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View of Forecourt and approach to the Exhibition

Buildings from left to right are Museum of the American Indian, Hispanic Museum, Numismatic Society and the National Academy of Arts and Letters. Building just disclosed on the right is that of National Geographic Society

A NOTABLE EXHIBITION of AMERICAN SCULPTURE

Work of The National Sculpture Society on View at the Hispanic Society Group in New York

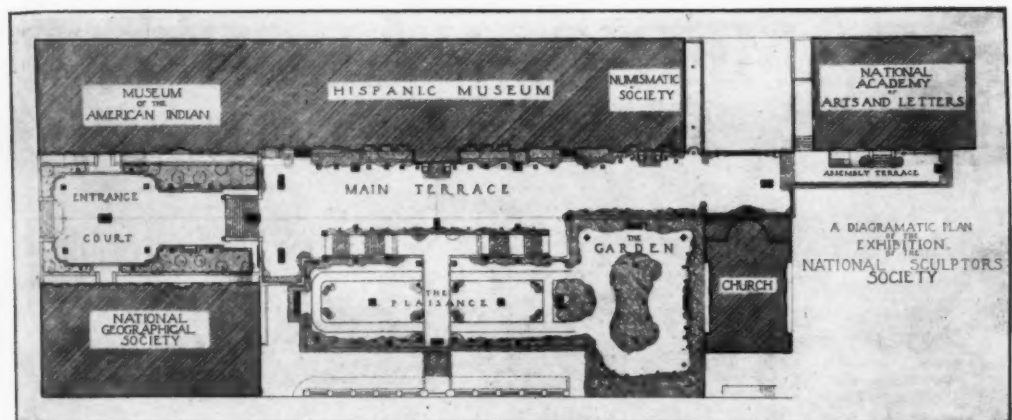
THE growth of the art of sculpture in the United States appears to have been largely influenced by the wars in which this country has engaged. Such sculpture as was done after the colonies had secured their independence was executed by foreign artists who came here knowing that a patriotic people would seek to perpetuate in imperishable material the memory of fallen heroes. At the close of the Civil War, every city, town and hamlet vied each with the other in the erection of memorials. There was really no real art of sculpture in this country then of sufficient dignity properly to supply the demand for these memorials and in consequence a host of

atrocities erected by a patriotic but artistically misguided people was conceived.

The serious phase of sculpture may be said to date from the time of the Spanish War. By serious we mean to convey the idea of a body of artist sculptors of sufficient influence and ability to place our sculpture, as it has always been in Europe, on the highest plane of art. Let it not be supposed that we lacked in the past sculptors of ability, but there was so little appreciation of the art and so few commissions,—for sculptors, like other men, must live,—that the preceding years developed few men.

Beginning about 1825 and coming on, there

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Ground plan showing area of Exhibition

were Greenough, Crawford, Randolph Rogers and Powers. But these men of high artistic ability were confronted by poverty in this country,—there were no commissions to be had,—and so they sailed away to Rome or to Florence. Later three men, through sheer ability forced recognition of the art of sculpture. They were J. Q. A. Ward, Augustus St. Gaudens and Daniel Chester French. French yet lives to dignify in the highest possible

manner his great art. It was the example and work of these three men more perhaps than any other influence that caused other men to take up work as sculptors, and eventually to organize as a body under the name of The National Sculpture Society. It is that society that has placed one of the most important exhibitions of art that has ever been attempted, on view in New York City.

This in- and out-of-doors exhibition numbers



Looking West along the Terrace



West Room in Building of Hispanic Society



Exhibition of the smaller pieces of sculpture, in the Main Gallery of the National Academy of Arts and Letters

EXHIBITION OF THE NATIONAL SCULPTURE SOCIETY

725 exhibits and forms a beauty spot on upper Manhattan Island that will undoubtedly attract many thousands of visitors. The setting is wonderful. The Hispanic Society group of buildings, located on the blocks from 155th to 157th streets, familiar to readers of this journal by reason of thorough illustration, has been generously placed at the use of the Sculpture Society. That society has added to a fine group of buildings and the entourage, examples of the most notable achievement of the sculptor's art during the last decade. Architects will have the finest opportunity to test the decorative value of sculpture to architecture. What has been accomplished in transforming a most dignified, but undoubtedly

up a flight of wide stone steps, the terrace is reached. Extending the entire length of the group, the wide spaces bordered on one side by the building of the Hispanic and Numismatic Society, extending to that of the National Academy of Arts and Letters, on the other by the balustrade from which one may overlook the formal garden. Every available space has its appropriate piece of sculpture. In the beautiful galleries of the Hispanic Society the indoor exhibition is placed.

Not since the day when Dewey returned victorious from Manila, has any display of the art of the sculptor approached this one. Then the arch that spanned Fifth Avenue at Madison Square



The Sunken Garden, enriched by exhibits of Sculpture. View looking toward Terrace

austere group of buildings into a location of surpassing beauty may be here seen.

The forecourt, facing on 156th Street has been transformed into a formal garden luxuriant with Spring flowers and tall transplanted conifers,—a good example of the work of the landscape architect. In this garden there have been placed fine examples of sculpture—such pieces as would properly find a location on a large estate or in a city's parks. The effect is one of great beauty. As the season advances, this garden will grow better and better and it will undoubtedly be one of the most popular points of the exhibition as long as it remains open.

The main entrance on Broadway is a large and very finely arranged court. Through this court,

was the work of this same group of men. Unselfishly then, as unselfishly now, they gave of their art and their time to erect a masterpiece of sculpture for the gratification and education of the public. (There is no admission charge to the present exhibition.) The only permanent result of that significant occasion following the Spanish War, is Stanford White's arch at Washington Square, enriched by sculptured ornament. The beautiful Dewey Arch was demolished. No argument could be presented to the political rulers of the city at that time to secure co-operation with public spirited citizens for the perpetuation of that splendid arch.

There is no attempt in the present exhibition to present a work that might become a civic monu-

ment. What is here is purely educational. And knowing the ignorant and apathetic attitude of civic officials in the past, it is felt that there is need for exactly the education that this exhibition affords.

It seems proper that recognition should be given to the men who form The National Sculpture Society. For the past thirty years this group has done the most valuable work in promoting appreciation of sculpture. These men, like all true artists, have not been self advertisers, have not posed or sought notoriety. And like all true artists they have let their work talk for them. It will therefore come as a complete surprise to the uninformed visitor to note the great accomplishment that has resulted from consistent effort and he will feel a sense of patriotic pride in an exhibition that so conclusively shows that our sculptors compare in the highest degree of artistic ability with those of the artistic world.

Mention should not be omitted of the Catalog of the exhibition. It is a volume of 360 pages, Size 8 x 11. Mechanically, it is one of the most dignified catalogs that has been published and may be classed with the *de luxe* catalogs that are made of important picture collections. This Catalog is profusely and beautifully illustrated.

The text is composed of short biographical sketches of the members of the Society. A veritable "Who's Who" of the art of sculpture. A book very much worth having as it is a record of an unusual accomplishment in the field of American art.

A further work, published as a guide to the better appreciation of the exhibition and of the marvelous strides of the sculptor's art in this country, is *The Spirit of American Sculpture*, by Adeline Adams. This work, specially written for the Sculpture Society is practically a history of the birth and development of sculpture in this country. The literary style is good and the small volume, together with the Catalog, makes a visit to this exhibition one of keen enjoyment and fine education.

The officers of The National Sculpture Society are: Daniel Chester French, Honorary President; Hermon A. MacNeil, President; Joseph Howland Hunt, First Vice President; John Gregory, Second Vice President; I. Wyman Drummond, Treasurer; and Charles L. Hinton, Secretary. The Exhibition Committee is composed of the following members: A. A. Weinman, chairman; and Messrs. Chester Beach, Daniel Chester French, Emil Fuchs, John Gregory, Anna Vaughn Hyatt and W. Frank Purdy.



A memorial at Tarrytown, New York

A. A. Weinman, Sculptor

Henry Bacon, Architect

SHORT TALKS ON LIVE TOPICS

Adolph A. Weinman, of The National Sculpture Society, Talks on the Relation of Sculpture to Architecture

SOME men "bear their blushing honors thick upon them." Take, for example, A. A. Weinman of The National Sculpture Society, and the efficient chairman of the committee in charge of the exhibition illustrated in this issue. During his fruitful lifetime Weinman has accumulated honors that should satisfy the most ambitious. Besides his relationship to the Sculpture Society, he is a National Academician, a member of the National Institute of Arts and Letters and of The Architectural League. He has been awarded medals and honorable mention wherever he has exhibited. The half dollars and dimes we more or less carry with us, were designed by Weinman and the button that every man who engaged in the World War so proudly wears in the lapel of his coat, he also designed.

But it is his work as related to architecture that particularly appealed to us. The decorative sculpture, façade and interior of the Pennsylvania Station were done by Weinman. Much of the fine decorative elements on the Municipal Building he designed. He also did the pediment sculpture for the Wisconsin State Capitol, and, in short, few sculptors in this country have so artistically demonstrated the great and close relation of sculpture to architecture. Weinman simply won't talk about himself or his work. The foregoing facts were gleaned from other sources. But when you ask him his views on the relation of sculpture to architecture, he becomes enthusiastic.

Interviewing an artist in his studio is one thing. Trying to talk to Weinman while he superintends the thousand and one details that he has in hand is another. We caught Weinman on the wing, as it were. We asked, "In what direction do you believe the sculptor can best serve the architect?" "My long and varied experiences," said he, "have convinced me that the very best results in such collaboration can only be reached when architect and sculptor work together from the moment the architect's design has reached the stage where scale, mass, contour and 'color' of the sculptural features must receive their joint and close consideration."

Just here half a dozen men, each with a pressing inquiry "buted in" and we wondered if that was all we would get. But Weinman seemed to have even more than a double track mind, for no sooner was the interruption at an end when he took up the subject exactly where he had dropped it. "Of course, you will understand," said he, "if both make up their mind that they will have a perfectly bully time in working out their problems together, nothing but lack of artistic ability can stop the thing from becoming an artistic success."

Recalling that an English architect, writing in an English architectural paper, bewailed the lack of competent sculptors and stated that if such sculptors as worked on the early French cathedrals existed today, he would never make any drawings of the sculpture required for his buildings, we asked Weinman what he thought about such a statement.

"Evidently," he said, "that man does not consult the right sort of sculptor. By the same token that a first class portrait or landscape painter may be an utter failure as a mural decorator or *vice versa*, so there are sculptors who by temperament or through lack of training are not successful in problems of architectural sculpture. However, I am sure there is no lack of sculptors in *this* country who can solve such problems extremely well.

"It doesn't seem to me," he continued, "that an architect of artistic temperament would expect a sculptor to follow slavishly a ready-made design." We were standing far out on the terrace as these words were spoken, when a voice called, "Telephone, Mr. Weinman." Starting at a run we strung along, wondering if that was all. "Why," he snapped out as he took up the telephone receiver, "such a performance would be nothing more than a modeller's job, utterly devoid of the joy that comes from creative thought and friendly collaboration."

And that was all. No use to try further to discuss art with a man up to his eyes in work and constantly besieged for instructions.

THE ROOSEVELT GROUP, DETROIT, MICH.

A Group of Educational Buildings to Include All Grades and a Stadium

MALCOMSON, HIGGINBOTHAM & PALMER, Architects

DURING the closing months of 1922 the Board of Education of Detroit, Mich., desiring to secure the best obtainable plans for a group of buildings on the important Roosevelt site, selected four firms of architects from a list of ten submitted at its request by the Michigan Society of Architects and the Michigan Chapter of The American Institute of Architects. The architects so selected were Albert Kahn; Smith, Hinchman & Grylls; Donaldson & Meier; and Malcomson, Higginbotham & Palmer.

The group to be erected was to consist, first, of a Teachers' College, High School, Intermediate School and Elementary School and ultimately a Junior College, Community Auditorium, Gymnasium, Stadium and the appropriate accessories.

The general problem was submitted to the firms selected for individual and joint consideration, together with a request for a recommendation of procedure which would produce, in their opinion, the most satisfactory results.

After a period of intensive study a joint recommendation was made to the Board of Education by the associated architects that Malcomson,



Auditorium and Gymnasium, Roosevelt Group

Higginbotham & Palmer be employed, in conjunction with the Department of Education to prepare sketch plans that would show room arrangement and correlation of the first four buildings. The suggestion was further made that on the basis of such sketch plans, the four firms named would prepare competitive sketch elevations and perspective drawings, from the consideration of which the Board could decide as to which of the four



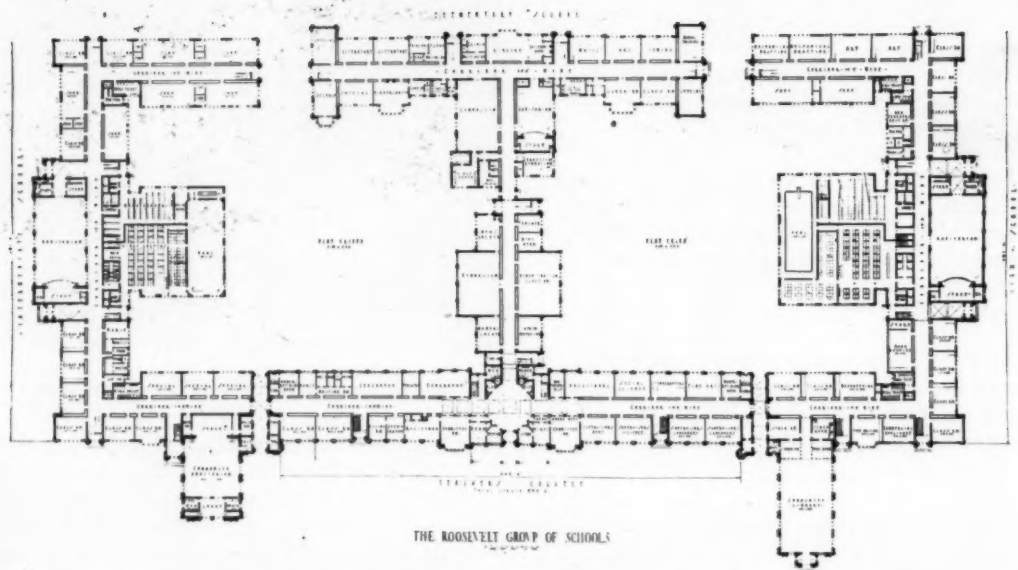
Central Tower, Scheme B



Scheme A



SCHEME A



SCHEME B

THE PROPOSED ROOSEVELT GROUP OF SCHOOLS, DETROIT, MICH.

MALCOMSON, HIGGINBOTHAM & PALMER, ARCHITECTS

firms should receive the commission for the execution of the design. From the designs thus submitted in competition, those of Malcomson, Higginbotham & Palmer were selected.

This, briefly, is the history of a most interesting competition and one that has served to evolve a most satisfactory design and plan for a group of



Part of Scheme B

buildings which, it is estimated, will total in cost between eight and ten millions of dollars.

**Barbour and Hutchins Intermediate Schools,
Detroit, Mich.**

MALCOMSON, HIGGINBOTHAM & PALMER,
ARCHITECTS

THE Levi L. Barbour and Harry B. Hutchins Intermediate School Buildings are similar in plan, type and construction, with a capacity of 1800 and 1500 respectively. The plan of the Hutchins is so arranged that an additional 300 capacity may be added when needed.

Each of these buildings houses the seventh, eighth and ninth grades, so planned to accommodate a specific number of pupils, according to program of studies determined by the Department of Building Research of the Board of Education of the City of Detroit.

Health education being a vital part in this program, two gymnasiums are provided, each having its own locker, shower and plunge rooms. The girls' locker rooms are provided with small dressing rooms. Individual showers are arranged for the girls, while the boys' shower consists of a shower sprayed runway, the water heated at the

beginning of same to a temperature of 95 degrees and graduated in temperature along the runway until at the end they receive a cold shower and are ready for the plunge. There is no entrance from the boys' locker room to plunge except through shower, thereby forcing every boy to take a shower before using plunge, and thus helping to keep the plunge in a sanitary condition.

A tube-like device standing about three (3'-0") feet from the floor, through which heated air is forced, is placed in the girls' locker room for drying the hair.

This Health Unit is so planned that the remaining part of the building may be shut off and this unit used for community work. In this connection spacious club rooms are provided, one for women and one for men. Locker rooms for women and men are also provided in this unit. The Auditorium and Library holding 750 and 250 respectively, are also placed in this central unit, which allows same to be used for community work.

The attic on the fourth floor is fitted up for Boy Scout Work.

A suite of rooms is placed on the first floor for use of Physicians and Nurses provided by the Detroit Board of Health.

Every effort has been put forth to assist the student to find his or her place in future activities in life. This is accomplished by shops and rooms well provided with necessary equipment for various trades and sciences.

The academic or non-specialized classrooms are 22 x 26, accommodating 35 pupils. A teachers' closet and a large cupboard are recessed in the walls and all available space is used for blackboards and corkboards. The corkboard is used for displaying the pupils' work. Individual metal lockers are recessed in the corridor walls, for holding the pupils' wraps and books. Composition floors are used in locker rooms; linoleum with terrazzo border for corridors, and wood floors in gymnasium and classrooms.

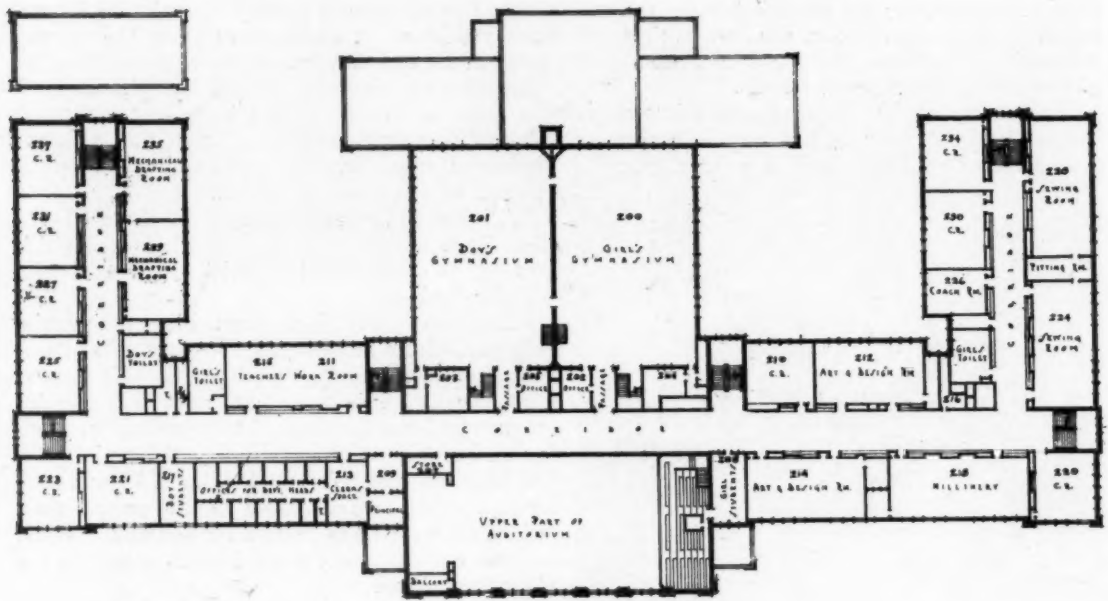
The cafeteria, placed upon the third floor, has a capacity of 325 at a seating, with a separate dining room for teachers.

The exterior of the two buildings is alike in design but different colored brick is used, thereby giving a variation in appearance.

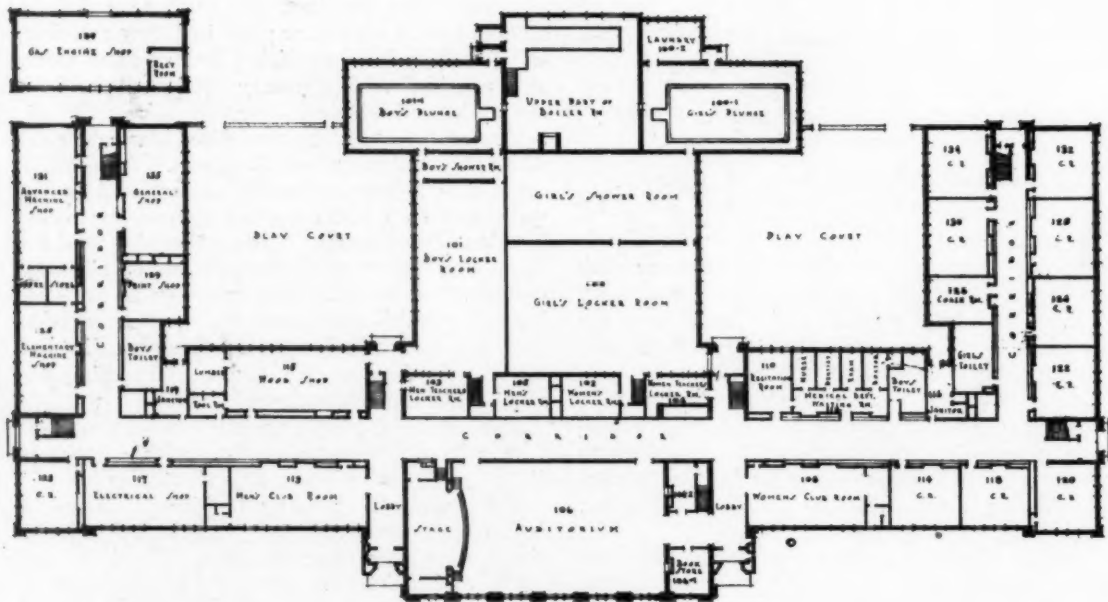
The roof is slate, varying in thickness and color.

Covered play courts are provided in the rear of buildings, which allow outdoor play during rainy weather.

The contracts for these buildings were let in 1921 at a cost of 37c and 39c per cubic foot.



