the company of these silver-throated singers of the past one gets into a romantic mood after which he should get himself a comfortable seat under the arches of the *patio* and read again

Poe's alliterative poem, or Lafcadio Hearn's charming description of the effect upon him of those deep-toned bells of old Japan.

I well remember how I was thrilled by the clanging of the church bells of an English town upon my first visit to that land and I think we all react, even today, to the chorus of meeting-house bells that call us to worship on Sunday mornings—that is if we happen to live in a town where this pleasant custom still prevails. Even a single bell, calling alone of Wednesday evenings to those still faithful attendants at prayer-meeting raises an echo in the heart of a bell lover. But once one has learned to love the wonderful carillon music of the "singing towers" of the Low Countries, the abandoned jangling of many and unrelated bells or even the pure note of a single silver-toned throat re-echoing across the glistening white snow upon a frosty night cannot completely satisfy.

In this volume Mr. Rice, who has followed the trail of the "singing towers" of Europe for many years, tells their story, giving their history, their romance and their lore. He is, however, very specific about the mechanical details and gives much very valuable information that an architect or a committee

interested in purchasing a peal of bells should know. The methods of play are explained; the technique of modern methods are examined and the evolution of the instrument is told. For the convenience and information of those who hope to investigate first-hand he appends "lists of carillions" in Europe and also the important ones in other lands, including America. He gives exact specifications of the 52 bells of the Ghent Carillion and of the 53 bells of the Park Avenue Baptist Church in New York. This great carillion was the gift of John D. Rockefeller, Jr. in memory of his mother. It was first played on Sunday, September 20, 1925.

Now that carillion music is gaining a footing in America it might not be out of place to mention others in our country. Those of Cohasset, Massachusetts, Morristown, New Jersey, and New York "are the most complete in the United States," says the author. Other important installations in this country are:

Christ Church, Cranbrook, Michigan, 30 Bells
 Jefferson Avenue Presbyterian Church, Detroit, 23 Bells
 Holder Tower, Princeton University, 35 Bells
 First Presbyterian Church, Birmingham, Alabama, 25 Bells
 Memorial Tower, Andover, Mass., 30 Bells
 Church of Our Lady, Gloucester, Mass., 31 Bells
 Grace Church, Plainfield, N. J., 23 Bells
 House of Hope Presbyterian Church, St. Paul, Minn., 28 Bells
 St. Joseph's Cathedral, Buffalo, N. Y., 43 Bells
 Chapel, Notre Dame University, Indiana, 32 Bells
 Holy Trinity Church, Philadelphia, Pa., 25 Bells
 There are a number of smaller collections.

As a travel-book on carillions, as a book of lore on bells and "singing towers", as a practical book for one interested in bells and bell-ringing or as a manual for the architect who would hope to house a carillion the volume is full of interest and information.

REXFORD NEWCOMB

INTERIOR ARCHITECTURE. By R. W. Sexton, with a Foreword by Charles A. Platt. 114 pages, illustrated, 9½ x 12½ cloth. Published by Architectural Book Publishing Co., Inc., New York City. Price \$7.50 net.

"Architecture is commonly associated with the plan, exterior design, construction and utilities. The finishing of interiors, the selection of the furnishings and fixtures, are commonly grouped as interior decoration and allocated to an interior decorator. Thus two distinct and quite separate kinds of service have been developed for the same structure, often resulting in an architectural discord. Architecture is the most comprehensive of arts and all of its elements must be under one control in order to secure the harmonious unity which comprises perfection.

Exterior designing is essentially structural and the same sense of structure must be apparent in the interior designing; otherwise the effect will be weak and meaningless. Consistency and unity are attained by co-ordinating architecture and interior architecture and the furnishings. When this is correctly done the objective is secured: "to design and furnish a room or interior that shall satisfactorily serve the purpose for which it is intended. The design of the interior, to be

brought to a successful conclusion, must first be considered as a problem of interior architecture. The furnishings, by making a room livable, follow, in correct relation, harmoniously completing the composition."

Mr. Sexton has based his book on this assumption, the different factors which constitute interior architecture being fully discussed and illustrated in its eight chapters. No hard and fast rules are set up but rather an exposition of principles illustrated by examples. The illustrations by plan, elevations and photographs are so selected and explained that the reasonableness and effectiveness of the methods are easily understood and made acceptable.

The illustrations are exceptionally good and are confined to dwellings. They are taken from every grade of dwelling that can aspire to interior architecture. This book has a freshness and interest because of the absence of the "period styles" which characterize the usual book devoted to interior decoration. With these stereotyped books in mind, the functions of interior architecture are easily made apparent by this book.

The book presents the subject from a viewpoint that is entirely new to many of us. It is a logical and convincing presentation made possible by Mr. Sexton's experiences.

The appeal and value of this book are not limited to architects who will find it of real value. Laymen who have a sense of proportion, harmony and refinement will find it to be of continuing interest. All readers will appreciate the ability and sincerity of the architects whose work has found a place in this book. While it presents a new viewpoint, it is not radical or bizarre but rather an exposition of reason and good taste.

