THE AMERICAN ARCHITECT

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THE OLD HOMESTEAD
MODEL BY HOMER F. EMENS

Scenery and Stage Decoration

BY J. MONROE HEWLETT

1. A recent exhibition at the Brooklyn Museum illustrating "The Scenic Art of the Theater."

"CATS is dogs, and rabbits is dogs, but turtles is insects." Playwrights, composers, singers and actors have long been classed as "artists," but in this country it is only recently that scene painters and designers have begun to share in the sort of public appreciation that is accorded to those whose work is creative and imaginative as well as technically proficient.

The nineteenth century school of scene painting may be said to have reached its zenith in the great cycloramas so popular about twenty-five years ago, in which the mental stimulus consisted mainly in trying to determine which members of a group of dead horses and fighting soldiers were real stuffed figures and which were "only painted." As a passing tribute to the painter it may be said that the painted ones were much more realistic than the stuffed ones, and the line of demarcation between the canvas background and the reeds, grasses and banks of earth which formed the foreground frequently defied detection without the aid of an opera glass. Those of us who are not enthusiastic about the "movies" may at least take comfort in the fact that this class of entertainment now seems so essen-

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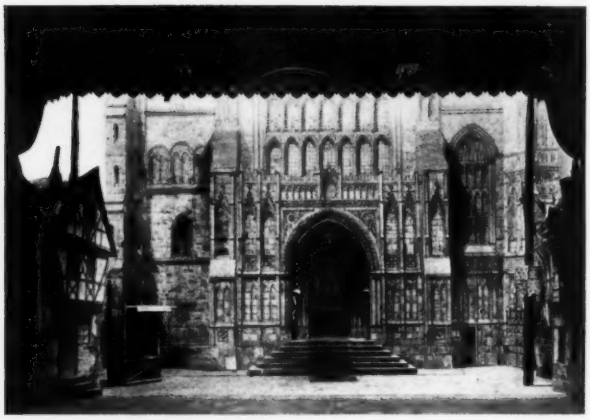


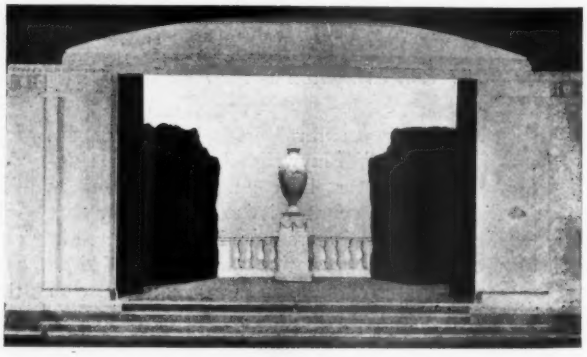
THE CANTERBURY PILGRIMS—CATHEDRAL FRONT
MODEL BY HOMER F. EMENS

tially satisfying to the portion of the public that yearns for accurate portrayal of locality in the setting of a drama, as to leave the stage proper free to develop more fully than in the past the sort of scenic harmony that makes of an entire production, action and actors, costumes, lighting and scenic setting a thoroughly co-ordinated unit of dramatic art.

We are now in the throes of a reaction from excessive and misapplied realism, and this reaction takes many different forms. "Abandon scenery altogether; let the imagination of the audience supply the setting." "Provide a setting, but let it not be pictorial. Make it merely decorative," or "suggestive," or "symbolic," or "imaginative." "Let us be simple." How shall we be simple? "The mind of a savage is simple, therefore let us be primitive and slough off all modern sophistication and get back to first principles." "The mind of a child is simple, therefore let us be childlike, innocent, naïve," "As far as possible eliminate color. A background must be neutral. Let the costumes supply the color." Not so, "Color is the only thing that really matters, crude, pure color vibrating in unison with the theme of the action or the music." One could go on indefinitely quoting points of view that have entered into the recent development of stage decoration, and in fact, as Kipling's totem says, "Every single one of them is right," and under favoring circumstances can be successfully applied, but no such theories can be regarded as fundamental principles nor should they be used as the basis of a recipe.

The scenic designer is not a star performer; he is an accompanist, and an inflexible point of view in regard to the character and legitimate scope of his work puts him in somewhat the position of Lewis Carroll's butcher who could only kill beavers. Scenic design calls for a rigid suppression of the individuality that is so often held up as the great goal of endeavor in other branches of art. A sympathetic study of the action, the dramatic theme, and the prevailing sentiment of a play or opera reveals such exacting requirements in the theme itself as to leave little excuse for any emphasis of the personality of the designer. The vigor and originality of such a designer as Bakst, however splendid it may appear in a ballet or other spectacle in which the delight of the eye is the leading motive, becomes forced and disturbing as an accompaniment to a theme with a well defined esthetic character of its own, and when his imitators try to make out of his methods a recipe for universal application the result becomes positively objectionable. This is what is wrong with the so-called "Modern School." A few men of real ability have stampeded a crowd that lacks the training and the instinct to distinguish between simplicity and crudity, between vigor and barbarism, between refinement and weakness, between marked individuality and tricky mannerism.

The remedy for this sort of thing will come with a better general understanding of the problems to be met, problems not in any sense confined to the technique of scene painting, but rather having to do with questions of appropriateness and depending for their solution upon a discriminating literary and artistic judgment. It is well therefore that the art museums should do their part in helping to cultivate a more general knowledge of this subject, and the recent exhibition at the Brooklyn Museum marks an encouraging first step in this direction. It was to be expected that the older school would be more fully represented than the work of more modern



BETWEEN TWO RAYS OF MOONLIGHT—GARDEN SETTING
MODEL BY HOWARD GREENLEY

IPHIGENIA IN TAURIS

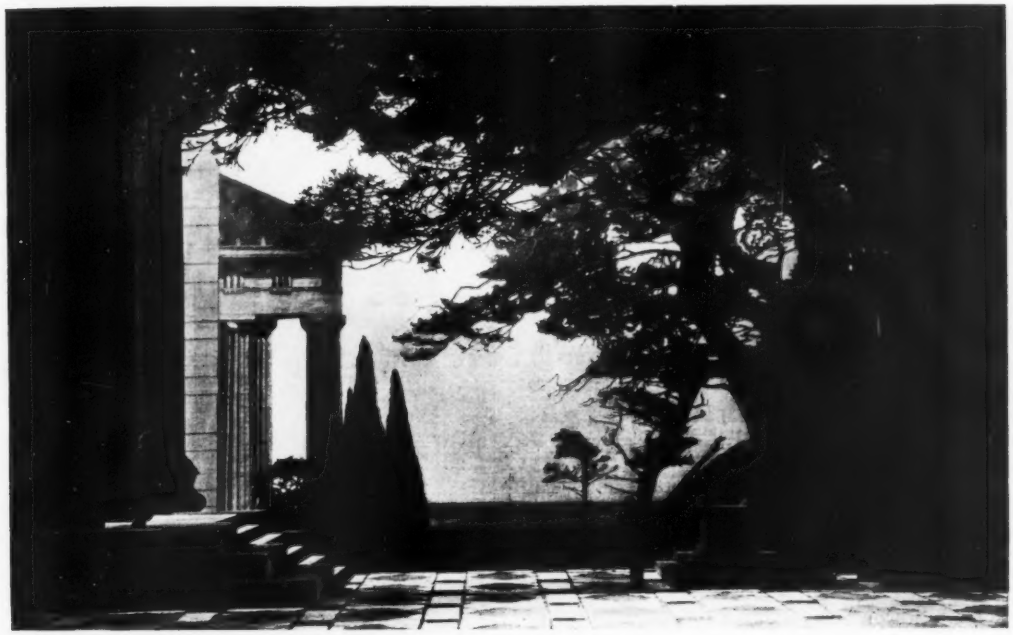
MODEL BY J. MONROE HEWLETT, CHARLES BASING AND A. T. HEWLETT

EILEEN—FIRST ACT
MODEL BY WALTER M. HARVEY

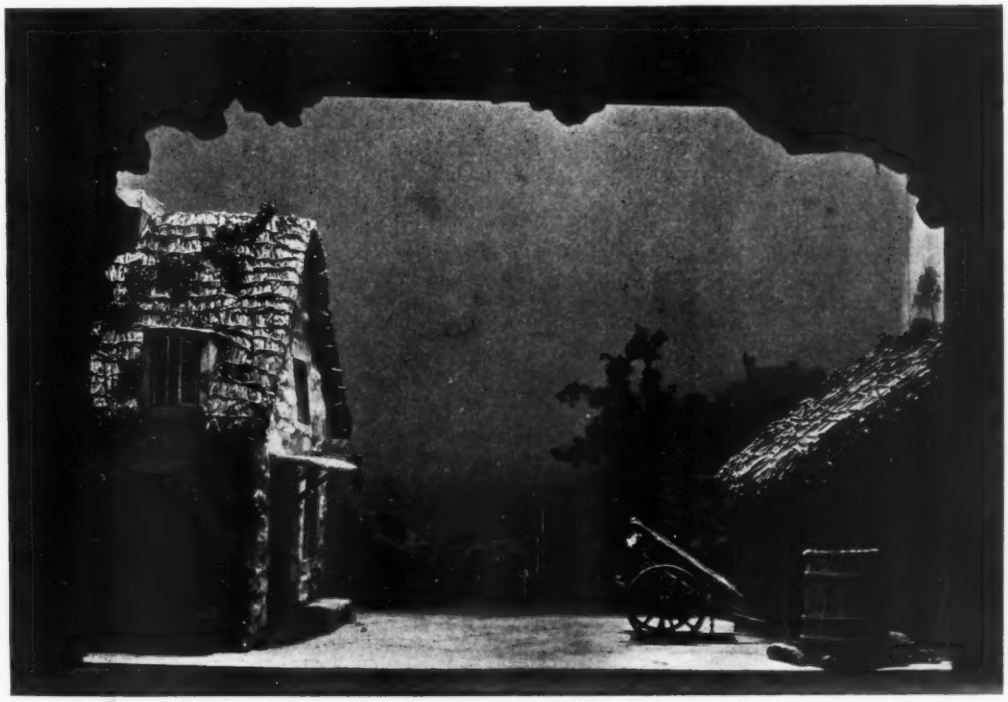
tendencies, and this is as it should be. A museum as an institution should stand for conservatism, for the careful comparison of the new thing with the standard works of the past before the new thing is granted equal recognition. Furthermore the newer essays in stage craft are for the most part largely experimental in character, in many cases improvised at the final scale of the production without any definite studies or small scale models suitable for exhibition. This frequently leads to most interesting results, but it is an unreliable and amateurish way of getting at a problem in design, and an exhibition of studies of a given craft should illustrate workmanlike methods of procedure that lead to accurately expected results and not the mere fortunate accidents that sometimes result from an unstudied or half-baked scheme.

