

## SAVING LOST MOTION

**E**VERY bit of energy or of time that is consumed unnecessarily in accomplishing a purpose is a dead loss. That is obvious. But how great this loss is in all the branches of the world's work is not often appreciated, and in architectural practice this loss exists to a considerable degree. Every means of preventing this lost motion is as valuable to the draftsman and the student as to the practicing architect. Unless one goes about every part of the work in the most direct way—the way that saves time and energy—the loss is at least partly his, for the value of his day's production is lessened. For this reason it is highly desirable, that as full an exchange of ideas as possible should take place among draftsmen and architects to the end that the most effective means of doing drafting room work may become generally known. This can be accomplished in a great degree through the pages of *PENCIL POINTS*, partly by the printing of letters from men who have worked out some stunt or short cut in practice, and partly by publishing articles by men who have given special attention to some phase of the work. For instance, the article "The Distant Vanishing Point" by Professor Martin, of Cornell University, which was published in this journal some time ago, was a practical help to many. One architect in New York told us that in his office at that time they needed to lay out a perspective and one of the vanishing points would have been "somewhere over in Brooklyn," as he expressed it. The copy of *PENCIL POINTS* with that article was at hand, and by tacking a few straight sticks on the drafting board, as described, the troublesome vanishing point was easily handled. There are innumerable other time saving methods that should be described. You are invited to send in a description of any you may think will prove of interest.

Lost motion in acquiring knowledge of architecture is a thing that systematic study is designed to minimize, such a method as that provided by the program of the Beaux-Arts Institute of Design for instance. In order that the maximum benefit might accrue to those of our readers who were following this course we began publishing two years ago, the series of articles "The Study of Architectural Design," by John F. Harbeson.

A fact that may well be emphasized here, though it is widely recognized, is that a systematic method

of working out a solution of each problem that arises in architectural practice is of the highest importance. In this connection it may be said that the habit of orderly and logical procedure is one of the most valuable results of the Beaux-Arts training.

In sketching and in learning to sketch, much time is usually wasted for lack of adequate guidance. To supply this need Mr. Guptill's articles were published in this journal, and later his book was published, containing much additional matter.

In detailing the construction of buildings much time is consumed because of the lack of adequate reference material in convenient form. To remedy this condition in some measure, we have just published Mr. Knobloch's "Good Practice in Construction."

Both in the pages of *PENCIL POINTS* and in the books of the *PENCIL POINTS LIBRARY*, we are endeavoring to help our readers save lost motion. Your suggestions regarding subjects for treatment in the magazine or in our books, as well as letters describing time saving methods of working, will be welcomed.

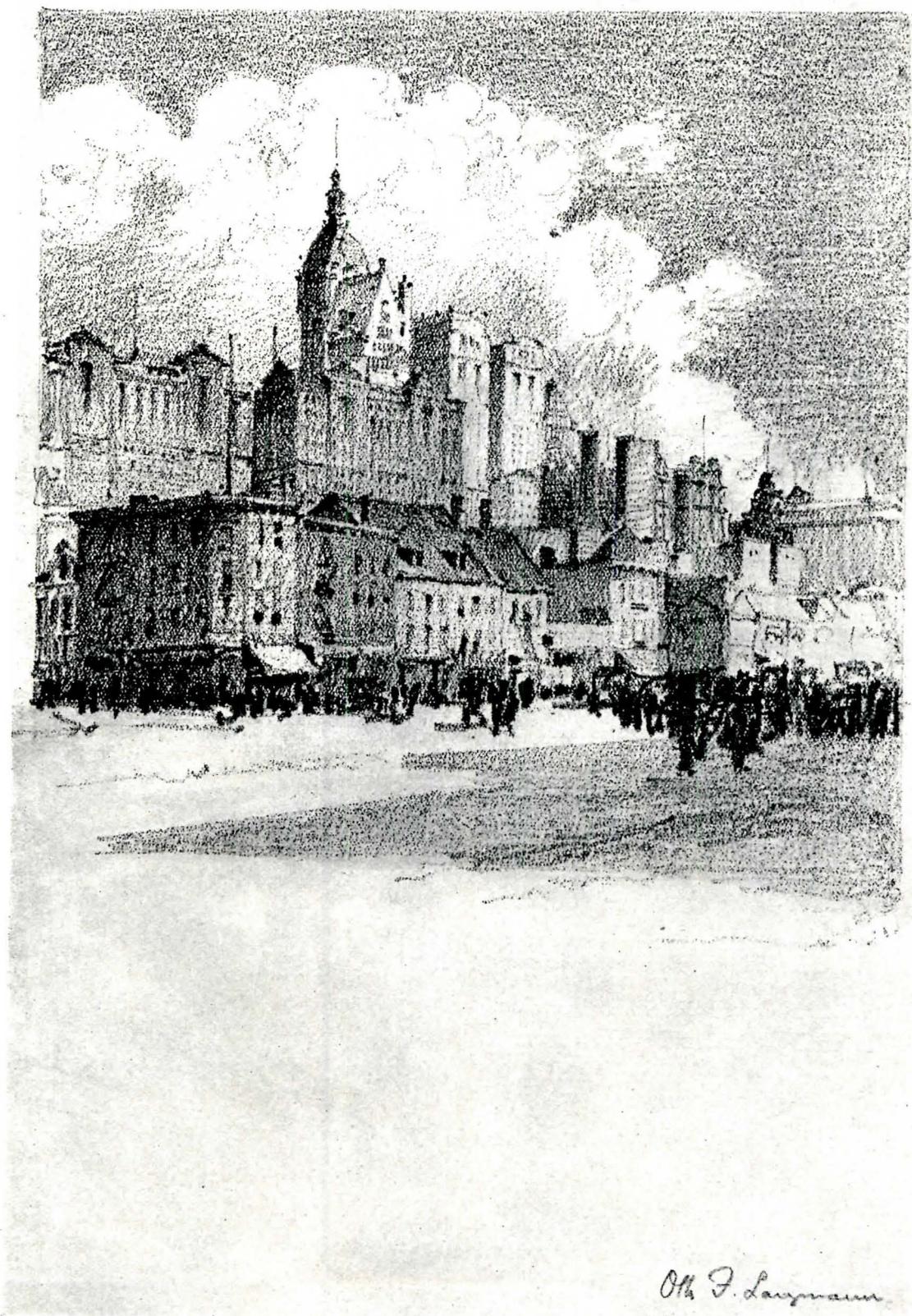
### TRAVELLING EXHIBITION.

**T**HE travelling exhibition of sketches selected from among those submitted in the Birch Burdette Long Sketch Competition for 1922, is now on its way from coast to coast.

It will be shown at the Massachusetts Institute of Technology in Boston, March 26 to April 3, inclusive, and will then go to Pratt Institute, Brooklyn, New York City, where it will be on view April 7 to April 14, inclusive. The T-Square Club, Philadelphia, is next on the schedule. From Philadelphia the exhibition will move westward until it reaches the Pacific Coast. So many more architectural clubs have applied for this exhibition than applied for last year's similar collection, that a much longer schedule of stops has had to be arranged for.

The exhibition consists of sketches by the prize winners and by those who received honorable mention, with a large number of other sketches from the competition. It is the exhibition that was shown at the Architectural League of New York, considerably augmented, and comprises sketches in a great variety of mediums and combinations of mediums.

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*View from West Street, New York City. Sketch in Lithographic Pencil, by Otto F. Langmann.*

# SKETCHING IN AND ABOUT THE CITY

BY OTTO F. LANGMANN

*Mr. Langmann's delightful sketches of city architecture are familiar to most men engaged in architectural work and many of his sketches have been published in this journal. In this article, Mr. Langmann gives in an informal way some of the results of his experience in sketching in and about the city, telling how he selects his subjects and how he works.*

EVERY city affords interesting subjects for sketching, some it is true are richer in material than others, but everywhere there is something of pictorial interest, whether it be tall buildings, monumental works of architecture, docks, grain elevators, great industrial plants, or little old houses that have remained from an earlier generation. The same principles apply everywhere, so, though my experience has been derived from sketching in and about New York City, what I have learned can, in the main, be applied to sketching in any city.

I have gone about the city sketching a great deal during the summer months and have derived much pleasure from the practice. If anything I can say will stimulate others to go and do likewise, I shall feel no small satisfaction. The mere exploration of the various foreign sections of the city, the contact with the people and the pleasure in discovering an attractive detail or street scene are in themselves sufficient. Added to that comes the contentment which comes, perhaps not at first, but almost invariably later on, with the feeling that one has done something "worth while." A score or more of sketches, at the end of a season, represent a "good" summer, and sketching in no wise interferes with my other pleasures and activities; one does the sketching and all the other things

besides—only it takes a little practice and system. And now for a few empirical rules and suggestions. I wish in no way to go into the minutiae of the subject of sketching, for I leave the matter of training in these matters to textbooks and professors. I assume that you all know how to draw and that what you wish to know is simply what I have

found it interesting to sketch in the city—particularly in this city which is usually thought of as commonplace and lacking in poetry,—and how the thing can be done comfortably, without disturbance from the crowds of people that usually throng the streets.

