



AMERICAN ARCHITECTURAL EDUCATION

ARCHITECTURAL education in America today is being conducted on an admirable system that has developed logically, that meets the conditions, and is being further developed. We may be proud of the progress made in architectural education, particularly in the past score of years.

Mr. Hastings, in his address before the Royal Institute of British Architects (reported in the *Journal of the R. I. B. A.*), upon the occasion of the presentation to him of the Royal Gold Medal recently pointed out that owing to the untiring efforts of the Beaux-Arts Institute of Design a centralized, co-ordinated system of competition or comparison between our schools and colleges, similar to that which obtains physically in intercollegiate games, has been brought about—practically all of the colleges from the Atlantic to the Pacific receiving the programs, simultaneously, and sending the work of their students all solving the same problem to be judged at the Beaux-Arts Institute of Design in New York.

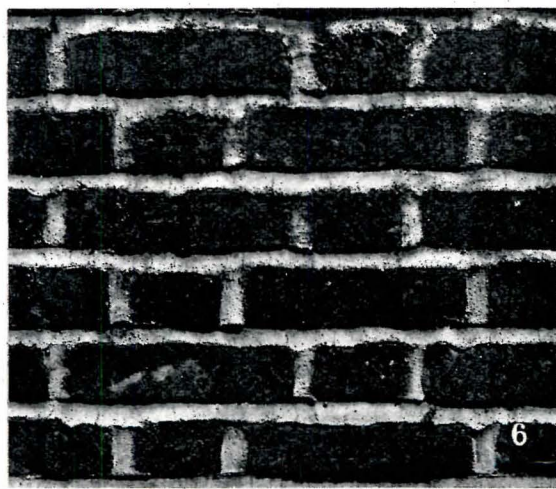
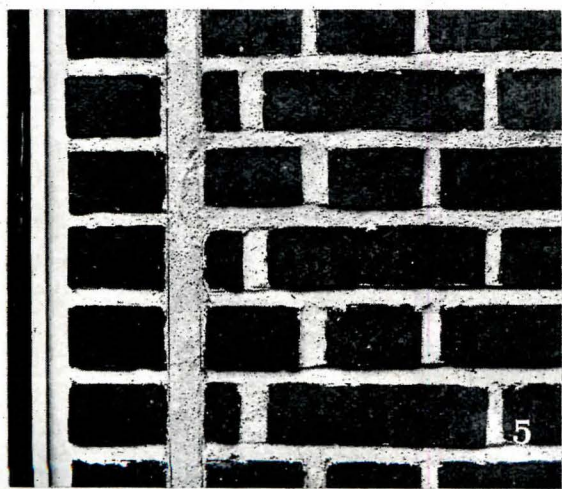
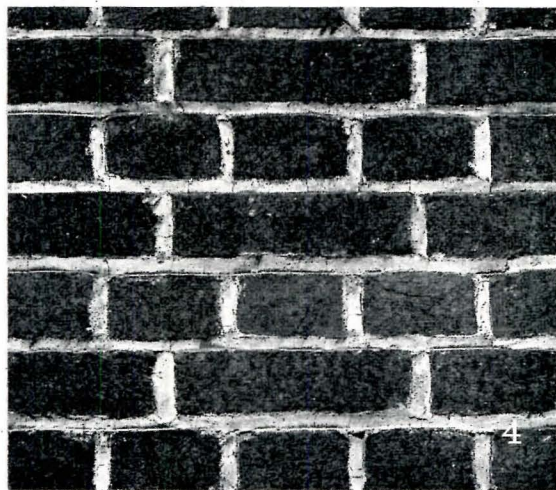
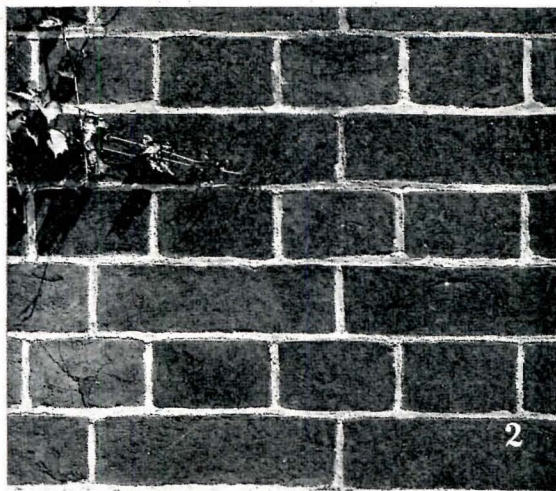
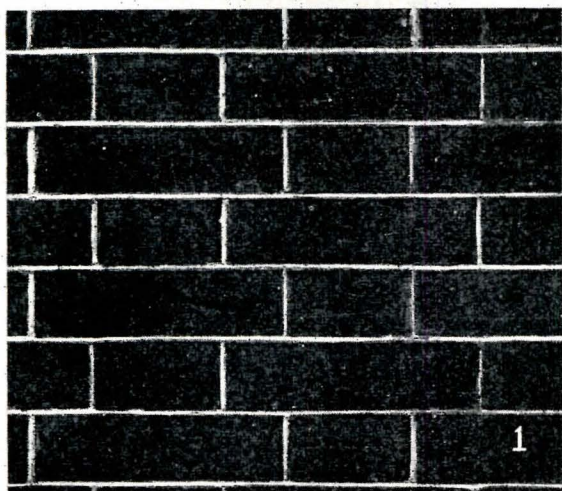
Of the greatest significance is the recognition accorded this achievement in American architectural education by the report of the Committee on Education of the American Institute of Architects presented at the Convention in Chicago. From this report we quote as follows: "In reviewing the development of architectural education, your Committee has frequently had occasion to comment upon the splendid work of the Beaux-Arts Society, now known as the Beaux-Arts Institute of Design. Some years ago the Committee urged the creation of intercollegiate competitions, believing that, first, the solution of the same problem by a great number of students in different sections of the country was of interest, and second, that emulation among the colleges stimulated to greater effort. While these intercollegiate competitions have proven difficult to bring about, today most of the schools use the programs of the Beaux-Arts Institute of Design more or less. This results in placing the work of many of the colleges in competition with the work of the ateliers all over the country. We understand that the Faculties are generally agreed that a more general use of these programs is to be desired and we have been present at informal discussions of representatives of certain of these Faculties where a closer co-ordi-

nation of the schedule of the Beaux-Arts Institute of Design with the colleges has been urged. We now understand that steps have been taken looking towards the writing of programs by a joint commission of the Association and the Beaux-Arts Institute, and we sincerely hope that this may lead to a closer co-operation between the schools and the Beaux-Arts Institute of Design. It seems to us that such a development cannot fail to be helpful.

"The American Institute of Architects should, we think, recognize the admirable work of the members of the Beaux-Arts Institute of Design. The great responsibility entailed upon the Chairman of the Committee on Education of that body in the conduct of this national work has perhaps never been fully understood. The unselfish devotion to the cause of education, of men like Lloyd Warren, Henry Hornbostle, Bosworth, and many others, is worthy of our every admiration. The rank and file of the Beaux-Arts Society have all contributed their mite under the leadership of these men. All the annual receipts from dues in the Beaux-Arts Society are appropriated to the support of the educational work of the Beaux-Arts Institute of Design. From its early beginning as a group of men interested in the teaching of architecture only, it has now developed into a property-owning institution conducting some fifty-two ateliers in different sections of the country for instruction in architecture and with courses in sculpture, mural painting and interior decoration.

"The Paris Prize, a scholarship entitling the winner to study at the Ecole des Beaux Arts in Paris, is given annually by the Society of Beaux-Arts Architects, entitling the winner to admission in the first class at the Ecole and providing him with the means of residence for two and a half years. He is during that time the guest of the French Government, receiving instruction and all the privileges of membership in the School gratuitously. The American Institute of Architects has never recognized the excellence of this work. It has never assisted in its support financially, nor has such aid ever been solicited. We believe that the time has come when the Institute should recognize the success of the Beaux-Arts Institute of Design.

PENCIL POINTS



Close-up Photographs of the Brick-work of Some Interesting Buildings. See Text Beginning on the Opposite Page.

ARCHITECTURAL DETAIL PART XVII

BY JOHN VREDENBURGH VAN PELT

This is the seventeenth instalment of an article in which Mr. John Vredenburg Van Pelt, formerly Professor in Charge of the College of Architecture, Cornell University, Architecte Diplômé par le Gouvernement Français, and author of "Essentials of Composition," will discuss the designing of good architectural detail and point out the means by which the ability to produce good detail can be developed. Reproductions of detail drawings from some of the best architectural offices will accompany this article and the publication of this series of drawings will be continued after this discussion of the subject has been completed—making a valuable feature of this journal indefinitely.

THE articles of this series that treated stone texture giving the number of bats to the inch and similar useful particulars were the cumulative result of earlier more or less fruitless efforts on my part to obtain data under the impulse of immediate need for the production of effects that I wished to secure in the stone work of a building in course of construction. In specifying brickwork, I have felt the same uncertainty and have found the same dearth of practical guides that I encountered when trying to define the method of producing a particular stone value. I have been brought up standing in the effort to visualize the appearance of an ordinary joint in ordinary common brick laid in running bond, wondering whether I ought to tell a draftsman to use a $\frac{3}{8}$ inch, $\frac{1}{2}$ inch, or $\frac{5}{8}$ inch joint and to adopt a $2\frac{5}{8}$ inch, $2\frac{3}{4}$ inch, or $2\frac{7}{8}$ inch coursing in laying out his elevation. Futilely, have I pulled out photograph after photograph and in the face of complete absence of information, have tried to guess the size of the joints. Not two years ago I settled on a $\frac{5}{8}$ inch joint that I wished I had made $\frac{3}{8}$ inch as soon as the wall was up four feet and it was too late to change. So I personally expect to find the following series of illustrations useful and hope they may also be of some service to the reader.

I have divided our study into two broad groups. The first includes brick whose textures range from the smooth, regular, re-pressed brick to swelled, warped in outline, sandy or cracked surface brick and it includes the usual makes of common brick. The second is made up of "rough texture" brick, the so-called "tapestries" from rain washed to the rug mixtures that beside being rough have on the surface a series of close definitely scored lines.

As has been suggested in our former talks about

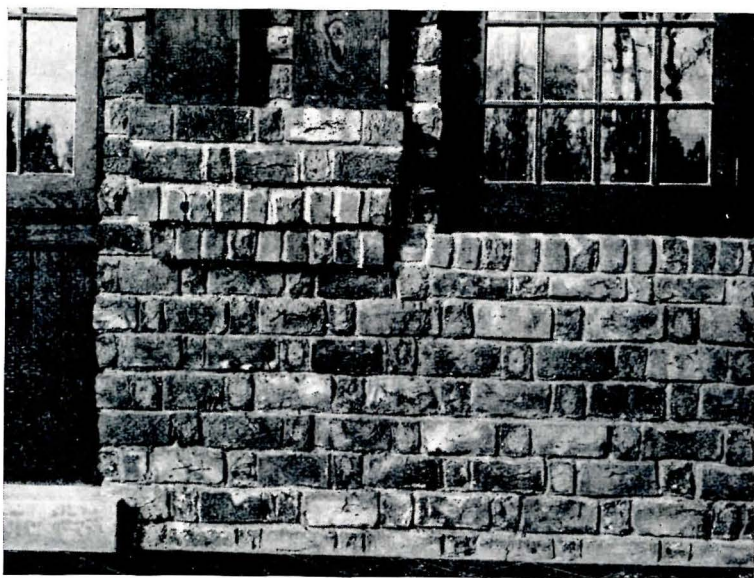
brick, smooth brick generally require a narrower joint than rough ones; smooth brick a tooled or struck joint, while the joints between rough brick often have grit in the mortar to roughen them; and usually smooth brick are better with a joint that is not too greatly raised beyond the surface or depressed, while rough brick may have a joint raked as deeply as the width of the joint itself or even more.

On page 10 are reproduced photographs of six examples of work that falls within our first group. In each case the joint has been smoothed with the trowel or jointer, although in that of the Grolier Club, with its wide joint and uneven brick there is

enough coarse grit in the joint to roughen it. The first example from a residence in East 61st Street, New York, probably a score or more years old, is of a very regular brick, apparently re-pressed, laid in Flemish bond with a practically flush joint of white mortar $\frac{1}{8}$ to $\frac{3}{16}$ of an inch wide.

This might be acceptable for a very neat little city residence such as the marble trimmed Philadelphia house, but necessarily the resulting wall effect is flat, the white lines are straight and thin and there can be little color vibration. In some of the New York so-called "Renaissance" houses the same brick and joint with black mortar was used extensively during the latter part of the nineteenth century. That these houses were not all good does not preclude the possibility of a beautiful result from use of the thin black joint.

Example No. 2, is a portion of the garden wall of the Knickerbocker Club of New York, southeast corner of 62nd Street and Fifth Avenue, Delano & Aldrich, Architects. The brick is very like a carefully selected hard-burned common red brick and it is laid up in Flemish bond, the stretchers of the



Detail of Brick-work, House for James Byrne, Esq., at Oyster Bay, L. I. Grosvenor Atterbury, Architect.

PENCIL POINTS

alternate rows coming directly over each other. The joints of white mortar struck smooth and flush with the face of the brick are about $\frac{1}{4}$ inch wide, for the beds, the build or vertical joints apparently slightly narrower. Whether or not this is intentional, I do not know, but in an upper wall, perspective would tend to make build joints look wider than bed joints that are really of the same size.