Among about forty models which form the main part of this exhibition I have selected several for illustration and special comment, not in every case because of any special excellence as compared with the others, but because they seem to typify more distinctively certain tendencies which should be fully recognized in trying to arrive at useful conclusions. Denman Thompson's "Old Homestead" is surely entitled to rank as one of the classics of the American stage, and it is well that an exceedingly complete model by Homer Emens makes it possible to consider the part contributed by the stage setting to the almost unprecedented popularity of this production. Here nothing is left to the imagination. All the trivial details incident to the American farmer's home, whether in New England or farther west, are presented. Probably everyone of the audience had seen just such a farm yard. Everyone felt at once that the quaint characters were absolutely at home in such surroundings, and the imagination of the audience, not being called upon to supply missing physical details, was left free to impart to the homely picture of commonplace everyday

SALVATION NELL—STREET SCENE
MODEL BY ERNEST GROS



IPHIGENIA IN TAURIS—FIRST ACT
MODEL BY J. MONROE HEWLETT, CHARLES BASING AND A. T. HEWLETT



GIOCONDA—SECOND ACT
MODEL BY MARIO SALA, MILAN, ITALY

PHARAOH'S PRISON
MODEL BY GATES AND MORANGE

life the pathos, humor, tragedy and nobility which caused this simple country drama to be accepted as a sort of epic of American life. It is interesting to try to figure out how this particular problem of scenic design would be approached by the "modernist." For my part I cannot see how any of his pet notions could have been applied here without a distinct loss of the sentiment of the play.

There are several other examples of an exaggerated realism thoroughly justified by the circumstances of the case, and one of the most interesting of these is Ernest Gros's street scene from "Salvation Nell," in which the massed fronts of the tenements, with their all over pattern of window sashes and rickety fire escapes, punctuated at intervals by the week's wash, form a background simple in composition and decorative in detail.

Homer Emen's "Front of Canterbury Cathedral," the second act of "Gioconda" by Mario Sala of Milan, and Walter M. Harvey's first act of "Eileen" are all dignified compositions in which detail of considerable intricacy has been beautifully subordinated to the unity of the important masses.

BABYLONIAN SCENE
MODEL BY JOHN YOUNG

John Young exhibits a model of a "Babylonian Scene" which contains much of unusual interest in color and design. It is, however, inadequate in its suggestion of scale and lacks concentration of color.

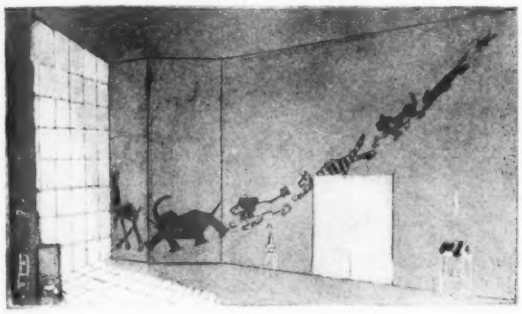
There is a group of tiny models by Gates and Morange for "Joseph and His Brethren." One of these, "Pharaoh's Prison," is reproduced herewith.

TANNHAUSER—FIRST ACT
MODEL BY ROLLO PETERS

This is an excellent example of what a scenic model should be. Many of the models in the exhibition have too much the look of things made for exhibition, rather than studies in relief made for the purpose of bringing into proper relation the several masses and silhouettes which are to compose the finished scene. "Pharaoh's Prison" is a big subject handled in a broad, simple way, and this presentation of the composition should help the student to realize how relatively unimportant in the final result is the question whether his method of presentation shall be realistic or highly conventionalized, vague and softly defined in its masses or firmly delineated with hard profiles. The point is that this composition having been developed to the extent shown in this simple little model could be adequately rendered in a dozen different ways, "according to taste," as the cook books say.

I have emphasized the unimportance of the manner of presentation or rendering as compared with the substance of the thing rendered, but as St. Gaudens once said, "It isn't what you do, but how you do it, that counts," and having arrived by study of a small scale model at an arrangement that meets the broader requirements of the theme the rendering

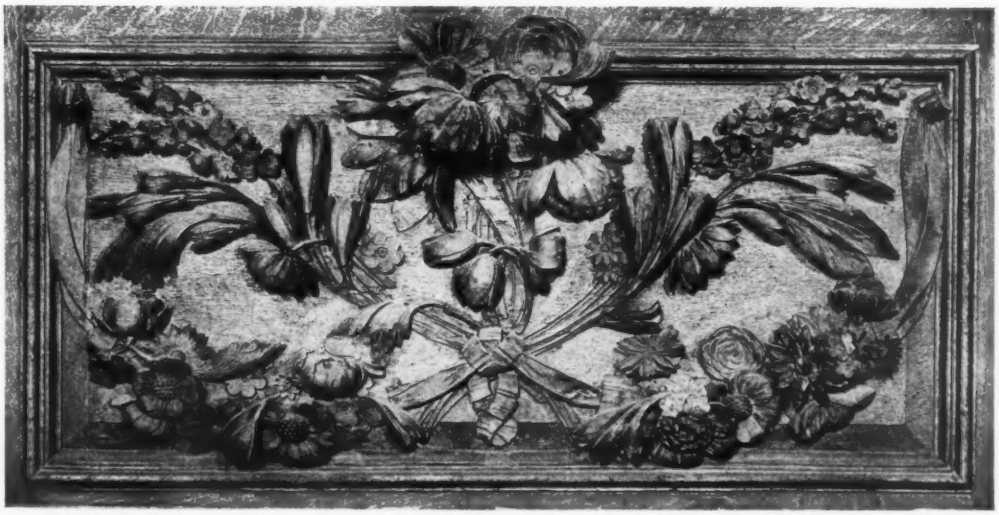
thereupon becomes of vast importance. Not so much the choice of how it shall be rendered, but the application of the method selected to all parts of the production—scenery, decorations, costumes and properties—so as to secure the necessary harmony in all parts. Many designers are working to-day for



SCENE FOR A NURSERY
SKETCH BY ROBERT LAWSON

the effects that can be secured by crude impressions, and such a study as Rollo Peters's "First Act of Tannhauser" rather comes under that class, but there are a few whose effort lies in the direction of simplification by eliminating the non-essential things and refining to the utmost the delineation of such detail as is retained. This method is illustrated by two masks designed by Edmund Dulac for W. B. Yeats's play, "At the Hawk's Well," and also by Howard Greenley's model for a pantomime, "Between Two Rays of Moonlight." The Siedle Studios exhibit a model by Berimo for "The Willow Tree" which has great charm of color. There are also many interesting sketches and studies, among which Robert Lawson's "Scene for a Nursery" contains the hint of a possibly charming tableau, providing his living figures are posed with the same dramatic instinct as his beasts.

It is to be hoped that the exhibit treated of here will appear to have been worth while to the management of the Brooklyn Museum and also to other similar institutions throughout the country. A sustained and lively interest in this subject has in it the germ of a beneficent influence upon the entire field of decorative art. In decoration, as in costume, the stage offers the best possible field of experiment for novel ideas of design before they are embodied into more enduring forms, and an increased interest in the problems of stage design on the part of architects, painters and sculptors will bear fruit in the form of new material for their respective arts.

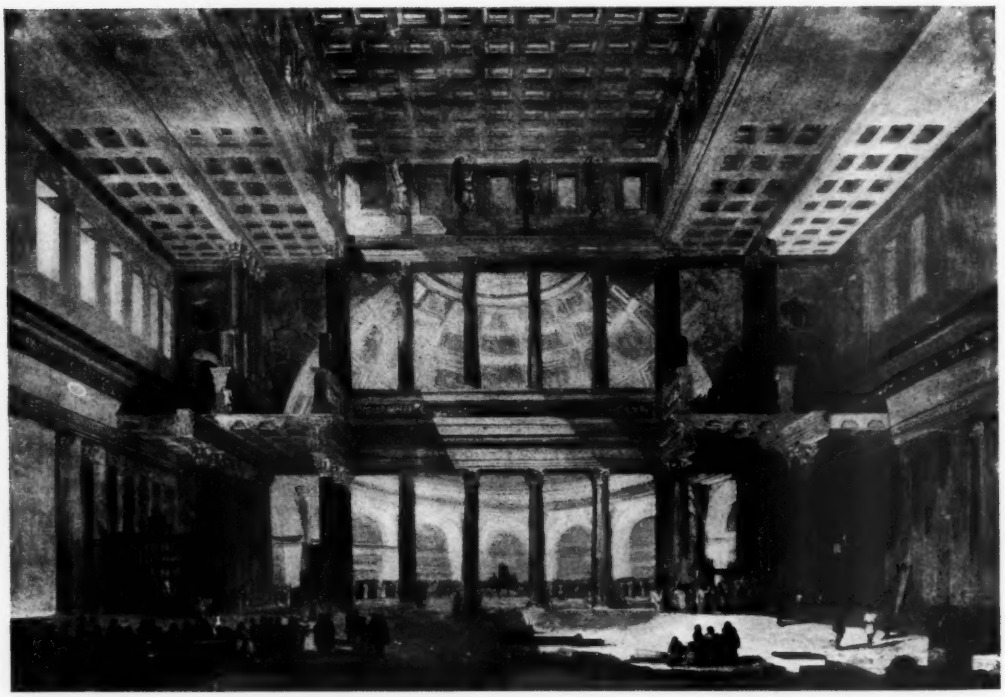


How the Artists Fool the Enemy

A FRIEND writes me from Paris that one day while driving through the forest of Saint Germain he came upon a convoy going to the front—six big 155-mm. guns "dragged by motors and all the personnel and ammunition tractioned by motor also, but automobiles of such very strange aspect. They were painted in chromes and greens and blues and purples to represent rocks and trees and leaves and shrubs, like scenery, so as to be completely dissimulated from the enemy. My companion said, '*Regardez comme ils sont bien camouflés,*' and I said, 'Well, I am glad that at last they are making use of the talent of the painters in a practical way.' "

