

ARCHITECTURE AND THE COMMUNITY

THE attitude of the public towards architecture is coming in for special consideration at present owing to a realization on the part of a considerable portion of the profession that the public in general knows very little about architecture, perhaps less about the services the architect renders, and that this state of affairs is detrimental to the proper development of architecture in this country and to the success of the profession.

So long as the public does not know, in a measure at least, the difference between good and bad architecture and does not know what the architect contributes to a building, it is going to be discouraging work for the architect, excepting where he can secure the attention of some few people who have had advantages that make them appreciative.

A drive through almost any of our prosperous towns is enough to reveal the chaotic state of the public mind in regard to architecture. We find in many of the old towns a few delightful houses dating from Colonial days interspersed among horrors of unknown origin produced, evidently, without the benefit of any architect's services, and here and there a house that, in addition to being up-to-date in every practical way and suited to our present-day manner of living, has much of the dignity and charm of Early American domestic architecture.

Most of the houses have the look of having been turned out as cheaply as possible, with the exaggeration of a feature here and there to give a semblance of character, though it be bad. This is a pity when we have traditions both East and West that together with a sane and tasteful meeting of modern living requirements are capable of producing pleasing homes. The business buildings, the school houses, churches and other public and semi-public buildings, are as a rule not up to as high a standard of design as they should be.

Deploping conditions does little good unless one goes further and does something to remedy them—so let us consider what can be done. In the first place the architects and architectural draftsmen of a community can do much through their local organizations such as the local Chapter of the A. I. A., and the Architectural Club, and these organizations should work together. In doing this it will be advantageous to get in touch and keep in touch with the Public Information Committee of the American Institute of Architects. Mr. J. V. Van Pelt is chair-

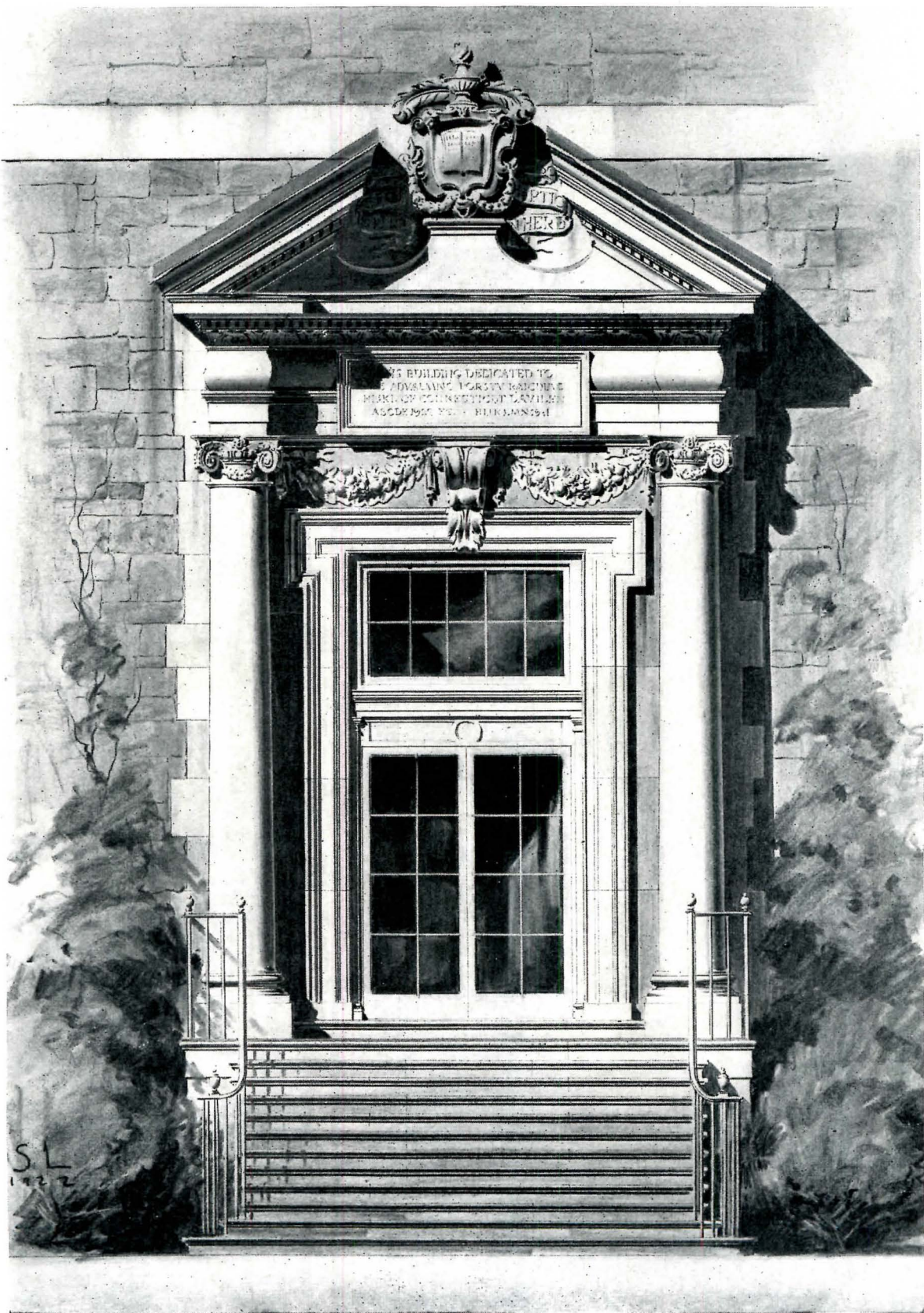
man of this committee and his address is 126 East 59th Street, New York City. What is needed is enthusiastic work in each community by men who are intimately acquainted with local conditions and really interested in their own town or city.

There are innumerable ways in which a beneficial influence can be brought to bear upon the public of any community. For instance, exhibitions of drawings, photographs and models of good architecture can be held and the public invited, including the school children in the upper grades. Often this can be arranged in co-operation with the local public library. Furthermore, a set of good photographs of whatever buildings of a worthy architectural character the town or city may possess might well be hung as a permanent exhibition in the public library. The public school authorities can do much by directing the attention of pupils to good examples of home building, old and new. The city council and the local business men's organization may well exert a powerful influence in favor of good design for all public and semi-public buildings. But all these agencies need the guidance of men trained in architecture—this is where the local organizations of architects and draftsmen can render a service.

PENCIL POINTS stands ready to co-operate with its readers in this work and you are invited to write to the editor for suggestions touching the problem in your community; also to send in reports of plans and of work accomplished for publication, in order that readers in other places may get ideas from what you are doing.

The architectural club that provides a pleasant social program and educational facilities for its members has realized only part of its possibilities if it does not also render a service to the community. Each and every town and city in this country should grow more beautiful year by year, more consistent in character, with fewer unsightly buildings. In order that this may come about, leadership is needed and this leadership must necessarily come from the men who have the training and the necessary knowledge of architecture—the architects and draftsmen of the community, working together in their local organizations. The work may be started in a small way, but it should be started at the end of the summer season—now is the time to think about it and formulate our ideas, so that when vacation time is past we may say to our colleagues—Let's go!

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*Charcoal Drawing by Schell Lewis of Detail by Charles A. Platt, Architect.
Size of Drawing, 2 ft. 4 in. x 1 ft. 7 in. Three-quarter Inch Scale.*

RENDERING IN CHARCOAL

BY SCHELL LEWIS

A WORD of explanation should, I believe, be offered regarding the purpose of these drawings. They are made as a means of studying the design in the office and are not regarded as fine examples of rendering. Their chief virtue lies in the fact that they can be made with considerable speed, most of the examples that have been published in PENCIL POINTS from time to time being about a day's work.*

There is little need to more than touch upon the value of conventional shaded drawings in the architect's office. The fact that draftsmen are trained in the use of such drawings from their student days enables them to realize at a glance the projections indicated by the shadows. Since the depth of the shadow is equal to the projection causing it, it would be possible for the draftsman to reconstruct the plan or section with no other data than the shaded drawing.

These drawings as usually executed involve considerable time and labor, a pencil or ink drawing being first carefully made on the best paper, and then laboriously rendered with numerous washes, a far too expensive method for common use in studying details.

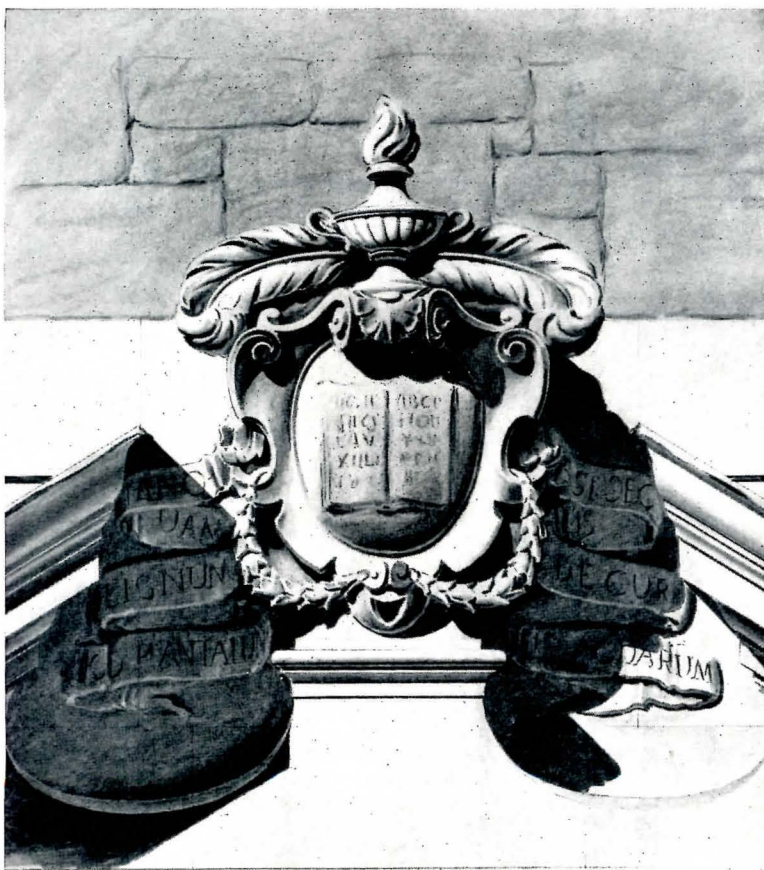
I do not want anyone to think that I am offering a royal road to fine effects with a few simple tricks, for making a drawing in charcoal is not simple and one has to buckle down and work with a will. These drawings can, however, be made with considerable speed once the method is acquired.

Briefly, the rendering is made

* Charcoal Drawings by Mr. Lewis appeared in the issues of this journal for May, June, October and December, 1921.

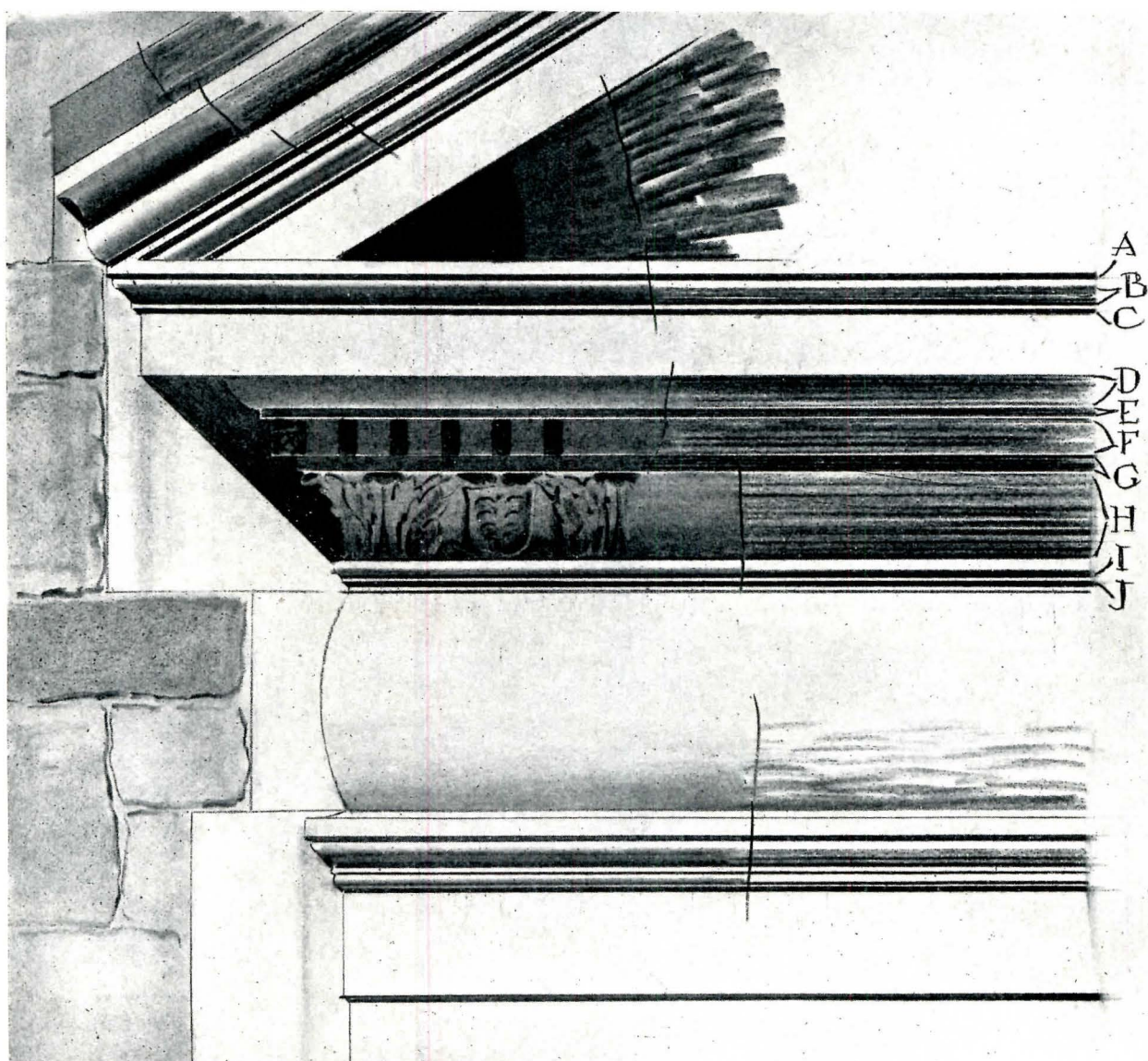
over any drawing, be it a study or working drawing that is complete, on a transparent paper that has a surface soft enough to take the charcoal. The kind of paper is decidedly important. It must be transparent enough so that one can see the lines of the drawing beneath and with a surface that will take a full black charcoal line and allow the charcoal to be rubbed to the various tones needed. The thin, soft, yellowish paper which is sometimes used for making office tracings of large detail sheets is what I have in mind, although much of the paper now used has a hard surface which is entirely unsuitable for this purpose. The thin white papers commonly used are of little value. The charcoal I have used is the French stuff in a green box with "Tusains Rouget" on the cover. There are probably other kinds that would answer as well. Many of the sticks are useless, giving a hard, gray line. A piece that will give a rich, black line and yet is not so soft that it will crumble at the touch will be treasured and

used to the last bit. The charcoal is laid on to about the value required, using the T-square or working free-hand as the occasion may demand, and is rubbed to the finished tone with a paper "stub," or the fingers in a full size drawing. A "Wolff" pencil, grade BB, is very handy. The outlines of the shadows can be penciled in with it (a graphite pencil must not be used at all on the drawing), and it can be used to good advantage on fine ornament, lettering, etc. The stick charcoal will make a very fine line when sharpened to a chisel point, and will stand up well, but will crumble very easily if used with a pencil point. A fine sandpaper pad will have to be



Charcoal Drawing by Schell Lewis. Quarter-size Detail of Entrance Shown on the Opposite Page.