This type of joint and brick is peculiarly expressive of Colonial and the particular example is one of the best of that style in New York City. Well may it be, for it is the work of a firm noted for its mastery of the style.

Example No. 3, the Brierly School on Park Avenue, No. 60 East 61st Street, New York, is also authoritative, as it was designed by McKim, Mead & White for a Colonial building. The brick appears to be a red Harvard, $2\frac{1}{8} \times 7\frac{3}{4} \times 3\frac{1}{2}$ inches, and it is laid up in Dutch cross bond, stretchers and headers in alternate rows, each stretcher centering on the joint between the stretchers next above and below. The joints are of white mortar and average $\frac{3}{8}$ of an inch wide although they really vary from $\frac{1}{8}$ inch to $\frac{1}{2}$ inch. The build joints of the headers space a little wider than the beds, while the stretcher build joints are narrow. A peculiarity of the joints is that they were slightly pressed back with a jointer from the face of the brick so that the edge of the brick is sharply and cleanly defined and the joint is smooth. To obtain this clear-cut effect it would be safe to clean down the wall shortly after it has been laid up unless, of course, a soft lime mortar that would wash out were used.

Example No. 4, is a residence at 19 East 62nd Street, New York, the brick being a red brick similar to a Harvard, laid in English bond with white joints $\frac{1}{2}$ inch wide of white mortar struck flush. Here the build joints do not vary greatly from the beds. Comparison of this and the preceding example impresses upon us the necessity of selecting for either English or Dutch bond a brick whose dimensions will lay up with the relation of build and bed joints we desire and that, for a joint of a predetermined size.

Example No. 5, a residence of 22 East 62nd Street, New York, is in a sort of red Harvard of a very hard variety, the dimensions of which are $2\frac{1}{8} \times 7\frac{1}{2}$ inch. They are laid up in Flemish bond with a frame of headers around the windows. The joints of white mortar are $\frac{5}{8}$ inch wide and slightly weathered, that is the trowel is run along the joint, inclined at an angle so that the face of the joint slants back from the brick at the joint's bottom to the disengaged under-face of the brick above. In this case, the slant was not accentuated and the build joints are practically flush. A build joint that I prefer for this work is obtained by giving a double stroke with the trowel so that the vertical edges of the brick are also disengaged and although the middle of the vertical joints will be higher than the edges, no marked shadow occurs across the bottom of the joint. A weathering of 60 degrees I have found very acceptable. In this building the continuous vertical joint at the edge of the headers that

frame the openings is $1\frac{1}{8}$ inch to $1\frac{1}{4}$ inch wide.

Example No. 6, the last on page 10, is very interesting. It is part of the wall of the Grolier Club, 47 East 60th Street, New York, by Bertram Grosvenor Goodhue. The brick, somewhat like a red Harvard, with black clinkers and swelled spots, are $2 \times 8 \times 3\frac{1}{2}$ inches but quite irregular in shape. They are laid in Flemish bond with a cream-colored mortar having in it grit to make it rough. The joint is $\frac{3}{4}$ inch wide and weathered back enough to give a definite shadow along the top of most of the bed joints. Some of the vertical joints have been weathered to the left, that is, with a direct right-hand stroke.

On page 11 is a charming bit of irregular brick work. It is from the house of James Byrne, Esq., at Oyster Bay, L. I., and Grosvenor Atterbury was the architect. The brick is red brown, with headers, all of standard size, but laid on edge, probably a wall eight inches thick with holes throughout the interior, each header running through. The brick texture is similar to that of common brick, but the color varies and the shape is less regular than that required for common brick. The joint $\frac{3}{8}$ inch wide is black.

This brings us to the end of a comparison of the usual widths of joints as they appear in our first division of brick work, those of smoother texture. It will be interesting to see how the rough texture of the second division affects this, which we shall endeavor to do in the next installment of this article.

PRIZES FOR CLOCK CASE DESIGNS.

TO AWAKEN interest in the designing of clock cases a competition with prizes aggregating \$1,200 is being conducted by the Cloister Clock Corporation of Buffalo, N. Y. The prizes include three first prizes of \$250 each, three second prizes of \$100 each, three third prizes of \$50 each and nine Honorable Mentions. The competition conditions describe three types of clock case designated as "Class A," "Class B," and "Class C," for which designs are wanted. Each class is to be judged without regard to the other classes and a contestant may win more than one prize. The contest closes 5 P. M., October 23, 1922. The jury of award consists of Mr. Richard F. Bach, Associated in Industrial Art, Metropolitan Museum of Art, New York; Mr. Charles Dana Gibson, New York; Mr. Albert M. Kohn, of the firm of Theodore A. Kohn & Son, Jewellers, New York; Mr. C. Matlack Price, Editor and Art Critic, New York, and Mr. Russell F. Whitehead, Secretary of the Architectural League, New York. The competition is open to everyone and a contestant may submit any number of designs. Announcement and conditions of this contest will be found on another page of this issue.

Pursuant to the call of the Picnic Committee, efficiently headed by Lister Holmes, about thirty-five care-free architects, members of the Washington State Chapter, A. I. A., gathered at West Landing on July 15th, for their annual frolic. All the high-brows stayed home, so a jolly time was had by all.

MOTION PICTURE THEATRE DATA PART III

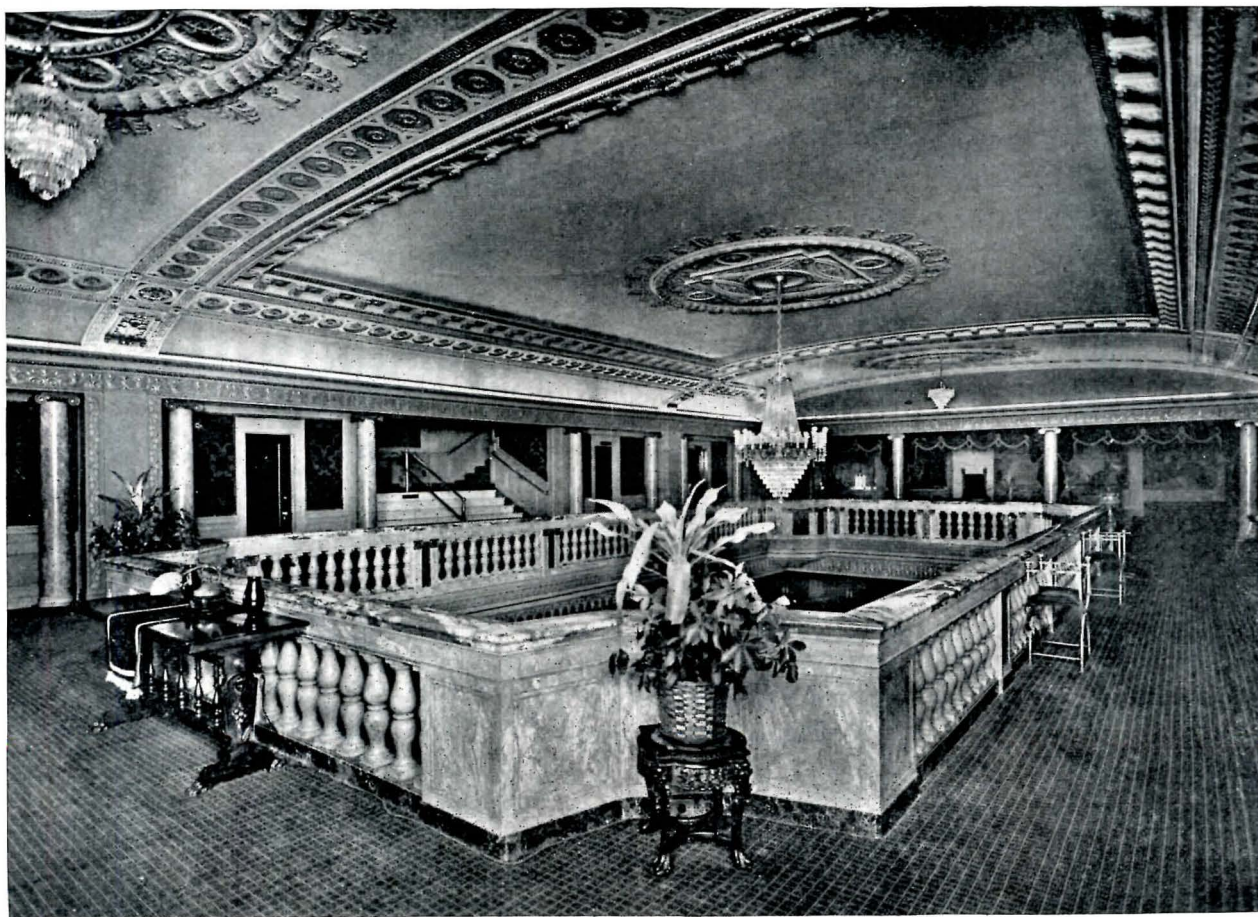
BY EMIL M. MLINAR.

In this serial article Mr. Mlinar, who is the New York associate of C. Howard Crane, Architect, Detroit, Michigan, is going thoroughly into the practical considerations in motion-picture theatre design, presenting the data indispensable in designing and making drawings for such theatres. Mr. Mlinar specializes in theatre work and was formerly of the office of Thomas W. Lamb.—Ed.

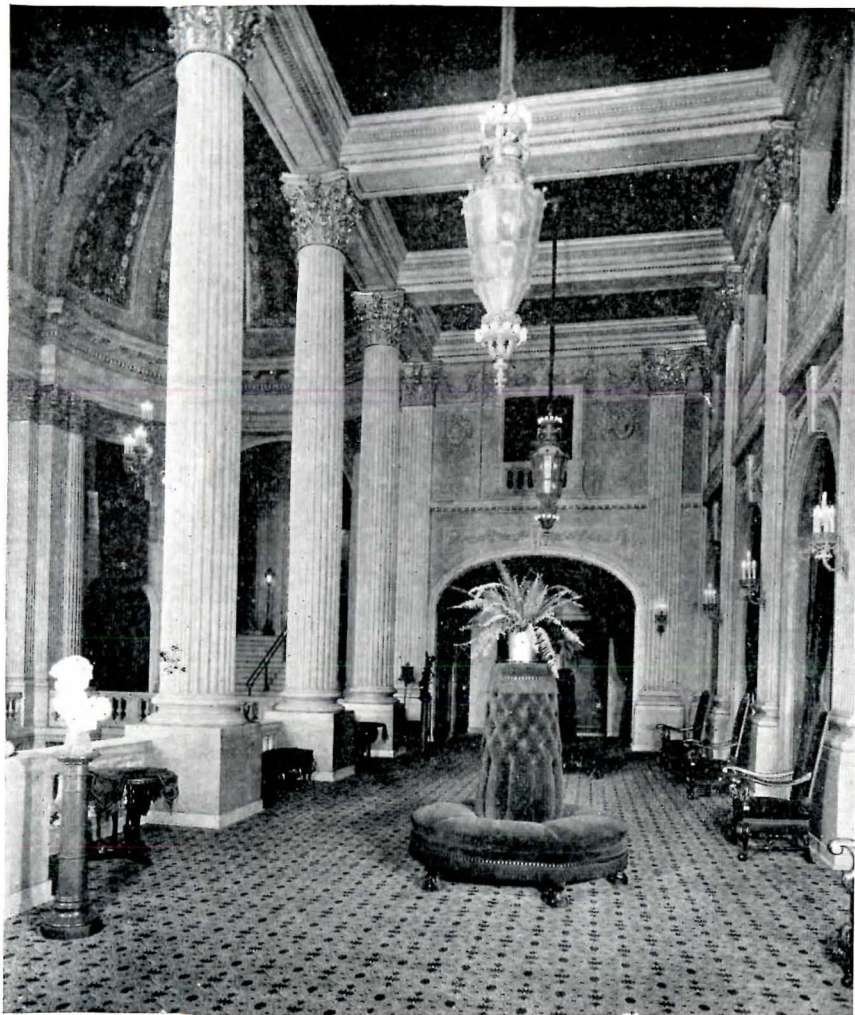
AN EFFECTIVELY designed mezzanine promenade is one of the most important features of a motion picture theatre, especially where large numbers of people must be handled. It is true that so spacious and impressive a mezzanine as that of the Capitol Theatre, in New York, is rarely possible, for in that theatre the balcony above is of such great depth that the rise provides space for an unusually large mezzanine extending all across the back of the auditorium and overlooking the grand foyer. The balcony of this theatre seats two thousand four hundred people. This mezzanine promenade is one hundred sixty feet long and about thirty-five feet wide from the wall to the balustrade along the open well at the back. The ceiling at its highest point is about fourteen feet. A photograph of this mezzanine is shown on page 15. The three doors

in the wall at the right of the picture open upon passages leading to the balcony. At either end are stairways to the balcony. The foot of one of these stairs may be seen at the extreme left of the photograph. At the far end is the main staircase leading from the grand foyer. At the end back of the camera are the ladies' retiring room and the men's smoking room.

The mezzanine of Loew's State Theatre, New York, is shown in the photograph on this page. This room has, as will be seen, an open well in the centre. Entrance is had from a passage at the far end of the room and the stairway at the left of the centre of the picture leads up to the balcony. This promenade is about forty-five feet wide and the depth of the mezzanine proper is about ninety feet. In this theatre the ceiling under the mezzanine is quite low and



Mezzanine of Loew's State Theatre, New York City. Thomas W. Lamb, Architect.