ARTHUR T. NORTH

ARNOLD W. BRUNNER AND HIS WORK. Published by the Press of the American Institute of Architects, New York. Price \$15.00.

Few men in any profession have ever had a more gracious tribute paid to them than has been paid to the late Arnold W. Brunner in the book recently published by the Press of the American Institute of Architects. This book is not only a pictorial story of what one man accomplished as architect, city planner and painter but is also a picture of a vivid and forceful personality as he walked through life and impressed those with whom he came in contact.

The story is not told by any one man but by a group of men of different professions with totally different outlooks upon life, and yet one and all had felt Brunner's virility and capacity and had succumbed to his abounding personal charm. Perhaps it was because of this charm that Brunner was able to influence so many different types of people and enjoy so rich and varied a life.

In writing a review of this book which the Press of the A. I. A. has gotten out so beautifully it is not my purpose again to attempt to sketch the man. Those of his friends who have done so in the book, the diplomat, painter, sculptor, dramatic critic, writer and editor have done this far better than could I. Brand Whitlock, our minister to Belgium during the War, and Clayton Hamilton, the dramatic critic have written of Arnold Brunner, the man, and have brought him right into our actual presence.

It was my privilege to meet him on several occasions and I shall never forget my first impression. When I was a student at the Massachusetts Institute of Technology Arnold Brunner's brilliancy and his genius for hard work were repeatedly held up to the students of my day as the example most avidly to be followed. Hearing of all this man had done, and seeing those of his sketches which were treasured by the Department of Architecture I had pictured him in my mind as a towering personality, rather gaunt, with a shock of reddish hair brushed back from his forehead—nobody had ever told me what he looked like. When, after my return from two years at the Beaux Arts I was presented to Arnold Brunner at the first convention of the A. I. A., in Washington, which I ever attended, and saw the rather small man with those penetrating eyes and closely trimmed and pointed beard; perfectly dressed, completely soigne, as the French would say, I could hardly believe my senses. But in less than five minutes, I too had felt his charm, and the character behind the charm, which made him what he was.

Although a much younger man he always made me think of Charles McKim. They had much the same method of attack when up against either a problem or a committee; both were architects with the larger vision, both had the passion for perfection which made them eager to collaborate with others, painters, sculptors, landscape architects, artificers in metals and workers in the other crafts, that the finest results might be attained, and they had that genius for friendship which made those with whom they worked their life long friends. Only character and charm can accomplish these results and both these men possessed both to a very high degree. Until I read this book I had never realized Arnold Brunner's age for though years elapsed between my various contacts with him he always appeared the same youthful buoyant personality destined to continue for years his efforts to make American cities beautiful. Clayton Hamilton very happily speaks of his youthfulness, using him as an interpretation of that ancient saying, "whom the Gods love die young." In thinking of

him another quotation comes to my mind, "Age cannot wither nor custom stale his infinite variety."

Whether he will be best known to future generations as a planner of cities, a designer of buildings, a master with water color or pencil or as a brilliant conversationalist and club man remains to be seen. That he was all of these is delightfully shown in the book about which I am writing. In its pages we read of the man and see him as he lived and worked, and in the illustrations one gets a clear idea of the extent and diversity of his professional practice.

Of special value to the young architect and the architectural draftsmen are the thumb-nail and water color sketches reproduced from Mr. Brunner's note books of his various trips to Europe. These sketches are not only architectural, they are intensely human and show how keen an observer of human life was their author. After all what is architecture but an expression of human life in the different stages of man's development? We learn far more of the history of ancient civilizations from the buildings of the past than from any of the archives and monuments which have come down to us. These little sketches of human life with their architectural backgrounds can tell our students far more of the meaning of the architecture thus depicted than more carefully prepared drawings from careful measurements. What our students of today need more than anything else is to catch the spirit of the architecture of the past and learn how it expressed the life of the people of its day so that they may make our architecture express to those who come after us the way in which we live.

One word is necessary about the make-up of this book. It is a high achievement of the book makers' art. The text is clearly and beautifully printed in distinctive type upon fine paper. The illustrations are of such a quality that they make one feel that they express the medium chosen by the artist to express himself, and the binding is distinguished. It is truly a volume of which the Press of the A. I. A. may well be proud; is a valuable and needed book in every architect's library as well as a volume which any layman interested in the story of a human life will enjoy reading and possessing.