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Detail Drawing Showing Method of Rendering in Charcoal.

used continually to keep the necessary point on the charcoal.

The drawing shown at reduced size on page 10, was made from a three-quarter-inch scale detail, in regular office practice, but with this article in view, as it shows a number of conditions arising in rendering. In the smaller detail on this page, I will try to show how the charcoal is handled for various mouldings.

The first step is to stretch the paper tightly, using plenty of thumb tacks over the drawing which is trued to the T-square. The light tones, indicating variations in stone work, weather stains, etc., can be put in over the entire drawing and if rubbed in well will not smudge. The drawing should then be protected with a paper cover which can be moved down as needed. As the charcoal will smudge at the slightest touch, each line and moulding must be finished

completely as the work proceeds. This may sound serious, but it must be remembered that these drawings are mere statements of fact, not pictures in which the composition must be studied and altered. The draftsman should be thoroughly familiar with shades and shadows, however.

The horizontal lines are worked on the edge of the T-square which can rest on the paper, although sometimes it is desirable to keep it away from the surface with a few thumb tacks on the under side. The vertical members must be put in from time to time, often the horizontal work *below* is in, with the aid of a large wooden triangle which is kept clear of all rendering by thumb tacks at the bottom and at the top, or else used cantilever fashion, if the triangle will not span the work.

On the drawing shown here, after the light tones were worked in, the cartouche was drawn, sketching

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the shadows in, working them with the stub, adding charcoal as needed until the desired values were reached. The left-hand pediment moulds come next, using a wooden triangle with a thumb tack under each point to keep it clear of the cartouche, and then the right-hand portion of the pediment was done in the same manner.

The detail drawing will explain the entablature moulds, I think, each member being ruled in with the T-square and completely finished with the stub, before the next was started. Thus, the members at A, B, C, D, etc., were each worked in this manner, the portion at the right showing the charcoal before being rubbed with the stub, used sometimes against the T-square, sometimes free-hand. The dark part of the shadow under the pediment, the spaces between the dentils, and part of the shadow against the wall were added after the fixatif was blown on, as I will explain later. Note the head on the architrave mould. This was put on as a single black line, well worked with the stub, a light line with the charcoal stick was added, and then the shadow under the head. The point is to finish each line completely as you proceed.

Returning now to the large drawing, the dark spaces between the dentils, and the ornament, were put in with a BB Wolff. For the caps, ornament and corbel, the charcoal and stub were used, helped out with the Wolff pencil, and the horizontal part of the door architrave put in with the T-square. The left-hand column and architrave came next, ruled with the aid of the triangle used as a cantilever, with two tacks at the bottom and one about the centre, which kept the top clear of the ornament. The transom and doors were drawn next, keeping the T-square free of the preceding work with several thumb tacks, properly placed, on the under side. The muntins were rubbed out with a new green eraser worked back and forth against the T-square or triangle. Excepting a few touches on the iron railing this was the only use made of the eraser, as the white lines, if possible, should be left in the work. The right-hand architrave and column were next taken up, of course, and then the column bases, steps, railing, etc., the shadow at the right, vines and shrubbing were last.

You will be bothered by charcoal dust when dark shadows of any size are put in. If the dust is blown off lightly with the lips eighteen to twenty-four inches from the paper less smudge will result than if blown when close. The charcoal should be laid on in short strokes running in one direction, as this will give less dust than if used zig-zag fashion. A little smudge is inevitable.

The drawing is now ready for fixing which must be done carefully so as not to smudge the sensitive charcoal.

I have intimated that there can be no going back to alter values, but this is not strictly true. After the drawing is thoroughly fixed and dried, additional charcoal can be added to such parts as have already been drawn on, giving a very rich black. Parts of the paper previously untouched cannot be drawn on now, however, the glaze of the fixatif on the clean

paper preventing. Dark accents and shadows are best brought out in this manner, rather than by attempting to get a very black tone the first time.

You will probably want to try some changes after the drawing is finished. This can be done by rendering the changed part on a separate piece of paper, trimming it to some convenient line and pasting it on top of the drawing. You will need a piece of white paper between the two to keep the first from showing through. Several of the drawings published in PENCIL POINTS have had parts changed this way.

The drawing shown here has been mounted, or floated, on white cardboard. Before trying this make sure that the thin paper will stand such treatment. I know, from sad experience, that some paper will not. It is safest to allow the fixatif to dry a day before mounting. Mounting thin paper, by the way, is best done by laying the drawing upside down on a piece of glass, or similar surface, applying the paste with a brush and laying the cardboard on top of the drawing.

ROME FELLOWSHIPS AWARDED

AS THE result of this year's competition The American Academy in Rome has awarded the Fellowship in Architecture to Henri Gabriel Marceau. A portrait and short biography of Mr. Marceau will be found on page 37 of this issue.

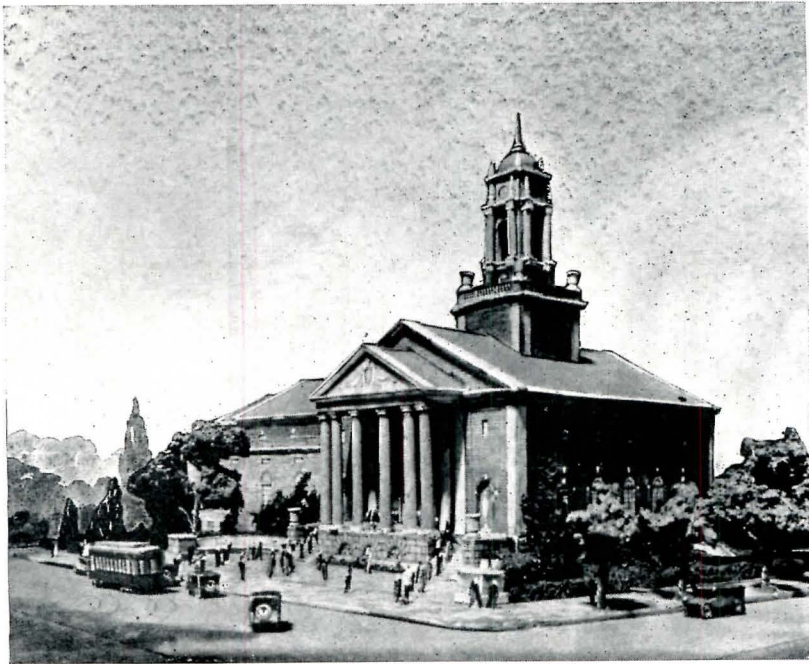
The Fellowship in Sculpture was awarded to Lawrence Tenney Stevens of Brighton, Mass. Mr. Stevens is at the Boston Museum School of Fine Arts, and last year received honorable mention in the *Prix de Rome* competition as well as a Fellowship for that summer at the Tiffany Foundation at Oyster Bay. Wheeler Williams, Chicago, a graduate of Harvard, received honorable mention.

A Fellowship in Painting has been awarded to Alfred Floegel, New York City. The stipend will be provided by the Metropolitan Museum of Art as Trustee of a fund established in memory of the late Jacob H. Lazarus of New York. Mr. Floegel is the ninth Fellow of the Academy to be appointed on the Lazarus Foundation, such appointment being made every three years.

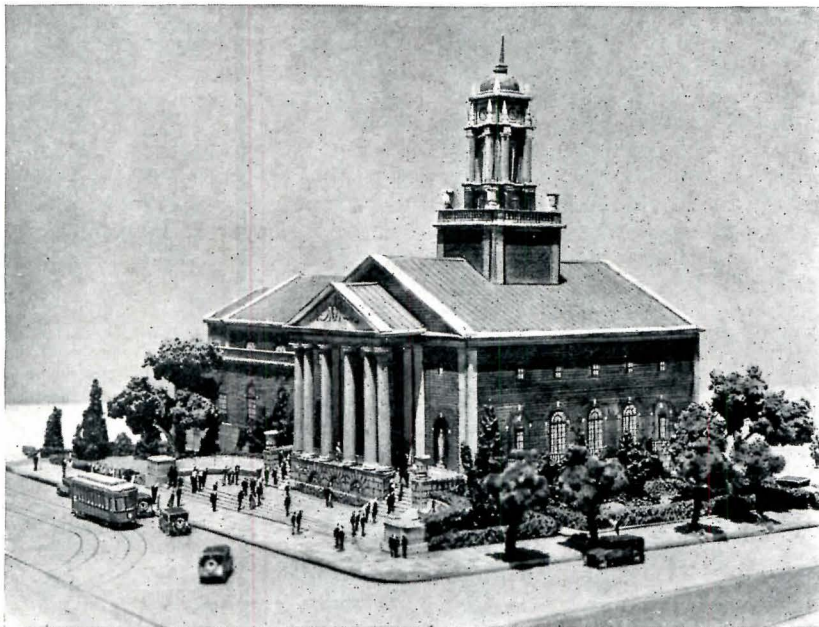
GOOD HOUSES

WITH the thought in mind that a house to be good must be useful, substantial and beautiful, Russell F. Whitehead has produced in "Good Houses" a book that will exert a beneficial influence. This book has just been published by the Weyerhaeuser Forest Products, Merchants' National Bank Building, St. Paul, Minn., who send it free on application. It interprets the typical historic architectural styles which are adaptable to wood construction and which provide the logical basis for present-day American domestic architecture. The many houses shown in full-page illustrations and in plans are modern houses inspired by various types of Early American Architecture and they are well designed. The illustrations of these designs are by Birch Burdette Long. The text is interesting and contains a large amount of information well presented.

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*Pin-hole Photograph of Model of The Bushnell Memorial Hall,
Hartford, Conn. Helmle & Corbett, Architects.*



*Photograph at Nine Inches (Glass Lens), Model of
The Bushnell Memorial Hall, Hartford, Conn.
Helmle & Corbett, Architects.*

ARCHITECTURAL MODELS OF CARDBOARD, PART IV

BY HARVEY W. CORBETT

This is the last installment of an article in which Mr. Harvey W. Corbett of the firm of Helmle & Corbett, Architects, New York, tells exactly how he makes cardboard models of buildings; how he uses them for study in the process of designing and as a means of presentation. Mr. Corbett goes into the most minute details of the making of these models and illustrates his description with photographs showing the tools used and the various operations. There are also numerous interesting photographs of models and of details of models. The making of landscape features, trees, hedges, lawns and other parts of the entourage are described, also such incidentals as automobiles and figures.—Ed.

WHILE well-made cardboard models properly used are of great value to the architect in studying and in presenting the design for a building, there are a number of ways in which they may mislead the architect or fail to convey a correct impression to the client. One finds out some of these things about architectural models as one uses them—I did. For instance, three views of one model are presented here, each of which gives quite a different impression of the building from the others. On this page is a photograph that shows the model as it is casually viewed, standing on a table at some distance from one and considerably below the eye level. Excepting for the slight distortion due to the photography this gives one an idea how the building would look when seen from a low-flying airplane or possibly from a tall building some blocks away, a point of view that we need not concern ourselves about very greatly.

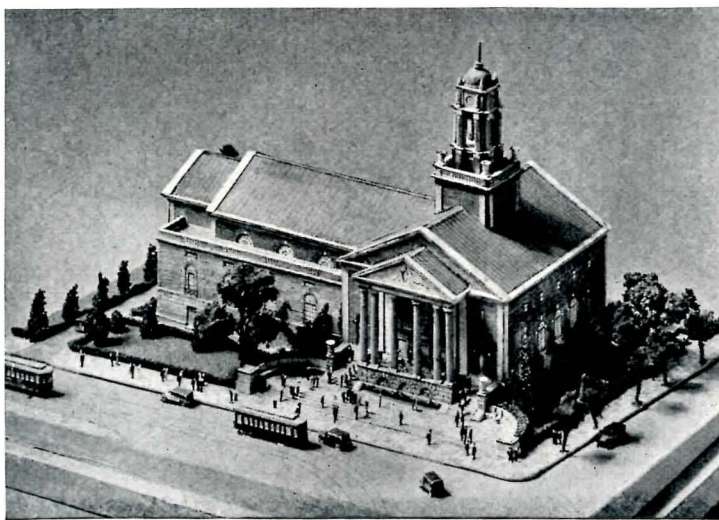
What we do want to know and to show the client is, what the building will look like when seen as most people will see it, from the street and at no great distance. In order to see it in this way I must, of course, place my eye at the point at which the observer will stand, measuring the distances in the scale of the model. Therefore, I take the model in my hands and hold it so that my eye is only a little above the base of the model and only a few inches from the corner of the building. At that range one does not see very satisfactorily and a client is likely to see even more badly or hardly at all, understandingly.

Photography seems to afford a way out so the photographer places his camera as close to the model as his lens will work and produces such a picture as the one shown on the lower part of page 14.