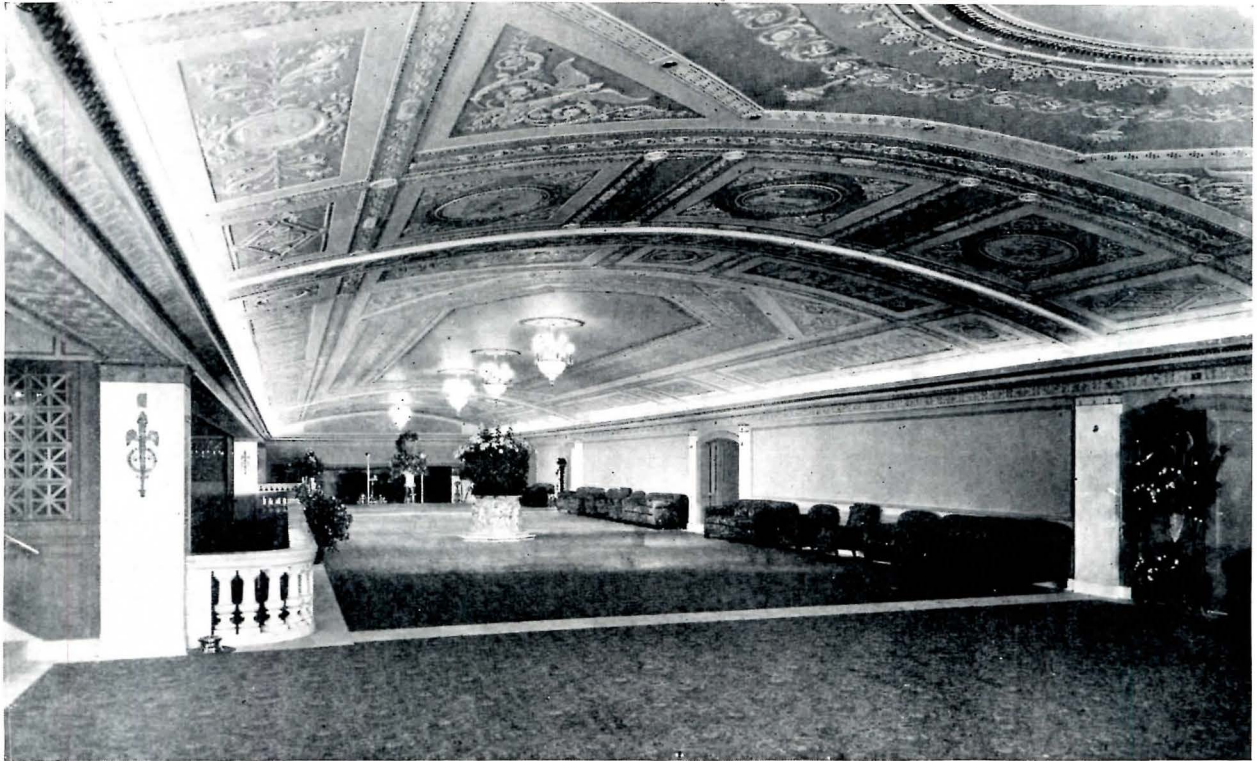


*Mezzanine Gallery of The Tivoli Theatre, Chicago.
C. W. & George L. Rapp, Architects.*



*Stairway to Mezzanine Gallery of Loew's State Theatre,
Cleveland, Ohio. Thomas W. Lamb, Architect.*

PENCIL POINTS



Mezzanine of The Capitol Theatre, New York City. Thomas W. Lamb, Architect.

the well in the centre of the mezzanine overcomes the tendency of this height to seem dwarfed.

In the Tivoli Theatre, Chicago, the mezzanine gallery, a view of which is shown on page 14, has a ceiling height of about sixty-five feet. The rear of a horse-shoe of boxes and of the balcony look out upon this mezzanine.

In Loew's State Theatre, Cleveland, the mezzanine is curved and is open over the back portion of the orchestra floor.

The adoption of these various schemes for the mezzanine was determined by the exigencies of the special problem in each case, a matter of planning which will be taken up in connection with a discussion of planning in a later issue.

I wish to call attention here to these different methods of treatment and to point out that when possible it is better to avoid an open well over the main floor of the auditorium because of the disturbance likely to be caused by people moving about and talking near this well in the mezzanine. The well at the back, like that in the Capitol Theatre, New York, has an advantage in this respect.

The amount of floor space and the amount of furniture in the mezzanine are determined in accordance with the policy of the management of the theatre in each case. With some classes of patronage it is not desirable to encourage lounging about, while for a higher class of patrons it is desirable to provide a mezzanine that has something the character of a spacious lounge.

It will be well, I believe, to say a few words in regard to the smaller rooms opening from the mez-

zanine. Among these is the ladies' retiring room (one being provided on the level of the orchestra floor also). This feature should consist of a series of three rooms opening one from the other. First the rest-room or "ladies' club" as it is sometimes called, in which there will be smoking; second, the dressing-room, or as one designer calls it, the "powder room"; third, the toilet containing the water closets and hand bowls. There should be one water closet to every three hundred women and one wash basin to every four water closets. The well-equipped dressing room has "vanity dressers," tables with mirrors, four dressers for three thousand two hundred seating capacity. Where it is not possible to provide a women's retiring room on the orchestra floor, additional space should be provided in the mezzanine for this purpose, rather than place a women's retiring room in the basement, as women in general dislike a basement room. I want to say here that the room must have outside ventilation. In some cases water closet stalls three feet wide have been provided but the conclusion has been reached that stalls not more than two and one-half feet wide are preferable.

A smoking room and toilet room for men may be provided on the mezzanine, but men as a rule, have no objection to a basement room. In the men's toilet room there should be one water closet to every four hundred men and one urinal to every three hundred men. One wash basin to every four water closets.

In every theatre there should be a room of seventy-two square feet in area for use as an emergency or

(Continued on page 32)

A VOCABULARY OF ATELIER FRENCH. PART VI

BY RAYMOND M. HOOD

This is the sixth installment of a vocabulary which Mr. Hood, Architecte Diplômé par le Gouvernement Français and Chairman of the Committee on Architecture of The Beaux-Arts Institute of Design, is preparing especially for this journal. It will be of special value to students in the ateliers in this country as well as to those who may later study at the Ecole des Beaux Arts in Paris, for there has been, we believe, no vocabulary published giving the special meanings of these words as used in the architectural atelier. As it is believed that an attempt to indicate the pronunciation would be futile, no such attempt is being made here; the pronunciation should be learned from someone who speaks French correctly.—Ed.

N (Continued)

Noir: *adj.*; black; *noir d'ivoire*, ivory black; *noir de pêche*, peach black.
Nouveau: *adj.*; new; *n. m.*; a beginner in an atelier.
Nuance: *n. f.*; shade, tone.

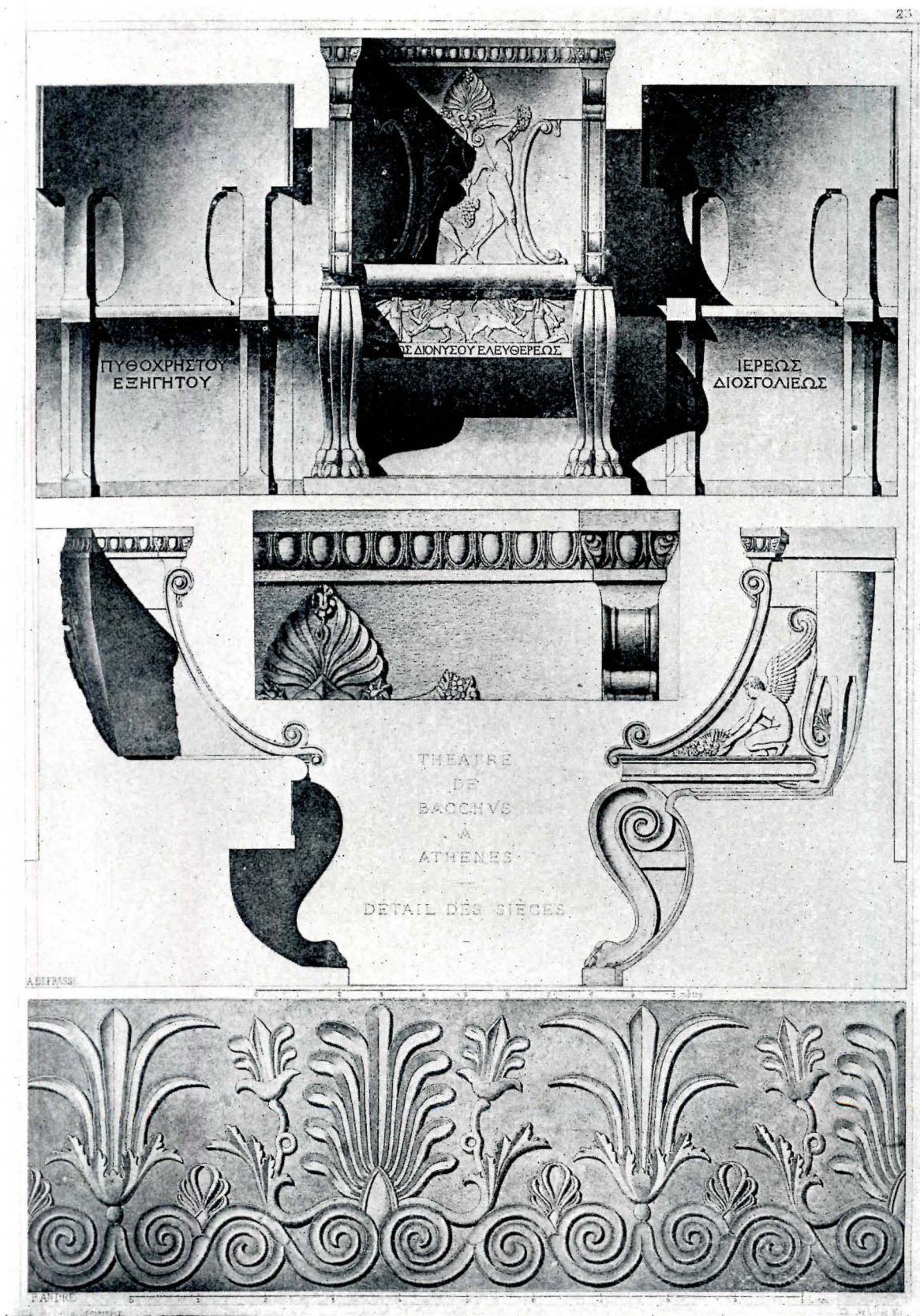
O

Oeil: *n. m.*; eye; *faire l'oeil*, to wink at, to make eyes at; *oeil de grand'père*, reducing glass.
Oeuvre: *n. f.*; work, task; *dans oeuvre*: *arch.*; inside dimensions; *hors d'oeuvre*: *arch.*, outside dimensions.
Office: *n. m.*; office, function; *also*, pantry.
Oiseau: *n. m.*; bird; *à vol d'oiseau*, bird's eye view.
Ombre: *n. f.*; shadow, shade; *ombre portée*, cast shadow.
Ordre: *n. m.*; order; *arch.*, the orders of architecture, as the Doric, etc.
Osé: *adj.*; audacious, nervy.

P

Pâître: *v.*; to lead to pasture; *envoyer quelqu'un pâître*, to dismiss a person without ceremony.
Paix: *n. f.*, peace; *fou-moi la paix*, *fiche-moi la paix*, be quiet, do not disturb me.
Palais: *n. m.*; place, a public or a semi-public building.
Pâle: *adj.*; pale, lacking in color, feeble.
Panier: *n. m.*; basket; *anse de panier*, a curve, elliptical in character, formed by arcs of circles.
Papier: *n. m.*; paper; *papier buvard* or *buvard*, blotting paper; *papier bulle*, a rough, yellowish drawing paper similar to detail paper.
Papilloter: *v.*; to lack quietness in effect, to jump, to be overdone in brilliancy.
Parterre: *n. m.*; flower garden; *also*, that part of a theatre or auditorium situated behind and at a slightly higher level than the orchestra stalls.
Parti: *n. m.*; scheme, idea, intention.
Pastel: *n. m.*; pastel.
Patelin: *n. m.*; country, locality.
Patine: *n. f.*; an oxidation that forms on old bronze; *also*, a tone enveloping and harmonizing the colors of a painting, drawing or an object.
Patois: *n. m.*; dialect.
Patron: *n. m.*; teacher, master.
Patte: *n. f.*; the foot of an animal; *slang*, hand; *avoir de la patte*, to be clever, dexterous.
Pavé: *n. m.*; pavement; *also*, street; *être sur le pavé*, to be homeless or without work.
Payer: *v.*; pay; *payer la tête*, make a fool of.
Peau: *n. f.*; skin; *la peau!*, nothing doing.
Pelouse: *n. f.*; lawn.
Pendre: *v.*; to suspend, to hang; *slang*, to do, to accomplish.