SECOND FLOOR PLAN



FIRST FLOOR PLAN

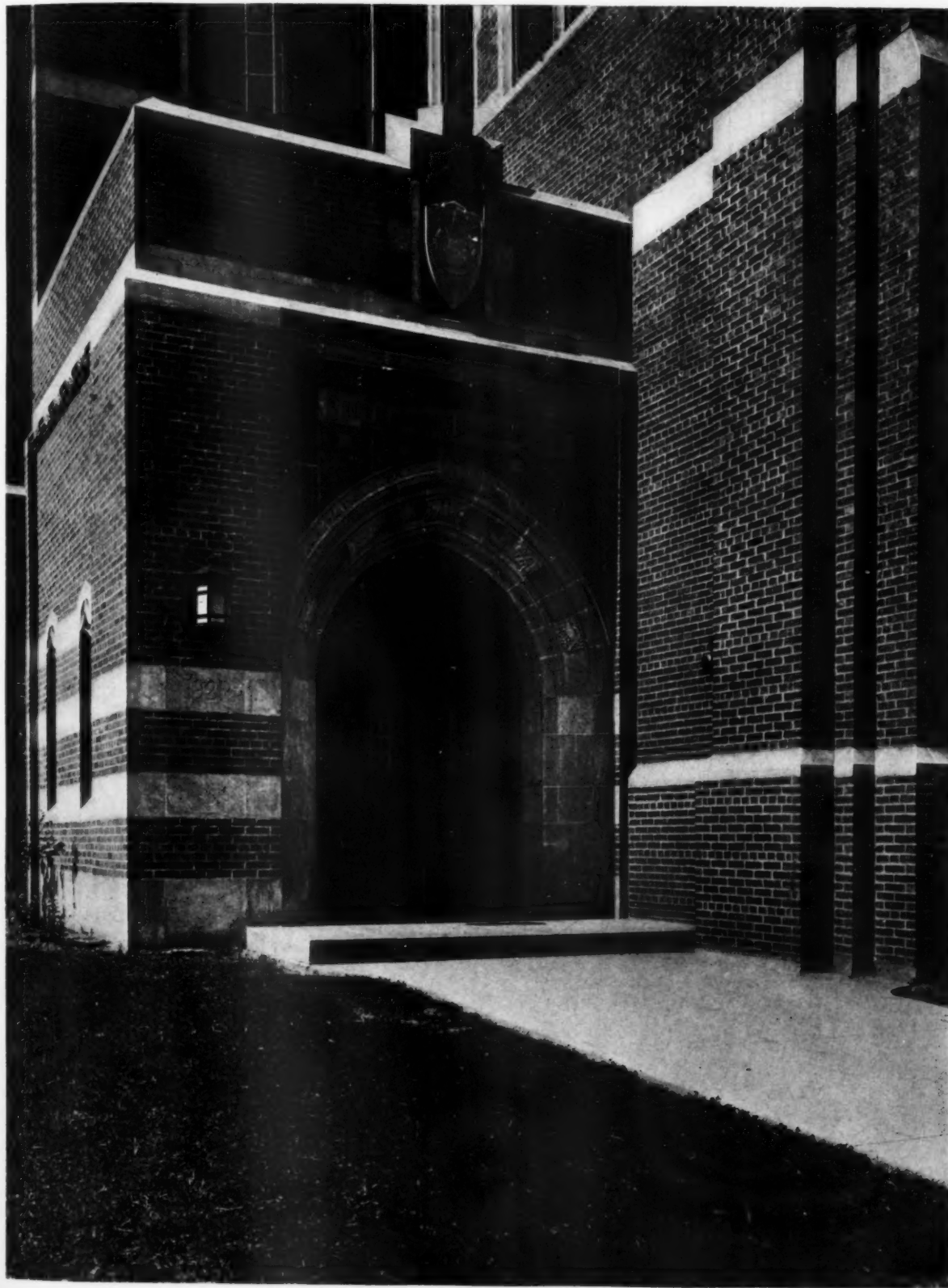
BARBOUR INTERMEDIATE SCHOOL, DETROIT, MICH.

MALCOMSON, HIGGINBOTHAM & PALMER, ARCHITECTS

THE AMERICAN ARCHITECT—THE ARCHITECTURAL REVIEW



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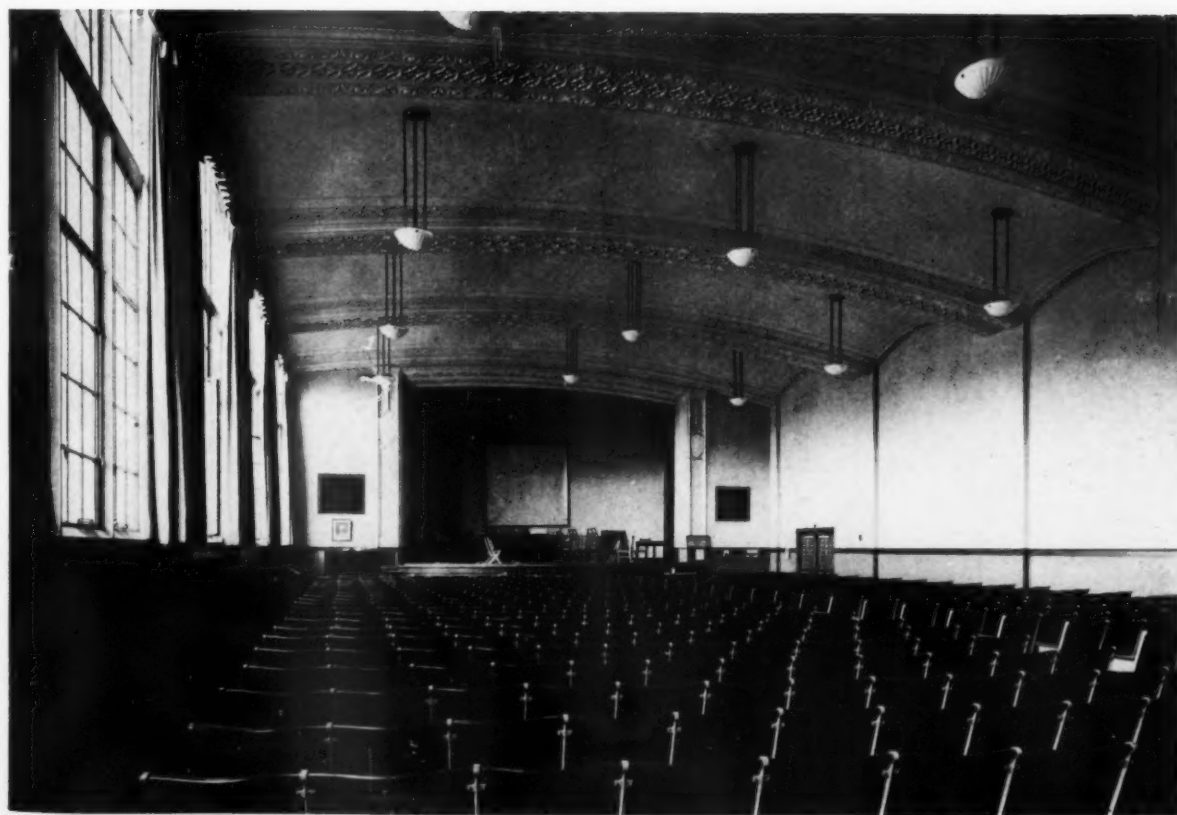


BARBOUR INTERMEDIATE SCHOOL, DETROIT, MICH.

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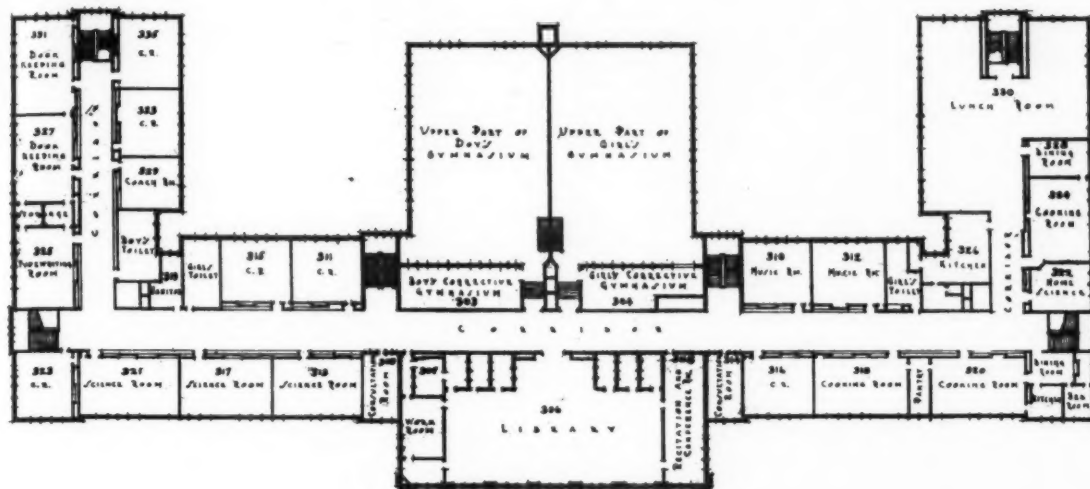
LIBRARY



AUDITORIUM

BARBOUR INTERMEDIATE SCHOOL, DETROIT, MICH.

MALCOMSON, HIGGINBOTHAM & PALMER, ARCHITECTS



THIRD FLOOR PLAN



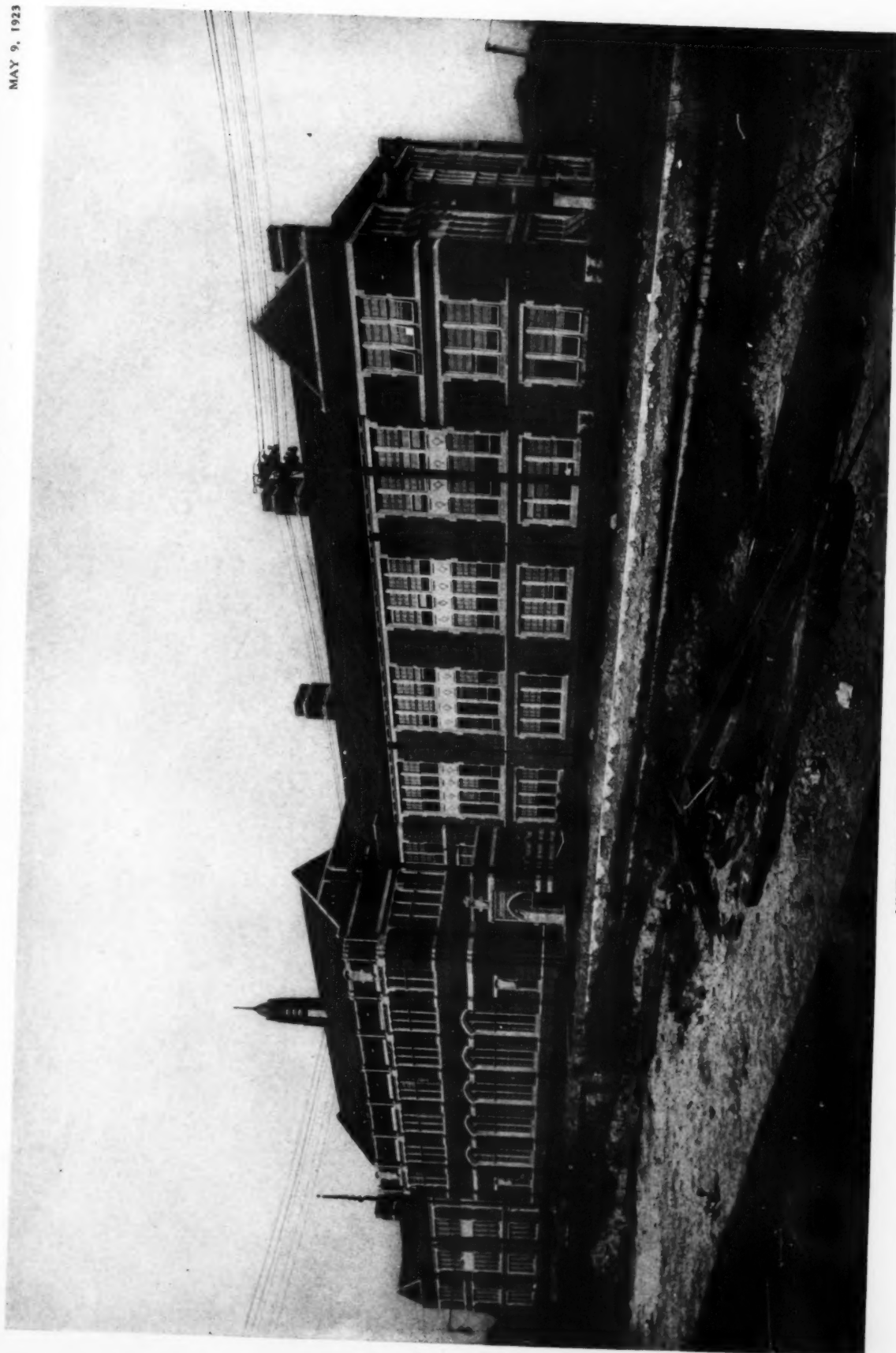
SWIMMING POOL

BARBOUR INTERMEDIATE SCHOOL, DETROIT, MICH.

MALCOMSON, HIGGINBOTHAM & PALMER, ARCHITECTS

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MAY 9, 1923



HUTCHINS INTERMEDIATE SCHOOL, DETROIT, MICH.
MALCOMSON, HIGGINBOTHAM & PALMER, ARCHITECTS

1923
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STAGE SETS—PART II

BY ROI L. MORIN

THE great stumbling block to the foes of realism is the Russian theatre. The Russians are the *tour de force* of the realistic theatre, and this almost entirely through their use of riotous colors, and the splendid acting of the Moscow Art Theatre. What could be more eloquent to Western eyes than the mad colors of the Slavs? The Germans have no sense of color so they seek to express the new movement in the theatre through form. To men like Leon Bakst, Nicolas Roerich and Boris Anisfield, color is both means and effect. Lines are forgotten, and their creations leave us speechless. The theatrical world in Paris, London and New York will not soon forget the triumphal march of the Russian Ballet some few years ago, with Bakst's settings and Nijinsky's dancing. During the past Winter an exhibition of Bakst paintings at the Knoedler galleries in New York was attended with as much ceremony in the social and artistic world as the arrival of the English crown prince. Bakst's voluptuous scenes and costumes for



Fig. 1. The mob scene, "Oedipus Rex"

Set by Reinhardt

An example of Reinhardt's masterly direction of mobs, in his Grosses Schauspielhaus in Berlin. In this huge auditorium, (which is equipped with a forestage thrust far out into the seats) he sometimes had as many as a thousand actors seated in the audience, only to spring up and go forward at the psychological moment

"Scheherazade," "La belle au bois dormant" and "L'après midi du faune," are things to marvel at rather than to attempt to explain or imitate. It is the passionate Orient imported to the temperate West, the Arabian Nights Tales on Broadway.

Coupled with this extraordinary color sense the Russians have gained world-wide renown through the most illustrious and finished repertory theatre of this century, the Moscow Art Theatre company,



Fig. 2. Throne scene, "Richard III"

Set by Robert Edmond Jones

With this rich though simple throne, with the royal escutcheon mounted above and the dark curtains in the background, Jones designed an appropriate "atmosphere" for the sinister Richard. This production marked the high water of our American scenic investiture

recently seen in New York,—an institution which is, for all its occasional digressions, founded upon the very essence of realism, realism of setting, realism of acting. For twenty-five years this company has been playing the same repertory until every movement, every utterance, every detail of scenery and background have been thought out to represent life as carefully as man's ingenuity can master. All this throws the expressionists into confusion. If this represents what realism can accomplish what more can be asked? This is not acting but life itself!

But it is a far cry from the realism of the Moscow Art Theatre to the realism of Belasco. The former produces its superb results in spite of realism, rather than because of it. In the theatre of Stanislawski realism is merely an appurtenance, but in the Belasco school it is so much dead weight. It enslaves its exponents and exhausts



**Fig. 3. Model of set for the
"Divine Comedy"**

Designed by Norman Bel-Geddes

This unique conception proposed to take over the entire Madison Square Garden auditorium, to stage an elaborate dramatization of Dante's immortal poem. The drama is to be played literally up and down stairs,—the nethermost pit being the depths of the Inferno

their energies and resources in its production. Some of the exhibits produced by the realists are so submerged in mechanical devices to make the scene appear "real" and "ingenious," that they represent not so much the art of the theatre as it was known during the days of the Elizabethan and Greek drama, as the "Power" show.

Lee Simonson, the scenic artist of the New York Theatre Guild shows us a proper and restrained use of mechanics in his production of "From Morn To Midnight." The scene represented a bleak field buried with snow. The single drop shows a naked tree rising out of the snow and reared against a clear blue sky. A fugitive from justice stands before the tree philosophizing on the untoward events that have befallen him during the past few hours, and asking what the future



**Fig. 5. Model for Dunsinane Castle
Sleep-walking scene, "Macbeth"**

Designed by Robert Edmond Jones

The most exotic work of the Expressionists that the American stage has seen. The play was actually staged as shown in this model, and brought down upon the artist and producer cries of blame and words of praise from the public and the dramatic critics

holds for him. A storm arises, the wind howls, the snow whirls and the tree changes into the ominous form of a skeleton rearing menacingly above the unfortunate. The storm abates and the tree takes its natural shape again. It was an hallucination! The effect was brought about by the use of a stereopticon thrown upon the drop from behind. During the flurry the slide of a skeleton was substituted for that of a tree. Simple and effective.

In the recent production of "Hamlet," Robert Edmond Jones uses symbols to reveal to the observer the inner significance of the drama. The vision that stands out clearly throughout the play, above all the obscurity of Hamlet's madness, is the spirit of the dead king, his father, crying out for revenge. Jones uses this very effectively by



Fig. 4. A Colonial drawing room in Boston, "The Rise of Silas Lapham"

Designed by Lee Simonson

An elegant setting with costumes true to the period

painting a number of wraithlike forms of kings of abnormal size on curtains.

All this "unreality" is regarded as "new" and "faddish" in some quarters, but simply because of an association of ideas. People's eyes are accustomed to the realism which distinguishes the stage of the 19th century, and it will be difficult for the expressionists to make great headway in winning them over. The great ages in the theatre were non-realistic. Actors playing Shakespearean roles from Elizabethan days up to the 19th century made no attempt to dress or appear like the characters they were supposed to represent. We must be weaned away from pictorial representation on the stage. Realism is a cramp upon art. Expressionism is not a "craze," it is simply the name



Fig. 6. Detail, closet scene from "Hamlet"

Design by Robert Edmond Jones

The costumes, furniture, etc., are all worked out in detail by the artist. Odd pieces of furniture which he has designed for such plays as "The Jest," "Richard III," "Hamlet," "Macbeth," "Swords" and "The Idle Inn" are not only very beautiful but almost entirely original. This particular piece in "Hamlet" was only one of several from the same motif, the grotesque carved arm, signifying the semi-barbarism of the court of Denmark. The piece was hand hewn, so-called "antiqued," rubbed to an ashen gray and streaked with gold.

of a new technique.

An architect has wood, stone and brick of infinite variety at his disposal and he arranges, models and composes these various materials, according to his learning, traditions and originality into a substantial reality of considerable durability, but not so with the stage artist. Wood and canvas must be made to represent stone. Shadows are often manufactured from a pot of paint, and colors unknown in the world of reality are brought into play. It is as ridiculous to quarrel with the expressionists for departing so radically from the traditions of the realistic school as it would be to censure Whistler for not adopting the scholarly and stereotyped manner of Sir Frederick Leighton.

A beam of morning light streaming through

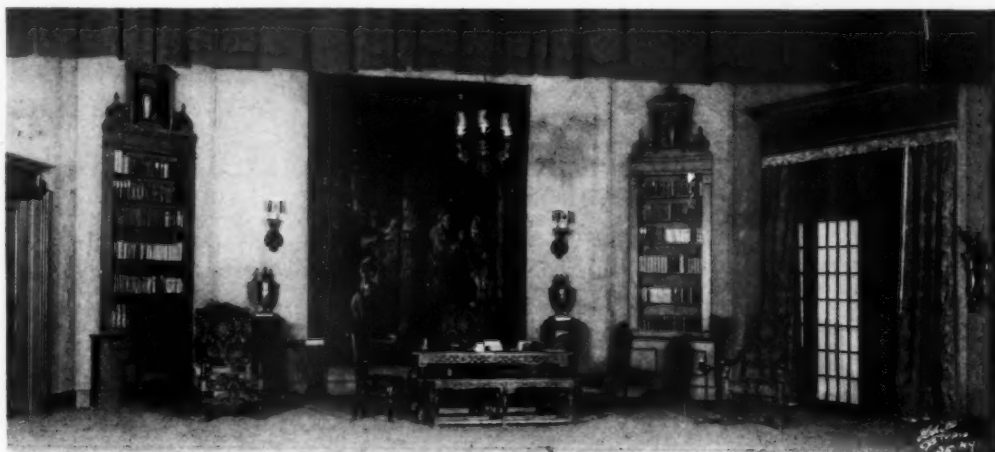


Fig. 7. A room, "The Fool"

Set by Clifford Pember

A conventional realistic setting, showing excellent restraint. The tapestry on the back wall, with its religious scene, is in keeping with the theme of the play. The completed set did not do justice to the artist's water colored drawing, which was shown in the recent exhibition of the Architectural League of New York.



Fig. 8. Valhalla, "Das Rheingold"

Set by Linnebach and Pasetti, Munich National Theatre

Drawing by Robert Edmond Jones

Painted on the huge skydome with an ethereal quality and dimly lit, it gives the setting an awesome touch. The foreground, where the actors are, is kept quite dark, whereas the distant painting is lighted from numerous concealed "spots." The gods' castle is very impressive

an oriel window is far more important to obtain a certain effect than a gracefully profiled cornice. Attention properly focused on some object symbolical of the play is more effective than a room panelled to scale. The stage is a world of trickery and make-believe. Absolute realism is not only impossible but positively detrimental.

Kenneth Macgowan, in his excellent handbook of modern stage design, "Continental Stagecraft," sums up the argument by saying that the keynote of the new work is simplification, suggestion and synthesis. All great art, whether painting, sculpture, architecture or music, is based on simplification. Simplification of effect and simplification of means. That is why the *baroque* school is held in such disrepute today.

And so the battle rages on. All this is keenly alive and holds an unutterable fascination for the architectural designers, for every year we find more of them associated with the theatre.

(The End)



Fig. 9. Hall in an Italian Renaissance villa, "Swords"

Design by Robert Edmond Jones

A setting of rich mottled color which is lost in a black and white print. The sort of beauty in which Mr. Jones excels. The background was a blend of blue and ashes, with deep rich notes of red, brown and vermillion

EDITORIAL COMMENT

VENTILATION, as practiced today, has become standardized. We go to the new building with our anemometers, thermometers and hygrometers, set the thermostats, adjust the intake and distribution dampers and deliver a stipulated volume of air of a certain temperature and humidity per minute per person. Fine! In all these years we have forgotten to take along the biologist and physician with their apparatus to study the effect on the occupant. In fact, the occupant has been forgotten as he was merely an assumption.

To the generosity of the Millbank Memorial Fund we owe the most complete study of ventilation ever made. A competent commission was appointed by former Governor Sulzer, in 1913, to investigate the subject. A complete report with conclusions has just been issued. This report is reviewed in this issue of *THE AMERICAN ARCHITECT*. A condensed statement of the various facts established and the conclusions of the commission will soon be printed in this journal.

* * *

IF WE ARE NOT WATCHFUL, we shall have London, in spite of its smoke laden atmosphere, introducing into its new buildings more vivid and more varied color than we do in this country.

There is, we learn from the English architectural press, due to the increased use of smokeless fuel, the substitution of gas and electricity for domestic heating and cooking, a strong probability that in the future serious inroads will be made on London's pall of smoke. This fact being practically assured, architects are urged to introduce glazed materials in colors into the façades of their buildings. This recommendation is based, to quote a correspondent to a London journal, on the fact that these glazed surfaces are cheaply and easily cleaned while textured material can only be restored to its original condition by long, laborious and costly methods.

A recent visit to Brazil has been most informing in its opportunity to study the effect of color on stuccoed surfaces. In a climate of torrential rains and excessive heat, the stuccoed walls of houses and fences show most attractive color effects. The eye is always greeted by some new combinations. And these are not studied effects, but on the contrary, due to the use of color in the freest way and with little regard to any true sense of color harmonies. But the blistering heat and the driving rains mellow and blend until an effect is produced that delights the eye of an artist.

Why not more color in our architecture? Much has been done, but only a small fraction of what could be accomplished.

* * *

IT IS GRATIFYING to a publisher to receive inquiries and requests for information from subscribers. Such things indicate a reputation for reliability and the ability to serve. The range of inquiries received by *THE AMERICAN ARCHITECT* is broad and a few that have reached this office recently are here outlined.