My first piece of advice is: Don't spend too much time looking for a subject. Have something in mind before you start, and go straightway to it, because the longer you search, the more exacting you become, and the less satisfactory will be the finished result. A product of the fading hours of a summer's day, made with teeth set, in the grim determination to do or die, is perhaps less satisfactory than no sketch at all. That is where my "experience" comes in. My own way of doing is to take an afternoon for no other purpose than that of marking or "spotting" subjects; or you can do the same while passing through various places on some errand or other. Note the subject, and the hour at which the light would be most favorable, i.e., whether it



*Wallabout Market,  
Brooklyn.*

*O. F. Langmann*

*Sketch by Otto F. Langmann. Wallabout Market, Brooklyn. In Red Pencil on Japanese Paper.*

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*Otto F. Langmann*

*A Bit of Old New York. Sketch in Lithographic Pencil, with Touches of Colored Pencil, by Otto F. Langmann.*

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*Old Building on East 29th Street, New York City. Sketch in Lithographic Pencil, with Touches of Colored Pencil, by Otto F. Langmann.*

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be a morning or afternoon subject, and anything else that might be of interest. When the proper time arrives, or rather when the inspiration does, then proceed without any delay, and get the thing done quickly. I have seen so many men lose an opportunity, just because they did not pursue this method, that I regard it of importance.

And that brings me directly to the second point. Don't go out in sketching parties, but limit your number to two or three. Proverbially even three is a crowd, but in sketching I have found it bearable. However when there are more, it is difficult to choose a subject satisfactory to all, or even a neighborhood upon which all will agree, and you are almost sure to attract undesirable attention, because where one or two can pass unnoticed, the presence of three or more will make the "natives" suspect and expect something exciting.

In the matter of choice of subject, I would caution against one too ambitious or elaborate. The use of easel or large board is positively out of the question, and a small sketch finished is worth many of the unfinished kind. My own practice is to make a small sketch, finish it at one sitting, and not to touch it after I get home. Hopkinson Smith, in his book on outdoor sketching, says that it takes two men to make a masterpiece, one to do the drawing, and the second to kill the first when he has arrived at the finished stage, and is not aware of it. Therefore, a party of two, who could indulge in mutual slaughter, would seem to be ideal.

If the subject encompasses a large area, by making the sketch small you eliminate most of the detail, and if you chose a bit of detail, you can concentrate on the particular subject which attracted you, vignetting all the ugly things that lie to the right or left. The old junk shop on Twenty-ninth Street, shown on page . . ., is very picturesque and the building a remnant of Colonial times, but the surrounding buildings, only indicated here, are tenements of the most commonplace design. And very often a subject can be made attractive simply by the forcing of a detail, as for instance a rather box-like building, with a picturesque tree, or through an archway. There is much of this type of thing in New York, and when you once get started you will be surprised how much beauty there is in places where you had never before suspected it.

Just let me mention a few of the possible subjects; some you undoubtedly know, others may be new to you. There are the high buildings, seen either through the canyon-like streets, or as I prefer them, seen from the river fronts, towering over the small buildings of an earlier generation. The sketch on page . . . illustrates the effectiveness of this view. And incidentally those river fronts provide admirable sitting room on a Saturday afternoon or Sunday, to say nothing of the other delights which river fronts usually furnish. Then there are the markets, Fulton, Wallabout, Washington, Gansevoort, and the informal scenes in the streets. They offer particular spots of color and busy groups of people, but far less opportunity to

sit or even stand. The sketch on page 11 made at Wallabout Market, Brooklyn, shows composition and detail which have all the picturesqueness of a European market place. The sketch on page . . . represents a type of picturesque shop-front of which dozens still exist in the lower city. This particular one is on Mulberry Street.

The various bridges are very picturesque, and so are the docks, coal-pockets, cranes, power plants and boats. There is nothing more "continental" than the rear of Fulton Market around the wharf where the Gloucester fishermen in yellow oilskins or blue overalls unload their cargo of fish into red baskets or green push-carts. The scene is so animated, and amusing, that it is truly difficult not to give up sketching altogether, to watch and listen. And by the way, it is a curious fact that those who gather around an artist to stand and watch, usually suppose that because he is apparently oblivious to things going on around him, he is also deaf to anything said near him, even concerning him. I have by reason of this, been treated to some rare information, both about myself, and things in general.

Bits of Old New York are getting fewer year by year, and are not very numerous even now. The best groups of houses are at the corner of Watts and Hudson Streets, while Canal Street in general has preserved its old character. Isolated old dwellings may be found in considerable number, but they are usually set in very ugly surroundings. They must be sketched as isolated buildings, or the framing buildings merely indicated. That of course is the artist's license, and perfectly legitimate.

For those who would rather get away from the city proper and spend their afternoon within the sight of the sea or in the park, there are good subjects along the Harlem River, especially at the old shipyard at the end of Manhattan Island, and down at the so-called "Old Mill" in East New York. The latter has a character quite as distinctive as some of the scenery near Venice. Of course Central Park and Prospect Park afford some really good tree and landscape composition, and they are not always crowded with inquisitive children. As in the matter of sketching down-town, it is simply knowing when and how to go about it. On Saturday afternoon and Sundays it is far less crowded in lower Manhattan than in most pleasure resorts adjoining the city.

And now a final word as to my exact mode of procedure. Every one ultimately works out his own theories as to pencils, paper, etc., but it is perhaps well to start with some idea as to the fitness of things.

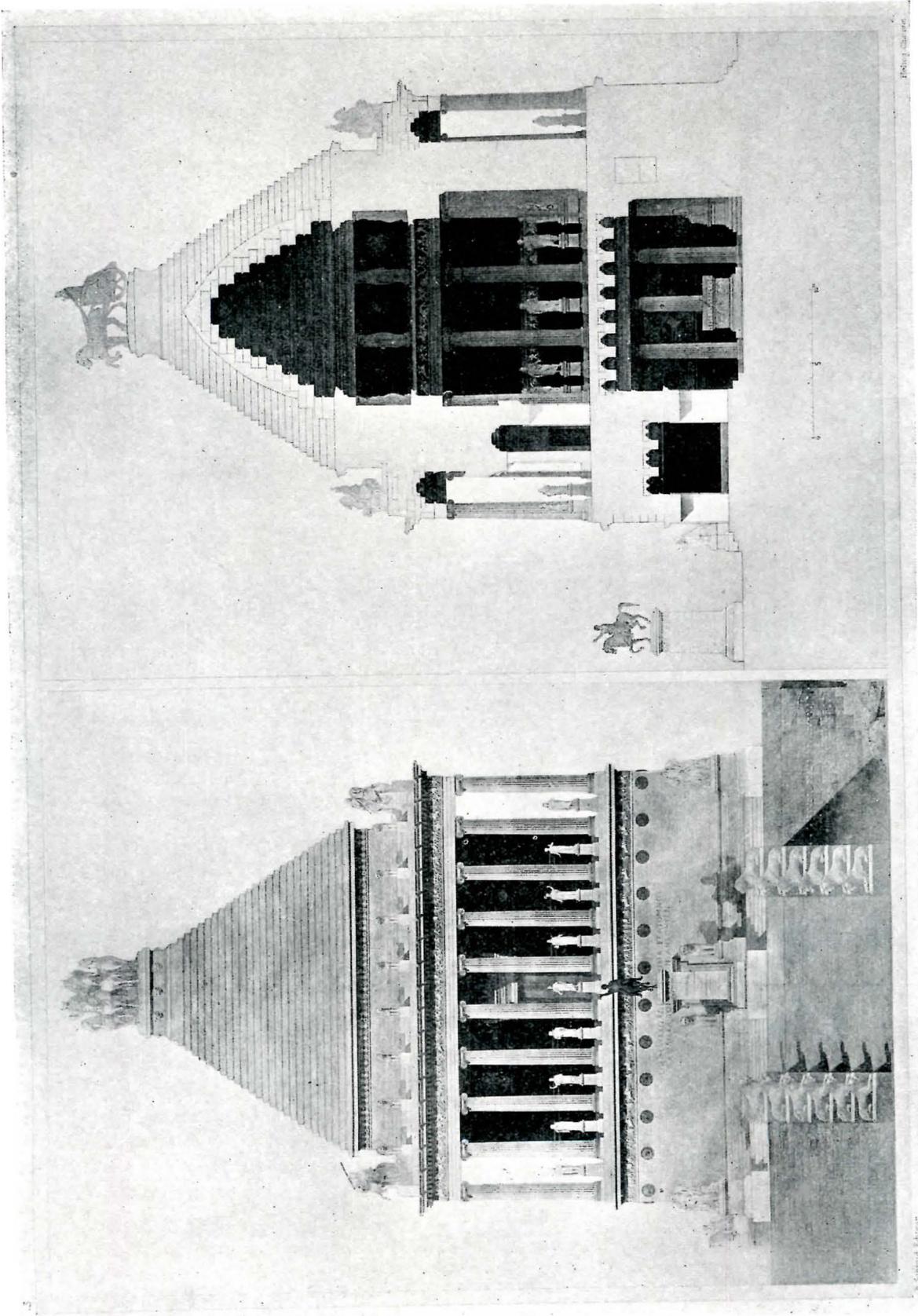
Most of my sketches have been in black and white, and that, by no mere chance, but as a very direct result. There is after all *not so much color* in the average street scene as there is form and tone, and secondly—and more important—it is far easier to work in black and white. Oils or water color require more room and take more time. I have de-