Pepin: *n. m.*; seed; *slang*, umbrella.
Perron: *n. m.*; an exterior staircase.
Piger: *v.*; *slang*, to regard, to admire, *also*, to take, to swipe.
Pinard: *n. m.*; *slang*, wine.
Pioupiou: *n. m.*; *slang*, a soldier.
Pipelette: *n. f.*; *slang*, the concierge, the porter.
Piquer: *v.*; to pierce a hole, *also*, to brighten up or make sparkle a drawing.
Plafond: *n. m.*; ceiling, usually flat.
Plafonner: *v.*; to put up on a ceiling.
Plaquer: *v.*; to apply one thing on another; *slang*, to quit, to abandon.
Plâtre: *n. m.*; plaster.
Pocher: *v.*; *arch.*, to fill in with black ink, as the walls of a plan.
Poché: *n. m.*; the walls of a plan blackened in; *fig.*, the study of a plan with reference to the walls and piers only.
Poêle: *n. f.*; stove.
Poilu: *adj.*; hairy; *n. m.*; *slang*, a rugged, courageous man, a soldier.
Poinçon: *n. m.*; the king post of a truss.
Point: *n. m.*; point.
Point d'appui: point of support.
Pointes seches: *n. f.*; *pl.*; dividers.
Poire: *n. f.*; fear; *slang*, an easy mark, a gullible person.
Poivrot: *n. m.*; *slang*, a drunkard.
Pompier: *n. m.*; a fireman; *adj.*; *slang*, commonplace, orthodox, old-stuff.
Poncer: *v.*; to transfer a drawing from one sheet to another, usually by rubbing; *encre à poncer*, a special ink used for making drawings which are to be transferred.
Poncif: *n. m.*; a drawing ready to be transferred.
Poncoir: *n. m.*; an agate instrument used in transferring drawings.
Popote: *n. f.*; *slang*, cooking; *also* commonplace, hum-drum.
Populo: *n. m.*; *slang*, the common people, the crowd.
Porte à faux: a part of a construction that is not directly carried by a support, as a cantilevered part.
Potager: *n. m.*; a vegetable or fruit garden.
Potin: *n. m.*; *slang*, a din, a racket.
Poule: *n. f.*; *slang*, a girl, a skirt.
Poupoule: *n. f.*; *slang*, a good-natured expression similar to *poule*.
Preau: *n. m.*; a covered playground, a prison court.
Prix: *n. m.*; price, prize.
Promener: *v.*; to lead, to walk; *envoyer promener*, to send about one's business, to put out.
Puer: *v.*; to stink, to be rotten.



DETAILS OF THE THEATRE OF BACCHUS, ATHENS.
FROM D'ESPOUY'S "FRAGMENTS D'ARCHITECTURE ANTIQUE"

The details from the Theatre of Bacchus shown in the plate reproduced on the other side of this sheet, from D'Espouy's "Fragments D'Architecture Antique" are admirable expressions of the Greek love for refinement and beauty and purity of line in every part of their buildings. This plate is also an interesting example of rendering.



CARTOON BY BARRY FAULKNER FOR ONE OF HIS MURAL DECORATIONS
IN THE EASTMAN SCHOOL OF MUSIC, ROCHESTER, N. Y.

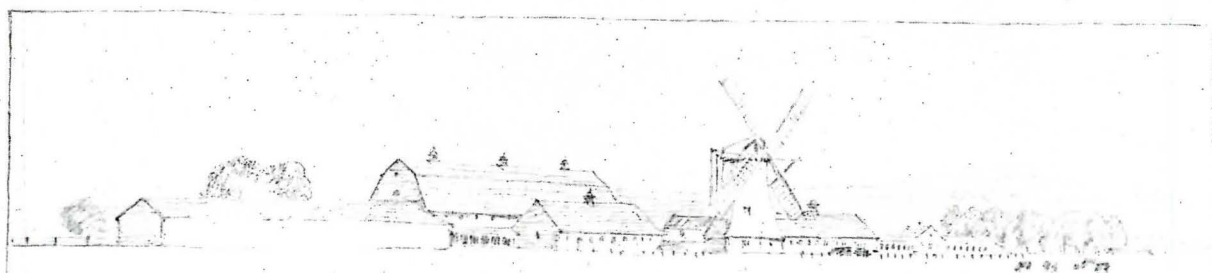
McKIM, MEAD & WHITE, ARCHITECTS.

The cartoon for one of the group of mural panels by Barry Faulkner in the Eastman School of Music, at Rochester, N. Y., is an unusually interesting drawing. These decorations by Mr. Faulkner consist of four panels grouped at the right of the proscenium—those similarly placed at the left being by Ezra Winter. These decorations fit in between pilasters and vary in size from about 10 ft. 6 in. wide x 18 ft. high to 16 ft. wide x 27 ft. high. The coloring of these paintings is like that of old tapestries and the pilasters and walls, which are of the color of Travertine, harmonize well. The decorative scheme relieves the oppressive sense of being shut within walls by its suggestion of the out-of-doors and its symbolism calls to mind pleasantly the various stages of development in the history of the art of music.

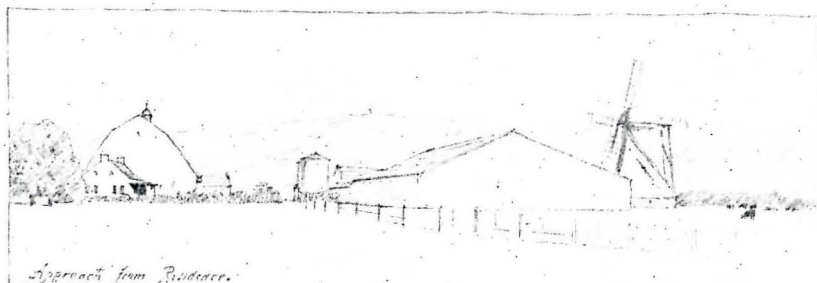


PENCIL DRAWING BY BERNHARDT MULLER

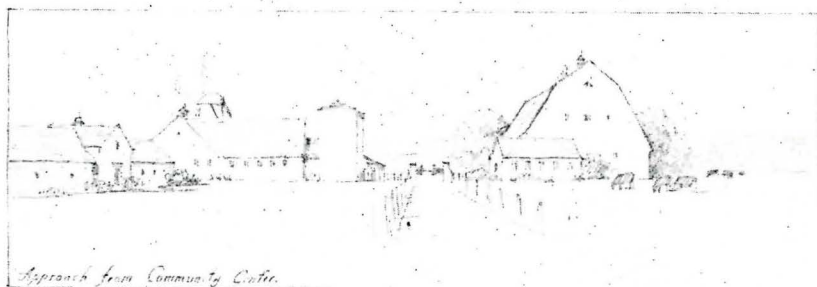
The pencil drawing by Bernhardt Muller, which is reproduced on the other side of this sheet, is notable not only as an example of pencil technique but also as an expression of the inherent charm of the building, a charm of which a suggestion persists even though the walls are in a state of ruin. This drawing well shows Mr. Muller's skill in making pleasing compositions and the sensitiveness with which he is able to render the picturesque note in architecture.



Farm Group from Residence.



Approach from Residence.



Approach from Community Center.

SKETCHES OF FARM GROUP

SKETCHES BY BIRCH BURDETTE LONG OF DESIGN FOR A FARM GROUP.
CHARLES WELLFORD LEAVITT, LANDSCAPE ENGINEER.

*Sketches by Birch Burdette Long
Landscape Eng.
New York*

Three delightful little pencil drawings by Birch Burdette Long are reproduced on the other side of this sheet. They are notable for the success with which the appearance of a group of buildings from different points of approach has been suggested by means of a few pencil strokes skilfully made. These drawings are also interesting because they are entirely different from the large, fully-rendered drawings of designs for important works of architecture for which Mr. Long is known.

THE STUDY OF ARCHITECTURAL DESIGN

WITH SPECIAL REFERENCE TO THE PROGRAM OF THE BEAUX-ARTS INSTITUTE OF DESIGN

CLASS B. PLAN PROBLEM. PART IX.

Studying by Means of Mosaic

BY JOHN F. HARBESON

In this series of articles, which began in January, 1921, Mr. Harbeson is explaining the method of working and how to get the greatest benefit in following the program of The Beaux-Arts Institute of Design. It is not intended as a substitute for personal instruction and criticism. The "Analytique" was treated in issues for February to September, 1921, inclusive.—ED.

ARCHITECTURAL students are all more or less familiar with the term "mosaic" as applied to the garnishing of a plan, of making a telling and effective presentation of an idea or a parti in plan. Just why or how it should be used for this purpose is not so generally understood, but they know the value of a number of lines within a plan, representing a floor here, or a ceiling there, or the furniture in a room.

But before a problem has reached the presentation stage mosaic has a value in the study of a plan very similar to the use of "grays" in the study of elevations. This is its use in the study of a scheme, of the "circulations," and of the working of a plan to solve the conditions of the program. For this purpose, of course, the mosaic is "indicated," rather than drawn.

This is, in reality, composition, composing with whites and blacks, and various intermediate grays. In every case successful mosaic is successful because it helps to explain the big idea of the parti. Now, the final presentation can never be successful unless the "effect"—the composition of whites and blacks and

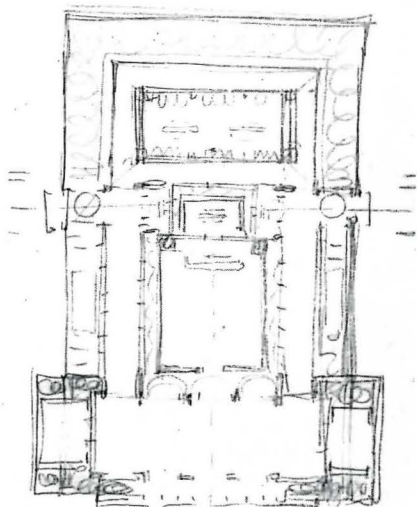


Figure 161. A Study of Plan.



Figure 160. An Elevation Study.

grays—is kept in mind from the early stages of the study, long before the presentation drawings are thought of. This is of equal importance with the study of "poché"—the study of the walls—for it should always be borne in mind in studying a plan, that one should consider the rooms, as enclosed by walls, rather than the walls. It is much easier to study effectively by masses of grays than by little points of poché!

Figure 160 is a typical study of elevation; here we see the balustrade, the band course, the window grilles, indicated by series of running spirals in pencil—usually smudged with the finger into a "gray"—to represent in a study of proportions, the position of ornament that will be later studied in detail and drawn, or in

some cases, perhaps, omitted if study shows them to be in the wrong place. To draw such details at such a stage in the study of elevation would be a foolish waste of time needed for other phases of study.

In the same way in Figure 161 we see an early study of a plan—a criticism by Paul Cret of a student's plan for a "Supreme Court Building." Here

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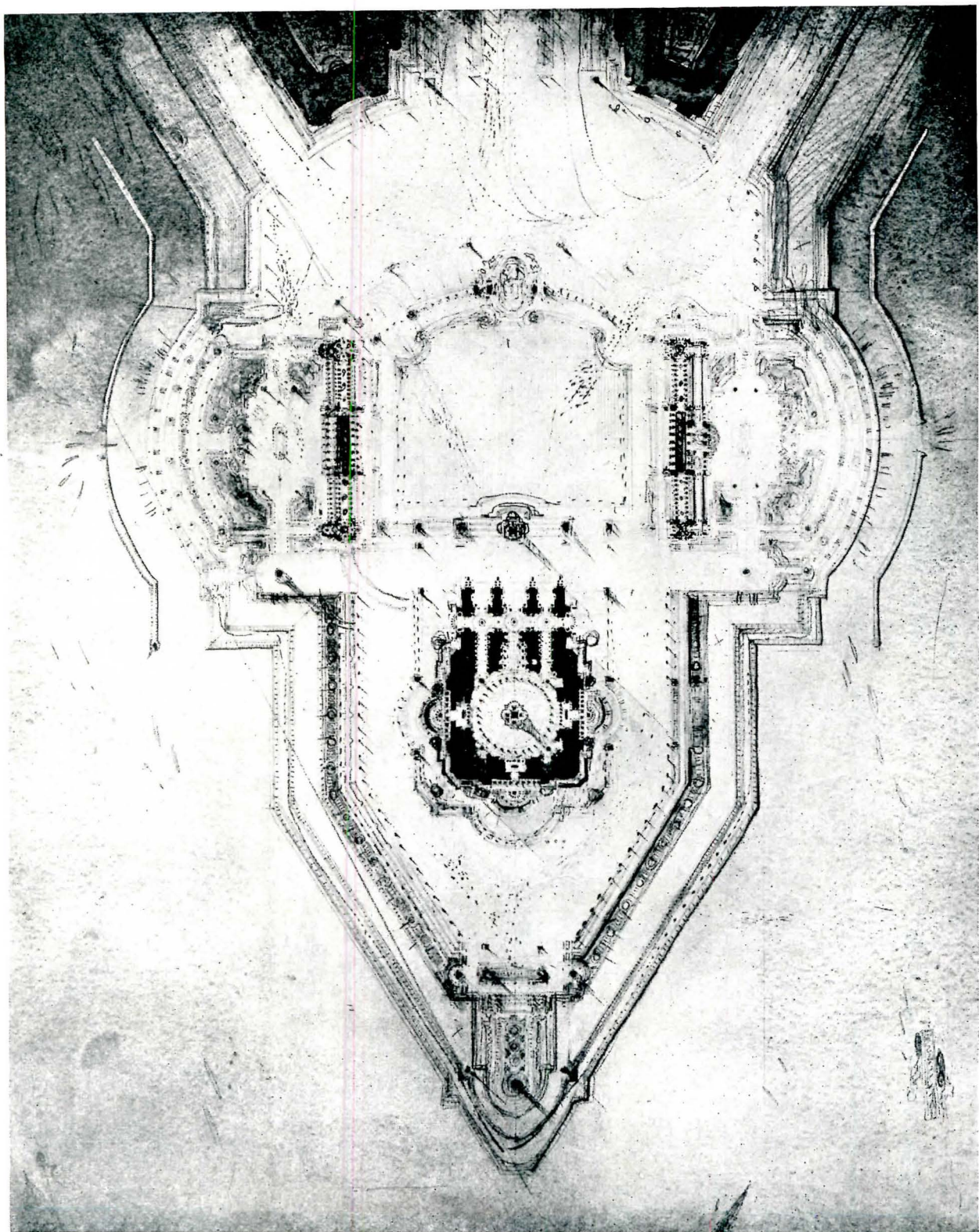


Figure 162. Plan Study by Grant Miles Simon for the Design With Which He Won the Paris Prize in 1913. Compare with Central Portion of His Final Drawing on Opposite Page. Subject "Treatment for Lower Part of Manhattan Island."