This is not satisfactory, for the observer is placed

too high and at too great a distance. The distance from the nearest corner of the building to the centre of the lens in this case was nine inches, and since the scale of the model is one-thirty-second of an

inch to the foot, that means a distance of two hundred eighty-eight feet—more than twice the distance the building will usually be seen from. The camera lens fails us, and as in the cases described in the installment of this article in the April issue we resort to pin-hole photography, with the result seen in the photograph reproduced on the upper part of page 14—a photograph taken from a point of view from which the building will be

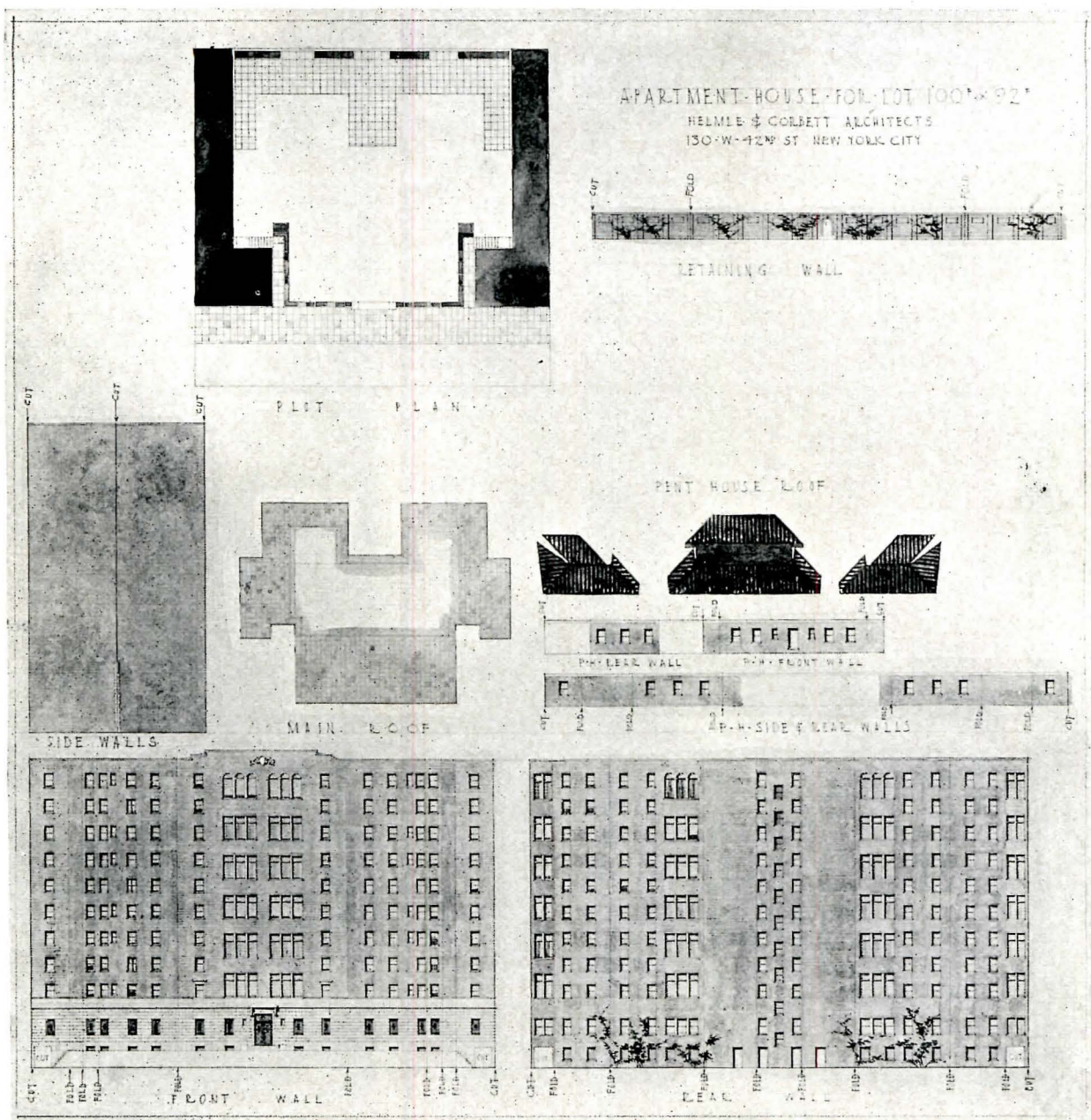


Photograph Showing a Model as Usually Viewed. Model of Horace Bushnell Memorial Hall, Hartford, Conn. Helmle & Corbett, Architects.

seen very often. The pin-hole lens in this case was only four inches from the nearest corner of the building, equivalent, in the scale of the model, to one hundred twenty-eight feet, which is a fair approximation of the distance one would be away from the building if viewing it from the street corner diagonally opposite. Now if we examine the three photographs with the purpose of studying the design by means of them, we will find from the pin-hole picture that the tower and portico will count much more effectively than one would have been led to believe from an examination of the photograph on this page. Furthermore, the pin-hole picture gives an impression of the mass of the building rising before one and above one while the other photographs lack this impressiveness and realism and make the building look rather like a toy.

It may be well to say in passing that the pin-hole photograph presented here shows the addition of a background. This was done by cutting out a pin-hole photograph of the building and pasting it down upon a card on which the sky and distant trees were later rendered. The picture of the building was also retouched slightly. This picture was then photo-

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Sheet Showing Lay-out of Model for an Apartment House.

graphed and the result is seen here—a picture that conveys a correct idea of how the building will look from the street. Many other cases might be cited, but I believe enough has been said in this issue and in the April issue to indicate the ways in which architectural models may be used.

In the June issue I told how I work the cardboard in making these models, and have left the treatment of an earlier stage of the work, namely, the laying out of the various parts on the sheet and the rendering, till this issue in order that I might show a photograph of such a sheet as it came through in the regular course of work in the office. This sheet is

shown on this page. It is practically self-explanatory. I need only to say that the rendering must be rather hard and sharp in order that it may count properly, and considerably simplified.

On page 17 is seen a photograph of this model in an intermediate stage, the card having been cut, the pieces bent to shape and *glued together, but the* parts have not been assembled and the accessories are still to be added.

A word about accessories and the entourage may prove helpful. I use tiny models of automobiles and street cars frequently. They are drawn to scale, flattened out, on water color paper, and bent and

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glued together. I usually have several small sheets of them ready. In the case of the model of the George Washington Masonic Memorial, views of which were shown in the May issue, there are not only automobiles, but also a complete railroad train, to scale, standing at the station. The plan view of that model shown on page 29 of the May issue shows these accessories and many trees and areas of grass. The trees are made from bits of rubber sponge cut to shape and dyed green, with twists of wire for branches and tree trunks. The grass is made by spreading fish glue evenly over the area and sifting on a mixture of beach sand and green paint in the form of a dry powder, from a can that has a perforated top. The sand and paint are mixed dry.

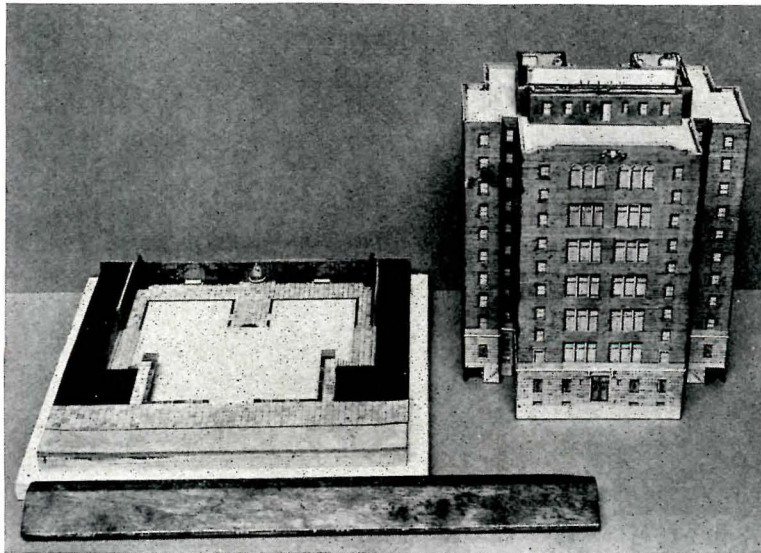
The making of columns, caps and other details that cannot always be represented by rendering but must be constructed, presents difficulties until one arrives at simple ways of working. At one time I thought that I might find small sticks ready turned to use for columns and one day I was delighted to see in the window of a store in a downtown street, slender, round sticks that seemed to be of about the size I needed. I went in and asked about them and was told they were lolly-pop sticks and when I inquired about buying some, I was told that the smallest quantity sold was ten thousand. However, when I explained my purpose I was presented with a number. But I found them useless, they are not of even diameter and are not straight enough, though machine turned they vary surprisingly. At last I hit upon the way of making columns shown in the photograph on page 18. A vise is clamped to a board and a hand drill is clamped in the vise, pointing upward at an angle of about 45 degrees. In place of the drill a slender square stick of white wood is inserted in the chuck.

Holding a piece of sandpaper around the stick with the fingers of my left hand, I revolve the stick by turning the drill and wear away the corners until I have a round column of the diameter I want and with the proper entasis. I have been asked if there is any danger of holding the sandpaper too tightly—there is not, for it gets very hot.

Lying on the table near by will be seen some columns, also some of the tiny discs of cardboard used for Doric capitals or for column bases, also the piece of cardboard from which they were punched

and the punch with which the work was done. I make Ionic capitals by simply bending a rectangular piece of paper over the top of the column and down on two sides, then indicating the volutes, broadly with a lead pencil. The other tools I use in making cardboard models may be seen also in this photograph. The small box-like object in the centre of the table is a small level. By setting the base level and then using this level further to test the work, one may be sure that all the parts of the model will be vertical as one works. At the left of the level is seen a pair of dividers, one leg of which has been ground flat at the sides to form a cutting edge. This is used in cutting discs from cardboard. At the right of the level is a manicure scissors, with curved blades, that is very useful in clipping out small parts. The familiar block of sand-paper is useful not only as a source of supply for the pieces of sand-paper used in turning columns as described, but in many other ways. The rubber bulb with flexible tube and nozzle saves one's lungs in blowing dust out of the corners of the model as one works and in freeing the models from dust after they are made, for when they stand about the office they soon accumulate a coating of dust that cannot be removed so well in any other way. The steel clamp at the right and other clamps of various kinds, are needed to hold parts together while the glue is setting. At the right of the bulb is a piece of the rubber sponge from which the foliage of trees, bushes and hedges are made. This particular piece happens to be of very fine grain, the coarse-grained rubber sponge makes very leafy trees. I may say here that to color the sponge, it is rubbed in dry powder green paint. Pliers with a wire-cutting part in the jaws are needed in making the trunks and branches of trees from wire. I make a skein of soft, black iron wire around two fingers held the desired distance apart, then I twist this skein into a rough cable. I clip off one end with the pliers and unwind the cable about halfway

down in strands composed of groups of three or four wires, each spread apart to form branches. These, in turn, I unwind for part of their length, spreading the wires to form still smaller branches. On the ends of these wires I stick bits of the rubber sponge clipped out with a scissors to form the foliage. When this is done I paint the wire with a mixture of dry powder paint in fish glue. The



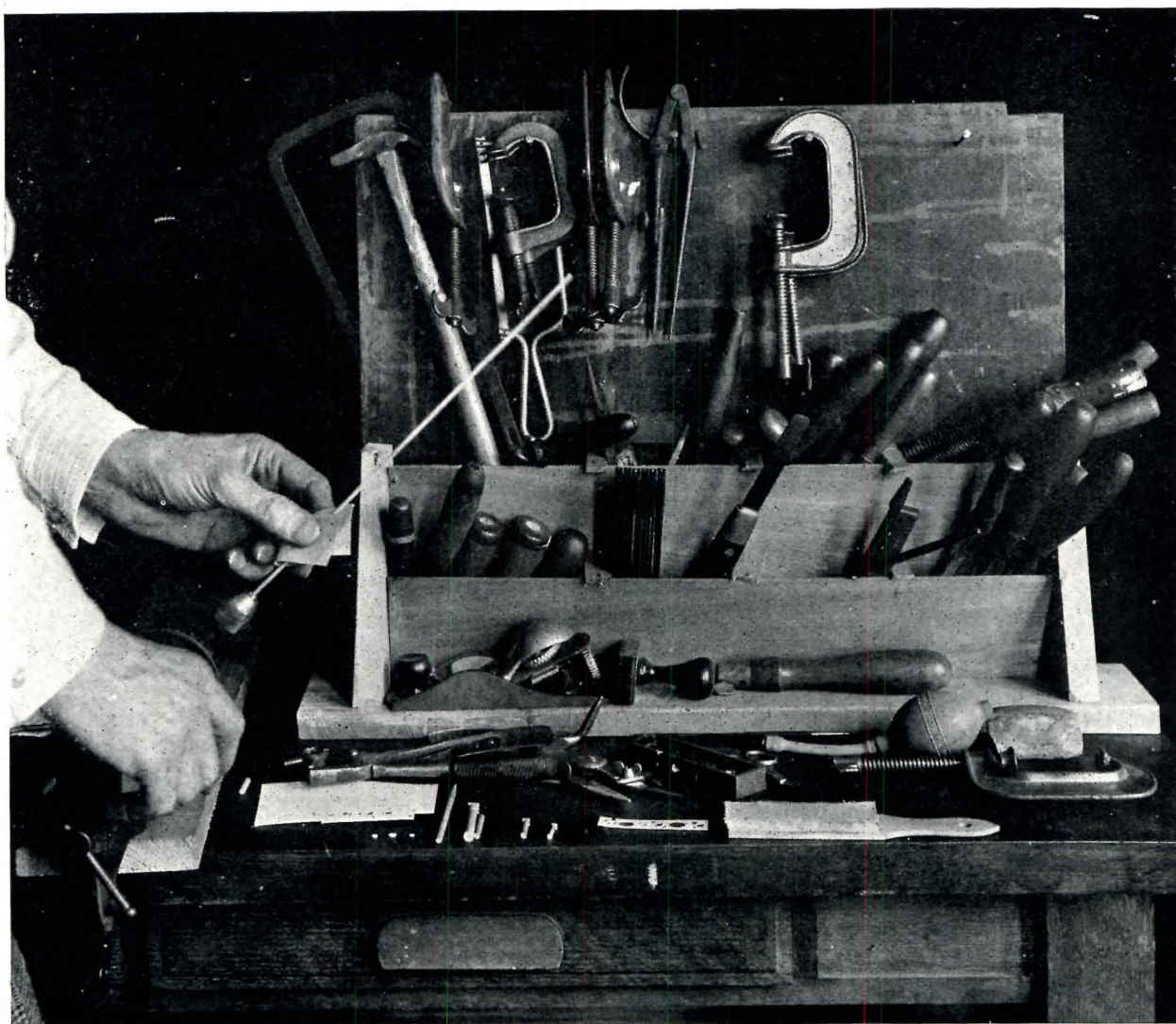
*Photograph of a Model Partly Assembled.
See Sheet on Page 16.*

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part of the cable that has not been unwound forms the trunk of the tree and the bottom end may be spread to make a foot for gluing the tree to the base, or it can be twisted tight and inserted in a hole in the base, the better way. I must not omit mention of the humble spring clothes pin of wood, it is very useful to hold small pieces of cardboard together while the glue is setting. Tweezers are used in handling some of the smaller parts, glue being put on the part, it is picked up in the tweezers and pressed into place. The plane, seen in the photograph, is so made that the blade comes out to one side for cutting rabbets. With this the simplified profiles of mouldings are worked in soft wood and rounded with sandpaper. The compass saw, the blade of which is hidden by the plane, is used in

cleaning out the "V"-shaped cut in the cardboard in forming corners as described in the June issue. Some chisels used occasionally for cutting out small parts are shown and other tools that are used less often than the ones I have described, and some the use of which needs no explanation.

