PENCIL POINTS

VOLUME III MARCH 1922 NUMBER 3

ARCHITECTURAL TRAINING

A GREAT deal of earnest attention is being given just now to the subject of architectural training in this country and abroad. The Royal Institute of British Architects is discussing "Architectural Education" at length, and, to judge from the reports printed in the Journal of the Institute, widely divergent opinions are being supported warmly. The Ecole des Beaux Arts in Paris has put into operation within a year or so a new method of teaching building construction, a method which aims to show the progress of the work from stage to stage by means of lantern slides accompanying lectures delivered in a lively, interesting manner. In our own country educators concerned with the training of men who are to become architects have been strengthening the courses of study in many ways.

A broad view of what is being done the world over in the effort to render architectural training most effective shows a keen appreciation of the value of a knowledge of construction, and of the requirements for particular classes of buildings, also a very encouraging emphasis upon the cultural side, —the development of the architectural student as a man who has a real appreciation of the life of the earlier periods and of its relation to the history of architecture, also an appreciation of the relation that should exist between present-day life and our architecture.

In the present discussions of the subject of architectural training, the importance of the study of architectural design, as the term is generally understood, is not overlooked, but attention is being focused upon what may be regarded as the weaker points in the present methods of training.

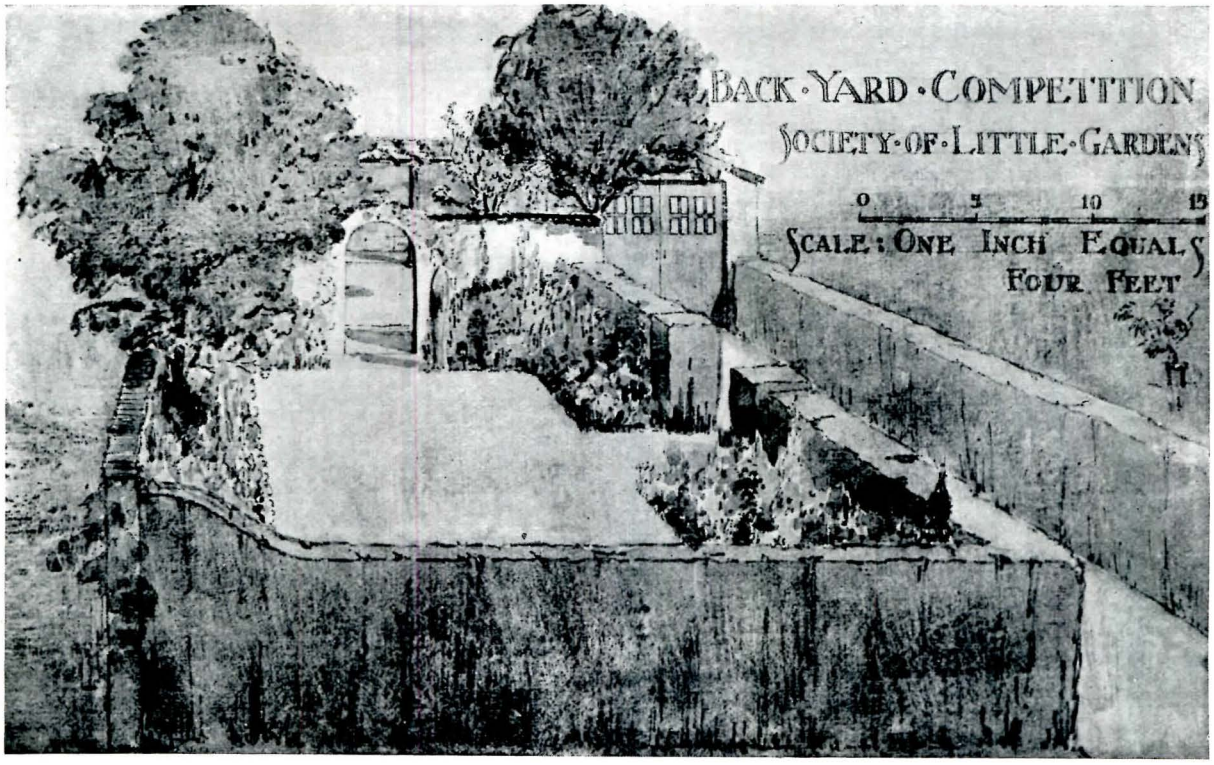
Some lay stress upon the value of office training, others upon the advantages of school training—while as a matter of fact all agree as to the necessity for both office experience and education, they differ only in point of view, in placing the emphasis and in their ideas of the right kind of experience and education. Out of this discussion only good can come through the broadening of the vision of everyone concerned.

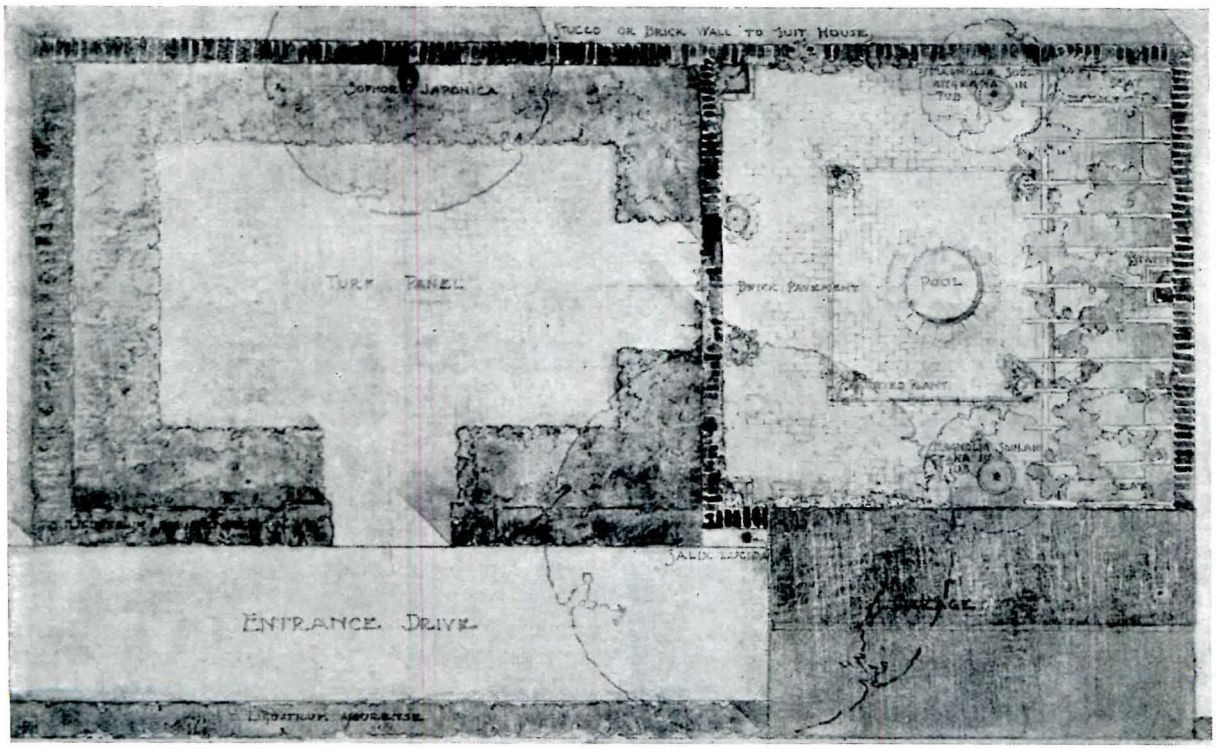
In our own country students of architecture are especially fortunate. The schools of architecture in general are of an extremely high grade, and the work of the Beaux-Arts Institute of Design, both in co-operation with the schools and through the ateliers in which men, most of whom are employed during the day, study in their free time, is a tremendous force for sound architectural training. The men in the schools are given a training well calculated to fit them, when supplemented by the office experience which it is assumed they will have after graduation, for the practice of architecture. The draftsmen who study in the ateliers obtain both sides of their training at the same time, partly in the office where they are employed and partly in the atelier. The latter, however, often lack the opportunities for cultural development unless they supply this deficiency in their training by reading and attending talks by able men and by other means in which the architectural club is a great help.

In step with this movement, PENCIL POINTS has been presenting close-up photographs of portions of buildings, showing such small but important matters as the tooling of stone and the surface finish of terra cotta and of stucco. This journal has published some construction details and some matter on the practical requirements of buildings for different uses—and we have much more in preparation. This is a side of architecture that is of interest to the architect and draftsman in every day office practice, a kind of material the value of which is readily appreciated by the architect and draftsman as well as by the student,—that is valuable to all connected with either the practice or study of architecture. We are also presenting matter on architectural design and other matter useful in the office, school and atelier.

A NEW DEPARTMENT.

IN THIS issue a new department is opened, a reader's guide, in which publishers and book dealers may print brief descriptions of books of interest to architects, draftsmen and architectural students. In the form of condensed advertisements, these notes of books, classified and printed in uniform style for easy reference, meet a need on the part of the profession for a constantly revised, up-to-the-minute book list. As the size of this list grows, its usefulness will increase. For convenience in ordering, the books listed have been given serial numbers by which they can be indicated, instead of giving the title, when writing to the advertisers. Please mention PENCIL POINTS.





First Prize Design, by Prentiss French, care of Olmstead Bros., Brookline, Mass. Competition for the Design of a Garden Treatment of the Typical Suburban Back-yard, Conducted by The Society of Little Gardens, Philadelphia, Pa.

LITTLE GARDENS COMPETITION DESIGNS

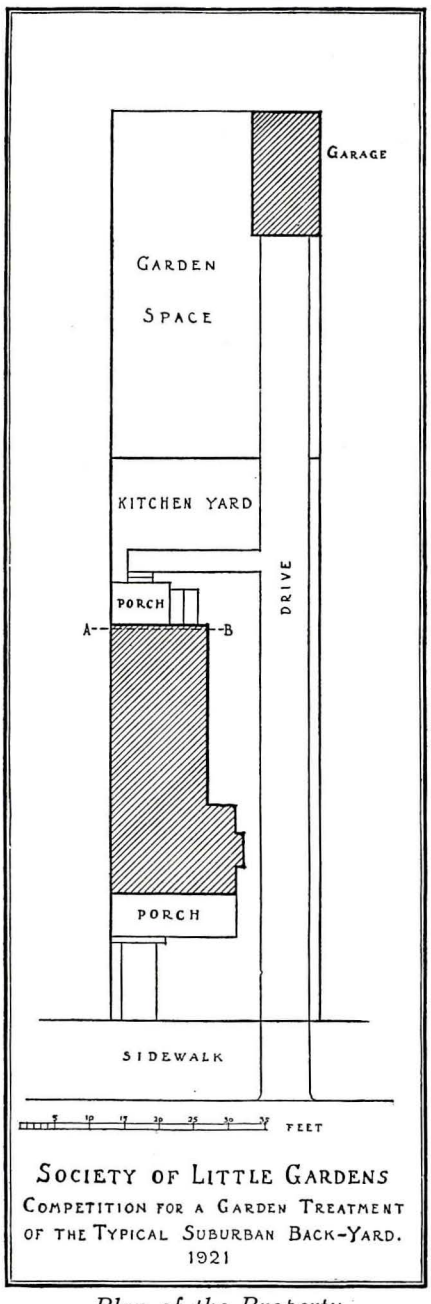
WHAT can be done to make the average suburban back yard attractive is suggested by the prize winning garden designs reproduced in this issue. The variety as well as the attractiveness of these treatments brings a realization that not only these treatments but an almost infinite number of other garden treatments may be used to give interest, beauty and the home quality to the space that is usually so unsightly and uninteresting—they demonstrate that the principles of landscape gardening can be applied to small spaces as well as to the larger areas with which we are accustomed to associate them,—that a good design can transform the ugly back yard.

These designs were awarded prizes in the Competition for the Design of a Garden Treatment of the Typical Back Yard, conducted by The Society of Little Gardens, Philadelphia. The prizes were awarded as follows: First Prize, $150, to Prentiss French, care of Olmstead Brothers, Brookline, Mass.; Second Prize, $100, to Louise Payson, 21 Beekman Place, New York City; Third Prize, $75, to Alan Cornwell Smith, care of B. G. Goodhue, 2 West 47th Street, New York City.

Equal Honorable Mention was given to the following: Thomas Earle Laughlin, 410 Dudley Avenue, Narberth, Pa.; George F. Ingalls, 758 North Genesee Street, Waukegan, Ill.; Mary Frances Nearing, School of Domestic Architecture and Landscape Architecture, 1278 Massachusetts Avenue, Boston, Mass.; G. C. Styles, 134 West 77th Street, New York.

The following were approved by the Jury for exhibition: Henrietta Marquise Pope, 372 Boylston St., Boston; George P. Jackson, 1914 Kater St., Philadelphia; Lucy Parke Taylor, P. O. Box 945, Richmond, Va.; Richard H. Pratt, 2d, 9 West Hamilton St., Baltimore; Mildred W. Wright, 217 Second St., Milwaukee, Wis.; Gerald K. Geerlings, 23 Provost's Tower, U. of P.; Channing W. Porter, 306 Concord St., Framingham, Mass.; Fowler and Jennings, 15 E. 40th St., New York; B. Ashburton Tripp, Cleveland, Ohio; E. C. Stiles, 705 3d St., Oakmont, Allegheny County, Pa.; Elizabeth L. Strang, Leominster, Mass.; N. J. Morrison, Prospect Hill, Tacoma, Wash.; C. F. Rosborg, 111 East 40th St., New York; Ernest Crimi, 110 Franklin St., Buffalo, N. Y.; L. W. Briggs, 15 E. 40th St., New York; D. O. Klaber and E. H. Klaber, Dickel Rd., White Plains, N. Y.; Wm. LeFevre Younkin, 2 W. 47th St., New York.

The designs were judged by a Jury composed of three architects: Messrs. Wilson Eyre, Jr., Warren P. Laird, and Horace Wells Sellers, who prepared the program and acted as the professional advisors of the society.