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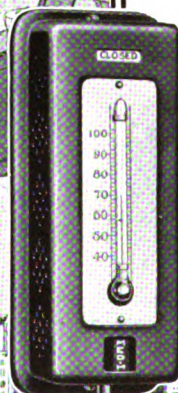
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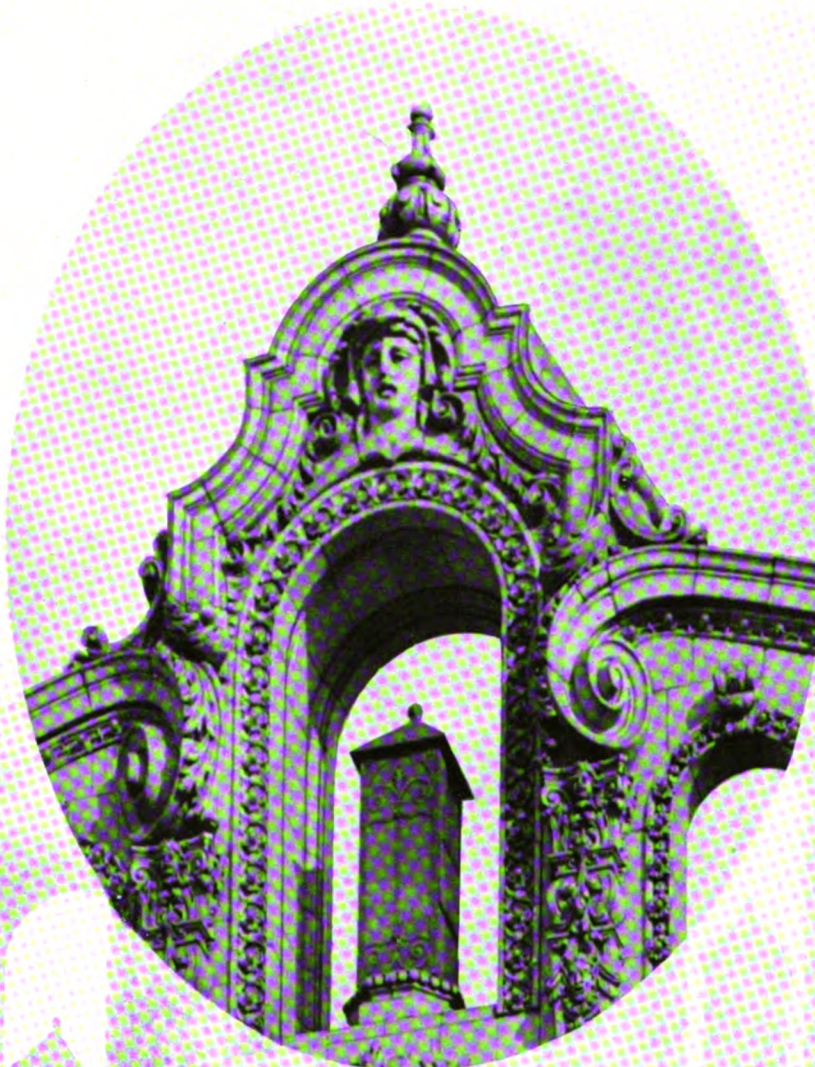
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Levy and Klein, Architects