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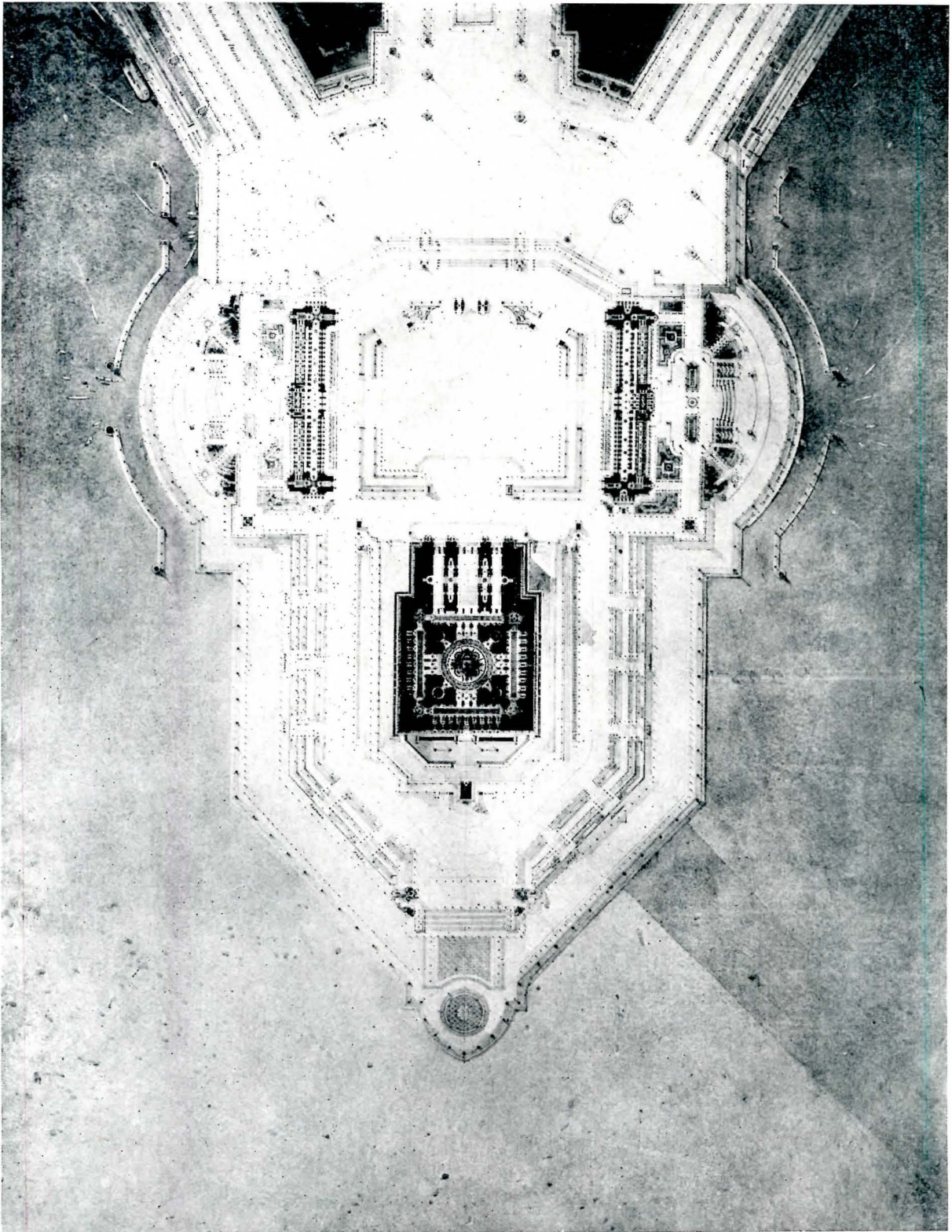


Figure 163. Final Plan of Design by Grant Miles Simon, Winner of the Paris Prize of The Society of Beaux-Arts Architects in 1913. Compare with Rapid Study on the Opposite Page. -
Note Effectiveness of the Latter.

PENCIL POINTS

the "circulations" are left white, the other portions grayed in in various ways, none of which require careful drawing, but aiding in visualizing a scheme, so that the disposition of the different portions of a plan may more effectively be made.

In studies, such indication of mosaic should follow a use of T-square and triangle in laying out the big lines of the plan—the axes first, and the principal lines of the walls. Put these in place, and poché blacked in quickly with a brush or with pencil, the "effect" should be sought by indicating mosaic.

Note the effect obtained in Figure 162, one of the studies of plan made by Grant M. Simon in competition for the Paris Prize in 1913, which he won. Compare this sketch, a work of a few hours only, and done at a small scale, with the central portion of the final plan, shown in Figure 163, on which the actual drawing and presentation required nearly

two weeks' time. The effect is almost as convincing in the sketch as in the final drawing. When this manner of study becomes a habit, and in the studies an attempt is made to approximate rapidly the final presentation, mistakes in plan, uncomfortable corners, unsatisfactory arrangements are made visible when they may be altered, while there is still time for study, and before the final paper is reached—avoiding the rubbing out and sponging out of mistakes that would not otherwise show

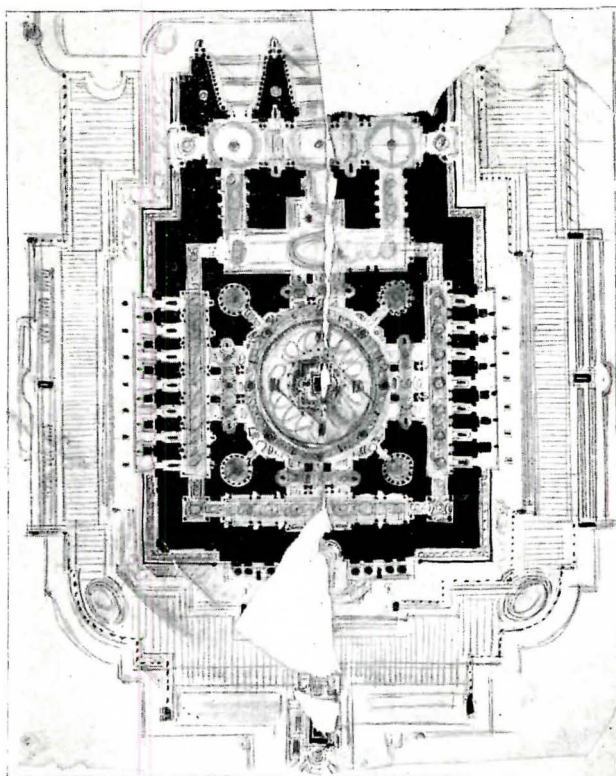


Figure 164.

petition in the Ecole des Beaux Arts, the way the mosaic is used in bands of gray to make a composition. This may also be seen in Figure 130 (February issue) in the plan by the same author submitted in a preliminary competition for the Prix de

Rome, and Figure 132 (same issue) by Delaun.

It is impossible to overestimate the value of this study of "effect." In small scale studies the mosaic may be indicated in pencil. In plans at large scale it is possible to arrive more quickly at an effect by using charcoal, or charcoal and chalk, especially in the study of the mosaic outside of the plan, or "entourage," as it is called, as we shall see a little later.

Now, as to the form of this mosaic indication: there (Contin. on p. 33)

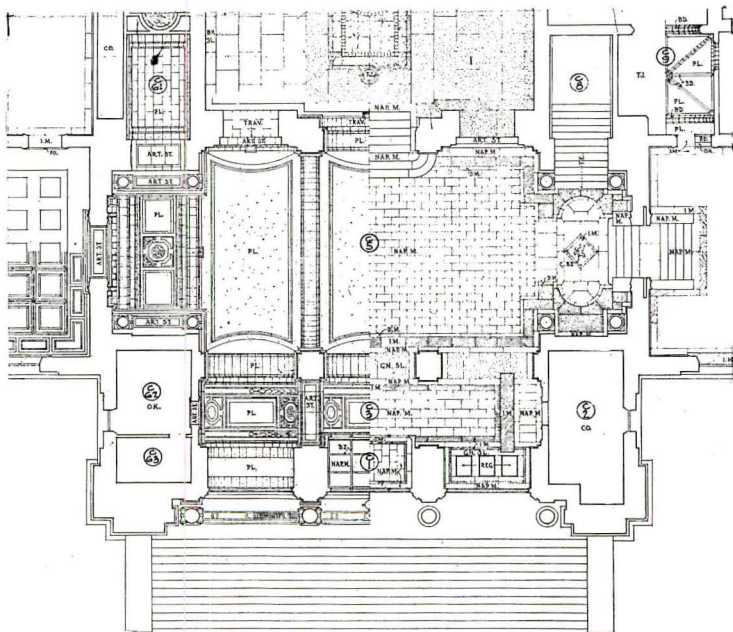


Figure 168.

PENCIL POINTS

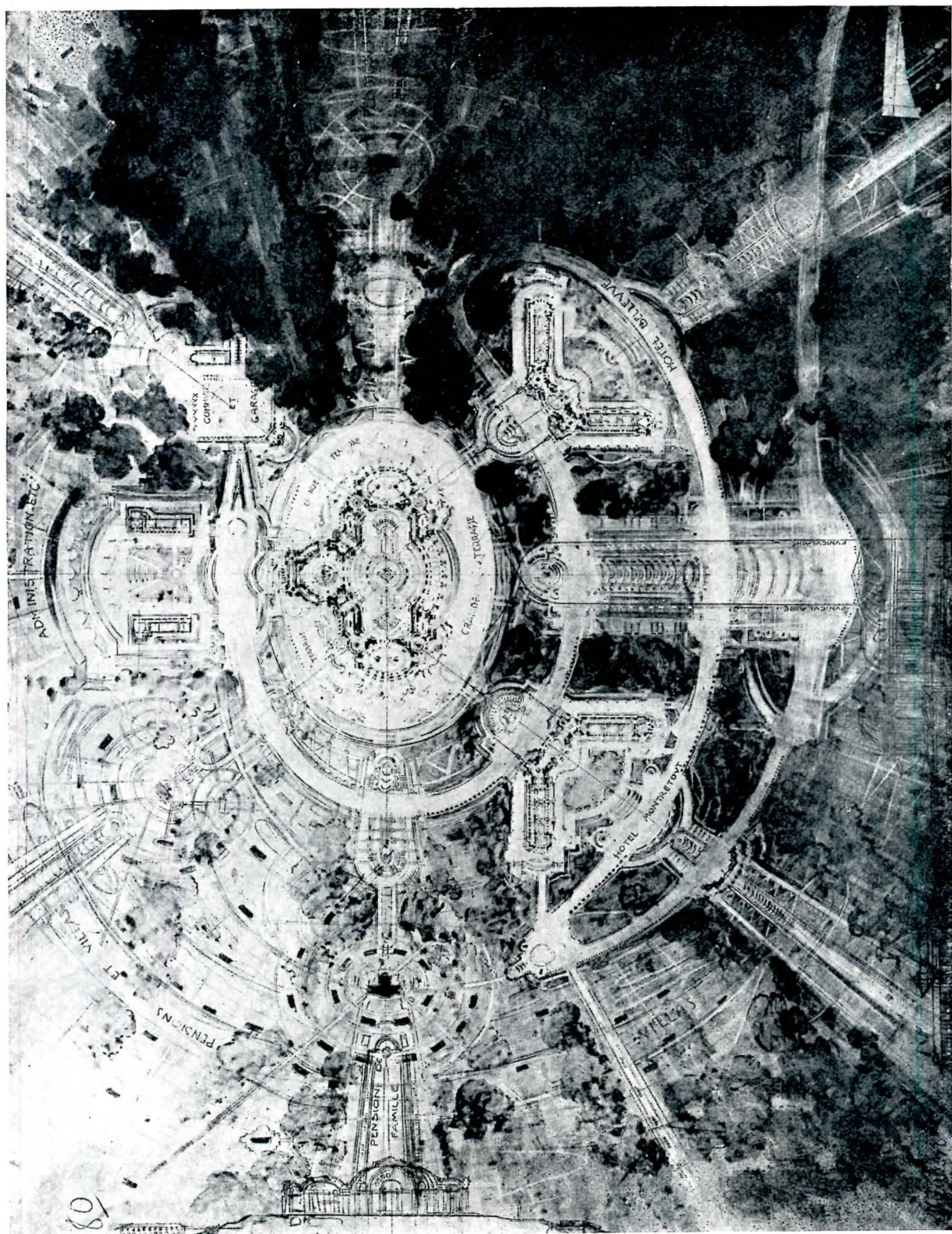


Figure 165. "Une Station Estivale," Concours Labarre, Ecole des Beaux Arts, Paris. Mention.
M. Roger Expert, Pupil of MM. Redon and Umbdenstock.

