

ON YOUR TOES!

THIS is the time as never before, for every reader of PENCIL POINTS to be right up on his toes. Why? Because things are going to happen in our profession faster and more furiously than they have ever happened before. We are not a sure enough prophet to be able to say whether the big building program, which we all know will soon be started in this country, will manifest itself unmistakable in September or even in October, but it is going to come before very long and when it does come it will keep us all very busy for a long time.

Now is the time to get ready for what is before us. Draftsmen, specification writers and all those who have to do with the actual production of buildings should set their houses in order so that time may be saved later on when the telephone is ringing and a million and one things have to be done to get the jobs through the office. Working information should be got together. Files of material useful in preparing plans, specifications, etc., should all be indexed and arranged so as to be handy. Files of the most important pieces of printed matter issued by reliable manufacturers should be completed and brought up to date. In short, everything in the way of data and information that will make your services more valuable should be got together now. If you are an architect conducting an office of your own you can readily see how this program will work to your advantage when the business begins to come in.

The editors of this paper are convinced of the fundamental soundness of the building industry in this country, of its early return to a very active condition and of the enormous part which will be played by the readers of PENCIL POINTS in the building program of the next few years. We have planned to make this paper not only a source of inspiration by continuing the publication of the work of master draftsmen and the other features with which you are already familiar, but also, in order to carry our work even further, we will include more articles such as that by Mr. Charles H. Nichols on "The Proportioning of Risers and Treads" published in August, articles that will be of assistance in solving some of the knotty practical problems met with in the drafting room. We intend to take to heart ourselves the title of this editorial and will

bend every effort in the direction of making PENCIL POINTS the liveliest little visitor that comes to you during the month.

Could PENCIL POINTS, so far as you are concerned, be better and if so, where? Are you getting too much of any one class of material and if so, what? Would you like to see any subjects treated which so far we have not reached, and what are they? Have you any article which you think would be interesting and valuable to the rest of our readers and if so won't you send it in for consideration?

"On your toes" we think means more right now than it ever has before. We have gone, through a long period of building stagnation and some may be inclined to be discouraged, but the man who hangs on at a time like this and gets ready in every sense of the word for different things and better things is the man who will take the greatest part and receive the greatest rewards during the next few years.

WHAT BOOKS DO YOU WANT?

THE publishers of PENCIL POINTS have in preparation a series of books which will be prepared and published especially for the readers of this journal. The titles and other particulars of the first books of the PENCIL POINTS series will be announced shortly and the first book will come from the press about January 1, 1922.

In order that we may not overlook any important subject in developing our program, we ask your co-operation in making this list complete. What books do you want? What subjects would you like to see treated in the contemplated series? Do not confine yourself to the mere titles of books, but let us have as complete a synopsis as you can of range of contents, manner of treatment, etc.

The publishers will send a check for \$10.00 for every suggestion for a book, in addition to those already arranged for, which is approved by the editors and adopted for publication. Any one may send in one suggestion for a book, or a hundred. In any case where two or more persons suggest the same book the prize will go to the one whose suggestion was mailed first as shown by the post mark. Let us hear from you.

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a summer hotel, on the other hand, we would find people dressed for bathing, boating, riding, tennis, golf, and other sports, or leisurely enjoying themselves dressed in appropriate summer clothes. Needless to say, fashions should be up-to-date in such a scene, but by all means avoid the unnatural people often found in the conventional "fashion drawings." Be especially careful not to have the figures too straight and stiff, this is a very common fault. Use care also not to make foreground figures so large or important that they dwarf the architecture or lead the eye from it. Occasionally people so near as to be exceptionally prominent are made slightly smaller than they would actually be, though such liberties should never be taken unless one has sufficient experience to enable him to do so to the best advantage, and a figure beside the building pictured should always be of correct size or a wrong impression of scale will be given. Too many figures spotted around carelessly will destroy balance, so in composing, plan for the eye to be lead gradually

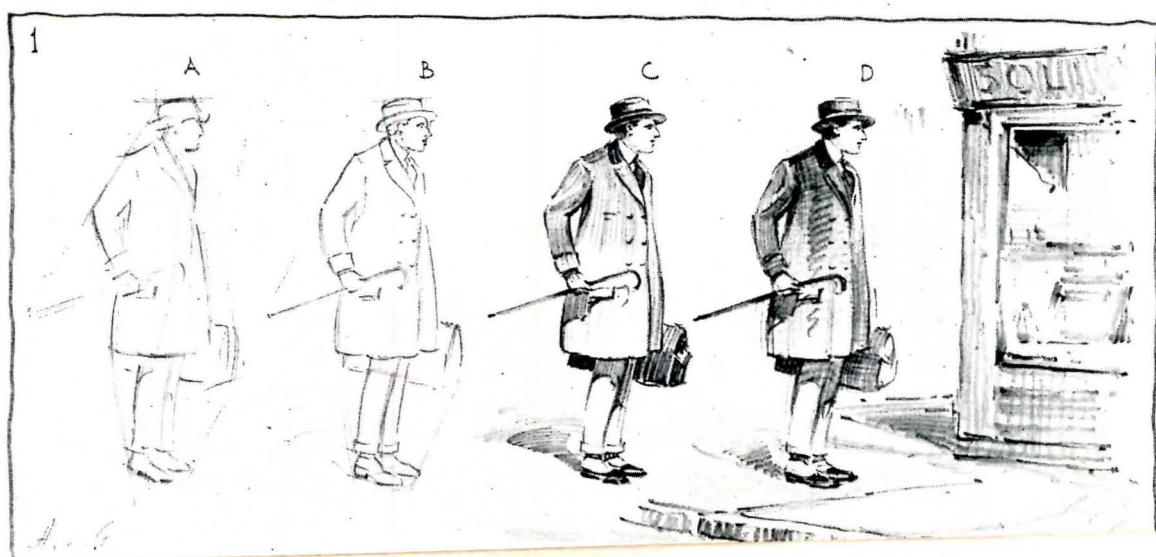
...dogs and other animals require as much skill to draw as do people and unless one is confident of his ability he will do well to omit them entirely or to get assistance from someone with greater dexterity.

Decorative Treatment

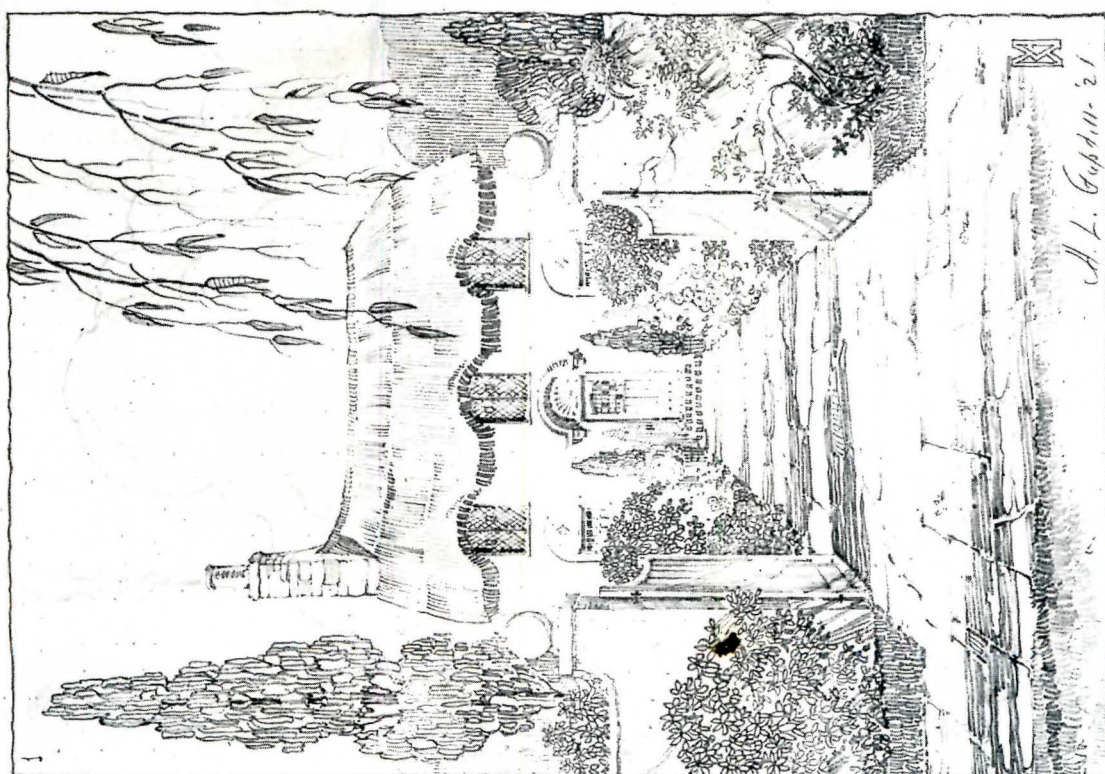
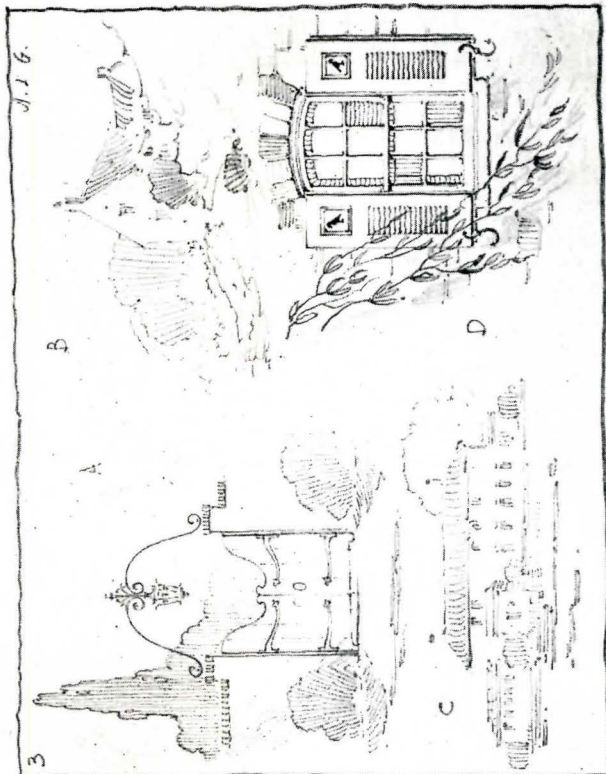
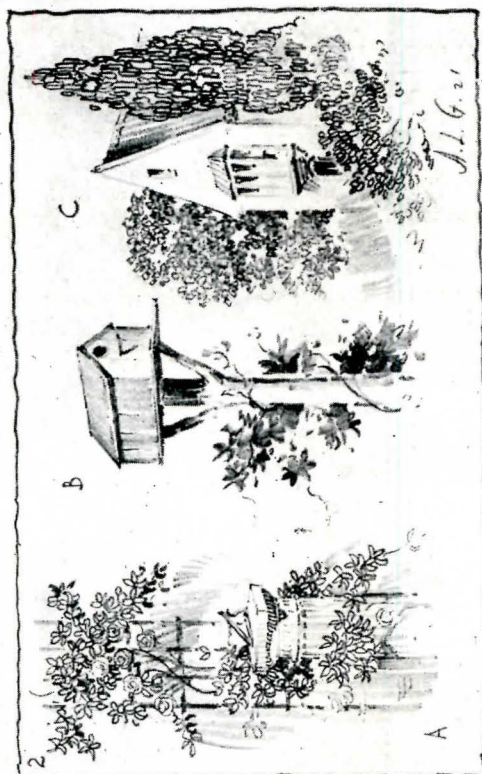
We have mentioned in previous articles that all pencil drawings are somewhat conventional in treatment, the objects being rendered more according to rule or precedent than by attempting to duplicate nature or fact. Nature shows us color, for instance, which in black-and-white drawings can be suggested only in a somewhat meager manner, and she makes no use of outline, so firmly established by convention in pencil representation. She gives us also such extreme brilliancy of sunlight that it is obviously impossible to adequately portray it on paper, so here too we resort to convention for its suggestion. There are certain conventions, then, that are forced upon us because of our inability to suc-

(Continued on page 36)

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Sketching and Rendering in Pencil, Figure 37.

THE SYMBOLISM IN ST. THOMAS'S

THAT the carvings in St. Thomas's are interesting and have significance is a fact that it seems the New York public has just learned through items in a number of newspapers during the past few days. Since a bit of sensationalism helps a newspaper story immensely, that element has not been left out.

As a matter of fact, St. Thomas's is rich in carvings that reflect the spirit and life of the times in which they were made—something for which there is ample precedent in the old Gothic churches and cathedrals. If the minor details of a church of today are to be anything more than dead copies of historic examples or meaningless inventions, there seems to be no other course than to draw upon the life of the day for subject matter and to give fresh renderings of Biblical stories, and portraits of prominent figures in the history of the Church.

Many of the carvings in this church were made during the war, or at about that time, and they naturally show portraits of the men who were taking a prominent part in the events of the day, as well as groups typifying the conditions and more important incidents of the times. Thus we find statesmen and generals, the Salvation Army lassie, with a pan of doughnuts; capital, labor and the consumer all bound together and struggling to the

discomfort of all, especially of the consumer; also the victory of prohibition.

The illustrations published in connection with this article, excepting those on page 12, are from photographs of the models, and some of them show the architect's criticisms. For instance, the prohibition design shows a note instructing the modeller to substitute a lemon for the bunch of grapes on the side nearest the figure typifying prohibition. The architect's drawing sent to the modeller bears this note, "Dionysus" is not to be ugly nor is Prohibition to be cattish. We are not taking sides with either." "More ribs," is the architect's comment on the grotesque at the right in one of the photographs illustrated on page 10, though this note does not show here.

One of the illustrations shows the figure of a jester who, if we remember the old legend correctly, assumed difficult postures as a form of penance.

Dignitaries of the Church, prophets and saints are present in bewildering numbers.

The illustration at the bottom of page 10 shows one of the many excellent representations of Biblical incidents. The loose-jointed bulk of the giant is especially well rendered and the whole treatment is spirited as well as decorative.

In the illustration at the top of page 10 the bunch of keys, the ac-

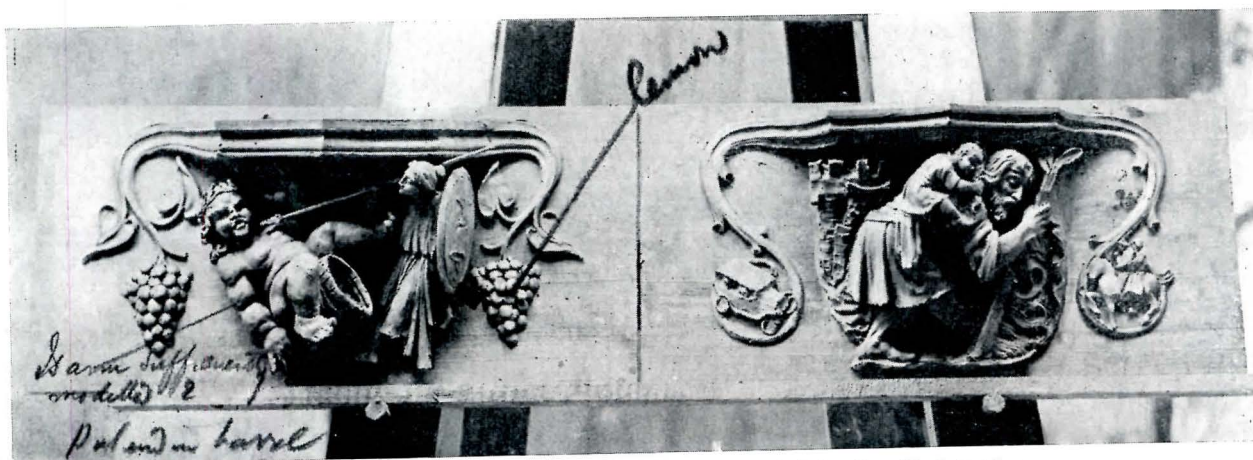
(Continued on p. 38)



The Jester



Capital, Labor and the Consumer



At the Left, the Victory of Prohibition, at the Right St. Christopher.