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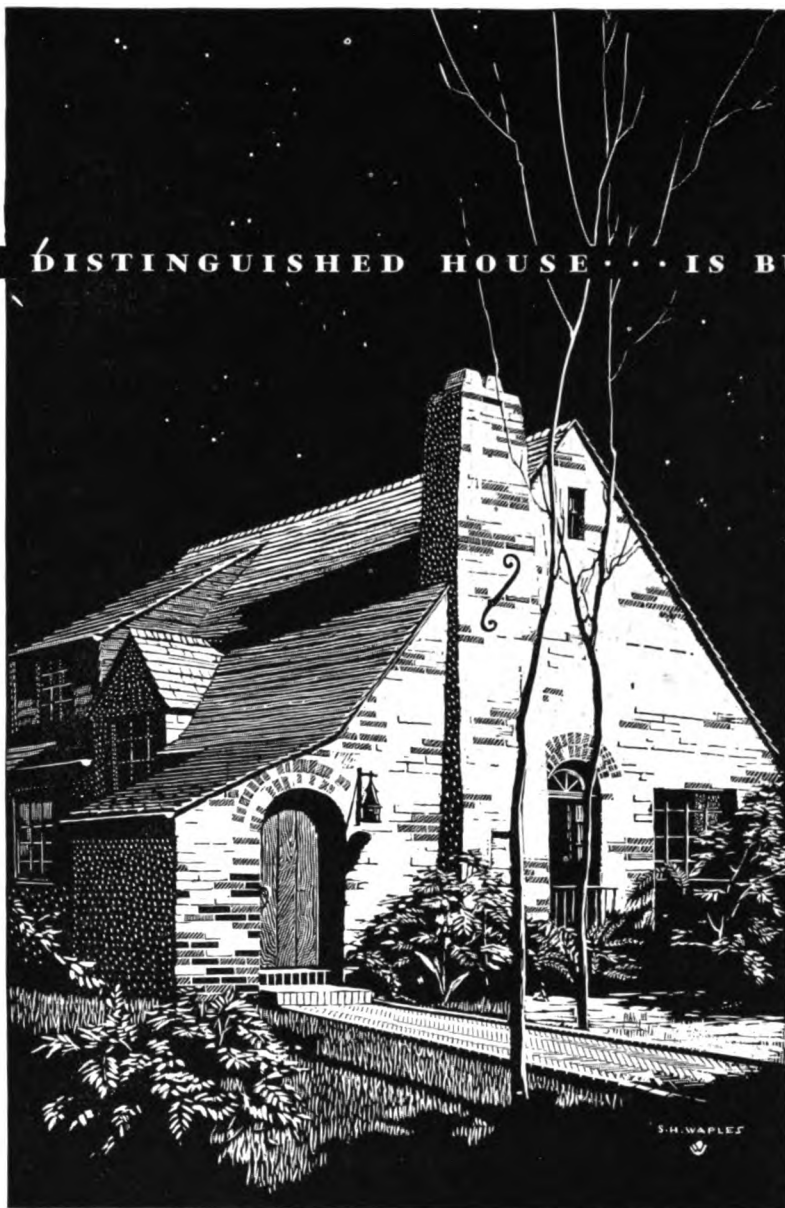
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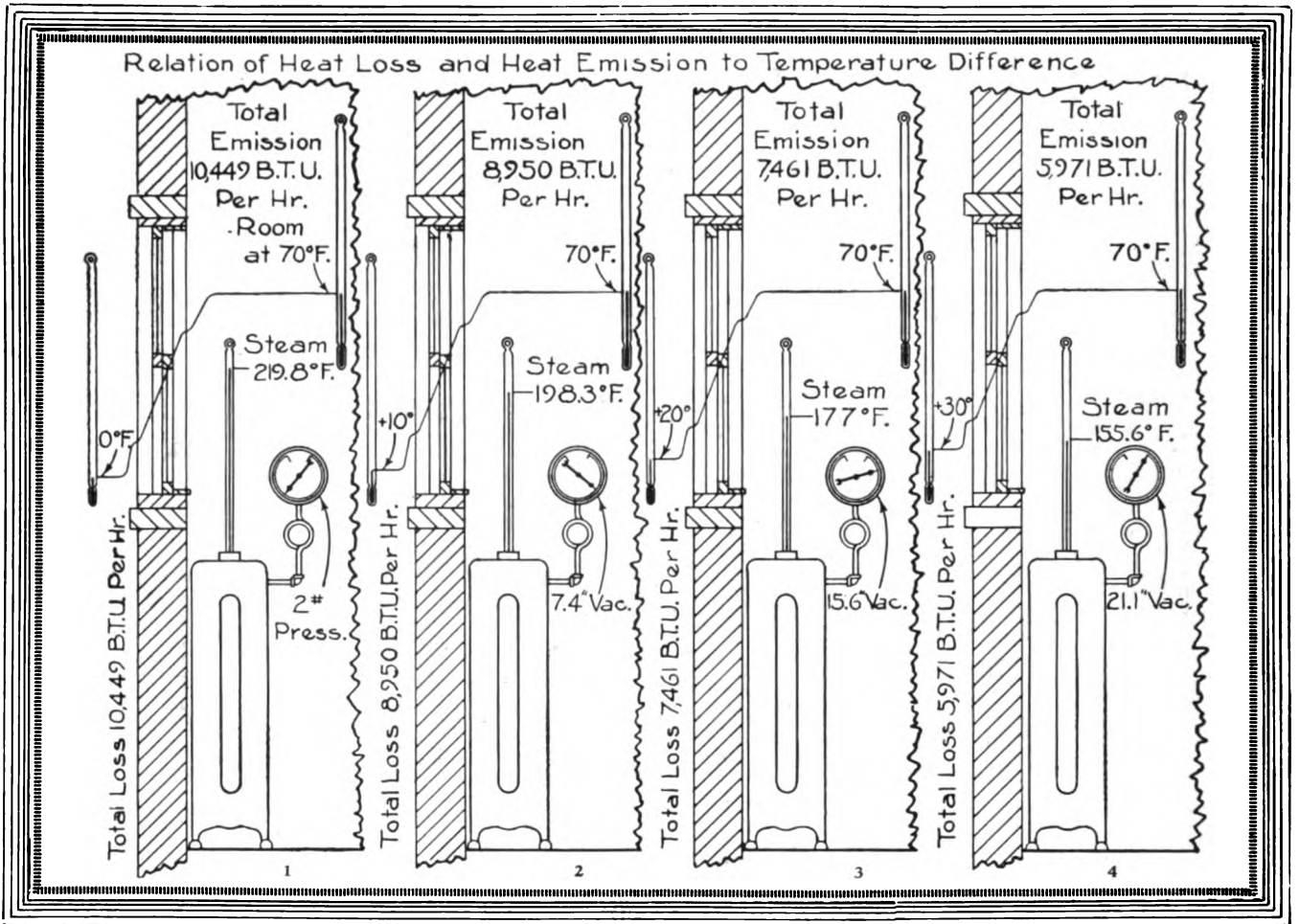
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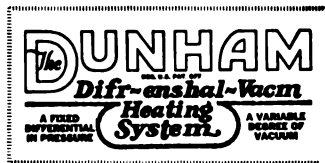
Room vs. outdoor temperature with the Dunham Differential Vacuum Heating System

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Sections 3 and 4 of the illustration show further reduction in steam temperature and pressure with corresponding decreased heat emission from the radiator and consequent reduced heat loss from the building.