Last summer, just after the battle of the Somme, this same friend met a man he knew, the head of one of the great designing houses of Paris, wearing his uniform and proudly displaying on his breast his *croix de guerre avec palmes,* the highest military honor. "You are back on leave?" he asked. "Yes and no," was the reply. "I am at present on post near Paris. I am *camoufleur.*"

Then he told some stories of the camouflage. Just before the attack on the Somme the German aviators were very active and made it difficult, except at night, to move large bodies of troops to the front. One road especially, leading from a small forest but lying straight and white over the fields, was closely watched. It became most important to get some big guns and many men over this road and into position by the 1st of July. So the camoufleurs got very busy and painted "three kilometers of white roadway bordered with green, and when the enemy aviators arose to reconnoitre they reported 'nothing moving on the road from Amiens,' while all day long, for five long days, a continuous line of artillery and thousands of troops passed under the painted roadway to take their assigned places for the great attack. So you see that we painters are worth something, after all, and that this canvas was the result of *genie* as well as genius!"—*From Scribner's Magazine for July.*



INTERIOR OF THE ULPIAN BASILICA, ROME
FROM THE DRAWING BY C. R. COCKERELL
From the Architects' and Builders' Journal

PLATE 24

COMMON HALL, ABBOTT'S HOSPITAL, GUILDFORD

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

ENGLISH DETAILS
NO. 5

XUM

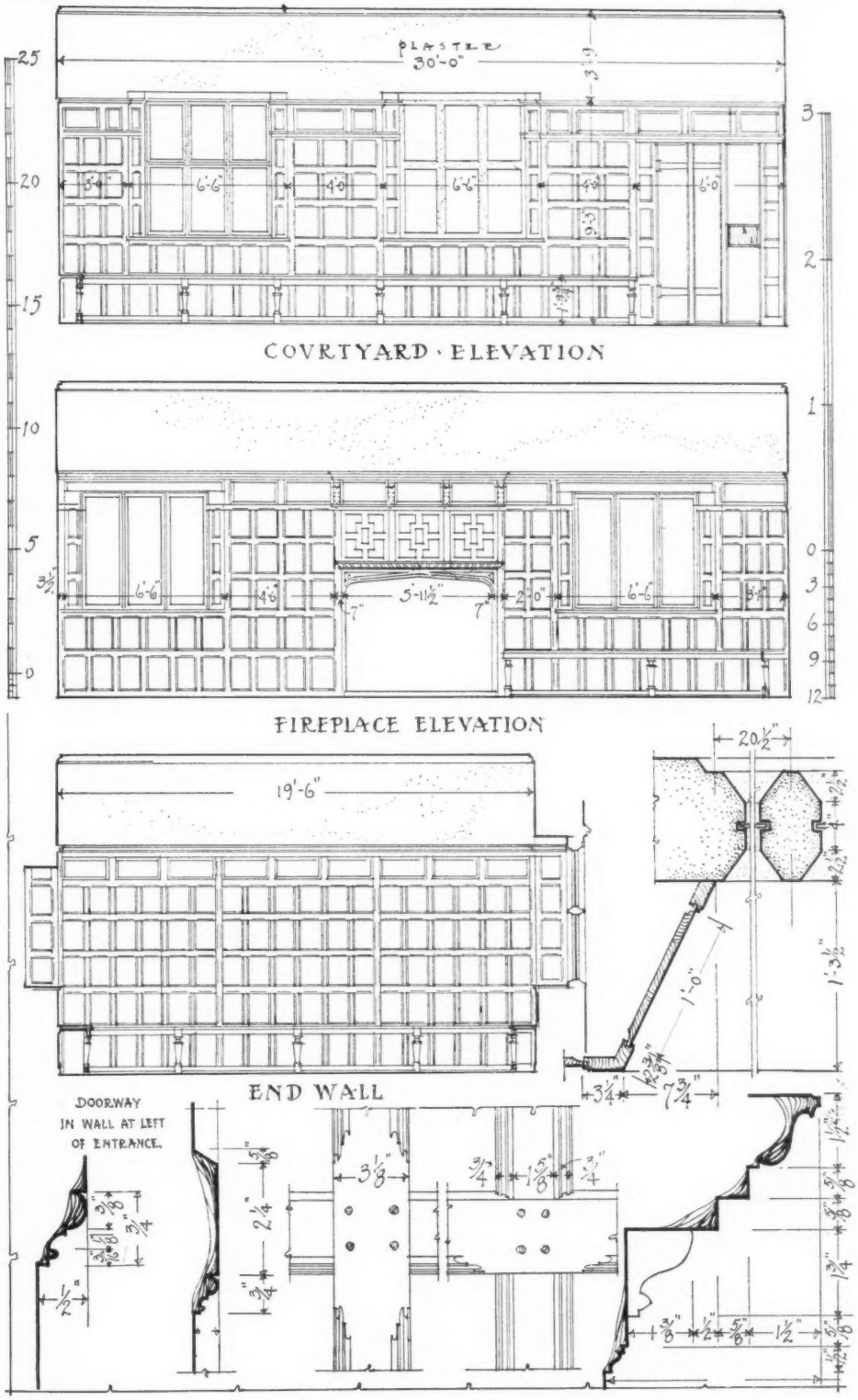


PLATE 25

COMMON HALL, ABBOTT'S HOSPITAL, GUILDFORD

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

ENGLISH DETAILS
NO. 5

XUM

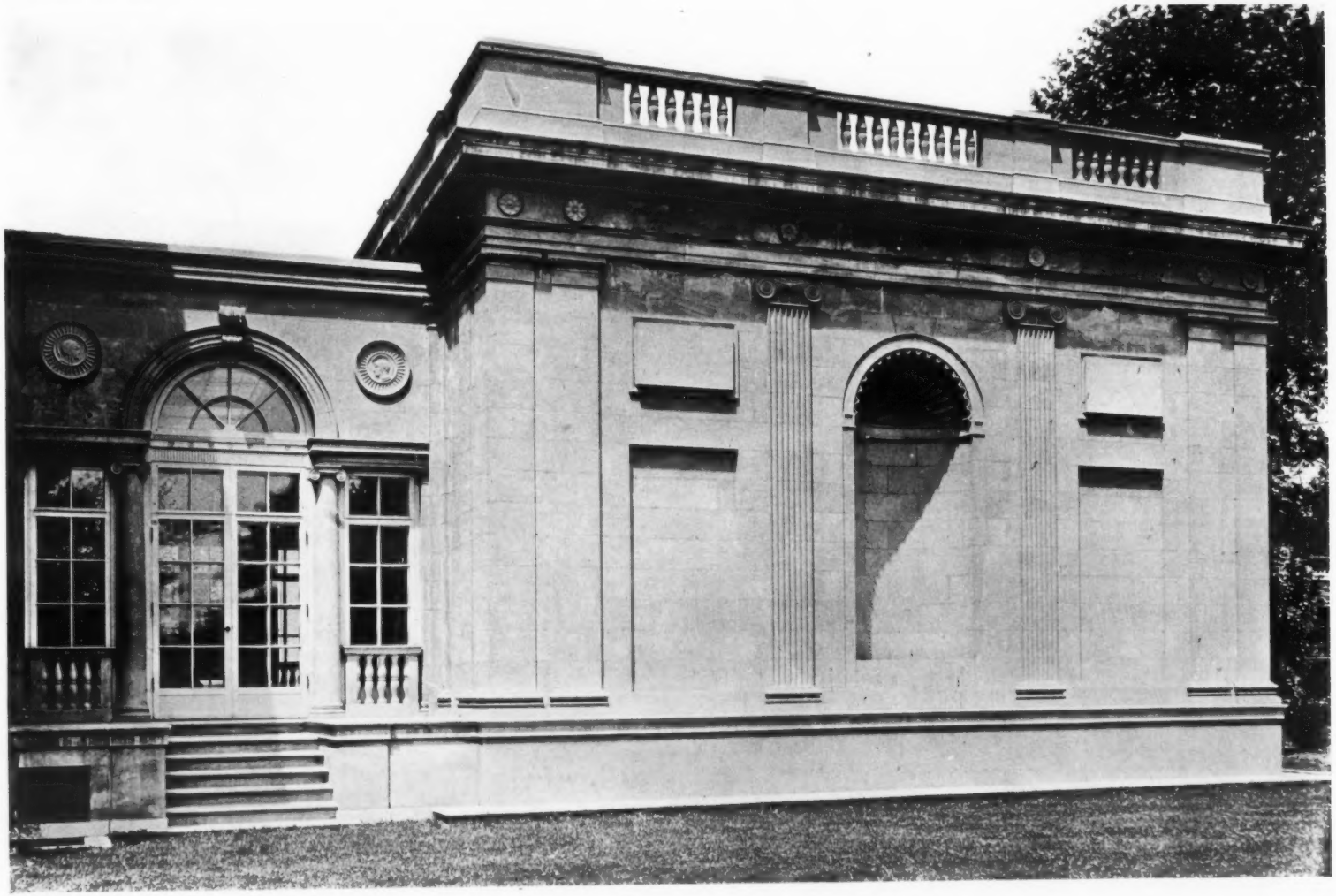


PLATE 26

ART GALLERY OF BRECKINRIDGE LONG, ESQ., ST. LOUIS, MO.