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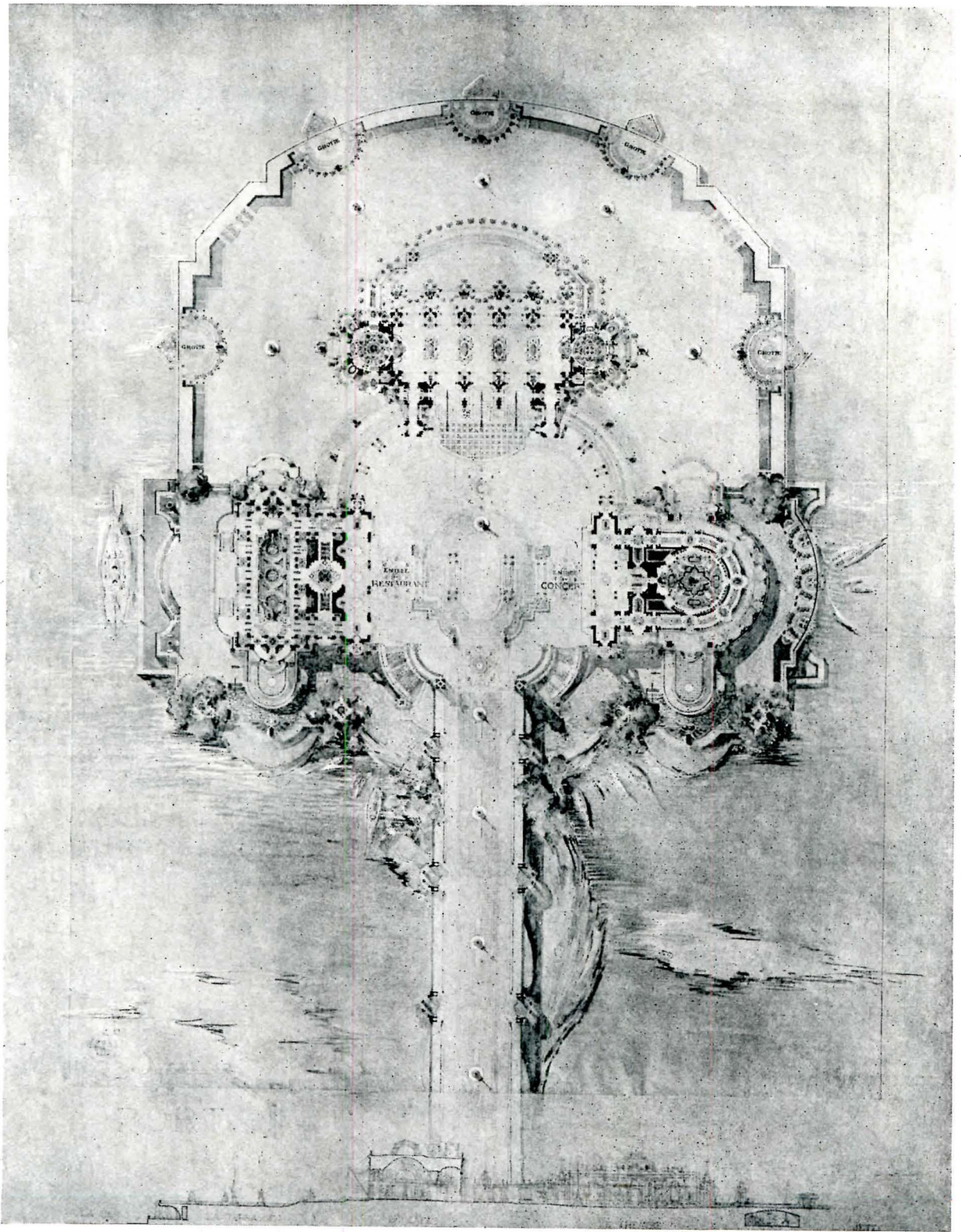


Figure 166. "Une Jettée-Promenade," Prize Design by M. Castel, Pupil of M. Bernier, Ecole des Beaux Arts, Paris, Concours Américains, 1912-13.

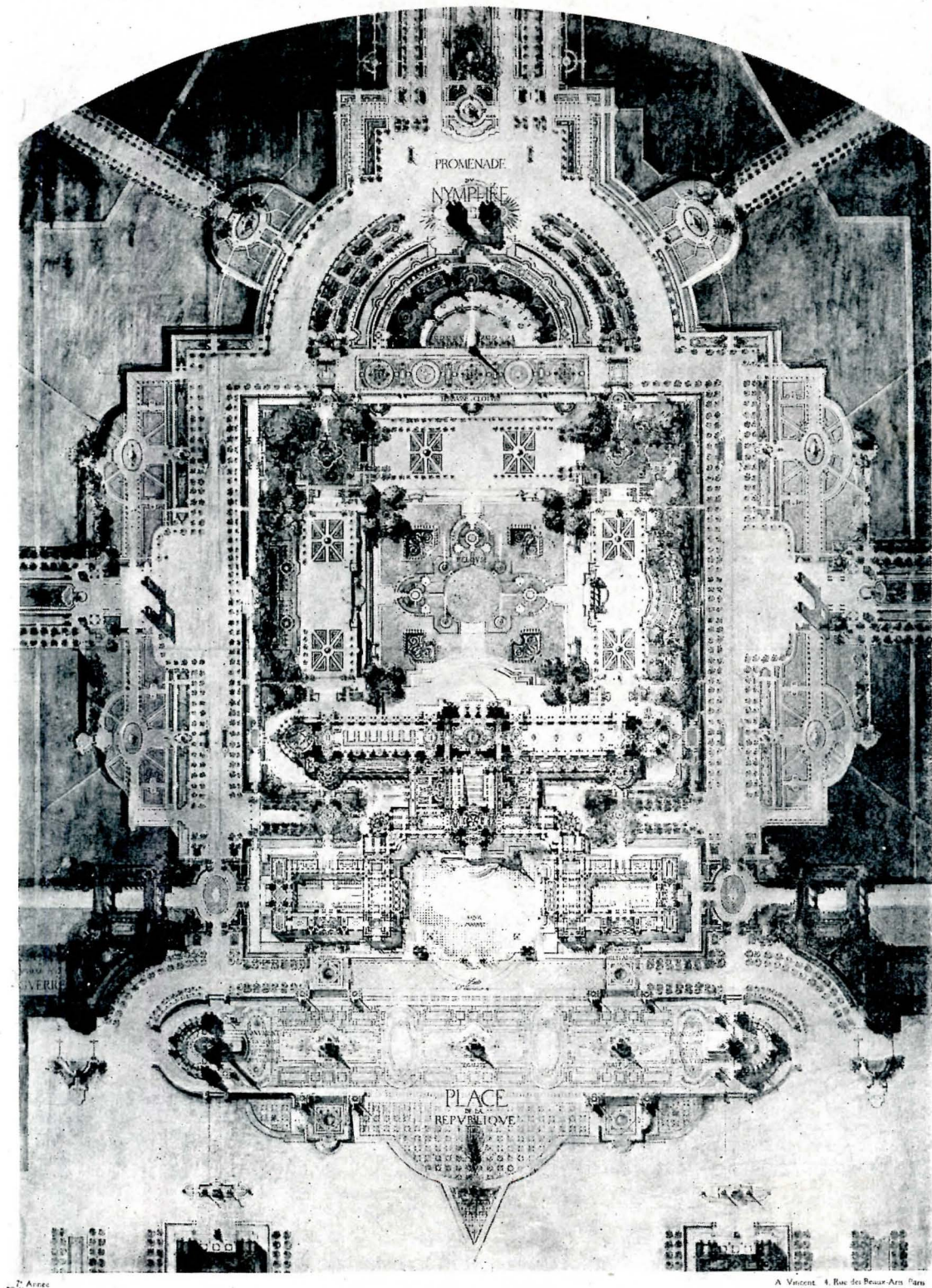


Figure 167. "Un Palais de la Presidence dans la Capitale d'une Grande Republique."
Placed Second, Grand Prize, Ecole des Beaux Arts, Paris, 1912-13.
M. Gaston Castel, Pupil of M. Bernier.

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THEY ARE COMING IN.

SKETCHES in considerable number have already been received at this office for entry in the Birch Burdette Long Sketch Competition for 1922. This year's competition, which closes at noon on October 30, promises to be an even bigger event than last year's competition. As was the case last year, prizes to the amount of two hundred fifty dollars are offered by Mr. Birch Burdette Long and the competition will be conducted by the publishers of PENCIL POINTS, with a jury of award including three distinguished architects. A public exhibition of sketches will be held in New York after the judgment and it is planned to send out a travelling exhibition again this year. Now is the time to come in. Read the announcement and full statement of conditions in the August issue of PENCIL POINTS or write to this office for conditions, then take a try at it.

RAYMOND J. RICHARDSON RECEIVES APPOINTMENT AT CARNEGIE INSTITUTE OF TECHNOLOGY.

RAYMOND J. RICHARDSON, of Reading, Pa., has been appointed Assistant Professor in the Department of Architecture at Carnegie Institute of Technology, Pittsburgh. His duties begin with the Fall Semester of 1922.

Mr. Richardson is a native Pennsylvania, and a graduate of the University of Pennsylvania, receiving his B. S. degree in Architecture in 1914, and his M. S. degree in 1915. The following year he was with J. E. R. Carpenter, and for another year was with McKim, Mead & White. He then entered the U. S. Navy and saw about eighteen months of service as Ensign with the Camouflage Division.

After the war, Mr. Richardson was associated for two years with Edward Z. Scholl, Architect, of Reading, Pa., and was then awarded the Henry Gillette Woodman Travelling Fellowship at the University of Pennsylvania. Since May, 1921, until July, 1922, he was abroad studying as holder of the fellowship.

MOTION PICTURE THEATRE DATA (Continued from page 15)

first-aid room. It should not be fitted to look like a hospital room. The walls should be painted a warm, pleasant color instead of white, and it should contain a comfortable couch or divan instead of a hospital cot. There should be a cabinet for supplies. This room is well placed on the mezzanine, as this gives it a central location.

There may well also be an office on the mezzanine for the manager, a room to which he can retire from his office on the orchestra floor and be undisturbed by the various types of people who insist upon seeing the manager without any good reason.

ADDRESSES WANTED.

THE publishers of PENCIL POINTS would like the present addresses of the following: Emmet, Ark.—Ira L. Brooks; Alhambra, Cal.—O. J. Brewer; Berkeley, Cal.—Rolf M. Eskil, Mary Jayne Gospodarcic, Wallace H. Matlock; Los Angeles, Cal.—L. S. Alexander, R. W. Day, Edith Hynes, Geo. W. MacKenzie, Roy S. Price, C. J. C. Sharpe, Herbert Shaw; Santa Ana, Cal.—Florence Yoch; South Pasadena, Cal.—Lelia E. Mattox; Bridgeport, Conn.—Herbert Flanagan; New Haven, Conn.—D. M. Douglas; Atlanta, Ga.—J. B. Gill, Jr., T. D. Herin; Champaign, Ill.—K. O. Graves; Chicago, Ill.—Glenn W. Allen, R. J. McFarlane, Leone Morrow, Eric Peterson, Frank Sohn, Wm. J. Williams; Richmond, Ind.—Rudolph Brehm; South Bend, Ind.—F. N. Pedrotty, Myrle E. Smith; Monroe, La.—L. M. Lawrence; Cambridge, Mass.—L. C. Holden, Ira C. Johnson, Helen Jones, Henry C. Knight, O. J. Teegen, R. H. Walker; Ann Arbor, Mich.—J. P. Leach; Detroit, Mich.—Lester Manning; Minneapolis, Minn.—Carroll A. Armstrong, L. R. Cleveland, Alberta Eberhart, J. A. Kallander, R. A. McGee, Arthur Wade; St. Paul, Minn.—R. N. Hazlewood, Edw. F. Riley, Ralph W. Williquett; St. Louis, Mo.—E. A. Stuck; Bloomfield, N. J.—Leon H. Hoag; East Orange, N. J.—Mrs. R. M. Sutphen; Hillside, N. J.—W. P. Aquin; W. Montclair, N. J.—Lucius Moore; Newark, N. J.—Harry Tepperman; Passaic, N. J.—John P. Kelly; New York City—C. L. Douglas, P. H. Dumar, Louis Hertzberg, M. T. Ketz, Hendrick Maas, Arthur C. Nash, Jos. J. Reubel, Tom H. Stevens; Brooklyn, N. Y.—C. J. Callahan, Stuart Paterson, S. Tantorski; Jamestown, N. Y.—Carl Gylfe; New Rochelle, N. Y.—N. A. Noreloue; Syracuse, N. Y.—Martha Dittmar, John Wassum; West New Brighton, S. I., N. Y.—W. M. Robbins; White Plains, N. Y.—E. Hasbrouck; High Point, N. C.—E. D. Everhart; Raleigh, N. C.—R. W. Underwood; Alliance, Ohio—Chas. W. Maple; Cincinnati, Ohio—W. Harry Phillips; Columbus, Ohio—R. A. Bohling, Downie W. Moore, H. Schoen, H. A. Wieland; E. Cleveland, Ohio—Wilbur G. Hyde; Philadelphia, Pa.—St. Brian Baylinson, A. D. Carroll; Pittsburgh, Pa.—M. G. Uslan; Scranton, Pa.—John G. Gilson; Clemson College, S. C.—H. L. Johnson; Huron, S. D.—J. H. Albright; Wakpala, S. D.—H. A. Miller; College Station, Texas—T. H. Baker, L. P. Newman, T. G. Ratcliffe; Fort Worth, Texas—H. A. Spackler; Charlottesville, Va.—G. H. Fohworth; J. H. Law, J. W. Martin; University, Va.—Edwin McElroy; Auburn, Wash.—E. J. Schubert; Seattle, Wash.—Victoria G. Edades, Edw. Leonard; Manitowac, Wis.—Arthur C. Dietrich; Milwaukee, Wis.—W. B. Sunley, Robert Trumpfheller; Montreal, Canada—Jos. A. L. Houle, W. Roy Wilson; Toronto, Canada—G. A. Reynolds, Henry F. Starbuck; London, England—F. B. Kemp.