(Continued on page 27)

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PLATE IX

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MAUSOLEUM AT HALICARNASSUS

*On the other side of this sheet is reproduced a plate that shows one of the several widely different restorations that have been made of the Mausoleum at Halicarnassus. This is at least an admirable design admirably drawn, whether or not it bears a very great resemblance to the building of which it is intended as a restoration. The few fragments of the structure and descriptions of this mausoleum are all that can be used as a basis for its restoration.*



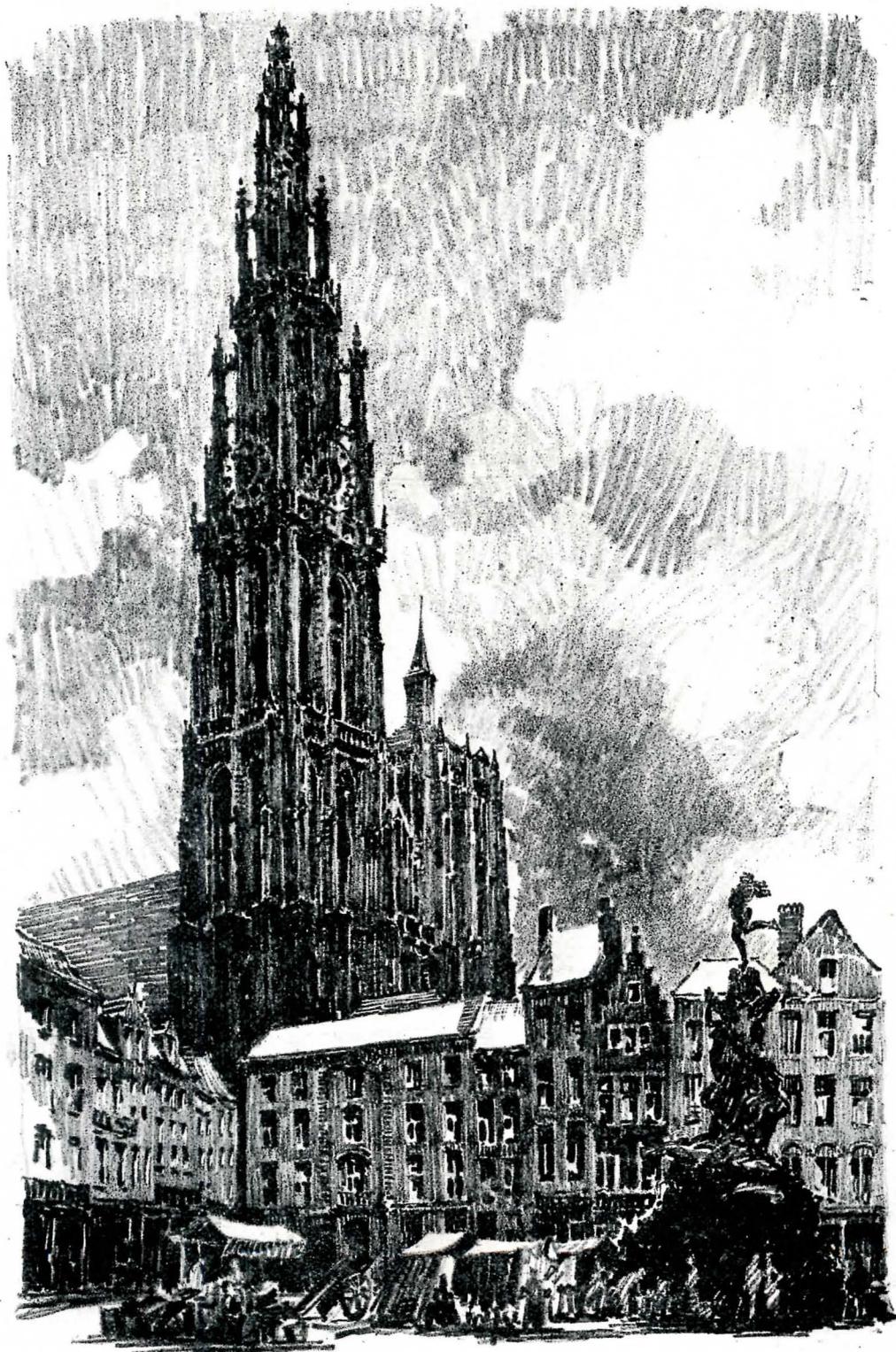
TOWER OF ST. THOMAS'S CHURCH NEW YORK CITY  
PENCIL DRAWING BY OTTO F. LANGMANN

*The sketch shown on the other side of this page is one of the most interesting of the many excellent sketches Mr. Langmann has made about the city in his free time. It is on Japanese paper and it is remarkable for its simplicity of treatment and its sympathetic suggestion of the architectural character of the subject. An article by Mr. Langmann appears on another page of this issue.*



PENCIL STUDY BY KENYON COX

*The study of a head reproduced on the other side of this page is notable for the tenderness of effect, and the skill of the pencil technique. This drawing, like the other drawings by Kenyon Cox reproduced in this journal, was loaned by Mrs. Cox.*



ANVERS  
1921

*John R. Rowe*

PENCIL SKETCH BY JOHN R. ROWE

*On the other side of this sheet is reproduced a pencil sketch by John R. Rowe, a student at the Ecole des Beaux Arts, Paris, who has exhibited both in this country and in Paris. This sketch was exhibited in the Spring Salon, 1922, in Paris. Mr. Rowe was born in Buffalo, N. Y., and is a student in the Atelier Laloux.*

# THE PROCESS OF LITHOGRAPHY

BY BOLTON BROWN

WHEN it comes to writing a technical account of the details of lithography, I have to decide whether to describe first my own operations, which in some particulars vary from the usual practice and which, as a matter of fact, I seldom perform twice alike, or whether to tell first what is regularly done in the shops. I decide upon the latter, since the significance of my divergencies cannot be made clear otherwise than by using standard practice as a point of departure.

The first operation is to grain the stone. Various abrasives,—sand, ground flint, carborundums, ground glass and others—are used. Each abrasive exists in a series of grades differing in fineness, which difference in fineness enables us to produce a corresponding series of surfaces on the stone—coarser or finer—according to the demands of the work in view. The stone is placed over a tray, a little water put on it, and abrasive put into the water. The grinding is done by means of a second stone, or sometimes a cast iron disc called a levigator. This operation both removes old work and prepares the stone for new.

When ground sufficiently the stone is washed very thoroughly with clean water and set on edge to dry; when dry it is ready to work on. The fresh limestone surface is easily affected chemically, and should be touched with the hands as little and as lightly as possible.

If your picture is enclosed in a rectangle, you now lay this off on the stone and draw its boundary with lithographic crayon. Following this I often paint a coat of gum arabic over that part of the stone outside the rectangle. The object is in this way to secure this border surface from soiling during the drawing.

The next question is the design itself—the approach to which varies both according to the skill of the draftsman and the nature of the subject. Though

there are certain possibilities of erasure by regraining a spot, or washing it out with gasoline, cutting out with a knife, or even using rubber,—it would be a mistake to start out with the idea of depending upon any of them. It is far sounder practice to start with the idea that no erasure whatever is

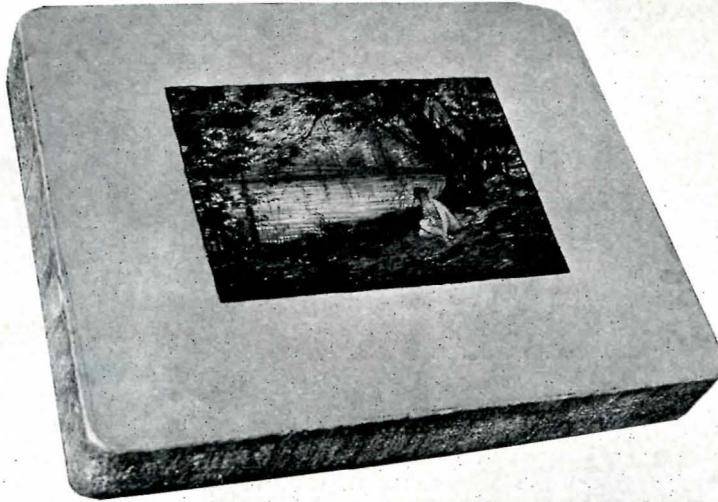
possible. In my own practice I rarely erase, having a constitutional objection to mussiness in works of art. On those occasions when matters go hopelessly wrong, I simply grain the work off the stone, and draw it over again.