AN INTERESTING and instructive book is "Visual Illusions," by M. Luckiesh, recently published by D. Van Nostrand Company, New York, \$3.00. It discusses many visual illusions that have a bearing on architectural design, such as the influence of angles, illusions of depth and distance, irradiation and brightness contrast, color, lighting, etc., and has a chapter devoted especially to such illusions in architecture.



This Photograph Shows the Method of Turning Columns and the Collection of Tools Used in Making the Models Illustrated in this Article.



TEMPLE DE MARS VENGEUR A ROME

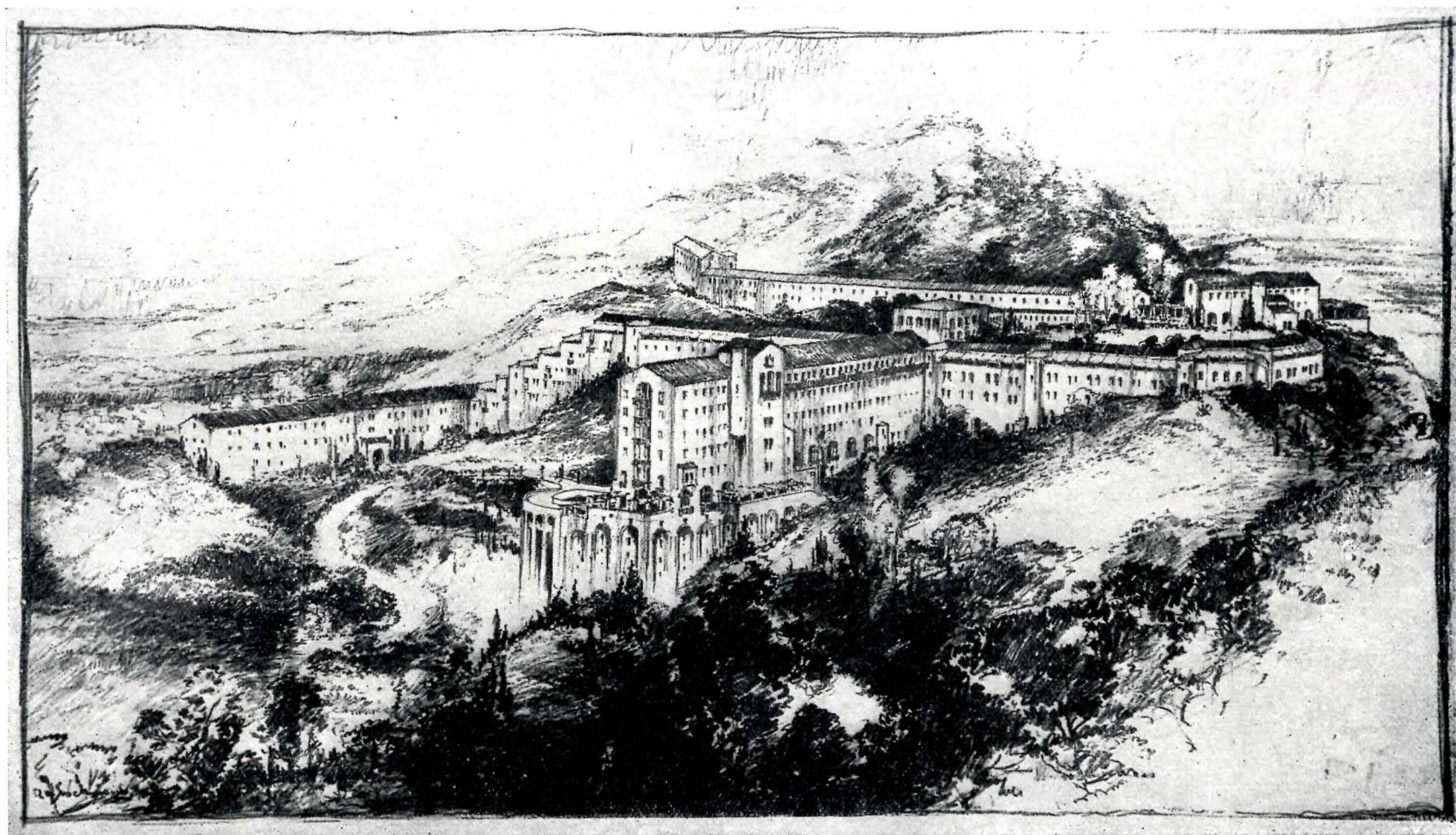
DETAIL OF THE TEMPLE OF MARS THE AVENGER, ROME.
FROM D'ESPOUY'S "FRAGMENTS D'ARCHITECTURE ANTIQUE"

The capital shown in the reproduction of a restoration by H. D'Espouy is one of the most interesting details of the Temple of Mars the Avenger which was erected by Augustus in the centre of his forum in Rome, to commemorate the victory at Philippi and the vengeance taken upon the assassins of Caesar.

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PLATE XXX



RENDERING BY ROBERT A. LOCKWOOD

On the other side of this sheet is reproduced a rendering characteristic of one type of Mr. Lockwood's work, a vigorous and highly effective treatment. This is in a manner as well suited to the subject as are Mr. Lockwood's more quiet and often delicate drawings of other subjects.



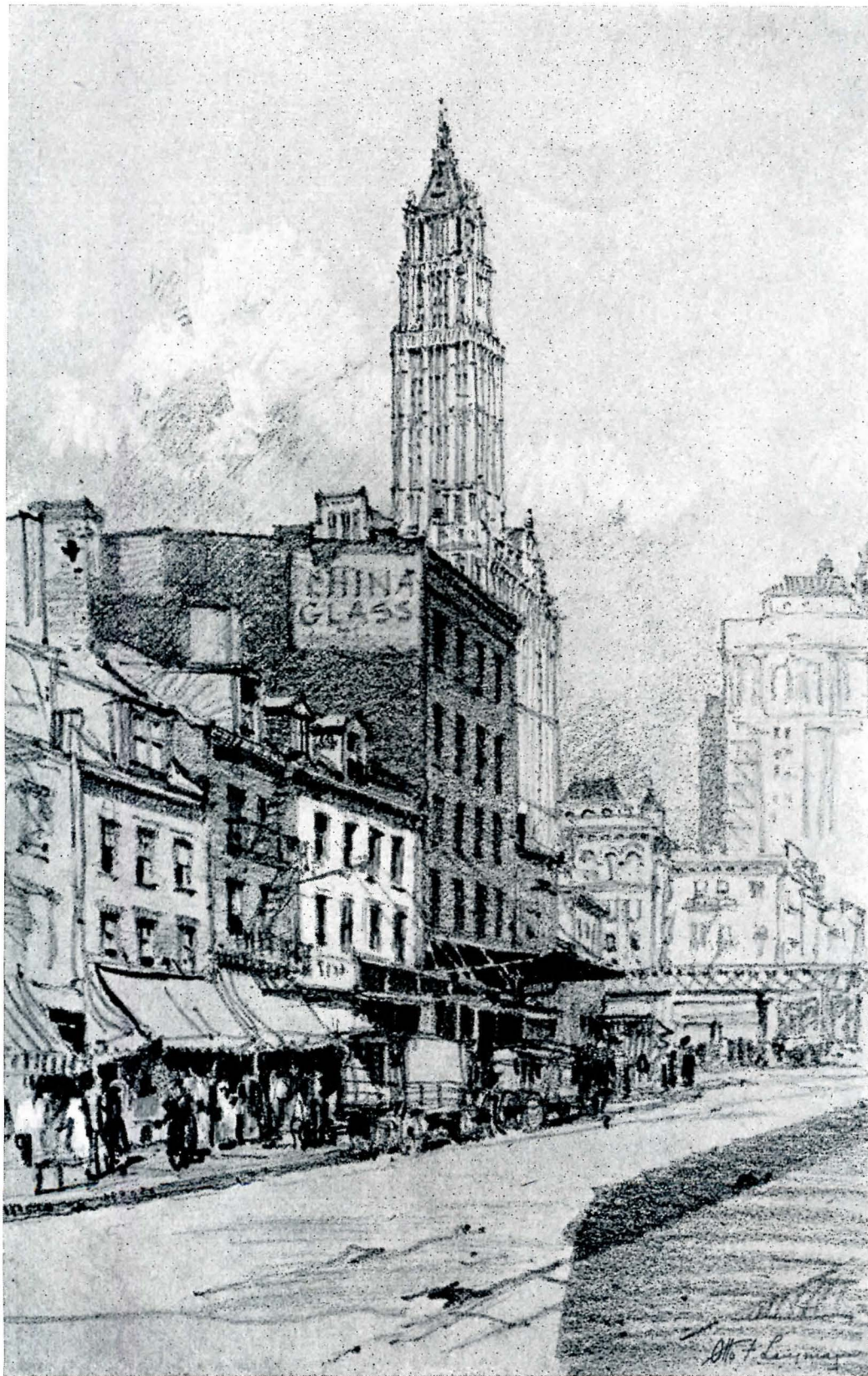
"ROMANCE" A MURAL PAINTING BY ARTHUR CRISP

The mural painting, a reproduction of which is shown on the other side of this sheet, is one of a pair of panels designed to be set in the oak panelling over the two fireplaces in the lounging room of a country club. This panel typifies "Romance" and the companion panel, "Adventure." The predominating colors are rich, deep blue-greens and browns with touches of gold leaf toned down in antique effect. Size of panel about four feet six inches.

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PLATE XXXII



DRAWING BY OTTO F. LANGMANN.
VESEY STREET, LOOKING EAST, NEW YORK CITY.

The drawing by Otto F. Langmann reproduced on the other side of this sheet is admirable not only because of its pictorial quality and as a presentation of an architectural subject, but as an example of the choice of an interesting paper to draw on and the skilful combination of different mediums. The paper is a fibrous Chinese or Japanese paper of a warm tint between ivory and buff. The drawing is mainly in lithographic pencil with touches in colored pencil, a little gouache, and white chalk.

ARCHITECTURAL DETAIL PART XVI

BY JOHN VREDENBURGH VAN PELT

This is the sixteenth 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.

LAST month's article insisted anew on the importance of like characteristics in all parts of a piece of architecture. A very definite controversy is beginning to gather strength on the reasonableness of the latter day worship of the hand-made, more or less crude article. Mr. Richard F. Bach, Associate in Industrial Art at the Metropolitan Museum of Art of New York, reviewed and to some extent ridiculed the fetish worship of the inaccurate, badly finished, hand product in an address before the convention of the National Federation of Arts in Washington during the month of May of this year. He showed with considerable truth how intrinsically beautiful are many machine-made pieces of decoration, fabric and other examples of applied design. Highly effective, because permeated by the satire of a brilliant mind is the arraignment of Thorstein Veblen in his chapter on "Pecuniary Canons of Taste," (pages 151 to 156) in the *Theory of the Leisure Class*.^{*} He accuses us of prizing that which is hand-made because it has become more costly to produce than the more perfect machine-made article. Thus, he says, we exalt our position and prove our wealth and culture. The book is well worth thoughtful reading and the subject unbiased pondering.

Unquestionably he is right. We do not judge the beauty of an object abstractly on its merits, but are governed by a multitude of preconceived notions that have nothing to do with the art expressed in it or by it.

^{*}*Theory of the Leisure Class*, by Thorstein Veblen, B. W. Huebsch, New York, 1919.

It is not always a fact that the un-accidental excellence of a perfect machine-made article is more beautiful than the slips of the craftsman. The variations incidental to the latter may really relieve the monotony of perfection and exact repetition, the

harmonious color scintillations of a rough, uneven, hand-made texture may be far more vibrant than any effect that can be obtained with the most scientifically planned mechanism and the psychological reaction stimulated by evidence of a human touch may give manifold compensation for lapses unbeautiful in themselves. It is not my purpose to take up the cudgels for either side. Suffice it, I think, for us to be honest and as unprejudiced as our natures will permit in judging the art and beauty of a production. But on one point I am fairly well convinced. All parts



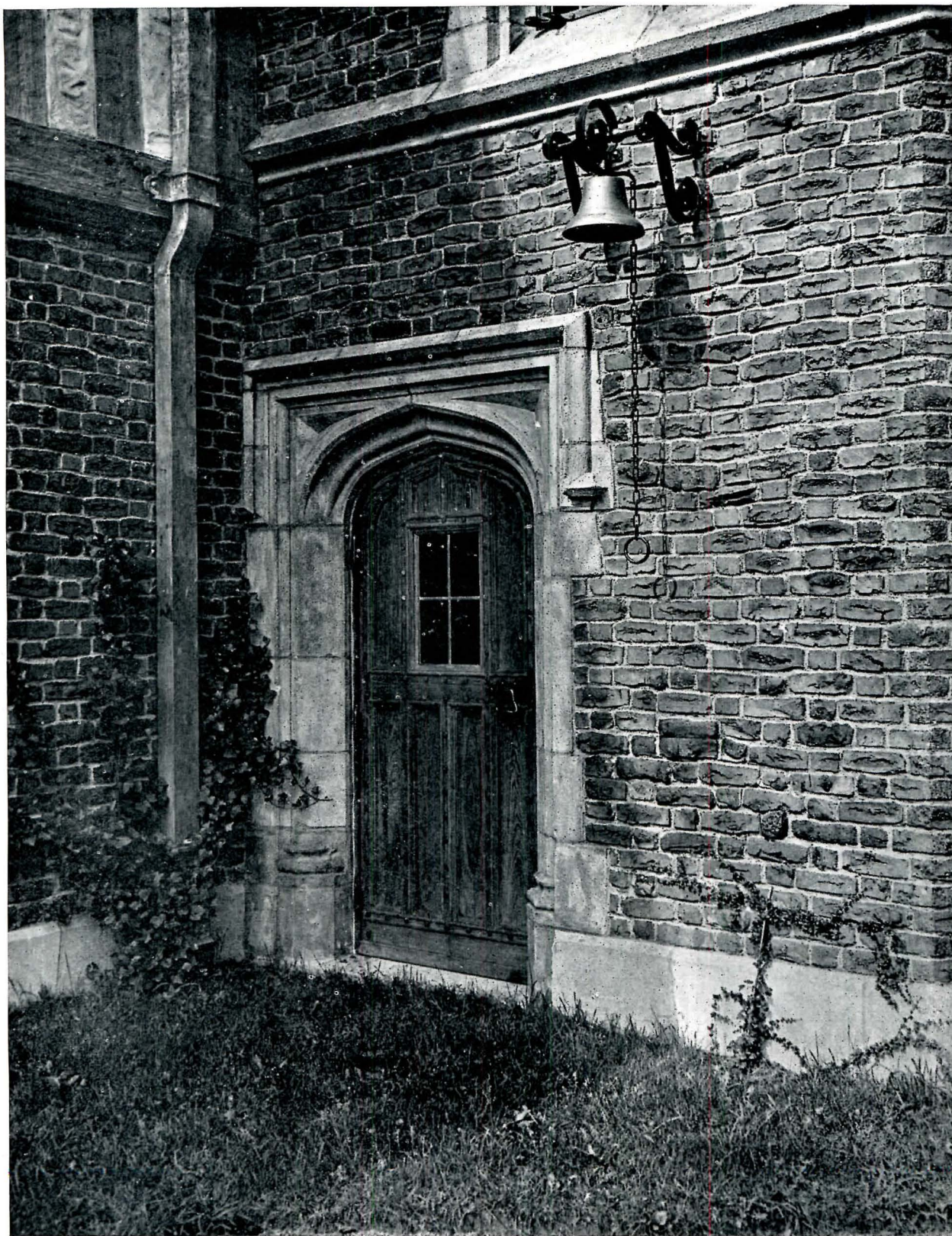
Detail of House at Rye, N. Y. Hobart B. Upjohn, Architect.

of the creation before us must exhibit a similar roughness or smoothness of finish. Finely cut stone and repressed brick will not wed happily with roughly leaded glass, adzed timbers, and a heavy broken-edged slate roof.