PERSONALS.

LINGLE DOUGLAS LANCE has removed his office for the practice of architecture from Wyomissing, Pa., to 108 North Fifth St., Reading, Pa.

THE ASSOCIATED ENGINEERS, INC., have removed their offices from 86 Michigan Street to 373 Broadway, Milwaukee, Wis.

HARVEY W. CORBETT, of the firm of Helmle & Corbett, is returning from his six-weeks' trip to London and will arrive in New York about September 1.

JOHN TEMPEST WALKER, as an associated partner in the company, will in the future direct the architectural activities of Samuel H. Pitcher Company, Inc., civil engineers and architects, 44 Front Street, Worcester, Mass.

NORRIS I. CRANDALL, assistant professor of Architectural Design of the University of Illinois, has resigned to become head of the Department of Architecture at the University of Porto Rico.

WILLIAM MACY STANTON AND STANLEY P. STEWART of the Department of Architecture of the University of Illinois, have resigned to enter the practice of architecture in Philadelphia. Both men are licensed architects in Illinois, Pennsylvania and New Jersey.

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THE STUDY OF ARCHITECTURAL DESIGN

(Continued from page 28)

should be a big scheme underlying it, to explain the parti. In some cases the "circulations"—corridors, lobbies, etc., are left white, and the various rooms grayed in, as in Figure 161. Of course, this will also be true of the finished drawing, as may be seen in Figure 166 by Castel, one of the masters of mosaic indication among the recent students at the Ecole des Beaux Arts at Paris. In a finished drawing of course, "whites" are only white by contrast with the darker bands, and themselves may have a considerable amount of drawing, as in parts of this plan. This scheme may also be seen in the plan of Hébrard, Figure 128 (February issue.) Or the scheme may be reversed, and the circulations heavily mosaiced, as in the reception portion of the plan for a presidential mansion shown in Figure 167, also by Castel. The important thing to remember is that the mosaic must, with the poché and rendering, form a composition.

Within this composition it is customary to indicate which are the important rooms by the richness of the mosaic—for mosaic may be rich in color and drawing whether it is to count as a light or a dark, by the character of the drawing and the contrasts between the light and dark bands. Note the almost jewel-like appearance of the center of the monument in the Simon Paris Prize plan, and in various portions of the two plans by Castel, Figures 166 and 167.

While these are all very rich in lines, and the mosaic is small in scale—and student work in general should be so—it is the custom in competitions for actual work, and in studies in offices for projected work to use a much simpler form of mosaic, limiting it to that which really is to occur in the building—simple floor patterns, or ceiling diagrams, but even here, though the lines are simple, they must in the same way be composed; i. e., they are part of the architecture, which, of course, is "composed." In this connection it is interesting to study Figure 168, a reproduction of a portion of a contract drawing for the new Museum of Art in Detroit.

In the next installment, we shall consider the actual drawing of mosaic.

PLYM FELLOWSHIP WON BY FLOYD W. RAY.

THE ninth competition for the Plym Fellowship in Architecture of the University of Illinois has been won by Floyd W. Ray, of Long Beach, California. The Plym is a travelling fellowship and provides for a year's study abroad. It was established some ten years ago by Mr. Francis W. Plym, a graduate of the Department of Architecture of the University of Illinois, and president of the Kawneer Manufacturing Company of Niles, Michigan. The present holder, Ernest Pickering of Lawrence, Kansas, returns from his studies as Mr. Ray departs. Mr. Ray is a graduate of the University of Illinois in the class of 1921, and the winner of the Institute Medal for that year. He is at present a designer in the office of T. Beverly Keim, Architect, Los Angeles. He sails in September.

THE TECHNOLOGY CLUB OF SYRACUSE.

THE affiliation plan recently adopted to bring into full membership all local chapters or sections of national engineering bodies so that the educational purpose of the club can function as a unit in engineering has added several hundred highly qualified engineers in Syracuse and throughout central New York to the annual membership which has averaged two hundred since the incorporation of the club nineteen years ago. Through a wise broadening of the membership requirements and the reduction of annual dues to five dollars, many scores of men not identified with the national bodies have joined.

Club rooms are maintained in the Eckel Theatre Building. Lectures are given at the Onondaga, either in the roof garden, the Hiawatha Room, or the ball room. The lecture program is varied and the lectures are by men chosen especially for their fitness to speak on their respective subjects. There are usually three lectures a month.



CLEMENS NICHOLAS.

CLEMENS NICHOLAS, president of the national organization of Scarab architectural fraternity, was born in St. Louis and is a graduate of Washington University of that city. In his college days he was the winner of the A. I. A. medal and later taught in the public schools. He was for a summer the instructor of the St. Louis Architectural Club Summer Sketch Class. While in college he was elected to the Scarab Architectural Fraternity. He is a member of the staff of Jamieson & Spearl, St. Louis. His early training was with such architects as Warren, Russell & Crowel, St. Louis, and Link & Trueblood, Jackson, Miss.

The Scarab Fraternity of which Mr. Nicholas is president was founded at the University of St. Louis in 1909 for the purpose of fostering good fellowship, developing a professional spirit and stimulating friendly and personal co-operation among architectural students. Temples of this organization are now to be found in such schools of architecture as the University of Illinois; Washington University, St. Louis; Armour Institute; Pennsylvania State College; Carnegie Institute; Massachusetts Institute of Technology and Kansas University. With representation in such schools as these and with so able a leader as Mr. Nicholas, Scarab may well be expected to greatly strengthen and broaden its influence for good in the architectural profession.

PRIZES FOR SLOGAN OR INSIGNIA.

A PRIZE of one hundred dollars is offered for the best slogan to promote the use of slate and another prize of one hundred dollars for the best design for a slate industry insignia. One competitor may win both prizes.

A national association of the slate industry is being created to inform the public of the superior service rendered by slate. An objective tersely expressed by a slogan is desired, also an insignia. They are to be used on the advertising and literature of the association and on the stationery of members. Contest closes September 30, 1922. Announcement of this competition and statement of conditions appear on another page of this issue. Booklet "Uses of Slate" will be sent on request addressed to Slate Slogan or Insignia Contest, 757 Drexel Building, Philadelphia, Pa.

QUERIES

In this department PENCIL POINTS will endeavor to answer questions of general interest pertaining to Architecture and allied arts, giving the best available information from authoritative sources. We desire that you feel free at all times to make use of this service, inviting your co-operation in making the department both interesting and valuable. Should you desire an answer by mail, enclose stamp for reply. Address queries to The Editor, PENCIL POINTS, Metropolitan Tower, New York City.

Question—Will you kindly let me know of a good book or two on architectural ornament for decorating friezes and other such surfaces, also a book on Colonial furniture? S. K. *Answer*—We would suggest the following books: Meyer's "Handbook of Ornament"; Speltz's "Styles of Ornament." The first is general and the latter is more architectural. For friezes and panels see "Le Stucco" by Terrarri. For Colonial furniture we recommend the book by Lockwood, published by Charles Scribner's Sons, New York; Nye's "Measured Drawings of Colonial Furniture," published by William Helburn, New York; Nutting's "Furniture of the Pilgrim Century," published by Charles Scribner's Sons, New York.

Question—Please suggest some books that would be of value to a young man soon to enter architectural school. R. M. M. *Answer*—Lubschez's "Over the Drawing Board," "Vignola" by Esquie with English translation, or "The American Vignola," "Essentials of Composition" by J. V. VanPelt, published by the Macmillan Company, New York.

Question—Will you kindly inform me as to where I can secure information on the Parthenon, regarding the dimensions, points of the compass, total height, column heights, etc.? P. H. C. *Answer*—We would refer you to Penrose's "Investigations into the Principles of Athenian Architecture," also to Stuart & Revett's work and to D'Espouy's "Monuments Historiques." We believe that Stevens is preparing a work that is intended to be the most complete and accurate book on the Parthenon, but this work is not finished. It is being done under the auspices of the American School of Classical Studies, at Athens.

THE AMERICAN ACADEMY IN ROME.

FROM a letter recently received by Mr. C. Grant LaFarge, Secretary of the American Academy in Rome, from Mr. Gorham P. Stevens, Director, we quote the following: "We are beginning to scatter for the year. We have had our last meetings of the Academic Council and the Library Committee. Prof. Lamond and Composer Sowerby have left and Composer Hanson follows in a day or two; their program is far from a restful one, as they are planning to attend all the important musical festivals in Austria, Germany, Holland and England. Mr. Lamond goes with the Fellows so that he may introduce them to important composers and conductors. The festivals they are to attend are at Vienna, Munich, Salzburg, Cologne, Bonn, Amsterdam, Gloucester, London and Leeds. Professors Van Buren and Curtis have left for America. Professor Whicher and McCrea are at Cortina d' Ampezzo in the Tyrol. Professor Fairbanks, Mr. Davico and myself are holding the fort in Rome.

"Just before Composer Sowerby left, I had the great pleasure of listening to a suite of four pieces composed by him for the piano. They were delightful interpretations of impressions he had gathered while camping last summer in the woods on Lake Superior. And his touch on the piano is extremely good. He has already formed quite a circle of admiring friends among the younger Italian composers.

"Mr. Blashfield has been in town. He intended to stay two weeks, but, as he was invited to motor to Florence

through the hill towns, he was here only a few days. He saw all the studios and the department of music, and he lunched with all the staff and students. He and I also had time to call upon the painter, Mr. Vedder. He took up with Painter Lascari the question of mosaics for your St. Matthew's Church in Washington. They were to have spent to-day at Ravenna studying the mosaics, and to-morrow they are due in Venice to confer with the glass contractor. You have given them a pretty big job—about 1,700 square feet of surface to cover with glass mosaic. They are both wondering how many years it will take!

"Mr. George F. Baker, Sr., dropped in upon us one afternoon without any previous warning. We did not know that he was in town and he was leaving at eight o'clock on the following morning. Professors Fairbanks, Lamond and McCrea were on hand. Mr. Baker seemed to be pleased with what he found for he wrote me from Florence stating that he would like to buy one of Sculptor Jones' productions.

"Mr. Robert W. DeForest's daughter, Mrs. Stewart, likewise made us a call, going through the studios, living rooms and library.

"It will interest the trustees who are landscape architects to learn that there is a party of eleven landscape architects in Rome at present. The party was organized by one of the chapters of the American Society of Landscape Architects. We have been able to help them in planning out their tour and in making arrangements at hotels and in obtaining permission to visit villas. Each member of the party has a particular job to fulfill when they visit villas; I was amused to learn that one man had the job of "scale." As you know, scale, is a pretty elusive animal!

"Almost every month I have a paragraph in these news letters on gifts. For last month I can report the donation of 30,000 lire from Mr. Myron Taylor (Mr. Norton's friend) for the purchase of pianos for the department of music. Mr. John William Mitchell, president of the Art Commission for the city of Los Angeles, said he would like to contribute \$1,000 toward the endowment of the academy and he also offered to help Senator Phelan collect money in California next fall for the endowment. Professor Wicher has contributed \$30 to pay for half the expenses incurred by Landscape Architect Griswold in connection with the latter's excellent plaster model of the casino at Villa Caprarola. And, finally, Mr. Alfred E. Hamill of Chicago has given us 300 lire for the purchase of art books.

"The Banca Italiana di Sconto is preparing to make its first payment this month—10 per cent. of the deposits.

"This is the season of repairs to the various properties. They are best made in the summer, when there are few persons in residence. There is comparatively little work to be done this year I am glad to report.

"I have obtained estimates upon the McKim-Morgan Memorials. The cost will be about \$3,000 for each memorial.

"I am trying to obtain a reduction in fares for our students both on the Italian railroads and upon the Italian steamship lines. I have succeeded in obtaining a 50 per

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cent. reduction on the railroads provided there be a party of ten or more and I have hopes of having this reduction granted to individual travellers.

"The British School at Rome and the French Academy in Rome have both held exhibitions of the work done by their Fellows. That at the French Academy was unusually good, due perhaps to the fact that they have had a greater number of Fellows than ever before on account of war conditions—twenty-five Fellows in all. The paintings they exhibited were really remarkable. It is still my hope to have some day a common exhibition of all the academies, but we must wait until the finances of some of the countries involved have improved—we will probably have to wait years. There is nothing like friendly rivalry among young, ambitious men—at least in my judgment."

PRIZES FOR PAPERS ON VITRIFIED CLAY PIPE.

PRELIMINARY announcement of cash prizes for the best paper entitled "Use of Vitrified Clay Pipe in Plumbing Systems" is made by S. E. Dibble, Head of the Heating and Ventilating Department of the College of Industries, at Carnegie Institute of Technology. The total amount of prizes is four hundred (\$400.00) dollars. The contest will be open to all practical plumbing and heating dealers, inspectors, etc., as well as to instructors and students in all institutions where drainage is taught.

Detail announcements of the rules and regulations of the competition, and the amount of each prize in the various classes, will be made about September 1st, 1922.