A prospective Florida hotel builder asks for a schedule of kitchen equipment required for a 40 to 50 room hotel; a New Jersey architect asks for details of certain equipment used in large bake ovens; a Nebraska architect wishes to be informed as to the best methods of constructing a ball room floor in a hotel; an Indiana architect asks how properly to install and waterproof a maple floor in a basement gymnasium; another architect in Wisconsin asks for data and details pertaining to soundproof double windows and partitions—and so it goes. The desired information has been given and *THE AMERICAN ARCHITECT* regrets that lack of space prevents printing it. It does however, express its appreciation of these inquiries and its opportunity to serve.

* * *

ANNOUNCEMENT IS MADE in the news columns of this issue of the establishment of a European scholarship in architecture at the University of Michigan. The generous donor of this scholarship is Mr. George G. Booth, a public spirited citizen of Detroit, whose active and practical patronage in matters relating to the Fine Arts has promoted a very decided interest in the direction of good art.

The Architectural School at the University of Michigan has for a long period been held in high respect by members of the architectural profession. In spite of the handicap it has suffered as a part of the Engineering School, its faculty has succeeded in providing a curricula that has enabled it to prepare its students thoroughly to take their places in active practice. The individuality of this Architectural School is fully as good as that of any university in the country and any efforts to promote and increase such individuality should be encouraged. It is good to note in the announcement of this European scholarship that a man so well qualified to judge as is Mr. Booth, should be willing to contribute

generously to the usefulness of an institution in which he evidently has large faith. His action should stimulate those who have closer contact with this school to a better appreciation of its real value as an architectural educational institution. The separate identity of the School of Architecture—a development that cannot in the best interests of the university be much longer delayed—would automatically attract a registration that would place it in an enviable position.

* * *

A FIVE STORY APARTMENT house at Lynn, Mass., was recently destroyed by fire. The building comprised forty-nine suites, sheltering one hundred and forty-eight persons, five of whom lost their lives. It is reported that the building was of the flimsiest wooden construction, with a four inch brick veneer. While probably complying with the building code of Lynn, the responsibility of owners may not in this and similar instances be entirely evaded. To the most non-technical observer, buildings of this type are death traps. If such construction may be considered legal, it seems necessary that the lives of occupants should be safeguarded by the imperative requirement of such accessories as are necessary to the protection of human life.

Just why buildings of this type should not be equipped with fire protection that is now a part of every commercial building is difficult to understand. The automatic sprinkler has outgrown the experimental stage. The records of fire departments all over the country show that sprinklers have extinguished many fires at their inception or kept them under such control as to make them readily extinguishable on arrival of the fire department.

Apartment houses of every type should have this protection. Basements, stairways, elevator and dumb-waiter shafts especially should be safeguarded by sprinkler systems. In a house of the type of construction such as was destroyed at Lynn, inside fire towers with fireproof walls afford some measure of protection. Fire escapes on the outside of such buildings are also of some use and they do afford vantage points from which firemen may work.

Inconsistencies of building codes have been many times referred to in these columns. Flimsy construction, authorized by codes to meet local conditions, has no excuse for existence unless accompanied by known means that have proven themselves effective in the extinguishment of incipient fires.

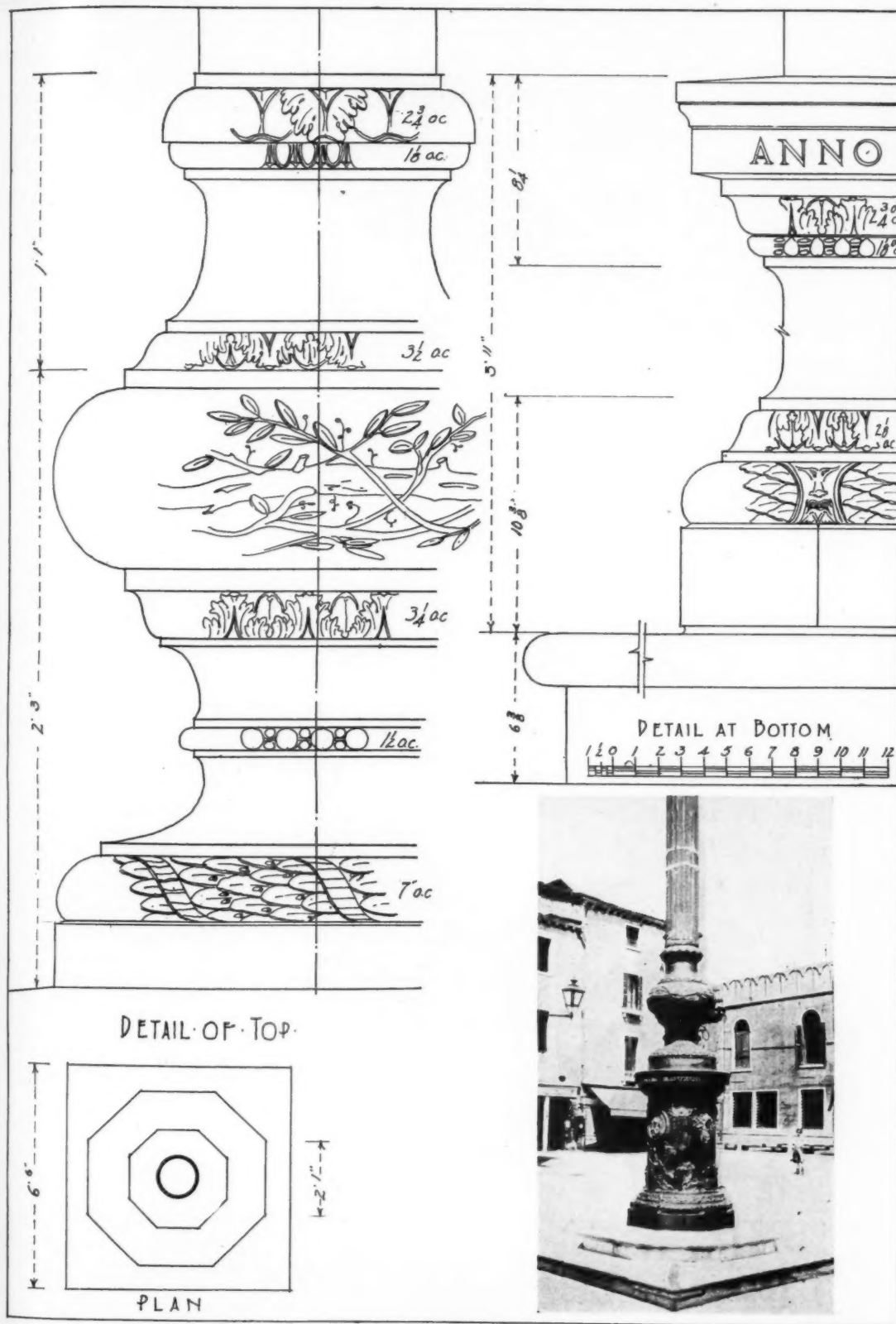
It is not pleasing to note the apparent indifference of the people of the United States as to our enormous fire loss, nor to find that this indifference extends to the loss of human life as well. During the past six months there have been many fatal fires in apartment houses. These fires were mainly in old type houses. It seems to be the duty of municipalities to enact such regulations as will better safeguard tenants of these old structures. Sprinklers, properly installed, would, it is believed, provide a large factor of safety.

* * *

A N OUTSTANDING accomplishment by The American Institute of Architects is the Lincoln Highway. At a time when that important highway was being considered and when political interests were doing everything possible to divert public attention, the Institute threw the weight of its influence into the controversy and the Lincoln Highway became an assured fact.

The largest through-connecting and best known road in the world, it is the most travelled road and the greatest of all memorial highways. It has become, in spite of the statements made in Congress when this highway was under consideration, the backbone, the main line of an American highway transportation system now gradually developed under the direction of the Federal government.

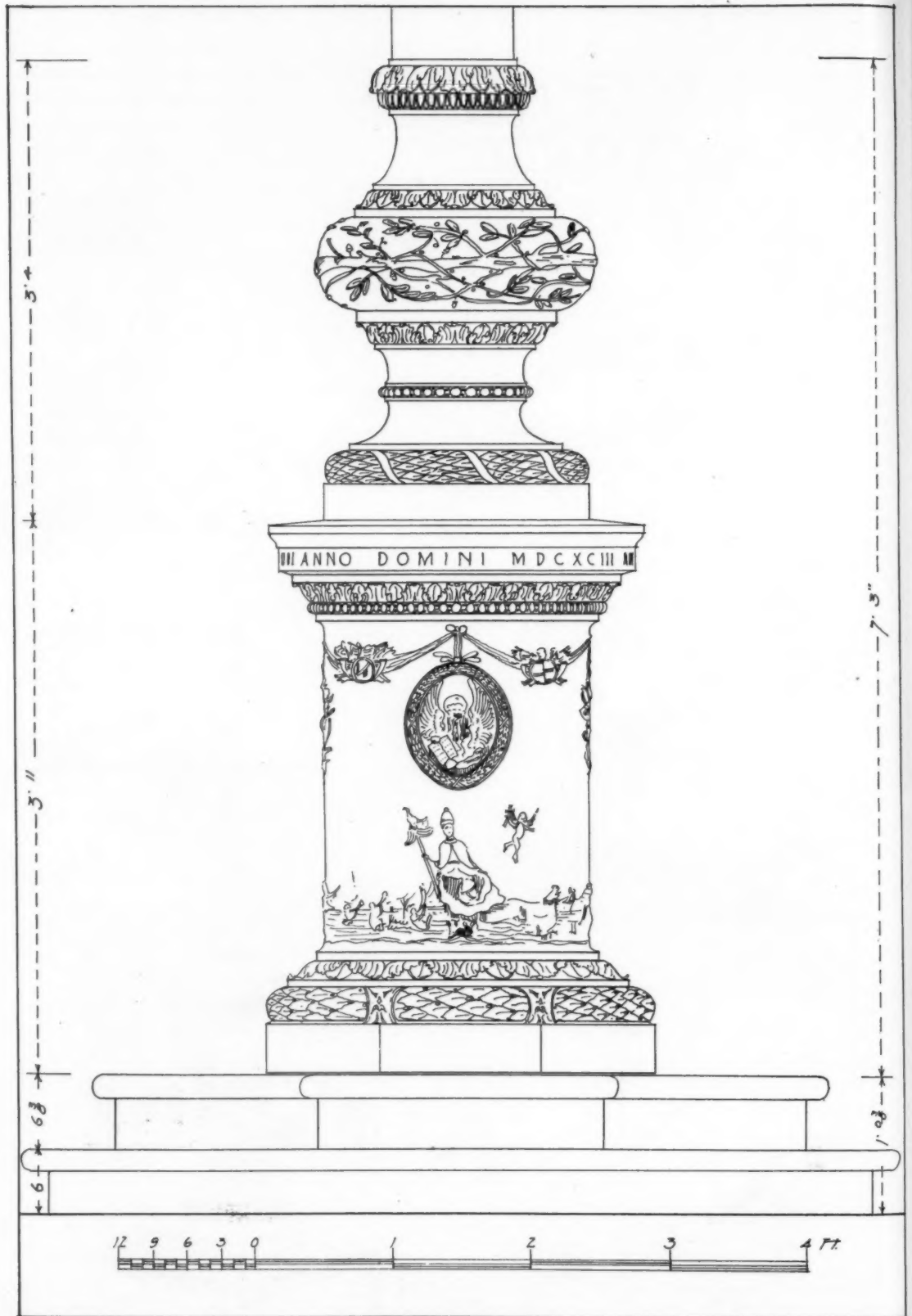
Since the beginning of this highway in 1913, the progress of the work has been uninterrupted. Due to the co-operation of the Institute and its keen supervision of the architectural treatment, the Lincoln Highway throughout its extent from coast to coast is perhaps the best protected of any thoroughfare in this country. Every detail requiring architectural supervision has received it and for that reason the many eyesores that are on other roads everywhere else apparent are to a great extent eliminated. As a constructive work, this record of achievement is something worth while.



· FLAG · POLE · IN · FRONT · OF · THE · ARSENAL · VENICE · ITALY ·

MEASURED AND DRAWN BY ROBERT M. BLACKALL, 35TH HOLDER, ROTCH TRAVELLING SCHOLARSHIP

THE AMERICAN ARCHITECT, SERIES II.
FRENCH AND ITALIAN DETAILS



· FLAG · POLE · IN · FRONT · OF · ARSENAL · VENICE · ITALY ·
 MEASURED AND DRAWN BY ROBERT M. BLACKALL, 35TH HOLDER, ROTCH TRAVELLING SCHOLARSHIP

THE AMERICAN ARCHITECT, SERIES II.
 FRENCH AND ITALIAN DETAILS

A CITY HOUSE REMODELED *and* its BACKYARD TRANSFORMED

BY A. WALLACE McCREA, Architect

THIS house, before remodeling, was identical with the houses on either side. It was extended nine feet at the rear and four in front. The size of lot is 17 x 102 feet and the house is 17 x 59 feet.

The house does not present the "low down" appearance so common in remodeled houses of the brownstone, high stoop type. The effect as secured was accomplished by raising the first tier of beams 10" and by making the first floor over the vestibule of 3" plank with finished oak floor on top and plastering underneath on wire lath, giving in all a thickness of about 6". Apparently the second floor windows reach to the floor. As a matter of fact, the floor is 2'-4" below the sills.

The concrete balcony at the level of the second floor (see view of rear) is not only a reinforced concrete balcony, but is also a reinforced concrete girder and carries the center pier of brickwork above.

The interiors of this house have been designed and executed by and under the direction of the architect. All of the furnishings were purchased with a view to their use in each particular room. The mantel in the Tudor dining room is executed in Caen stone and plaster, the ornaments worked out in English 17th century color work. The woodwork in this room has been stained in variations and brought to a weathered oak finish. The windows are of leaded glass and hung with tapestry and red Venetian Damask. The chairs are of Charles II period. The ceiling has a pebble finish, painted and glazed to a light ivory tone mottled.

The drawing room is carried out in the Georgian style and the arrangement and contour of wall mouldings give it the appearance of a room panelled in wood. The ceiling is painted and glazed out to an antique gray green with two lines of gold leaf forming a center panel. Walls are the same color as ceiling only six shades deeper with highlights of mouldings in gold leaf antiqued; the

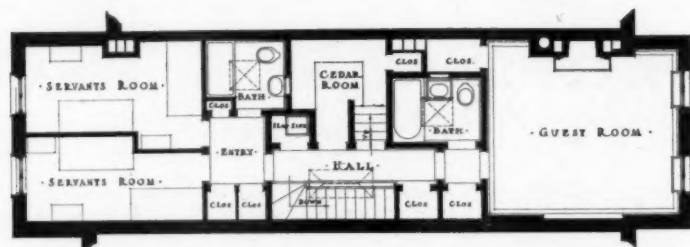
woodwork same as walls. The furniture in this room comprises mainly a suite of Louis XV chairs and sofa with Mortlay tapestry and walnut frames. The mantel has been designed for the picture above it.

The painting throughout the house has been carried out to a degree unusual in a house of its size. In halls, the walls and ceilings have a varied pebble texture, painted and glazed to a warm brown tone, mottled with three true colors blended in at random under the supervision of the architect. All highlights on trim and door panels carry a dark green line. Entire woodwork in halls is finished in an antique gray washed glaze. Base and hand rail is made ebony with highlights of gold leaf.

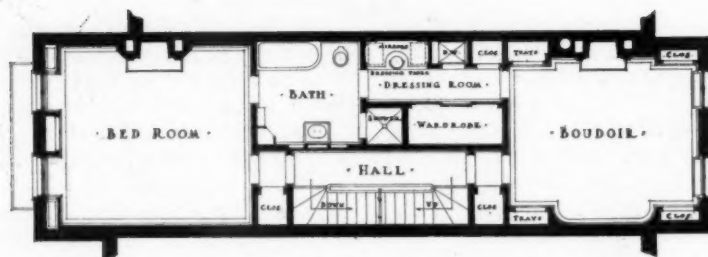
In bed room, boudoir, dressing room, etc., on second floor the ceiling, walls and woodwork are painted and finished in a pale blue spot glaze with lines of gold leaf forming center panels in ceiling, and on all highlights of wall moulding, doors and trim. In main bed room the chairs indicated are of Louis XV with Petit and Gros point needle work. The mantel has gray Sienna marble facings and hearth. The ornament in consoles, frieze and overmantel is worked out in color.

The garden is planted with cedars, English Ivy, arborvitae, hemlocks, pachysandia, juniper and lilies of the valley. The walk is of irregular broken bluestone. The fountain is built of red brick with cast cement bowl and surmounting bronze figure. A feature of this fountain is the bird rest which serves also to support the figure of bronze. The spray is controlled by valve at fountain and drain leads underground to drain placed in an area under dining room window. The brick wall of garden gives a sense of privacy enhanced by the pergola at rear. The pergola has niches at each end plastered in cement and bronze half lanterns with lights under control of switch located in dining room. The pergola is painted in French gray green.

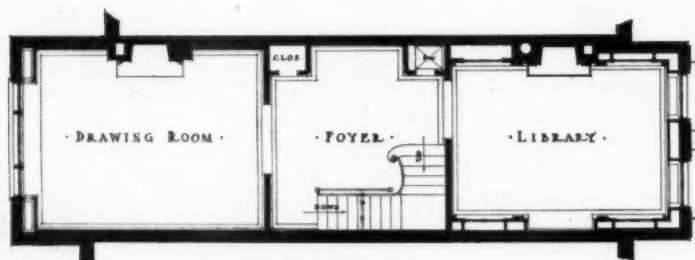
For plans and illustrations see following pages



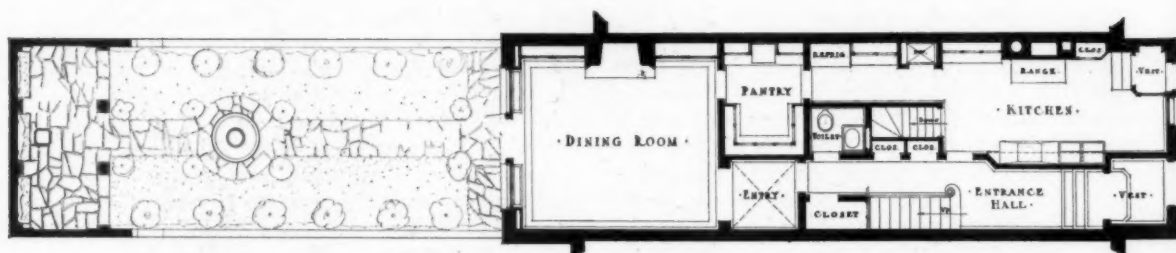
· THIRD FLOOR PLAN ·



· SECOND FLOOR PLAN ·



· FIRST FLOOR PLAN ·



· BASEMENT PLAN ·

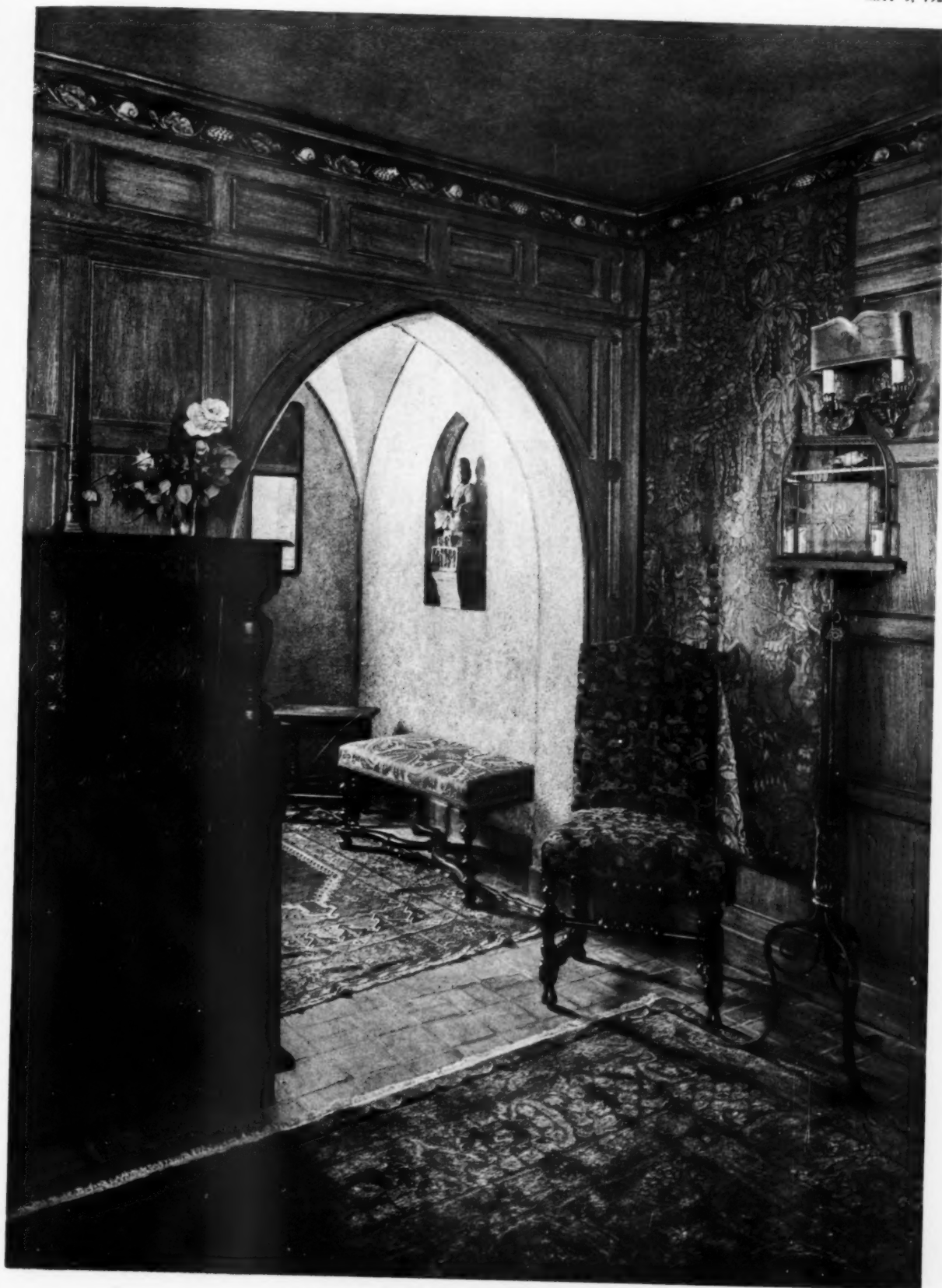
A HOUSE ON EAST 74th STREET, NEW YORK

A. WALLACE McCREA, ARCHITECT



A HOUSE ON EAST 74th STREET, NEW YORK

A. WALLACE MCCRACKEN, ARCHITECT



A HOUSE ON EAST 74th STREET, NEW YORK

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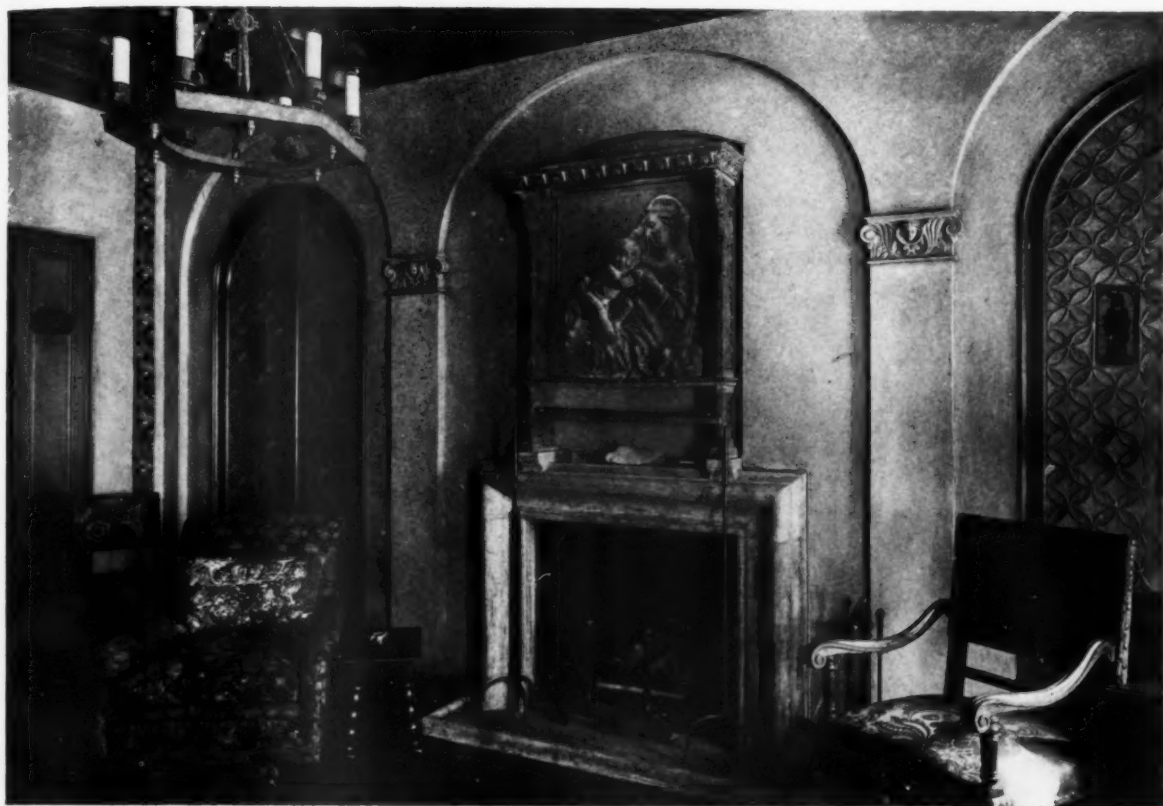
A HOUSE ON EAST 74th STREET, NEW YORK

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A HOUSE ON EAST 74th STREET, NEW YORK
A. WALLACE MCCREA, ARCHITECT

MAY 24 1923
EDISON CO.