To get the placing of a design, without having the construction lines show, it is practicable to begin with charcoal. This has no chemical effect on the stone, and when the masses are sufficiently indicated,

if you dust off the work with a clean handkerchief, enough will be left for guidance, yet not enough to deceive your eye when you begin to work with crayon. Another useful method is to transfer guide lines by rubbing the back of a tracing with dry powder—light red or something of the sort. This being laid on the stone and gone over with a tracer, the design will be found on the stone in red.

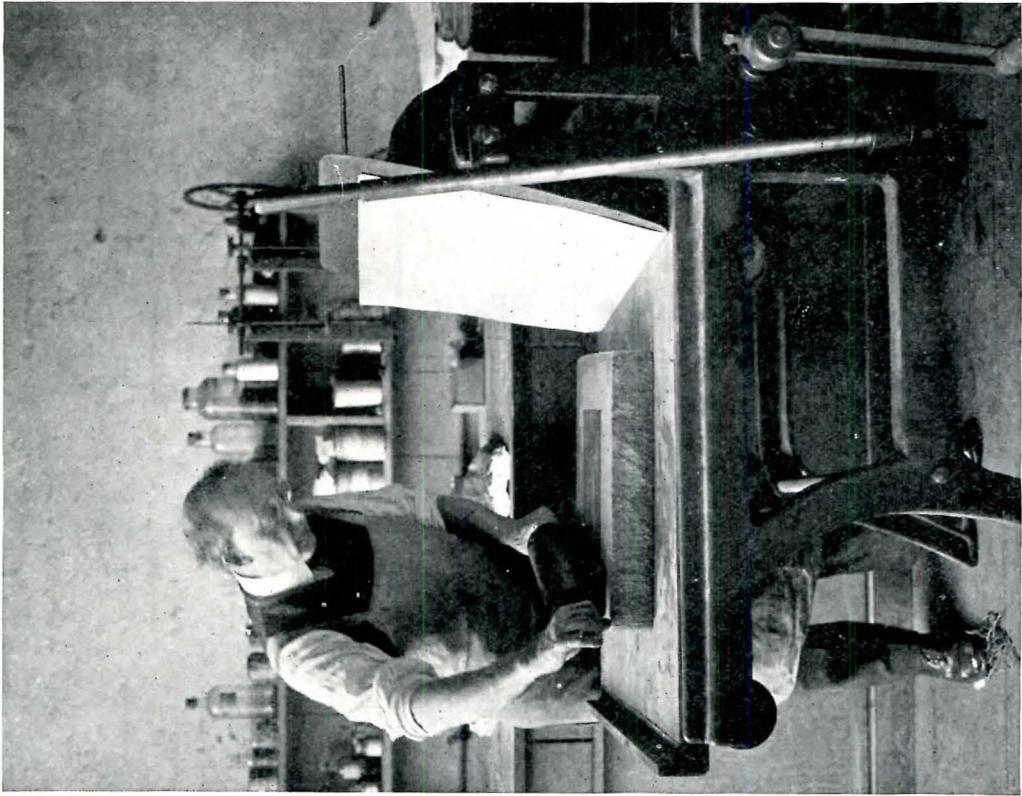
It is not well in any of these or other operations to rest the hand much on paper laid on the stone. Paper will keep the oil of the hand off the stone, it is true but the moisture of the hand will sometimes soften the size on the paper sufficiently so that, though nothing is visible, the print will show that the size did stick to the stone enough to affect the action of the lithographic crayon at that point.

It is not well to draw too fierce and fast as one may do if he chooses, with pencil and charcoal. The lithographic crayon is not like either of these, or, indeed, like anything but itself. It is a much more adhesive substance than any other drawing material. For reasons not easy to discuss in words, but which all skillful draftsmen on stone know, this

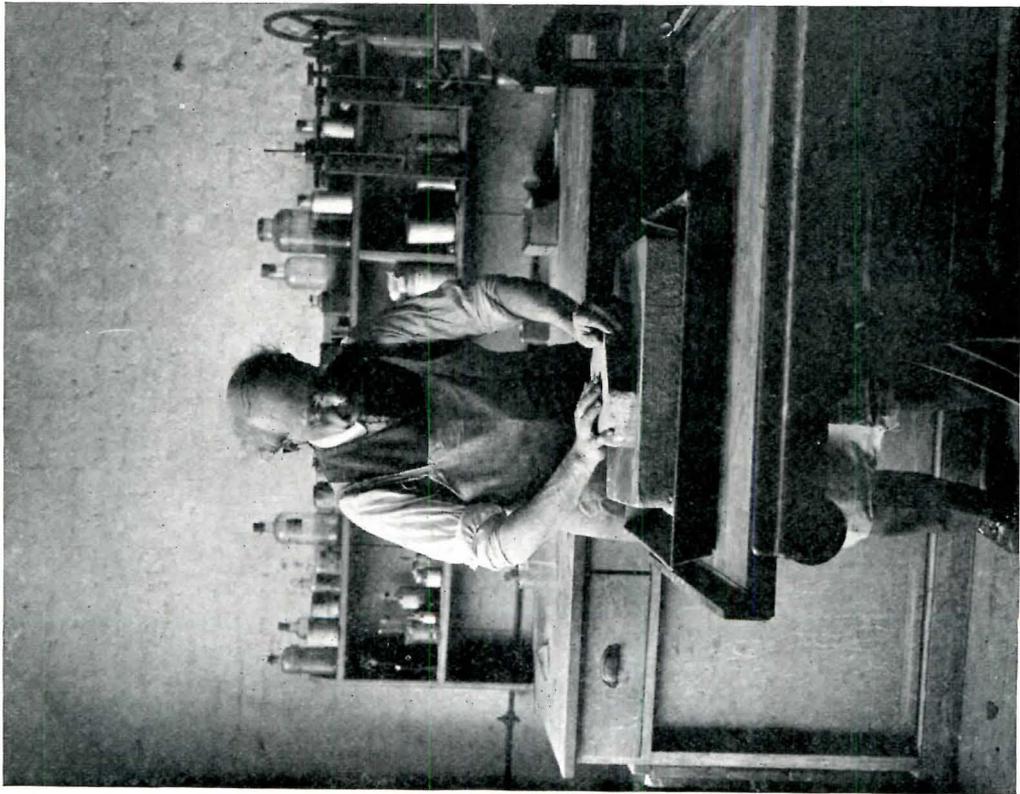


*Lithographic Stone, Inked Ready for Printing.*

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*Inking a Lithographic Stone.*



*Grinding a Lithographic Stone.*

*See text beginning on page 23.*

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indicates and, if true lithographic effects are to be obtained, compels, a certain degree of relative deliberation in the execution.

The market is supplied with crayons called Lemercier's, Korn's, and Currier's. All are good practical crayon and you may choose the one which suits your taste. I have drawn much with each of them and have the habit of picking out those grades from each make which my experience has led me to prefer. Lately, I have been using them very little, having invented a type of crayon of my own which I prefer to any of them.

Soft crayons yield coarser, harsher textures on a given surface than do harder ones. This is apt to surprise beginners who imagine soft work and soft crayons go together—whereas just the opposite is the case. George Bellows' recent lithographs, which are notable for the rich velvet quality of the touch, are all done with a specially hard crayon made for him by me. The natural tendency of beginners is to imagine they are still making charcoal or pencil drawings which they are not. The peculiar and peculiarly beautiful quality of crayonstone drawing is not to be obtained except on its own proper surface, with the right crayon suitably applied.

Printing is a separate craft. Ideally it ought to be done by the artist himself, and this for two reasons. In the first place the operations involved are so intimately connected with both the original drawing and the resultant print that the artist's own judgment of these is really called for. In the second place, an artist who knows, by personal experience, these operations, can and does adapt his work, in fact his very imagination, when he is conceiving his work, to them—getting thereby far better results.

However, though I sometimes teach artists to print, I cannot try to do it in the compass of this article, and will, therefore, simply give the main moves as universally practiced by the professional workmen. These moves differ in detail in different shops and in the hands of different men, but the general idea is the same. In the presence of the completed crayon drawing on stone, the printer will begin by mixing with a gum arabic solution of the consistency of linseed oil, enough nitric acid to cause a slight effervescence when applied to the stone. Experiments and experience have taught him how strong this etch ought to be in each particular case, and he varies it accordingly. Occasionally, too, different parts of the same stone call for different degrees of etching. Heavy work will stand harder etching than delicate work. You may vary the strength of the etch also, according to the number of proofs you wish to pull. The more you etch, the more you can print, but the less perfectly will the delicacy be retained. The less you etch, the less you can print but the more perfect will the print be like the original.

The etch is allowed to dry on the stone. It is well, while in this condition, to set the stone aside for a day, or several days. You then put it on the press, wash off the gum with water, and the stone being wet, roll ink on the drawing from a

leather roller. When the drawing has taken the ink perfectly, printing may begin. Or,—the usual way—turpentine may be applied and the drawing removed, but the chemical effect which these have produced on the stone suffices to enable you to re-roll it into existence again with the inky roller. I find it a good plan, following the washout and roll up, to gum the work down with gum arabic—leaving it commonly over night. The tendency is to print firmer and more reliably after this treatment. Chemical action between the fatty acids of the oil in the ink and the alkaline limestone has been going on.