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Portraits of Bishops



*Prophets, Carvings in the Crestings of the Sound Board
Details of Chancel Fittings in St. Thomas's Church, New York City.*

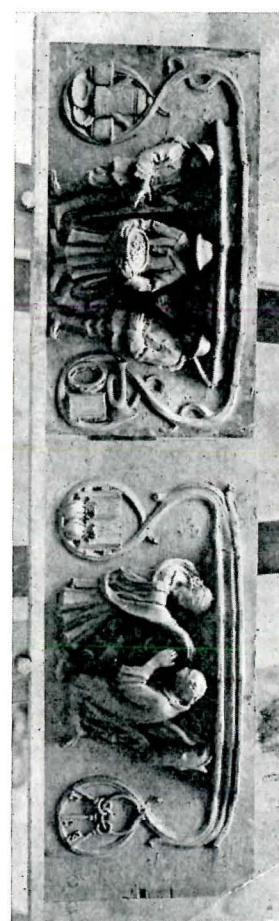


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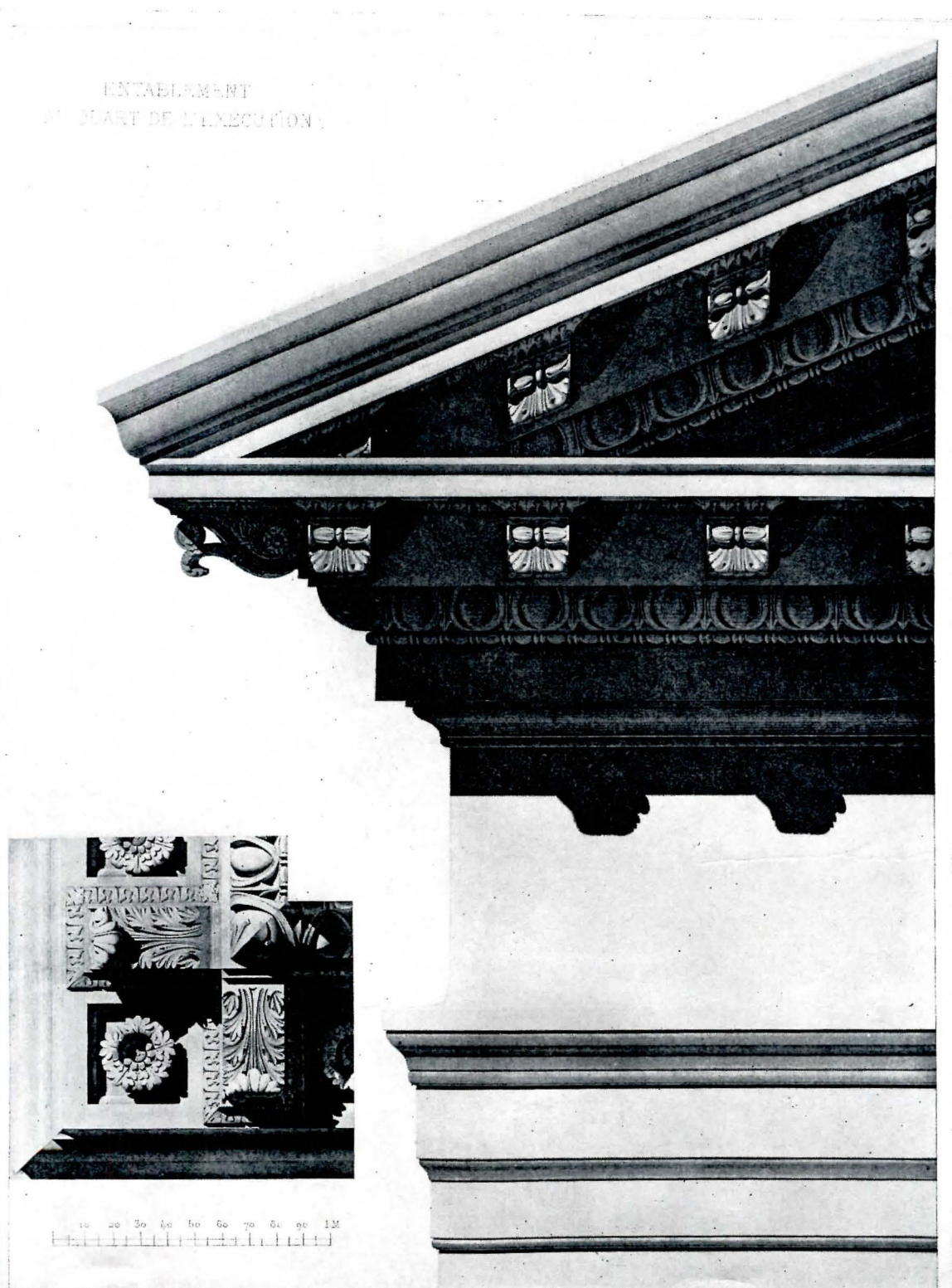
ns for figures in crestings of sound board, Chancel of St. Thomas's Church, New York City. Reproductions of full-size drawings sent to the modeller by the architect. At the left Joel and at the right Habakkuk. Chancel Fittings by Bertram Grosvenor Goodhue, Architect.



Misrecords "The Salvation Army" and "The Baptism of the Eunuch"



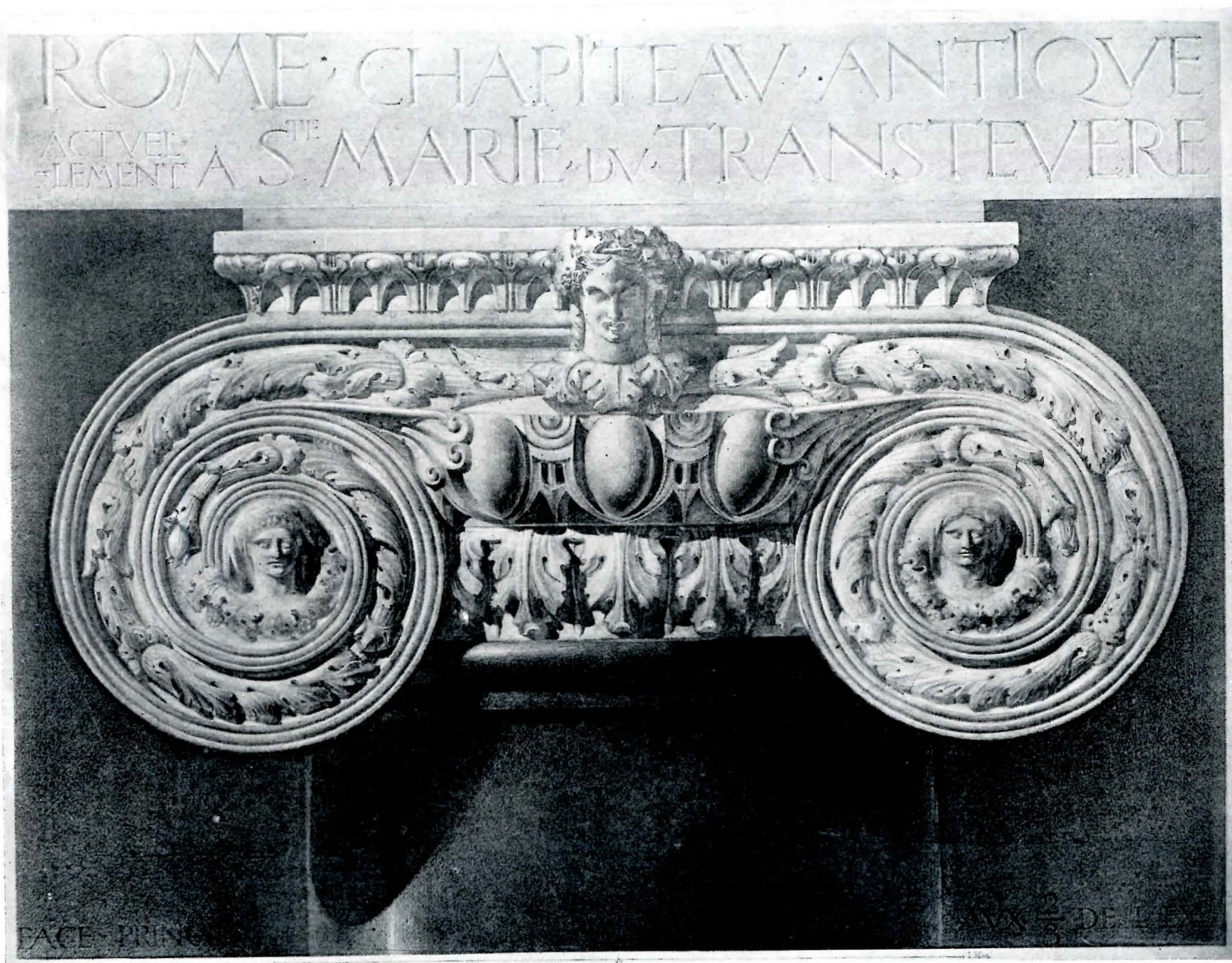
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DETAIL OF PORTICO OF THE PANTHEON AT ROME

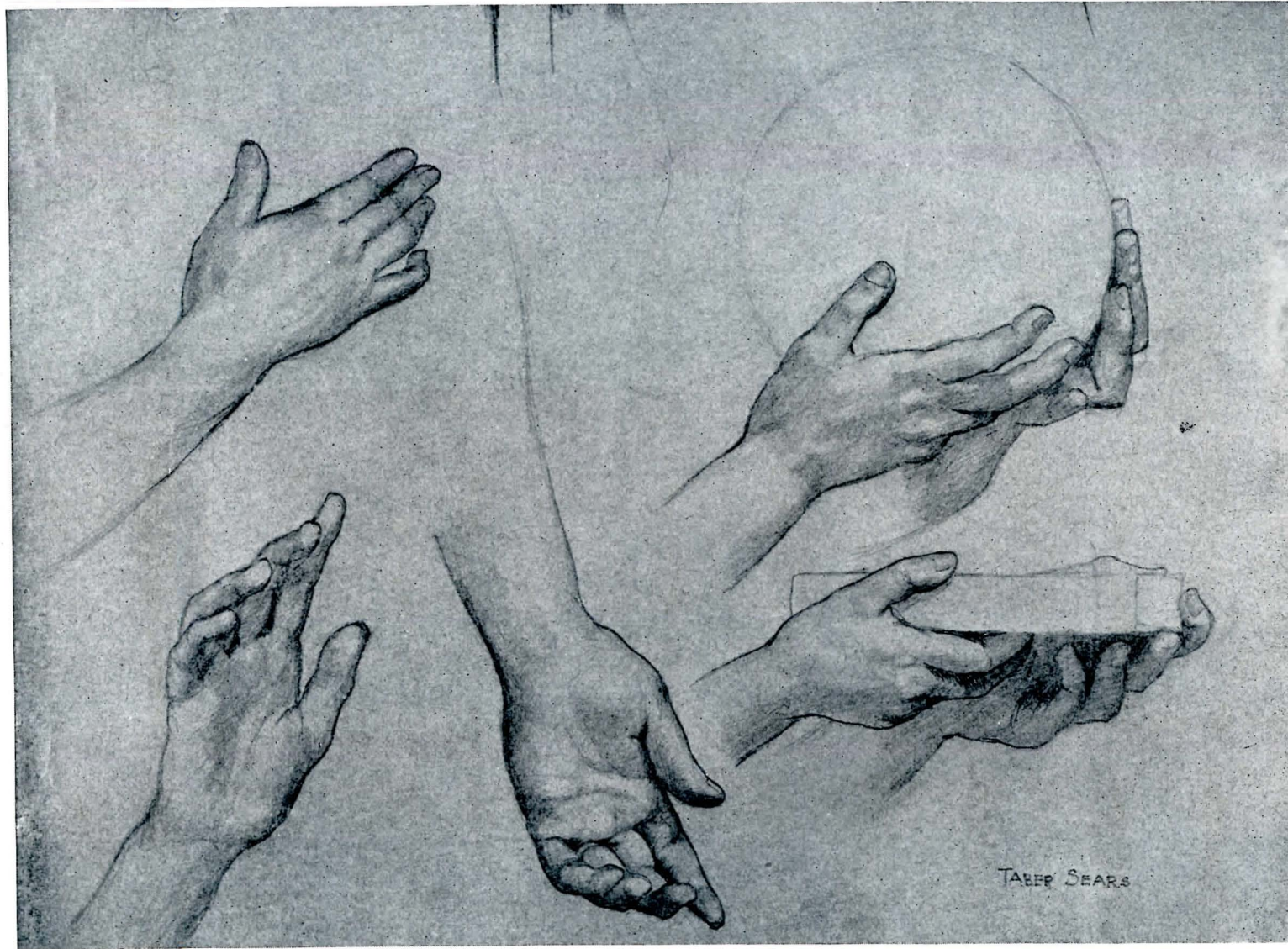
FROM H. D'ESPOUY'S "FRAGMENTS D'ARCHITECTURE ANTIQUE"

On the other side of this sheet is shown a portion of the entablature of the portico of the Pantheon, Rome. The portico is octastyle. It extends sixty-two feet beyond the main portion of the building, which is circular. The pediment of the portico is like that back of it on the wall of the building.