A HOUSE ON EAST 74th STREET, NEW YORK

A. WALLACE McCREA, ARCHITECT



VIEW IN BACKYARD, LOOKING TOWARD HOUSE
A HOUSE ON EAST 74th STREET, NEW YORK
A. WALLACE McCREA, ARCHITECT



DETAIL IN BACKYARD

A HOUSE ON EAST 74th STREET, NEW YORK

A. WALLACE McCREA, ARCHITECT

FORTY YEARS AGO

Excerpts from THE AMERICAN ARCHITECT, May 5-12, 1883

WE owe an apology to two of our contemporaries for having allowed some weeks to lapse before saying what we might to welcome them to the field of technical literature. *The Builder*, published monthly by Clark W. Bryan & Co., at Holyoke, Mass., and edited by Mr. E. C. Gardner of Springfield. * * The other (purchased by and incorporated with THE AMERICAN ARCHITECT in 1908), published monthly in Chicago and containing primarily such information in regard to local building matters as may be most acceptable to the profession in that busy place.

* * *

The Supervising Architect of the Treasury is charged with being guilty of cancelling the system of percentage on contracts for granite cutting and substituting therefor specific contracts at fraudulent prices. The Supervising Architect found that the government was charged for time not spent on government work and for a scale of wages not paid. "If the cancelling of such contracts as this is an error in a public officer, it is to be wished that we might have some more criminals of the same kind in stations of responsibility."

* * *

The City Council of Milwaukee, Wis., has appropriated a sum of money for procuring model schoolhouse plans for buildings of four, eight and fourteen rooms, which are, after careful selection, to be adopted as standards, according to which all future schoolhouses in the city are to be built. * * Our poorly planned schools are partly due to the feeble hold which architecture, as a science, has yet secured upon our every day life and partly to the peculiar methods of carrying out public works.

* * *

According to *La Semaine des Constructeurs*, a mirror attached to the wood furring of a building

constitutes a part of the structure. A part of a scheme of decoration belongs to the building even if placed on the plastering. In the case in question, four of the mirrors were placed on the plastering and the wall paper stopped at the frame of the mirrors instead of passing behind them, showing that they were not intended as movable ornaments. The point was covered by the *Code Civil*.

* * *

The excavations for the foundations of Bartholdi's statue of Liberty have been begun on Bedloe's Island. Drawings of the statue and its supports have been received from France and Mr. Richard M. Hunt has been entrusted with the task of designing the pedestal.

* * *

Mention is made of the habit of speculative apartment house builders in running the soil pipes into the basement with no drain connections.

* * *

The narrowest house in New York is at the Northeast corner of Lexington Avenue and Eighty-second Street. The lot, 5 x 100 feet, is a portion

left when Lexington Avenue was cut through some years ago. The law permits a building on a street corner to have bay windows on the side. The entrance to the two houses is in the center. Each house has two bay windows in one of which are the stairs and in the other one a room about 8' wide and 15' long upon each floor. There are also ingeniously placed closets at each end of the building and under the stairs.

* * *

Illustrations: Cotton Exchange, New Orleans. H. Wolters, architect, Louisville, Ky.; Jacob Sleeper Hall, Boston University, Boston. W. G. Preston, architect, Boston; Emmanuel Church, Shelburne Falls, Mass. Van Brunt & Howe, architects, Boston.



House by Chas. Crapsey, Architect, Reproduced from the full page illustration in THE AMERICAN ARCHITECT issue of June 9, 1883

BEAUX-ARTS INSTITUTE of DESIGN

ACTING DIRECTOR OF THE INSTITUTE—WHITNEY WARREN
 ARCHITECTURE, RAYMOND M. HOOD, DIRECTOR—SCULPTURE, JOHN GREGORY, DIRECTOR
 INTERIOR DECORATION—ERNEST F. TYLER, DIRECTOR
 MURAL PAINTING—ERNEST C. PEIXOTTO, DIRECTOR

JUDGMENT OF MARCH 13TH, 1923
 SECOND PRELIMINARY COMPETITION FOR THE
 16th PARIS PRIZE
 SOCIETY OF BEAUX-ARTS ARCHITECTS
 "A SUMMER HOTEL"

A private corporation owns a tract of 800 acres located on rolling ground fifty miles from an inland city. They propose the development of a 400 room summer hotel with dependencies and recreational facilities.

The character of the ground and the orientation make the higher portion of the Northeast corner of the property most desirable as the site of the hotel proper with its services. It is this section which is to be considered in this problem.

This area is rectangular, bounded on the North by an automobile road, on the East a lot line and on the South and West the golf course, aviation field, small lake, etc., making up the 800 acres.

The requirements are:

1. Ground floor of hotel
 - a. Lounge and dining rooms with services
 - b. Theatre seating 500
 - c. Indoor swimming pool
 - d. Utilities and shops
2. Six two-story cottages of 2 apartments to each floor

3. The tennis courts with pavilion containing two covered courts
 4. Outdoor swimming pool
 5. Garage facilities for 150 cars
 6. Stables for sixty horses
 7. Two service buildings, 75 rooms each
 8. General plan shall include entrance and service drives, scheme of gardens, planting, etc.
- Property, 1,500 ft. East and West by 1,000 ft. North and South

CLASS "B"—III ANALYTIQUE

"A PAVILION IN A GARDEN"

A feature of the great formal parks and gardens which are to be found in all the countries of Europe, is the pavilion. Upon this subject many of the greatest architects have been ordered to lavish their imagination and their skill. Consequently the pavilion, which was a model of architectural refinement and taste, came to be located in such a manner as to form an important element in the garden scheme.

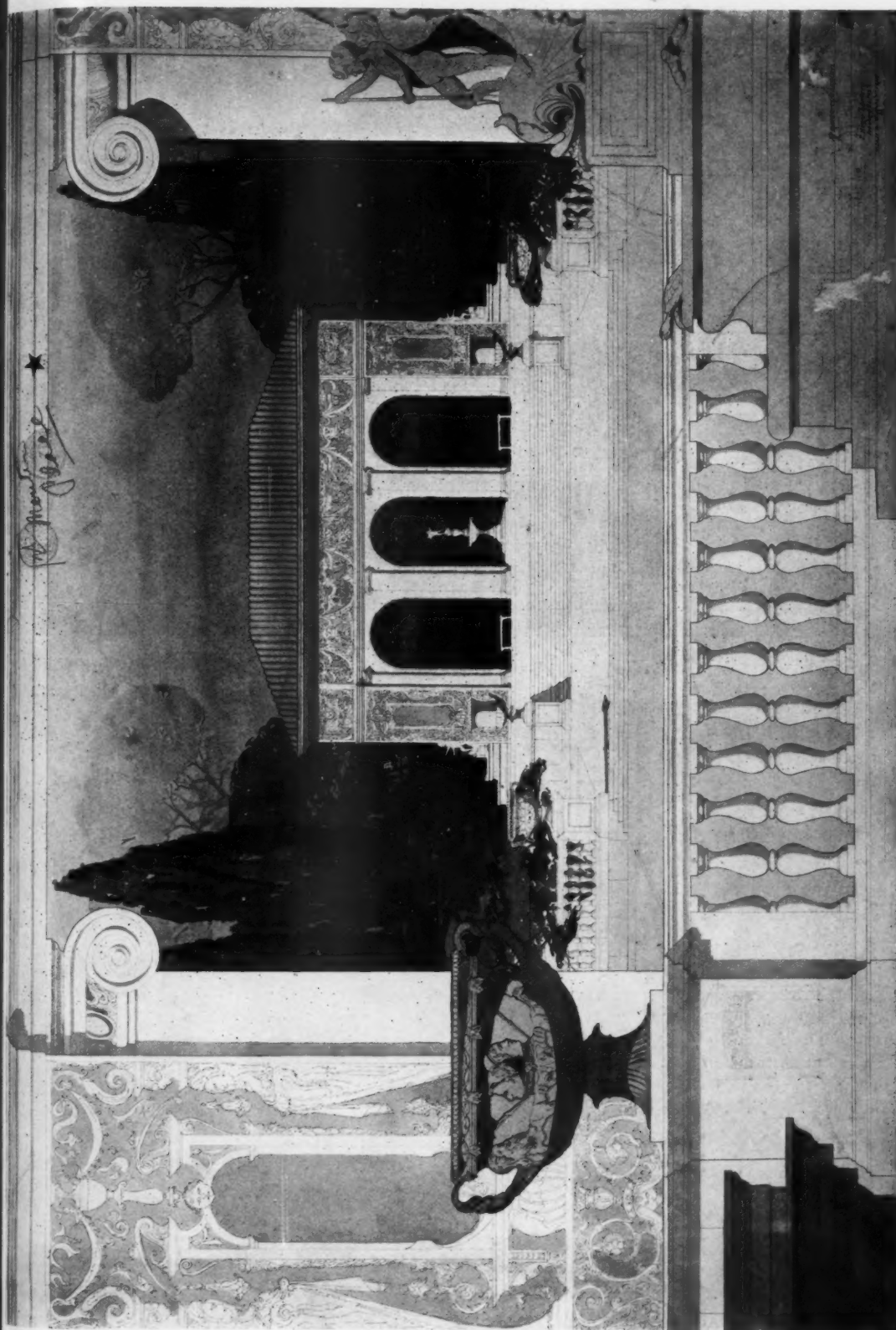
For this program the pavilion is to consist of a single room with openings giving easy access to the park and affording ample vistas. It will be used for social or intellectual gatherings. The exterior should be built of permanent materials and the use of an architectural order is desired, in some portion of the design.

It shall be a one story building and shall not exceed 50'-0" in any linear dimension.



Fragment of North Window, United States Military Chapel, Westpoint, N. Y.

Designed and executed by A. L. Willet

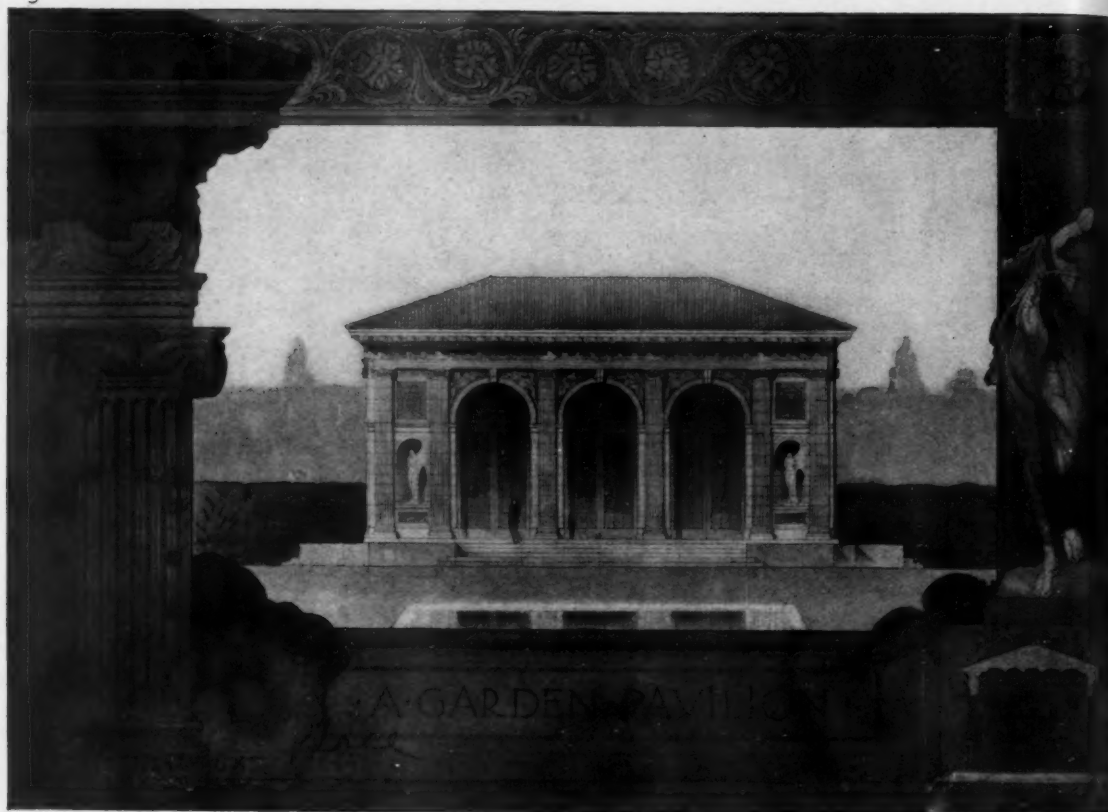


FIRST MENTION PLACED

P. H. SHONBERG

CLASS "B"—III ANALYTIQUE—A PAVILION IN A GARDEN
STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN

ATELIER CORBETT-KOYL



FIRST MENTION PLACED

E. F. WALLDEN

ATELIER PARSONS

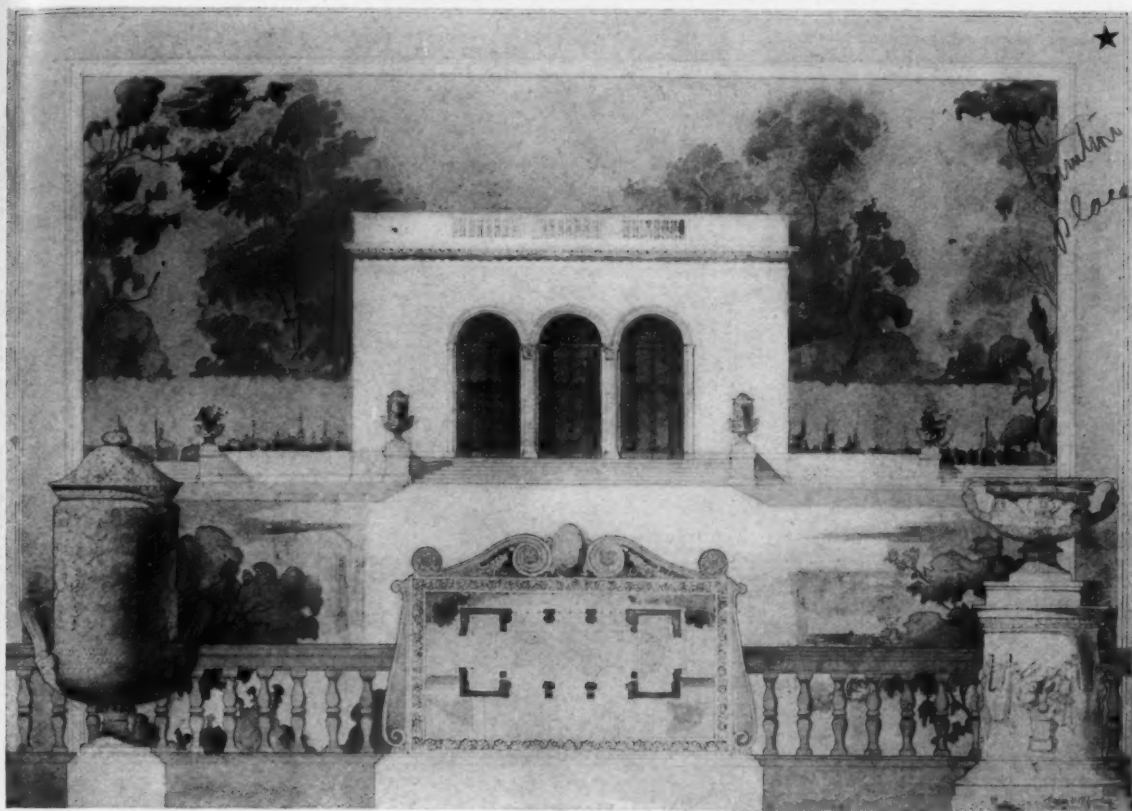


FIRST MENTION PLACED

H. G. RIEBER

"T" SQUARE CLUB

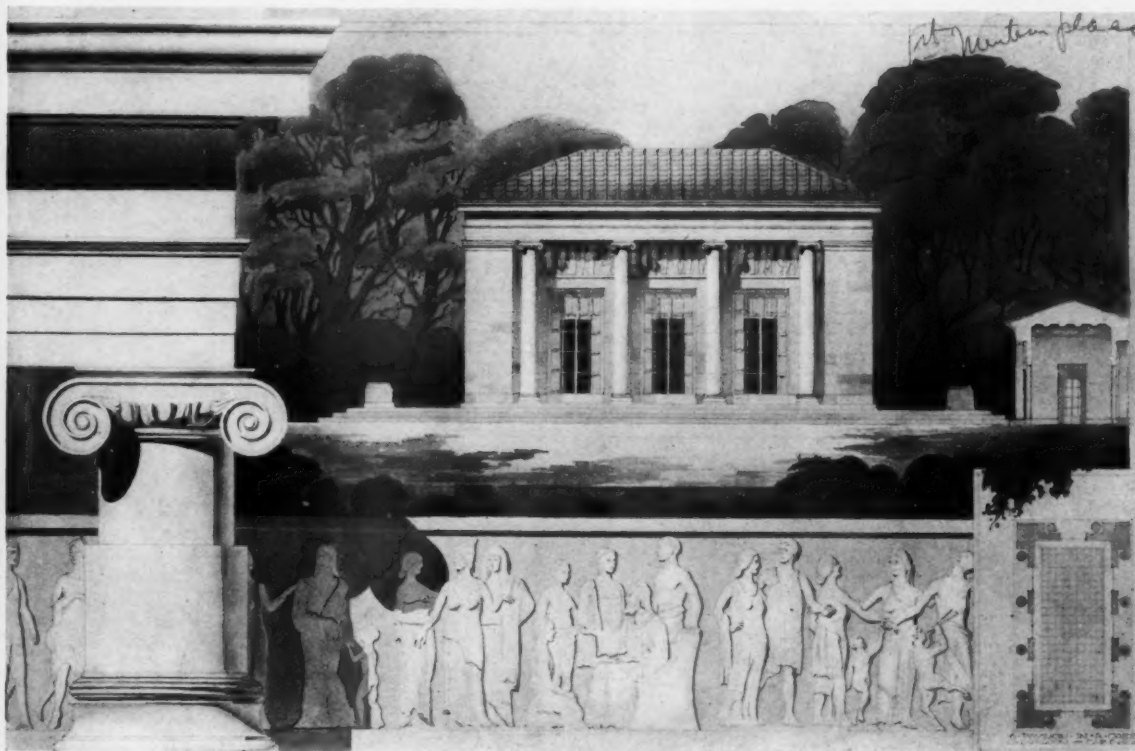
CLASS "B"—III ANALYTIQUE—A PAVILION IN A GARDEN
STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN



FIRST MENTION PLACED

F. P. McARTHUR

UNIVERSITY OF KANSAS

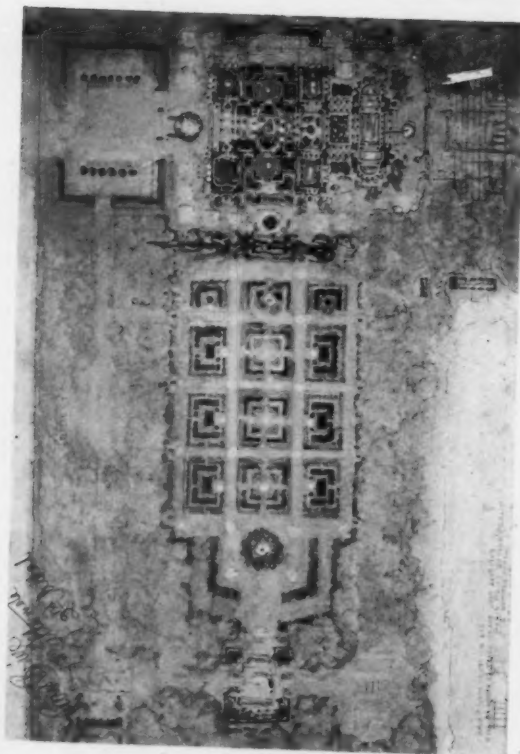


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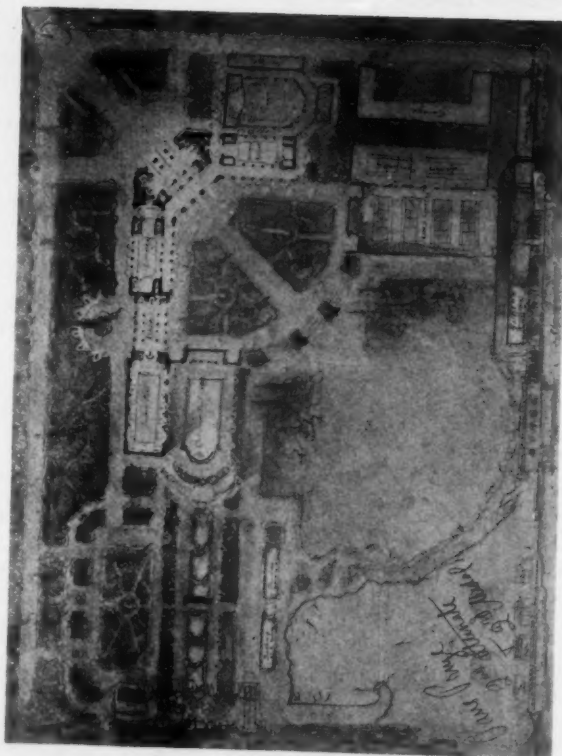
G. B. ALLISON

CARNEGIE INSTITUTE

CLASS "B"—III ANALYTIQUE—A PAVILION IN A GARDEN
STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN



E. W. KLEE
PLACED SIXTH—(FIRST ALTERNATE) SECOND MEDAL
CARNEGIE INSTITUTE



R. SCHMERTZ
PLACED SEVENTH—(SECOND ALTERNATE) SECOND MEDAL
CARNEGIE INSTITUTE
SECOND PRELIMINARY COMPETITION FOR 16th PARIS PRIZE
STUDENT WORK, SOCIETY OF BEAUX-ARTS ARCHITECTS



F. R. Lyster
FIRST MENTION PLACED
"T" SQUARE CLUB
CLASS "B"—III ANALYTIQUE—A PAVILION IN A GARDEN
STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN

THE AMERICAN ARCHITECT—THE ARCHITECTURAL REVIEW

THE value, to architects, of sketching in the field, may not be overstated. As a means of training the hand to obey the eye, it is invaluable. And, it has been proven by actual observation that the men who have risen to the highest places in the profession of architecture, are among the most proficient in out-of-doors sketching.