When ready to be printed the stone is laid on the table of the press, the gum washed off with water, and the ink or crayon washed off with the turpentine. The second operation is performed in the presence of the water used in the first. The presence of the water on the stone is, in fact, all that makes the other wash out possible, and if by mismanagement any part of the stone gets dry and the turpentine, loaded with what it has dissolved, gets a chance to sit down directly on the stone—it may ruin it. It certainly will ruin it if any appreciable amount of time passes before it is wet again.

The stone, then, being cleaned of gum and of ink, and thoroughly sponged with clean water, is at once rolled up with printers' ink. When fully charged, a sheet of damp printing paper is laid upon the design, a sheet of some soft, dry backing paper put over it and the stiff sheet of red press board—in old times the sheet metal tympan—the back of which has been well tallowed, above this. The table is now rolled along until the scraper in the press is well past the edge of the stone but well outside the picture rectangle. The lever is thrown down which raises the table and by so doing forces the stone tight against the scraper. You seize the crank handle and turn it until the stone has been carried quite through under the scraper—stopping, however, before the edge is actually reached. You throw back the lever, which, releasing the pressure on the stone, enables you to run the table back to its original position. Having gently lifted off the greasy pressboard, you cautiously pull the printing paper from the stone. The pressure of the scraper has caused the ink to adhere to it, so that the paper now carries a reversed duplicate of what is on the stone. This is your proof.

The first one, or two, or more, often do not print quite fully, are apt to be a little pale. But this does no particular harm. Tear up these proofs, and if all arrangements are right, perfect ones will follow them.

The idea prevails in some quarters that it is possible and desirable for the printer to change the design as it exists on the stone by inking some parts different from other parts. Against this idea I oppose the statements of Hallmandel, of Thomas Way, and of myself—that this is a false notion of the function of the printer and that the true notion is that the best printer is he who most perfectly takes off on paper what the artist puts on the stone. I should have much pleasure in amplifying this

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statement and should have no difficulty whatever in making the reason of it perfectly obvious—but space forbids.

Having thus given an outline of the actual works, I will offer a few remarks of a less narrowly technical nature.

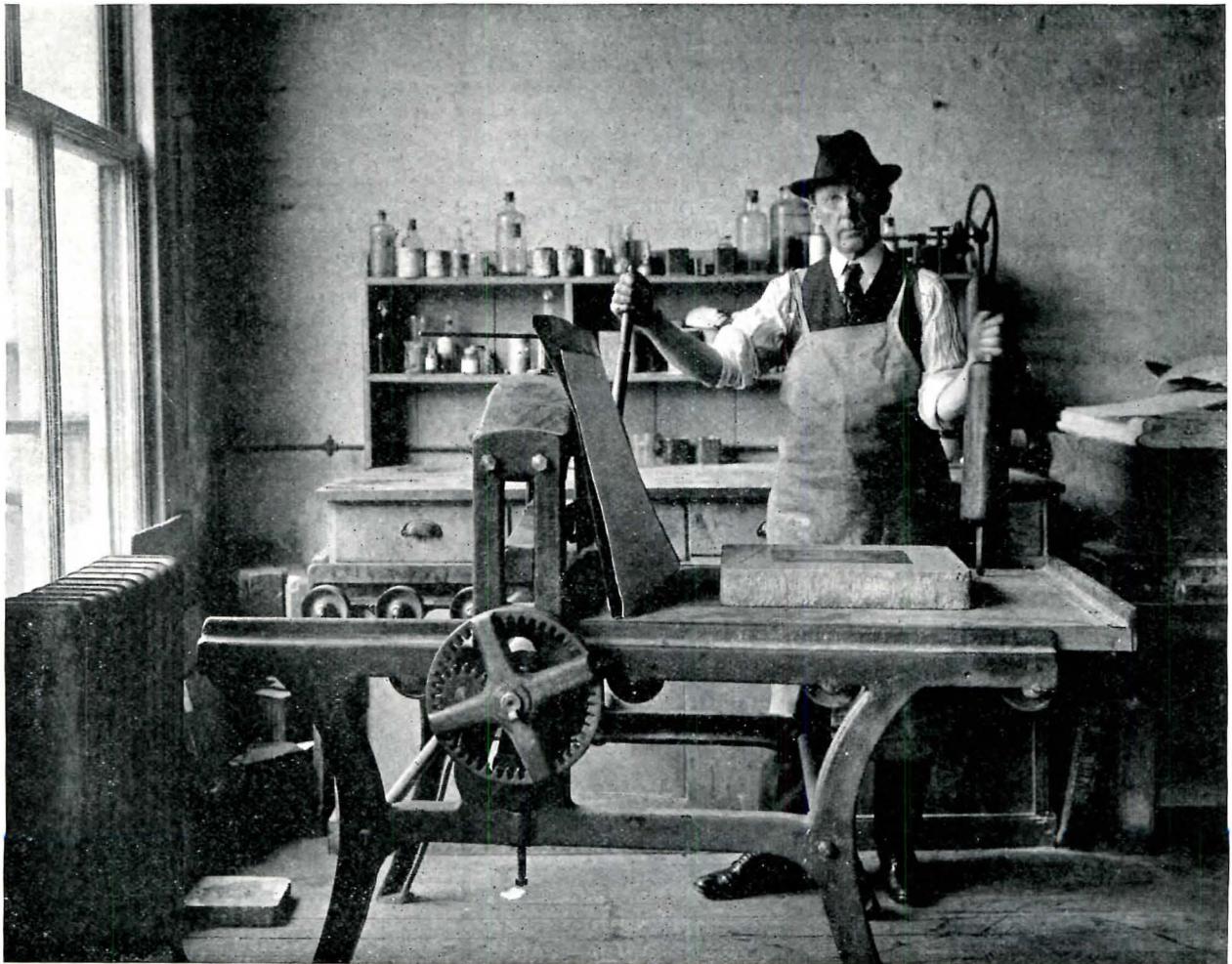
Lithography is a word that indicates not a process of drawing but a process of printing. It means whatever is printed from a flat surface by the repulsion between oil and water.

The flat surface may belong to almost any substance—Senefelder's first lithographic prints were printed from paper. He merely developed the principle in this way, however—when he set about real work he adopted stone as his standard printing surface. This choice time has abundantly justified, and to this day, despite the wide substitution in recent times of other surfaces, nothing superior to stone has been found to print from and nothing equal to it to draw on.

For the draftsman, two kinds of lithographic prints are to be distinguished. These differ not in the way they are printed but in the way they are drawn. Work drawn on paper and then trans-

ferred to stone is called a transfer. Work drawn on stone had no special name until the word crayonstone was invented for it. The message which the writer—a painter, by profession, who has devoted a number of years to an intensive training in drawing on and printing from stone—the message he would give to all and sundry is that if they overlook the difference between transfer lithographs and crayonstone lithographs, they overlook a difference which is vital. It is a difference greater than that between things as different as charcoal and lead pencil.

For thirty or forty years, some artists, both in England and in America, have now and then made drawings on paper which have been transferred and printed and given to the world as "lithographs." They are such so far as printing goes, but as drawings—which is obviously the matter of first importance—they are not. They are simply drawings on paper and this character they necessarily transmit to the print. Prints made from lithographic drawings—that is to say, drawings made on stone, have a character and beauty peculiar to crayonstone. This arises from the extraordinary qualities of the



*Lithographic Press and Stone.*

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surface of the stone as a thing to draw on. No one who has not drawn on a properly grained stone has yet experienced the perfect joy of the draftsman. The surface of this stone is not any one surface, but is made different, with different grades of abrasives, according to the desires of the artist. Any of these surfaces is better than corresponding grades of paper, but there is a whole world of fine grades—yielding a whole world of different types of drawings—that does not exist in paper at all.

Those who use these resources have available all the effects that the great early masters of the art had—for these masters universally used crayonstone—not transfer. Harding, Haghe, Prout, Isabuy, Bonington, these masters drew on stone—and their work is truly lithography. Nothing approaching it has ever been done by any other method. Whistler, Pennell, and a few others draw on paper, and though their work is printed lithographically, it is not the same art as that of the men above mentioned—it is a paper substitute—capable of certain effects, of course, yet fundamentally different from work on stone.

The difference between crayonstone and transfer is greatest in work of a fine texture and of less and less importance as the textures grow coarser. This is nearly equivalent to saying that the smaller the work is, the more markedly does crayonstone surpass transfer, and the larger it is the nearer they come to an equality.

I make the statements I do out of a mind filled with the aims and backgrounds of the purely creative artist—the man who simply wishes to draw an original thing as a personal expression, and to give this to the world as nearly as possible just as he made it—which can be done only by lithography. But I recognize that there are numbers of applications of the art of drawing which this does not quite exactly describe—yet which might also well utilize the remarkable properties of lithography.

My friend, Charles H. Whittaker, who edits the *Journal of the American Institute of Architects*, has told me of his own keen appreciation of the potential value of this medium to architects, and an examination of the bound volumes of his magazine show many reproductions of important examples of crayonstone lithography. I am not personally in close touch with the needs of the modern architect's office and so refrain from putting up any bluff on that matter. But it does seem, even to me, that where so much time is spent making drawings—many of them careful and excellent drawings—many of them of highly important work—there must constantly be occasions where great advantage would accrue from making the drawing on stone. With a little practice the drawing itself would turn out to be better—and then there is, practically, not merely one but an indefinite number of it.