MESSRS. ROTH & STUDY, *ARCHITECTS*

XUM

PLATE 27

ART GALLERY OF BRECKINRIDGE LONG, ESQ., ST. LOUIS, MO.

MESSRS. ROTH & STUDY, *ARCHITECTS*

XUM

PLATE 28

ART GALLERY OF BRECKINRIDGE LONG, ESQ., ST. LOUIS, MO.

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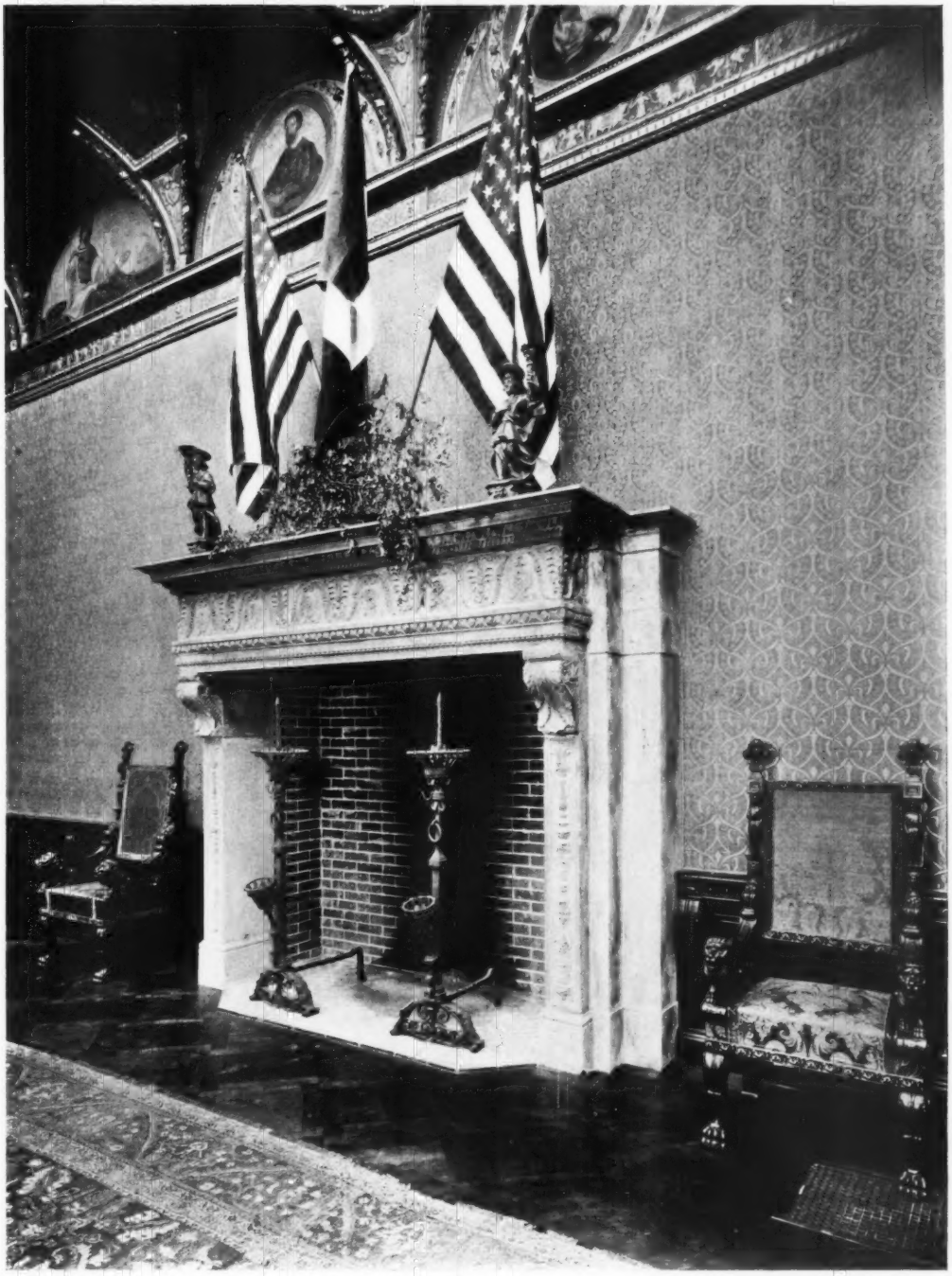

PLATE 29 MANTEL IN GALLERY

ART GALLERY OF BRECKINRIDGE LONG, ESQ., ST. LOUIS, MO.

MESSRS. ROTH & STUDY, *ARCHITECTS*

XUM

XUM

PLATE 30 DOORWAY—ENTRANCE FROM LOGGIA TO GALLERY

ART GALLERY OF BRECKINRIDGE LONG, ESQ., ST. LOUIS, MO.

MESSRS. ROTH & STUDY, *ARCHITECTS*

XUM

PLATE 31 DOORWAY—ENTRANCE FROM GALLERY TO LOGGIA

ART GALLERY OF BRECKINRIDGE LONG, ESQ., ST. LOUIS, MO.

MESSRS. ROTH & STUDY, *ARCHITECTS*

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Facing the Facts

IF, as has been often said of late, many people in the United States fail to realize that the country is at war, and that we are facing the most momentous problems in its progress towards what we all believe will be ultimate victory, they will undoubtedly have the truth brought home to them before the summer is over.

Economic conditions are daily changing. The demands of almost every one of the many departments having to do with the progress of the war are so arbitrary as to entirely change our one-time placid course. Commodities that were but in slight request are now demanded in large quantities, necessitating the most unusual exertions to meet present necessities.

In many instances the need for speed has made it impossible to employ usual materials owing to scarcity and unpreparedness in their manufacture. Car shortage, a vital condition affecting the assembling of the enormous stocks demanded, is now so acute that this menace to our preparedness is most serious.

These conditions are all working changes, necessitating an entire readjustment of methods heretofore considered standardized.

Timber is a product that may be cited as a typical instance of a return to extended use in construction work of a material that for many years has been supplanted, very largely, by steel, iron and cement. The item of present cost of steel and cement, coupled with the certainty that deliveries will be retarded if not entirely suspended, causes timber to regain a popularity in certain work almost completely lost before the beginning of the war.

Engineering News-Record, commenting editorially on these conditions and writing with particular reference to timber, states:

"It will be well to face the certainty that cost and delivery arguments will continue to favor timber for some time to come. Just now events are placing particular emphasis on the abnormality of conditions —when two Government factions quarrel whether $60 or $95 per ton is the right price for ship plates, while the market for private buyers is much higher. And it ought to be clearly remembered, at the same time, that wood is a highly efficient and adaptable structural material."

Another phase of the present situation and one that will probably awaken certain classes to the seriousness of present conditions as affecting the welfare of the country, is the housing problem in our larger manufacturing cities. The "speeding up" of many industries has resulted, of course, in the employment of an increased amount of labor. In many cities this large increase of the working population, the advent of the laboring classes, drawn from every available source to meet the necessities of a pressing demand, has caused a shortage of houses of a certain type, and is working a great hardship.

Akron, Ohio, presents a typical example of the very serious question of industrial housing. There has been an increase in population of at least 150,000, with housing accommodations for about 100,000 people. The result is that many homes are housing from three to five families, some tents have been erected, while the additional labor that is a pressing necessity at this time cannot be employed, as there are no means for providing even shelter.

These problems and their solutions are in the hands of men who have by long experience and careful study prepared themselves to cope with just such situations. Any present solution, however, will be born of necessity, and it will be fortunate, if in the demand for speed, errors are not committed that will, when conditions return to the normal, be found to prove costly and difficult of correction.

If there ever was in this country a time when serious thought and deep concentration were necessary, it is now. To wait until we become personally menaced by the advancing tide of changed conditions would be the height of folly. To go ahead in an irresponsible way with regard only for present conditions would be equally unfortunate. The warning is plainly written. Every man who

runs may read. It is a plain duty on the part of those who for sufficient reasons find themselves detached from the actual conflict, to ponder on these changed conditions and to so steer their course that they will contribute as far as is possible to not only a successful progress of the war, but an equally successful progress when peace has come.

THE Chamber of Commerce of the United States has issued a warning to business interests as to the probability that the war demand for steel will increase and that there is a certainty that the utmost we can produce will be below the requirements of ourselves and our Allies. An urgent plea is made that the use of steel be abandoned for general business purposes in every possible case.

As substitutes, lumber and concrete are strongly advocated.

The steel crisis is developing with such rapidity that there is strong probability that general manufacturers, unable to find a substitute, will be compelled to suspend operations. No substantial increase in steel production is anticipated, nor, says the report of the Chamber of Commerce, can it be expected, and even maximum production from existing facilities will be hampered because labor and transportation conditions will seriously affect the full operations of plants. On the other hand, the indications very strongly point to a considerable increase of war requirements.

Materials which can be used in substitution for steel are plentiful in comparison. The principal materials available are lumber and concrete. While there will probably be more or less delay in securing delivery of these materials, there is no possibility of a hopeless shortage, and the course for architects and those engaged in building operations to pursue is therefore quite clear. Every effort should be made to use wood and concrete in place of steel wherever this can be done, and all construction work requiring steel should be indefinitely postponed.

In a communication from Mr. Cass Gilbert, printed in a recent issue of the New York *Times*, he states, in discussing the substitution of other materials for steel:

"We have been perhaps extravagant in America in the use of structural steel for building work. There are hundreds of buildings erected in this country every year which could be just as well erected without steel, and in hundreds of others the amount of steel could be greatly reduced. An enormous tonnage could be saved if reinforced concrete, masonry, or other material was used. Practically all buildings of moderate height can be erected without the use of large quantities of structural steel. Reinforced concrete or old-fashioned masonry can take its place, and for a time at least we could well forego the erection of buildings of excessive height. The architects and engineers of America have ingenuity enough to meet our building problems along these lines if they must, and if the owners of prospective buildings will adapt their views a little to the practical conditions of masonry and concrete there is no reason why we should not in the end have even better and more substantial buildings for all structures of moderate height.