As a means of training the memory in art, nothing is better. Even if the sketch is not kept, but soon destroyed, the details are indelibly fixed on the mind by the mere setting down of them.

Many people charge their memory with some important thing by writing down the essentials, reading them carefully and then destroying the memorandum. There is, scientists tell us, a certain psychology in this. The subconscious servant, that everyone has to a greater or less degree, becomes charged with a certain duty, and when properly trained, never fails to respond.

It is so with sketching. It will not be necessary to retain all the many small impromptu sketches. The fact of their making and the close observation and study involved will so charge the subconscious servant as to make it an invaluable help.

The accompanying sketches by Arnold W. Brunner, F. A. I. A., are a good example of what an architect may well attempt. Through the courtesy of Mr. Brunner, we are permitted to select these excellent examples from a large collection of sketches made during many recreative trips abroad.



A DETAIL OF THE ALHAMBRA, GRANADA

(From the Original Sketch by Arnold W. Brunner)



A STREET IN NEVERS, FRANCE
(From the Original Sketch by Arnold W. Brunner)



IN GRANADA

(From the Original Sketch by Arnold W. Brunner)

DEPARTMENT of ARCHITECTURAL ENGINEERING

SETTING TERRA COTTA

TWO essentials are involved in the use of a building material and often these are practically of equal importance. The material itself: its manufacture, physical and mechanical properties and durability are qualities that determine its value. Placing in position: correct setting, suitable mortar, anchorage or other means to maintain secure placement, protection of joints or surfaces from action of the elements or processes of manufacturing and other things that help to retain the original value of the material. However good the material may be, its usefulness and value may be depreciated or totally destroyed by improper installation. The importance of securing proper installation becomes apparent when troubles develop in the use of almost every material. These conditions should be the subject of investigation and the production of such details and specifications as will safeguard the material from such conditions.

The Chicago Department of Buildings, for the past eight years, has been keenly interested in such problems. The Commissioner of Buildings, Charles Bostrom, formerly a competent and successful building contractor, has given every encouragement to these efforts for improvement. A specification covering the setting of architectural terra cotta has been prepared for use in the City of Chicago by a committee formed at the instance of Mr. Bostrom. This committee consisted of the following: F. E. Davidson, A. I. A., Charles E. Fox, A. I. A. and John A. Nyden, A. I. A., representing architectural and engineering societies. H. J. Lucas, H. Mendijs and W. D. Gates represented the Northwestern, the Midland and the American Terra Cotta Companies, respectively. This committee, after thorough investigation and discussion of all phases of construction falling within the scope of this specification, presented a report to the Commissioner of Buildings and unanimously recommended its approval and adoption. The Commissioner of Buildings adopted the recommendations of the committee and issued this specification to his deputies, with instructions to enforce its provisions.

In giving its approval to a particular brand of elastic cement by its trade name, the committee was guided by the thought that this method was the most practical way of identifying to the building public, the chemical and mechanical character-

istics of what appealed to the members as most desirable in an elastic cement. Other elastic cements of equal or superior qualities are being sought.

A Terra Cotta Specification

Covering the protection from corrosion of supporting iron and safeguarding the terra cotta structure from internal dampness

SETTING:

All terra cotta shall be set true to a line and carefully laid in a solid bed of mortar. All rebates in bed and cross joints from front to back and top to bottom, shall be filled solid with mortar, leaving no voids. Each piece of terra cotta shall be tamped into place, excess mortar cut off and joint struck with a jointer or trowel. All sills, wall copings and other capping courses, shall be set in a thick bed of mortar and well pounded down so that the mortar fills all spaces around bottom of webs of terra cotta.

BACKING:

The backing of terra cotta shall proceed simultaneously with the setting, and at no time shall the terra cotta proceed more than one course ahead of brick backing. Each piece of terra cotta shall be backed up solid with brick and mortar, so as to make a perfect bond and homogeneous mass between wall lines. This backing shall extend beyond the wall line when necessary to structural stability.

PROTECTION:

All uncompleted walls, including terra cotta and backing, shall be protected by waterproof covering at night and at any time when liable to injury from storms or freezing.

ANCHORS:

All anchors, hangers, bolts, clips, straps, dowels, rods, pins, etc., for supporting or securing terra cotta shall be thoroughly coated, where manufactured, with asphaltum applied hot.

All of the above shall be made of wrought iron, meeting the specifications of the American Society for Testing Materials. For all courses (not balanced on wall) where integrity depends on iron, sizes of hangers and dowels shall be as follows: Courses 4" high and under, $\frac{1}{2}$ " hanger, $\frac{3}{8}$ " dowel; courses 4" to 10" high, $\frac{3}{8}$ " hanger, $\frac{3}{4}$ " dowel; courses over 10" high, $\frac{3}{4}$ " hanger and $\frac{1}{2}$ " dowel.

Self-supporting courses shall be secured to framing or masonry by strap anchors of $\frac{1}{4}$ " square iron cut and bent to proper size at building.

PROTECTION OF METAL:

Metal work of every description, supporting terra cotta, shall be imbedded thoroughly in the masonry backing and when not so imbedded, metal work shall be protected against corrosion by encasing with cement mortar or in cement mortar masonry.

When the back of a terra cotta course comes in contact with iron or structural concrete in such manner as to prevent the encasing of supporting iron from the rear, an opening shall be made in the top to admit of the placing of the encasing mortar as required above.

MORTAR:

All cement used for setting mortar shall be of a standard brand of Portland cement, fulfilling the requirements, both physical and chemical, of the standard specifications for Portland cement adopted by the American Society for Testing Materials.

All sand used for setting mortar shall be clean, sharp and well graded in size.

All mortar for setting and pointing shall be composed of one volume of Portland cement to three volumes of sand. Lime, not to exceed 1/5 of a sack of lime to a sack of cement, shall be added.

The sand, cement and lime shall be thoroughly mixed dry before any water is added.

PARAPET WALLS:

All parapet walls with front face of terra cotta shall be faced on the back with vitrified or sewer brick set in cement mortar, with horizontal joints not over 1/4".

WASHES, WEEP HOLES AND DRIPS:

Washes shall be provided on all projecting courses; and saddles shall be provided in ornamental details sufficient to shed water readily. If voids, in which water is liable to accumulate, remain in the terra cotta after it has been backed up and bonded properly and all supporting iron has been encased, as per these specifications, then weep holes shall be provided at such points as may be necessary for drainage and air circulation. All projecting courses—such as sills, belts, cornices, copings, etc., shall

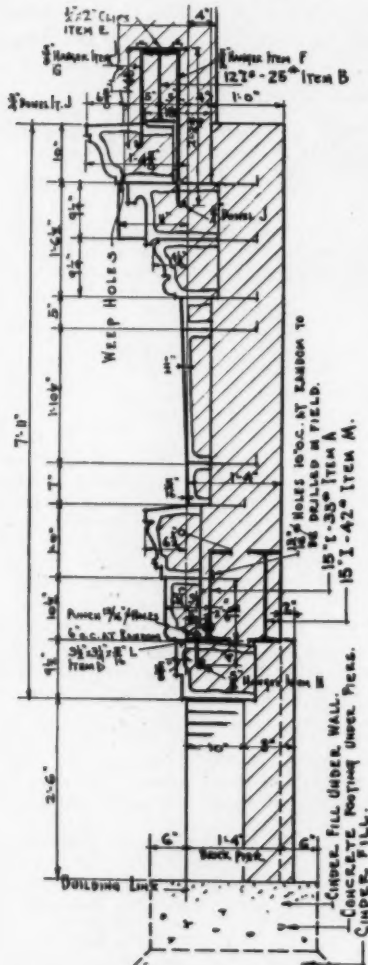


Exhibit A

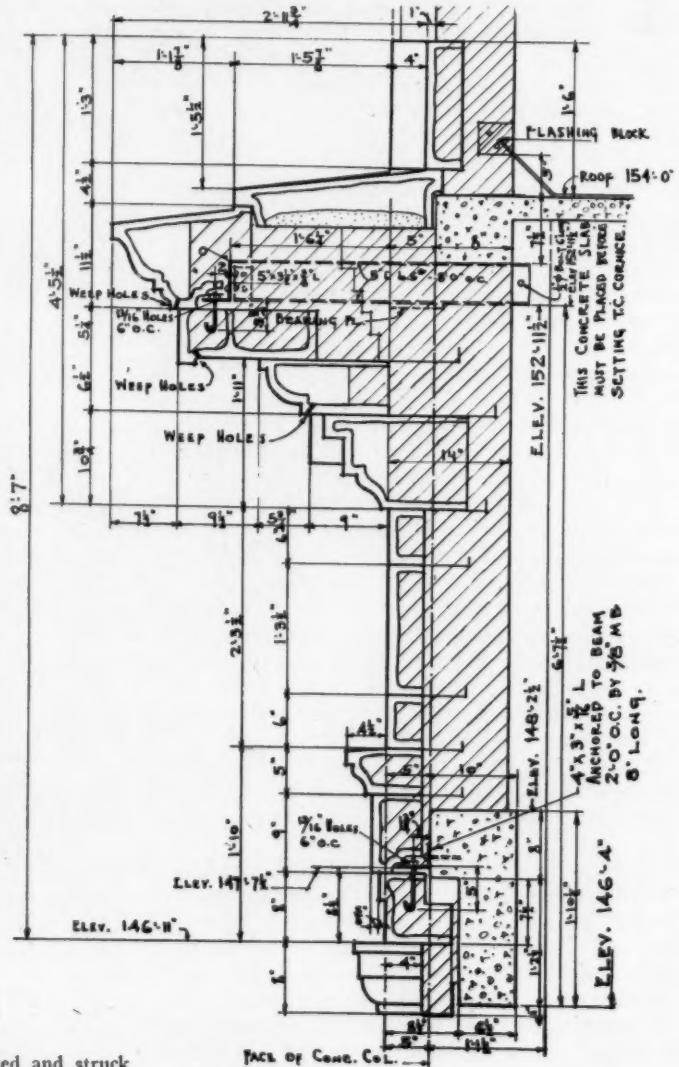


Exhibit B

POINTING:

All joints in terra cotta shall be pointed and struck as the setting progresses except in freezing weather. In freezing weather and when re-pointing is necessary, all joints shall be raked or cut out to a depth of 1/2" and pointed with same mortar as specified for setting or with an approved elastic cement in the construction mentioned below.

All joints in projecting cornices, over-hanging terra cotta, balustrades, sill-courses, parapets and free-standing features, shall have joints raked out one-half (1/2) inch and pointed with *Pulcatex* or other elastic cement of equal quality.

have drips so that water will not run down face of walls.

PROVISION FOR RECEIVING FLASHING:

Raggles, not less than 3/4" deep, shall be provided in terra cotta to receive flashing when the terra cotta pitches inward against superimposed work; for all balcony floors; for all gutter linings and at other points as indicated on shop drawing.

A NEW FLOORING MATERIAL HAVING LARGE LEATHER CONTENT

A FLOORING that will withstand the effects of hard usage is a most desirable thing. The subject of satisfactory flooring probably receives as much and careful attention as any other part of a building. In cases of severe use, it is usually conceded that renewals must be made with more or less frequency. When a new material for this purpose is produced which has the ability to withstand the most severe usage without any apparent depreciation, it is well worth mention and investigation by architects and engineers.

A very large corporation which operates extensive tanneries and fabricates the leather into finished products, conceived the idea of utilizing the leather waste for making a flooring material. Nearly five years have been devoted to experimentation in the selection of the materials and manufacturing processes. After over three years of use in their own plant, subjected to the most severe usage, the material has proved its ability to satisfy all of the essential requirements of a floor.

A satisfactory floor surface for industrial buildings must first of all be indestructible under the most severe conditions that can be applied to a floor. The other desirable qualities are a high coefficient of frictional resistance to applied forces, which prevents slipping; resiliency in the sense of ability to withstand sudden shock without permanent deformation or rupture; pliability which enables it to conform to the supporting sub-surface; low degree of water absorption; high degree of sound absorption; resistance to decay; resistance to the action of water, oils and diluted acids; non-injurious or tiresome to persons standing or walking thereon. These qualities are found in this material and in addition, it is easily and quickly installed and the cost is very moderate. When used in industrial buildings, this material is black, but appearance is not essential for this purpose.

The distinctive element of this material is leather. To find a use for this waste leather by-product other than manufacture into fertilizers, led to the production of this flooring material. The leather content is of two kinds: the waste cut from the leather immediately after it comes from the tannery in a raw state, and the waste cuttings from the finished leather. To secure several desirable physical properties a fibrous material is added to the leather content. The value of leather for this purpose is that it is all fibre and the process of beating simply disintegrates the fibres so they can

be re-formed and felted together in water on the fibre making machines; otherwise instead of their being felted together, there would only be a mass of lumps—no bond one to the other. It is the raw hide or tannery waste that lends the wonderful wearing qualities to this floor covering material.

The manufacturing process is similar to paper making. The leather and other materials are reduced to a pulp in a beater, the pulp is made into sheets by passing through a specially designed paper mill, the sheets are finished $\frac{1}{8}$ in. thick and cut to width. The sheets are cut into strips $\frac{5}{8}$ or $\frac{7}{8}$ in. wide and perforated at the same operation. The strips are automatically assembled and made into panels by hand. The strips are fastened together by passing No. 10 gauge wires through the perforations, binding the strips together in a panel 16 x 28 in. or any less length, in size. The strips are set on edge as in a laminated floor construction. After assembling, the panels are impregnated with asphalt for industrial floors or waterproofed for other uses, having a gray or reddish color. After this treatment the top of the panel is brought to a plane surface by passing it through a sanding machine. This material of $\frac{5}{8}$ in. thickness weighs $3\frac{1}{2}$ lbs. per square foot, which is less than that of any other flooring material of comparable physical properties. It is so light that it is almost a negligible quantity.

On a wood floor sub-base, the end of the panel is toe-nailed in place and staples are driven between the strips and over the wires, thus securely attaching it in place. On a concrete sub-base the panels are bedded in a thin asphalt coating and the joints between the panels filled with an asphalt grout.

The material has been put to severe test over the period of time above mentioned. In a racing stable the floor of the alley between the rear of the box stalls is covered. The horses pass over this floor and are tied there for cleaning. These horses, at certain times, are sharp-shod and slight indentations are made by the sharp calks of their shoes. There is no indication of the surface being worn off by the pawing of the horses. The indentations of the sharp calks evidently close up in time and disappear. On a floor of the leather finishing building, the hides of leather are stretched and tacked to wood frames for drying. These tacks are about $\frac{3}{4}$ in. long and have flat heads about $\frac{1}{4}$ in. in diameter. When the hides are taken from the frames and loaded on trucks a great many of these tacks fall on the floor and the

trucks pass over them. Indentations are made and finally disappear with no evidence of destruction of the floor surfacing material.

Two buildings are connected with a covered bridge which joins one floor with a quite steep incline. Heavy truck loads of leather, weighing 2,000 pounds and upwards, are transported over this bridge with electric driven locomotives or "jitneys." The wheels of the trucks have a $1\frac{1}{4}$ in. face. Wooden floors had to be repaired or replaced about every three weeks. A steel plate floor became slippery and buckled because of the expansion of the more used parts. This material has withstood long usage with no indication of wear. The motor can stop and start on the incline with ease, demonstrating a high frictional resistance.

This material was installed in the floor of a large freight elevator platform exactly even with the horizontal leg of an angle iron frame and after extensive use still retains the surface level with no signs of wear. Floors of wood were quickly destroyed by the wheels of the heavily loaded trucks.

Other instances of equally hard service demonstrate the remarkable qualities of this floor.

A test of the fire resisting qualities of this material was made at Columbia University, March 28, 1923. A panel $\frac{5}{8}$ in. thick was placed over a crucible furnace about 10 in. in diameter. The temperature of the gas flame impinging on the surface of the panel was measured by a thermoelectric couple. The temperature was increased steadily from 70 degrees F. to 1480 degrees F. during a period of 36 minutes when it burned through the panel. When the sample was cooled the burned portions resembled charcoal. The material does not support combustion but is destroyed by charring.

When the fibres of a wooden floor are cut, the wood slivers and disintegrates very rapidly. The edges of a crack in a concrete floor rapidly crumble under heavy traffic. Almost every flooring material rapidly deteriorates after its original surface is damaged. Cutting the surface of this floor apparently has no effect which is probably due to its pliable and resilient properties.

An Experiment in State Ownership

NEW JERSEY has followed in the wake of several of her sister states to the West and has ordered the construction of a state cement plant, comments *Engineering News-Record*. It remains to be seen whether she will follow the lead still further and neglect to build such a plant. Resentment against the high price and slow deliveries of cement is not confined to state highway departments, but it remains to be proved that these evils are the result of private ownership. The cement companies have put up a pretty fair argument in defense of prices, and one that can be answered only by the construction and operation of a state-owned plant. As to deliveries, that is something beyond the control of the manufacturer. Only actual operation can determine whether a state-owned plant means cheaper cement to the state. There is not the danger of political control that lies in the state ownership of utilities, but there are still the possibilities of false accounting, the loss of taxes and the necessity of production over and above the needs of the state. If the state is to sell cement to its citizens, why not underwear or coughdrops? However, if New Jersey wants to try the experiment there are several other states that will be glad to have her try. It may prove pretty costly to the Jerseyites.

Agree on Lumber Sizes

AT a meeting of the Standardization Committee of the National Lumber Manufacturers Association, held in New Orleans, March 24, in connection with the annual meeting of the association, an agreement was reached among the representatives of all constituent associations of the national body, except one which was not represented when the action was taken, upon standard finished sizes of lumber, as follows: That 25/32 in. shall be the standard finished size, surfaced two sides, of all grades of 1-in. lumber, kiln dry basis, and $1\frac{1}{8}$ in. as the surfaced thickness of small dimension.

National Association of Building Owners and Managers Convention

THE sixteenth annual convention of the National Association of Building Owners and Managers will be held at Atlantic City, June 18-23, 1923. The reports of committees and the discussions will be of value to owners and architects who are interested in office buildings. Lewis B. Ermeling is Executive Secretary, his address being The Edison Building, Chicago, Ill.

INCONSISTENT CODES

Digest of Minimum Floor Load Requirements of 109 American Building Codes

IT is hardly conceivable that a country which leads in developing the art of building construction as does the United States, should have such inconsistent codes. Such a condition does not reflect credit on any element of the industry, architects, engineers, contractors or producers of materials. With them must rest the blame for this bad situation. We do not expect our lawmakers to have technical knowledge of these things and it can be said that they will usually enact such ordinances as are proper if shown the way.

There are three things which should be universally alike in building codes—strength of materials, sanitation and live loads. When these are

controlled by unreasonable requirements a great waste of resources follows.

THE AMERICAN ARCHITECT presents a digest of American live floor load requirements which justifies the characterization of inconsistent, wasteful, unscientific and foolish. The duty of all concerned with the industry is plain and all possible aid should be given to the Building Code Committee of the U. S. Department of Commerce.

The Building Code Committee of the U. S. Department of Commerce has done a commendable thing in preparing this comparative table and analysis which THE AMERICAN ARCHITECT acknowledges the permission to publish.

MINIMUM FLOOR LOAD REQUIREMENTS ALLOWED AS A BASIS OF STRUCTURAL DESIGN IN THE UNITED STATES.																																
ANALYSIS OF BUILDING CODE REQUIREMENTS OF 109 REPRESENTATIVE CITIES OF THE U.S. SHOWING NUMBER IN WHICH EACH OF THE FOLLOWING MINIMUM LOADINGS ARE SPECIFIED FOR THE OCCUPANCIES LISTED.																																
U.S. DEPT. OF COMMERCE. BUILDING CODE COMM. Dec. 1922.																																
Minimum Load in Pounds per Square Foot.																																
OCCUPANCY	Max. Live Load	20	25	30	35	40	50	60	65	70	75	80	85	90	100	105	110	115	120	125	130	140	150	160	175	180	200	250	300	350	500	
DWELLINGS	1st. Floor.	101	52.2	1	2	28	31	33		3	1	2			1																	
	Above.	103	43.7	1	1	40	28	26		3		2			1																	
APARTMENTS	1st. Floor.	103	53.8			1	21	32	37		4	2	8		1	8																
	Above.	105	30.6			1	1	37	33	25		4	1	2		1																
STORES	Light. 1st. Floor.	107	113.6									1			26					41	29			3			1					
	Above.	102	115.0					1			1	1		1	34					39	18			6			1					
	Heavy live floor.	38	162.3												12					12	6		1	31	3		21	11	1			
	Above.	34	136.0												1	13				11	7		1	29	2	1	18	9	1			
WAREHOUSES	Heavy.	38	184.5												8					4	1			28			39	16	1	1		
	Light.	100	137.7												22					28	14	2		16	2		12	3	1			
FACTORIES	Heavy.	37	177.0												10					8	3	1		28	1		29	20	1			
	Light.	103	121.0												27					37	25	1		10			2	1				
ROOFS	Less than 20°	100	32.2			6	28	1	40	27																						
	More than 20°	88	31.0	7	9	56		12	4																							
ASSEMBLY	Movable Seats	102	110.3							1		1		14	20					22	20			6								
HALLS	Fixed Seats	102	94.0				1	1		2	8	13		39	22					3	14			3								
	Drill Halls	33	137.0											4	17		1	1		7	13			27	1	1	3	7				
	Dance Halls	34	115.0											4	18		1	1		26	14			25		1	2	1				
SCHOOLS	Corridors	36	92.3				1	3		7	13	11		26	18					7	7			3								
	Assembly	101	52.3					1		2	12	7		26	29	3			1	7	15			4								
	Class Rooms	36	63.0				3	10	21	1		3	41	3	5	7					1			1								
OFFICE BUILDINGS	1st. Fl.	101	114.0				1	3	1		3	8		5	30					12	14			27								
	Above.	108	63.7				4	14	22		6	49	3	2	4									2								
PUBLIC BUILDINGS		30	105.4				1			1	3	1		9	37				2					5								
GARAGES	Public.	30	126.6				1				2	5	1		20					8	11	1		1	30	2	3	1				
	Private.	30	70.3				1	3	4	5		24	7	1	18					8	3			1			2					
HOTELS	Rooms	104	57.3				1	18	30	40		1	4	7	1	1	2							1								
	Corridors	38	87.1					5	3	8		5	7	13	17	14				6	7			3								
HOSPITALS	Wards	36	61.0				1	13	24	35		4	7	4	1	4				1	1			1								
	Corridors	34	83.0				1	5	4	10		2	4	16	20	11				3	5			1								
SIDE WALKS		63	272.4																					4				3	9	40	1	

[illegible]

MINIMUM LIVE LOADS IN BUILDING CODES.
IN BUILDING CODES OF 109 REPRESENTATIVE CITIES OF THE UNITED STATES.