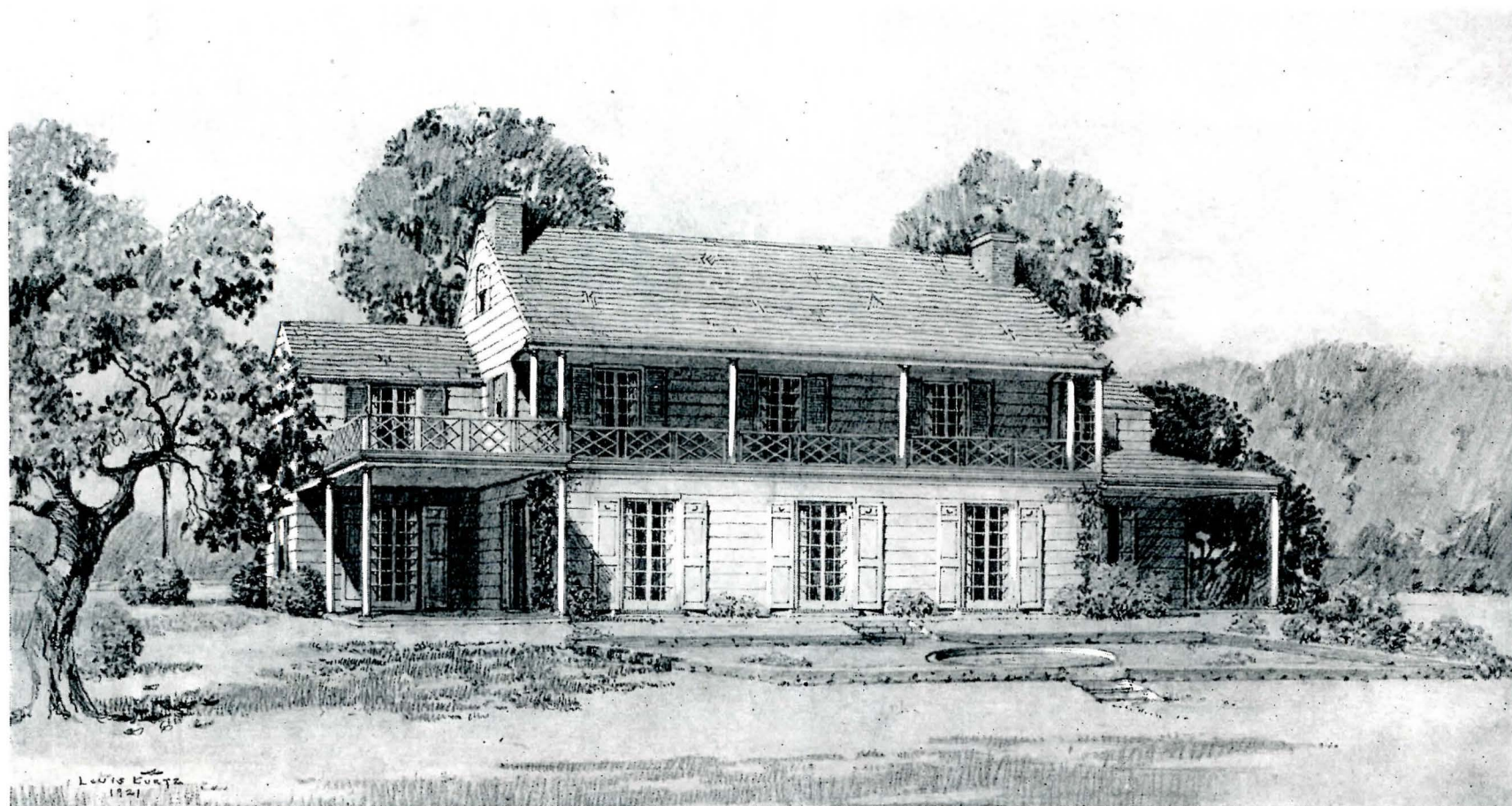
ANTIQUE CAPITAL
FROM H. D'ESPOUY'S "FRAGMENTS D'ARCHITECTURE ANTIQUE"

An interesting rendering by Bigot of an antique capital is reproduced on the opposite side of this sheet from a plate in H. D'Espouy's "Fragments d'Architecture Antique."



STUDIES OF HANDS BY TABER SEARS, FOR CHANCEL DECORATION IN THE FIRST PRESBYTERIAN CHURCH, NEW YORK CITY

The beautiful studies of hands reproduced on the other side of this sheet are from drawings from life by Taber Sears for a mural decoration in the First Presbyterian Church, Fifth Avenue and 12th Street, New York City. Among Mr. Sears' notable mural paintings are "The Spirit of Niagara," Buffalo Historical Society; "New York Among the Nations," in the New York City Hall, and paintings in Grace Church Choir School, New York; Trinity Church, Buffalo, N. Y., and the First Presbyterian Church, New York.



SKETCH BY LOUIS KURTZ FOR HOUSE AT KINGSPORT, TENN.

ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

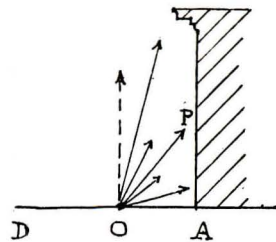


Figure 80.

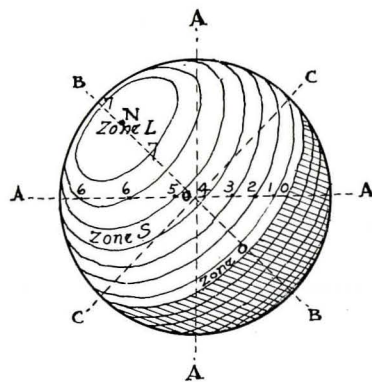
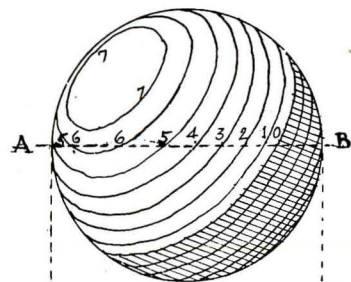


Figure 85.

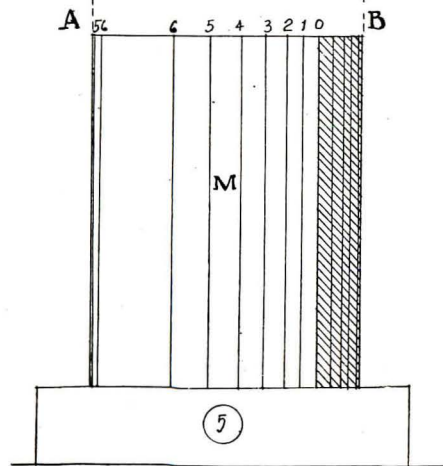


Figure 86.

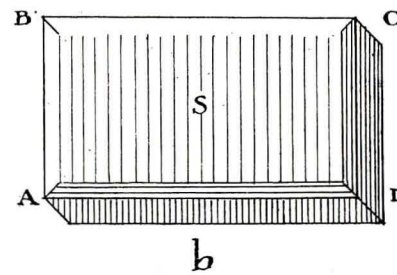
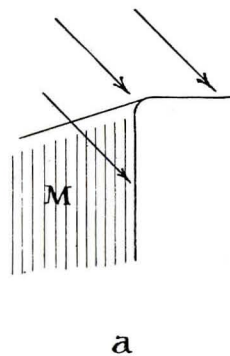


Figure 84.

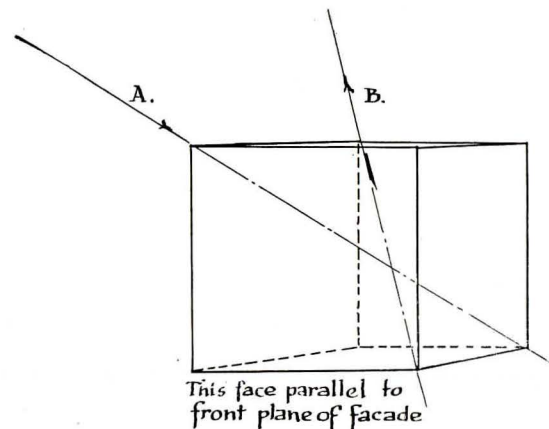


Figure 81.

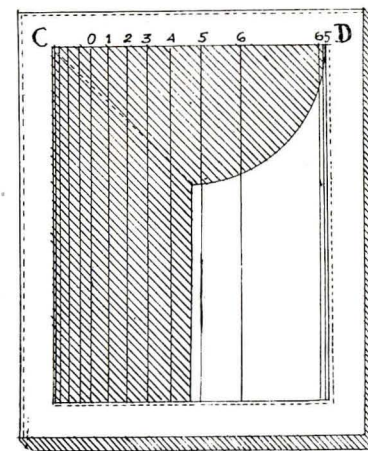


Figure 87.

The Study of Architectural Design. See Text Beginning on Page 21.

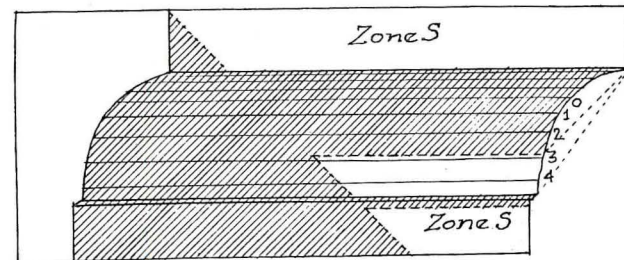
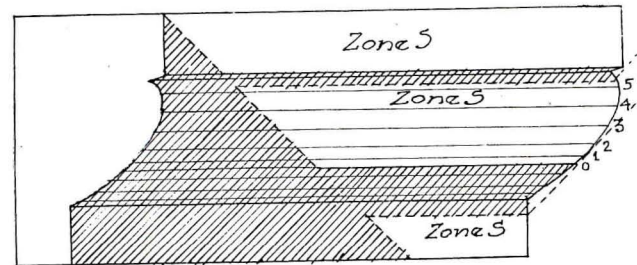
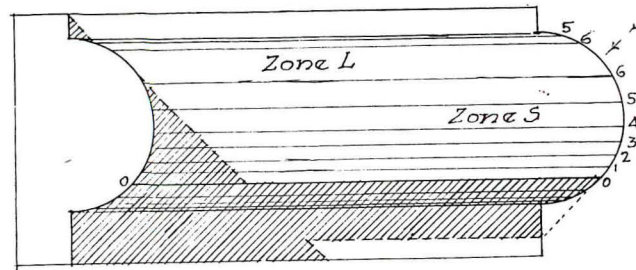
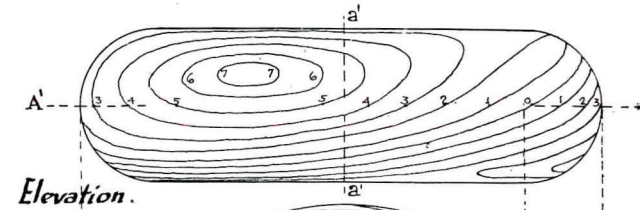
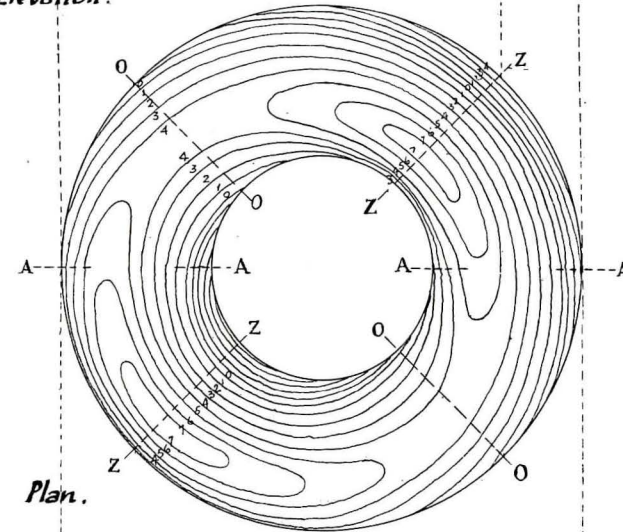


Figure 89.

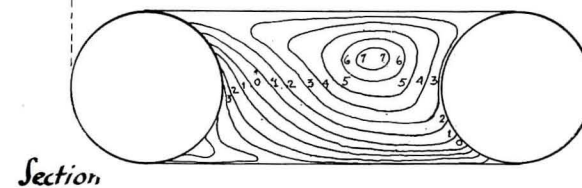
The Study of Architectural Design. See Text Beginning on Page 21.



Elevation.



Plan.



Section

Figure 88.

PENCIL POINTS

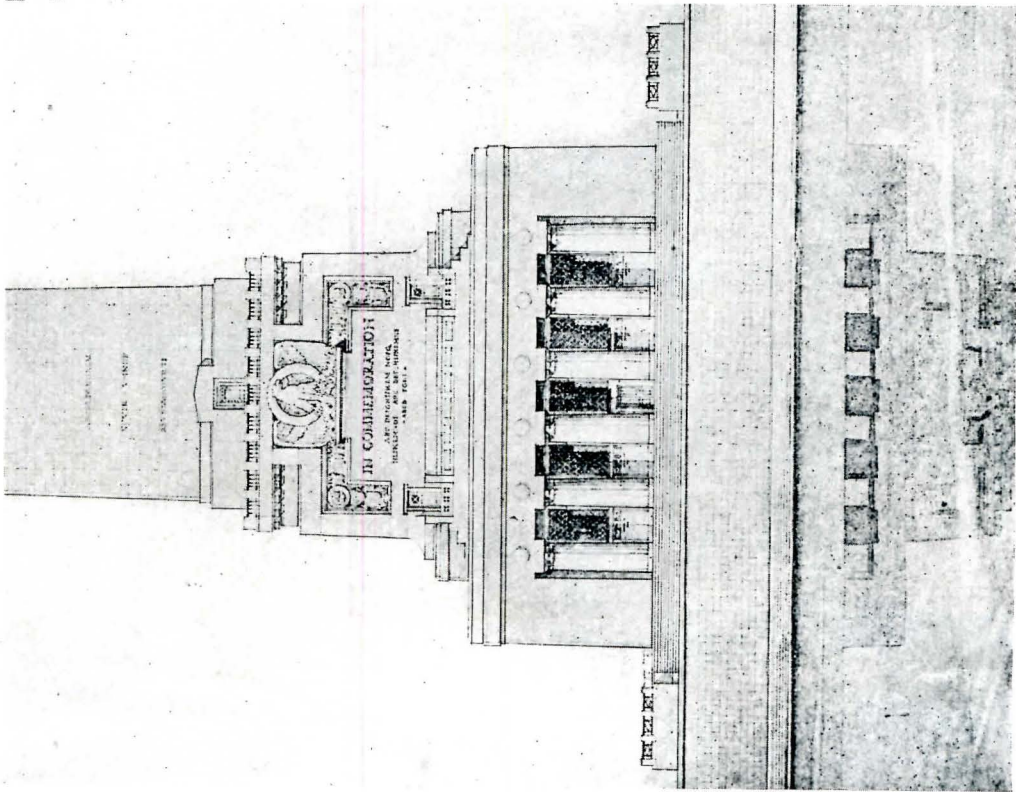


Figure 82.

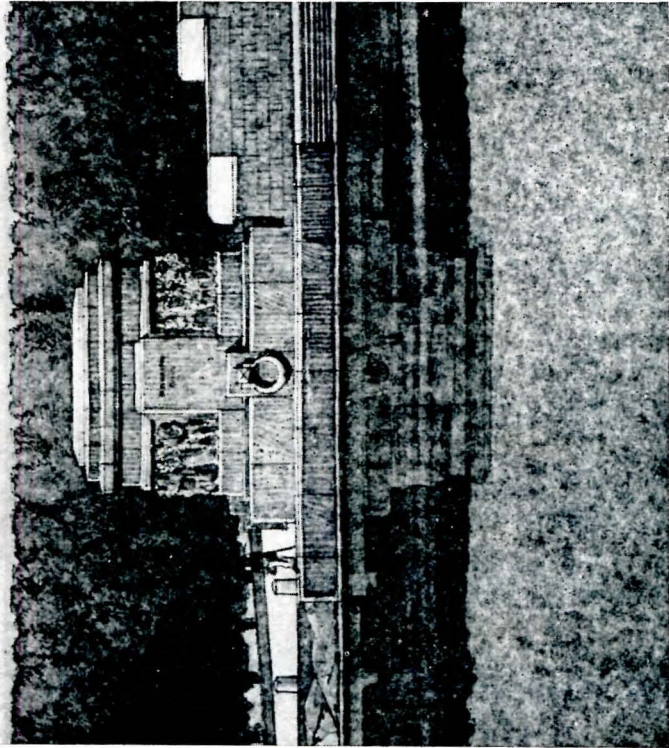


Figure 83.