Examples of mistakes might be more striking than illustrations of successes. Unfortunately the former would be useless for reference and our space is limited. So the moral must be pointed by suggestions of what to do instead of what to avoid. Looking about us we can easily find the latter.

The house at Rye, New York, of which Hobart B. Upjohn was the architect, is not in the mistake class. A view of it is shown on this page. The architect has balanced its different parts so nicely, used a somewhat uneven brick, but not a "rough texture," and laid it in common running bond for

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Detail of House for Allan Lehman, Esq., at Tarrytown, N. Y. John Russell Pope, Architect.

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the lower walls. There are hewn and pinned timbers for the structure of the second story, but not split rails characteristic of the careless back-woodman's log cabin. The roof is graduated with reasonably square-end slates, not so thick as to imply that they were the scrap left over from a yeoman's stony field after the best had been sorted out. Notice the leading of the windows and how that of each story fits with its environment. It is especially that environment in the second story that makes the photograph a particularly valuable document. The brick filling of "nogging" of the timbered walls, evidence of the loving care of the designer, is a mine of ideas. Two vertical framing panels of the main gable have a projected pattern and are symmetrical, the small panel under the window of this gable reveals a center that marks the axis. The running panels are in a succession of different bonds that harmonize one with the other and give endless variety and interest to what might have been commonplace. The face of all the brick is set one-half inch back from that of the timbers so that it may not assert itself obtrusively. There is only one change that I should like. The panels on each side of the windows of the right-hand gable are sufficiently symmetrical to make the slant of the lines of the left-hand panel too much at variance with the horizontality of those of its correspondent. While it does not seem to me that the panels would need be exactly alike, I should prefer the same general direction in their dominant lines.

The brick of this house is selected common, about as rough as a Harvard, laid with a flush half-inch joint in white mortar and the timbers are five inches from front to back.

The corner of the Allan Lehman House, John Russell Pope, architect, shown on page 28, affords one more example of harmonious blending of material, each with an equal degree of roughness of texture.

First examine the stone and note the small inaccuracies. They do not appear studied, but the natural result of casual workmanship. The edges of the bond stones slant away from the exact vertical and are all the more attractive for that. The finish of the timbers and stucco of this house have been commented upon in an earlier article, but the illustration now shown gives a new view of the brick work. The wall is laid up with swelled red brick in Flemish bond. They vary in color from almost black to light salmon, the refuse of the cull pile. The joint is normally five-eighths of an inch wide of white mor-

tar pressed back with a jointer, but the irregular outline of the brick, some small, some large, has run a large proportion of the bed joints out of line and varied their thickness from a quarter to three-quarters of an inch. Do not abandon the study of this illustration without examining the door panelling, large headed nails and lock. The bell is in excellent keeping with the whole and its appearance implies that it is used.

A rather marked contrast of brick work that must depend in some degree upon its color for its success or failure is the combination of garden terrace, wall and brick house in the illustration on page 31. This is the residence of James A. Blair, Esq., at Oyster Bay, L. I., Carrère & Hastings, architects. The wall and steps in the foreground are red, standard, rain-washed brick, rough cut but not what is called "rough texture." The joints are light grey, three-quarters of an inch wide, struck flush and with a rough finish probably obtained by using grit in the mixture and scraping them off with the edge of the trowel. The bond, as can be seen, is Flemish. The risers are all headers, laid flat, with stone treads, and harmonize delightfully with the garden walls and their flagstone copings. On the other hand, the house

is built of rough-texture tapestry brick, Roman size, 18x1½x6 inches, laid up in a special pattern. The spanrels of the arch are of special brick also laid in pattern as is the brick balustrade above the arch. Although there is a similar degree of roughness of finish in house and wall, there is a dissimilarity in the quality of the two architectural expressions. Perhaps this is sufficiently motivated by the fact that one pertains to the main element, the house itself, the other to the garden, which should in all reason be simpler. However, it would have been possible to express this differentiation and to lavish an equal amount of care on the house by studiously designed pattern work in the



Polychrome Terra Cotta Showing a Variety of Textures.

same brick as that of the garden. As it stands, the simpler steps and terrace walls with their clinging vines have to my mind a greater charm than the more studied and certainly more expensive house wall.

A beautiful example of contrasting material handed down to us by the past is that shown on page 32. This doorway of the Church of Saints Peter and Paul, San Stefano, Bologna, Italy, is made up of brick, limestone, marble and terra cotta, all so wonderfully intermingled and blended that no mutest discordant note is discernable. The graceful,

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*Detail of Lion House, Lincoln Park, Chicago, Ill.
Perkins, Fellows & Hamilton, Architects.*

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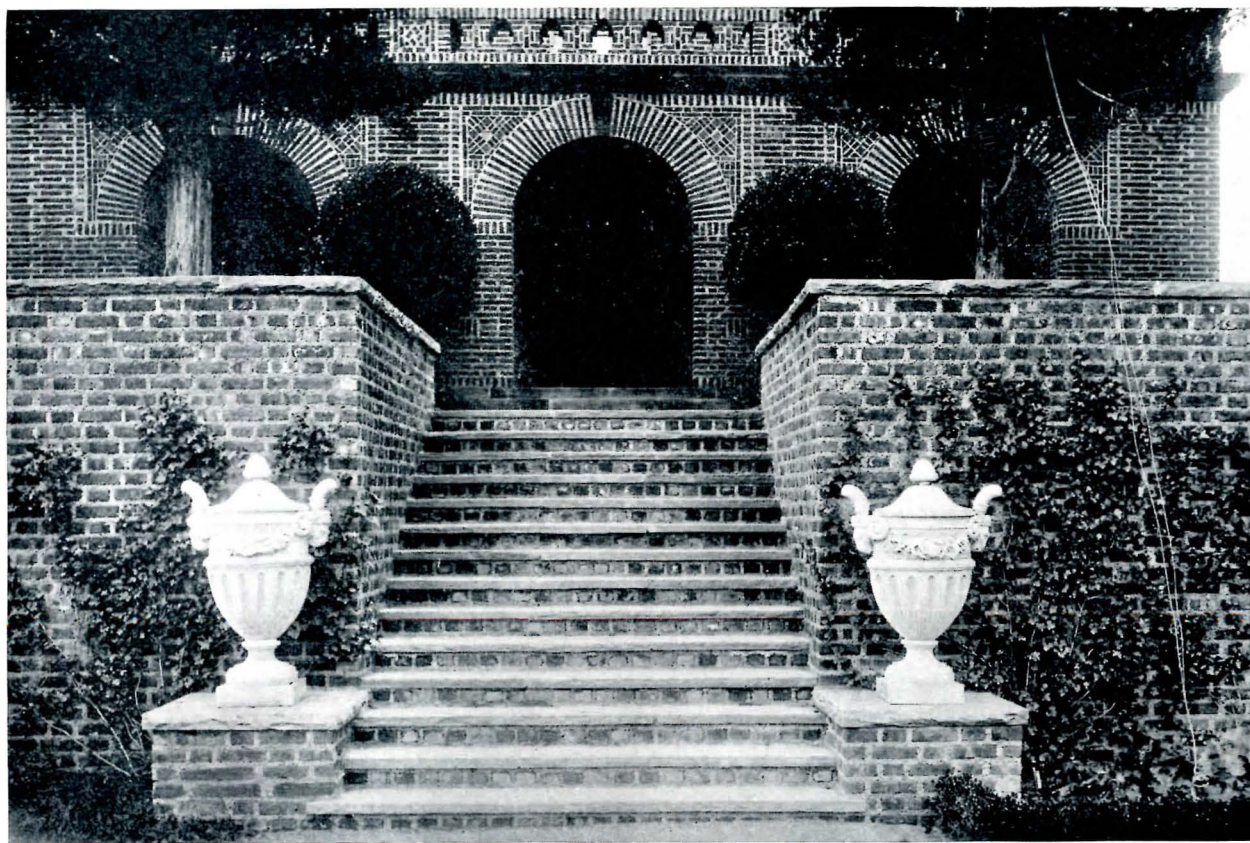
flowing Romanesque ornament of the archivolt, the sculptured pier caps, the marble inserts, and pattern brick, are in perfect keeping with the simple background brick of the walls themselves. Ravaging time has wrought some disintegration at the base of the latter, but the original jointing still shows in their main body higher up and we find them to-day, despite the lapse of years and crumbling mortar, regular, but not too even, in perfect keeping with the patterns, marble, sculpture and modelled designs.

A modern effort to express a multiform composition in brick and kindred materials is to be seen in the entrance to the Lion House, Lincoln Park, Chicago, page 30, where the architects, Perkins, Fellows & Hamilton, have carried their forms from the realm of the geometrical into the pictorial. The frieze of the gable with its inserts and pattern recalls the horizontal band of the Church of Saints Peter and Paul, but the broad quarry tile background about the arch, with the brick key stone decoration and the lionesses at the springing line are entirely modern. Indeed, I think this a very able piece of work executed with great perception and judgment. Notice the differences in value obtained by the relative projection of different parts of the design. The plane of the pictorial representations is slightly higher and the joints of the moulded brick that form them, although white, are almost flush. These fine brick

divisions outline the muscles and planes of the animals and were evidently worked out like the leading of an old cathedral window with scientific care. The quarry tile have a broader white joint or grouting kept back from the face so that each tile is enriched by the frame supplied in perspective by its projection. The spotting on the terra cotta has been made unusually large and carries to the point from which the lions and other elements of this broad design must be viewed. Finally, in order to differentiate the pictorial motive with its ground from the main framework of the composition, the body of the brick wall, arch rings, side piers and cornices have been laid up with brown mortar instead of white. The main typical joint is half an inch wide and raked to give it shadow. Otherwise, with a joint so nearly the same in color as the brick, the wall would look flat. Of course the initial feature that gives special interest to this composition is the deeply-recessed opening with its broad shadow. That is not part of our immediate research in the realm of detail and texture, so I shall only enlarge upon it to the extent of drawing attention to the tile vaulting, excellently in keeping with the burnt clay of the exterior.

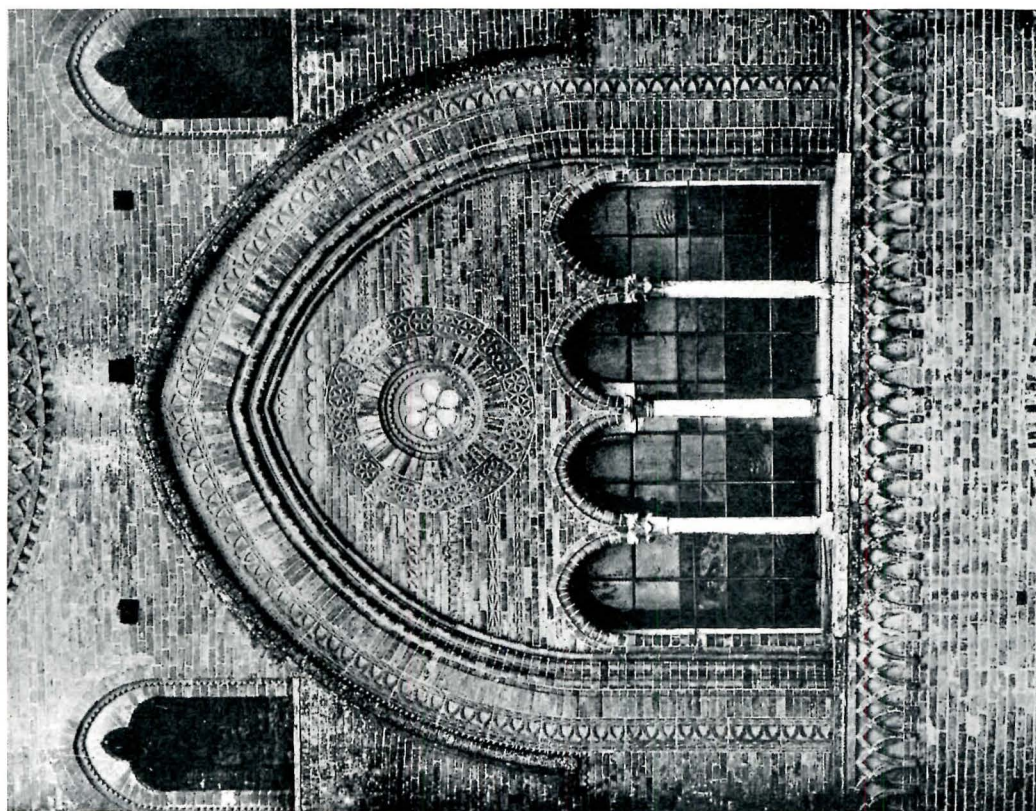
One more example, from the past again, should set us forward on the road of our own endeavor. It is useless to examine and study the work done by