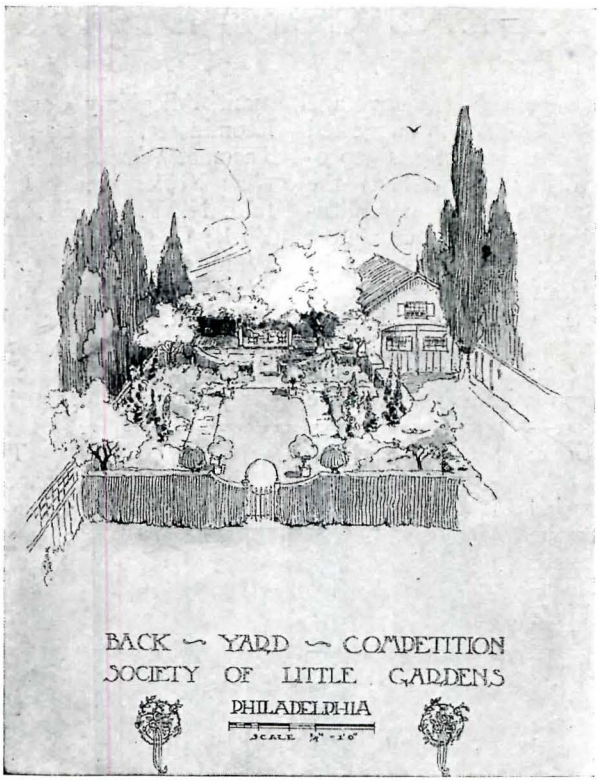
Plan of the Property.

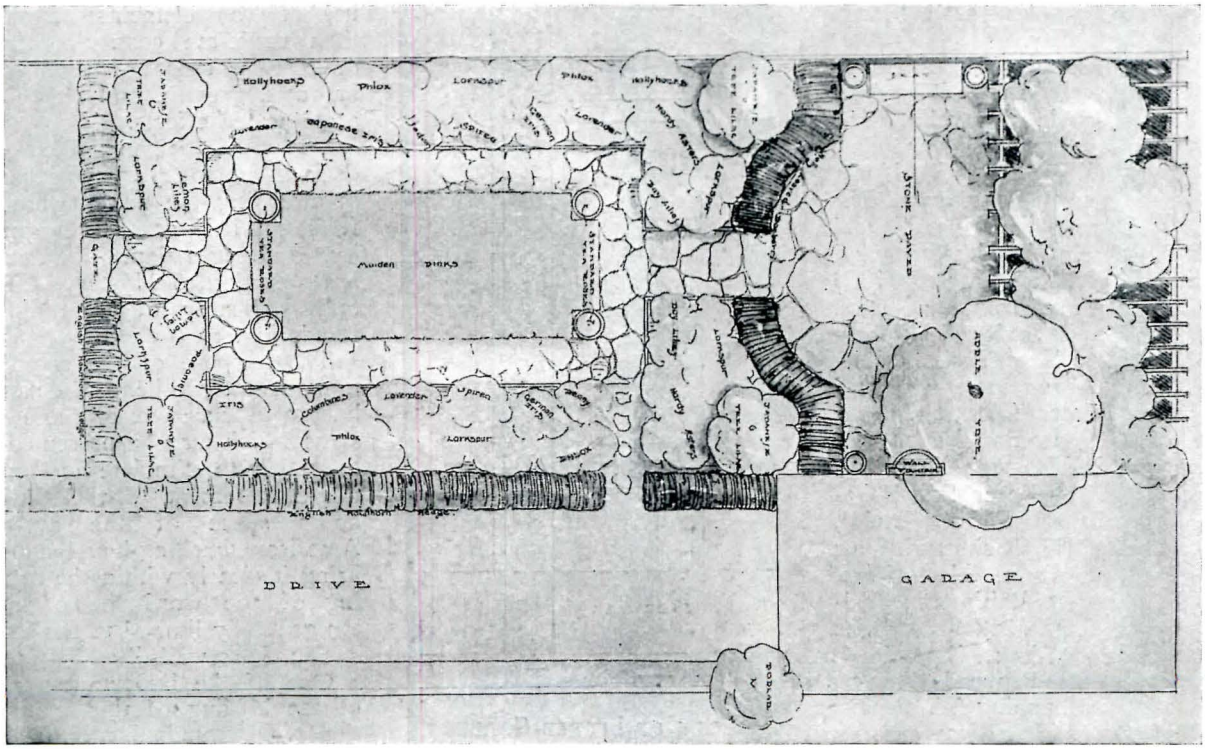
The problem was to present a garden treatment of the "garden space" shown in the plan of the property which was printed in connection with the program and is reproduced on this page. A garage 10 ft. x 18 ft. in outside plan dimensions and a drive are shown on the plan within the "garden space," and their position and dimensions were not to be changed. Access to the garage or garden space to be had only from within the property as shown. It was also stated that "The design should avoid the use of (a) elements of other than moderate cost, (b) trees other than those of small size or rapid growth, and (c) elaborate water effects.

The points upon which the decision of the Jury was based in awarding the prizes were as follows: 1 Fitness, 2 Originality, 3 Imagination, 4 Balance, 5 Proportion, 6 Mystery, 7 Detail, 8 Beauty of Planting, 9 Rendering.

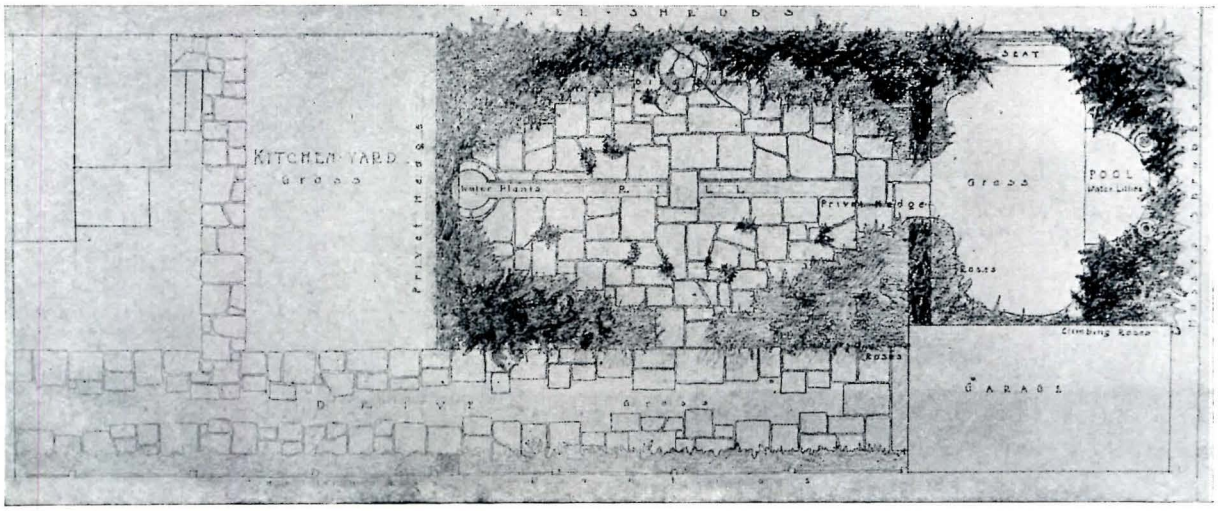
The purpose of the competition was an excellent one, namely, "to procure one or more designs which may be presented to the public to stimulate and guide the development of the out-of-doors space of the average American dwelling-house and to bring it clearly within the meaning of the word 'home,' now too generally limited to the space within four walls."

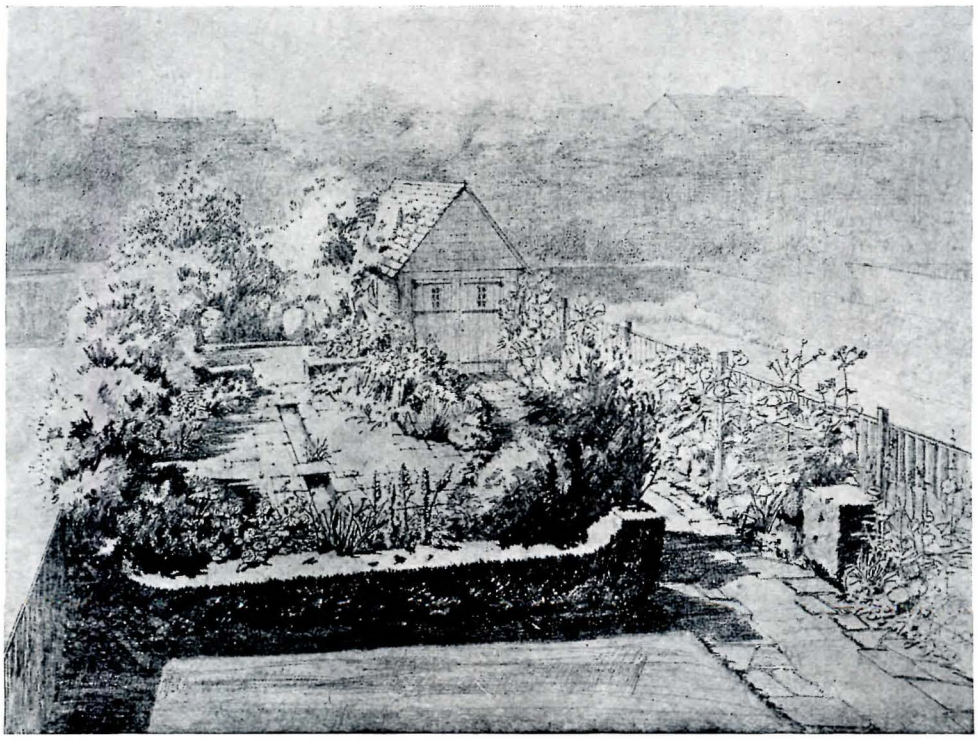
One of the important results of the holding of this competition will, undoubtedly, be to draw the attention of many architects and draftsmen to the garden possibilities of the average back yard.





Second Prize Design, by Louise Payson, 21 Beekman Place, New York City. Competition for the Design of a Garden Treatment of the Typical Suburban Back-yard. Conducted by ***The Society of Little Gardens, Philadelphia, Pa.***





Third Prize Design by Alan Cornwell Smith, care of B. G. Goodhue, New York City.

Competition for the Design of a Garden Treatment of the Typical Suburban Back Yard. Conducted by The Society of Little Gardens, Philadelphia, Pa.

Detail of House for L. Harding, Esq., at Forest Hills, L. I. William Lawrence Bottomley, Architect.
(*See text on page 15*)

ARCHITECTURAL DETAIL PART XI

BY JOHN VREDENBURGH VAN PELT

This is the eleventh instalment of an article in which Mr. John Vredenburgh Van Pelt, formerly Professor in Charge of the College of Architecture, Cornell University, Architecte Diplomé 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.

IN LAST month's article we reviewed the more common stucco finishes. The smoother spatters or sand sprayed surfaces are not dissimilar to sand sprayed terra cotta, see page 24 in the November number of PENCIL POINTS, but the wall effect is quite different, inasmuch as stucco is monolithic while terra cotta is set up in small pieces.

More interesting than the simple treatments are combinations of stucco finish that can be made at slight cost. For instance the office building of the American Encaustic Tiling Company, 16 East 41st Street, Rich & Mathesius, Architects, (see page 17) was first floated off and stippled with an ordinary coarse scrubbing brush. When the stucco had begun to set up (the particular material used took about two hours) parts of the surface were gone over with a steel trowel kept washed and very clean and smooth. This gives the alternating smooth and rough texture similar to that of Cato stone. The material of this operation is one of the special stuccos, and has a very strong adhesive quality permitting its successful application to an old stone building that has not been roughened; but the texture of the finish is not unlike that of ordinary Portland cement mortar. In the halls of the American Encaustic Tiling Company's building is a very rough plaster or sand finish obtained by using a coarse sand or grit and floating off with a wood float. In the rear room, however, this finish was modified as follows: When a few feet had been put on, before it had set or hardened the rough floated finish was brushed over with a large whitewash brush full of clean water and this softened sharply projecting points and made the texture more quiet and in keeping with its function of background for special focal points of decoration in faience or tile. To make the color warmer and give it more life, after the stucco was quite dry, a large brush dipped in water and raw umber was dragged over the surface. The umber held in suspension in the water was drawn into the stucco by its suction. The soft brush only touched the higher surfaces so that there is a difference in tone between the hills and valleys greatly enhancing the effect.

Detail of Surface Finish of Portland Cement Stucco on a Church in Evanston, Ill. Hartrey & Harrison, Architects.

Farther east on 41st Street, is the Commonwealth Garage designed by Herbert Lippmann. Here the floated finish coat was stippled with a coarse brush set crosswise at the end of a handle (the handle extended sidewise from the head of the brush) and the surface was retrowelled in spots, no special composition having been used for the mortar other than coloring matter.

On page 18 the residence of B. Austin Cheney, Rossiter & Muller, Architects, has a very different texture. The finish coat was trowelled on and immediately worked over and pressed in with the hand, giving the rather smooth depressions shown in the slanting light. In explaining the process to me, Mr. Rossiter said that he believes a great deal of the old uneven work was done by the direct contact of hand with stucco or plaster.

The residence of H. W. Bell, A. L. Harmon, Architect, see page 19, is a piece of three-coat work on terra cotta block that shows an interesting coarse sand wood-floated finish. The float was about 8"x10" and the workman seems to have introduced a waving motion into his stroke that makes it look as though the soft stucco had been struck repeated blows with a flail.