Prepared by Building Code Comm.
U. S. Dept. of Commerce,
Nov. 1922.

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U. S. Dept. of Commerce,
Nov. 1932.

CITIES.	STATE.	Code DATE.	Dwelling		Stores		Warehouses		Barns		Assembly Halls						Office Buildings		Public Bldgs.		Theaters		Hotels		Warehouses					
			1st	Above	1st	Above	Heavy	Light	Heavy	Light	Light	Heavy	Mezzanine	Fixed Seats	Drill	Dance	Codebook	Assembly	1st	Above	Public	Private	Codebook	Rooms	Codebook	Wheels	Codebook			
NEW ENGLAND.																														
MANCHESTER	N.H.	1916	50	50	50	125	200	200	250	125	250	250	250	250	250	100	100	150	50	75	100	60	100	200	200	30	30	300		
BOSTON	MASS.	1921	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
CAMBRIDGE	"	1917	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
WINDHAM	"	1919	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
LOWELL	"	1906	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
LYNN	"	1916	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
SPRINGFIELD	"	1922	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
Worcester	"	1917	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
PROVIDENCE	R.I.	1918	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
BROOKFIELD	CONN.	1915	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
WATERBURY	"	1919	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
NEW HAVEN	"	1919	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
STAMFORD	"	1917	50	50	50	125	250	250	250	125	250	250	250	250	250	100	100	150	50	75	100	75	100	150	75	100	100	100	250	
MIDDLE WEST.																														
CHICAGO	ILL.	1917	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1929	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1918	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.	1922	50	50	50	150	250	250	250	150	250	250	250	250	250	150	150	200	100	150	200	150	200	250	250	100	150	200	250	300
CHICAGO	ILL.</																													

DEPARTMENT of ARCHITECTURAL DECORATION and FURNITURE

NO other pages in the history of art, not even those of the period of the *Golden Age* in Italy, are so replete with romance and color, as are those relating to the Iberian peninsula.

Spain was invaded by the Arabs in the VIIIth century, and they were not driven out until the XVth. These people brought with them a curious, colorful, semi-Oriental art which was infused into the Christian, forming a style known as the *Mudéjar*. After the last of the Moorish strongholds, Granada, was captured by the Christians, during the reign of Ferdinand and Isabella, and the Moorish nobles returned to Africa, thousands of Moorish craftsmen remained behind, and, until the beginning of the XVIIth century the large majority of Spanish artisans were Moors, indelibly stamping their tradition into Spanish art. It was during this period of Spain's material prosperity, in the days of the mighty Philips, when the *Conquistadores* in the New World were sending galleons heavily laden with gold, silver and precious stuffs back to the mother country, that Spanish art produced the most beautiful and characteristically native work, i.e., during the XVth, XVIth and early XVIIth centuries.

But the defeat of the wondrous Spanish Armada, and the subsequent English piracy of the sea, together with the after effects of the Inquisition, changed the aspect of things, and in the latter XVIIth and during the XVIIIth and XIXth centuries an impoverished and weakened nation readily succumbed to the

The Spanish Influence in Interior Decoration and its Expression in the United States By RAIMONDO CUTAJAR

languorous influences of the French and Italian *baroque* styles of decorative art.

This picturesque legend is handed down to us in the form of a singularly small number of interiors which retain their original dignity, sumptuousness and restraint, and a

paltry few thousands of authentic pieces of fine antique furniture scattered the world over, for the peculiarity which the collector first encounters in his search for genuine Spanish antiques, is their scarcity. Moreover many fine pieces were allowed to perish, or were destroyed during the period of neglect. Today there is a revival of interest in native art, and a more prosperous people are patriotically attempting to keep all authentic work at home.

The *Mudéjar* interior is today the purest source of inspiration for the Spanish style. When the Moors migrated to Spain they

brought their lavish use of glazed, polychrome tiles. These tiles were used for floors and wainscots, often extending to the ceiling. They were purely decorative in character, the motifs and patterns being geometric, owing to the restrictions of the Mohammedan religion. The Spaniards later introduced floral and animal forms, and restrained the use of these lustre tiles to the floor and base, with occasional wainscoting in cupboards, lavabos, etc. The tile remains today, together with the decorated wooden ceiling, the most essential characteristics of the *Mudéjar* interior, more especially in Andalusia, where the Moors remained the longest.



Fig. 1. Salon, Palace of the Duke of Alba, Seville
Decorated wooden ceiling, carved plaster frieze,
glazed tile floor and base
(Courtesy of Wm. Helburn)

The painted pine ceiling is not to be found anywhere else in Europe. It is usually a flat, rectangular, beamed and coffered ceiling, with little carving, except on the curious Moorish brackets, but all woodwork is painted in flat colors, in

shutters being closed in the daytime to keep out heat and at night to keep out the cold.

The other feature of the Hispano-Moresque interior is the carved plasterwork. Ornamental plaster was polychromed by the Moors but the

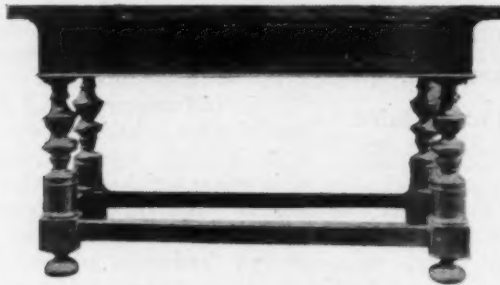
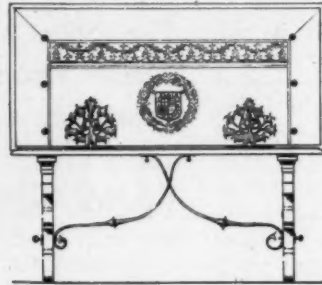


Fig. 2. XVI Century Walnut Table, Ruiz Collection, Madrid



Scale of 1 2 3 4 5 6 7 8 9 10 feet

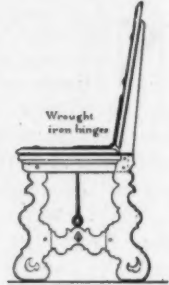


Fig. 3. XVII Century Walnut Bench with darker inlay. Archaeological Museum, Madrid

(Courtesy of Wm. Helburn)

bands, geometric and conventional floral patterns.*

The doors and inside shutters on the windows are of similar carpentry but merely oiled instead of painted. The door and window openings are usually square-headed, the intercommunicating doors being small, and sometimes splayed. No wood trim appears about the openings. The windows contained no sash and were unglazed, the

Spaniards left it white. It appears in the form of a frieze, and in wide bands around the openings. The designs were made freehand on plaster while wet, by a skilled craftsman, and were later carved when the plaster was hard and dry. It was never cast as it is today. The plaster walls were absolutely plain, no attempt being made at surface

*Decorated Wooden Ceilings in Spain, Byne and Stapley, Hispanic Society, New York, 1920.



Fig. 4. Patio of a California House

Bertram Grosvenor Goodhue, Architect

texture or mottled coloring.

All of these characteristics of the *Mudéjar* interior are embodied in the accompanying drawing, Fig. 1.

FURNISHINGS

With a background of such architectural restraint and severity, the Spaniards were able to produce interiors of a rare sumptuousness and dignity by the use of rich, simple furnishings. The entire furnishings of a Spanish salon, including paintings and hangings, often did not exceed a dozen pieces. This accounts, in a great measure for the dearth of Spanish antiques today.

Wrought iron lamps (one is forever associating the Spaniard with the finest wrought iron work) were hung from the ceiling on long, slender chains. Iron grilles on the outside window openings gave



Fig. 5. Huche or Arquilla, tooled Cordovan leather chest, velvet lined with gold clasps

(From Metropolitan Museum of Art)

the fenestrations the proper touch of ornament. Silk, Flemish-tapestried, embossed Cordovan leather and brocaded hangings, together with large dark paintings (often hung unframed) enriched the plain wall surfaces. The movable furniture, sparingly used, was arranged conventionally along the walls, except for an occasional table, a couple of chairs, and a brazier in the middle of the room.

The movable furniture consisted, for the most part, of chests, cabinets, wall benches, chairs, tables and braziers. The Spaniard of that day never cluttered up his home with a thousand and one odds and ends of furniture and bric-a-brac as we do today. Most of the pieces are of walnut.

The chest was one of the most popular pieces of furniture, being used as a wardrobe, bureau, and in fact to store, or lay in, any clothing, jewelry,

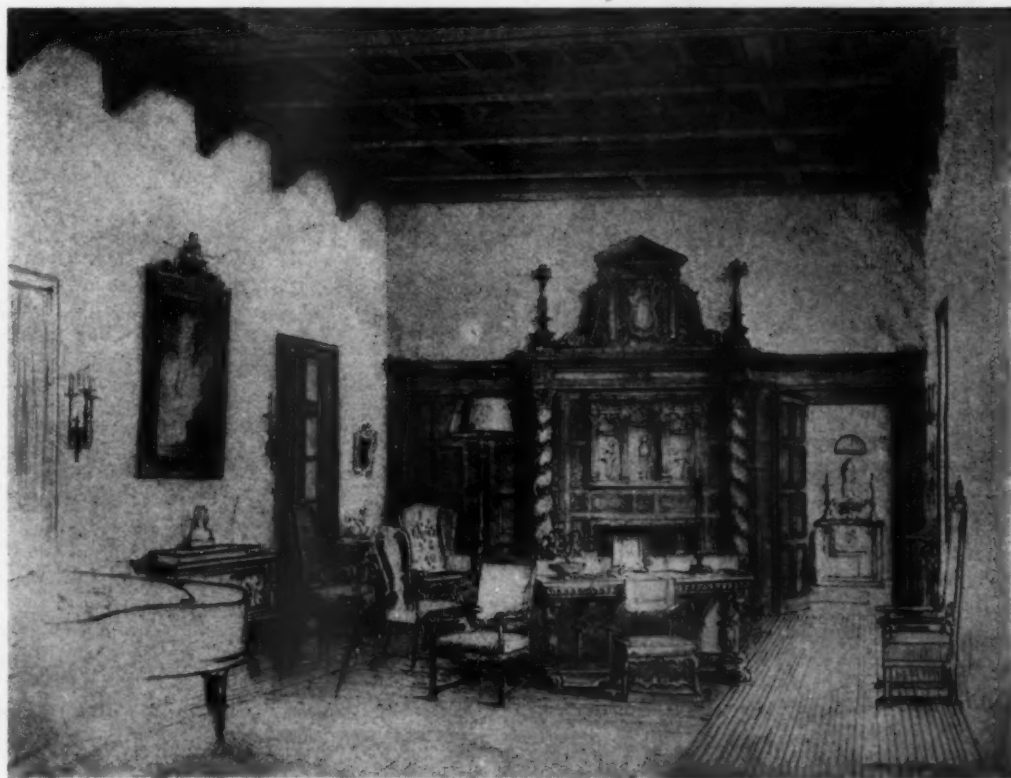


Fig. 6. Sketch for a living room in a house in Santa Barbara

Myron Hunt, Architect

papers, etc. These chests were of two types, either of wood, carved and painted, with iron straps and clasps, and with delicate geometric panels, or leather, silk or damask covered, with elaborate nailhead decorations. Some are like huge trunks (many with arched tops) and others are small as jewelry or despatch boxes. The heavy Cordovan leather is embossed, and the interiors are lined



Fig. 7. XVI Century Walnut tooled leather armchair
(From the Byne and Stapley Collection)

with velvet or silk. The smaller ones are set on tables and are very rich. (See Fig. 5) The Spanish chest is in no wise a counterpart of the dark, carved chest of the Italian Renaissance.

The *varguero* or Spanish cabinet, consists of two sections, the upper of which is filled with small drawers and compartments, and the lower may be merely a stand (See Fig. 12), or a cupboard with drawers and doors. The cabinet is used as a desk, and when closed shows pierced iron plaques on red velvet, with wrought iron, gold or silver locks and pulls.

The armchair happily unites the two most prominent earmarks of Spanish furniture, to wit, the use of painted, gilded and embossed leather and tooled ornamental nailheads, of brass and

iron. (See Figs. 7 and 8.) These chairs were in vogue in the XVIth century, but at a later date the leather became merely structural, being covered with silks and velvets, finished off with galloon and fringe. Chairs, however, even in the days of Spain's prosperity, were never numerous. In the palaces of great families chairs were reserved for the elderly men, the women and visitors following the Moorish custom of sitting on cushions on the floor. Note this influence in the arrangement of the conversation room in the Gillespie house in Santa Barbara, (Fig. 9) where the architect has built deep recessed seats in the walls and covered them with rich cushions.

The most frequently encountered type of Spanish table is that with splayed legs of waved or lyre form, with graceful wrought iron braces underneath. (See Fig. 10.) These tables are usually demountable, curious to note, and the tops are plain and heavy, and their edges never carved. Another type of table is shown in Fig. 2, but this shows the Italian influence.

The bench is a sort of cross between the table and the chair. The wrought iron braces underneath, together with the hinged back make it de-



Fig. 8. XVII Century embossed leather chair
(From Metropolitan Museum of Art)

mountable. (See Fig. 3.) It was often upholstered, especially during the XVIIIth century, in leather, or quilted velvet and brocatell. The Moorish use of tassels, galloon and fringe is also displayed in this type of furniture. A modern bench built on Spanish lines is shown in Fig. 11.

Because of the hot climate fireplaces were of little use and are rarely to be met with. The little heat required was generated in large, movable, charcoal braziers, placed anywhere in a room, often before a group of chairs. These braziers were large open brass pans with wrought handles, on ornamental stands.

Brass and iron are to be found in plenty in Spanish homes. The *velón*, or tall brass oil lamp (See Fig. 12) is an accessory of the Majorean interior.

The bed was hardly considered a piece of furniture until the XVIIIth century because the early bed consisted merely of four plain posts with a corded frame, relegated to some corner or alcove to serve as a ground for richly embroidered spreads.

From the XVIIIth century on, carved and

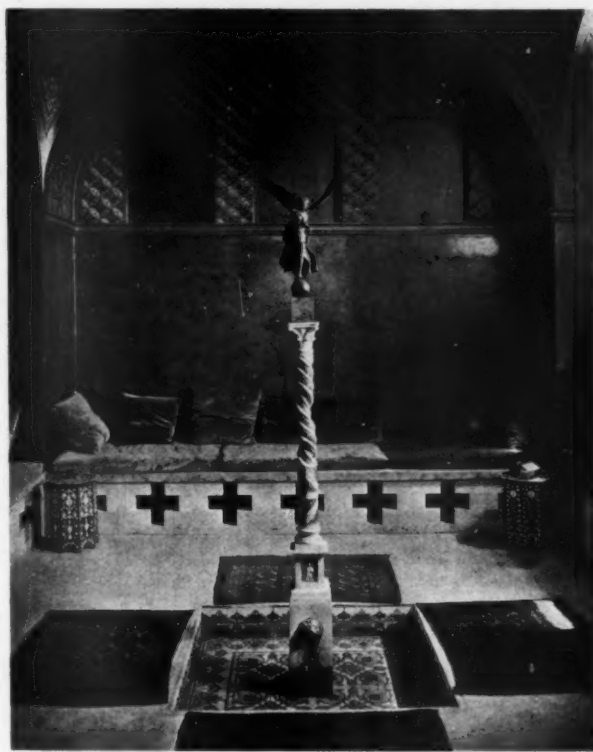


Fig. 9. Conversation room in a house in Santa Barbara
Cram, Goodhue & Ferguson, Architects

painted beds found their way into the more palatial homes. These beds showed the influence of other parts of Europe, having four high, spiralled or turned posts with a frame to support the linen canopy and rich valance. Other beds were low, with no canopies but with baroque headpieces carved in low relief and gaily painted and gilded. These headpieces were not attached to the beds, but hung on the walls, with the beds rolled up underneath.

The most attractive feature of the Spanish bed is its coverings. The painted beds were covered with blue and white linen spreads woven in

Moorish geometric patterns; others with block print chintzes. The richer beds had valances and coverlets of Valencian silk or velvet with gold galloon and fringe. Among the poorer people the bed was covered with various crude but quaint spreads woven and embroidered in zig-zag patterns in contrasting colors. In the province of Toledo spreads were made merely for display, in dark colored Arabian embroideries.

Of the smaller objects of furnishing nothing is more beautiful or more employed by modern dec-

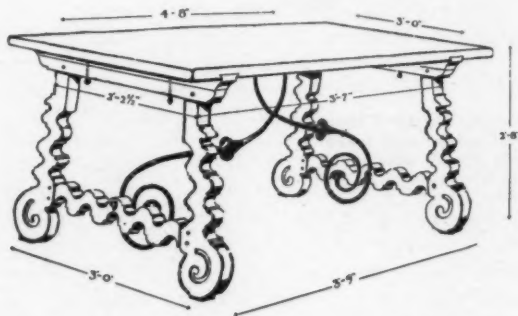


Fig. 10. XVII Century Walnut Table
(Courtesy of Wm. Helburn)

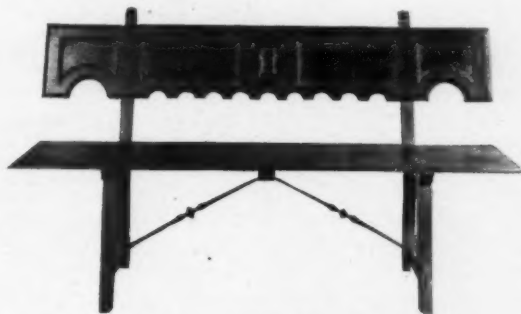


Fig. 11. Modern reproduction, bench for Santa Barbara Country Club,
by John Hutfaff

orators than the typical Spanish frame for mirrors and paintings. These frames are of simple wave mouldings painted red, black or green, with occasional carved and gilded motifs at the corners. They are suspended by heavy red silk cords which hold them out at an angle from the wall. Spanish paintings are usually very dark in tone and these rich red frames enhance their beauty. (Note a frame of this character in Fig. 1.) Another curiosity is the traditional Andalusian lantern, a polygonal, Moorish shaped affair built up of intricately shaped bits of glass and heavy sheet tin fancifully cut in openwork patterns and painted or gilded. These lanterns were usually mounted on red poles for carrying through the streets, but today these poles are set in stone bases and pedestals.

The Spanish interior lends itself very readily

to our modern requirements in the sunnier and more temperate parts of the country such as Florida and California. Our growing knowledge of the use of glazed colored tiles, color tones in stucco, and the old-fashioned hand-made roofing tile, together with a greater familiarity with Spanish motifs has enabled architects to design scores of excellent residences in lower California, several of which might well bear comparison with some of the finest palaces of old Spain. The Gillespie house in Santa Barbara, designed by Messrs. Cram, Goodhue & Ferguson, (Fig. 9) and the Dater house, by Bertram Grosvenor Goodhue (Fig. 4) are excellent specimens.

The author is indebted, for much of the information, and several plates, to a voluminous work entitled, "Spanish Interiors and Furniture," by Arthur Byrne and Mildred Stapley.

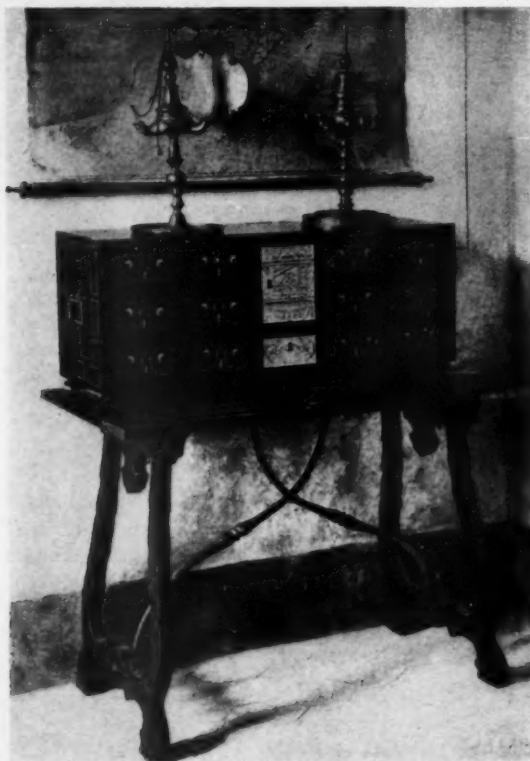


Fig. 12. Palma Majorca, Palace of the Marquesa de la Cenia, XVII Century Cabinet with ivory inlay, typical Spanish stand with splayed legs and wrought iron braces

(Courtesy of Wm. Helburn)

DEPARTMENT of SPECIFICATIONS

BRICK MASONRY (*Continued*)

THE section of specifications dealing with Quality of Materials should list all of the items that are to be furnished, and should describe governing limits of maximum or minimum characteristics between which any materials submitted will be accepted. It is rather unusual to write a specification comprising the brick masonry work only, as there are so many other branches of masonry work that are usually put in this section, such as limestone, sandstone, granite or exterior marble, where a very small quantity is used, or where the specification writer does not desire separate bids for the furnishing of that material. The following list of items that may be found in brick masonry specifications is fairly complete, although some few items that are only rarely inserted, may be found missing:

The specifications for sand should be rather explicit if a particularly high grade of workmanship is expected. This has to do not only with the thickness of the joints, but their color, if the mortar is not to be colored, and quite often, in respect to the size of the grains. An extremely technical specification for sand is not recommended, unless the superintendent is able to make proper judgment on the basis of accurate scientific tests. In important operations where expense is not the chief consideration, the sand as well as other materials, should be inspected, but as this is rather unusual in brick masonry practice, the specification writer is advised to study the records of The American Society for Testing Materials, and the Common Brick Manufacturers' Association, and the Face Brick Association, for further information. Although there has been much agitation against the use of the word "sharp" in defining sand, it still persists. A much better word is "coarse." Sand should be graded from fine to coarse within certain screen limits to produce the most uniform mortar mixture. For very narrow joints in stone work and oftentimes in ground joint terra cotta work, the finest white sand obtainable may be desired. For heavy masonry work and for joints, ranging from $\frac{3}{8}$ " to $\frac{1}{2}$ " in thickness, the sand should be somewhat coarser to give more substantial body to the mortar. For wider joints that are commonly used in face brick work where joints are a distinct part of the pattern, the sand should be quite coarse; for this latter purpose, limestone or other stone screenings are often used so the mortar will hold up in the joints without shrinkage. The selection of the sand will depend somewhat on the condition of the mortar that may be expected at the end of

thirty to sixty days, at which time it will be well dried out. If the mortar is full of fine hair cracks, the usual reason is that too fine a sand is used. In all cases, of course, sand must be washed or otherwise made free of all foreign or deleterious particles. As a general rule, the specified thickness of joints, the character of material to be laid up, and the local sand supply, will govern the selection of sand far more than would an extremely technical specification.