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light rays. With the sun assumed in the customary position, reflected light from the sky will be strongest along the diagonal of a cube, but in the opposite sense (up, back, to the right) to direct light rays. The reflecting sky may be considered as a hollow hemisphere, and the portions nearer the sun will supply the strongest rays while the rays of lower power will come from the portions more remote. This has a first effect of reinforcing the effects of direct light.

The ground is extremely important as a source of reflected light; its principal rays produce an effect comparable to the footlights of a stage. From Figure 80 it will be seen that *OP* is the normal direction of reflected rays illuminating the façade, and that any element of the façade (edges of mouldings, etc.) perpendicular to *OP* will receive the maximum intensity of the reflected rays, and also that the illumination from this source will decrease with the height of the building, the brightest portions being nearest the ground.

Three sources of reflected light rays have been considered: the general atmosphere, the sky considered as a hollow hemisphere, and the ground. Simplification of rendering leads to the combining



Figure 94. Villa Albani, Rome.

of these in one direction, which has been selected as that marked *B* in Figure 81. It is the direction that has been assumed in most of the recent renderings where, for instance, the counter shadows of dentils or modillions are cast at 45 degrees from right to left. This convention is not much older than the middle of the Nineteenth Century. Previous to that time back-shadows were cast indifferently to the right, as in Plate XXXIII in this issue, which is a restoration of the cor-

nice of the portico of the Pantheon at Rome, by Daumet; or to the left, as in Figure 29 in April issue, the detail of frieze from the temple of the Sun, Rome, by Esquié; or from below up, as in Figure 28, April issue, also by Daumet, a detail from the Temple of Concord, Rome. It is best to adopt the direction of reflected light indicated in *B*, Figure 81, as it is now so general, but we must not forget its purely conventional character.

In casting counter shadows it must be remembered that reflected rays from the sky or from surrounding objects interfere with the rays from the ground and that the outline of the counter shadows soon becomes blurred, and vanishes in the general shadow tone. The rendering by Esquié

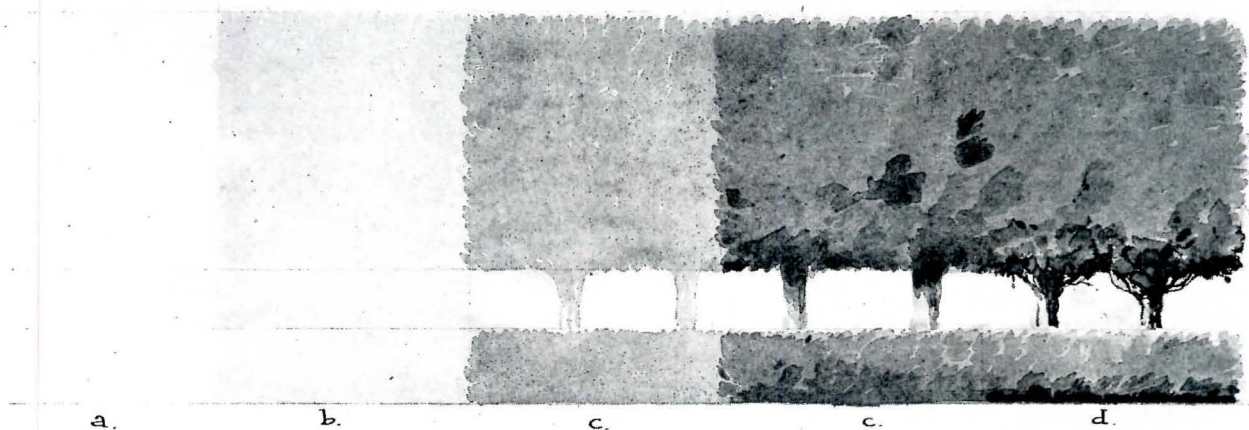


Figure 95.

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shown in Figure 29 (April) illustrates this principle very clearly.

Shadows of all kinds are rendered by graded tones because of the effects of reflected light. A long vertical shadow, such as that cast by a column, is lighter in the lower than in the upper part, which is farther away from the ground acting as a source of reflected light.

Many shadows, direct as well as reflected ones, on the small-scale drawings and the smaller ones on the details, are most conveniently put in with the ruling pen, mixing the proper tone with the brush, which is then used to fill the pen. In the same way a free-hand pen may be used to put in back shadows and accents on sculptural reliefs or architectural ornament. This use of the freehand pen and ruling pen may be seen in Figures 82 and 83, details of a competition elevation drawing.

All plane surfaces are limited by edges: these are never perfectly sharp, but have a section similar to *a*, Figure 84. Therefore these edges will receive either a greater or a less amount of light than the surface *M*. In the case of a rectangular surface such as a quoin, Figure 84-*b*, the two edges *AB*,



Figure 91.

BC are illuminated as planes at 45 degrees, while the edges *CD*, *DA* are similar to surfaces in shadow. It is the usual practice in drawings at small scale to treat all vertical surfaces like this quoin, but to neglect the rendering of *CD* and *DA*, while keeping a high light on the edges *AB* and *BC*, which are very bright in contrast with surrounding values. How this may be applied to a small-

scale rendering is shown in Figure 82. Note how a high light has been left on the left hand edge and the top edge (unless it is in shadow) of all the vertical surfaces. This has been a common practice in rendering details at large scale, or in the foreground, as in Figure 83. It is of just as much use in small-scale drawings if properly handled. Similarly, in rendering within shadows, just as reflected light will cause counter shadows, so will it cause lighted edges on the *lower* and *right hand* projecting edges, as shown in the rendering at the right of Plate XIII, April PENCIL POINTS.

In all rendering there are three big divisions of tone—the highlights, left almost colorless, or rubbed
(Continued on page 44)

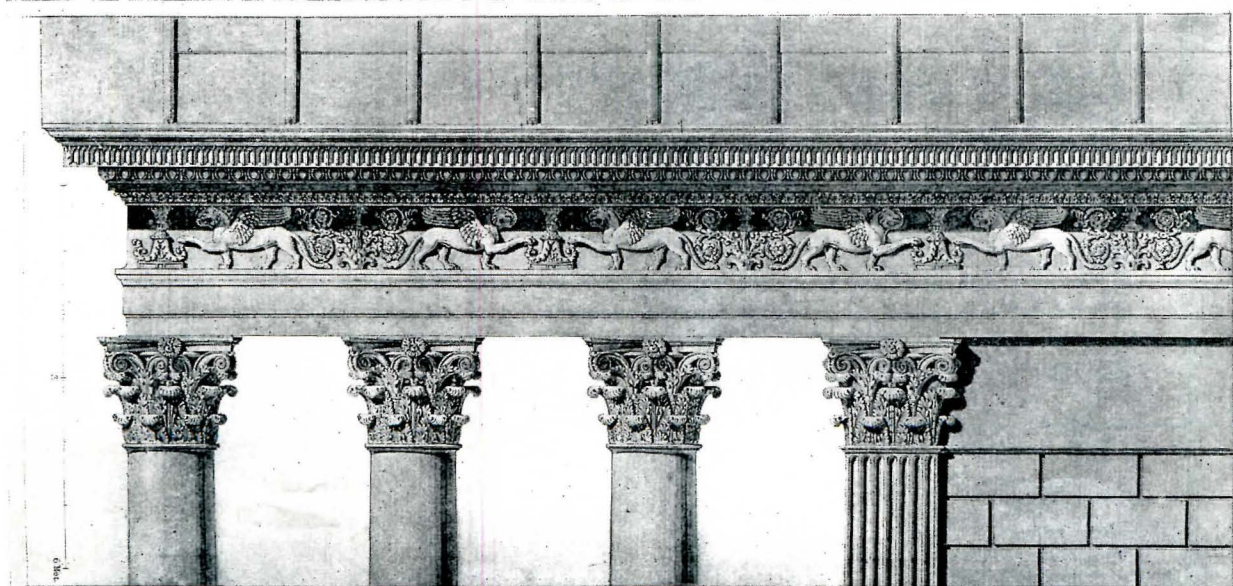


Figure 90. Detail of Temple of Antoninus and Faustina, Rome.

ARCHITECTURAL DETAIL PART V

BY JOHN VREDENBURGH VAN PELT

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

THE necessity for so fashioning our designs that they will be well suited to the material in which they are to be embodied has been referred to several times in earlier parts of this article. Prerequisite to this is a thorough understanding of the material. A comparison and study of the surface effects appropriate to the more common of these should, I think, be the next step in this discussion.

The characteristics of building materials may be grouped roughly under two main heads, the characteristics that relate to their structural qualities and those that influence or determine their appearance. Discussion of the first group is pertinent here only where the structural peculiarities affect the design of detail. That an important quality of steel is its tensile strength while stone acts principally and brick always in compression, that steel supports our larger buildings, while stone, terra-cotta, or brick clothes and protects the steel are facts generally understood. Most of this can be profitably left to the engineers. The vistas opened up by the second group of considerations are wide enough to fully engage our attention.

There is no material whose fashioning has not been, in many cases, a travesty; iron refined into the form of bronze or wrought into shapes that should have been cast, stone carved

like wood and wood like stone. We have in general failed to avail ourselves of the opportunity afforded by terra cotta. The Persians, the Greeks and the Italians made clay tile to be used architecturally as a covering or dress to beautify and sometimes to protect the rough supporting structure. With the decent development of the use of steel as the skeleton of the largest buildings, the use of terra cotta has increased tremendously, for it is well adapted to serve as an outer dress for buildings of modern construction. But with us the design of this beautiful material has been in most cases a direct derivative from stone, with which it has little in common except that it can become its more or less perfect imitator. A chief quality of good stone design is

the suggestion of its inherent supporting qualities. Terra cotta columns, piers, entablatures, arches, even rusticated walls, have been fashioned and repeated endlessly. Sometimes when great care was used and the detail placed at some distance from the eye, the different pieces of modelled clay could be lined up so that they could not be distinguished from stone. Modern methods of manufacturers have enlarged these possibilities of imitation, but slight imperfections reveal a most beautiful quality, that can be turned to good account in terra cotta. Few of us prefer a perfectly uniform, absolutely flat-toned, wall of smooth

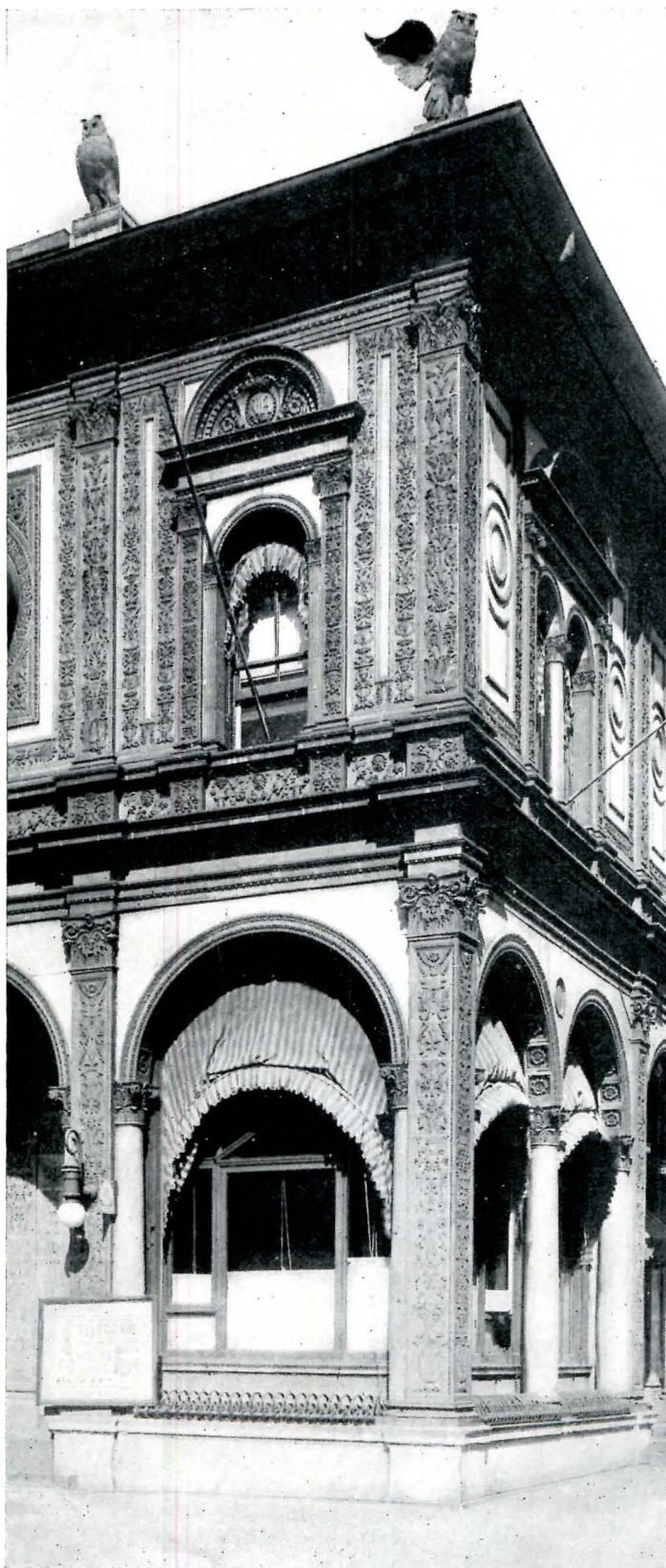


Texture in stone, wood, brick and plaster. Detail of a Residence by Charles I. Berg, Architect.

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brick to an irregular vibrant wall of bricks that have a rough texture, laid with broad rough joints. Terra cotta, which warps naturally in burning, may well be made to satisfy in like manner. It cannot do this where the essence of the design lies in the cold regular lines which are among the chief beauties of classic stone buildings.

The representative of an important terra cotta company told me lately that Stanford White used to make them distort the pieces of clay during manufacture so that they would not resemble stone. Stanford White's work in terra cotta is the best of the period, indeed nothing better has been done since, although there are later buildings that are more characteristic of the material than his, they are not as good architecture. Where his work falls short, it seems to me, is in the kind of detail that he tried to adapt to terra cotta. Although fine in scale it had the spirit of stone, delicate Italian stone, but it was not a tile dress for a sub-structure. Examine the photograph of the Herald Building, New York, of which McKim, Mead & White were the architects, shown on this page. The pilasters are covered with small filagree ornament that is appropriately proportioned to the modeller's



Detail of Herald Building, New York. McKim, Mead & White, Architects.

art. It is also quite within the limits of marble. There is even more delicate carved stone in Italy than that on the Palazzo del Consiglio of Verona. And although the small elements of the detail may be good terra cotta ornament, I maintain, that the expression of structural strength in the pilasters, arches, column caps, entablatures and cornices is false. It is essentially stone detail and would be excellent only if the material could sustain weight. The parts of the design that really have the appearance of a covering and that, therefore, I think most characteristic of terra cotta are the flat surfaces of the arch spandrels, but these, as it happens are made of square cast stone or cement quarries.