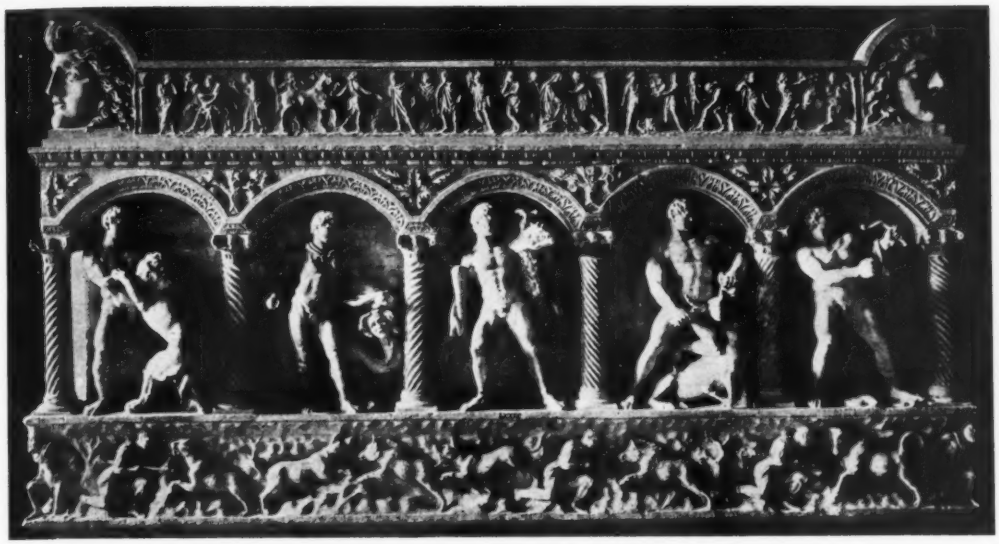
"The greatest architecture the world has ever known was built of masonry and concrete. Vast spaces were vaulted, vaster, perhaps, than any we now build, and far more enduring. The Baths of Caracalla and of Diocletian, the Pantheon in Rome, the Dome of St. Peter's in Rome, the Mosque of Santa Sophia in Constantinople, all spanning great distances, were built of masonry. The great cathedrals in France and England were vaulted with masonry. Certainly no more dignified and imposing buildings were ever built. The floor construction of the earlier buildings in our own country, such as the old section of the Treasury Department and the older portion of the National Capitol, was vaulted masonry. In Italy and France, in our own time, it has been the custom to construct floors of concrete or masonry vaulting, and should we return to these methods of construction we would develop an architecture more substantial and more imposing than anything that we can construct of steel."

Naturally more or less confusion will exist through this disturbance of conditions, but, as Mr. Gilbert states, architects will be found able to confront these new conditions and find a satisfactory solution to the many new problems presented.

The Wooden Shingle Hazard

ON another page in this issue there is printed a communication from Professor Ira H. Woolson, consulting engineer of the National Board of Fire Underwriters, in which he directs attention to the fact that what he terms the bad repute of the wooden shingle is increased by a certain class of shingle manufacturer who places on the market an inferior quality of shingle, "unsuited for good service and hence unworthy of treatment."

When architects learn on so high an authority as in this instance, the danger that lurks in these low grade shingles, they will undoubtedly take means to prevent their use, and thus aid in the campaign against useless fire losses.



GRECO-ROMAN SARCOPHAGUS OF THE BEST PERIOD
FROM THE BORGHESE MUSEUM, ROME

The Building Methods of the Roman Empire

PART II

BY CLEMENT HEATON

INTERIOR ORGANIZATION. — As regards the organization of the Colleges, it is said that members were grouped in cohorts, on the model of the army. Smiths are specially mentioned as included among the structors or builders, in the phrase "smiths, levelers, architects, and all the family of artisans who build or decorate edifices."

All members were obliged to sojourn in the locality assigned to their corporation, so as to hold themselves ready for public service; hence they could leave only by turn. They had to give their services whenever the public works required it, and this service is the fundamental idea that lay at the root of the organization of the whole college.

But the service they rendered to the State was not gratuitous. They were subjected, it is true, to a grave infringement of personal liberty, and any lack of obedience to rules met with severe punishment, especially for those who sought to escape service by flight. This obligation to reside on the spot, so as to be ready to work at call from the Administration, at whatever was assigned to them by the State, was in reality semi-slavery. But all Roman society was organized on the basis of servitude redeemed by privilege.

These privileges consisted in exemption from public charges, municipal functions and extraordinary taxes. For members of the Collegii forced labor did not exist, nor military service. They received payment in two ways: A grant of land from the State, which depended on the service rendered, and which could be transmitted as an hereditary right, and a fixed payment in kind.

Obligation to serve was in proportion to the amount of land held, and from the association of service and land it came about that sons were obliged to follow the vocation of their father, unless they forfeited their tenure of land. Continuity from father to son in the same vocation was thus secured, with consequent stability of the institution. This fostered also adherence to tradition, which was so great a feature in Roman art. "Ars longa, vita, brevis" was literally true, for over a thousand years of unbroken effort lay behind that mastery which excites our wonder to-day.

Thus was founded the vast body of experienced workmen of all kinds and all grades, which was at the disposition of the Emperor. He could augment this body, as he claimed the right to oblige other citizens to enter the ranks of the "Collegium Struc-

NATURALESQUE ROMAN SCULPTURE
FROM THE THEATER OF APOLLO, ROME

torum" (the Corporation of Builders), and it was a legal custom to punish crime by obliging the condemned to enter the more laborious vocations, such as to work with slaves and soldiers preparing stone in the quarries. A glance at the plan of the Imperial Palace at Rome gives an idea of the vast extent of the buildings erected, and the remains of the Basilica of Constantine show their enormous size. The immense number of those employed on such works can be inferred. A writer of the ninth century says there were then existing fifteen gates, six thousand or eight thousand battlements, forty-six bastions and three hundred and eighty-one towers.

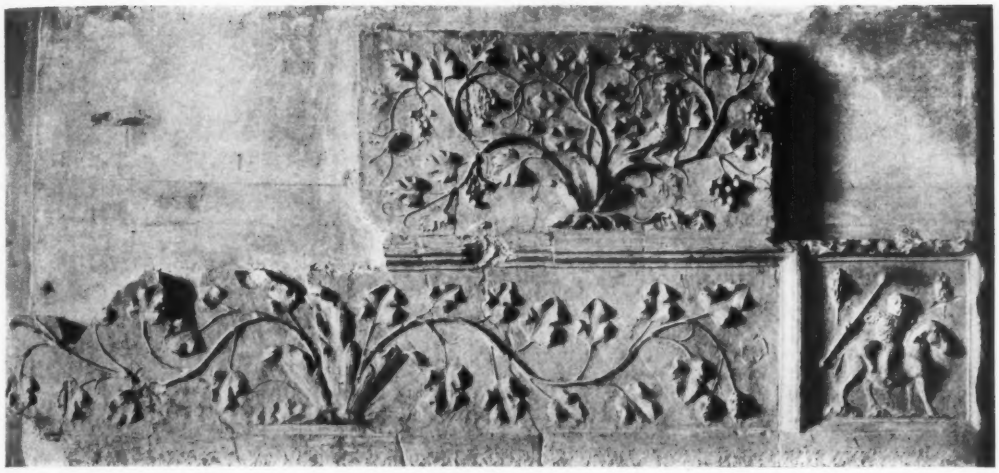
The State controlled agriculturists and truckmen, who carried the materials for building. A truckman received for transporting lime an amphora of wine and a certain amount of lime for each lot of 2900 pounds transported. This represented an enormous quantity of wine to be distributed, which had to be cultivated for this purpose. Such payments were called a "solatium" or consolation, as, in reality, they veiled a semi-slavery. As one Roman said, "Their ancient privileges were bought at a high price; it is by perpetual obedience they have acquired their apparent immunities."

But, on the conditions here indicated, a corporation having been authorized, the State avoided unnecessary interference. "They were accorded power to govern themselves as they would, providing this organization did not conflict with public law." With this liberty grew up minor associations, smaller groups working under the leadership of one more skillful or richer than the others. He was called "redemptor" or "locator operis" and acted in the character of a contractor. This is analogous with medieval practice in Italy, where a master directed a group, going about with them from one work to another, undertaking a contract and receiving somewhat larger pay, and himself working with the others.

It is easy to imagine that such conditions would create a psychological atmosphere of which no parallel can be found in our own time. Shut off from surrounding citizens, living in a quarter to themselves, engrossed in a particular kind of work, ignorant of much that went on outside their sphere, they formed social centers with religious bonds. They obeyed their own by-laws, and were directed by their own dignitaries, with mutual subordination similar to that in the Roman city. The years were counted from the foundation of their College (even in public acts), which proves that the College created a relationship which overshadowed all others.