Lime to be used for mortar may be either quick lime or hydrated lime. If quick lime is to be used, the lumps should be freshly manufactured and slaking should be specified for a period of not less than twenty-four hours in the most urgent case. It is far better to require slaking of lime and consequent curing for as long a period as possible, but the use of slaked lime less than twenty-four hours old should be prohibited. In the past few years, hydrated lime has been coming into much greater use. Some specification writers, architects and engineers seem to believe that one of the two classes of lime, i.e. magnesian or calcium, is to be preferred, but individual preference will not have much weight if only one of these classes is obtainable in local supply. For all practical purposes, it is just as well to specify hydrated lime with the added restriction that it should be manufactured in accordance with specifications of The American Society for Testing Materials.

If cement is to be used, either Portland or a natural cement may be specified. Portland cement will, of course, be manufactured to meet the tests of the A.S.T.M.; likewise, natural cement should meet the same requirements. In the case of natural cement, however, the specification writer, unless he is thoroughly familiar with the available supply, should exercise caution in choices or restrictions, as some contractors feel that a natural cement is either too lean or too fat to work well, and if specified, some complications may arise. In the manufacture of several natural cements, hydrated lime is introduced in amounts ranging from five to ten per cent, thus making it necessary to eliminate the use of lime for gauging unless a mortar of higher content is desired. Other natural cements are not manufactured in this manner and may require lime gauging. These facts must be discovered upon investigation. In the past few years, a number of special brands of so-called "bricklayers cement" have come into vogue. There seems to be no general consensus regarding the suitability of one kind of this cement over another. Contractors who use one of these materials may be so well pleased with it that they would not care to use another. Specification writ-

ers will find that if they specify a particular brand of bricklayers cement for one operation and have it used successfully, the same specification for a subsequent operation may cause discord because of the resistance the contractor may offer its use. Most of these special cements have been tested by responsible testing laboratories and seem to bear out the assertions made in their favor. One word of caution should be kept in mind, and that is, to remember the materials that are to be used for the masonry structure and the possible effect as regards stains that may be had by the use of a special cement. Attention, of course, is given to this subject when considering the use of Portland or natural cements, but one is liable to forget this important factor for the others. Furthermore, care should be exercised in the quantity of sand and the kind of sand that is to be used in connection with bricklayers cement. This has a great deal to do with the workability of the mortar and as a result, with the satisfaction or dissatisfaction in its use. As a general rule, if the cement is mixed in accordance with the instructions of the manufacturer without adding sand beyond the requirements of the manufacturer, the material will work satisfactorily, consequently if a special cement of this kind is to be used, be sure of all these factors.

MISCELLANEOUS SPECIFICATION DATA

In many cases where the finest grade of wood trim that is to be manufactured, fabricated and finished in one shop is to be used, the specification writer is uncertain as to the best method of specifying the material, its finish, installation and the general results desired. The following paragraphs may be of some assistance to readers of these columns:

QUALITY OF MATERIALS:

All walnut shall be genuine American walnut, selected for uniformity in color and grain; all gum shall be kiln dried, quarter-sawed red gum; all oak shall be genuine English bog oak (or selected quarter-sawed American white oak); all birch shall be selected stock, kiln dried, for paint finish.

All rough woodwork, grounds, window frames and sash in basement shall be made of air-dried Northern pine, unless otherwise specified herein after.

All materials used in finishing the cabinet work (not otherwise specified) shall be made by reputable manufacturers approved by the Architect, and shall not be adulterated, thinned or changed in any way.

DISTRIBUTION OF WOODS:

Under this caption, the distribution of woods shall be specified clearly, unless a schedule appears on the drawings. This will facilitate the

study of the specifications and will assist the contractor and the superintendent in the proper layout of the work.

SAMPLES:

This Contractor shall furnish, for the approval of the Architect, samples of the walnut, gum, oak and birch in the cabinet finishes he proposes to furnish under this specification.

The samples shall be truly representative of that which is to be used in general work and for panels where matching is specified and shall be sufficiently large to show a good amount of figure.

There shall be one sample prepared which shall represent all solid stock that is to be furnished.

The finished samples shall have the first coat started one inch from one end and each succeeding coat one inch from the preceding coat so as to show the number of coats applied.

SHOP DRAWINGS:

This Contractor, immediately upon the award of the contract, shall prepare large scale and full size shop drawings of all work that is to be installed under this specification and he shall submit two sets of copies thereof to the Architect for approval.

These drawings shall show, in detail, the profile of all sections the nature of construction and framing together or assembling of the various parts, the method of anchorage or support, the application of hardware or other items and all other essential details in the construction, erection or operation of each unit or item.

The Architect will check the shop drawings for design, contours, construction, etc., but will verify only such dimensions as could not be obtained from the Architect's drawings or from the building.

One copy of approved drawings shall be filed with the Architect and additional copies shall be delivered to other contractors when necessary or as directed by the Architect.

The manufacture or assembly of work shall not be commenced until after these shop drawings shall have received the approval of the Architect.

MEASUREMENTS:

This Contractor shall obtain, at the building, all measurements which cannot be determined from the Architect's drawings or until after adjoining or surrounding building construction or equipment has been erected or installed.

This Contractor shall furnish to such contractors as the Architect directs, all finished dimensions of areas or spaces in work furnished hereunder in which work of other Contractors will be installed.

VENEERS AND VENEERED WORK:

All cores for veneered work shall be laminated or staved, made of sound basswood, old pine or

wormy chestnut, jointed and thoroughly glued up and of thicknesses shown or indicated on the drawings or as required for substantial construction. Both sides of cores shall be plane, parallel surfaces, without hollows or ridges.

All veneers shall be sawed, not rotary cut.

All veneers for door rails and stiles shall be not less than $\frac{1}{8}$ " thick.

All veneers for panels or other flat work shall be not less than $\frac{1}{12}$ " thick for cross-banding and $\frac{1}{16}$ " thick for face veneering.

All edge-banding shall be not less than $\frac{3}{4}$ " thick.

All cross-banding, face-veneering and edge-bands shall be glued solidly to the core and to each other, and the gluing shall be of a composition and applied in such a manner as to prevent blistering, peeling or other defects in the finished work.

All panel work shall be five-ply, of thickness shown or indicated, or as required to prevent warping and twisting and to insure substantial work.

All rails and stiles for doors shall be three-ply veneer $1\frac{1}{4}$ " thick or of thickness shown or indicated on the drawings or as required to insure substantial work.

All face veneering, unless otherwise specified or indicated, shall have the grain vertical.

All face veneering for panels shall be well figured and matched by reversing, with evenly divided veneers, so that joints will be spaced evenly to produce an artistic effect.

SOLID STOCK:

All mouldings, casings, chair rails, stools, sills, stops, and similar work shall be made out of solid stock which shall match in color the adjoining veneered work, except for such items for which the use of veneered stock would be more practicable.

FINISH OF WOODS:

All woodwork of every character shall be sanded thoroughly, leaving no machine marks or sand streaks. All finish shall be applied on the work in a horizontal position and in a dry, well ventilated and heated room.

Back, or concealed surfaces of all woodwork shall be given a heavy, thoroughly applied coat of lead and oil paint as a protection against dampness.

All oak woodwork shall be genuine acid-fumed, then given two coats of linseed oil, thoroughly rubbed dry.

All walnut woodwork, except base and window stools, shall be stained, filled, given not less than three coats of shellac and then waxed. All base and window stools shall be stained, filled and then

given two coats of spar varnish, rubbed to match, as closely as possible, the waxed walnut.

All gum woodwork shall be stained, shellaced and given two coats of spar varnish.

All birch shall be given a prime coat of paint for later finish in the field.

All surfaces of woodwork finished hereunder, upon completion of installation, and immediately before public opening of the rooms, shall be re-finished as may be necessary to leave them in perfect condition.

The Contractor shall submit to the Architect, before starting to apply any finish work of any kind on woodwork, complete specifications of the finish he proposes to apply and he shall make changes in these specifications as required to meet the approval of the Architect.

GROUND, PLUGS, FRAMING, ETC.:

This Contractor shall furnish and install all wood grounds required for the installation of the work included herein and for the plaster work.

This Contractor shall furnish and install all wood plugs or other nailing surfaces, additional to those specified herein to be furnished by others which are necessary for the proper installation of the work, and he shall furnish and install all necessary rough framing, supports, bracing and blocking-out work as required.

All furring and look-outs, etc., required for the installation of plaster work will be furnished and installed by others.

SHOP ASSEMBLING:

All work to be furnished hereunder shall be made complete and finished at the factory in large sections of such size as will lend themselves to transportation and assembling in the field.

All intersections left loose for assembling shall be fastened together with tongues, grooves and dowels, further fastened with stair rail bolts, and shall be well provided with cleats or blocking for protection when shipping.

All mouldings shall be glued in position except shoe moulds, glazing mouldings and marble base mouldings, which shall be left loose.

INSTALLATION OF WORK:

All work shall be installed in a workmanlike and substantial manner, using all necessary clips, anchors, dowels, bolts, screws, gluing or other means and methods of attachment and anchorage as may be approved by the Company.

All standing trim, linings, base, chair rails, wainscoting, etc., shall be blind-nailed or otherwise secured in place by means of concealed attachments. Where no other method is practicable, surface nailing will be permitted, but any tool-marked work shall be replaced by acceptable work in an approved manner.

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THE LEGAL SIDE of ARCHITECTURE*

THE long form of contract covers many other possibilities and points, such as extra charges for furnishings and all that sort of thing, along the line of the Institute schedules. The practice in many offices now is to print these contracts or similar ones, and when you have an ordinary client who is a good fellow and knows you, have him sign up the long form. If he is inclined to be a bit fussy, let him sign up the short form of contract. That is substantially the way it works. In about eighty per cent of the cases, the client will sign up the long form and everybody will be happy, and in about ninety-nine per cent of the cases, he will, in any event, sign one of these forms of contract.

The question of the agency of the architect is another question on which I must touch rather briefly here. You want to be pretty careful in your dealings with a client on the question of agency. Do not go beyond the powers that you definitely have under your contract with him. Do not assume that you have a right that you have not got. Do not think that you can issue orders for changes in the plans and that it is all right for you to do so, where the contract says that the owner is not bound for any extras or alterations, unless he approves of them in writing. If you do, the contractor may not be able to recover from the owner and may then try to collect from you, and you may have a law suit on your hands.

If you are going into this new development of architecture, of overseeing the lettering of contracts and the handling of money, do not get into a position where you are acting practically as contractor yourself. I had a case last year where a client of mine put himself in such a position that the owner claimed that he was the general contractor for the work. He wrote the owner that he had an organization which had an engineering department and was equipped to let all contracts for the various parts of the work, and that they would cut out the main contractor's profit by doing that and save the owner money, which was true, and then he went ahead and worded his letter in such a way that the owner attempted to construe it as an offer by him as a general contractor to build the building for a specified sum.

The owner did not understand it in this way, but when the building cost about \$40,000 more than he anticipated it would cost, he consulted a lawyer who advised that the wording was such that he could hold the architect as the contractor for that building. The result was that we had a law suit and it took upwards of a year to extricate the architect from the mess into which he had

gotten by writing two letters of about half a page each. He did not have the slightest thought of being a contractor, and the owner did not consider him such, but the owner nevertheless took advantage of the architect's position and came very near making him pay the \$40,000. He has been unsuccessful in doing so in this particular case, but it was not my client's fault.

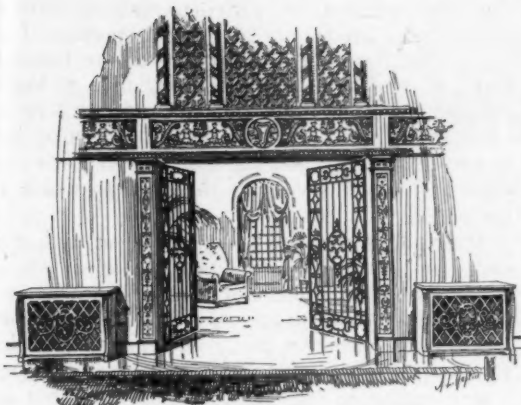
I have touched on the question of extras. The owner ordinarily is not bound by any extras that he does not authorize in writing. Be careful about that. Be careful concerning the question of your supervision. That, of course, is another danger point. That is the point where in a great many of these cases the owner claims the architect has been negligent and that he has made himself liable for damages—something is wrong with the construction. The owner cannot hold the builder, or the builder has been paid and defects develop six months later, and the owner wants the architect to make them good and claims that the fault is his.

In one case the owner tried to hold the architect because there was a leak and two or three ceilings fell down, necessitating a replacement cost of several thousand dollars. When we looked into the matter, we discovered it was all due to the fact that a nail had been driven through a lead pipe and caused a leak. The owner tried to hold the architect liable for that, claiming, apparently, that he should have watched the driving of that nail. All clients are not reasonable!

Supervision does not mean that you have got to watch every nail put in. It does mean that you must use ordinary care and skill. You have got to be there a reasonable number of times and see that the building is put up properly. If the client wishes to have a regular resident supervisor on the job—a clerk of the works—he must pay more. But you must give the work reasonable care and competent supervision while you are present. Unless you do, you are liable for anything that goes wrong, due to your failure to give proper supervision.

One final word on the question of the termination of the architect's employment. The contract between the architect and owner is a contract of personal employment. It is like the employment of a lawyer. If you employ me to do a certain piece of work and after I have partially completed it, you do not like the way I have done it, you have a right to go to someone else. It is the same with the architect. If he is employed to do a certain piece of work and the owner does not want to put up that building, the owner does not have to do it; it is not like buying a house, when you can compel the seller to convey titled to you. In the absence of a special contract, the general rule is,

*Lecture delivered by Clinton H. Blake, Jr., to the Students of the School of Architecture of the Massachusetts Institute of Technology—concluding installment.



The architect's original design with the two Ferrocraft Bronze Grille enclosures.



Showing the frieze converted into a Ferrocraft Grille as the architect now wishes he had done.

Two Ways Of Securing the Same Heating Results with Ferrocraft Grilles

The original was direct radiator heating and Ferrocraft Grille enclosures.

During a conversation with the architect, after the grilles had been installed he said:

"The bronze Ferrocraft enclosures are exactly as I designed them and entirely satisfactory, but as I see it now, it was the obvious thing to do, and rather lacks invention on my part. There is no reason why an indirect system could not have been used, and the frieze converted into a grille, quite as we talked about converting the cartouches in the adjoining room."

Professional ethics debar our mentioning this architect's name.

Suffice, that he is among the so called "leading twenty-five." To which let us add, that all Ferrocraft Grilles are hand tooled and hand chased by expert metal craftsmen. Do not confuse them with the untooled, so-called ornamental iron work.

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that, if you are employed definitely to erect a building and it is agreed that you are to be the architect of that building to prepare the plans for it and to supervise its erection and the owner, without fault on your part, discharges you as architect and employs another architect to erect it and the latter does so, you are entitled to damages based on the assumption that you were entitled to act as architect for the completed building. This general rule is apparently modified, however, in turn, by the Institute's rules and form of contract, providing, in effect, that, in the event of the suspension or termination of the work, the architect is to be paid the proportionate amount of his fee due up to that time. This proportion should be in accordance with the installment payments provided for under the Institute schedule of charges and form of contract. The question then arises what that proportionate amount is—whether the Institute contract means that you shall have three-fifths of your fee, if at the time your services are dispensed with, the work has reached the point where, under the Institute form of agreement, three-fifths of the architect's fee is payable. As the Institute agreement is worded, this would seem to be the intention. Logically, this should not be the result. In many cases, the conditions of a job are such that the architect who has done the work for which, under the rules of the Institute or its form of contract, he is entitled to receive three-fifths of his fee, has done actually much more than three-fifths of the total work that he will be called upon to do, or conversely, considerably less than two-thirds of such total work. The fair rule would seem to be, where the architect's services are dispensed with, that he should be paid the amount of his fee which has accrued up to that time on the basis of work done and services given. The installments for the payment of the fee provided in the Institute contract are, it seems to me, arbitrary installments based on the ordinary case, and provided in order to establish a convenient and definite standard governing the periods at which the payments on account of the fee shall be made. If an architect who is discharged at the one-fifth stage of the work (under the Institute contract) has actually at that time performed two-fifths of his full services, it would be clearly fair that he should receive two-fifths of his total fee, rather than one-fifth. An objection to a general provision that, in the event of the termination of the architect's services, his fee shall be in accordance with the reasonable value of the work done by him up to the point where his services are dispensed with, might be that, in any such case, the amount due him would be left unliquidated and a question of fact to be determined. Controversy on this point is obviated by the Institute form of contract or by any contract providing

that the architect, on retiring, shall be entitled to receive an arbitrarily specified proportion of his fee at that time. The advantage of the Institute form of contract is, accordingly, that it makes definite the amount due the architect on his retirement from the job, even if this may penalize him to some extent by making him accept a less sum than would actually cover the services which he has given.

I have been very glad again to meet with you, and I would like again to urge you when you go out in the active practice of your profession to try to visualize these danger points of supervision, agency and guarantee, and your services and what you are to be paid for them, and other headings that I cannot go into now, so that when you approach those points, you may tread carefully.

And again, and finally, in your dealing with owners, with contractors, with sub-contractors, with all of those interested in the building operations, be definite and you will save an immense amount of misunderstanding and a great deal of loss to yourself and to all concerned.

LEGAL DECISIONS

A BUILDER submitted a bid to an owner. The owner, on opening the bid, said to the builder "I guess it is up to you. Yours is the lowest bid." The court held that the statement made by the owner, as above, was an acceptance of the bid.

Lane v. Warren, 115 Southwestern 903.

CONTRACTORS submitted bids to build a house for a certain sum, not including the foundation. The bids were submitted in response to a written notice by the owner that he proposed to build. The court held that the bids submitted by the contractors under these conditions were, in effect, offers by them to erect the building for the sum named, and were to be construed, in arriving at the legal obligations of the parties, as an offer made by them to the owner.

Lane v. Warren, 53 Texas Civil Appeals 122.

IT appeared that it was the intention of both parties that the building contract should be reduced to writing. The contractor submitted plans and a written contract, signed by him and prepared for the signature of the owner and surety. The owner never signed the contract. The court held that, under these conditions, either party had a right to withdraw from the transaction, before the execution of the contract by the owner.

Barrelk v. Wehrli, 121 Louisiana 540.

Building in 1923

BILLIONS of dollars of new construction work is planned for 1923, further to remedy the nationwide building shortage. This means business for the architectural profession, after the construction projects are financed.

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THE Board of Governors represent memberships in the following national societies: American Institute of Architects; American Society of Civil Engineers; American Society of Mechanical Engineers; American Institute of Electrical Engineers; American Society for Testing Materials; American Concrete Institute; American Iron and Steel Electrical Engineers; indicating the scope and activities of The American Specification Institute.

THE AMERICAN ARCHITECT AND THE ARCHITECTURAL REVIEW has gratuitously set apart this section for use by The American Specification Institute. The Editors and Publishers assume no responsibility for any statements made, or opinions expressed.

The purpose, simply stated, is to afford an organization which, it is believed, will become a most important element in architectural practice and building operations, a medium through which it may, without expense to itself, reach a class of readers that are most intimately identified with the field of the activities of The American Specification Institute.

Publishers, THE AMERICAN ARCHITECT AND THE ARCHITECTURAL REVIEW.

THE Board of Governors is seeking all possible information relating to paints, varnishes, enamels, and the kindred finishing materials and their use. There is in preparation a bulletin covering the specifications for painting and although it was anticipated that the task would be great, the actual work required has far exceeded the expectations. Much material is at hand relating to the more common paint, varnish and enamel materials, but it is probable that there is a deficiency in information covering driers, shellacs, gilds, and other of the materials used more in first-class decorative work rather than in general building practice.

In the matter of application of finishing materials, it is believed that much more information of value could be obtained from those who are accustomed to inspect the paint finish work under buildings with a great deal of care. Many so-called "tricks of the trade" might very well be incorporated in specifications and made of universal use. Undoubtedly many interesting items could be brought to the attention of the Board of Governors by the members in different sections of the country.

One interesting portion of the bulletin will contain specifications for the determination of the finished film as a covering and as a durable finish

for the purpose intended. It is true that a high-class enamel in one position will not last as long as an enamel in a different position, although the use conditions may be the same. This may be caused by the condition of the surface to which the material has been applied, or to atmospheric conditions either during the application or subsequent thereto.

Members are requested to send in examples of their best painting specifications, that is to say, the most comprehensive ones for which careful study has been made. Much of the material requested sent in about a year ago in response to the first request has proved of great value, and it is felt to be impossible to obtain too much of the practical suggestions. Many of the manufacturers throughout the United States have been requested to send material covering the technical branch of the specifications, but if any of the members feel that they have news of importance along the technical lines, their suggestions are welcome.

ANNUAL MEETING

The annual meeting was held on the evening of May 7, at the Hamilton Club, Chicago. A complete report of this meeting will appear in the next issue.

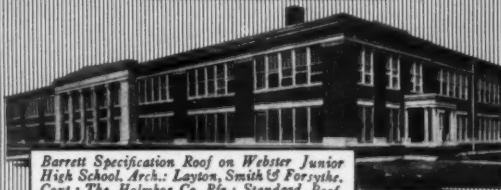
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Gloyd-Halliburton Building. Arch.: Layton, Smith & Forsythe. Cont.: F. A. Gross Const. Co. Rfr.: James F. Devine, all of Oklahoma City.



Barrett Specification Roof on Rolater Building. Cont.: P. L. Bottoms. Rfr.: James F. Devine, all of Oklahoma City.



Barrett Specification Roof on Webster Junior High School. Arch.: Layton, Smith & Forsythe. Cont.: The Holmboe Co. Rfr.: Standard Roofing and Material Co., all of Oklahoma City.



Magnolia Petroleum Filling Station. Arch.: Clarkson & Gomes, Dallas, Tex. Cont.: W. F. Lawrence, Oklahoma City. Rfr.: James F. Devine, Oklahoma City.

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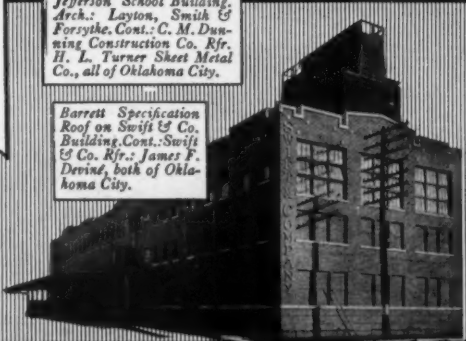
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Barrett Specification Roof on Southwestern Bell Telephone Co. Arch.: E. J. Peters, Shawnee, Okla. Cont.: Smiser Const. Co., Oklahoma City. Rfr.: James F. Devine, Oklahoma City.



Barrett Specification Roof on Jefferson School Building. Arch.: Layton, Smith & Forsythe. Cont.: C. M. Downing Construction Co. Rfr.: H. A. Turner Sheet Metal Co., all of Oklahoma City.



Barrett Specification Roof on Swift & Co. Building. Cont.: Swift & Co. Rfr.: James F. Devine, both of Oklahoma City.



Barrett Specification Roof on Mo., Kans. & Tex. R. R. Roundhouse. Cont.: H. D. McCoy, Cleburne, Tex. Rfr.: James F. Devine, Oklahoma City.

PERSONALS

Scott Quintin, architect, is now located at 219 West Main Street, Alhambra, Cal.