Moreover, while for the full development of all lithographic possibilities, stone is essential, I recognize perfectly that in practical work numbers of occasions constantly arise in which transfers would serve all purposes and be more convenient to make. I may add, too, that transfer lithography itself is

capable of a more complete development than it has hitherto gotten. Few of those who practice it—probably none, in fact—transfer their own work but leave it to a workman. Few of them understand, therefore, exactly what are the essentials of getting a perfect transfer—what crayons, papers, and treatments will come best. Few transfer printers are called upon to transfer artists' crayon drawings on ordinary paper—and therefore few of them can do it expertly. I mention these facts merely to show that even this secondary sort of lithography has, in my opinion, greater possibilities than we have seen realized. My own experience in transferring drawings by myself and others have convinced me of this.

## SKETCHING IN AND ABOUT THE CITY.

*(Continued from page 14)*

veloped a way of making sketches, standing up, with my back against some wall and usually squeezed into an angle or doorway so that very few see me, and still less come to look on. I will say that although I do not like to be watched, there are none to annoy you except once in a while the little boys or girls. Of the grown ups I haven't a complaint to make; which may reassure those who are timid in bringing their talent before the public.

Of course a few will gather now and then, when you cannot hide altogether in the manner which I have described above, particularly when your sketch is nearing completion. But the people are always respectful and considerate and never make it impossible to sketch.

Usually I take a small board, about 11 in. x 15 in., and fasten a paper to it, with thumb-tacks or elastic bands. This I hold with one hand, bracing it against my body. It is of course more difficult to draw in this way, but practice will make most anything possible.

For paper I use various kinds; the Japanese heavy transparent, Cameo, or rough white, Bristol or detail paper. My practice is to carry a leather portfolio, like a brief-case, containing several kinds of paper and pencils; the subject to be sketched, or more accurately the fancy, determining which of each to use. In general, the rougher paper takes the harder pencil best, but the Japanese paper is rough, and cannot be worked except with a smooth soft crayon. Lithographic pencils, Korn's, Nos. 1, 2, 3, Conté pencils black and red, Wolff pencils, or the ordinary yellow hexagonal kind are the ones I use. An admirable pencil is Dixon's Marking Crayon, No. 804, which gives a very deep non-greasy black.

And here, by the way of a little technical advice; always start and finish your sketch with the same pencil. Do not change pencils in the middle of it any more than you would change a pen in the course of a letter, for only by using the same pencil can you register variations of touch.

*(Continued on page 37)*

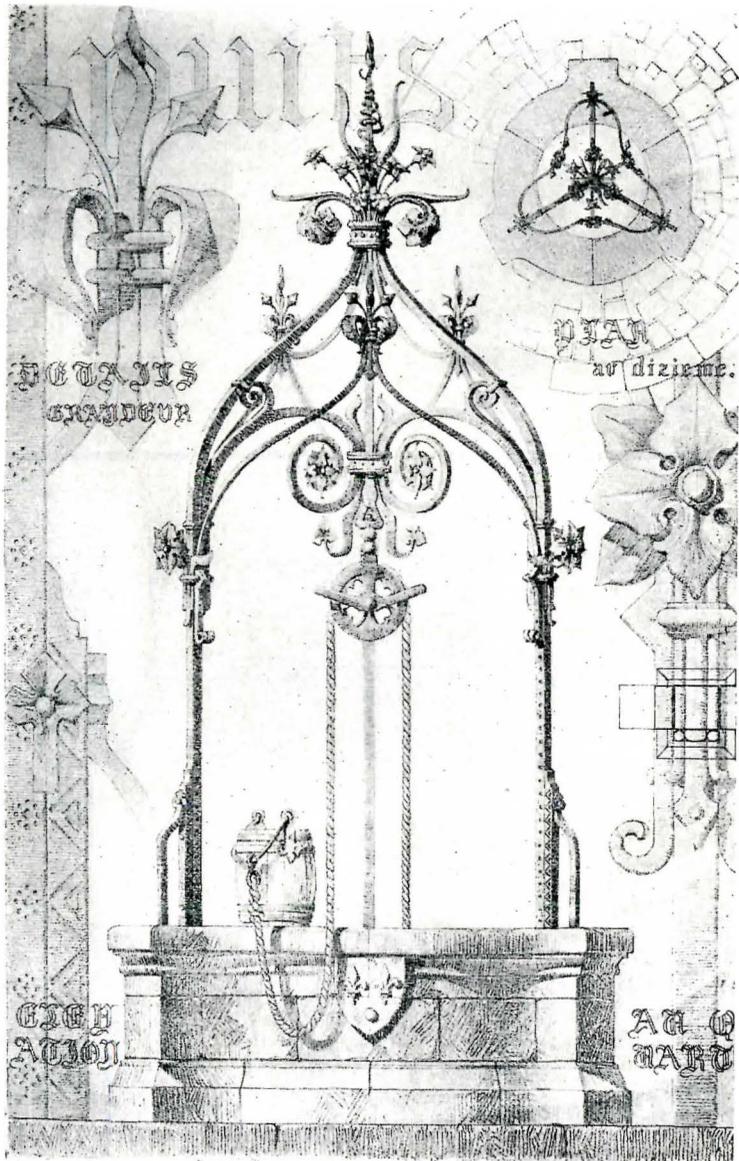


Figure 9. A Well-head with Wrought Iron Armature, by M. Chatelan, Pupil of M. Héraud, Ecole des Beaux Arts, Paris.

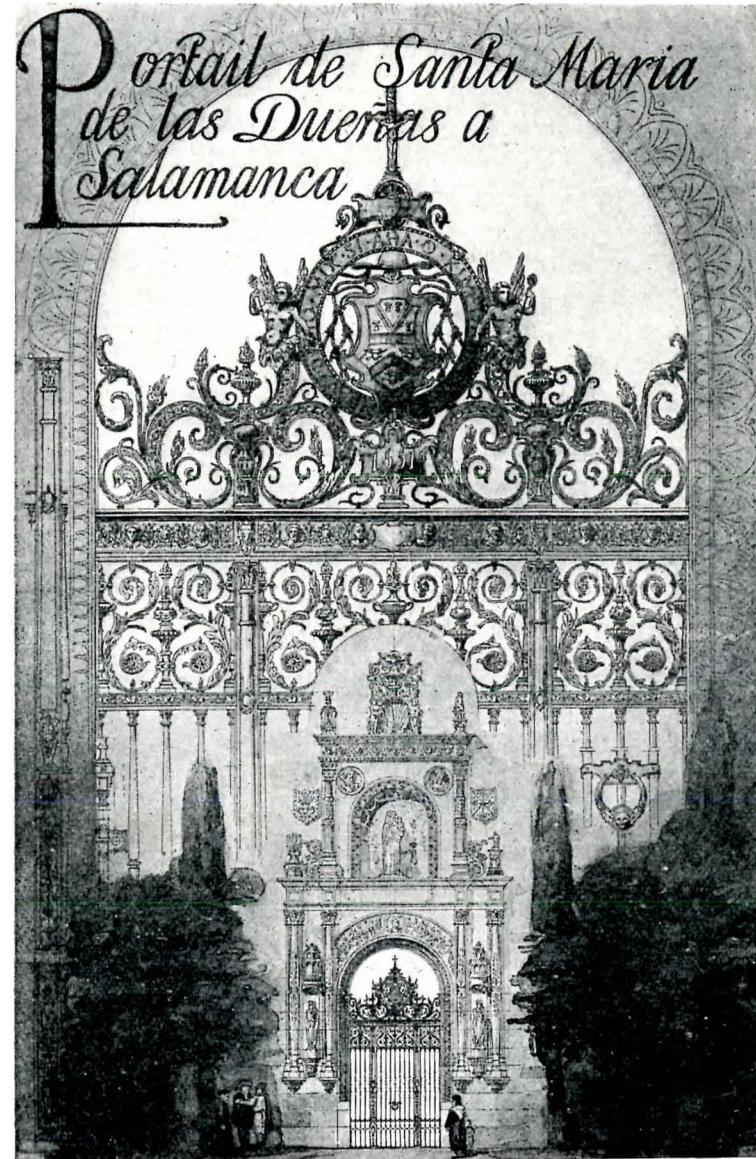


Figure 11. A Wrought Iron Grille, by M. F. H. Haskell, Pupil of M. Deglane, Ecole des Beaux Arts, Paris.

# THE STUDY OF ARCHITECTURAL DESIGN

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

## THE ARCHAEOLOGY PROJET. PART II.

BY JOHN F. HARBESON

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

A MAN who does several archæos, especially if he can go to the exhibitions at the Beaux-Arts Institute rooms after the judgment and compare his work with that of others, will probably have a very clear idea of how he can best study the problem, taking into account his individual training and methods of work.