Meetings were held on fixed days, in their own buildings, called "Scholæ," and assumed a religious character. They possessed their own temples, and their religious institutions persisted as centers of

ROMAN SCULPTURE WITH NATURALESQUE ELEMENTS, ROME

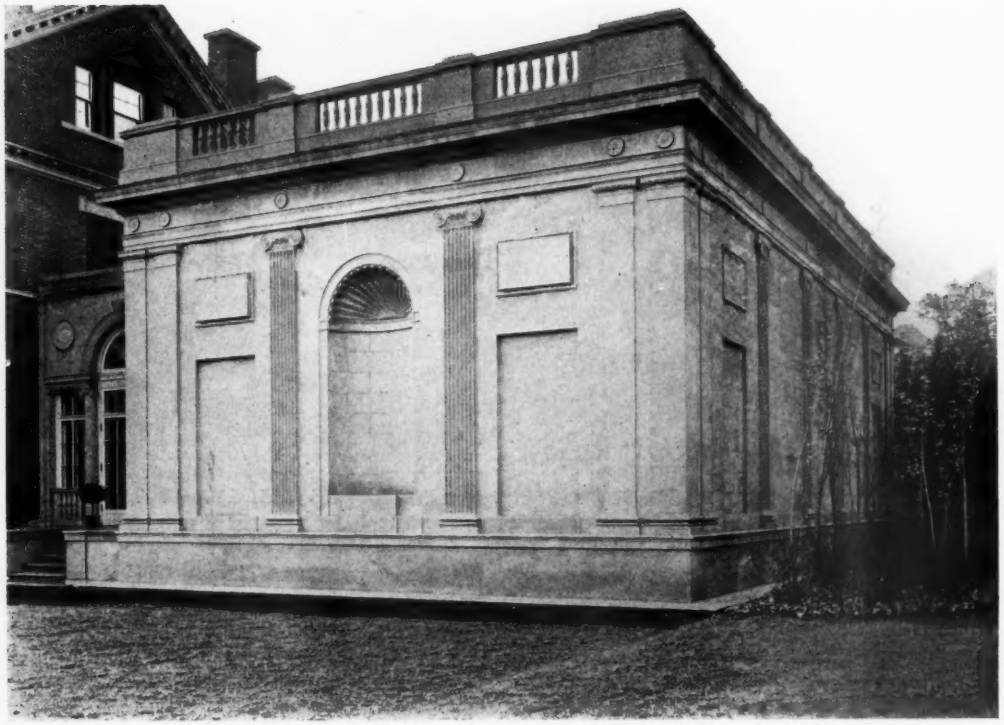


SCULPTURE OF FOLIAGE, DECORATIVELY DESIGNED AND DELICATELY TREATED
LATERAN MUSEUM, ROME

Paganism, even after the imperial recognition of the Christian religion.

Not much is known in detail of the Building Corporation, but from data afforded by the buildings, it is gathered that the members were much subdivided, and that special groups existed which carried on the construction of particular parts, walls, pilasters or vaulting. Thus the chain work of regular stone was the production of one group, and the filling in with rubble or brick, another. Hence the total College was subdivided into distinct classes with varying attributions, giving an extreme specialization of industrial operations. Decoration was a distinct branch from that of the construction.

SCULPTURE OF FOLIAGE, DECORATIVELY DESIGNED AND DELICATELY TREATED
LATERAN MUSEUM, ROME



Art Gallery of Breckinridge Long, Esq.

St. Louis, Mo.

MESSRS. ROTH & STUDY, *Architects*

THE small private art gallery of Mr. Breckinridge Long, in St. Louis, is a further and interesting example of a type of building erected by wealthy collectors in this country.

The present instance is, however, notable for with perhaps the exception of the Morgan Gallery in New York, designed by Messrs. McKim, Mead & White, it is a rare example where the architects have been permitted to carry the work to a well-finished result.

The style of architecture of the Long Gallery may be called classic, if we use the term broadly. The general design is Roman or Italian, while the details have a Greco-Roman feeling. The gallery was begun by Roth & Study, architects, and finished by Guy Study, architect, who designed the larger part of the work.

In plan, the building is extremely simple, consisting of one large rectangular room 30 by 70 ft., with a small loggia or atrium connecting the gallery to the old house. In the gallery, the architect had the rare good fortune to be able to use old fragments in building up the room, such as the carved wooden doors, the stone fireplace, the Rosselino Tabernacle, and most of the furnishings; and, also, to call to his assistance many noted artists and sculptors in this country. As the gallery stands to-day, with but few of the Long art treasures yet installed, the loggia fountain, by Paul Manship, the beautifully carved marble doorway leading into the gallery, by Peter Rossak, and the ceiling painting, by H. Siddons Mowbray, are the chief points of interest in the room.

The design of the ceiling as a whole, as well as all the architectural details and arabesque ornament, is the work of Mr. Study. The treatment of the lunettes and small panels in the center of the spandrills is the work of Mr. Mowbray. It was Mr.

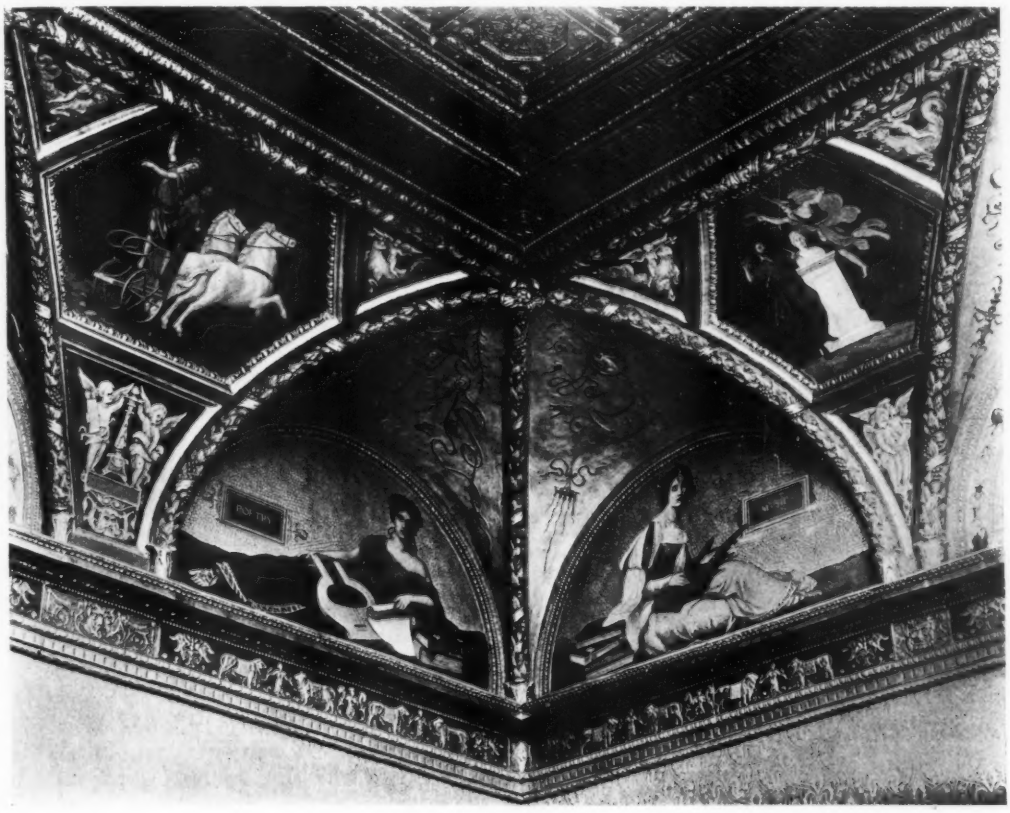
Study's desire that the ceiling become, in a sense, a rich frame or band of color to incase the various objects of art below that the room would contain. While the general design of the ceiling is in the later period of the Italian Renaissance, it was the architect's desire to have the ceiling recall the color scheme of the Borgia apartments in the Vatican. Mr. Mowbray in carrying out this color scheme has employed a most liberal palette, still further enriched with gold, yet he has brought down the tonal effect of the whole to a low key of perfect blending and quiet color. The work has an unquestionable scholarly and classic character.

The lighting of this room became a serious problem. It was the intention to obtain a light at night that could approximate the light of the day. In order to do this, the entire space between the upper and lower skylight is flooded with artificial light, which is reflected down into the room below. The lights are placed in white enamel reflectors running over the top of the beams of the skylight. This light is reflected down into the gallery by means of white enamel reflectors made in the form of movable louvres placed under the upper skylight. These louvres are operated by a control in the gallery wainscot and serve likewise to shut out the sunlight during the day, when desired.

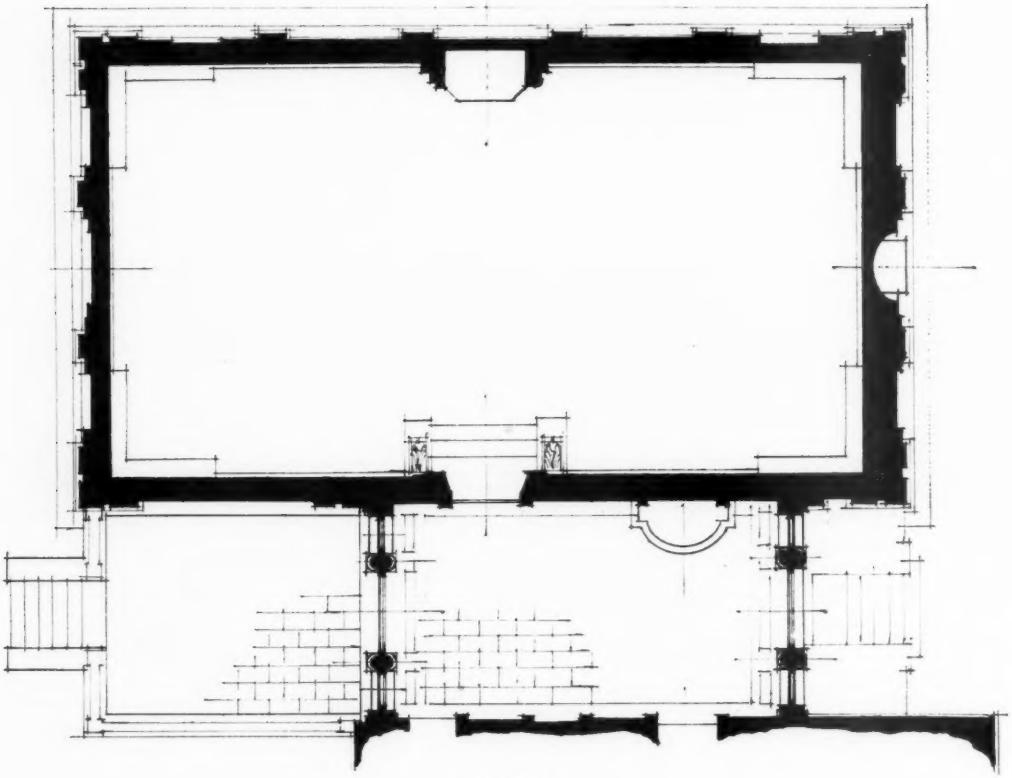
The gallery is built of buff Bedford stone, backed up with 18 in. of brick, waterproofed. Inside of wall is furred out and covered with 3-in. fir boards. The floor and roof slabs are of re-inforced concrete. Loggia floor is finished with Ste. Genevieve stone. Gallery floor is of teakwood.