It should be particularly noted that the room temperature is maintained constant at 70 degrees under these varying outdoor temperature conditions.

U. S. Patent No. 1644114. Additional patents in the United States, Canada and Foreign Countries now pending

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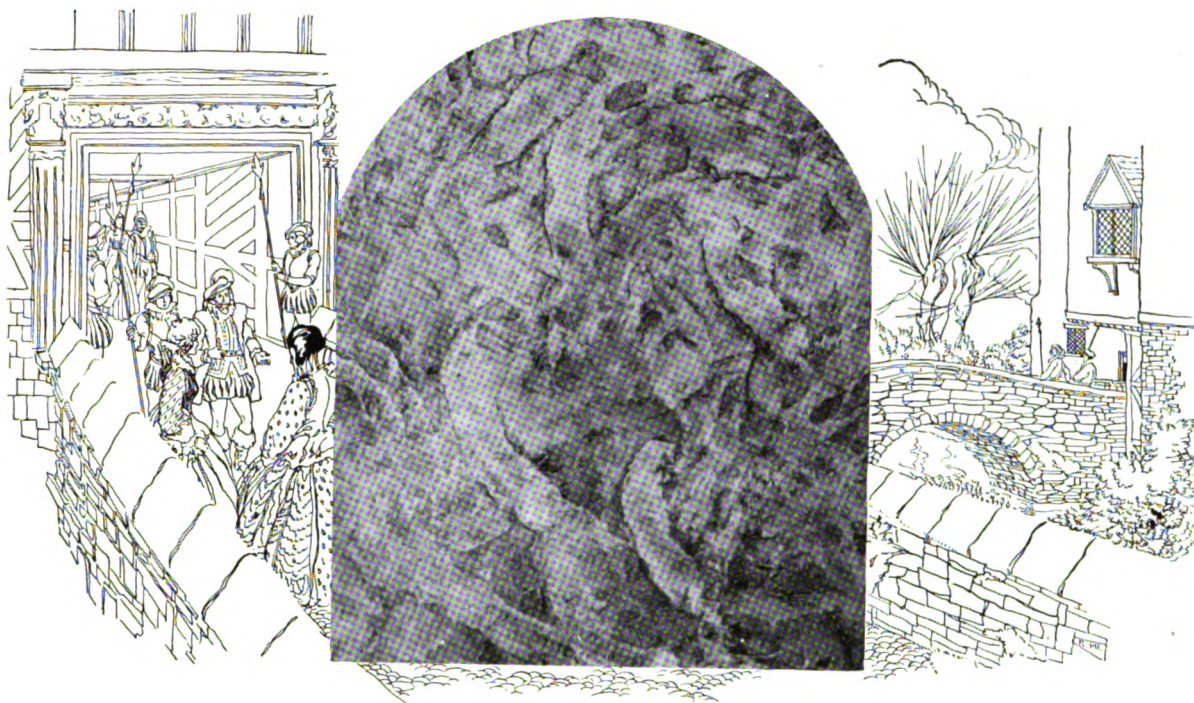