But for the man who takes his first archæo it will be of value to outline a definite method to work on, to avoid some of the usual pitfalls and especially to save valuable time.

In a plan projet much of the time is spent at the beginning of the problem in studying the parti, and until this parti is studied rather thoroughly any time spent on detail is ill-spent. As we said before, in an archæo, there is not this study of a parti, other than hunting through the documents to see what "partis" were used in the style. For the purposes of the problem one is no better than another, provided each is of the required period.

But a much greater amount of time is needed for the presentation of an archæo than for that

of a plan projet. For one thing, a perspective is frequently required or allowed in place of two elevations. When such a choice between two elevations and a perspective is allowed, it is much better to present the perspective; the psychological effect

on the jury is greater, the skill used in either case being equal, for it gives a convincing sense of the third dimension and always looks like, and actually is, more work. A perspective requires much more time to render than a geometrical drawing, more time even than two elevations; it is less conventional and the usual conventions and rules of thumb cannot be used to the same extent. As it is more realistic, naturalistic, in drawing, it must be equally so in rendering and must depend more on observation of nature for the infinite variety of effects necessary to take away the "paper look" from a rendered perspective. The gradations in value caused by receding planes, by reflected light, by local color; the effects of time and use; all are very different from the simple ef-

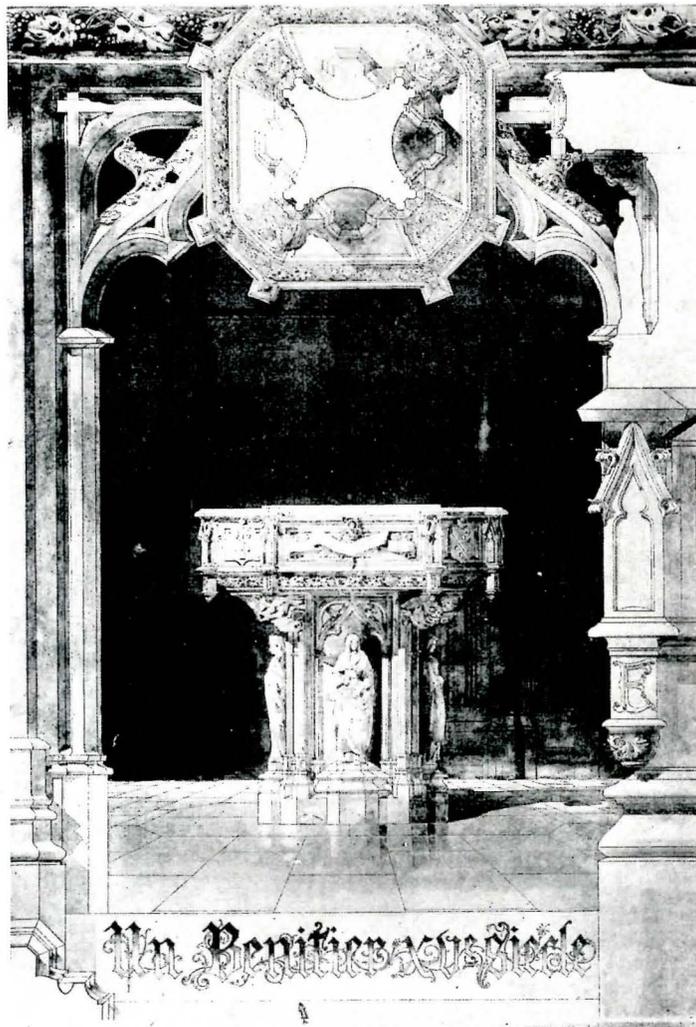


Figure 10. Holy Water Basin, St. Germain  
L'Auxerrois, Paris.

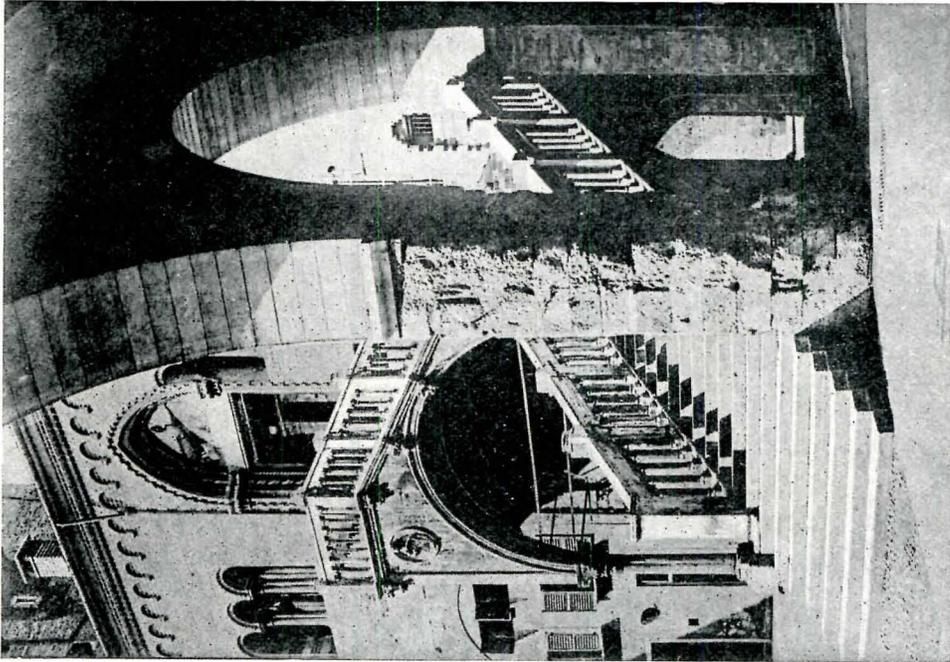


Figure 15. Stair of Old Market, Verona.

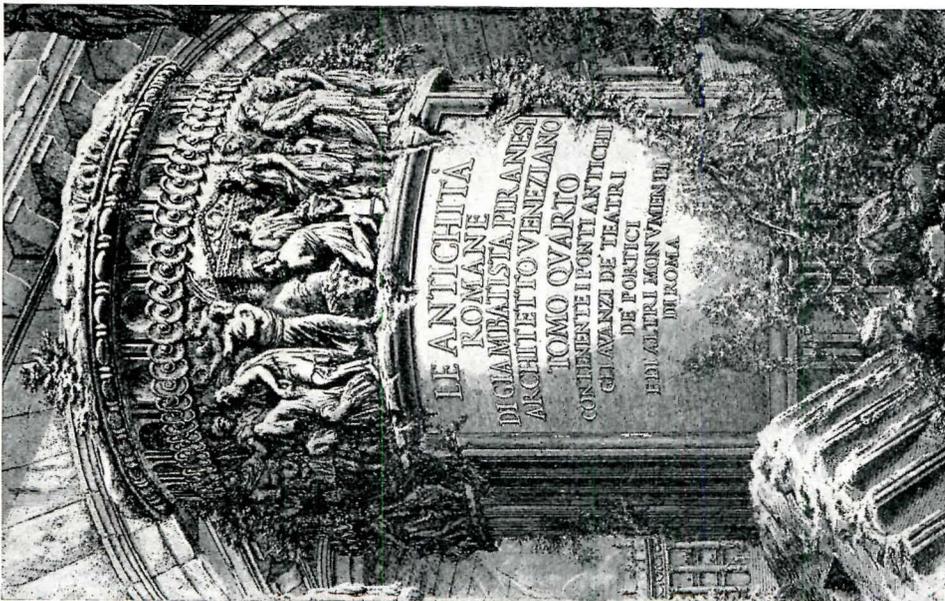
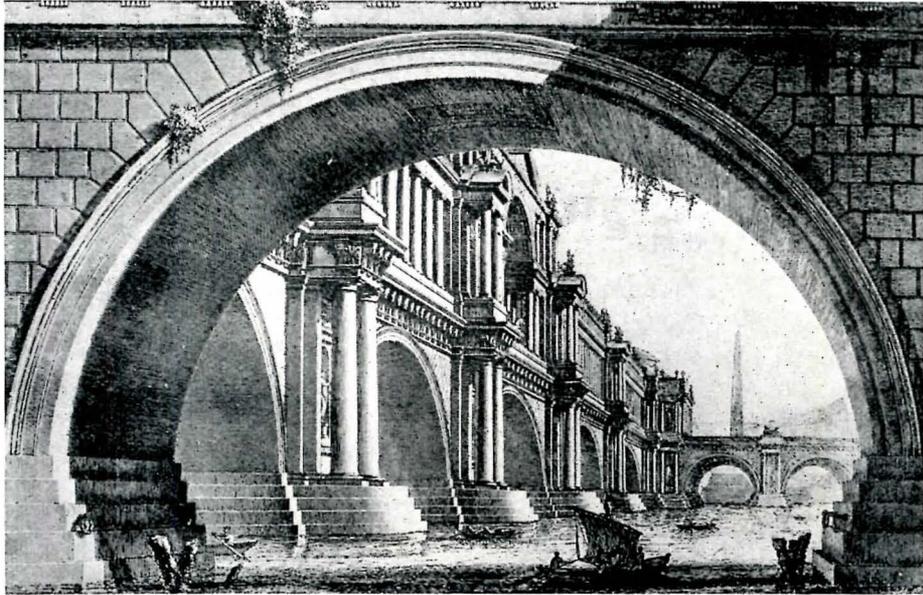


Figure 17. Fragment, Piranesi.