All projecting courses of stone are covered with lead. Interior of loggia is of plaster with Bedford stone trim. Marble doorway in gallery is of Tavernelle marble.

Ceiling of gallery and loggia are of plaster.



DETAIL OF CEILING DECORATION



FLOOR PLAN

ART GALLERY, BRECKINRIDGE LONG, ESQ., ST. LOUIS, MO.
MESSRS. ROTH & STUDY, *ARCHITECTS*

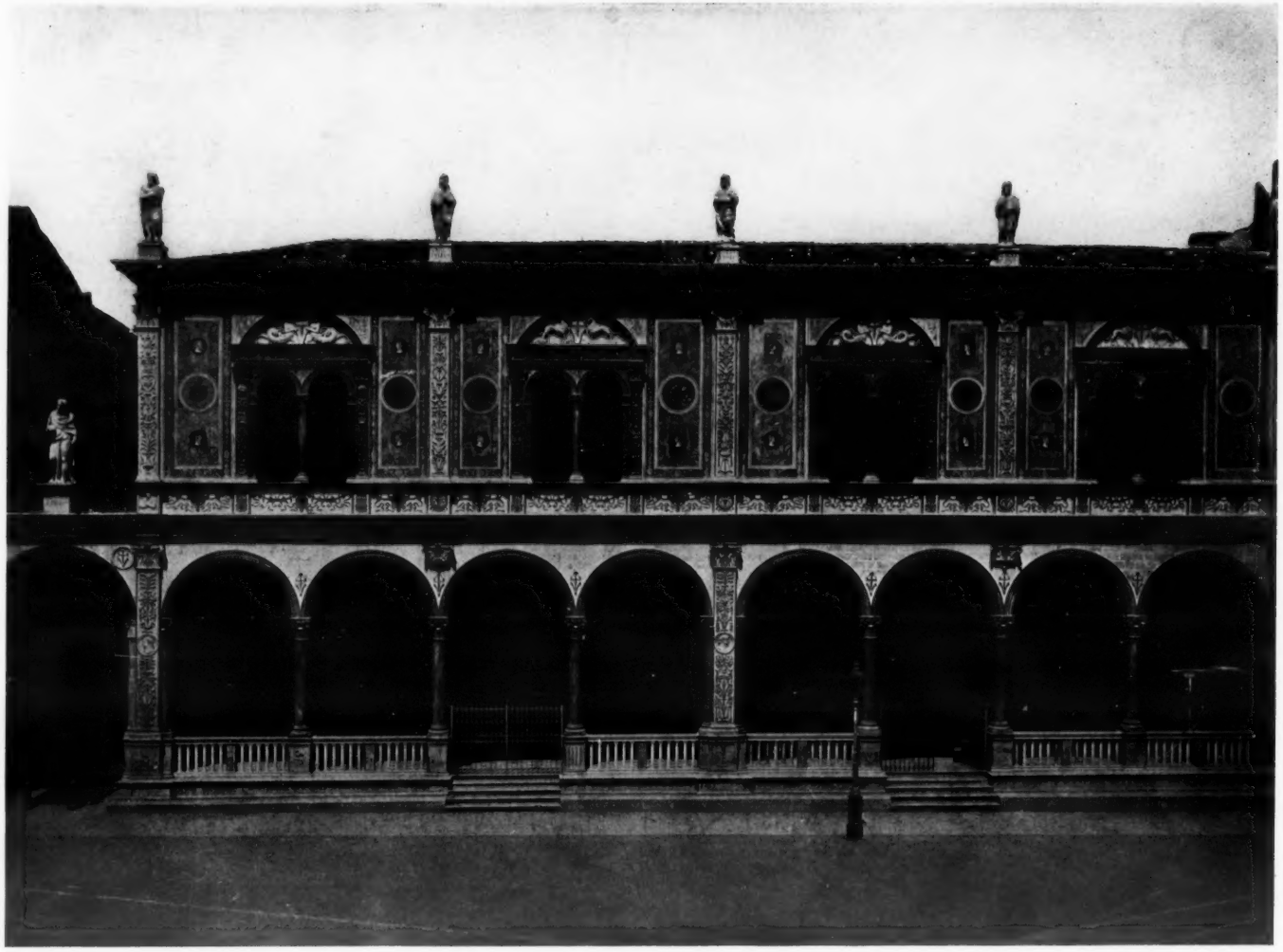
Discovery of a Buried City in Morocco

M. Pierre Paris has announced to the French Academy of Inscriptions the discovery of what may prove to be a second Pompeii, buried under the sands of Morocco. In carrying out excavations in the region of Bolonia, on the sea coast, M. Paris first came across an ancient factory, believed to have been established for the salting of fish, and more particularly perhaps of the tunny fish which abounds in those waters. This factory was indisputably of Roman origin, as proved by the style of the columns and marks upon them, careful photographs of which have been taken. Further search revealed on a vast terrace dominating the sea a big house obviously contemporaneous with the factory. The atrium of the dwelling has been completely cleared, and is surrounded by vestibules and chambers, a sketch of the plan of which had been executed. M. Paris says that this is merely a beginning, and that he is convinced a whole town in an exceptional state of preservation can be unearthed.—*Building News* (London).

Treating Wood for Inflammability

Shingles sufficient to cover two small panels were fireproofed by the Forest Products Laboratory of the Forest Service and sent to Seattle for fire tests to be conducted by the West Coast Lumbermen's Association. Shingles for one panel were painted with two coats of zinc borate paint, and the other shingles were given a zinc borate injection. Samples of these shingles tested in the inflammability apparatus at the laboratory indicate that the treatment and coating are effective.

XUM



A STREET IN VERONA, ITALY.

The Hazard of the Wooden Shingle

The Editor of THE AMERICAN ARCHITECT.

Sir: I have been much interested in the editorial, "The Atlanta Fire," appearing in your issue of July 11. The continuous and enormous losses suffered for many years from the criminal career of the wooden shingle have given it an evil reputation which nothing but authentic proof of complete reform and continued good behavior can counteract. Whether such reformation as that intimated in your article is possible remains to be proven, but it is encouraging to know that the prospects are so hopeful.

Criminals with a long record of evil deeds are very liable to be credited with crimes of which they are innocent, and undoubtedly the same is true of the wooden shingle. Fires which should be charged to defective chimneys are probably often blamed upon the wooden shingle roofs surrounding the chimneys. Nevertheless, the record of disaster properly chargeable to the shingle is so black it is entitled to no pardon.

Insurance companies have suffered severely from this "conflagration breeder," and have publicly denounced it for many years. However, they recognize the fact that wooden shingles, for several reasons, will remain a common roofing material for some years to come, especially upon isolated dwellings and outbuildings. Therefore, they will hail with joy any specifications for treatment and maintenance which the manufacturers of wooden shingles can present giving reasonable assurance of rendering them resistant to the flying-brand hazard, which is their greatest weakness. If this could be accomplished it would be a distinct public benefaction, since it would greatly lessen the annual fire loss, remove the antagonism to their use in outlying districts of cities where frame buildings are permitted, and conserve the financial interests of the manufacturers and dealers who supply the market.

Taken as a whole, your editorial is a fair statement of the wooden-shingle case as it stands to-day, but I take exception to one assertion, which reads as follows:

"No competition that seeks to strike a killing blow at a well-established manufacturer can be considered fair."

That may or may not be true. A manufacturer of goods that are detrimental to the public good should have no protection against a smothering competition simply because his business is well established. Such a principle would be inimical to the best interests of our citizens. As a matter of fact, there are manufacturers of wooden shingles in certain parts of the United States to-day who are putting such a low-grade product upon the market it would be a distinct benefit to the country if that feature of their business could be struck a "killing blow." Such inferior shingles are either made from an almost worthless grade of suitable shingle timber or from a variety of timber quite unsuited for shingle manufacture, particularly when the fire hazard is considered.

It is quite certain that any set of specifications which will place the wooden shingle in even the lowest grade of fire-resistive roofings will necessarily eliminate these inferior quality shingles as unsuited for good service, and hence unworthy of treatment.

IRA H. WOOLSON,
Consulting Engineer, National Board of Fire Underwriters.

Pittsburgh Architectural Club Year Book

The eleventh annual year book of the Pittsburgh Architectural Club is an attractive volume. In addition to the fact that it is a record of the more important material shown at the recent exhibition, it includes in a separate section a complete presentation of school buildings designed and built for the Board of Public Education of Pittsburgh, Pa.

The book, which is uniform in size with other similar publications, may be had for $1 by addressing the secretary of the Pittsburgh Architectural Club, Mr. James M. Macqueen.

The Proper Vocation

The following is an extract from an address by Mr. F. E. Davidson, retiring president of the Illinois Society of Architects, at the July meeting of the society:

"I am convinced from my observations of the past two years that not every man licensed to practise the profession is properly following his proper vocation in life. I am convinced that many good building mechanics and many good draftsmen have been spoiled to make indifferent architects. I do not wish to discourage anyone. Hard work backed by fair ability and proper ambition will accomplish much. But to expect that every young man who can hold a ruling pen is qualified by nature to be trained and developed into a successful architect is to my mind the rankest absurdity.