In contrast with the foregoing, it is interesting to examine the detail of the Harding house by W. L. Bottomley (see page 14). Instead of the cork or wood float sand finish which I myself have found good in stucco work, this was done with a small steel trowel under the directions that it was to be a "bum job." The mouldings and the table or cornice over the door were all run, the keystone

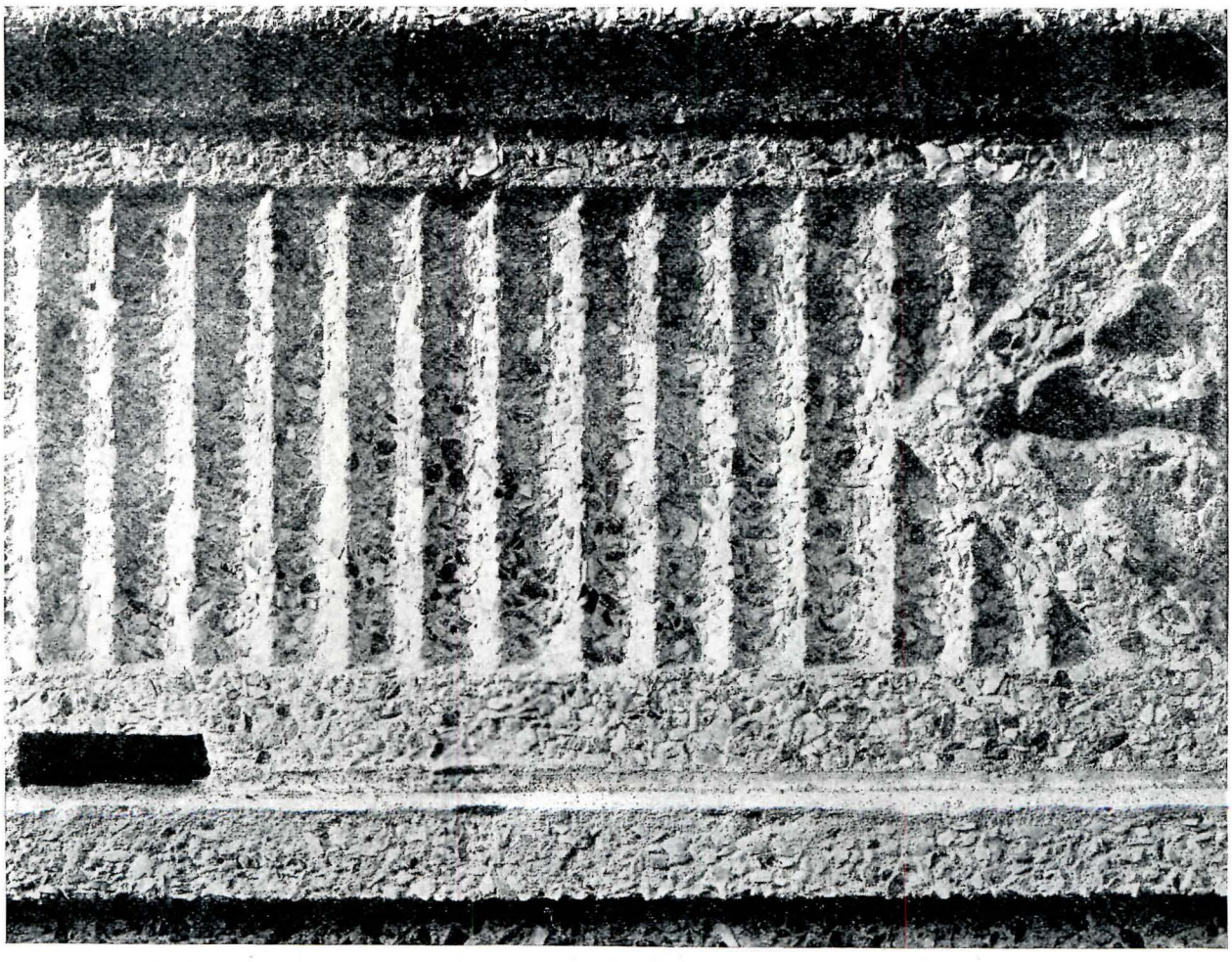
being the only bit of pre-cast work. The keystone was set in after all of the rest of the work was finished. The projecting voussoires of the arch were made by laying on radiating strips of wood which were used as grounds. What Mr. Bottomley said of his insistence on the small trowel suggests a keynote of old-fashioned stucco texture. It is much more difficult to trowel to a perfectly even surface with a small trowel. I understand that Bertram Grosvenor Goodhue's delightful reproduction of old plaster is produced under a like restriction and that in addition to the use of a small trowel, the plasterer has a sponge soaked with water to wipe in indentations and soften some of the harshness. It is well to remember that if a coarse texture is desired under the trowel, the introduction of fine gravel or coarse grit will accentuate it.

The illustration on page 15 is still another style of trowelled finish, used on the Episcopal Church at Evanston, Illinois. The trowel appears to have been a small one and to have been pulled up in a direction perpendicular to the surface of the wall, sucking some of the soft mortar after it until it made little mounds and craters whose crests drooped down again toward the ground. This example may be criticised on the same grounds as may an exaggerated "rough-cast": both seem rather forced.

Pulling the trowel or float away from the wall so as to suck the mortar after it need not result in such marked excrescences if a slight sliding motion or turn of the wrist is introduced at the same time. I have in mind a house of which Frank E. Newman is architect, built for Mr. Robert Appleton, two-coat work on hollow tile, the second coat containing heavy sand, trowelled with a quick upward stroke pulled away sharply as it reached its end. This has produced a simple and very beautiful rough trowelled texture. It is pertinent to remark that on masonry two coats may develop a better uneven finish than three, if the first coat is well scratched, is allowed to set and contract and both coats are fairly heavy. Remember that it is important to soak any coat, that has dried, before putting on another.

It is essential to have samples of stucco dried out before reaching a decision about any job. Color is affected by the cement (each brand has its special shade), the color of the sand, the percentage of hydrated lime (which may be run up to thirty or forty per cent., but which ordinarily should not exceed twenty, ten or fifteen being even better), as

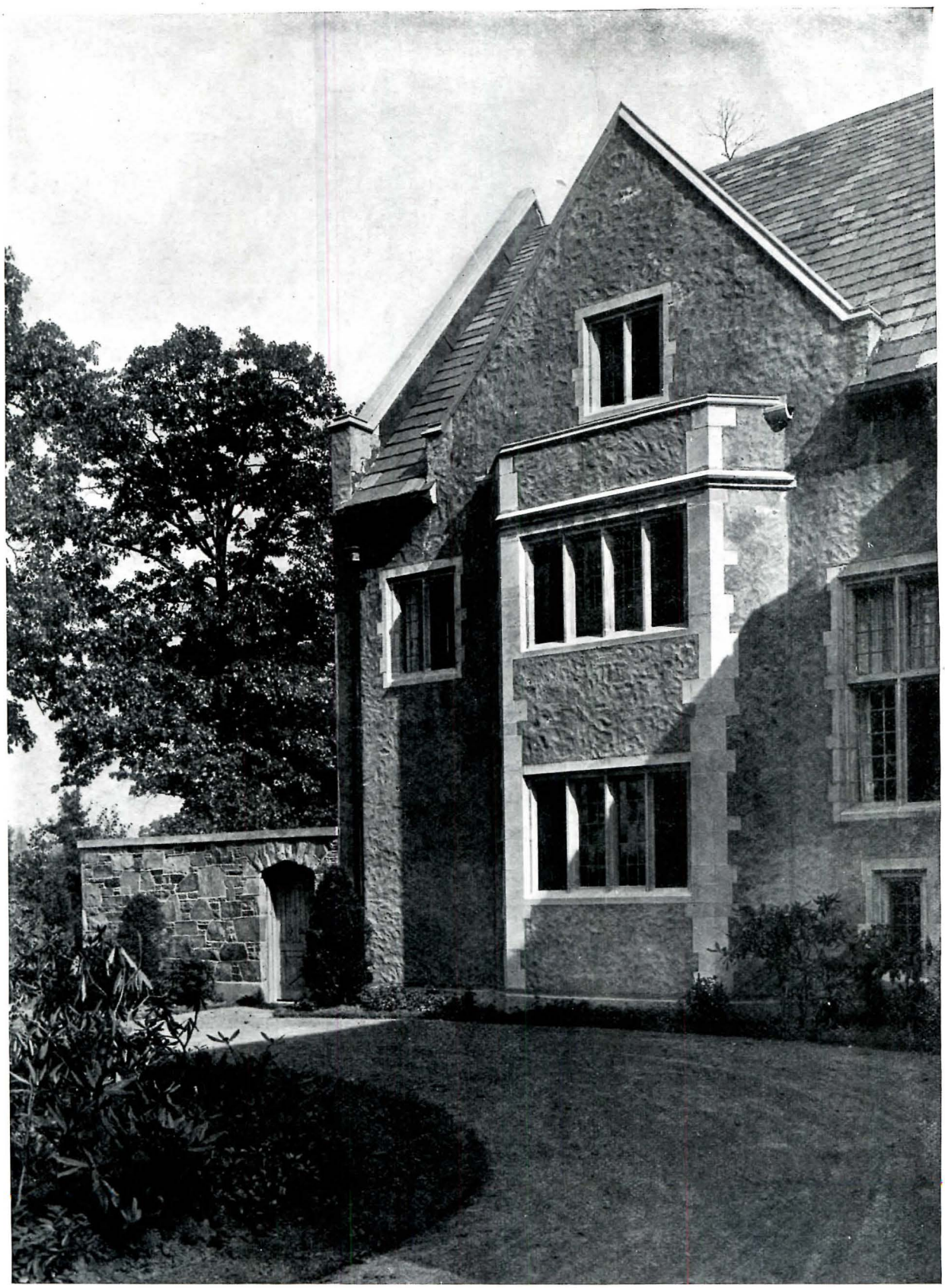
(*Continued on page* 41)



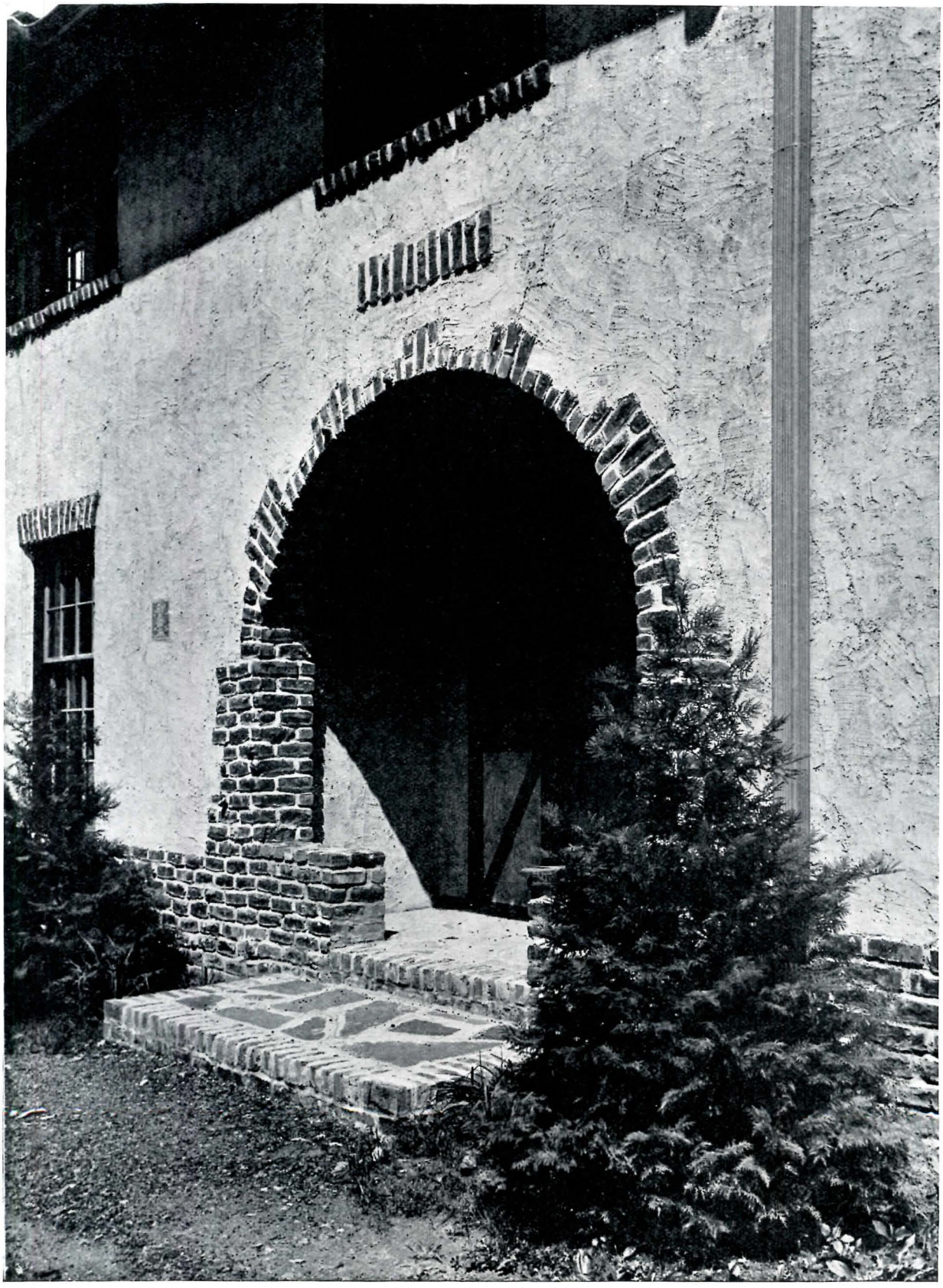
Close-up Photograph of Pre-cast Over-coating on The Brownley Building, Thirteenth and F. Streets, Washington, D. C. Cornice Above the First Floor. It is vibrant in coloring.

(*See text on page 41*)

Detail of Entrance to the American Encaustic Tiling Company's Building, New York City. Stucco and Faience. *(See text on page 15)*



Detail of House for B. Austin Cheney, Esq., New Haven, Conn. Rossiter & Muller, Architects.
(See text on page 15)



Detail of House for H. W. Bell, Esq., Ardsley-on-the-Hudson, N. Y. Arthur Loomis Harmon, Architect. *(See text on page 15)*

COLLABORATIVE DESIGN FOR DOORWAY AT ARCHITECTURAL LEAGUE EXHIBITION.

AN ESPECIALLY interesting feature of the Thirty-seventh Annual Exhibition of the Architectural League of New York, now in progress at the Fine Arts Building, 215 West 57th Street, New York, is the decorative treatment of the doorway to the Central Gallery from the South Gallery.

The design for this entrance treatment was secured by competition, a special prize of Three Hundred Dollars being offered by the Architectural League for this purpose. It was a collaborative competition, each design to be submitted jointly by an architect, a sculptor, and a mural painter. The group of men who won the prize and carried the design into execution are: Francis J. Creamer, Architect; C. Paul Jennewein, Sculptor; George Davidson, Mural Painter.