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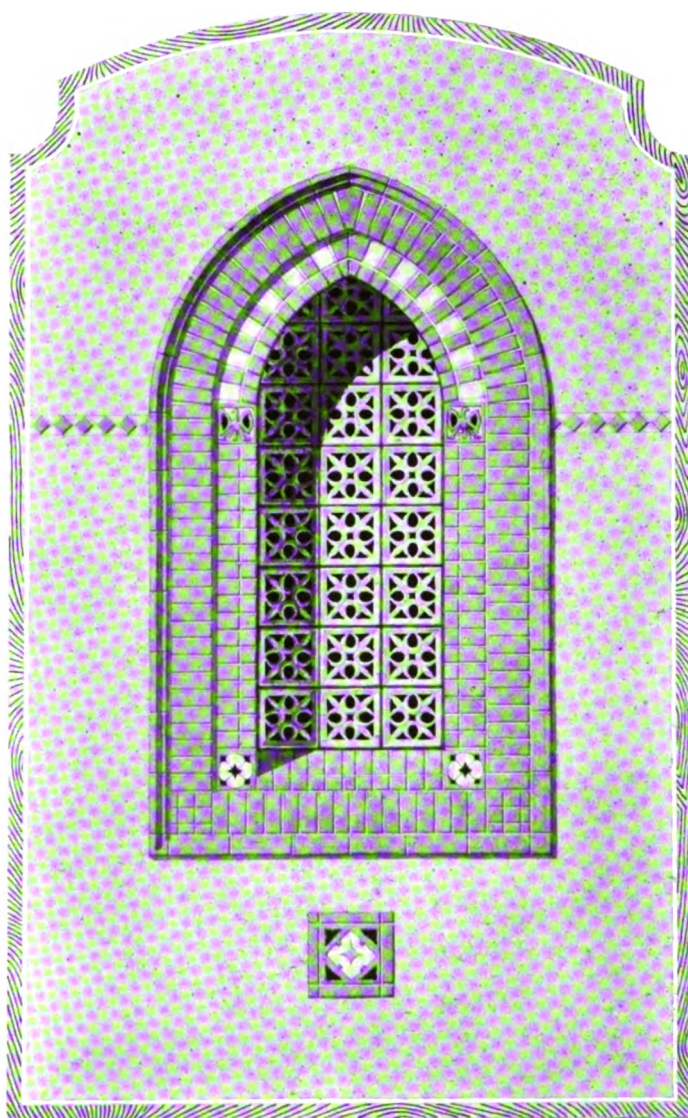
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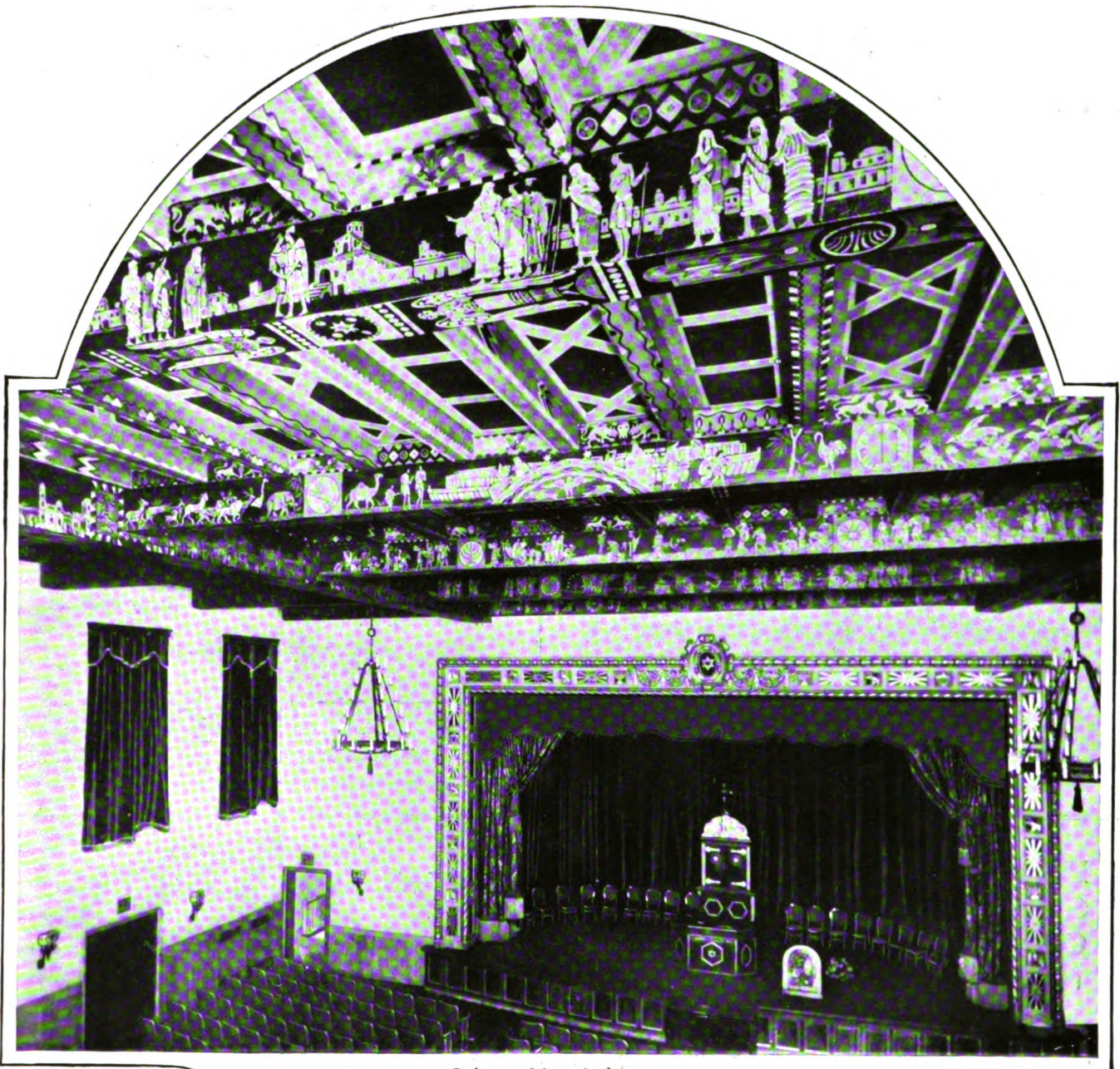
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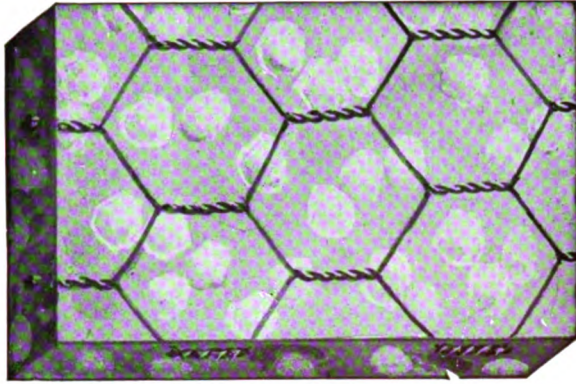
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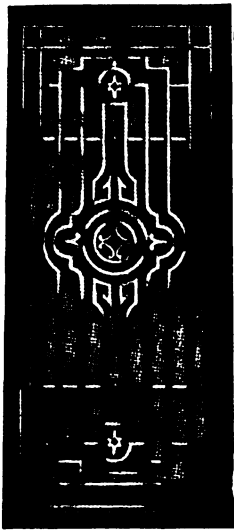