D. H. Burnham & Company are now located in Suite 609 at 105 West Monroe Street, Chicago, Ill.

Lincoln Norcott Hall, A.I.A., announces the removal of his office to 7 West Madison Street, Chicago, Ill.

Wood & Bradney, architects, have moved their office from the Builders Exchange Building to 70 Andrews Building, Buffalo, N. Y.

The New York office of John Mead Howells and Raymond M. Hood, associated architects, is now located at 18 East Forty-first Street.

Julius S. Klein, architect, announces the removal of his office from 434 The Arcade to 406-1900 Euclid Building, Cleveland, Ohio.

Announcement is made that George B. Bangs, architect, has opened an office for the general practice of architecture at Hollywood, Fla.

It is announced that James P. Baugh has opened an office for the practice of architecture at 403-404 First State Bank Building, Waco, Tex.

Arthur C. Yost, A.I.A., formerly of Richardson & Yost, architects and engineers, is now located in new quarters at 519 Caxton Building, Cleveland, Ohio.

Lloyd Rally, architect, has opened an office for the practice of architecture at 1019 Wright & Callender Building, Fourth and Hill Streets, Los Angeles, Cal.

A. Storrs Barrows, architect, announces the opening of his new studio at 56 James Street, Rochester, N. Y. Manufacturers' samples and catalogs are requested.

C. D. Hill & Company and J. W. Dehnert, architects, announce the removal of their offices from 202 Larendon Building to Suite 501 Kress Building, Houston, Tex.

Nelson P. Rice, architect, has opened offices for the practice of architecture at 1503 Arcade Building, St. Louis, Mo., where he will be pleased to receive manufacturers' catalogs and samples.

Hugh A. Sprague who was for several years associated with Robert B. Cridland, landscape architect, 1000 Bailey Building, Philadelphia, has opened an office as landscape architect and engineer at 2939 Clifton Street, Indianapolis, Ind.

Joseph H. Bristle, architect, desires to announce that he is now located in Room 1010, Tacoma Building, 5 North La Salle Street, Chicago, Ill.

Edward J. Weber, architect, has moved his office to 308 K. of C. Building, 237 Fourth Avenue, Pittsburgh, Pa. Manufacturers' samples and catalogs are desired.

Batey & Halloran, architects, have opened offices at 540 North Seventh Street, Steubenville, Ohio, having been formerly located at Huntington, W. Va. Samples and catalogs are desired.

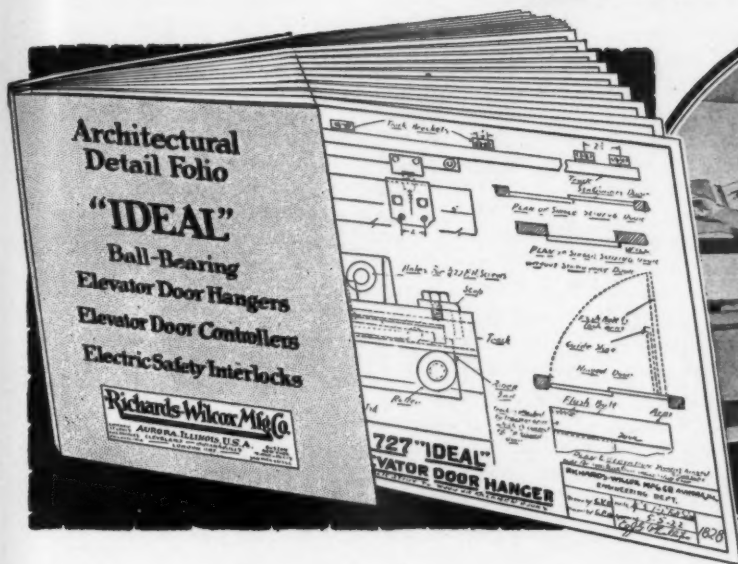
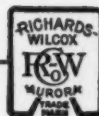
S. M. Colburn, for the past twenty years a member of the firm of Kees & Colburn, architects, announces the formation of a partnership with Ernest Forsell for the practice of architecture under the firm name of Colburn & Forsell, architects, with offices at 210 South Ninth Street, Minneapolis, Minn. Manufacturers' samples and catalogs are desired.

Walter B. Phillips, architect, announces the opening of his office for a general professional practice at 307 South Hill Street, Los Angeles, Cal. Mr. Phillips was a resident of New York City for the past seven years and for some time was associated with York & Sawyer, architects, in whose office his most recent work was in charge of job management on the new Pershing Square Building, New York City. Manufacturers are requested to send catalogs and samples.

Rudolph P. Miller, formerly Superintendent of Buildings for Manhattan and first chairman of the Board of Standards and Appeals of the City of New York, announces that he has resumed practice as consulting engineer with offices at 25 West Forty-fifth Street, New York City.

Matters relating to the construction, use and occupancy of buildings are the special field in which his services are offered, particularly with reference to appeals and petitions to the Board of Standards and Appeals, interpretations of the laws relating to buildings, inspection and survey of buildings, soil examinations, testing of materials of construction, arbitration of disputes, expert testimony in litigation, formulation of building codes, and the preparation of zoning plans for municipalities.

As draftsman of the present building code of New York City, as a member of the Building Code Committee of the U. S. Department of Commerce, as representative of American Engineering Council on the National Board for Jurisdictional Awards in the Building Industry, and as an active participant in committee work of various technical societies, he is in close touch with developments in the building industry.



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This unusual detail folio took our Engineering Department more than a year to prepare. Nothing quite like it has ever been offered by any manufacturer. Contains information hitherto unavailable to architects. Gives complete facts instantly in technical form for plans, specifications and detail drawings. As the detail drawings in the book cover practically every elevator door installation problem, many architects are now making blueprints directly from it, thus saving time and labor. This detail folio will be sent without cost or obligation. Just drop us a line.

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BOOK NOTES

Spanish Interiors and Furniture

MOST architects in this country know Italy, many know France, but few know Spain. It seems strange that in the search for the beautiful that a country whose heritage of art is so rich should be so generally ignored. We talk and write of the "renaissance," and when we do, we more generally think of Italy. But there has been for centuries an art in Spain, so rich and fine that it is to be wondered that its beauties are so little known. The interior of the Spanish home is yet to be revealed to us. Lately there has appeared a tendency to suggest in interior design and decoration something Spanish. But the true elements, the real "feel" of it, have been lacking.

Mrs. Stapley and Mr. Byne, the collaborators of this book, have during the last ten years spent most of their time in Spain. Mrs. Stapley's monographs and Mr. Byne's clever illustrations are perhaps the most accurate data that has thus far been presented to the American public. The very fine support of The Hispanic Society of America has made the researches of these two competent persons possible. The good results, as set forth in the books on Spanish art and craftsmanship thus far published, are very apparent.

There are now available Parts Two, Three and Four of the series on Spanish Interiors and Furniture. Part One, issued some time ago, has received previous notice. The three parts just out, continue the excellent work of the first part. The plates have been cleverly prepared and the text as cleverly written.

Spanish Interiors and Furniture. Photographs and Drawings by Arthur Byne, with text by Mildred Stapley. In Portfolio, \$40.00. Bound in two volumes, \$50.00. New York, William Helburn, Inc.

Ventilation, Report of the New York State Commission on Ventilation

PROBABLY no subject, at this time, is more prolific of discussion, of theories and means of production, than is ventilation. One day in the comparatively dim past someone estimated that persons should be provided with a certain number of cubic feet of fresh air per minute. On what basis this was determined is not of particular moment at this time. The result is that codes and regulations embodying these requirements were adopted by almost every civil authority in control of health and sanitation. In accordance with these codes the modern science and profession of ventilation was developed with attendant commercial and manufacturing interests.

It appears that during all this period the art of ventilation was based on an assumption. Through the interest and generosity of the Millbank Memorial Fund the most extensive investigation of

the subject ever undertaken was conducted by a commission appointed in 1913 by former Governor Sulzer of New York. The commission is composed of men prominently identified with activities closely related to the subject. The work of the commission was interrupted by the war and its report is now completed and available for study.

The outstanding feature of this investigation is that the effect of heat, air and humidity on the human being was to be measured in a definite and scientific manner. It apparently took some fifty years or more to bring about a realization that from actual effects on the person, the art should be developed.

The report contains all of the recorded data of numberless tests made under existing conditions in many widely scattered localities and under all manner of varied conditions in existing buildings and in especially constructed rooms. Every possible angle of the subject was investigated and many preconceived theories based on assumptions were found to be incorrect.

Lack of space does not permit an extended statement of the conclusions of the commission. The report should find its way into the hands of every library, technical school, civil authority controlling health and sanitation, teacher of heating and ventilation, ventilating engineer and architect who plans buildings that require ventilation.

Ventilation. Report of the New York State Commission on Ventilation. 620 pp., illustrated, 6 1/2 x 10 inches, cloth. New York, E. P. Dutton & Co. Price \$15.00.

Architectural Composition

PROFESSOR VARON has put together a most excellent book. It departs from the usual method of text book construction. It is readable and entertaining without in any sense losing sight of the fact that the purpose is to educate the student in the best principles of architectural composition.

The work is divided into eleven chapters, leading the student logically and safely from a consideration of the simplest forms of plan elements through the various more complicated plan elements, rhythm, scale, to concluding remarks on harmony and the proper methods of advanced plan study.

There are 40 plates, mostly provided to illustrate graphically the writer's points as brought out in the text. Withal the work is worth while, and, though primarily for the student, will be found a most stimulating work for the man in practice.

Architectural Composition, by D. Varon, former Professor of Architecture at Syracuse University and at the University of Illinois. Full cloth, 140 pp.; size 10 x 12 inches. Price \$6.00. New York, William Helburn, Inc.



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of Wrought Pipe Quality*

English Homes**THE LATE TUDOR AND EARLY STUART PERIODS**

THE third volume of the important series on English homes published by *Country Life* of London, is now received. In reviewing the preceding volumes, it was stated that while the English country house had probably been written up and illustrated more than any other architectural topic, this dignified presentation had a novelty and charm that revived a lively interest.

This sentiment can be repeated with respect to the present volume which treats of the Late Tudor and Early Stuart Periods (1558-1649). With the accession of Elizabeth in 1558, England became more tranquilized. The zest for home building had returned and with newer influences the charm of well designed novelty was everywhere apparent. The style that arose during the early part of Elizabeth's reign did not exhaust its novelty, nor fail in originality during her lifetime. Just how markedly original was this strong advance in design is shown throughout this volume and the tendencies toward the evolution of types that have become standards of design can be noted by comparison of the houses illustrated in this book with the volumes that have preceded it.

Books of this nature, when so splendidly prepared, become an absolute essential in the working libraries of architects. Their suggestive value is out of proportion to the comparatively small cost.

Triangle Club of New Jersey Organized

THE Triangle Club of New Jersey was recently organized in Jersey City. Architects, draftsmen, professional engineers, superintendents of construction, or others whose qualifications are satisfactory to the membership committee, are eligible to join. The purpose of the organization is the promotion of a general spirit of good fellowship. Officers elected were Hugh A. Kelly, president; Harry J. Oste, vice president; and Peter J. Gannon, secretary.

Industrial Arts Development Medal

A SHORT while ago Michael Friedsam, president of B. Altman & Company, New York, presented to Howard Greenley, president of The Architectural League of New York, an Industrial Arts Development Medal. This medal is to be competed for by artists and artisans of America and presented by the League to that individual who has contributed most to the development of art in industry in 1923.

In presenting the medal, Mr. Friedsam stated that he hoped it would be an incentive to a further

The plates are large and beautifully reproduced, while the text affords the very best and most reliable analysis of the houses of this important period of English domestic architecture.

English Homes, Period III, Vol. I, Late Tudor and Early Stuart (1558-1649), by H. Avray Tipping, M.A., F.S.A. Full cloth, 378 pp.; size 10 x 15 inches; price \$25.00. London, *Country Life* and George Newnes. New York, Charles Scribner's Sons.

500 Plain Answers to Direct Questions on Steam Heating

THE contents of this book are arranged in the form of questions and answers. The range of the work includes the theory and laws of heat, the accessories and parts of the complete plant, steam and hot water heating, vacuum and vapor systems of heating, as well as the ordinary one and two pipe gravity systems, details of connections, heating all classes of buildings including greenhouses, useful information, rules and tables. The work is divided into nine chapters, with table of contents and index.

The information is general in character and is not specific enough to be applied to large installations. From its reading, a general idea can be secured of the subject.

500 Plain Answers to Direct Questions on Steam, Hot Water, Vapor and Vacuum Heating, by Alfred G. King. 253 pp., illustrated, 6 x 9 in. Norman W. Henley Publishing Co., New York City. Price \$2.50.

linking together of art and industry. The medal will be known as the Michael Friedsam Medal.

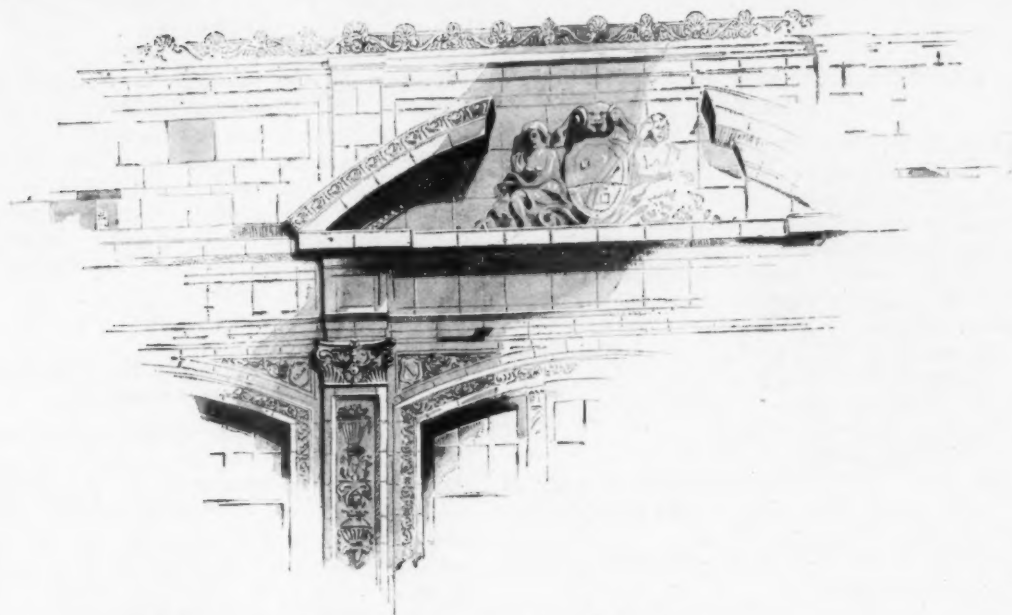
The committee of award of the Architectural League consists of Howard Greenley, president, James Monroe Hewlett, president of the Mural Painters, Dr. John H. Finley, Charles Cheney, Professor C. H. Richards and Sidney Blumenthal.

To Spend \$500,000,000 for Improving Paris

ALTHOUGH France is facing one of the worst financial crises of her history, Paris, it is reported, will spend 7,000,000,000 francs, or nearly \$500,000,000, for municipal improvements.

The items include: Subway, extension, \$65,000,000; workmen's dwellings, \$6,000,000; repairing streets and improving public gardens, \$6,000,000; water works, \$2,000,000; repairs on City Hall, nearly \$1,000,000; new lighting, \$6,000,000.

In addition to the \$500,000,000 total, \$30,000,000 will be spent on the port of Paris.



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International Congress on Architectural Education

PRESS reports from England announce that the Council of the R. I. B. A. has decided to hold an International Congress on Architectural Education in London in the Autumn of 1924.

The congress will consist of special meetings for the purpose of considering the history, position, and prospects of architectural education with special reference to the following points:—

The revision of the methods and system of obtaining professional qualifications

The sources of study; the use of travel

Prizes and awards of honor

Preliminary studies

Detailed subjects: Draftsmanship; study of history; practical handwork; professional journals; contact with works

Examinations: Standards; relation to practice; paid examiners

Promotion of post-graduate studies: relation to preliminary and general education

The subject of the congress, important at all times to architects, is more than ever important at the present day in view of the vital changes which are being introduced into British architectural

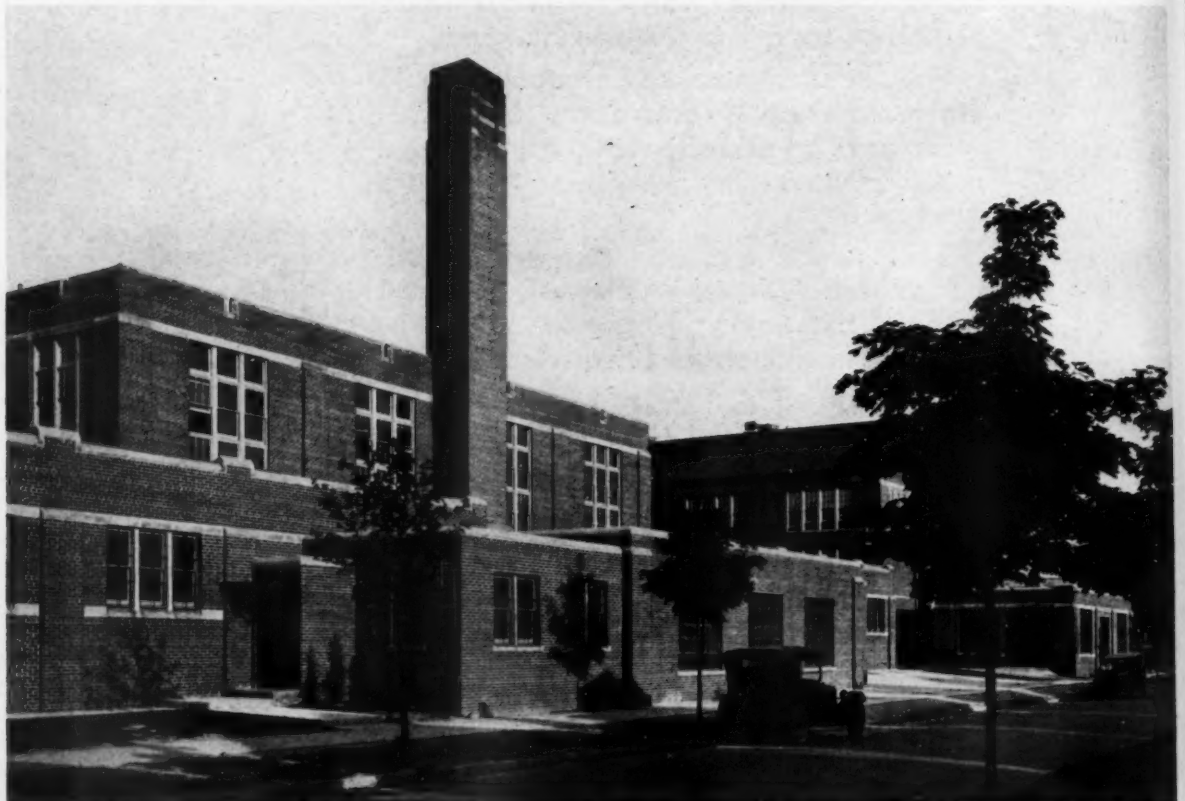
education by the schools. It is hoped that a national and international exchange of ideas will lead to valuable future developments.

The organizing committee of the Board of Architectural Education will be glad to receive and consider suggestions for the greater success of the congress, which should be sent to the secretary of the Board of Architectural Education, 9 Conduit Street, W.1., London.

University of Michigan to Have European Scholarship in Architecture

THE College of Architecture of the University of Michigan is to have a European scholarship, through the generosity of Mr. George G. Booth of Detroit. The scholarship will be awarded for the first time at the end of the academic year 1923-24 and will be in the sum of \$1,200.

The successful candidate is to be given considerable freedom in the choice of his field of work and observation abroad, and is to be selected by the architectural faculty on the basis of his total record as a student, ability in design, and fitness to do independent work abroad.

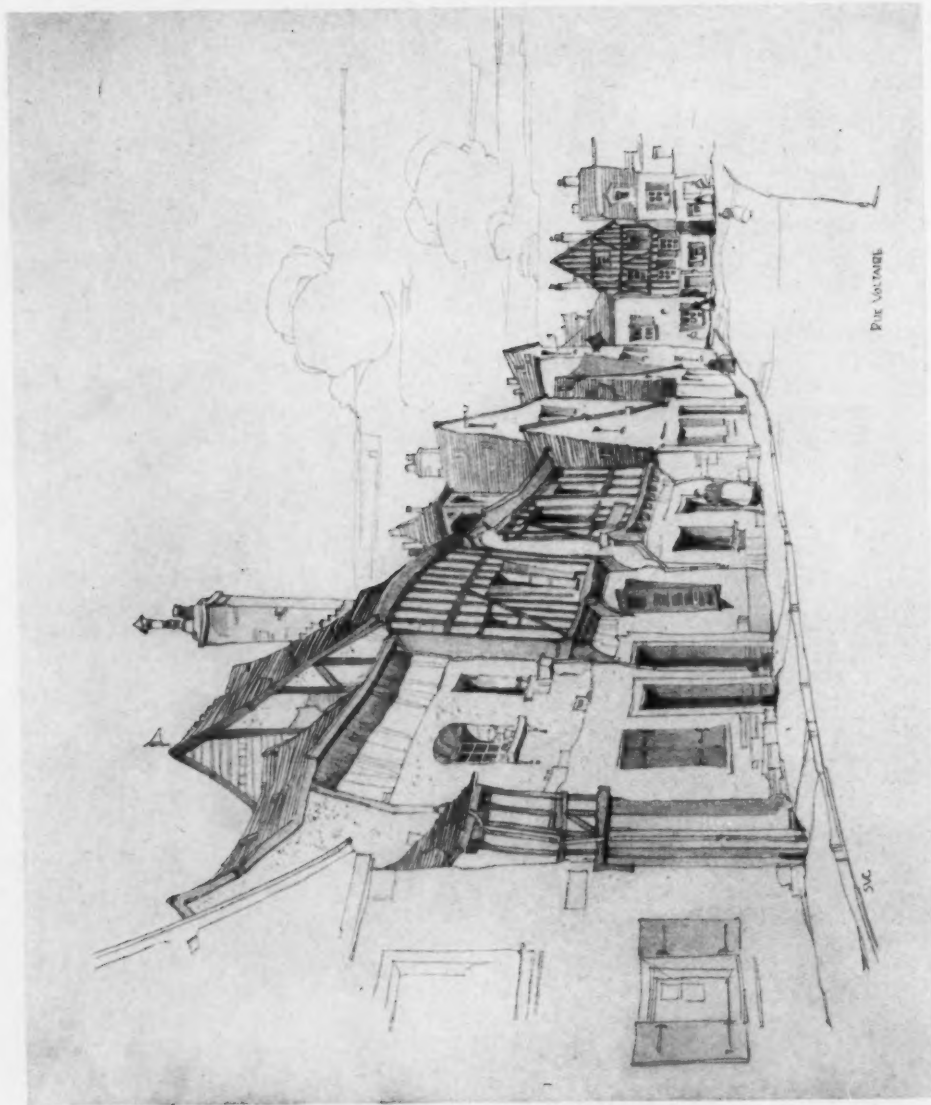


Rear View, Hutchinson Intermediate School, Detroit, Mich.

Malcomson, Higginbotham & Palmer, Architects

(For additional illustrations see Plates following Page 404)

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ROUEN

(From the original sketch by Samuel Chamberlain)

THE AMERICAN ARCHITECT