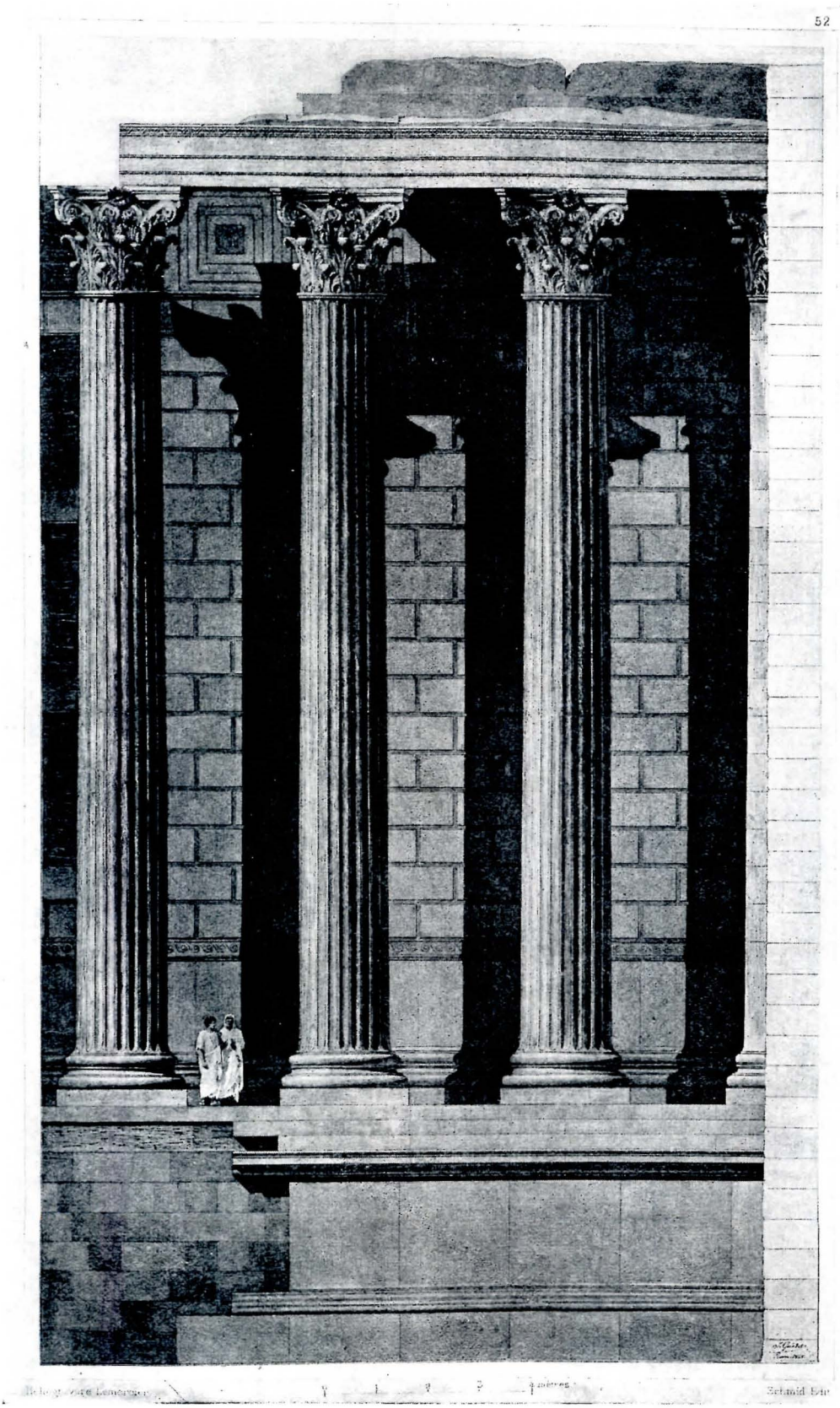
In order that the design might be executed, the Architectural League offered, in addition to the regular prize, an amount not to exceed Five Hundred Dollars, to defray the costs of materials and installation of the successful sketch at the exhibition.

That the men should be able to collaborate harmoniously and effectively was, of course, necessary, and in this respect the winning group was well made up. Both Mr. Jennewein, the sculptor, and Mr. Davidson, the mural painter, had been doing work on a project of which Mr. Creamer, the architect, is in charge, for Messrs. McKim, Mead & White, so it will be seen that they were accustomed to working together. Furthermore, being Fellows of the American Academy in Rome, both Mr. Jennewein and Mr. Davidson have had the unusual opportunity to learn to work with an architect, that is afforded by the collaborative work done at the Academy.

It took only a brief consultation on the part of the collaborators to arrive at a suitable scheme. Mr. Creamer sketched about fifteen possible designs and, on account of the decided limit of cost, they selected the simplest one. They agreed that the architectural effect should be obtained by proportion alone; that the painting should be rich in color; and the sculpture of high quality, though necessarily limited in quantity. All the men of the group were very busy, Mr. Creamer completing working drawings and details of a group of buildings before leaving for Europe; Mr. Jennewein on important work in Philadelphia, and Mr. Davidson working with Mr. Ezra Winter on a set of decorations that must be finished by March first. They, therefore, attacked the problem with dash.

Prize Winning Design in Collaborative Competition Under the Auspices of The Architectural League of New York. Francis J. Creamer, Architect; C. Paul Jennewein, Sculptor; George Davidson, Mural Painter.

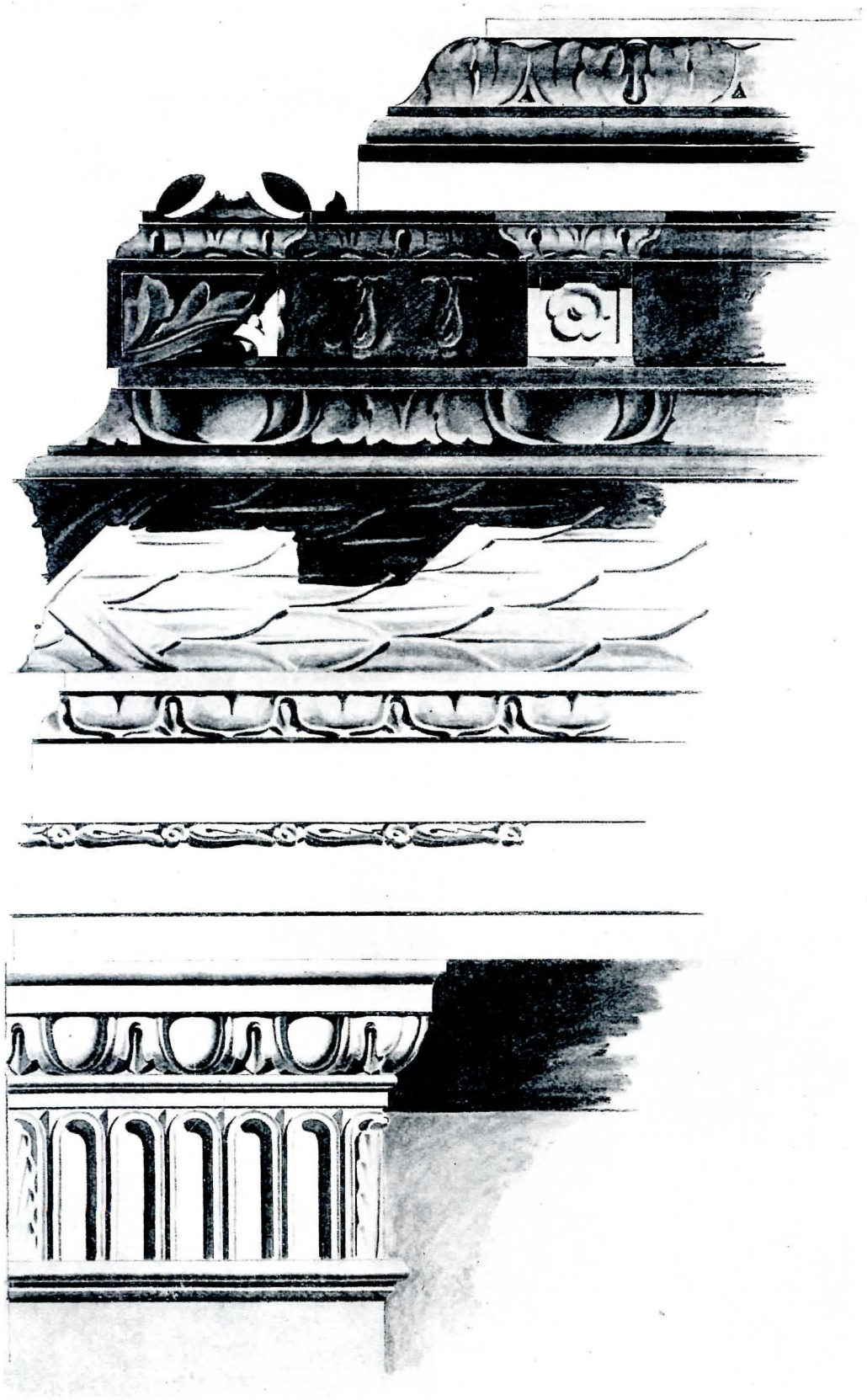
Winning the competition was only the beginning of the real work, for the thing had to be executed, and the amount of work to be done evenings and Sundays during January loomed before the winners in almost appalling proportions. They went at it seriously and at once. Mr. Creamer and Mr. Davidson worked together from the first. The lunette was drawn carefully at three-inch scale, studied in all detail and then solar-printed up to full size. Using the solar print saved about a week. The architect was on hand to draw in the Doric temple, the seat and the lettering, so the painting progressed rapidly. (*Con. page* 38)



DETAIL OF THE TEMPLE OF MARS THE AVENGER, ROME.

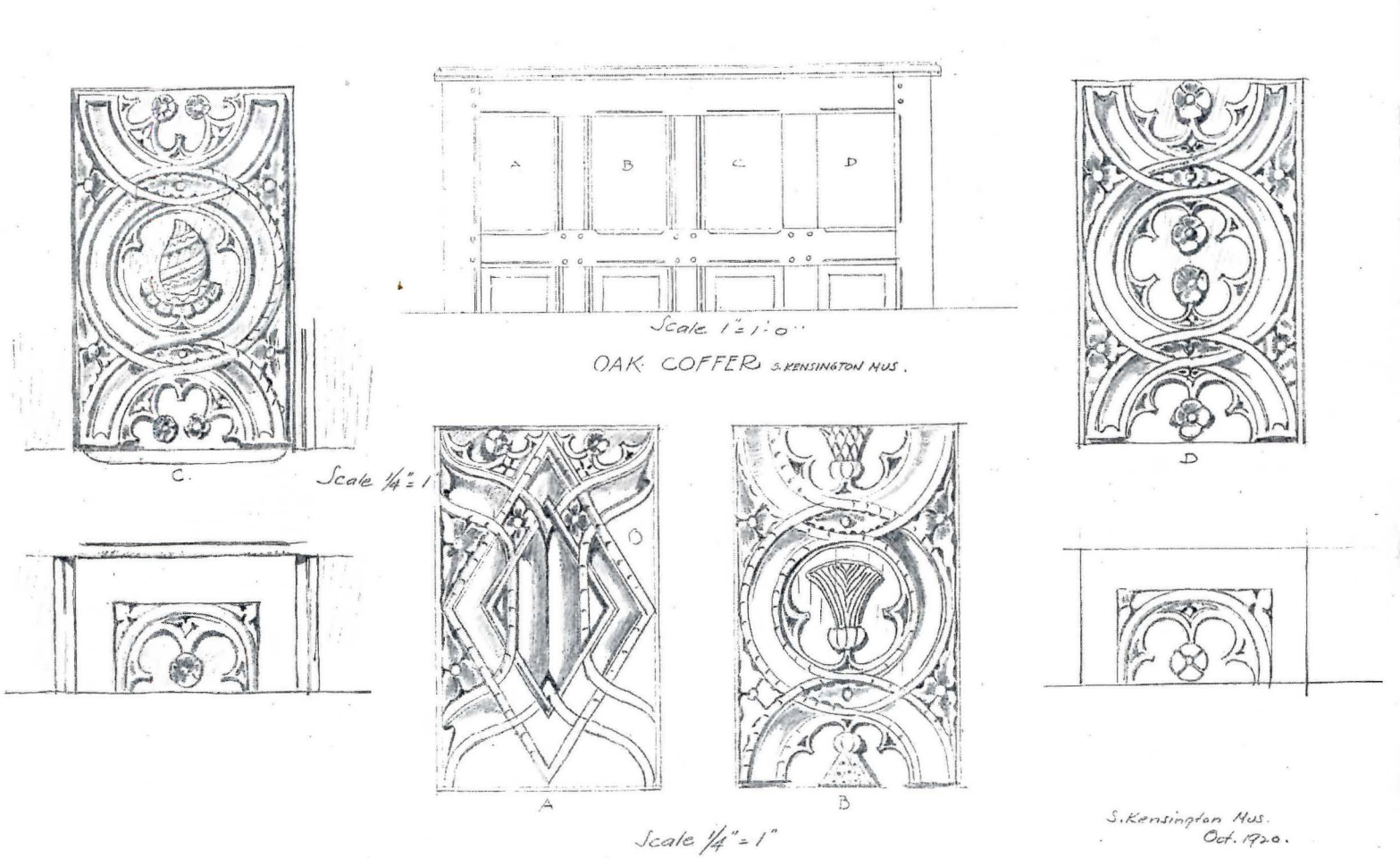
FROM D'ESPOUY'S "FRAGMENTS D'ARCHITECTURE ANTIQUE"

The Temple of Mars the Avenger, detail of which is shown in the plate reproduced on the other side of this sheet, was one of the many magnificent buildings erected under Augustus. This building was erected to commemorate the victory at Philippi and the vengeance taken upon the assassins of Cæsar. The remains of this temple are regarded as among the most beautiful existing examples of Roman architecture.



CHARCOAL STUDY OF DETAIL BY SCHELL LEWIS.
CHARLES A. PLATT, ARCHITECT.

On the other side of this sheet is reproduced one of the charcoal drawings, made in the office of Mr. Charles A. Platt, architect, by Mr. Schell Lewis. This drawing, like other drawings by Mr. Lewis, which have been reproduced in previous issues, was made for the purpose of studying the detail in the office during the process of designing. This method of drawing affords a comparatively rapid means of studying detail.



PENCIL SKETCHES BY ALBERT KAHN.

DETAILS OF WOOD CARVING IN THE SOUTH KENSINGTON MUSEUM, LONDON.