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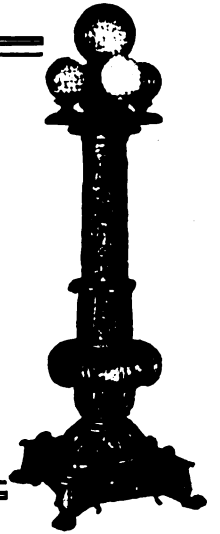
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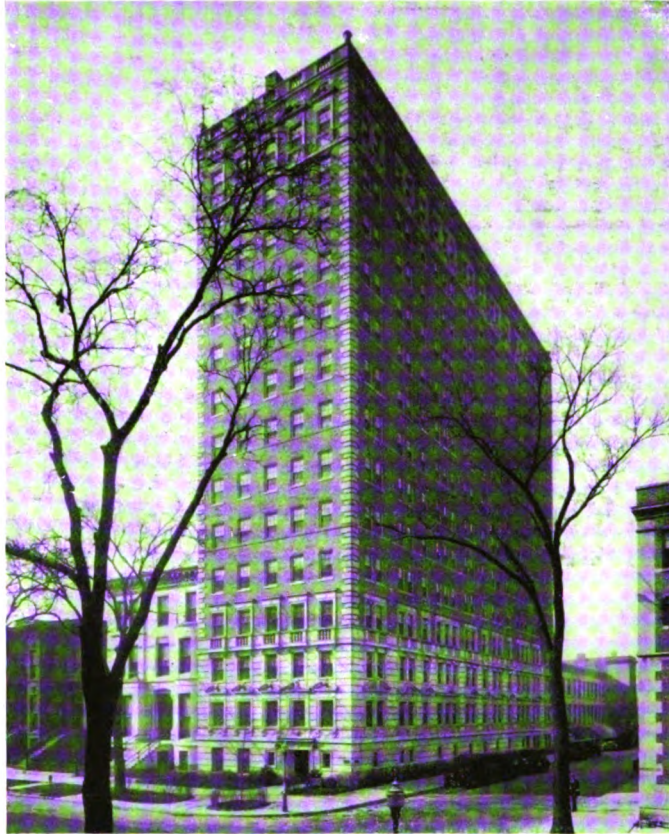
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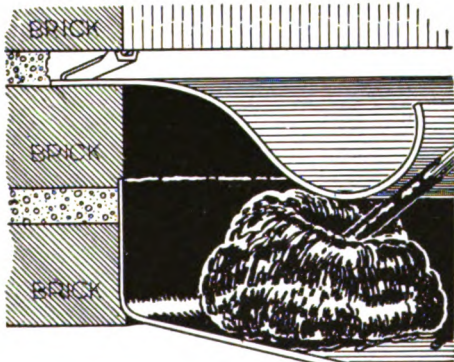
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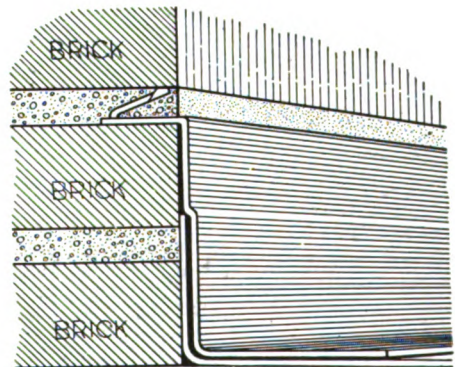
1110 West Adams Street