"A successful architect must be more than a draftsman; he must be more than a specification writer; he must be more than an engineer; he must

be more than an artist; he must have a working knowledge of all the sciences and of all the arts, and be able to apply them properly; he must have a judicial temperament able to fairly judge the many questions daily referred to him in his practice; he must have a good knowledge of business law; he must be an executive able to command the support of his associates and employees and be able to direct work in person; he should be a man willing and able to give of his time to all matters affecting the welfare of the community and of his group in the community."

Medals of Honor for Buildings to Be Awarded by the Southern California Chapter

We learn from the Journal of the American Institute of Architects that the Southern California Chapter, at its last meeting, established three medals of honor to be given annually for buildings erected during the year preceding the date of the award. The first medal is to be for residences costing between $2,000 and $10,000; the second for residences costing above $10,000; the third for work other than residences.

The medals will be awarded, unless there is no work of sufficient merit to justify them in any one year, by a Jury of Award composed of architects and laymen to be elected by the Chapter, the nominations to be made by the president of the Chapter. The medals will be accompanied by a certificate setting forth the name of the structure which formed the basis of award together with a summary of the considerations upon which the medal was conferred.

Annual Conference, South Carolina Chapter, A. I. A.

The annual meeting of the South Carolina Chapter, A. I. A., was held in Columbia on July 3. The guest of the occasion was Glenn Brown of Washington, D. C.

Officers elected were: E. D. Sompayrac, Columbia, president; George E. LaFaye, Columbia, vice-president; N. G. Walker, Rock Hill, secretary and treasurer, and A. W. Todd, Charleston, and J. E. Summer, Greenwood, members of the State executive committee.

At the conclusion of the meeting the architects who attended the meeting visited the cantonment, under way of construction near Columbia, and thoroughly inspected the work now in progress.

At the meeting of the State Board of Examiners, held the day before to serve the convenience of the visiting Chapter members, forty State licenses to practise architecture were issued.

Traveling Scholarship, Carnegie Institute

Announcement has just been made of the award of the annual traveling scholarship in the department of architecture, school of applied design, Carnegie Institute of Technology, to Bennett Cardwell.

The subject of the design is a municipal improvement for Pittsburgh, located at the entrance to Schenley Park, including a temple of labor and open-air theater.

The committee of award was composed of the following architects: John Wynkoop, Benno Janssen, E. B. Lee, E. J. Weber and William Boyd. The second place in the competition was awarded to J. P. Metheny.

A Summer Course in Concrete

The University of Chicago Summer School offers for this year a series of lectures by engineers and teachers thoroughly familiar with the cement industry and the subject of concrete as taught in manual training and vocational courses. These lectures are open, without charge, to every one interested in the subject. Schedule of the lectures may be obtained by applying to the University of Chicago, Chicago, Ill. A similar course will also be held at Columbia University.

Monument to Americans

A monument will be erected in some prominent square in Paris to commemorate the co-operation of American men and women in relief work in France during the war.

The committee for the erection of the monument is under the patronage of President Poincare, and is presided over by Leon Bonnat, head of the National School of Fine Arts.

The Moment of Inspiration

Every designer knows the thrill of those unfortunately few but happy moments when he seems inspired to his best effort. When in a comparatively short time he produces a result that he has never equalled by hours of patient labor.

To these who have known those rare moments, the following written by James Northcote will be read with appreciative understanding:

"When a work seems stamped on the canvas by a blow, you are taken by surprise, and your admiration is as instantaneous and electrical as the impulse of genius which has caused it. I have seen a whole-length portrait by Velasquez that seemed done while the colors were yet wet; everything was touched in, as it were, by a wish; there was such a power that it thrilled through your whole frame, and you felt as if you could take up the brush and do anything. It is this sense of power and freedom which delights and communicates its own inspiration, just as the opposite, drudgery attention to details, is painful and disheartening."

Institute of Scottish Architects

The newly organized Institute of Scottish Architects has just held its first convention at Edinburgh. The conditions affecting housing conditions in Scotland were very thoroughly discussed.

Cornell University School of Architecture in the War

It is learned that at least one-third of the men graduates from the School of Architecture of Cornell University have taken service with the Government, and many of these are either at the time of writing in France or on their way there.

Personal

Joseph Breck, director of the Minneapolis Institute of Arts, has resigned to become assistant director of the museum, and curator of the Department of Decorative Arts at the Metropolitan Museum of Art in New York City.

Recent Books

EXPERIMENTAL BUILDING SCIENCE. By J. Leask Mannson. Full cloth, 200 pages, size 5½ x 9 inches. Cambridge, England, Cambridge University Press.

Building Science may be said in its fullest extent to signify the selection, arrangement and gradual development of knowledge from one branch of physical science in so far as it is likely to have any bearing on building problems. This work is in a sense a text book designed for the student who in many instances lacks the very instructions that a work of this nature very fully imparts. At the same time it is not so elementary in its discussion of the scientific aspect of building problems as to be beneath the attention of the man in practice, and it will be found a valuable and handy reference book in the architect's working library.

MECHANICAL EQUIPMENT OF BUILDINGS. A reference book for engineers and architects. By L. A. Harding and A. C. Willard. Vol. 2, Power Plants and Refrigeration. Flexible cloth, 750 pages, size 6½ x 9 inches, price $5.00 net. New York, John Wiley & Sons, Inc.

This book deals not only with power plants and refrigeration, but also with the heating and ventilating of buildings, which subject is considered in Volume 1, already published. The work constitutes a new departure in the literature on the mechanical equipment of buildings. It is a book of considerable interest to both architects and engineers, as it contains official theoretical and commercial data for practical use in the designing room and at the same time shows the student of this subject the proper relation between theoretical principles and their practical application to actual problems.

The book is divided into thirty-one chapters, each one treating of a special topic, and on the whole constituting a reference work of more than usual value.

MODERN THEATER CONSTRUCTION. By Edward Bernard Kinsila. Full cloth, 266 pages, size 5 x 5½ inches, price $3.00. New York, Chalmers Publishing Company.

No phase of building construction has undergone greater changes within the last decade than theaters. The very widespread popularity of the moving picture has served to create a demand for large and expensive houses devoted exclusively to this style of entertainment, and the needs of a building of this character as contrasted with the usual or earlier forms of theater are so widely different that a new type of theater may be said to have been evolved.

The work has been prepared by an architect who has specialized on this type of building, and we learn from the preface that the deductions set forth are based on actual experience in planning and designing. The book is divided into fourteen chapters, covering site selection, designing and planning, and the various essentials of lighting, heating and ventilating.

Industrial Information

"Good Lighting Is Clear Profit"

The present tendency in factory and office-building construction proves that architects realize the value of good arrangement, satisfactory ventilation and scientific lighting, as they affect efficiency.

Probably the most important consideration in manufacturing buildings is the natural and artificial lighting facilities. Sufficient light, well diffused, will correct the time waste, errors and accidents of the dimly illuminated or the improperly lighted building. Glare will cause eye-strain as surely as will a poorly lighted interior. And eye-strain affects the health of the workman and detracts from his accuracy and speed and has therefore a direct influence on the product.

These facts are emphasized and a remedy provided in a booklet published by the National X-Ray Reflector Co. of 21 West Forty-sixth Street, New York, which gives details of increased production in fifty instances where systems of properly diffused lighting were installed in factories and offices.

There is also an interesting chapter on flood lighting for night construction work, advertising purposes or the always present necessity for protection against prowlers.

The book is illustrated with reproductions developing its arguments, sound logic of interest to the architect of any type of construction where the problems of either natural or artificial lighting become of unusual importance.

Hospital Signal Systems

Architects interested in the construction of public buildings and appliances for their requirements will want to see a booklet issued by The Holtzer-Cabot Electric Co. of Boston, Mass., covering the hospital signal apparatus of their manufacture. Several applications of the system are described, and lamps, semaphores, buzzers and annunciators to fit the variations of the signaling principle are shown. Floor plans, wiring diagrams and photographic reproductions of hospital buildings in which Holtzer-Cabot signal installations have been made illustrate the booklet.

"Creo-Dipt" Shingles

The Standard Stained Shingle Co. of North Tonawanda, N. Y., have several folders in circulation setting forth the merits of creosoted stained shingles and the various shapes, grades, sizes and shades in which they are supplied. A series of photographic prints showing applications of "Creo-Dipt" shingles for various effects on walls and roofs, is also a feature of their publicity campaign, of unquestionable interest to designers of bungalow types.

For Lighting the Country Estate

"Delco-Light" is a system for the electrical lighting of premises situated beyond the reach of city and town service stations. Plants for the generation and distribution of "Delco-Light" are manufactured by The Domestic Engineering Co. of Dayton, Ohio. Application to the company will bring a descriptive booklet on the apparatus and its operation. The publication goes very thoroughly into questions of installation and cost, and illustrates farm and store requirements that are met with this current for motive-power and light. The same service will be found suitable for house boats and launches, and other uses will suggest themselves to architects with specific problems.

"Expanded Metal Construction"

A sixteen-page house organ is published monthly by the North Western Expanded Metal Co., of 37 West Van Buren Street, Chicago, in the interest of metal lath. Each number sets forth some of the talking points of this material, news items having a bearing upon the question of expanded metal construction and numerous illustrations of buildings in which their "Kno-Burn" and "Chanelath" products have been used in walls, ceilings and roofs. There is a query and answer department in which lathing and plastering problems are discussed and an extensive list of distributors and selling agents of the company occupies the last two pages of each issue.

Pure Aerated Water

The healthful results of the elimination of injurious matter from raw water by distillation are well known. A still for purification of water and the introduction of sterilized air into the distilled water chamber of the apparatus is manufactured by the Sargent Steam Meter Co., 2835-2837 Armitage Avenue, Chicago. The company has published a pamphlet on stills, in which are given a health talk and a detail of the Sargent principle of distillation. A price list covers the cost of various types and sizes of still.

XUM

PALAZZO TACCONI, BOLOGNA, ITALY.