In a book published in the interests of terra cotta are pictures of two small theatres that show especially suitable terra cotta work. In one, the whole building is evidently surfaced with a modelled material and the walls and other supporting members are covered either with tile shapes or such detail that the impression of a covering is always present.

In the Century Club, another of the beautiful buildings by the firm of which Mr. White was a member, the stamped treatment of the wall courses is appropri-

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Texture in brick and stone. Detail of a Residence by Charles I. Berg, Architect.

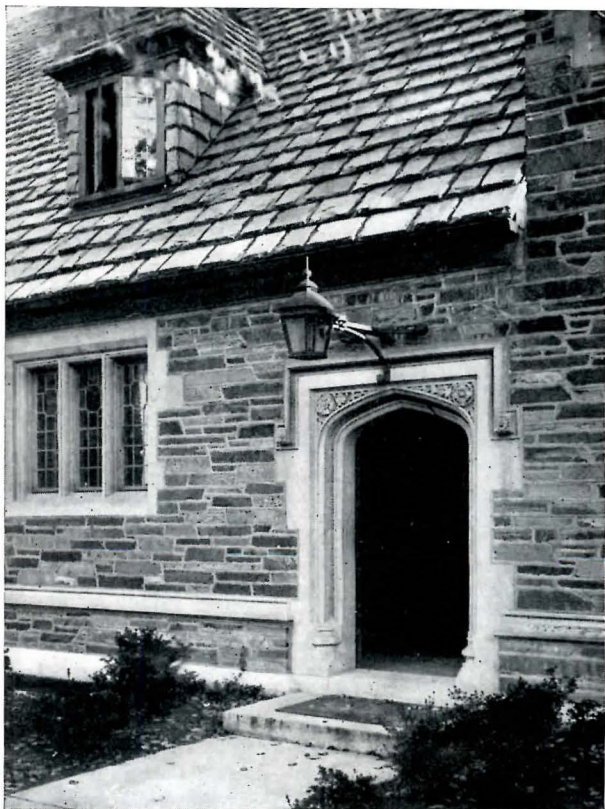
ate enough to terra cotta; not so the rustication of these same courses which suggests a sturdy support in stone.

At the Madison Square Presbyterian Church, polished granite column shafts terminated in terra cotta capitals that appeared to hold up the portico so well that, I venture to say, the average passer-by thought they really were the stone they personified. One of the most interesting parts of this building was the wall surface with its incident of moulded brick containing a small cross. I believe Mr. White had corners and edges of bricks chipped off to make them more irregular, and that introduces another question. Is the idea of super-antiquing by producing an effect of irregularity entirely satisfying?

There is a tendency now-a-days not to be satisfied with the natural irregularities of material and to manufacture stunt irregularities. In asking the question about antiquing I am not losing sight of the charm old bits of architecture exert. Not only are the actual colors more harmonious and beautiful than when fresh and new, but there are potent suggestions of quietness and peace, a kindling of the reverence we all feel for antiquity. Imitations of antiquity may have the opposite effect. If forced, we know them to be false and revolt. It is just here that the search after texture often "o'er-leaps itself." Simplicity of craftsmanship should go hand-in-hand with this reincarnation of the old, for it was in olden times that simple methods obtained. As long as the craftsmanship is

natural and reasonable, there is no danger of its becoming artificial. On page 27 is a view of a portion of a residence of which Charles I. Berg was the architect. It is an excellent illustration because of its undeniable charm. The contrast of texture between the stone and the brick that shows on the right, the adzed beams and the roughly plastered-on finish of the stucco, the uneven laying of the heavy slate, all are in keeping; even to the old iron ring, stuck in askew on one side of the doorway, the old fashioned flowers and the vines that frame and clothe it. Because it is lovely I dislike to suggest that it is not reasonable. But it must have cost a lot of money to get adzing done as badly as that; it is so studiously bad. The irregular stone work looks a bit studied too; hardly the result of inability; rather of over-ability. Another possible point for discussion is the arched wood lintel. Of course the answer to an objection is that the curve is only decorative. In this case I agree, although it is decoration derived from the structural form of another material. When, however, a stone lintel is cut in a curve on the underside which leaves insufficient strength just where the bending moment is greatest, that is decoration I have not yet been able to condone.

I said, a few paragraphs back, that simplicity of craftsmanship should go hand-in-hand with the reincarnation of the old. It does not follow that rough finish alone will reproduce the old manner, nor does it follow that the touch of the skillful craftsman's hand is valuable only to copy the past.



Texture in stone and slate. Detail of Buildings for Princeton University. Day & Klauder, Architects.

PENCIL POINTS

A beautiful, rough texture is beautiful because of the variety and vibration that it affords. A perfectly smooth trowelled cement surface might exclude the water from a wall better than a thrown, or a gravel, or a grit finish of harmoniously contrasting colors; but it would prove far less interesting to look at. So a warm, vibrant texture is valuable in itself, giving life to large unbroken spaces and the craftsman may work to the end of securing such a surface without the vain hope of imitating decay.

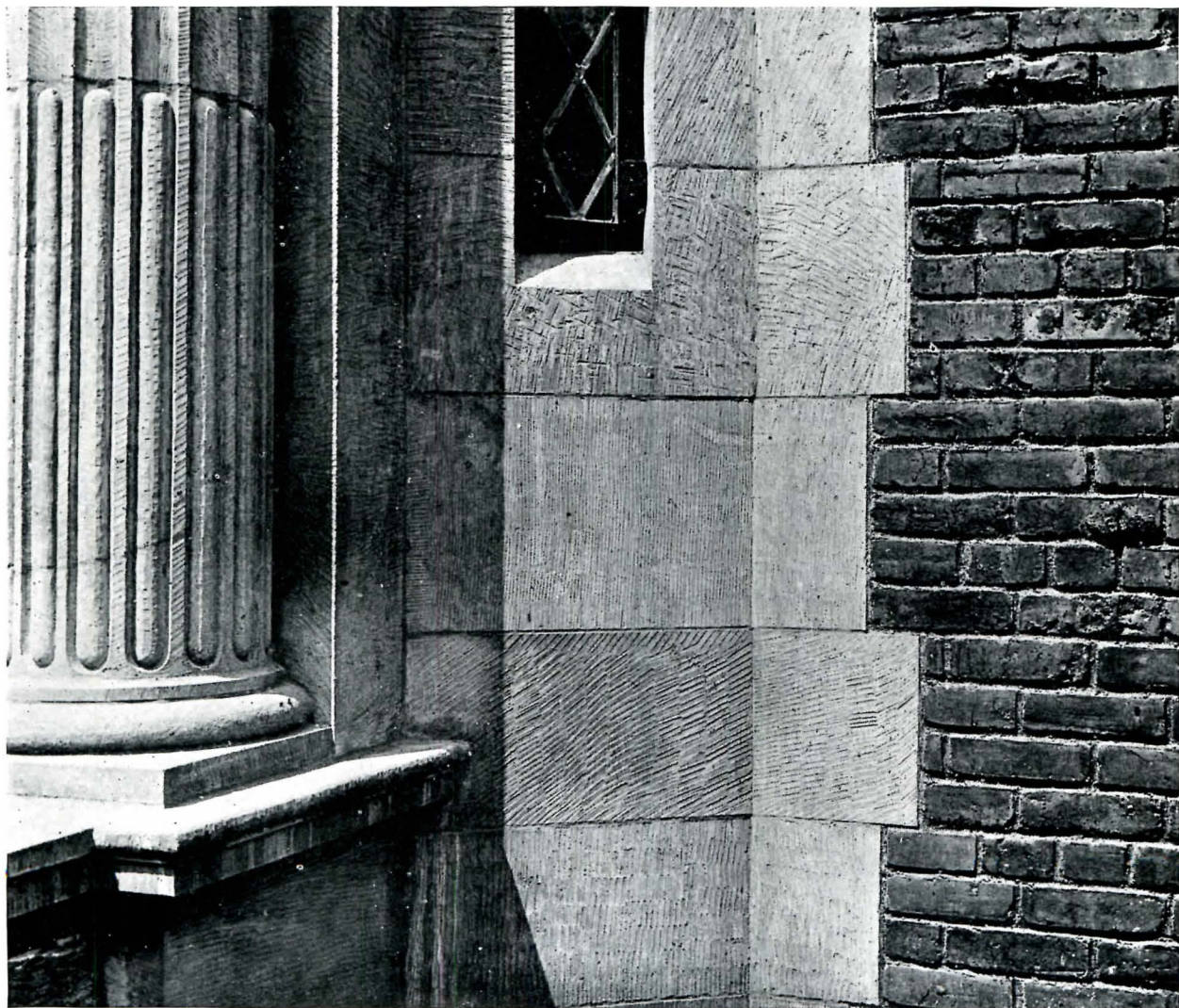
On the other hand, do not forget that the smooth, light-gray wall surface of a Louis XVI salon, graded perchance by the varying illumination, is desirable because it offers a contrast to the vibrating light and shade of the white mouldings and ornamentation. The principle it exemplifies is of wide application. Texture, as I understand the word, may mean a smooth as well as a rough finish, though I grant that when the term is used comparatively, it

suggests a degree of roughness.

Much care has been bestowed by some architects upon the texture of their buildings even though there be others unaware that such a thing exists. It is detail just as much as are mouldings and sculptured ornament. But it is a kind of detail about which very little has been written. Some years ago, I had to decide on the size and finish of some rusticated stone courses: In New York there were at hand a number of examples, good and bad, but there was no study on this really very important subject, nothing recorded, and I had to go about the city with a rule and measure the courses of buildings, their projection, the space between the rustications, etc., and make notes of the finish that accentuated the different effects.

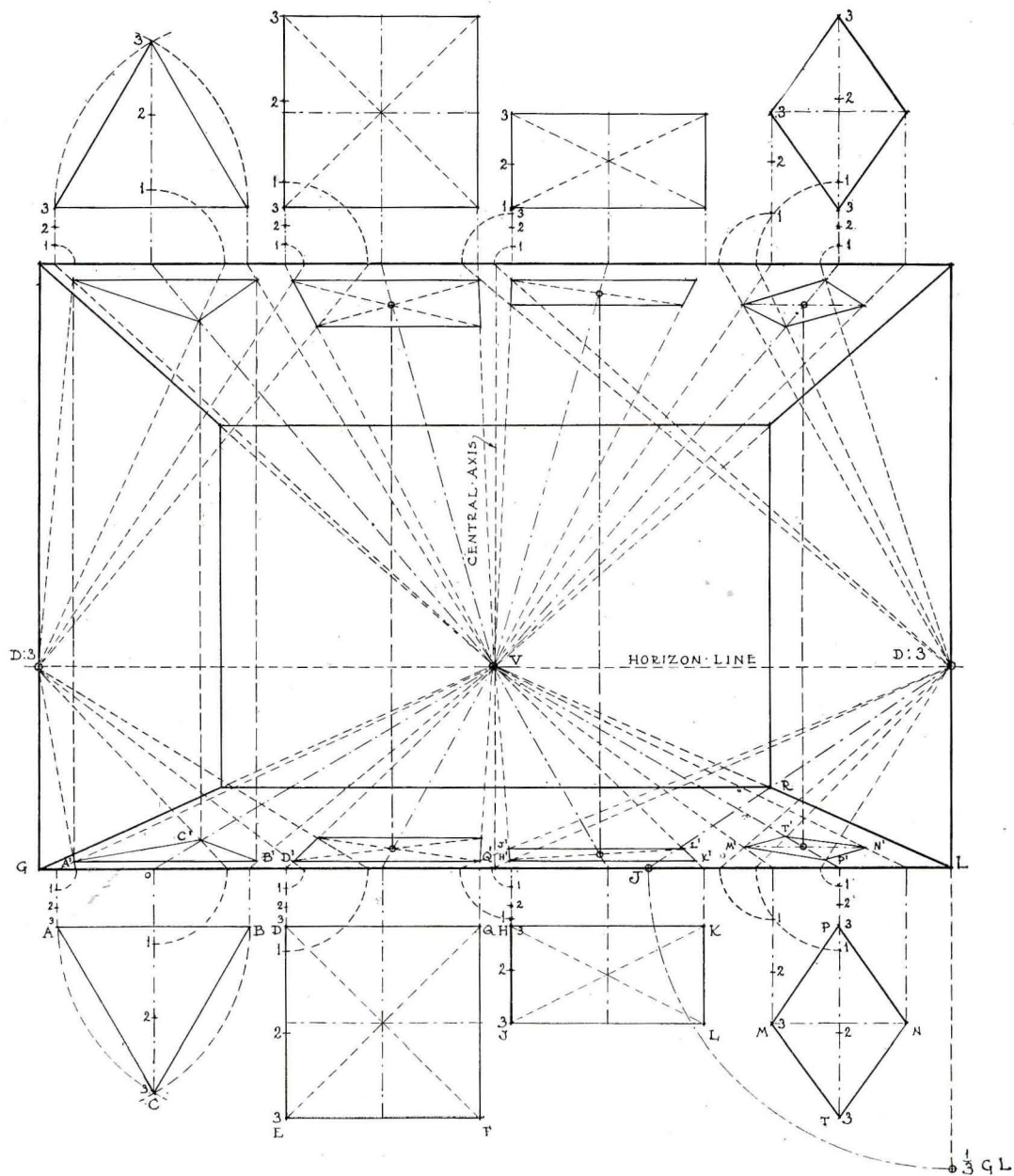
One day some of us had a discussion about the stone of which St. Thomas's on Fifth Avenue is built. An enthusiast applauded the great variety of

(Continued on page 37)