Chicago, Illinois



FIGGE ROOF FLASHING extending into the wall and cemented both to wall and roofing (left) becomes an integral part both of wall and roof covering, as shown in drawing at right.

FIGGE ROOF FLASHING is made in two types, **STANDARD** and **EXTRA HEAVY**, each type of suitable heavy woven cotton fabrics, thoroughly saturated and coated with best quality of bituminous compound.





Michigan Central Railroad equips over 300 doors with R-W-

"The doors operate easily year after year. Our satisfaction is indicated by our constant re-orders"

J. F. Deimling, Chief Engineer, Michigan Central Railroad, says:

"In January, 1926, we completed a new 1190 ft. section of our freight house, making the total length 2000 ft.—perhaps the longest railroad freight house in the country. On one side of the freight house are the tracks; on the other side is a roadway where teams and trucks are constantly loading and unloading.

"In the original section of this freight house, which is 10 years old, we used Richards-Wilcox door hardware. Being perfectly satisfied with our 10 years' experience, we naturally selected R-W equipment for the newer additions. R-W equipped doors of the sliding type line the railroad track side of the freight house. On the teaming side, we use a vertical rolling door. All door openings are 9x9 ft.

"In June, 1926, we completed a new inbound freight house of the same type, three sets of tracks away. This building is 590 ft. long, with R-W equipped sliding doors throughout.

"Altogether, we have in these two freight houses over 300 doors equipped with R-W hardware, slides, and trolleys. We also have several FyReWall doors of Richards-Wilcox manufacture, as well as a folding door 17 ft. wide by 12 ft. high.

"At present we are constructing the Michigan Central Fruit Auction Building, which will be equipped throughout with R-W bi-fold and sliding doors and hardware.

"We have never had a complaint about our Richards-Wilcox equipment. The design is right, and the doors operate easily year after year. Our satisfaction is indicated by our constant re-orders."

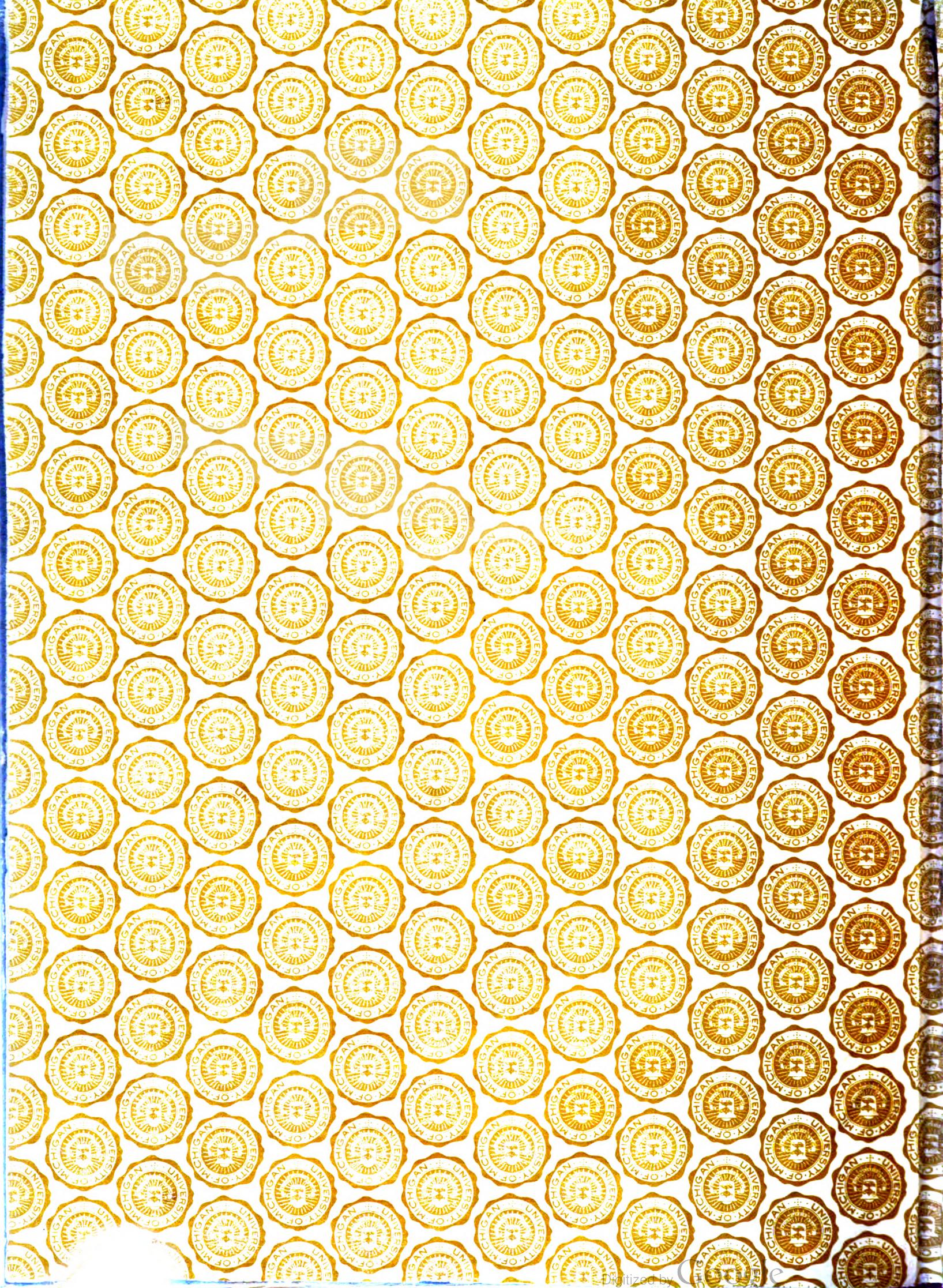
R-W Engineers will gladly make an analysis of your plant requirements in the matter of doorways and conveying problems, without placing you under any obligation. Just write our nearest branch office.

Richards-Wilcox Mfg. Co.

"A Hanger for any Door that Slides."

New York . . . **AURORA, ILLINOIS, U.S.A.** . . . Chicago
 Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
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