In addition to providing an excellent example of pencil technique adapted to the purpose of recording the character as well as the facts concerning detail for future reference, the plate of sketches by Mr. Albert Kahn which is reproduced on the other side of this sheet presents a number of interesting and beautiful designs in wood carving.

PENCIL SKETCH BY OTTO F. LANGMANN.
A BIT OF OLD NEW YORK.

A delightful sketch of a street corner in the older portion of New York City is reproduced on the other side of this sheet. It is notable for simplicity and freedom of treatment as well as for the convincing manner in which the character of the subject has been rendered. This is one of the many sketches Mr. Langmann has made in and about New York in his free time, by way of retaining and developing his skill in sketching.

THE STUDY OF ARCHITECTURAL DESIGN

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

CLASS B. PLAN PROBLEM. PART VI.

Size, Scale and Proportion

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.

IN AN earlier article, I have spoken of the value of knowing the size of various good examples of architecture, and of architectural elements—in order to know how many motives can be put into a given length of façade, and how this number of motives would be affected by changing from the lintel to the arch type. In studying this question of size, and scale, we find that it is constantly becoming also a question of proportion—that an element of architecture may vary in size to a considerable extent if its treatment is changed. It is well to remember that, in the words of Guadet, "Proportions are essentially variable . . . two considerations should govern proportion—the program, the actual requirements, and the monumental effect . . . one cause of variety is the mode of construction."

A single motive of composition will give absolutely different expressions according to the proportions the designer has given it. Compare the two examples in Figure 134. The superposed arcades of the theatre of Marcellus at Rome, of which a rendered detail was shown in Figure 38, May issue, and of the court of the Farnese Palace at Rome; one was built under the Roman Empire, the other in the Italian Renaissance. The composition is identical; both are masterpieces; they are almost the same in actual dimensions, the intercolumniation in the former being 16 feet, 3 inches; in the latter 19 feet, 6 inches. Each has on the first stage an arcade accompanied by two engaged Doric columns, an entablature, and then on the second stage, an arcade between two engaged Ionic columns and an entablature; and yet these examples are as different as possible; this difference is not in the ornamentation, nor in the profiles, it is in the proportions. If we compare the arches only, we find the following contrast of height to width: of arch A, the height is 2-2/5 times the width; of arch B, 2 times; of arch C, not quite 2 times, of arch D, 1-3/5 times.

There are many reasons which cause proportions to vary; one of these is the actual size. Thus in the temple of Mars Vengeur at Rome, Plate IX in this issue, the space between the columns is, roughly, 1-2/5 the diameter of the column, which necessitates a lintel 14 feet in length, which is very large. The column in this case is a big one, 56 feet 10 inches high, and with a diameter of 5 feet 9 inches. If the same proportion were applied to a column 20 inches in diameter—and there are many such—the space between columns, if the same proportion were followed, would be 27 inches—too narrow to walk through.

In the same way the Parthenon, Figure 135, with columns 37 feet high and 6 feet 2 inches in diameter, has as passage between columns, approximately 8 feet 5 inches, necessitating a lintel from center to center of column of 13 feet 10 inches. If the same proportions were applied to the small

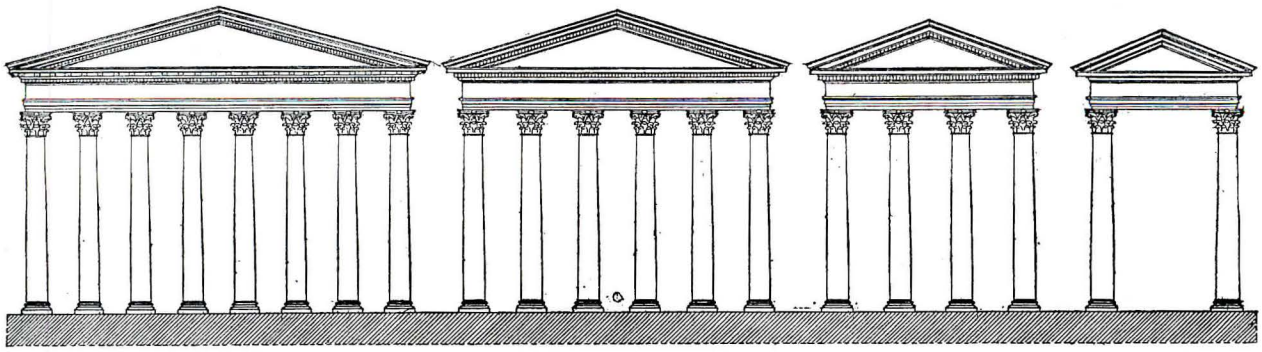


Figure 137. The Spacing of Columns. From Guadet's "Eléments et Théorie de l'Architecture."

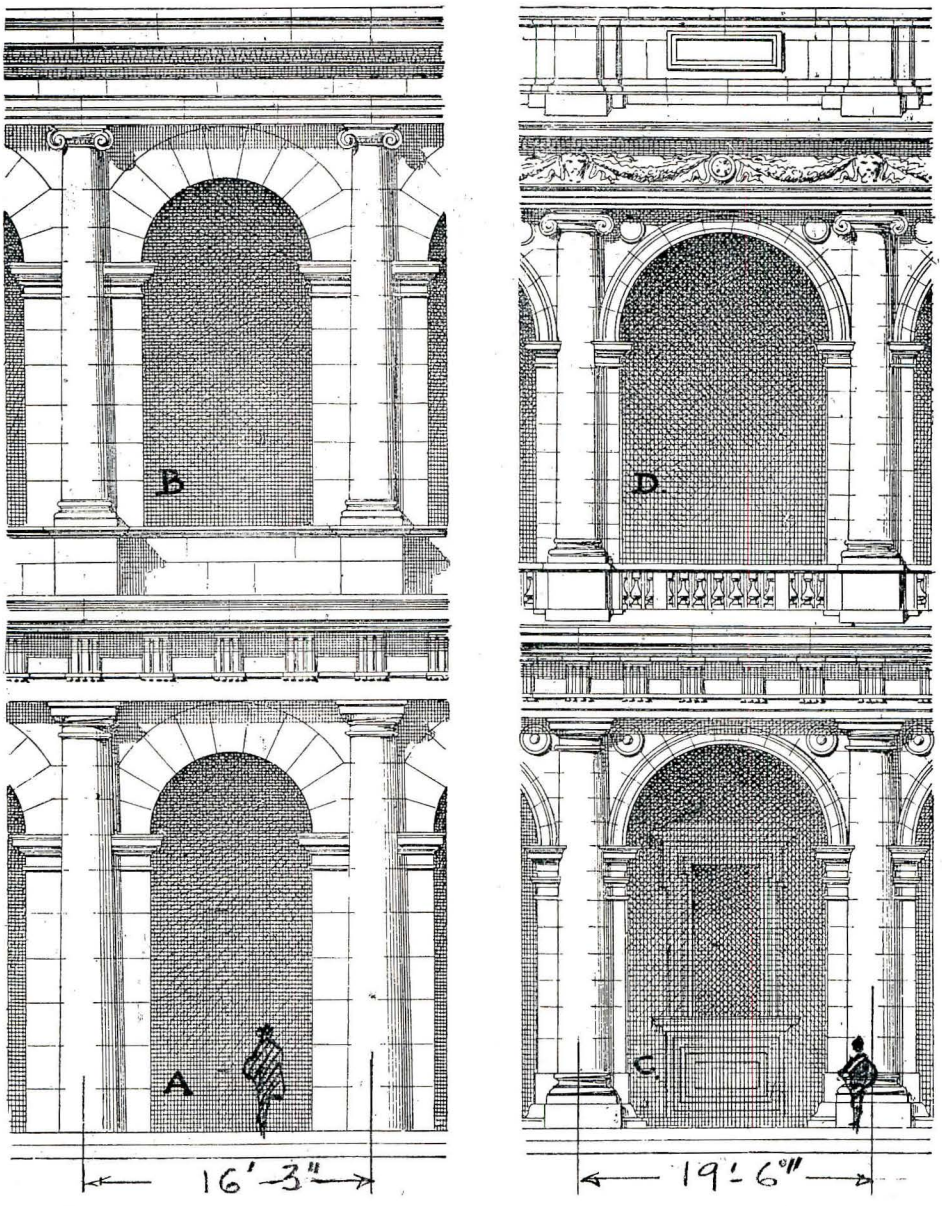


Figure 134. At the left, Entrance to the Theatre of Marcellus, Rome; at the right, Entrance to the Court of the Farnese Palace, Rome. From Guadet's "Eléments et Théorie de l'Architecture."

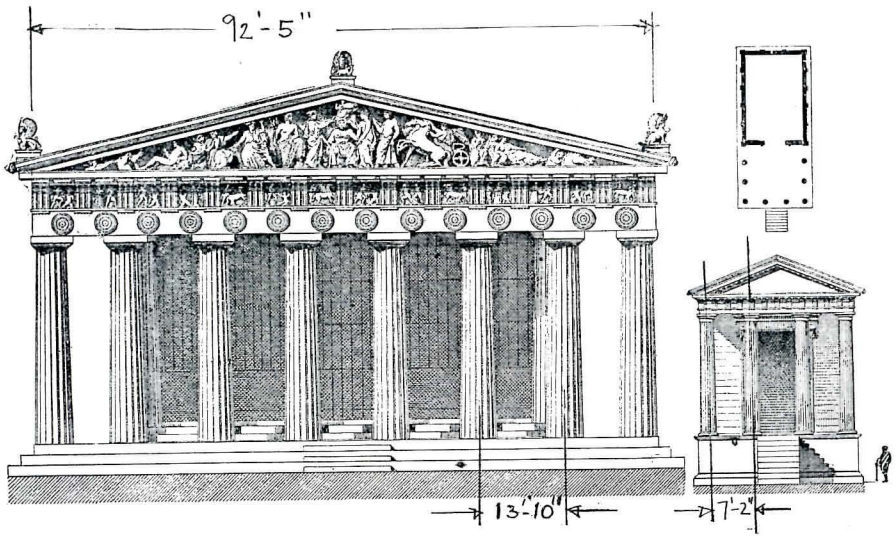


Figure 135. At the left, the Parthenon; on the right, the Temple of Cori. From Guadet's "Eléments et Théorie de l'Architecture."

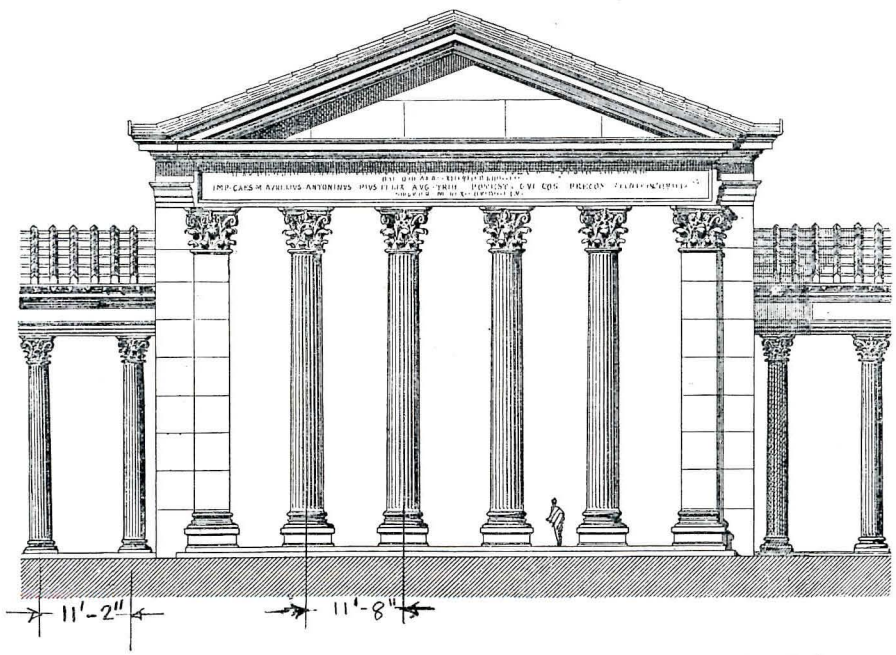


Figure 136. The Portico of Octavius, Rome. From Guadet's "Eléments et Théorie de l'Architecture."