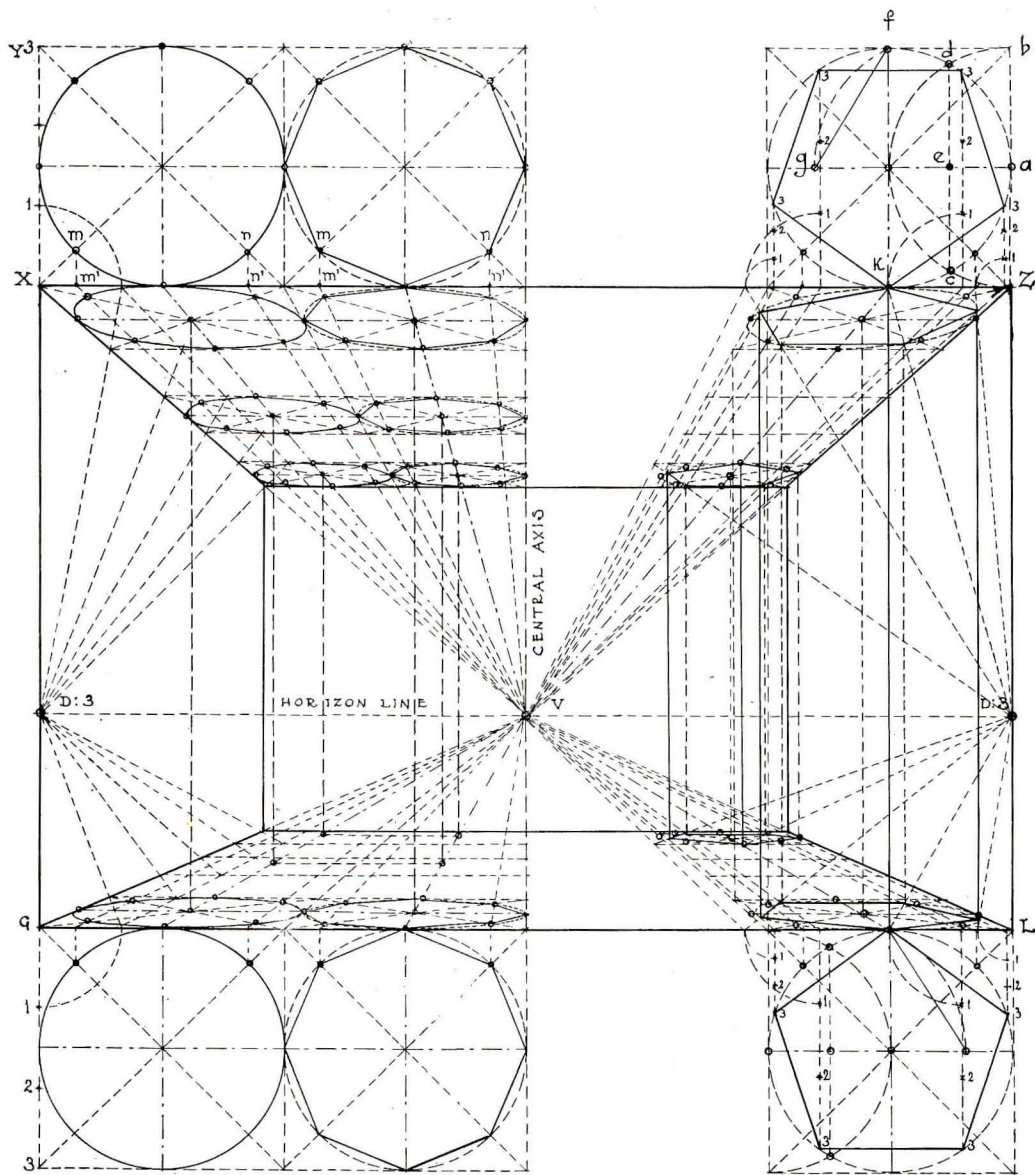
Close-up showing tooling of stone and texture of brick-work of a residence by Walker & Gillette, Architects

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Perspective Drawing, Figure 41. See Text on Page 33.

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Perspective Drawing, Figure 42. See Text on Page 33.

PERSPECTIVE DRAWING, PART XVI

BY PAUL VALENTI

THE object of the diagram Figure 41 is to show how to determine certain geometric figures in perspective as projected from a geometric plane either above or below the picture plane. These geometric forms may be the block outline of a nucleus of a building, a column, a detail, or a unit of any description. The point of interest is to be able to locate with precision these block-forms in the picture, with the exact relation between themselves and the picture plane, and between one another. The same method of elimination is applied with the distance point reduced to $D \div 3$, thus avoiding the unnecessary spread of operations outside the picture plane. In a subsequent issue the method of eliminating the geometric forms or plans outside the picture will be shown, but in order to make that demonstration intelligible, it will be necessary at this stage to give the complete operation as it takes place in its full development. First trace an oblong $7 \times 4\frac{3}{4}$ inches, this being a convenient size for the diagram. One-third of the way up from the bottom trace a horizontal representing the horizon line, then a vertical through the centre of the diagram, representing the central axis. The depth of the picture is found at the intersection of line LV and $J-D \div 3$, or at point R which means that the depth is equal to the width—since the reduced distance point $D \div 3$ is used and $1/3 GL$ which is one-third of the width of the picture. At a half inch distant from the picture plane both above and below, trace a horizontal line upon which construct the different geometric forms as shown in Figure 41. Letter the extreme points of each of the said forms as for example A, B and C in the triangle at lower left hand corner of Figure 41. To find the perspective of this triangle form and to locate it with precision in the picture, with its exact relation to the picture plane, proceed as in all other cases already known in preceding issues. Erect a perpendicular from each point, A, B and C for example, until it intersects the ground line GL , thence a straight line to the vision point V . Centering at the points of intersection of these verticals and the ground line, with an arc of circle equal to $1/3$ the distance of each point in question from the ground line in the geometric plane, rotate this arc in the *opposite* direction to the distance point $D \div 3$ most convenient for use, and from the points of intersection of these arcs with the ground line respectively, trace a straight line to the distance point $D \div 3$. At the intersection of these last mentioned lines, and those conducted to the vision point V from the *foot* of each vertical previously raised from the points in the geometric plane, on the ground line, we shall find the perspective of each point respectively. To illustrate see Figure 41, in lower left hand corner, taking the triangle A, B, C . Verticals are first erected from points A, B , and C respectively until they intersect the ground line. Thence a straight

line is traced from these intersections to the central or vision point V . Centering at the aforesaid intersections on the ground line with an arc equal to $1/3$ the distance of these points respectively from the ground line, we rotate this arc in the *opposite* direction to the distance point $D \div 3$ we wish to use, and uniting the point of intersections of this arc on the ground line with the distance point $D \div 3$ we shall find at the intersection of this line and the line traced from the *foot* of the vertical previously raised from the points in the geometric plane on the ground line will be the perspective of each point respectively. For example, A', B' and C' are the perspectives respectively of A, B and C in the geometric plane. This operation repeated above the picture plane as shown in Figure 41, will serve to check our operations and also show a fuller development in the perspective of these forms at the top of the picture, because of the horizon line being placed $2/3$ of the way down from the top.

The other forms shown to the right are constructed in the same way and their perspective is also obtained in the same fashion. An accurate delineation of these forms as shown in Figure 41 is advisable for the student to make, solving each problem carefully and for himself in order that he may grasp readily the more advanced operations which are to follow. In Figure 42, exactly the same method is followed and should also be worked out by the student very carefully. This figure may serve especially in later issues in laying out colonnades, etc. It may be necessary to explain at this point the method of finding the depth of the successive squares in the picture in which the other figures, such as the octagonal or pentagonal shape is inscribed. (See Figure 42.) For example, in the upper left-hand corner of Figure 42 we find first the circle, then to the right an octagon inscribed in a circle, and so on, each enclosed within a square. The perspective of the square is obtained in the usual manner, by using the distance point $D \div 3$, the depth of the square in perspective being found at the intersection of a straight line traced from the left of the vertical XY (Figure 42, upper left-hand corner) to the vision point V , and a straight line conducted from the intersection of an arc of circle equal to $1/3$ (one-third) the distance XY , on line XZ to the distance point $D \div 3$. For the perspective of the circle and octagon, these having been first drawn geometrically above and below the picture plane, or in what is known as the geometric plane, including the vertical and horizontal axis and diagonals, erect a vertical from the two lower intersections MN of circle and diagonals respectively, to the top of picture plane or line XZ , thence straight lines to the vision point V from these points $M'N'$ on line XZ . These lines will intersect the diagonals traced in the perspective square in four places, and these together with the four additional

(Continued on page 44)

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PICNIC OF THE PITTSBURGH ARCHITECTURAL CLUB.

THE first picnic held this year by the Pittsburgh Architectural Club was carried through on an interesting program. It was a stag affair, held on the grounds of the South Hills Country Club. Henry Hunt, chairman of the picnic committee had the event in charge. Arthur E. Anderson designed an effective announcement, blueprints of which were sent to club members. We can do no better, and might easily do worse, than to quote the account of the affair which was printed under the title "Picnicking in Arcady," in the last issue of the club's monthly "The Charette," so here it is:

"How naive a toy is a top in the hands of a child.

"Round, red, and revolvish.

"Now some scapegrace son of Belial has debauched this harmless toy for man's more effectual undoing.

"There seems to be a regular invasion of spinning brass, like the locust they prey upon our greenness, adorned with criptic cipherings, yet not devoid of sentiment. How clear, succinct, without the sounding nothingness of many syllables, yet full of meat and heavenly comfort, are the words 'take all.' What a epitome of the wide world's ambitions and the dreams of men. If one might criticize, however, the 'put one,' 'put two' have quite too much the flavor of the bounding main to suave the harsh purport of their rede.

"Great indeed was the entertainment committee, may their shadows lengthen largely.

"Tents, tables, all the conveniences of life most snap-pily indicated.

"Pleasant was the gathering, luxuriously conveyed to sylvan dells, in many automobiles, and several fords.

"The great were there. The Chapter was there, the Club was there, we were there. And ah! the meetings of the Ancient and Innumerable order of the Zymologists. Note a certain air of conscious competence in anecdotes. Last year apologies and modest hope subdued the voice, now rings proud certainty, heralded by confidence servitured by Braggadocio. These be unwotted matters.

"After vulgar Hunger had been ousted from the belly, trooped the faithful to the games. Here was the only shadow of a glorious day. We have always esteemed Tom Pringle highly as an honorable man. No more. The cock-fight, what a brutal game. A ring being formed two men are loosed at each other, bound, think of it, bound, shackled, in the twentieth century of this gentle era. The editor and Tom Pringle took the ring together. We fell, let the veil be drawn.

"But revenge is sweet, or sweat perhaps on such a day. Tom Pringle was driven ignominious from the ring by that earnest Irishman Boyd, who struck with victory hot upon him after evicting Wallace Smith from the ring by dint of hearty grunting.

"The sack race! What a boost for embrocations. Thus it is done. Get a sack, gunny sack preferred, enter it feet first, and at a signal try your best to jump out of it, this will accelerate your momentum, to speak technically, until you are able with a last despairing leap to land firmly and flowingly on your stomach. Then go and get some few gallons of arnica and retire for the day.

"How descriptive is the noble English tongue. Heats. Exactly. The first heat discovered Pringle and Mac-Crumm gracefully draped on the sward in advance of the field. They yielded their places courteously to Schoeneman and Hergenroder and in the final agony the furrows smoked beneath the digestive tracts of Schoeneman and Pringle in the order named. Then, as if enough perspiration was not crying aloud from the saturated soil we must have a foot race. Eighty yards. This is the roster of imbecility. First heat Smith and Caldwell, second Bowers and Aussen, finals Smith and Aussen. But we mention the wheelbarrow race with shame. How can man, the noblest of created things, stoop to such depths, to his hand to be exact. And with his latter anatomy elevated, like as never since the palmy days of childhood, grasped by another of his ilk and trundled drunkenly to ignominious victory. Hergenroder-Aussen, Morris-Brasfield so they were exhibited.

"But now the noble fanfare of the trumpets!

"Sir Lefty Bowers high of Jack, meets Sir Tom de Pringle, the daft Scot. Sir Bowers holds between his iron thighs the noble destrier McMullen (out of Woods Run by Accident), Sir Pringle pringles on the spine of Schoeneman who curvets snortingly.

"A hush is on the lists as the champions lower their heaumes upon their necks, which are distinctly heard to give out a rasping sound. The heralds sound their flourishes, the knights address themselves and when the baton falls the earth thunders hollowly beneath their rushing hooves. They meet with a crash, universally conceded to be audible. (Upon consulting Sir Thomas Mallory I find they should have at this juncture lightly avoided themselves, after all-to-brasting the spears, but times change, no criticism intended.)

"Fell was the fray, so fell that Sir Pringle caught the spirit and fell also. When the dust had settled, behold Sir Bowers still Left. Great victory, great satisfaction, good Knight.

"Baseball inevitably. Henry Hornbostel as umpire; Mr. Hornbostel is an excellent architect. We won as usual.

Score	.....1	2	3	4	5	6	7	8	9	Total
WE	.....0	1	2	1	0	2	4	.	.	10
WE	.....1	1	1	3	3	1	3	.	.	13

"How well the committee on transportation functioned this time; we are grateful for your thanks.

"Glorious occasion.

"Many happy returns of the day.

"(Note—Prizes were awarded but as these are presented in the forms and kinds prescribed in the secret ritual of the Club we are not privileged to mention more than the fact.)

IT IS not generally known that there is a great deal of information readily available to the architect or draftsman who is undertaking the designing of a building or group of buildings for some special purpose—institutions particularly. A knowledge of the practical requirements is essential if the building is to be satisfactory and it can be had from headquarters. For instance, The National Tuberculosis Association, 370 Seventh Avenue, New York, has a service department that helps architects, heads of institutions and others with problems in the design of sanatoria. It does not supply plans for institutions but co-operates with architects free, excepting in cases that require travelling on the part of an expert. The Sage Foundation, 130 East 22nd Street, New York, has in the Child Helping Department, plans of homes for orphans and an expert consultant.

In sending in subscriptions for PENCIL POINTS please state your profession or occupation as we need this information for our records.—*Subscription Mgr.*

Issues of PENCIL POINTS previous to March, 1921, are out of print.

PENCIL POINTS



V. L. S. HAFNER

VICTOR L. S. HAFNER, who won the Fellowship in Architecture of the American Academy in Rome, in the Annual Competition recently held, was born in Cincinnati, Ohio. He was educated in the Public Schools in Boston and graduated from High School in that city. He entered the office of Bellows and Alderich, Architects, Boston and while employed in that office studied in the Atelier of the Boston Architectural Club under M. Duquesne, a Grand Prix man of the Ecole des Beaux Arts, Paris, as patron. He studied at the Massachusetts Institute of Technology and graduated from the Department of Architecture. He then took a year of Naval Architecture at the Massachusetts Institute of Technology specializing in the design of concrete ships. Following this course he took up work under the government at the Boston Navy-yard and upon completion of this work was recommended for the rank of Ensign and served in the Construction Corp of the Navy. At the termination of the War he re-entered Architectural work and was in the organizations of McKim, Mead & White and of William Baungarten in the capacity of designer. He won second prize in the Ruth Travelling Scholarship Competition in 1920 and 1921.

The subject of the Preliminary Competition for the Fellowship of the American Academy in Rome was "A Country School for Boys near an Old Fashioned New England Village." The final problem was "A Group of Buildings for a University of the First Class." The fellowship which Mr. Hafner has won is of the value of \$1,000 a year for three years during which he will reside at the American Academy in Rome, where he will enjoy the great opportunities for advanced study afforded by the Academy including the opportunity to travel in the pursuit of his studies.

Mr. Hafner is now with Frederic G. Frost, Architect, New York City.

PERSONALS

HAROLD E. HALL, registered architect, formerly of Westwood, N. J., is now connected with the Hester Decorating Co., New York City.

JOSEPH P. JOGERST, who for the past year has been in charge of design in the office of Van Leyen, Schilling, Keough and Reynolds, Architects and Engineers, Detroit, has resigned his position to open an office for the practice of Architecture at No. 970 Gratiot Avenue, Detroit, Mich.

HAROLD P. BERGEN has opened an office at 607 Worcester Building, Portland, Ore., for the practice of architecture. Mr. Bergen has lately been manager of the Canadian office of Thomas W. Lamb.