This contest is a move toward increasing building operations, having in view, particularly, the reduced cost of drainage work. It is advisable that competitors for these prizes obtain copies of Mr. Dibble's printed report of recent experiments on the use of bituminous jointing compounds for Vitrified Clay Pipe. The experiments were conducted at Carnegie Institute of Technology. Copies of the report will be sent upon request by addressing R. S. Clark, Office of the Secretary, Carnegie Institute of Technology, Pittsburgh, Penn.

PHILADELPHIA BUILDING CONGRESS.

AT A meeting in Philadelphia of the Construction Conference Group which has, for two years past, been functioning informally along lines conforming to the activities of the National Federation of the Construction Industries and latterly of the New York Building Congress, the Group formally completed the organization of the Philadelphia Building Congress in the Hotel Longacre on August 17th, 1922.

The principal matters transacted at the meeting included the adoption of a constitution and by-laws, the creation of several committees with highly important functions and the election of officers pro tem.

The Philadelphia Building Congress was created "with the desire to place the Construction Industry on a high plane of integrity and efficiency and to correlate all efforts towards betterment now being made by existing organizations."

This meeting and the previous one, held August 10th, were practically representative of all the following groups which comprise the twelve component parts of the building and construction industry, and conform to the same groups as classified in the new American Construction Council, namely: Architects, Engineers, General Contractors, Sub-contractors, Construction labor, Material and equipment manufacturers, Material and equipment dealers, Financial, surety, accounting, insurance, building and loan and real estate organizations, Chambers of Commerce and Boards of Trade, Public utility construction departments, representatives of Federal, State, County and Municipal bureaus or departments concerned with construction, Associations of builders exchanges and building trades employers, and the Public.

Officers were elected as follows: President, D. Knickerbacker Boyd; Vice-Presidents, James W. Pearce, Edwin L. Seabrook, Harry C. Woods; Secretary, H. J. Baringer; Treasurer, Herbert L. Towle; and at the next meeting additional members of the Executive Committee will be elected and committees authorized by the By-laws will be

appointed, as follows: Committee on Vocational Guidance and Apprenticeship, Committee on Seasonal Unemployment, and a Committee on Co-ordinating New Construction with Maintenance Work. Other standing committees to be appointed at the next meeting include: Committee on Codes and Committee on Public Information. A special Committee on Sesqui-Centennial Construction Matters was authorized.

ROGER BAILEY WINS PARIS PRIZE.

ROGER BAILEY has been awarded the Paris Prize of the Society of Beaux-Arts Architects as a result of the competition just closed at the headquarters of the Beaux-Arts Institute of Design in New York.

Mr. Bailey's home is in Rochester, N. Y. He graduated from Cornell University in 1919 and has been employed in the offices of John Russell Pope and of A. L. Harmon in New York. Mr. Bailey worked under Patron E. V. Meeks of the School of Fine Arts, of Yale University.

The program called for a City Hall which had the requirements never before demanded in practice. Realizing that important cities in the country were now called upon to receive in a dignified manner frequent visitors of distinction, even Kings and Queens, the program demanded either a separate building or that a distinct portion of the large building be given to great suites of reception rooms and that the administration should be housed in close connection with this. The plot was 400 x 800 between important avenues and half of this space was to be kept free to give a setting to the buildings and place for large crowds to congregate at the times when distinguished visitors were received by the municipality.

The other men in the final competition were: E. W. Burkhardt of Columbia University, N. Y.; Louis Fentnor, who worked under Patron F. C. Hiron; J. G. Schuhmann, Jr., of Columbia University, and E. L. Babitsky, graduate of John Huntington Polytechnic Institute, Cleveland, Ohio, who worked under Patron John Wynkoop of New York.

The jury of award was composed of the following members: Henry O. Milliken, Chairman; James Gamble Rogers; Joseph H. Hunt; John M. Howells; Louis Ayres; F. L. Ackerman; H. R. Sedgwick; Robert Bellows, and Paul Cret.



Roger Bailey

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MISCELLANEOUS ITEMS OF CONSTRUCTION PART VI.

BY OTTO GAERTNER.

In this series of notes Mr. Gaertner of the staff of McKim, Mead & White, Architects, will treat of a number of the minor matters of construction that are troublesome unless the architect happens to have met a similar problem previously—matters of a more or less special nature.—Ed.

Squash Court Construction Continued.—In the centre of the rear wall, opposite the play wall having the tell-tale, is a door through which one enters the court. If the adjoining space does not permit the door to be placed in the centre it may be placed to one side. It is generally made two feet and six inches or two feet and eight inches wide, and six feet and six inches or six feet and eight inches high, the larger dimensions being used for wood lined courts and the smaller ones for cement courts. In the wood courts the door generally sets at the floor but in the cement courts it is raised six inches above the floor. The door is provided with a heavy polished plate glass peep hole about three to six inches square, set about five feet above the bottom of the door. It must be at a convenient level for the eye when one stands on the court floor as well as when one stands on the six inch higher level of the raised door sill which is often the level of the adjoining floor space outside the court. The door must set flush with the face of the court wall and not have any projecting hardware. For this reason it is set with a pivot at the top and a suitable pivoting floor check at the bottom. The construction of the court side of the door must be of the same construction as the walls of the court, the other side being made to match the surrounding trim. The door is hung to swing into the space adjacent to the court, not into the court. With the wood court the door and frame do not present so difficult a problem as with the cement court. The wood door is of the same heavy construction as the walls, and bolts having a diameter of one quarter of an inch and about twenty-four inches apart are run through the door its full width to re-inforce it. In the cement court, the door must be finished on the court side with cement applied on a rigid, enduring, and non-shrinking and non-expanding back ground, capable of withstanding the harder usage to which this heavier door is naturally subjected. Also there must be a suitable stop for the cement wall finish. This stop is formed by the door frame which is usually made from an iron channel weighing eleven and one quarter pounds per foot in length, and having flanges two and one quarter inches wide. The iron channel is used for the head, jambs, and sill of the door frame, the flanges being turned outward so that the edge of one flange forms the stop for the plaster of the wall. Iron strap anchors fastened to the back of the frame anchor it to the wall. No door stop is placed on the sill of the door frame, but a metal stop one half of an inch thick and seven eighths of an inch wide is placed on the head of the frame flush with the court wall face, and has its one half inch face away from the court slightly beveled making it slightly wider against the frame. A stop of the same size is similarly placed on the jamb opposite the one at which the door is hung. This stop, however, should be slightly beveled on the seven eighths of an inch wide face making the edge of the stop away from the court slightly less than one half of an inch wide. This is done so that the door will swing shut with a very close joint. In addition to these, a stop is placed on the other jamb of such a size as may be necessary to suit the particular size and make of pivot and floor check to be used. A check similar to the Rixon check number twenty-five is the type generally used. It may be necessary to make the stop on this jamb one quarter of an inch less than the thickness of the door, which is made of frame angle irons covered with a steel plate three sixteenths of an inch thick. The stop can be one half of an inch thick and the plate of the door can overlap it to make a tight joint. Of course, where the seven-eighths of an inch wide stop occurs at the head, a similar one to meet it must be placed on the edge of the door. The same

thing applies where the seven-eighths of an inch wide stop occurs on the jamb, but in this case the one on the door need not be beveled like the one on the jamb. The plate of the door extends over the edges of the stops forming the rabbets on the door, and makes a tight joint at the channel iron frame.

The angle iron frame of the door is made of angles having legs one and three quarters of an inch long and one quarter of an inch thick. From the foregoing statements it may be seen that these angles are set with one leg forming the edges of the door to receive the stops, and the other parallel to the court wall but away from it to receive the plate forming the back of the door. The edge of the one leg of the angle facing the court must be milled so that it has a perfectly square face since it forms the stop for the plaster finish on the court side of the door. The same thing applies to the angles of the same size that are used to form the frame for the glass of the peep hole. The plaster finish is placed on a rich concrete of fine aggregate, well compacted, that is placed within the angle frame of the door. Before the concrete is put in place, rods that are one quarter of an inch in diameter must be placed about six inches apart in both directions inside the angle iron frame of the door to reinforce the concrete and to hold it against the steel plate forming the side of the door away from the court. The ends of the rods extend through the angle iron frame about three quarters of an inch from the face of the plaster and are fastened like rivets countersunk flush with the outside of the frame so as not to show, and to permit making close joints against the channel iron door frame.

In addition to the stops already mentioned, stops are also needed to hold the glass of the peep hole in its frame. For this purpose, angles with legs one half of an inch wide are fastened to the frame of one and three quarter inch wide angles in such a way as to be flush with the plaster face of the door. The plate glass, which is one-half or preferably seven-eighths of an inch thick, is then rabbetted into these angle stops so as to be flush with the plaster face of the door also. On the side of the glass away from the court, metal stops about one half of an inch thick and three quarters of an inch wide are put against it to hold it in place, these stops being removable to permit replacing the glass. All screws and rivets must be countersunk so as not to show on the edges or face of the door. Advantage may be taken of the so-called non-breakable glass now on the market. It consists of several layers of glass cemented together with an invisible cement. If the thickness of the layer toward the court is made the same thickness as the leg of the angle stop, the rabbet can easily be formed by making the dimensions of that layer less all around than the remaining layers, according to the width of the rabbet required. Also, a thinner glass may be used.

The door must be provided with a lock having a flush handle on the court side. By a flush handle we do not mean the countersunk handle commonly used on a horse stall door, but one which will insure an absolutely flush surface, so that the play of the ball when it strikes the handle will be the same as on the remainder of the wall. In order to be able to take hold of the handle to turn the latch and open the door, one must press the handle at a certain place to make it spring out sufficiently to be taken hold of. It will be noticed that if there are four vertical reinforcement rods placed into the door at equal distances from each other making five spaces, and if there are eleven horizontal rods similarly spaced, the peep hole will occur in the centre of the door and in the fourth space down from the top. Also, the lock will occur in the fifth space from the bottom, or at a distance of about three feet from the court floor to the centre of the lock.

The ceiling heights of the courts are not definitely fixed, but since the play walls are fourteen and sixteen feet high as already mentioned, the clear unobstructed heights should not be less. There need not necessarily be a flat plastered ceiling over a court, as for instance, if the court is free standing, on a roof, or on an upper floor, there may be exposed roof trusses or a skylight. If artificial lighting is used, the projection of the fixtures below the ceiling must be considered and the ceiling height established accordingly. The lighting should be indirect and well diffused so that there will be no shadows to confuse the

players. A good method is to place eight units on the ceiling, which is painted a light color, hanging the fixtures about eighteen inches below it. The conditions in each individual case must govern the method to be used, as well as the type of fixture and the number of watts to be used in each. The fixtures must be protected against the balls by heavy wire mesh on top and if necessary on the under side also. When sufficiently heavy metal bowls are used, the protective wire underneath may be omitted. If a skylight occurs in the ceiling, a large amount of reflected light will be lost and it may be necessary to use a fixture with a reflector over the bowl.

The court is usually provided with a hipped skylight over the greater part of it, and it generally extends to within about two feet of the four walls. If such a skylight is used, the roof construction must be of steel to support it and the remainder of the roof may be of any desirable construction. But the necessary skylight curb, flashings, and roof covering must also be provided, the owner's pocketbook dictating the quality to be adopted. Any substantial weather tight type of skylight is acceptable, but the glass should be at least five-sixteenths of an inch thick, translucent, ribbed or possibly ground on the under side, and preferably wired.

(To Be Continued)

PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER.

Any publication mentioned under this heading will be sent free, unless otherwise noted, upon request, to readers of PENCIL POINTS by the firm issuing the publication. When writing for any of these items please mention PENCIL POINTS.

Catalog of Drawing Materials—Complete catalog of instruments, papers, cloth, furniture, and drafting-room supplies. 6 x 9 in. 384 pp. New York Blue Print Paper Co., 98 Read St., New York.

Soss Invisible Hinges—Booklet showing details and specification data. Hinges for furniture, cabinets and general use in buildings. 24 pp. Soss Mfg. Co., Grand Ave. & Bergen St., Brooklyn, N. Y.

Lupton Steel Windows—Illustrated specifications brochure, No. 110. Windows for apartments, residences, schools, industrial plants, etc. Working drawings. 8½ x 11 in. 72 pp. David Lupton's Sons Co., Allegheny Ave. & Tulip St., Philadelphia, Pa.

Steam Heating Engineering Manual—Covering the subject of heating very thoroughly. See review in August issue. 367 pp. 8½ x 10½ in. Price \$3.25 per copy postpaid. Warren Webster & Co., Camden, N. J.

Brascolite Bulletin No. 9—Booklet illustrated in color, showing types of units for various uses. Tables, prices, chart for calculating illumination required. 8 x 10½ in. 30 pp. Brascolite Co., St. Louis, Mo.

Atlantic Terra Cotta Monthly Brochure No. 4—Illustrates Chiesa del Corpus Domini, Bologna. 7 full-page plates. Atlantic Terra Cotta Co., 350 Madison Ave., New York.

Specifications for Inter-phones—Loose-leaf bulletin of specification data for intercommunicating telephone systems. 64 pp. 8 x 11 in. Western Electric Co., 195 Broadway, New York.

Batchelder Tiles—A catalog of mantel designs. Colored frontispiece. 30 full-page measured drawings. 8½ x 11 in. Batchelder-Wilson Co., Los Angeles, Cal.

Architectural Terra Cotta—Standard Construction—A collection of 70 full-page plates showing best types of constructions in connection with the use of Architectural Terra Cotta. Fully indexed. Size of page 10½ x 14; size of plates 8½ x 11. Bound in library buckram. National Terra Cotta Society, 19 West 44th St., New York.

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