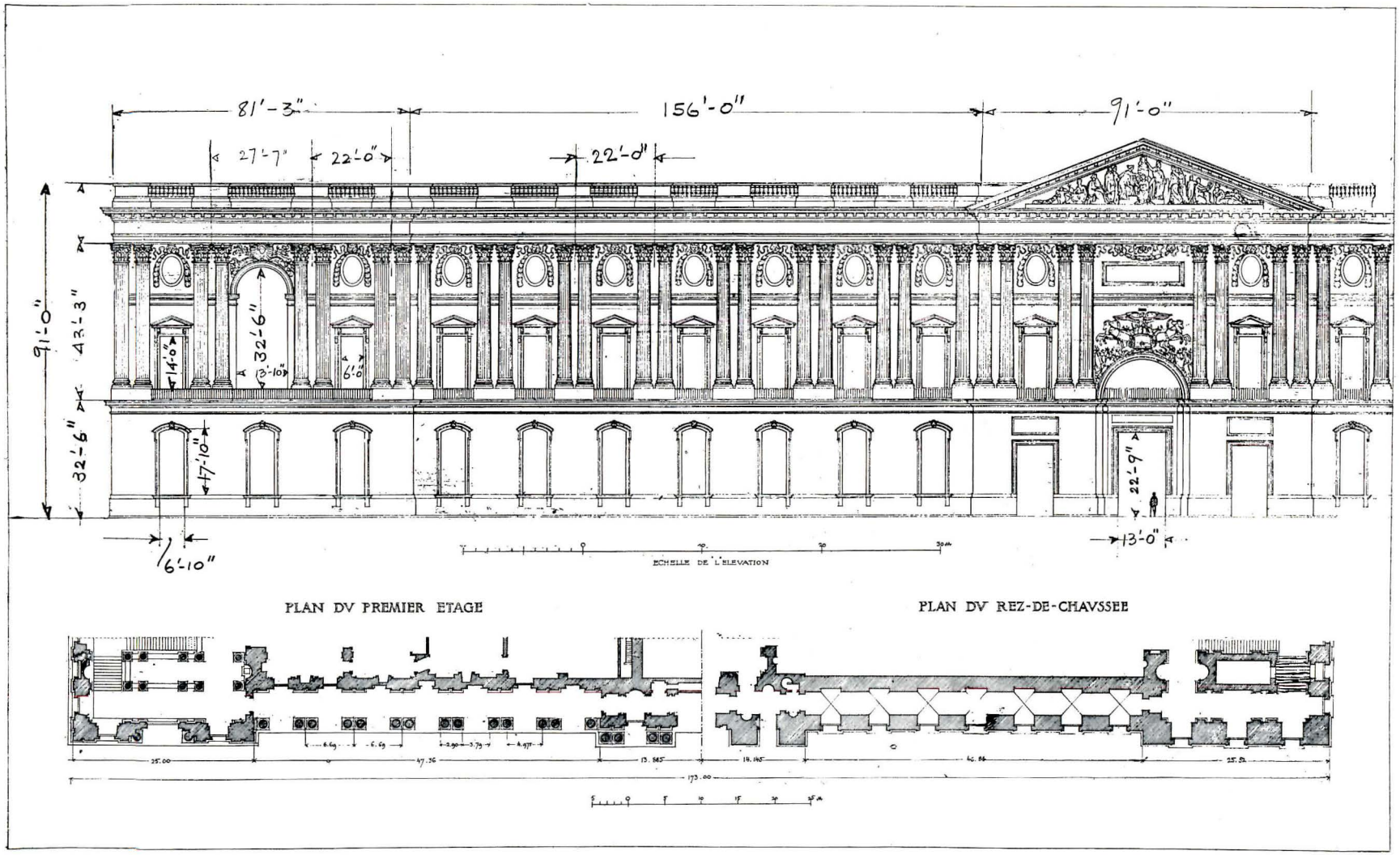


Figure 138. Plan and Elevation of Colonnade of the Palace of the Louvre, Paris. From G. Gromort's "Choix d'Eléments Empruntés a l'Architecture Classique."

temple at Cori—there are some even smaller—it would give as space between the columns, 3 feet, whereas the actual distance in this temple is 5 feet 5 inches. To take one other example, in the Portico of Octavius at Rome, Figure 136, a classic example of the placing side by side of a small order and a large one, we find that while one order is only two-thirds the height of the other, the distance from center to center of columns is about the same in each, so that the actual passage between the small columns is greater than between the large ones. There are examples of intercolumniations narrower than the Parthenon, and wider than the small temple of Cori. In general, in colonnades and in lintel construction, the greater the actual dimensions between supports, the narrower the proportion; the smaller the actual dimensions, the wider the proportion.

A difference in the numbers of columns will also cause a variety in the proportion of colonnades. If a motive of façade is formed of two, of four, of six, of eight or ten columns, the proportions will become narrower and narrower with the increase in the number of columns—Figure 137. One reason for this is that the greater the number of passages to pass through, the narrower each one may be, while if there is only one such passage, as is the case when there are but two columns, it must be as large as possible. These, like all rules of proportion, are the result of generations of impressions; and as we wish to produce in the spectator favorable impressions we search for these basic reasons in documents of good work, in order not to transgress them.

Coupled columns call for different proportions from isolated ones, since the two columns really form a single point of support, and may have a very much wider intercolumniation, as in Figure 138, the Colonnade of the Louvre, the masterpiece of Claude Perault; we see here that the space between the sets of columns is a little over three diameters.

It is interesting to look at the actual sizes in this façade. The total length is 565 feet; this is a five-motive composition, consisting of a central pavilion, two end pavilions, and an intermediate portion between these on each side. The central pavilion is 91 feet wide, the end pavilion 81 feet 3 inches; each has *three bays*. The intermediate portion, 156 feet long, has *seven bays*. Compare this with that other masterpiece in Paris, the Colonnade of the Place de la Concorde, Figure 139, reproduced at the same scale as Figure 138, which has a total length of 302 feet; this is a three-motive composition, with two end pavilions and an intermediate portion. The end pavilions are 65 feet 9 inches wide, and have five bays; the intermediate portion is 158 feet long and has *eleven bays*. This building is in reality one of two which together form the end of the Place de la Concorde, and frame, between them, the vista of the Church of la Madeleine.

The figures are interesting as showing the difference in the number of single column motives and those with doubled columns, which may be used in a given length of façade.

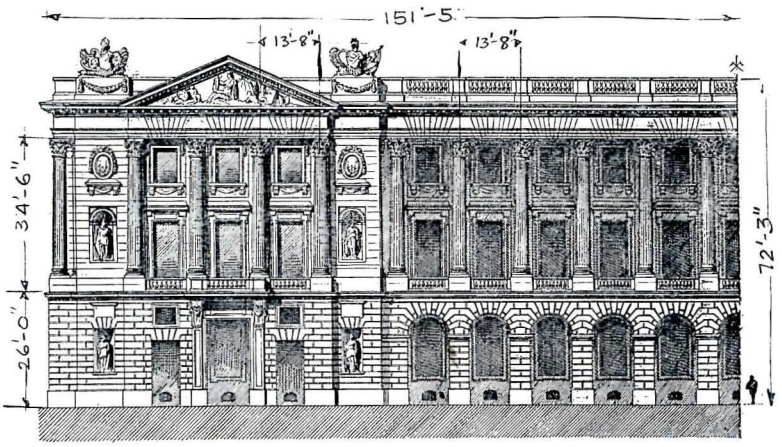


Figure 139. Colonnade of the Place de la Concorde. From Guadet's "Eléments et Théorie de l'Architecture."

It is interesting to note further the following dimensions of the Louvre and façade of the Concorde, which for convenience in comparison have been arranged in tabulated form below:

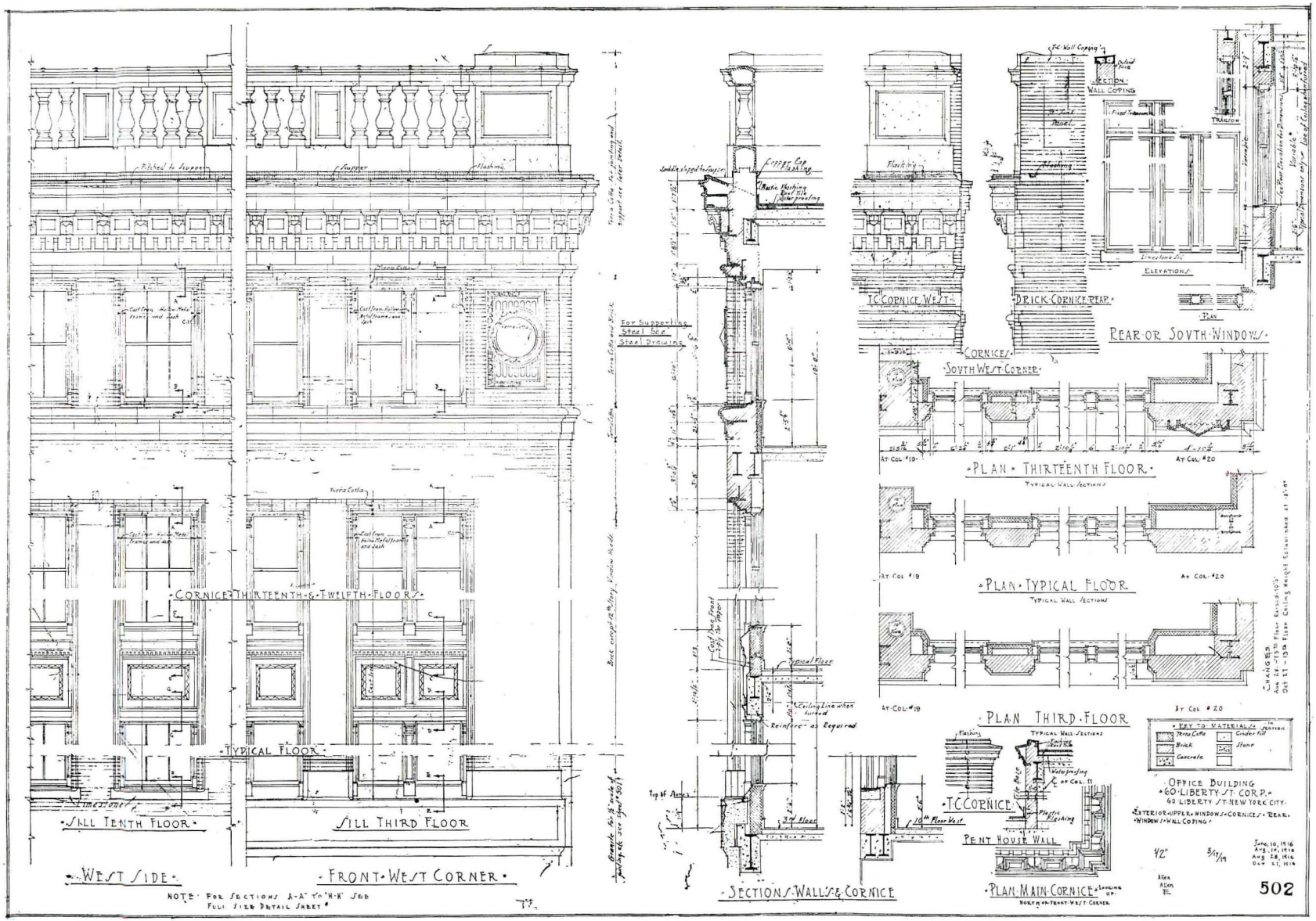
	Louvre	*Concorde*
Height of Column	43′ 3″	34′ 6″
Height of Base	32′ 6″	26′ 0″
Total Height	91′ 0″	72′ 3″
Ground Floor Windows, Height	17′10″	21′ 0″*
" " " Width	6′10″	9′ 9″*
Second Floor Windows, Height	14′ 0″	13′ 0″
" " " Width	6′ 0″	5′ 6″
Entrance Door Height	22′ 9″	19′ 6″
" " Width	13′ 0″	9′ 9″
Width of Typical Bay	22′ 9″	13′ 8″

(* Arched openings)

The proportions would have to be changed in either example if the columns rested on the ground instead of on a high base. Cover the base course in Figures 139 or 140, and you will see how heavy the proportion appears. The ground floor openings in each case count with the voids between the columns.

(To be continued)

The Sixth Exhibition of American Industrial Art, consisting of current work by manufacturers and designers, showing study of the collections of the Metropolitan Museum, was held January 15 to February 26, and showed convincingly the awakening to the value of the Museum in every day work in the field of industrial arts. Mr. Richard F. Bach, associate in Industrial Arts at the Museum extends valuable assistance to manufacturers and designers.



Details of Office Building for the 60 Liberty St. Bldg., New York City. Cross & Cross, Architects.

PERSPECTIVE DRAWING, PART XXI

BY PAUL VALENTI

In this series of articles Mr. Valenti is taking the student step by step through a course in the direct construction or perspective plan method. Mr. Valenti, who is Instructor in Architecture at Washington University, St. Louis, Mo., is a graduate of The Royal Academy of Fine Arts of Brera, Milan, Italy, where he received the degree of Professor of Architecture. Mr. Valenti studied under Professor Ferrario, principal of the school of perspective at the Academy and scenographer at "La Scala," theater in Milan, and under other distinguished masters. Upon the investigations and the ripe practical experience of these men, he has based the course which he is presenting to the readers of this magazine. The method shown here, once it has been mastered, saves time and gives increased accuracy over the usual practice in laying out architectural perspectives instrumentally.—ED.

PROCEEDING with our problem, after studying carefully the conditions called for in the layout given in Figures 53 and 54 (See sheet of diagrams on page 34, February issue, for all figures referred to in this issue) we may begin immediately to find the perspective of the object in question, using all the *abbreviations* of operations, or short-cuts thus found. First mark off to the *left* of the Central Axis on the Horizon Line and in the scale of our picture (shown on the top and left side of the picture plane) 30'-0" as required (See Figure 52) and trace a perpendicular indefinitely, both above and below the Horizon Line. Then mark off on this vertical line the required distance below the horizon, or 10'-0" (See Figures 52 and 52B), and from this point C for example (See Figure 52) measure up 40'-0" also required (See Figures 52 and 52B) and find point A. Line $A\,C$, as will be noticed, represents the imaginary corner (nearest or tangent to the transparent plane) of the solid containing the building, and formed by circumscribing it by straight lines tangent to all its *extreme* projections, both in plan and elevation. Through point A we shall trace a straight line $E\,F$ indefinitely at a slant which can be arbitrarily selected, and representing one side of our building, (point E on the Horizon Line being the vanishing point of all lines pertaining to this side and of the planes parallel to this). In this case, however, wishing to fix the angle of the building at 60° to the transparent plane as shown in Figure 53, proceed as follows: (See Figure 55) From point A to the left and above line $R\,S$, trace a straight line at 60°, as shown in $A\,B$ at an arbitrary length. Then recalling the operations as given in diagrams and text, in Part VIII, (though in this case the operation occurs *above* the picture instead of below, which is identically the same thing) lower a perpendicular from point B, in the geometric plane, to line $R\,S$ (upper limit of picture) to point b. Then conduct a straight line from this point b to Vision Point V on the Horizon Line. Centering in point b with radius equal to one-third of Bb, or $bb'=\frac{Bb}{3}$ rotate this arc to the *right* until it intersects line $R\,S$ at point b'. From this point b' conduct a straight line to the *reduced* Distance Point $D\div 3$ on the *left* hand limit of the picture (or opposite side) on the Horizon Line; and at the intersection of these two lines, that is, line $b\,V$ and $b'D\div 3$, find point B', which is the perspective of point B (2 in the geometric diagram). Uniting points A and B', and continuing this line until it intersects the Horizon Line at point $V.\,P.\,I.$ (or Vanishing Point No. 1), this line will represent a line in perspective at exactly 60° to the picture plane, and consequently is the perspective of the geometric line $A\,B$, which of course is traced at 60° to the picture plane, which in this case is line $R\,S$, or upper limit of the picture.