EDWARD F. FANNING, Architect, has removed his offices from 4 East 39th Street, to 522 Fifth Ave., Guaranty Trust Building, New York City.

PARIS PRIZE AWARDED

THE Paris Prize has been awarded by the Society of Beaux-Arts Architects to Lloyd Morgan, as the result of the competition which closed August 16, at the headquarters of The Beaux-Arts Institute of Design.

The funds for the scholarship were donated this year by Mrs. Lewis B. Preston. Mr. Morgan is from the Atelier Hiron, New York. In addition to receiving the Paris Prize Mr. Morgan was given a First Medal. Mr. J. G. Schuhmann, Jr., Columbia University, was placed second and awarded a First Medal. A. E. Westover, Jr., was placed third and given a Second Medal. H. S. Atkinson was placed fourth and awarded a Second Medal. R. A. Fisher, placed fifth and awarded a Second Medal.

PROGRAM

The Annual Committee on the Paris Prize proposes as subject of this Competition:

"An Exhibition Center"

A rich municipality in developing its city plan, proposes to give great importance to a center for exhibitions and assemblies. It is convinced that not merely national but international prominence will be given to the city which provided, in a magnificent manner not hitherto realized in America, facilities for great political, religious, or industrial conventions and assemblies and exhibitions of all kinds.

Therefore, at a point where important avenues and streets converge, a circle with a radius of 750 feet has been drawn and the ground within its circumference left free for the placing of the contemplated construction. It is proposed to erect here a building or a group of communicating buildings which may be used as a unit or separately.

The requirements are:

(1) A *Great Hall* to be used for industrial exhibitions, horse shows, athletic meets, horticultural exhibitions, etc. The clear floor area in this should be not less than 50,000 sq. ft., around which should be disposed exhibition galleries which may be converted into seating space when required.

(2) An *Art Gallery* adapted to annual exhibitions of national and international scope and loan exhibitions of different kinds, such as paintings, sculpture, architecture, furniture. Certain of these galleries should be lighted from windows in the wall, others from overhead. The floor area of this should be in the neighborhood of 30,000 sq. ft. disposed on one or more floors.

(3) An *Auditorium* with a seating capacity of 10,000 for public meetings, concerts, etc.

(4) An *Enclosed Space* available in connection with these units where, in the open air, concerts could be held and sculptural and horticultural exhibits shown in connection with those held under cover.

(5) A *Restaurant*, installed somewhere in the group, to serve visitors during the time of exhibitions or assemblies.

The facilities for entrance, circulation, and exit should be carefully considered in connection with these buildings as they will necessarily vary according to the functions of the different elements included. At times the whole group will be used for a single purpose, at other times there will be separate or simultaneous use of the different units.

PENCIL POINTS

SKETCHING AND RENDERING IN PENCIL

(Continued from page 7)

cessfully picture some of nature's complexities, but there are many others which are entirely a matter of choice. It is within the power of the skilled artist to approximate, if he desires, the forms and the values (with the exception of the more brilliant ones) of objects in nature, but, mainly because it has been found that such drawings as most closely approach perfection in this direction are usually too photographic in effect to prove pleasing from an aesthetic standpoint, there has always been an attempt to obtain a somewhat individual interpretation rather than mere excellence of depiction. In striving for such expression, artists have developed conventional methods of their own, or have copied from their predecessors and contemporaries such ideas as have strongly appealed to them, with the result that the student now finds unlimited suggestions from which he may select those that he desires. Modifying them to suit his problems and his personal tastes. Most draftsmen have a leaning towards some definite type of work;—some like the naturalistic, for instance, while there are others who take greater pleasure in employing a style which is more highly conventionalized, adding a certain decorative quality, perhaps, to all that they do:—who so compose their masses and arrange their lines that regardless of the objects represented this quality is conspicuous. Now the average architectural subject fails to lend itself readily to such treatment, as the more photographic type of work better expresses, from the client's standpoint, the character of buildings, but there are, nevertheless, some classes of drawings in which architecture is prominently shown, but where composition and technique of a decorative nature seem more essential than does a truthful delineation of the architecture itself and its surroundings, and it is this type with which we are especially concerned just now.

Rendering of this sort is used for so great a variety of purposes and is handled in so many different ways that we can hardly do more here than attempt to show its importance, pointing out to the draftsman that his knowledge of sketching and rendering will not be well rounded out until he has given this decorative style his careful consideration. (In this connection we urge him to collect and study many examples by different artists, copying such drawing or portions of drawings as make a strong appeal.)

Among the uses of such drawings may be mentioned the illustration of types of advertising matter, in which drawings of buildings, or parts of buildings are required or the making of magazine covers, the designing of title pages, or the illustration of certain classes of books and articles, such as those pertaining to the purchase or furnishing of the home (and others of similar nature):—or, again, the drawing of decorative headings, marginal sketches and tailpieces.

It should not be supposed from what was said above, that architectural perspectives of proposed buildings for submission to the client cannot be done satisfactorily in a decorative manner, for if the style is not forced the results may be very pleasing without detracting from the subject, and even the more naturalistic type of drawing can be made somewhat decorative in effect, if it seems desirable to do so, by the addition of an ornamental border or lettered inscription or something of that sort. There are many drawings, however, where the architecture is simply a part of the decoration, being sometimes entirely imaginary or perhaps distorted into forms which would be impossible to build or undesirable if built, yet which add nicely to the decorative appearance. In such work the drawing is not a means to an end (as is the average architectural rendering) but is an end in itself, and as its main purpose is frequently to catch and hold the attention, as in advertising work, prominence is therefore often given to such architectural features as are considered quaint and picturesque. Thatched and tiled roofs are popular, for example; as are huge chimneys, windows with shutters of unusual design, flower boxes, lattices, garden gateways, etc.;—birdhouses, weathervanes and sundials, rainwater leaders and leader-heads, door knockers, ornamental hinges, and so on.

It is not only in the selection of these details, however, but it is in their arrangement as well that the picturesque is sought, for the spacing of the windows and doors,—in fact all those parts,—often depends more on what looks interesting and attractive than on what would be practical. The search for the picturesque is not confined to the architecture for trees and shrubs of all sorts are utilized, distorted into any shape and arranged in any way that pleases the fancy of the artist. Flowers of unheard of species grow in curiously fashioned pots or are grouped in beds of fanciful design while clouds are piled in the sky in a manner wholly without precedent in nature. The technique is as varied, too as the selection, all sorts and kinds of lines being used in every possible way. One should not gain the impression from all this, however, that these things are jumbled together in a haphazard manner, for quite the opposite is true,—the greatest pains being usually taken that the completed whole shall be a beautiful and interesting design, rendered in an attractive manner, and although in much of this work the imagination is given free play, it is by no means permitted to run riot.

Many of these decorative renderings are done in pen-and-ink or wash or some medium other than pencil, but as in nearly every case careful pencil preparation is required, regardless of the medium used for completing the final drawing, the subject seems to fall within our scope. In fact the importance of such preparation cannot be over emphasized. When a decorative sketch is desired the customary method of procedure is the same as we have explained for other pencil work, for once the artist has conceived his scheme a number of rough sketches are generally made first of all at small scale, from which the best is selected for further study, following which larger scale sketches are drawn, frequently on tracing paper and one over the other, changes and corrections being performed as the work progresses. When the design meets the requirements and satisfies the artist it is transferred to the final paper and completed. The number of studies made from start to finish depends on the skill of the artist and on the kind and size and importance of the problem.

At "1," Figure 37, is a "fine line" pencil sketch of a decorative nature, and yet the naturalistic effect is not in this case wholly lost;—in fact one can gain a clear conception of the building and its environment in spite of the decorative character of the rendering. At "2" and "3" are several other suggestions, showing a somewhat similar treatment of smaller subjects, and in these, too, architecture of a practical nature has been indicated.

Not infrequently artists make decorative sketches just as a pastime, either combining existing elements, or fragments of some definite style, into a decorative arrangement or composing fanciful designs entirely from the imagination. In such projects no limitations of any sort are present unless the designer wishes to impose them upon himself, so he is able to forget the many handicaps that ordinarily restrict him in every direction and find an opportunity to lose himself, for the moment, in these creations of his imagination.

TRAFFIC TOWER COMPETITION

THE competition which closed at noon, August 17, to secure designs for traffic signal towers to be donated to the City of New York by The Fifth Avenue Association, Inc., brought a very large response from competitors. The competition aroused so much interest that it is probable that many excellent designs were submitted and the result should be the selection of a design that will make these towers ornaments to the Avenue.

Mr. Eliot Cross of Cross & Cross, Architects, is professional advisor in the conduct of the competition.

The purpose of the Fifth Avenue Association to replace the present temporary towers with towers of suitable design is an excellent one. The present towers were installed through the generosity of Commissioner John A. Harriss and the idea has proved a successful solution of the problem of regulating the traffic on Fifth Avenue.

The new towers, like the present ones, will have lights, like powerful automobile headlights, mounted on the top.

PENCIL POINTS

ARCHITECTURAL DETAIL, PART V.

(Continued from page 30)

shade exhibited between different blocks in the flat wall surfaces. It was much later found out that this contrast is due more to the way the stones are cut, to texture, than to the color of the stone itself. Such variety will increase as the building grows old; while differences in the color of the stone would be obscured by the grime and soot of the city.

A few suggestions about texture would have saved me much time in making these personal investigations, and believing that others may agree with this view, the next articles of this series are to take up a short study of different kinds of textures and the way they can be obtained.

The first will be illustrated with close-up views of the finishes of limestone, terra cotta, granite, stucco and other materials.

As I have partially suggested, the fundamental points to keep in mind in working this fertile and fascinating field of architectural expression are:—

1.—*The finish must be characteristic of the material.*

The stronger structural stones must always express their ability to uphold the structure and only marbles of finer grain adapted to use as veneers or coverings should be treated as such. In no case should rustications or supporting members, brackets, etc., project so greatly that the excrecent bulges of stone become manifestly useless bumps outside the plane of real support.

Shingles are distinctly an American roofing material, why try to employ them in ways that ill suit their proper use? The artistically irregular lines of some of the modern waved shingled roofs, the weaving of the valleys and within limits the bending of the eaves, have much charm; not so a roof so laid that water runs sideways across the shingles, or a whole roof puffed up until it looks like a feather bed.

Slate is a beautiful roof covering and more beautiful when it has variety of color and thickness. It should not, however, be blocked out in chunks in imitation of the far less adaptable stone slabs used in some localities abroad, or so heavy as to make one fearful for the security of the rafters.

An almost undiscovered world lies in the really good and appropriate design of terra cotta—a plastic material peculiarly adapted to the incrustation of a building and temptingly amenable under the modeller's hand—and in a use of stone more in keeping with the structural nature of our buildings.

Wood may be finely carved or roughly hewn; but certain kinds of wood should be reserved for each treatment. It is useless to carve strongly-patterned grains and one wonders at the carelessness of specification writers who insert a blanket clause of "quartered oak" regardless of the finish.

2.—*The texture should be restrained, never forced.*

Although lack of feeling for texture produces a mechanical effect and leaves the art-lover cold, too much of it becomes theatrical. On page 29 is shown another part of the residence by Charles I. Berg, a view of which has already been discussed. Here the architect exhibits more reserve. The soft effects of tapestry brick and the variety of the stone finishes do not seem like an effort to reproduce something old. If we except a cracked and re-leaded pane of glass the treatment of this whole corner is replete with the refined expression of an artist handling his material with loving care. Notice the relieving arch over the window, where brick comes to the assistance of a stone lintel proportioned to no more than the support of its own weight. No hidden steel backer is needed here.

3.—*The texture of each material must be in keeping with that of its neighbor.*

In the view of a portion of beautiful Princeton Dining Halls on page 29 it seems to me that the slate roof—though not too heavy perhaps on a rougher building—is forced for the rather clean-cut texture of the stone, both ledge and cut, and for the sharp and delicate carv-

ing of the arch spandrels. Perhaps this view is badly selected to point the moral for I appreciate the fact that this group is on the whole so lovely that many persons will be unwilling to cavil at any part of it. The illustration shown on page 30, a bit of detail from Mr. Thomas W. Lalmont's new house, Walker & Gillette, architects, is an example that shows entire harmony in the finish of brick, stone and glass. The tooling of the limestone has the most charming variety; is simple, yet rather unusual in the way the column is handled. The brick work shows a swelled brick sticking out now and then; but not too many—the whole is a beautiful bit of carefully inter-related texture.

Before stopping I wish to make one point, the really constructive one, quite clear. You will have missed the more important part of this forcedly sketchy review if you do not understand that the examples illustrating the text were selected with two thoughts in mind. They have been used in warning against possible pitfalls, but chiefly they are shown as a stimulant to the quest of beautiful texture. "Go thou and do likewise," is their message to us. For it is not enough to conceive—the man who forecasts the finish of his design must keep close to the artisan who materializes it; and, guiding his hand, these two become the craftsman.

NEW YORK ARCHITECTURAL ALUMNI OF THE UNIVERSITY OF PENNSYLVANIA

THE monthly luncheons of the New York Alumni of the University of Pennsylvania School of Architecture will be resumed on Thursday, September 1st, and the Executive Committee hopes that a goodly number of new faces will be seen. The luncheon will be at 12:30, at Browne's Chop House, 1424 Broadway. The last meeting was held in June, and was addressed by Frederic L. Ackerman, Architect, whose subject was "Standardization and the Architect." A prominent speaker is present at each of these luncheons, and the success of the idea is shown by the number of new men seen each month.

Any men who have attended the U. of P. School of Architecture are welcomed, and should keep the secretary posted as to their correct mailing address, so as to receive the post-card notices. There are no dues, the light expenses being taken care of by small assessments. The officers are: Abram Bartow, President; T. Ross Ferry, Treasurer; Fred R. Lorenz, Secretary, care of McKeenzie, Voorhees & Gonelin, Architects, 1123 Broadway, New York City.

DALLAS ARCHITECTURAL CLUB

THE Dallas Architectural Club held its annual election of officers with the first meeting in June and during the same week celebrated its first anniversary with an informal dinner in the Oriental Hotel.

Shortly afterward the Atelier of the Club held its "First Annual Roughhouse."

Since the coming of hot weather the club has given up its regular business meetings. Keeping the meeting dates in mind by giving entertainment in some way to cool a few of the sweltering moments of "dog days." A swimming party, a watermelon festival, and a theatre party have been given and a picnic is planned.

Considerable rivalry has been shown in the baseball schedule which has been in progress on Saturday afternoons, during the past few weeks.

Mr. J. W. Dehnert, first Vice-President of the club was recently tendered a farewell luncheon, upon leaving to take charge of the branch office of C. I. Hill & Company, in Houston, Texas.

THE Otis Art Institute of The Los Angeles Museum of History, Science and Art has issued an attractive booklet for the season of 1921-1922. The school offers courses in drawing and painting, illustration, decorative design, sculpture, metal work and jewelry, and in interior decoration. The instructor in interior decoration and furniture design, and in perspective is Alexander Baroggio. Wm. Alanson Bryan is Director; E. Roscoe Shrader, Acting Managing Director; Minnie E. Wallace, Registrar.