(Continued on page 36)

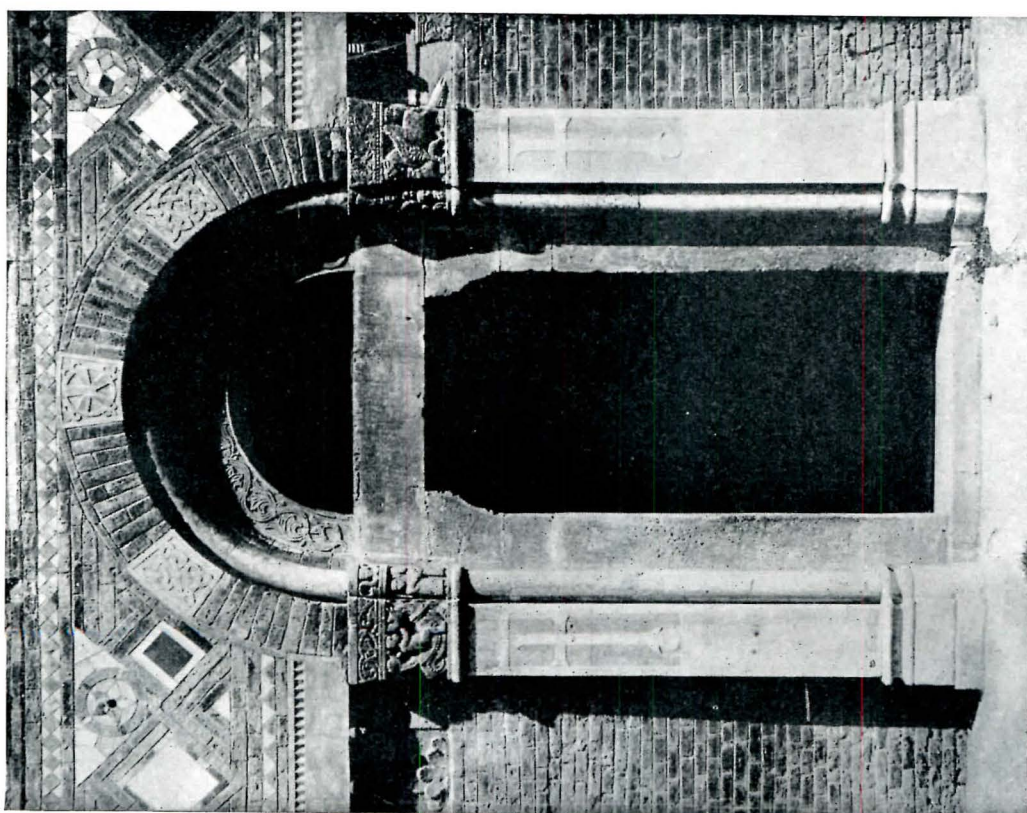


Detail of House for James A. Blair at Oyster Bay, L. I. Carrère & Hastings, Architects.

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*Cathedral at Cremona, Italy.
About Twelfth Century.*



*Doorway of Church of Saints Peter and Paul.
San Stefano, Bologna, Italy.*

A VOCABULARY OF ATELIER FRENCH. PART V

BY RAYMOND M. HOOD

This is the fifth 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.

L (Continued)

Lâcher: *v.*; to loose, to let go; *also*, to do carelessly.
Lapin: *n.*; a rabbit; *also*, a clever, resolute man; *poser un lapin*; to fail at a rendez-vous.
Lattis: *n. m.*; lattice.
Lauréat: *n. m.*; a person who wins a prize in a competition.
Lavabo: *n. m.*; wash-stand, wash-bowl.
Laver: *v.*; to wash; *also*, to render, or wash with water-color.
Lavis: *n. m.*; a rendering, a presentation of a drawing in wash.
Léché: *adj.*; overdone, too finished.
Lécher: *v.*; to complete a work with unnecessary care and pains.
Limon: *v. m.*; a string of a staircase.
Linteau: *n. m.*; lintel.
Loge: *n. f.*; a small hut, cabin or lodging; *arch.*, a small room or stall in which a student is enclosed to work alone.
Logement: *n. m.*; a lodging, a small apartment.
Logis: *n. m.*; a house.
Logiste: *n. m.*; a student admitted to a loge for a competition, usually applied to those doing the Prix de Rome competition.
Louche: *adj.*; cross-eyed; *in a figurative sense*, equivocal, slippery, tricky.
Loupe: *n. f.*; a reducing glass.
Loustic: *n. m.*; a joker.
Loyer: *n. m.*; rent.
Lucarne: *n. m.*; a dormer window.

M

Machin: *n.*; a thing, a what-you-may-call-it.
Maçonnerie: *n. m.*; masonry.
Main: *n. f.*; hand; *A La Main*, freehand; *Coup de main*, assistance, aid.
Mainlevée: *n. f.*; free-hand.
Mairie: *n. f.*; a town hall, a borough hall.
Maison: *n. f.*; a house.
Maîtrise: *n. f.*; skill.
Malin: *adj.*; roguish.
Malpropre: *adj.*; dirty.
M'amie: abbreviation for Mon amie.
Manie: *n. f.*; mania.
Manifestation: *n. f.*; a celebration; a demonstration.
Manille: *n. f.*; a game of cards similar to whist; a Manilla cigar.
Manillon: *n. m.*; the ace in the hand of manille.
Mansarde: *n. f.*; a mansard roof.
Maquereau: *n. m.*; a species of fish.
Maquette: *n. f.*; a small model, a rough study for a piece of sculpture.
Marche: *n. f.*; a step as in a staircase.
Marché: *n. m.*; market; *à bon marché*, cheap.

Marcher: *v.*; to walk; *slang*, to be game.
Marge: *n. f.*; border, margin.
Maronner: *v.*; to rage.
Marron: *n. m.*; chestnut; *slang*, crazy, funny.
Masse: *n. f.*; mass; *atelier*, the treasury.
Massier: *n. m.*; the student head of an atelier.
Mat: *adj.*; without polish, dull.
Mausolée: *n. f.*; mausoleum.
Mèche: *n. f.*; the wick of a lamp, fuse, lock of hair; *Il n'y a pas mèche*, it is impossible.
Médaille: *n. f.*; medal.
Megot: *n. m.*; *slang*, a cigar or cigarette butt.
Meneau: *n. m.*; mullion.
Mention: *n. f.*; mention; *arch.*, a passing mark.
Menuiserie: *n. f.*; cabinet work.
Menuisier: *n. m.*; a carpenter, a cabinet worker.
Métope: *n. f.*; metope of a Doric cornice.
Mètre: *n. m.*; metre, *also*, a measure the length of a metre.
Miché: *adj.*; *slang*, wealthy.
Mine de Plomb: *n. f.*; the lead of a pencil.
Mioche: *n.*; a little child.
Mise en Place: the arrangement of a drawing on a sheet.
Moche: *adj.*; poor, rotten.
Modillon: *n. m.*; a modillion.
Module: *n. m.*; a module, unit of measure for the proportions of a column.
Moellon: *n. m.*; a small stone used in masonry, or the aggregate of a concrete.
Môme: *n. f.*; *slang*, a little child; *also*, a woman.
Monôme: *n. m.*; a parade, Indianfile, by students.
Monstre: *n. m.*; a monster; *adj.*; colossal, wonderful.
Monte-de-piété: *n. m.*; a pawn shop.
Monter un Bateau: *slang*, to razz.
Mosaïque: *n. f.*; mosaic.
Motif: *n. m.*; motive; *arch.*, an element in a composition.
Moulage: *n. m.*; a casting.
Moulure: *n. f.*; a moulding.
Mufle: *n. m.*; *slang*, a disagreeable, stupid person.
Mutule: *n. f.*; mutule of a Doric cornice.

N

Navet: *n. m.*; turnip; *slang*, drawing, piece of work.
Negligé: *adj.*; neglected, insufficient; *Esquisse-négligée*, insufficient sketch.
Negrifier: *v.*; *slang*, to nigger, to help on a drawing.
Noce: *n. f.*; marriage, accompanying celebrations; *faire la noce*, to go off on a tear, or a debauché.
Noceur: *n. m.*; a rounder, a person who leads a wild life.

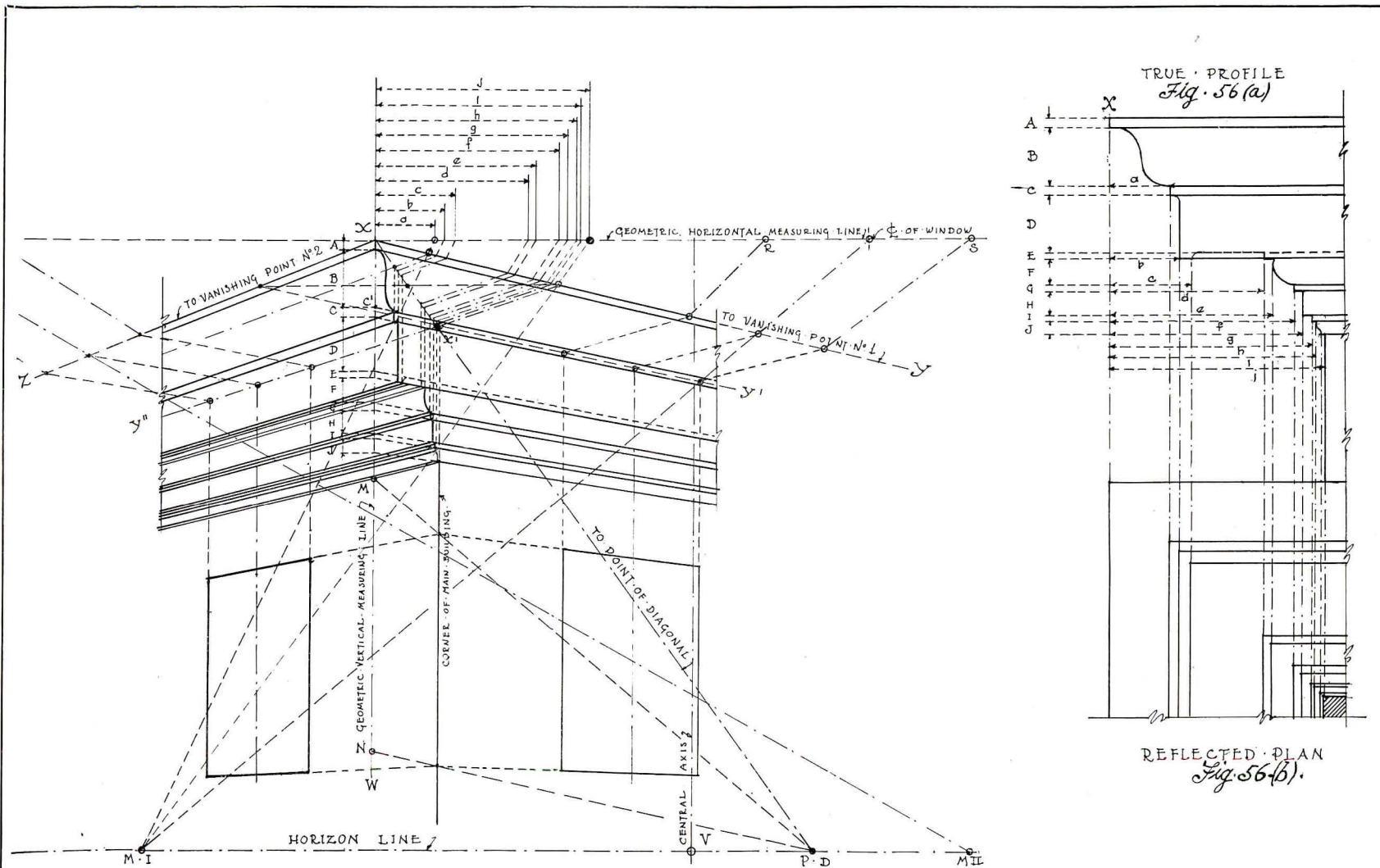


Fig. 56

Perspective Drawing, Figures 56, 56a and 56b. See Text on Opposite Page.

PERSPECTIVE DRAWING, PART XXIV

BY PAUL VALENTI

This is the concluding instalment of a serial article in which Mr. Valenti has taken 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," theatre 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 has presented to the readers of this magazine. The method explained here, once it has been mastered, saves time and gives increased accuracy over the usual practice in laying out architectural perspectives instrumentally. This article began in the issue for June, 1920. All excepting the most recent issues are out of print.—Ed.

AFTER having considered the building in question as circumscribed by a solid, the extreme projection of which (in the horizontal sense) is the corona of the cornice, we may begin by placing point *X* (see true profile Figure 56a) tangent with the transparent plane (shown in perspective Figure 56). At this point trace a horizontal line representing the "geometric horizontal measuring line" (see construction of diagram and text of Figures 52 to 54, previous issue). Once the two vanishing points have been established, together with the point of the diagonal, and measuring point No. 1 on the Horizon Line (see diagrams and text mentioned above) proceed as follows: First:—Lay out a true profile of cornice mouldings as shown in true profile Figure 56a, plus a reflected plan as in Figure 56b. Second:—Drop a line from point *X* (Figure 56) and place dimensions of members of cornice as shown in true profile Figure 56a, that is: *A B C D E F G H I* and *J*, in the same scale or any other desired. Third:—From point *X* conduct straight lines to Vanishing Points Nos. 1 and 2 respectively, and one to the point of the diagonal all previously found and situated on the Horizon Line. Fourth:—From point *X* lower a perpendicular to a distance represented by *A* (see true profile Figure 56a). This represents the fillet of the cymatium. Fifth:—Measure off on upper geometric horizontal measuring line a distance equal to "*a*" (see true profile Figure 56a). From this point conduct a straight line first to measuring point No. 1 on Horizon Line, until it intersects line *XY*, thence a line to Vanishing Point No. 2 until it intersects the line of the diagonal. Drop a perpendicular from this point until it intersects a line conducted from point *c'* to Vanishing Point No. 1. Uniting the lower point of space *A* with the upper point of space *C* just found, with a graceful curve as shown in the perspective in Figure 56, we will obtain the mitred corner of the cymatium of the cornice directly on the diagonal plane. If we follow this process right through, taking each operation, step at a time, first establishing the vertical dimensions on line *XW*, conducting same to Vanishing Point No. 1, and secondly, establishing all the horizontal dimensions on geometric horizontal measuring line as shown in Figure 56,—that is, *a b c d e f g h i* and *j* from each of which a line is conducted first to Measuring Point No. 1, intersecting line *XY*, thence a straight line to Vanishing Point No. 2. This will in turn intersect the line of the diagonal. By lowering from these points

perpendiculars respectively until they meet their corresponding points found by operation No. 2 above mentioned, we are enabled to delineate a profile of these mouldings in the diagonal plane by uniting the points thus found with lines both perpendicular, curved or vanishing, according to the geometric or true profile (see Figure 56a).