Then proceed exactly as was done in Figure 51 of previous issue. (The lettering in this case having been changed for convenience). At the point where line $E\,F$ intersects the left hand limit of the picture, trace a horizontal indefinitely and call it $X\,Z$, as was done in Figure 51, this representing the introduction of a geometric plane at this point. Then let us take up the usual operation as learned in the beginning of this study (See part VIII) and *reverse* the same, by first conducting a straight line from point A, to the vision point V, and trace a second straight line from point A to the *reduced* distance point $D\div 3$ located on the left-hand margin of the picture on the horizon line. At point N on line $X\,Z$ where line $A\,V$ intersects line $X\,Z$, lower a perpendicular $N\,Y$ indefinitely (as was done in Figure 51), and with an opening of the compass equal to $N\,L$ on line $X\,Z$ (Point L being the intersection of line $A\,D\div 3$ and line $X\,Z$, which in turn is the newly created geometric plane traced at this particular point for convenience and explained above), mark off on line $N\,Y$ three spaces equal to three times $N\,L$ or $N\,Y=3\times N\,L$. Uniting point X with point Y, and at point Y, tracing a straight line $Y\,Z$ at 90° to line $X\,Y$ to point Z on line $X\,Z$, and also uniting point A and Z, we shall find we have in $X\,Y\,Z$ a triangle in the geometric diagram corresponding exactly with the triangle $X\,A\,Z$ which is in the perspective, and is the perspective of the triangle $X\,Y\,Z$. (See the diagram Figure 51A.) Consequently as was done before (See Figure 51 and 51A) continue line $A\,Z$ (the letters differing in this diagram) until it intersects the Horizon Line, and call this point VII, which is the vanishing point of all the system of lines pertaining to the other side of the building and all planes parallel to this side. The vanishing point No. I or V. P. I. on the opposite side is found by prolonging line $A\,X$, already established, until it intersects the Horizon Line, and is the vanishing point of all the system of lines pertaining to the other side of the building and all planes parallel to this side, as already explained above.

(To Be Continued)

THE gold medal of the Societe des Architectes Diplomés par le Gouvernement Français, which was put into the hands of the American Group for award to that institution which shall have most distinguished itself in the year in architectural teaching, according to Beaux-Arts principles, has been awarded for the season 1920-21 to The Carnegie Institute of Technology.

PENCIL POINTS

Published Monthly by

THE PENCIL POINTS PRESS, Inc.

Publication Office—Stamford, Conn.

Editorial and Advertising Offices—One Madison Ave., New York

RALPH REINHOLD, President F. W. ROBINSON, Treasurer

EDWARD G. NELLIS, Secretary

EUGENE CLUTE, Editor W. V. MONTGOMERY, Business Manager

RAY D. FINEL, Advertising Manager

Subscription rates per annum, payable in advance; United States of America and U. S. Possessions, Cuba and Mexico $1.00, Single copies 15 cents; Canada $1.25 all other countries $1.50. Payment for Foreign Subscription should be made by International Money Order or American Express Money Order, drawn in terms of United States Money.

All Subscribers are requested to state profession or occupation.

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THE AMERICAN ACADEMY IN ROME

FROM a letter received by Mr. C. Grant LeFarge, Secretary of the American Academy in Rome, from Mr. Gorham P. Stevens, the Director, we quote the following:

"The great event of the month (December) has been the financial crisis—the Banca di Sconto, one of the three banks in which we had funds, stopped making payments on December 29th. Fortunately we had by far our largest amount in the Banca Commerciale, and this entire sum is now in our safe deposit box. The Banca di Sconto, according to Mr. Sebasti, is to begin to pay off its creditors at once, giving each one a certain percentage month by month until the entire sum is paid. As we draw our money month by month, I do not believe the financial situation will trouble us very much. The whole country, however, is in a bad financial way. I do not trust any bank, except the Banca d'Italia, which is prohibited by laws from undertaking any commercial enterprises. More definite details in regard to the Banca di Sconto are to be published next Friday.

"Another event of great interest for all of us in Rome is the fact that Mr. and Mrs. Mead are in town. Mr. Mead intended to come in March, but he now is heading for Sicily, and he could not pass through Rome without spending a week here in looking over the Academy. He has already attended one of our Faculty meetings and likewise a meeting of all the Fellows in the School of Fine Arts, at which the Collaborative Problem for this year was discussed. He is planning to study the whole situation on the hill with thoroughness. It certainly is a great pleasure to have him in Rome, and it is a particular comfort to me, for there are many questions about which I need his sound advice.

"Professor and Mrs. Leverett Moore of Vassar are in town for the winter. He is the Secretary of the Jury on Classical Studies.

"Professor C. U. Clark, a former professor in charge of the School of Classical Studies, spent a few days in Rome on his way back from Roumania.

"The lectures in the Classical School have been particularly numerous: Professor Whicher, Professor McCrea, Professor Showerman and Professor Lugli have all talked to us.

"It is a keen satisfaction to learn that Professor Fairbanks has been appointed professor in charge of the School of Fine Arts for three years, and that, probably, Professor McDaniel of Pennsylvania will receive a similar appointment. A permanent Head of the Classical School is sorely needed. Professor Showerman's appointment as Annual Professor in the School of Classical Studies for next year is excellent, for he is a Former Fellow of the School and very appreciative of the advantages which Rome offers.

"The well-known etcher, Mr. Walcot, writes that he will be pleased to start his work at the Academy toward the end of January.

"It may interest you to know that, in the purchase of art books for the library, Professor Fairbanks, Professor Van Buren and I go once or twice a month to the principal book sellers in town; we have thus an opportunity of examining each book before it is purchased. We have found this a very good method.

"Mr. and Mrs. Lamond have worked like Trojans upon the furnishings of the Villa Chiaraviglio, and in a day or two they are going to give their first luncheon to a few Italian composers. Then toward the end of the month the first musical is to take place, when one of Sowerby's compositions is to be played. Professor Lamond is certainly most active, and he deserves a great deal of credit for the way in which he has thus far obtained results.

"The new machinery of the automatic laundry is being installed. The chief advantages will be a saving in time and money, and a more thorough sterilization of the clothes than is possible by our present system.

"I have heard from one of the secretaries of the Roumanian Legation that Roumania is planning to have an Academy in Rome.

"The students are an energetic lot of men, apart from their Academic work. They have just revised their own organization as a student body, and elected an entirely new house committee. What they are after is democracy! They organized a reception for the new department of music, to which more than 200 people came. The invited people first had an opportunity to meet Mr. and Mrs. Lamond, then to listen to some music, and finally to have a cup of tea.

Below is reproduced a photograph of the decorative treatment of the doorway from the South Gallery to the Central Gallery at the Thirty-seventh Annual Exhibition of the Architectural League of New York in the Fine Arts Building. The design for this treatment was secured through a competition for account of which see page 20 *of this issue. Collaborative design by Francis J. Creamer, Architect; C. Paul Jennewein, Sculptor, and George Davidson, Mural Painter.*

FRANCIS J. CREAMER

FRANCIS J. CREAMER, Architect, who, with C. Paul Jennewein, Sculptor and George Davidson, Mural Painter, won the recent collaborative competition of the Architectural League of New York for a decorative treatment of a doorway, is in the office of Messrs. McKim, Mead & White, where he is in charge of drawings for the Eastman School of Music, a group of buildings at the University of Rochester.

After leaving preparatory school, he worked for leading architects in Philadelphia, including Day & Klauder and Wilson Eyre, for two years. He entered the architectural school of the University of Pennsylvania, with the class of 1916. There he studied under Paul Cret for four years; he also took part in athletics at college, winning intercollegiate honors and the 500 yard Middle Atlantic States' swimming championship.

He was associated with the firm of Hewitt & Granger up to the outbreak of war. He then went to training camp, was commissioned Second Lieutenant, Air Service, and was sent to France, 1917. Later he was assigned to headquarters' staff, A. E. F. On return from France he entered the office of McKim, Mead & White. He won third prize in the Terra Cotta Apartment House Competition in 1921.

PERSONALS

BERNARD T. WISENALL, Architect, formerly of 1643 Reading Road, Cincinnati, Ohio, is now located at 2305 Union Central Building.

ADDEN & PARKER, Architects, announce the removal of their offices March 1st, 1922, to 177 State Street, Boston, Mass.

NICHOLS, SHEPPARD & COLTHURST, Architects and Engineers, 32 Sandwich Street, W. Windsor, Ontario, Canada, will be located in their new offices, Dowler Building, Sandwich Street, W., after March 1.

HARRY LUCHT, Architect, is now established in his new Office at 242 Fulton Terrace, Cliffside Park, N. J.

ROBERT VON EZDORF, formerly with Cross & Cross, Architects, is now associated with The Francis H. Bacon Company, in charge of the New York office at 10 East 47th Street.

WILLIAM J. MURNEY has opened an office for the practice of architecture at 10 Central Square, Lynn, Mass.

J. IVAN DISE, formerly with Albert Kahn, Detroit, and Cass Gilbert, New York, has opened an office for the practice of architecture at 424 McKerchey Building, Detroit, Mich.

BAILE ESPANOLE OF THE ARCHI-ARTS, RICE INSTITUTE, HOUSTON, TEXAS

A SPANISH costume ball was given by the Archi-Arts —the students of architecture and the students of painting at Rice Institute, Texas, February 3. The idea was fostered by The Architectural Society of Rice Institute, composed of certain of the graduates, post-graduate students, senior and junior classmen of the School of Architecture.

The "Baile Español," as it was called, was a great success and was notable for the thoroughness and ability with which it was staged. The dance hall at Autry House, in which the ball was held, had been transformed into the patio or fore-court of a Spanish castle by means of scenery that masked the walls. This setting was painted, built and set up by members of the Archi-Arts, each of whom was responsible for a certain section—a bit of wall, a window, etc. The settings showed the painted figures of Spanish characters—a fruit woman with her stand, a man with his burro, two suspicious looking characters apparently plotting some mischief, a charming senorita looking down from a window, etc. An old-time well of mesquite blocks hid the fireplace in an arched alcove. It was a truly remarkable well for instead of water it yielded a plentiful supply of punch. A blue cloth covered the ceiling to represent the sky. The room was lighted strongly from one direction, so that shadows were cast, and the effectiveness of the setting enhanced.

The idea and its execution are much to the credit of the Archi-Arts. Mr. Tidden suggested the Spanish idea, Mr. Stayton Nunn designed the setting in collaboration with the senior architects, who were set to work early in the term by Mr. W. W. Watkin on a Spanish problem.

The costumes made a gay mass of moving color of which the orchestra in white suits and red sashes and caps formed part. The dances were announced by the orchestra with a clash of cymbals and whirling of tambourines. There was a dash and a go in keeping with the Spanish setting, plenty of atmosphere and peppy music. Interspersed with the dances were a number of stunts. Miss Bertha Louise Hellman, of the art department, gave a Spanish dance effectively; Messrs. E. H. Duggan and J. C. Tidden got plenty of laughs with their comedy acrobatic sketch. There was a bull fight—with a live bull, the motive power being supplied by two husky young architects, namely, Mr. B. B. McElroy and Mr. Ted Flaxman, under a burlap bull hide. Mr. McElroy animated the anterior portion of the animal, while the rear end was ably taken care of by Mr. Flaxman. The toreadors were Instructors Tidden and Conklin.

A buffet supper was served and dancing continued through the early morning hours. The attractive cover design for the program and the design for the ticket were made especially for the occasion by Mr. Tidden.

It is intended that the ball be made an annual event, taking the place of the play which it has been the custom to produce in the drafting room each year, the play having been abandoned since the forming of a live dramatic organization in the school.

SABINE ON ACOUSTICS

WITH the purpose of presenting all the important contributions to the subject of acoustics from the pen of the late Professor W. C. Sabine, The Harvard University Press, Cambridge, Mass., has just published "Collected Papers on Acoustics" by Wallace Clement Sabine. $4.00. The book has been edited by Mr. Theodore Lyman. The value of Professor Sabine's investigations of this subject to the architectural profession is so well known as to call for no comment. The presentation in this book is excellent and there are a number of illustrations that increase the value of the text. The material here presented appeared in most instances scattered through several journals and some unpublished notes by Professor Sabine have been included.

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 please recommend a list of books forming a good working library for a young architect? Though I may not be able to acquire all of them at once, I should like a rather complete list, so that I may ultimately have a good library of the most useful books. R. H. L. *Answer*—Though it is rather difficult to make up such a list upon which any two competent architects would agree throughout, we are sure that, if not the best, the list we have prepared as printed below is, at least, thoroughly good, and constitutes a library that will meet the requirements. On Classic Architecture we would suggest the following: Buhlmann, "Classic and Renaissance Architecture" (original in German, reprint English translation); D'Espouy, "Fragments D'Architecture Antique," 2 vols.; D'Espouy, "Monuments Antique," 3 vols.; Penrose, "The Principles of Athenian Architecture." On Italian Architecture we recommend: Letarouilly, "Edifices de Rome Moderne"; "Palast Architektur," 5 vols.; Thomas & Fallon, "Northern Italian Details"; Camille Martin, "L'Architecture Romane en Italie"; Strack, "Baudenkmaeler Roms." Excellent works on French Architecture are: J. Vacquier, "Les Anciens Chateaux de France," 3 vols.; J. Vacquier, "Les Vieux Hotels de Paris," 12 series; The Guérinet, reprints of Louis XV and XVI periods; H. Saint Sauveur, "Chateaux de France," 3 vols.; Gaston Brière, "Versailles" (Le Chateau 2 vols., Le Parc 1 vol.); Pierre de Nolhac, "Les Trianons"; Léon Deshairs, "Dijon"; Léon Deshairs, "Bordeaux"; Léon Deshairs, "Aix-en-Provence"; H. Revoil, "L'Architecture Romane"; Pfnor, "Fontainbleau," 3 vols. On English Architecture: Pugin, "Examples of Gothic Architecture," 3 vols.; Pugin, "Specimens of Gothic Architecture," 2 vols., (there is a reprint covering the whole of the two preceding); Pugin, "Normandy"; "English Homes" (now coming out Scribner's, New York); Garner & Stratton, "Domestic Architecture of England, Tudor Period"; Gotch & Brown, "Architecture of the Renaissance in England"; Belcher & Macartney, "Later Renaissance Architecture in England"; Uhde, "Baudenkmaeler in Gross Brittanien." Spanish and Portuguese: Uhde, "Baudenkmaeler in Spanien and Portugal"; Byne & Stapley, "Rejeria of the Spanish Renaissance"; Owen Jones, "Alhambra." Flemish: "Documents de L'Art dans les Pays Bas du X au XVIII Siecles." Arabian: Sarre, "Baudenkmaeler Persischer Baukunst," 2 vols.; Prisse D'Avennes, "L'Art Arabe," 3 vols. American: "Monograph of the Works of McKim, Mead & White"; "Works of Charles A. Platt"; "The Georgian Period."