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 give me a list of books on architectural ornamentation of the Empire, Adam and Renaissance periods? J. F. O'M., Pawtucket, R. I. **Answer**—We suggest the following books for the architectural ornamentation of the Empire, Adam and Renaissance periods: Empire—"Motifs Historiques" by César Daly, "Versailles and the Trianon" by Lambert, "La Musée des Arts Décoratifs" by Lambert, "Le Palais de Fontainebleau" by Rousel, Percier et Fontaine, "Style Empire" (Friezes, Panels, Ornaments, etc.) by Salembier. Renaissance—"French Decoration" by Strange, "Décorations Intérieures" by Boucher, "L'Architecture Française, "Palais du Grand Trianon," "Palais de Petit Trianon," Intérieurs de Style" by Remon. "The Palace of the Louvre and the Tuilleries", published by Albert Morance, II, Rue de l'Odeon, Paris, and "La Renaissance en France" by Camille Martin. Adam—"Robert Adam and His Brothers" by John Swarbrick, published by B. T. Batsford, London, England; "Reprints from the Works of Robert and James Adam", "A Book of Mantels" by Adam, "The Art of the Plasterer" by Bankart.

Question—Will you tell me where I can obtain a copy of the New York Building Laws, N. W. Le G., Water-vliet, N. Y. **Answer**—You can obtain a copy of the New York Building Laws from the Brooklyn Daily Eagle. Eagle Bldg., New York. This book, together with the Code of Ordinances can be obtained for 75 cents a copy.

Question—Will you kindly let me know if you have any books on the framework of buildings? M. A. M., West Philadelphia, Pa. **Answer**—For books on the framework of buildings we submit the following references: Kidder, "Building Construction and Superintendence," Part II, Carpenters' Work, Eighth edition; Martin, "Details of Building Construction"; Fair, "Practical House Framing"; Maginnis, "How to Frame a House"; or "House and Roof Framing" and "Roof Framing Made Easy"; Radford, "Framing, House Framing, Barn Framing, Roof Framing", W. T. Comstock Co., Publishers

Question—Will you kindly inform me whether or not you have ever illustrated Park Shelter Houses in any of your publications, or if you can mention any book or other publication on this topic? M. E. S., South Bend, Ind. **Answer**—Vol. 9 of The Architectural Review contains details on Garden Architecture, but this issue is now out of print. We however, submit several references which we believe will be useful in the design of park shelters, as follows:—"The Practical Book of Garden Architecture," by P. W. Humphreys, published by the J. B. Lippincott Co., 1914; "Landscape Gardening—Buildings, Western Landscape Architecture," Municipal Facts, V. 3, No. 9, September, 1920, p. 9-12; "Garten Architektur," Wien, Lehman & Wenzel, 1876, "Architektonisches Skizzen Buch, 1855; "Construction et Décorations pour Jardins" by J. Bousard, published by A. Morel & Co., 1881, "Architectural Features of the Garden" by J. T. Fallon, Brickbuilder, Boston, 1916, p. 119-120; 150-154.

Question—Can you supply me with the names of the leading architects in the principal countries of South

America, or refer me to the source from which these names can be obtained? W. N., N. Y. C. **Answer**—We have no list of names of the principal architects of the principal countries in South America, but submit herewith the name and address of the publisher of a register of the leading manufacturers and architects of South American countries, which is similar to our Hendricks' "Commercial Register of the United States", as follows: "Anuario de la American Latina, Bailly-Bailliere-Riera, Eduardo Riera Solanich, Consejo de ciento 240, Barcelona Espana.

Question—Will you please advise me where it may be possible to obtain information on Japanese Tea Houses for residential purposes, to be constructed under climatic conditions, relative to this country, or on Japanese Architecture, which would cover this field? W. G. D., Ottawa, Canada. **Answer**—We herewith submit the following references: "Constructive Art in Japan" R. H. Brunton, Asiatic Society of Japanese Transactions, Vol. 2, p. 64-86; Vol. 3, part 2, p. 20-30, Yokohama, 1874-1875, "Impressions of Japanese Architecture and the Allied Arts", New York, Baker & Taylor, Publishers, 1905, R. A. Cram, Author, "Japanese Art at the Panama-Pacific Exposition", Jiro Harada, International Studio, New York, 1916, Vol. 57, p. 164-175, "Japan and Its Art." M. B. Huish, B. T. Batsford, Publishers, 1913, "Japanese Temples and their Treasures", Tokyo, The Shimbi Shoin, 1915, Japan-Panama-Pacific International Exposition Committee, "Japanese Homes and their Surroundings" by E. S. Morse, New York, Harper & Bros., Publishers, 1889.

THE SYMBOLISM IN ST. THOMAS'S.

(Continued from page 9)

count book and the money bags, symbolize the eunuch's office as steward of his master's house. Speaking of money bags reminds one of the emphasis some of the newspaper stories placed on the association of money bags with initials, presumably those of a great financier—but how could finance be symbolized better? The question has also been raised in the newspapers whether a dollar sign and a true-lover's knot carved at either side of the bride's door represent alternative motives for marriage. It is safe to say that no satire was intended and that the interpretation is unwarranted. Everyone knows that even the most idyllic matrimonial venture is likely to come to grief if the romantic swain is not what is called in homely language "a good provider."

Taken as a whole—as they should be—the carved decorations at St. Thomas's, both those on the exterior and those in the interior, embody the human element and provide a beautiful and significant enrichment for a church that is an example of architecture of the highest type. The architects of the church were Cram, Goodhue & Ferguson, the architect of the chancel fittings, upon which the details illustrated here appear, was Bertram Grosvenor Goodhue.

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THE SPECIFICATION DESK

A Department for Specification Writers

WRITING THE SPECIFICATION

By LOUIS R. HOLSKE

IT may be well to open this article with some remarks on the preparation necessary to enable one to write a specification, so that the intent of the specification may be readily grasped by any one on reading it. Regardless of the nature and extent of one's previous education, the first step for anyone desiring to fit himself for specification writing, is a thorough training in an architect's office as a draftsman. This training *must* be thorough, and be continued over sufficient years to give a wide range in types of buildings worked over, and to insure an ability to make a clean, clear working drawing, scale or full size detail, as well as the ability to read quickly, any drawing. Having satisfied himself that he has reached this point in his preparation, it will become necessary for the aspirant to begin superintending construction, either in conjunction with his drafting or by giving his entire time to it. The more superintendence experience the better fitted he becomes. At this time the faculty of observation should be cultivated, particularly for small things. It is also well to practice being a good listener rather than a talker, for much practical information can be acquired from a foreman on a job and also from the individual mechanics as well—they are all possible future foreman. Such information is usually given freely. Whatever the information, it must be weighed and analyzed carefully, the good retained, the bad rejected. In beginning superintendence work, the habit of thinking in general terms must be supplemented by that of thinking in detail without losing sight of the problem as a whole. A mental attitude that is skeptical and analytical must obtain. Conditions must not be accepted at their face value, but must be carefully analyzed and separated into their component parts and each part weighed separately. Things are not always what they seem. A material proposed for substitution for one specified must be examined, its characteristics studied and compared with those of the one specified, and its effect on other adjoining materials determined before a decision as to its use is given. Similarly a form of construction proposed for use in place of one specified or detailed, must be carefully analyzed, its relation to all other work considered and its sufficiency determined before rendering a decision. During the years of superintending the constant need of referring to specifications will give a familiarity with them, an ability to discern their faults of arrangement, and of language, as well as other shortcomings. It will be excellent practice having the defects of a specification for a current piece of work well in mind, to rewrite it in accordance with one's ideas while superintending the work. At this time one should be in a position to write a specification, selecting a small building, preferably a country house, the drawings of which may be accessible. After writing the specification, it would be an excellent scheme to have it criticised by some competent person. From this point on it is a matter of practice and study. As one goes along it is necessary to have a filing system to collect the technical data and requirements of all trades necessary in writing specifications. This is matter gathered partly from one's own experience, partly from the experience of others obtained by personal contact, or from books and the technical journals. Good constructive matter is very often found in catalogues, but it must always be carefully weighed. It should be properly classified and filed to be readily accessible, because it is matter which is being constantly added to and changed.

At first one will write the specifications by hand, referring to paragraphs of other specifications obtainable, followed later by dictating to a stenographer, who will typewrite a draft for correction, and, later, as one be-

comes more proficient, will come the dictation of the specification to be typed in finished form.

In writing a specification it is important that the drawings be arranged to give one a comprehensive view of them all. They should be arranged in some order and in such manner that the eye may travel swiftly from one to another. Writing a specification with the drawings placed one on top of another, having to lift each in turn to get at the one under it, is not only wasteful of time, but is very apt to lead to duplications and omissions. The drawings should be either tacked to racks of wood properly arranged, or pinned to muslin shades which should be attached to spring shade-rollers.

The drawings having been arranged properly, it will be necessary next to study thoroughly the scheme before one. A specification can not be written intelligently until the theory of the proposed building is fully understood and assimilated. In the case of a simple building this may not require much time, but in larger and more complex buildings all the time that is necessary for the purpose should be given. The scheme having been assimilated thoroughly, the items of work in the various trades should be picked out in their order and noted on a pad, the trades kept separate and in order. As one picks out the items in each trade, many of them require either mention or work in other trades to tie in properly, so that some kind of pad or book indexed as to trades should be at hand in which to note such items under their proper trades. Also as one goes through the later trades, items will occur requiring mention in earlier trades, each of which must be noted in the indexed pad or book mentioned above, and each of which must be listed in the work to be done in each trade. At this point it may be mentioned that the arrangement of trades in a specification should be as far as possible, in the order in which the work is customarily installed in the building. Where a trade installs both exterior and interior work, they should be separated, the exterior work specified first, followed by the interior.

In taking off the drawings the items of work to be done in the various trades, the customs in vogue in the locality should be followed closely, and all items of work specified under the trade or trades which must install them. This is particularly important in large cities where the labor unions are strong and agreements between them and the employer's associations exist. Work specified under one trade and rightfully belonging to another, is very apt to be overlooked by the sub-contractor in estimating with a situation resulting which is very unpleasant.

Having listed all items of work required in all trades, it will be necessary to prepare the general and technical requirements for each trade, which determine the quality and method of installation of the work. As explained before, this is matter which is made up partly from one's own experience, partly from the experience of others and acquired in contact with them, and in many other ways. It is constantly changing and must be revised from time to time. Indeed, it varies with different types of structures.

With this arranged satisfactorily and with the list of items of work to be done, the dictation of the specification may be safely started. This should be done preferably in a room where one is free from interruption, as mental concentration is not only desirable but necessary for the best results. As to the typing, it is much better, until the work becomes familiar, to have a draft typed "triple spaced" by a stenographer, to be corrected and then written in final form. The triple spacing allows room for corrections without making it so difficult for the stenographer to copy.

From this point on it becomes a matter of practice. The habit of analyzing constructions and separating them into their component parts must be practiced con-

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tinually. The specification writer should be able to demonstrate the practicability or reverse of any proposed construction. As he works, he must actually, in his mind, erect the building. Any construction which he does not understand fully, he can not properly handle in the specification. It is imperative that he acquire an understanding of any construction before attempting to specify it. The specification writer should at the same time keep himself informed as to costs. He should watch the changes in the material market and labor as well. If asked, he should be able to name the more expensive of any two materials or forms of construction having the same result in view. He must study constantly along this line. He must keep abreast of the times by reading all manufacturers' literature reaching the office, and should file a great deal of it in such manner as to be readily accessible. He should be informed as to the manufactured devices in the market and know where they may be obtained. Also he should be particularly alive as to the new ones, their merits or defects.

He should acquire the art of estimating the probable cost of work by taking off quantities both of material and labor in all trades. As estimating requires a great deal of analysis, it will be very helpful in his specification work and will develop in him a certain quick judgment of costs. It would be well for him to purchase a practical book on estimating and study it diligently.

One more point only need be dwelt on, and that is a specification reminder. It would be an excellent thing early in his experience to start a reminder, i. e., a list of possible items entering into the construction of buildings of all classes. It should be arranged to separate the different types of buildings, i. e., country houses, city houses, non-fireproof and fireproof construction. Or, perhaps better, country houses, non-fireproof and fireproof construction. It should be gradually developed by the individual, and after lining out all specifications it should be read over to pick up any possible omissions. Printed reminders have been obtainable in the past, but as methods change, their usefulness becomes less and one built up by the individual is always preferable. Besides the research necessary in preparing such a reminder is very beneficial.

PENNSYLVANIA ACADEMY OF THE FINE ARTS SCHOOL

THE school circular for the one hundred and sixteenth year of The Pennsylvania Academy of the Fine Arts, Philadelphia, has been issued, that for the school year 1921-1922. In addition to the descriptions of the various courses given in the school and other information, this booklet contains a number of very interesting illustrations showing work done in painting and sculpture by students in the school. The faculty is composed of Arthur H. Lea, Charles Grafty, Hugh H. Breckenridge, Henry McCarter, Joseph T. Pearson, Jr., Daniel Garber, Arthur B. Carles, George B. Bridgeman, F. Walter Taylor, John F. Harbeson, Fred Wagner, Albert Laessle.

A well-equipped summer school is maintained at Chester Springs, Pa. The headquarters of the school are at the Pennsylvania Academy of the Fine Arts, Broad Street above Arch, Philadelphia, Pa.

Through the generosity of Mrs. Alexander Hamilton Rice, twenty scholarships in the Academy have been provided, entitling the holders to free tuition. Ten of them are in memory of William L. Elkins, and ten in memory of George D. Widener. Through the generosity of Edward Bok, a scholarship is available from the "Philadelphia Prize," established for the Academy's Annual Exhibition. Under the will of Mary R. Burton, deceased, another free scholarship is provided, and through the generosity of Mrs. George K. Johnson, the Sarah Kaighn Cooper Free Scholarship has been established. The above free scholarships are available this year for returning students only, and are awarded solely for the purpose of financially assisting those who would otherwise be unable to pursue the study of art.

PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER.

Any publication mentioned under this heading will be sent free, upon request, to readers of PENCIL POINTS by the firm issuing the publication.

Terra Cotta Defined, Brochure Series Vol. VI.—A profusely illustrated treatise defining the use of Architectural Terra Cotta in The Retail Store, Theatre, Office Building, Bank, School, Public Building, The "tax payer" and the "Run-down" Building. Many details of ornament. 32 pp. 8½x11 in. The National Terra Cotta Society, One Madison Ave., New York.

Architectural Terra Cotta—Standard Construction—A collection of 70 full-page plates showing best types of constructions in connection with the use of Architectural Terra Cotta. Fully indexed. Size of page 10½x14 in.; size of plates 8½x11 in. Bound in library buckram. The National Terra Cotta Society, One Madison Ave., New York.

Design for Houses of Indiana Limestone—A reprint of a competition for a detached residence of Indiana limestone, that appeared in The Architectural Review, Sept., 1917. Shows the prize winning designs and the Jury's criticisms. The reprint is obtainable by our readers from the Indiana Limestone Quarrymen's Association, P. O. Box 400, Bedford, Ind., and is listed as Volume 27 of the Library Series.



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