Finally, from each of these points conduct straight lines to Vanishing Points Nos. 1 and 2 respectively and you will obtain the perspective of the cornice. (See Figure 56). These operations are very plainly illustrated in Figures 56, 56a and 56b, and can be easily followed.

Note that in finding the location of any unit on the main building, consideration must be taken of the cornice projection (and any other if such should exist) and the dimensions *must* be followed down to the plane of the main building or the surface to which this unit belongs.

For example: If we were to find the centre line of a window on the front wall of the building under consideration, first determine the location of this point on the geometric horizontal measuring line as shown (Figure 56). This, of course, will be determined by the distance of this point from the left-hand corner of the building in plan. From this point conduct a straight line first to Measuring Point No. 1 on Horizon Line until it intersects line *XY*, thence a straight line to Vanishing Point No. 2 until it intersects line *X'Y'* which represents in *perspective plan* the plane of the front face of the building proper and line *X'Y'* the side face of same. (See Figure 56). Lowering a perpendicular from this point we will obtain the centre-line of the opening desired in its correct plane and location in perspective, as called for in the geometric plan. Now in order to obtain first the width of this opening in perspective, together with its height, proceed as follows: Place both to the left and to the right of the centre-line on the geometric horizontal measuring line, the required width of this opening, (that is, half on one side and half on the other side of this centre-line). See Figure 56,—points *R S*. Following the operation, as was done in the case of the centre-line, and lowering perpendiculars from the two new points found on line *X'-Y'* we shall find the width of this opening in perspective. Establishing points *M N* on the geometric vertical measuring line, representing the height of this opening and its location in relation to the cornice, etc., conduct first

(Continued on page 37)

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

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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.

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ATELIER MEMPHIS.

THE first annual exhibition of the Atelier Memphis as a feature of the Architectural Exhibition of the Tennessee Chapter of the American Institute of Architects will be open to the public until August 1, at the Brooks Memorial Art Museum, Overton Park, Memphis. The atelier is proud of the fact that of the five analytiques submitted to the Beaux-Arts Institute of Design, three received mention and one first mention. Mr. Baird S. Cairns is Patron of the atelier.

Student work from other cities of the state forms an interesting part of the Architectural Exhibition and it is hoped that the showing made by the Atelier Memphis will stimulate the formation of ateliers in these other cities in the near future.

BASEBALL.

A BASEBALL game between the offices of Robert D. Kohn, Charles Butler and Associated Architects and Werner Nygren, Charles E. Knox and Associated Engineers was played Saturday morning, July 8th, 1922. The score was: Robert D. Kohn 16, Werner Nygren 10. After the contest all enjoyed a shore dinner at City Island. Other office teams desiring to book games should write to F. G. Seelman, care of Robert D. Kohn, 56 West 45th Street, New York City.

THERE are openings in the Department of Architecture of the Alabama Polytechnic Institute, Auburn, Ala., for the coming college year, for an assistant professor of architectural design and an instructor in free-hand drawing, water-color and clay modeling.

PERSONALS.

HARVEY W. CORBETT, of Helmle & Corbett, Architects, sailed on the Lapland, July 22, on a business trip to London. He will return in about six weeks.

PAUL LIVINGSTONE BOYD, Architect, has removed his offices from 5110 Warrington Avenue, to 6943 Limekiln Pike, Philadelphia, Pa.

BERNHARDT E. MULLER, Architect, has removed his office from 477 Fifth Avenue, to 527 Fifth Avenue, New York City.

CLARENCE E. DECKER, Architect, has removed his office from 306 Spreckels Building, to 3550 First Street, San Diego, Cal.

JOHN WARREN TEASDALE, Architect, has removed his office to the Times Building, St. Louis, Mo.

BRENTWOOD S. TOLAN, Architect, formerly of Fort Wayne, Ind., is now associated with DeCurtins & Rawson, Architects, Lima, Ohio, under the firm name of DeCurtins, Rawson & Tolan, with offices at 503 Opera House Block.

ARCHITECTURAL DETAIL

(Continued from page 31)

others if it does not show us how to obtain beautiful combinations in our work and above all if it does not stimulate us to try our hand in ever new and broadening directions. The illustration on page 32 is of the Cathedral of Cremona in Italy. Built about the twelfth century it is almost entirely of baked clay, the slender columns with their caps and the window sills and inserts at the center of the circular design, or rose, being the only exceptions. The bond of the main wall seems to be quite irregular, the mason having inserted headers in his runs of stretchers as the fancy took him. But around the openings this is changed and alternate headers and stretchers frame each one. The projecting band of the main ogive is what we to-day should call moulded brick. Then comes an ornament band that we should dub terra cotta except that it is of the same material as the other parts of the brick wall. There are certain firms that do this work in our own country, although I understand their activities in this direction are less great than formerly when the work was first introduced. This is a pity. It was brought about perhaps by the fact that a good deal of the moulded brick work done some years ago was not good in design and so there resulted a distaste for the material. It was a common fault at this period to make the detail too large in scale and with too great relief and much modern moulded brick had too uniform a color. Notice how flat the general surface of our cathedral is, yet how decorative. The little horizontal bands within the arch, no two alike, serve to break up the monotony of what would otherwise be a heavy surface. Unquestionably age has contributed to the softness and beauty of the whole, but I have no idea that originally the brick were all of the same color and value.

Before leaving this general subject of the texture of burnt clay it will be interesting to revert once more to the differences of texture that can be obtained in a single piece of terra cotta. The illustration on page 29 shows this in a close-up that clearly presents the sprayed texture of the mouldings, the light enamelled ground painted into the lower and broader band and the deeper color between the acanthus leaves of the cyma. This detail is for the Mobile Post-office and was designed in the office of the Supervising Architect of the United States Government. I wonder whether a smoothly enamelled projecting surface and rough textured ground might not make an even better design, though a little less ready of manufacture. In any event, these combinations offer some of the means of development in new expressions of architecture and are utilized too little. In the next article there will be a comparison with close-ups of different brick bonds, with varying sizes of joints and treatments. After that it may be possible to break away from this fascinating subject of texture and to take up a study of moulded and sculptured detail.

THE IDENTIFICATION OF MAHOGANY

MAHOGANY enjoys so high a reputation as a wood for interior finish and furniture that it is not surprising that a great variety of woods more or less similar in appearance or that can be treated to resemble mahogany are offered as mahogany, and it is not always easy to distinguish the true mahogany. A means of doing this is now provided in "The Identification of True Mahogany, Certain So-called Mahoganies, and Some Common Substitutes," by Arthur Koehler, specialist in wood structure, known as Bulletin No. 1050, United States Department of Agriculture.

This bulletin describes true mahogany and a large number of woods that have at one time or another been put on the market under the name mahogany. It states that some of these are closely related botanically to true mahogany and others look much like it, while some have only the most general resemblance, and no relationship which under the most liberal interpretation could entitle them to the name.

It also states that the woods now most commonly sold as mahogany in this country are true mahogany from tropical America, "African mahogany," and "Philippine mahogany."

PENCIL POINTS



HENRI GABRIEL MARCEAU.

HENRI GABRIEL MARCEAU, who has just been awarded the Fellowship in Architecture of the American Academy in Rome as a result of this year's competition, was born in Richmond, Va., June 21, 1896. He received his grammar school and preparatory school education at St. Ann's Academy, from which school he was graduated in June, 1914. In September of the same year he entered Columbia University School of Architecture in the Department of Extension Teaching. After two years he transferred his credits and began working under the scheme of combined college and architectural course at Columbia that leads to the degree of Bachelor of Architecture, receiving this degree in 1921.

Mr. Marceau's course was interrupted during the war, as he enlisted in the field artillery, serving as a cadet officer at Camp Taylor and subsequently receiving a commission in that branch of the service.

During several summers Mr. Marceau was employed by the architectural firm of Boring & Tilton and he is now working in their office pending his departure, in September, for Rome.

Early in Mr. Marceau's course at Columbia he was appointed evening assistant at the Avery Architectural Library, and held that position until his Senior year, when he was appointed assistant instructor in architecture in the Department of Extension Teaching. Last year Mr. Marceau also held a similar post in the regular school, working the remainder of the time with Boring & Tilton.

Last summer he went over to France in charge of the Verdun unit of the American Students' Reconstruction Association. The unit was composed of architectural and engineering students representing eleven universities. The work was to make plans and surveys and help rebuild communal buildings in the front line areas. Upon his return he was elected secretary of the Association, a post he still holds.

During his course he was taken into the fraternity of Delta Upsilon by the Columbia Chapter.

Mr. Marceau tried for the Fellowship last year and was placed in the finals.

He attributes part of his success in this year's compe-

tion to the broadening of his vision in an architectural sense that came from his work in France last summer.

DALLAS ARCHITECTURAL CLUB.

THE new year in the Club has started with the following men elected as officers for the coming year: Walter C. Sharp, President; Dudley S. Green, First Vice-President; W. M. Kleuser, Second Vice-President; A. E. Thomas, Secretary; Leland Hodges, Treasurer; Ralph Bryan and W. L. Love, Members of Executive Board; D. F. Coburn, Otto F. Lang, and C. C. Bulger, Advisory Board.

The Annual Banquet was held at the Jefferson Hotel Roof on the night of the sixteenth and was attended by about seventy-five members. Much enthusiasm was shown and the coming year should see many big things done in the Club. The Birch Burdette Long Sketch Competition Traveling Exhibition was viewed by the members at the banquet. To say the least it was very interesting as all the sketches were very clever pieces of work.

The big event of the evening was the distributing of the Year Book. We of the Dallas Architectural Club feel very proud of this book. It is excellently put up and is a credit to this Club. Next year we hope to put out a bigger one and if possible a better one.

Summer is now upon us in full force and we are searching about for cool spots where we can carry on our daily grind of pencil-pushing. Our meetings from now on will be for the most part swimming parties, as last summer we found that we could keep cool and attentive to the words of our worthy president while we were floating around on our backs in a certain indoor pool here in Dallas.

Would that we could move the Hudson River or Rye Beach or some of those wonderful summer resorts down here to Dallas.

We would like to hear what other clubs are doing in the way of summer meetings. Let's hear from you.

STEAM HEATING

UNDER the title "Steam Heating" a valuable book on this subject has been compiled by the general engineering committee of Warren Webster & Company, Camden, N. J. Price \$3.25 net. The work is in two parts, bound as one volume. Part One treats thoroughly of the conditions and principles involved in steam heating, going into detail to an exhaustive degree that makes it a highly important contribution. Special articles and helpful suggestions have been contributed by John A. Serrell, by The General Engineering Committee, and by John B. Dobson, Ralph T. Coe, William Roebuck, Russell G. Brown, Harry E. Gerrish, Howard H. Fielding, and others.

Part II is devoted to Webster steam specialties and their application in a thorough manner, adding very greatly to the practical value of the work. The book is 8½x10½ in., contains 367 pages, is well bound in cloth and is fully illustrated. It is a manual of practical data that covers the subject in detail, conveniently arranged for reference, and is well suited in form to be included in the architect's library.

PERSPECTIVE DRAWING

(Continued from page 35)

straight lines from points *M* and *N* respectively to the point on the *diagonal* on the Horizon Line until they intersect the corner of the main building (see Figure 56), thence straight lines conducted to Vanishing Point No. 1 will intersect the two perpendiculars just found (representing the width of the opening as explained above) determining in this way the upper and lower limits of the opening in question.

It can readily be seen that by reversing these operations on the *left side* of point *X* on the horizontal geometric measuring line and using the *opposite* measuring point and Vanishing Point, a penetration or opening on the other wall can be found in perspective accurately and in the same simple manner.

THE SPECIFICATION DESK

A Department for Specification Writers

MISCELLANEOUS ITEMS OF CONSTRUCTION

PART V.

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—There are two kinds of squash courts, those for squash racquet and those for squash tennis. Squash racquet is played with a hard ball and squash tennis with a soft one. Racquet is played in a court the walls and floor of which are finished with cement. Squash tennis is played in a wood finished court but may be played in a cement finished one. The players have their own likes and dislikes, and the draftsman should consult the client regarding the finish to be used. The writer recently heard of a racquet court that was built with a wood finish. There are also differences of opinion and choice regarding the sizes of the courts and the individual clients should be consulted regarding the dimensions. Sometimes they are made any size that the space will permit, and sometimes a client wishes to have his court made to the same dimensions as those of some other courts upon which he plays. On account of the difference in the play of the ball in the different sized courts, the various clubs are now getting down to more uniform dimensions. The squash racquet courts are now generally made thirty-two feet long, eighteen feet wide, and sixteen feet high; and the squash tennis courts are generally thirty-two and one-half feet long, seventeen feet wide, and fourteen feet high, this being the size approved by the National Squash Tennis Association. In addition, both types of courts should have their playing walls, which are the walls opposite the doors, made the same heights as given above for the courts. The side walls should be twelve feet high, and the racquet court should have its rear wall, where the door occurs, eight feet high, while the tennis court should have its rear wall from nine feet to ten and one-half feet high. The heights of the courts given above are the unobstructed heights and the dimensions refer to the clear playing surfaces. Additional allowances must be made for the thicknesses of materials, etc. The rear walls and side walls are usually extended over the playing height to the height of the playing walls.

The success of any court depends greatly upon the speedy and uniform rebound of the balls from the walls and floor, and to attain this it is important that all parts of the walls and floor are of the same construction, both as to the finished materials and as to the rough work underneath. The least difference may make enough difference in the play of the ball to have the court condemned by some players and sometimes a player's knowledge of an existing difference in the construction will make an imaginary difference in the play of the ball, making the court unpopular with him. There are firms who make a specialty of wood finished courts, and others for cement finished ones. It is advantageous to have the work done by experienced contractors, especially the cement finish which must have just the proper amount of troweling and no more. Too little troweling will result in a weak surface, and too much will leave a crazed surface that will disintegrate under the rough usage it will receive in play.