SAN ANTONIO ARCHITECTURAL CLUB

THE San Antonio Architectural Club was organized by eight draftsmen who met September 1, 1921, and laid down plans for a permanent organization. The charter members numbered seventeen and now the paid-up roster is better than fifty and new names are being added daily.

The present officers of the club are: L. E. Mellor, President; E. B. Hays, Vice-President; A. B. Campen, Secretary; J. A. Williamson, Treasurer; J. A. Dodge, Librarian.

The advisory board of architects consists of: Atlee B. Ayres, (Chairman); Raymond Phelps, R. B. Kelly.

The club goes a step further than those in most cities, in that it makes all tradesmen and contractors, as well as architects, eligible as associate members and fosters the spirit of general co-operation and education for them. This idea was prompted by local conditions where there is a pressing need for some incentive for co-operation and appreciation of better architecture and craftsmanship. The spirit of acceptance of these ambitions for advancement and co-operation has been unusually gratifying.

Plans for the coming year include the abstract construction of an average building through a series of lectures. These lectures are to be given by men of recognized standing in the local building field, and cover the period from the first meeting of the architect and the prospective builder to the completion of work and acceptance by the owner.

The entertainment feature has not been overlooked and alternate meeting nights will be given over to relaxation.

All traces of the September flood have been removed and the city is in the midst of a building program which includes two skyscrapers and hundreds of beautiful homes.

COLLABORATIVE DESIGN FOR DOORWAY AT ARCHITECTURAL LEAGUE EXHIBITION.

(*Continued from page* 20)

Meanwhile carpenters were working on the framework of the doorway. The carpenters finished about a week before the exhibition opened. The painting was stretched on a frame by Gigi, an expert from MacDougal Alley. The curtains, which had been ordered previously, were hung—the whole work was completed, two days in advance of the grand opening.

The lunette is painted in warm tones of a rich orange vermillion on a background of gold mosaic. The temple is purplish gray standing on a greenish ground, there are spots of blue to echo the rich blue of the curtains. The lettering is painted in burnt sienna.

The architectural frame of the doorway suggests Travertine in texture and is of a silvery gray color that harmonizes admirably with the neutral gray tones of the Gallery. How well this design has worked out can be seen in the small photograph published on page 36 of this issue, though the color, one of the most pleasing things about the treatment, is unavoidably lost in the illustration. A portrait of Mr. Creamer and a short biography will be found on page 37 of this issue.

A CORRECTION.

IN THE caption of an illustration of detail of the Grand Central Terminal, New York City, published on page 24 of the December issue of this journal, and in the text on page 27 of that issue, referring to this illustration, we inadvertently omitted the name of Reed & Stem, the architects with whom Warren & Wetmore were associated in this work. We take this opportunity to correct this error.

THE SPECIFICATION DESK

A Department for Specification Writers

MISCELLANEOUS ITEMS OF CONSTRUCTION PART I

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.

Provision for Fastening Carpet or Linoleum in Fireproof Buildings—In a fireproof building where the floor is usually finished with a fireproof material it sometimes happens that, as in hotels, the entire cement floor surface of the room is to be covered with carpet. A rug would cause no difficulty but a carpet must be fastened down at the edges.

Unlike linoleum, carpet is not glued to the cement surface and therefore provision must be made for tacking it. This necessitates the placing of wooden nailing strips about three-quarters of an inch thick and two inches wide, embedded in the finished cement surface of the floor, at the wall base, around the room. To fasten these strips, grounds may be placed in spots at the proper level and fastened by means of cement mortar or plaster of Paris. The strips are then nailed to the grounds and the cement is worked around them. The strips also serve as screeds for bringing the cement to the proper level. If no spot grounds are used, the strips can be made with their edges beveled so that when they are placed with their widest face downward, they will be held in place by the overlapping cement floor finish. It is better, however, to drive large-headed nails into the bottoms of the strips for anchoring to the cement below. When the strips are set in this manner they must be brought to the proper level by patches of cement mortar placed at sufficient intervals to prevent the strips from working loose when the cement is applied.

But nailing strips may also be used in connection with linoleum. Although linoleum is glued to the cement finish, the edges often become loose and curl up when water used in cleaning gets underneath, even if the glue is supposedly waterproof. If the nailing strips are provided, the edges can be nailed down with fine brads that are scarcely noticeable. Often a three-quarter inch, quarter-round, hardwood moulding is then placed on the linoleum to keep the water from the edge and to make easier the cleaning of the angle with the base at the wall. All nailing strips should be oiled before they are set, so that they will not absorb water from the cement, causing them to swell and warp.

At the doors the strips can be made wide enough to provide nailing for the door saddles. These saddles should have vertical edges high enough to suit the thickness of the carpet or linoleum stopping against them. Above the vertical edges they may be moulded or beveled in the usual manner.

Sometimes, in a hospital or in other public buildings, a cement finished or terrazzo corridor floor with a coved wall base, while desirable for cleanliness, is objectionable on account of its noisiness when being walked upon. Since linoleum is not so noisy, in such a case a strip of linoleum can be laid through the center of the corridor with the other finish on either side. To do this a brass guide should be provided on each side of the space that the linoleum is to cover. These guides should be an eighth of an inch thick, or better still for lateral stiffness one inch angles can be used. They must be anchored to the rough floor by means of strap anchors every two feet, riveted to the guides and bolted to the rough floor. The guides must be set with the top edges at the level of the finished floor. The space between them is then finished with cement which is recessed so that the linoleum will lie flush with the top of the guides. Nailing strips may also be provided at the edges. The cement or terrazzo finish on either side of the linoleum must also be laid flush with the tops of the guides.

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.

Architectural Details in Brickwork—Portfolio of 32 full page plates. 8x11 in. Printed on heavy plate paper in sepia. Exteriors, interiors and details of notable brickwork, illustrating a variety of subjects. American Face Brick Assn., 1160 Westminster Bldg., Chicago, Ill.

Olde Stonesfield Roofs—Brochure with color plates illustrating artistic roofs and walks. 18 subjects, 5½x6½ in. The John D. Emack Co., 112 South 16th St., Philadelphia, Pa.

Faience and Flemish Tiling—Profusely illustrated booklet showing a wide range of subjects. Details. Swimming pools, mantles, ornaments for exteriors, etc. 6x9 in. 32 pp. Mueller Mosaic Co., Trenton, N. J.

Fun and Health in Running Water—Historical treatise tracing development of the bath from ancient to modern times. Illustrates especially the Curtainless Shower line of specialties. 5x7½ in. 16 pp. Curtainless Shower Co., 507 Fifth Ave., New York.

The Home Painting Manual—Complete treatise on this fascinating subject. Color plates. Complete specifications. 16 chapters. 6x9 in. 170 pp. Price fifty cents per copy. Sherwin-Williams Co., Cleveland, Ohio. Dept. B-435.

Hard Lead Products for Building—Two valuable sheets of details illustrating complete line of rain water heads, roofing, etc., with correct applications clearly shown. 20x30 in. Also catalogs and specification suggestions. United Lead Co., 111 Broadway, New York.

"Buckeye Grey" Sandstone—Service brochure with specifications, detail drawings, complete information for using sandstone. 14 full page drawings. 8x11 in. 32 pp. The Ohio Quarries Co., Citizens Bldg., Cleveland, Ohio.

Dampproofing and Preservation for Buildings and Monuments—Illustrated treatise describing Caffall process as applied to Cleopatra's Needle and other monuments. 4x9 in. 24 pp. Obelisk Waterproofing Co., One Madison Ave., New York.

Science and Practice of Integral Waterproofing, Second Edition—Treatise on the subject as applied to basements, cement stucco, cisterns, foundations and masonry structures generally. Drawings and specification data. 32 pp. 4x9 in. Truscon Laboratories, Detroit, Mich.

The Latch String—Monthly publication edited primarily to interest architects. Illustrated. Bright and clever. 4½x6 in. 30 pp. The W. S. Tyler Co., Cleveland, Ohio.

Cypress Pocket Library—Forty-three booklets, each dealing with a subject of interest to architects. Send for Vol. I which contains list of the entire series, convenient pocket size. Southern Cypress Mfg. Assn., New Orleans, La.

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The Regulation of Temperature and Humidity—Complete catalog, handbook and specification guide showing in detail the entire line of Johnson Temperature Controlling Devices for all types of buildings. 8½x11 in. 64 pp. Johnson Service Co., Milwaukee, Wis.

The Red Book—Hand book and specification manual for architects, contractors and plasterers covering all Gypsum products. Tables and charts for estimating. 4x6¾ in. 84 pp. U. S. Gypsum Co., 205 West Monroe St., Chicago, Ill.

Vendor Roofing Slate—A book for architects. Illustrated. Contains service sheets, Vendor Classification Catalog of Slate, specifications and notes on estimating. 8½x11¼ in. 20 pp. Vendor Slate Co., Easton, Pa.

Books of Interest to Architects, Draftsmen and Architectural Students

Announcements under this heading ten cents a word per issue. Books may be ordered either by mentioning the title or the serial number, which is assigned for your convenience. Names of publishers are indicated by abbreviations as follows:—

Chicago Press—The University of Chicago Press, Chicago, Ill. Harrisburg—Harrisburg Star Boiler Co., 50 Church St., New York. Lippincott—J. B. Lippincott Co., Washington Square, Philadelphia, Pa. P. P.—Pencil Points Press, Inc., 1 Madison Ave., New York. Record—The Architectural Record Co., 119 West 40th St., New York. Sedgwick—Sedgwick Machine Works, 150 West 15th St., New York. Spon—Spon & Chamberlain, 120 A Liberty St., New York. U. P. C.—U. P. C. Book Company, Inc., 241 West 39th St., New York. Van Nostrand—D. Van Nostrand Co., 8 Warren St., New York.

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(*See page* 40)

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ARCHITECTURAL DETAIL, PART XI.

(*Continued from page* 16)

well as by special stains. White cement and white sand make a white stucco, but one part ordinary Portland, a quarter of a part hydrated lime, and three parts sand, half white, half yellow, will give a light stucco while a little yellow ochre or raw sienna will throw it into the cream group unless the Portland is very dark or blue. Personally I find that one of the yellower or lighter Portlands with a reasonable proportion of hydrated lime and the usual yellow sand, will give a very good color and save the cost of either white cement or white sand. This is even more true in pebble dash or exposed aggregate (suggested in the quotation from Mr. Earley's paper last month), as the colored marble chips or other stones not only hide the cement, but, shading its lower relief, reflect the greater part of the light. The greatest care must be taken in both pebble dash and exposed aggregate to have the pebbles or chips evenly spaced. They may be sparse throughout or close together over the whole surface, but sparse spots contrasted with heavily covered areas look bare. I have seen some very attractive effects for which a light almost white stucco had been used on a surface that may have been spattered and over which a widely scattered dash of small black chips had been thrown. It is difficult to do this scattered work evenly and a good workman and close supervision are required.

There are several different ways of obtaining exposed aggregate effects. The main divisions are those of "stucco" and "cast." We reviewed the specifications of the former last month. There are several divisions in "cast" work. A—the concrete may be "poured in place" and the face forms so supported that they can be removed in twenty-four hours and the face washed down to expose the aggregate. B—the structure may be divided into small pieces that can be handled and built together like stones and these smaller pieces "pre-cast." They are usually of such size that they can be washed in a tank and strong acid used if desired. But both the poured or pre-cast may be of the same material all the way through or of a coarse cheaper concrete in the interior with an outer veneer of special mixture anywhere from an inch to three inches thick, depending on the size of the work. This may be accomplished by setting a thin metal partition between the outside coating and the core, raising this gate as the pouring is done so the two kinds of concrete will knit together. It is possible to pour the core first and the veneer afterward, but then the veneer is more likely to peel, as the crystallization of exterior and interior do not proceed at the same time and rate. On page 16 is an interesting close-up of a pre-cast over-coating at 13th and F. Streets, Washington, D. C., the cornice above the first floor. The effect of this is said to be vibrant and brilliant in the sunlight, and it must be borne in mind that what looks ragged in the close-up will merge at a distance like the spots of the *pointillist* painters and produce a subtle harmony that has life even though it may, in its broad effect, appear monochrome and quiet of line.

(*To Be Continued*)

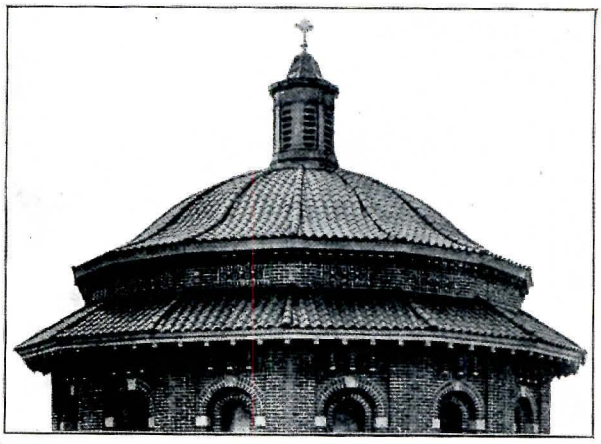
EXHIBITION OF WORKS BY FINE ARTS FACULTY OF CARNEGIE INSTITUTE OF TECHNOLOGY

AN EXHIBITION of works of art by members of the faculty of The College of Fine Arts, Carnegie Institute of Technology, Schenley Park, Pittsburgh, Pa., was held in galleries of the Institute, February 8-26. The purpose of the exhibition was to give the public of Pittsburgh an opportunity to see examples of the work of the faculty of the various departments of the College of Fine Arts.

The faculty of the Department of Architecture, of which Professor Harry Sternfeld is head, was represented by a display of renderings, water colors, sketches, designs for buildings and studies for projets.

The exhibition in general included: sketches, etchings, illustrations, posters, architectural designs, pottery, costume designs, theatrical costumes, working drawings, interior decorations, sculpture, industrial art, jewelry, weaving, designs and models for stage settings.

Faculty members were in attendance during the exhibition to give information concerning the exhibits. Several lectures were given on interesting topics, beginning with a lecture by E. Raymond Bossange, Director of the Division of the Arts.



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