The rough construction of the courts may be whatever it will, provided that the finished materials can be properly applied on such a foundation. In the case of the wood finished tennis court, the foundation work should be of two-inch by four-inch timbers thoroughly air and kiln-dried and rigidly fastened to the construction of the

building. The finished materials should be strips of very clear, kiln-dried maple, though hard yellow pine has been used, one inch by two inches for the side walls, and one inch by three inches for the playing and rear walls, and the floor. It should be carefully milled, tongued and grooved, and should be laid with the narrow face exposed. Sometimes in order to save expense, the one inch by two inch material is used throughout, but this had better be avoided. The strips should be run lengthwise on the floor; horizontally on the side walls, and vertically on the playing and rear walls. Sometimes they are laid horizontally on these walls also and sometimes the space behind the strip and between the two inch by four inch nailing pieces is filled with clean, dry sand. The play lines on the walls and floor may be formed by an inlay of wood of another color, or they may be painted or stained before the shellac is applied.

In the case of the cement finished courts, the walls must be substantial and either good hard common brick or hard-burned terra cotta blocks, no porous or semi-porous blocks should be used, laid up in mortar composed of one part Portland cement to two and one-half parts of sand. The brick should be well bonded and have the joints slightly raked out, English bond being preferably used. The terra cotta blocks should be set upright with the open ends at the top and bottom. If the walls are exterior walls, they must be made watertight on the outside, and six-inch or preferably eight-inch blocks should be used, stuccoed on the outside. In laying up these walls allow one inch for the thickness of the cement finish. This finish should be applied in three coats after the walls have been well wet down with a hose. The scratch coat should be composed of one part Portland cement and two parts of clean, well screened and washed sand, free from loam and vegetable matter. This coat should be rodded and floated to an even surface and scratched in both directions with a forked tool having prongs one-half inch on centers. It should be allowed to set for about one week, and it should be well wet down before the second coat is applied. The second coat should be of the same mixture as the first coat, and applied and scratched in the same manner. The second coat should also be allowed to dry out for about one week and should then be thoroughly wet down before the third coat is applied. The third coat should be composed of one part Portland cement and two parts of clean, sharp, white bank sand, screened through a fine mesh screen, and to this mixture should be added about six or seven per cent. of hydrated lime. This coat should be thoroughly rodded and floated, and care should be exercised to delay the initial set by keeping the surface thoroughly wet. After the mortar has started to set, about six or seven hours after it is applied, it should be troweled and brushed simultaneously and kept drenched with clean water. The troweling and brushing should only be done until such times as the finish begins to polish. Each coat on each wall should be completely finished in one operation without interruption. Any plaster occurring above the twelve feet high playing surfaces on the side walls, the sixteen feet high playing surface on the play wall, and the eight feet high level of the rear wall, may be plastered with three coats of lime plaster or any other finish. The same applies to the ceiling or that part of it that does not form a skylight.

If the floor of the court is placed directly on the ground, fill in with about six or eight inches of cinder concrete to a level five inches below the finished floor, after having made the necessary provisions against water. This may require a layer of stone concrete with waterproofing on top and a mortar protective coating and then more stone concrete, depending upon the conditions involved. But in any case, there should be four inches of stone concrete with a one-inch-thick finishing course for the floor. This concrete should be composed of one part Portland cement, three parts clean, sharp, well-screened sand, and five parts of clean-screened broken stone or

PENCIL POINTS

gravel, and sufficient water to make a mixture, all carefully mixed, laid immediately, and rammed thoroughly. The finishing course should be composed of one part clean, coarse, gritty sand and one part grits, free of dust, and one part Portland cement, all thoroughly mixed dry until uniform in color, showing no streaks or patches, after which enough water should be added to saturate the mixture which should then be thoroughly mixed again. This finishing course should be straight edged to a true and even surface, floated well with a wooden float and troweled, a second troweling being applied when the surface has set sufficiently to finish hard and smooth. An approved hardener should be added to the finishing course, either integrally or to the surface just before troweling, in accordance with the manufacturers' directions. The entire floor should be laid so as to avoid cracks from expansion and contraction, or from movements in the structure. This is important and special care should be taken to prevent it. When a crack occurs, the edge on one side of it sometimes raises above the edge on the other, so that a player sliding on the floor is likely to stumble against the higher edge and be thrown headlong against a side wall of the court. Reinforcement mesh may be placed in the concrete, the concrete may be laid in alternate square with tongued and grooved edges, or any other method may be employed to help prevent it. When the court is on an upper floor, the concrete of the court floor being thick enough, a layer of waterproof paper may be laid over the structural arch or slab before the concrete of the floor is laid. This will help to avoid cracks due to movements in the building. When laying the floor, the joints should be placed so that they will occur under the play lines that will be painted on the floor, where they will be least noticeable if they should open. Generally, four monolithic slabs are thus formed. The joints should be cut completely through both the rough concrete and the finishing course.

On the play wall, extending the full length of the wall, and with its top edge twenty-four inches above the finished floor, is a tell-tale. This is a metal plate which is erected so that when it is struck by a ball in playing, a distinctly different sound is made from that which is made when the ball strikes the floor or any other parts of the walls. In the case of the wood finished courts, this tell-tale is often erected so that it can readily be removed if the court is to be used for playing hand ball. In the cement finished racquet courts, however, it is permanent, and projects two inches from the finished wall face above. The top of the projection thus formed is splayed upward one-half inch to meet the face of the wall. The tell-tale is made of stiffened number sixteen United States Standard gauge galvanized iron applied over sheathing or three lines of grounds extending the full length of the play wall and with soldier pieces at intervals. Advantage is taken of the tell-tale to aid in ventilating the court. One or more cast iron registers of square lattice design are set into it. If only one is provided, it is generally sixteen inches high and about sixty inches long, and is set on the axis of the court. If two registers are used they are made about sixteen inches high and thirty-six inches long, and are placed equidistant from the axis of the court. However, the entire length of the tell-tale may be taken up with registers allowing only sufficient space between them for the construction of the wall. The registers are provided with adjustable louvers and fresh air is conducted to them by means of openings through the wall behind them if it is an exterior wall, and by means of fresh air ducts from other parts of the building if it is an interior one.

(To be Continued)

THE Students' Edition of The Georgian Period just published by the U. P. C. Book Company, Inc., New York City, has been prepared to meet the requirements of the architectural student and junior draftsman and others who desire an abridged edition of that well-known monumental work, "The Georgian Period." The Students' Edition of The Georgian Period comprises one hundred plates, 10x14 in., and 24 pages of text. The price is \$15.00 postpaid. It is in the form of a portfolio, attractively bound.

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.

Burnt Clay Products—Handsomely illustrated portfolio with color plates, showing elevations and details of residences with especial reference to the application of burnt clay products. Should be in every reference library. 50 plates. 10 x 12. B. Mifflin Hood Brick Co., Atlanta, Ga.

Copper Roofing—Specification data with four full-page detail sheets showing flashings and methods of laying various types of roofs, gutters, eaves troughs, etc. 8½ x 11. 32 pp. Copper & Brass Research Ass'n., 25 Broadway, New York.

Brass Pipe for Water Service—Illustrated specification book, tests, layouts, tables of sizes and weights. 8½ x 11. 30 pp. American Brass Company, Waterbury, Conn.

Monarch Casement Hardware—Illustrated specification booklet 27 C-2. Detail drawings showing correct methods of installation for casement, transom and pivot windows. 8½ x 11. 24 pp. In folder ready for filing. Monarch Metal Products Co., 5020 Penrose St., St. Louis, Mo.

The Tale of a Clam—A story about lime. 8½ x 11. 16 pp. The Ohio Hydrate Supply Co., Woodville, Ohio.

Specification for Cut Indiana Limestone—Condensed specification forms covering various classes of limestone work. Loose leaf. 8½ x 11. Indiana Limestone Quarrymen's Ass'n., Bedford, Ind.

Steel Furniture for the Modern Business Office—Catalog illustrated in color showing complete line of metal equipment for all uses, including units for maps, plans and large drawings. 5 x 7½. 90 pp. General Fire Proofing Co., Youngstown, Ohio.

Siphon Heating Specialties—Technical Hand Book containing valuable tables, specification data, etc. for all types of steam and hot water heating. 3½ x 6½. 144 pp. The Fulton Co., Knoxville, Tenn.

The Book of Vermont Marble—A reference book for the architectural profession, illustrated. Sectional drawings showing details for windows and doors, cornices, parapets, terrace work, corridor treatment, wainscoting, stairs ceilings, etc. 8½ x 11. 70 pp., with supplementary portfolio containing 16 full page color sheets showing various varieties of Vermont Marble. Vermont Marble Co., Proctor, Vt.

The Lunken Window. Two Portfolios containing typical installation details of light and heavy construction, showing in addition to window details many other features of construction in various types of buildings, both steel and frame. 24 plates 8½ x 11. Architectural Department, The Glidden Window Co., Cincinnati, Ohio.

Locks and Builders' Hardware—New catalog showing complete line of builders' hardware. Thousands of illustrations. 485 pp. 9 x 12. P. & F. Corbin, New Britain, Conn.

Hoffman Casements—Portfolio of detail drawings and specification data dealing with casement windows, screens, shutters, curtains, weatherstrips, etc. 34 pp. 8½ x 11 in. Including one large drawing 23 x 32 in., showing full-size details of millwork for casements. Andrew Hoffman Mfg. Co., 28 East Jackson Blvd., Chicago, Ill.

Architects' Specification Hand Book—New and revised edition of the Truscon Specification Book containing complete specifications on water-proofings, damp-proofings and technical coatings for all uses. 104 pp. 8½ x 11 in. Truscon Laboratories, 1628 Caniff St., Detroit, Mich.

Brascolite Bulletins—Architectural series numbers 1, 2 and 3, dealing with the lighting of hospitals, banks and office buildings, schools, colleges, and Y. M. C. A. buildings. Illustrated bulletins showing typical installations and containing much useful data on illumination. 8x10½ in. 48 pp. Luminous Unit Company, St. Louis, Mo.

Improved Mechanisms in Builders' Hardware—A very complete catalogue has been issued by The Oscar C. Rixson Co., 101 Park Ave., New York City, showing detail drawings, and instructions for installing mechanical builders' hardware such as casement hinges, casement operators, hinges and pivots, and overhead door checks. It also contains other information of interest. The catalogue is 6x9 in. and contains 58 pages.



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—Can you recommend a portfolio of desirable exteriors and interiors of country clubs? L. J. D. **Answer**—We do not know of any such portfolio. The best material on club houses has appeared at intervals in the architectural magazines, describing clubs upon completion. We would advise you to look up such articles at the nearest large public library where they probably have a subject index of the articles in their files of back numbers of magazines. In February, 1917, *Architectural Review* you will find illustrations of several club houses and in February, 1913, *Architectural Review* the Golf Club at Groton, Conn., was illustrated.

Question—Who are the publishers of the book "Modern Building Superintendence and the Writing of Specifications" by David Emerson? Where can I obtain a book containing contract forms and dealing with general business practice in an architectural office? L. A. L. **Answer**—"Modern Building Superintendence" is published by Charles Scribner's Sons, New York City. "Institute Forms" and "Handbook of Architectural Practice" may be obtained from E. C. Kemper, American Institute of Architects, The Octagon, Washington, D. C.

Question—Will you please tell me names of books or sheets of architectural details drawn to scale for study and handy reference? R. I. S. **Answer**—"Details of Building Construction" by Clarence A. Martin, also a book of details by Radford. We would suggest that you write to Mr. Frank Snyder, 463 First Ave., Pelham, N. Y., for information in regard to his architectural details.

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: "On the 20th of May we had our annual exhibition; in spite of a strike on the tram lines, more than four hundred people came that afternoon. Compositions by the fellows in music at the Academy were played for the first time in our history at an annual exhibition. The music took place in the students' dining room. Next year we may perhaps give it in the courtyard, placing the musicians under one of the arcades and seating the people on the grass in the middle of the court—at least, this is a suggestion offered by Mr. Damrosch, who was here for four days after the exhibition. Tea was served out in the court-yard, and the sight was altogether most attractive. I have sent Mr. Guernsey a catalogue of the exhibition and in a few days I expect to send him photographs of the rooms. Among the people present were Senator Phelan of California and Mr. Paul Cravath of New York.

"The King's visit could not take place before the 31st, as he was kept in the north of Italy upon important matters. He came with a general, an admiral, and two aides. The American Ambassador and I met him at the gate and marched with him into the vestibule, where the Embassy Staff and the people belonging to the Academy were introduced; then we proceeded into the salon. Mr. Lamond made a short speech about the new department

of music, and then Hanson, Fellow in Music, played a piece which he had specially composed in honor of the King, and Sowerby, Fellow in Music, followed him with a composition for the piano and violin. I presented the King with a bound copy of Hanson's piece. Then we walked through the salon, billiard room and the dining room, looking at the exhibits, then through the library where everyone signed the visitors' book. The next step was to investigate the publications by members of the School of Classical Studies. Finally, we looked at Man-ship's new fountain in the court-yard and had our pictures taken grouped around it. I will send these photographs within a few days to you. We were informed of the King's visit at half past seven on the previous evening and as he came at ten o'clock the following day, we had to hurry a bit. However, the Ambassador and all his staff, the Sindaco of Rome, and the reporters of the Associated Press and Stefani were all informed in time to be present. Also fresh decorations had to be put up, a piano moved from the Villa Chiaraviglio and the violinist engaged. If I had not had a machine, this could not have been done.

"Professor Van Buren is at work cataloguing the library according to artists and places. He has two men working under him at present with money subscribed by Professor Whicher, Professor McCrea and Professor Fairbanks.

"Professor Curtis has secured a promise of \$1,260 from Professor Joseph Hoppin toward the publication of the Memoirs.

"I have some preliminary estimates for the McKim-Morgan memorials designed by Mr. Kendall and I am scouring Europe for the very best marbles. Both memorials together will cost more than 100,000 lire. I think that we will certainly be able to get the work done with not more than \$3,000 for each memorial. I am going to send the estimates and samples of marble to Mr. Kendall within a few days.

"Professor and Mrs. Whicher, and Professor and Miss McCrea gave a large tea at the Academy for the friends who have been kind to them in Rome this year and for the members of the Academy. Every one enjoyed himself immensely.

"I am sorry to say that Mr. Mead wrote me from Paris that Mr. Walters, who is travelling with his bride in France, would not be able to come to Rome. I wish he could have come either for the exhibition or for the King's visit. We expect Mr. Blashfield about June 10th. He is coming to look over the Academy and also to study the question of the mosaics for your church in Washington. I hope to be able to carry him in triumph from the station to the Gianicolo and have him stay with us at the Villa Aurelia.

"Mr. and Mrs. Cortland F. Bishop have visited the Academy. They saw the exhibition and I likewise had an opportunity to take them over the girls' quarters and give them a tea at which the Classical Staff was present. They have a daughter in Vassar who may apply for a fellowship at the Academy in the future."