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*Figure 16. Composition, Piranesi.*



*Figure 14. Reindeer Inn, Banbury.*

## PENCIL POINTS

fects necessary to render a conventional drawing.

But even if the drawing be presented in elevation and not in perspective, there is, nevertheless, more time necessary to render the archæo than a plan projet, the detail must be brought out and atmosphere and the character of the given style imparted. Any human figures used must be in costume and must be convincingly rendered, even though this rendering be free. All this requires more time than the casting of shadows and simple modelling of a plan projet.

This leads naturally to the question of the disposition of the time at one's disposal in studying the archæo. It is hardly necessary to lay out a "schedule of time" as we did for the analytique or "B" plan problem. If we keep in mind that the presentation will require three-fourths of whatever time there is, we see that we shall have available for preliminary study only the first week or ten days. This preliminary study will include the search for and noting of, material, the deciding upon the parti and general scheme, the choosing of details to be shown and studying these and their arrangement on the sheet up to the final scale.

The first step is to look through all available documents, look at existing examples of the style if any are at hand, visit the museums to see small objects belonging to the period and look at all the books on the style that can be found, not only the architectural books but also those on the general history of the period, on its manners and

customs, its costumes, furniture and small objects of the style, at the work of contemporary painters and sculptors. You will not use all of the material so gathered but it is only in this way that you will get an insight into the time, and put yourself in harmony with the style, so that when you start work on your problem you may give it a true character. You will also have a better opportunity to make a good composition if you have a fair amount of material from which to choose. Figure 8 is part of a set of such notes made for a "Pompeian Court," mostly taken from Menard's "La Vie Privée des Anciens."

If the problem is in the Georgian or Colonial style (as the cast iron balcony of Figure 7, February issue) it is possible for those in the east and

south to see actual examples of the style, and that is, of course, the best form of document. The books should be used at the same time to show other examples so that one may see what characteristics were common to all, what were the earmarks of the style in question, and what was peculiar to the single example.

For the Ecole at Paris, of course, existing examples are much more available, Europe and Paris itself having many centuries of architectural forms to their credit. Thus the program of a competition for a "well-head with wrought-iron armature," of which Figure 9 was a solution, mentioned as examples for study the well of Quentin Massys at Ghent, one in the Court of the Hotel, Dieu at Beaune, one in

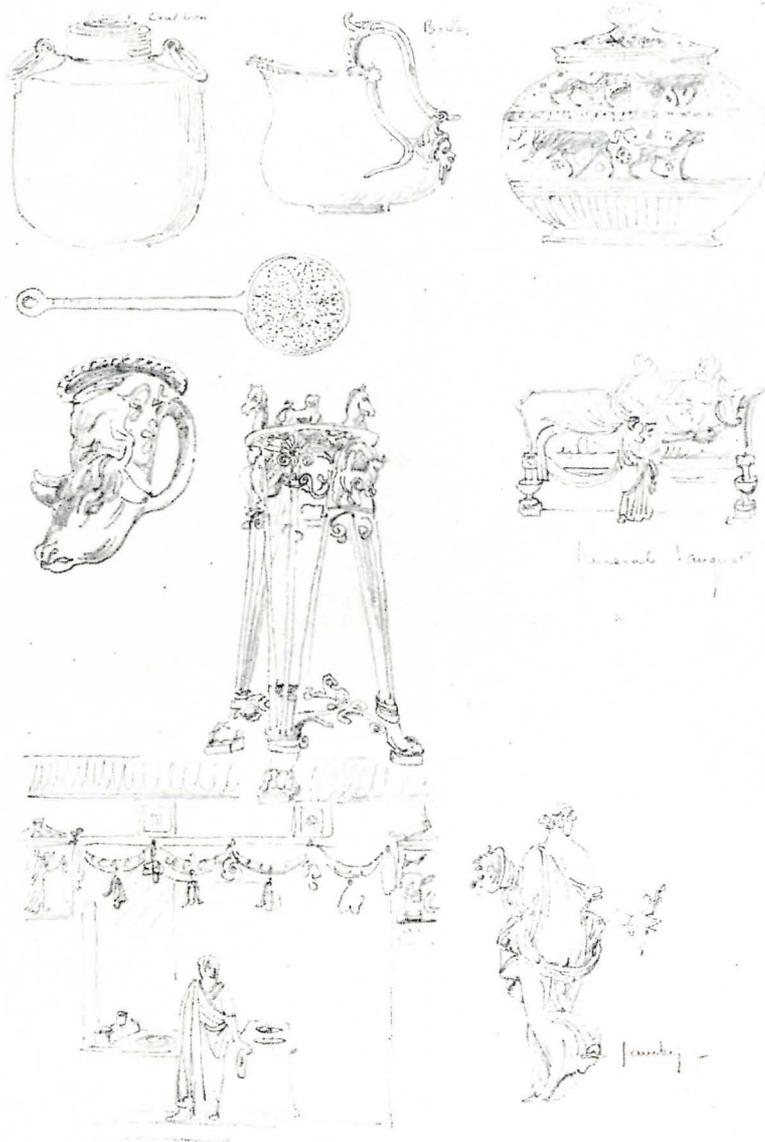


Figure 8. Notes Made for the Study of a Pompeian Archaeology Projet.

## PENCIL POINTS

the courtyard of the Museum at Troyes, one at the Musée Cluny, one at Chateau Nantes, one belonging to the Church of Notre Dame at Epure, and one at Chenonceaux, all within a radius of a few hours from Paris.

Another program called for a holy water basin in an existing church at Paris, Saint Germain L'Auxerrois, Figure 10. Even in the case of Figure 11, a wrought iron grille for a church at Salamanca, the subject of the program, and examples of the style, were no further away than New York is from Boston.

While problems are not often possible, as yet, in this country, in a style in which existing examples may be studied, it is well to remember that many of our museums contain collections of the smaller objects of a period, things that will give color and life to a problem, jewels and pottery and tomb sculpture for an Egyptian problem, Grecian urns and bronzes and figurines for a Greek or Pompeian one, ivory caskets, armor and furniture of the Middle Ages and Renaissance, etc. Figure 12 shows one such example, a group of Italian faience of the Fifteenth Century at the Metropolitan Museum. The value in going to the museum to study it instead of doing so from photographs is, of course, to note the color, surface, texture, etc. Small objects such as these not only explain the style to the student, but they make a composition more interesting.

Having, then, collected your material, you are ready to make your first studies. Lay out the elevation, or elevations, at the required scale if that be not too great to handle at the start; if that is the case, start at half the final scale. Try to put into it as much of the spirit of the called-for style as is possible. If you have noticed any peculiar arrangements in your search through the documents, especially things that would not have happened in another period, use them by preference.

Work in where you can, any interesting detail that you may have found. H. Van Buren Magonigle in his book on rendering says, when suggesting restraint in the use of many colors in a rendering, "It is the same as in design, the novice forgets that if his luck holds he will design many a building, and that it is not necessary, it is even quite distinctly undesirable, to put everything he knows about into one design. A decent reticence is to be observed in this as in all things in life—one does not go about telling all one knows—all at once." How-

ever, as the proverb has it, "There is an exception to every rule," and the archæo is the exception to this one, for it is desirable to show as well as one can, all that one knows of a given style.

As parti, proportion, disposition of motives, all come from the documents, this part of the study

will require very little time. The next step is to compose the sheet, the final presentation, as was done for the analytique, this time with freer forms. With a soft pencil make thumb-nail sketches of the composition, as in Figure 13, about three by five inches. In making these sketches try to utilize the interesting details you have made note of—utensils,

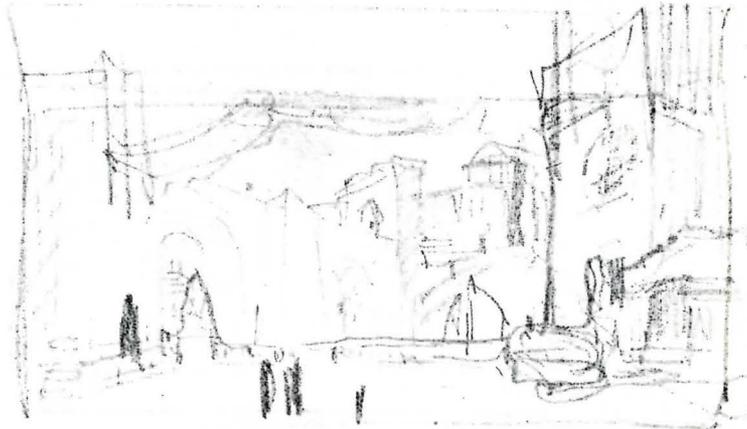


Figure 13. Thumb-nail Sketch of a Composition.

reliquaries, pieces of pottery, bronzes, and free objects, as well as actual details of the architectural fabric. Try to approximate in these small sketches the values of the future rendering, shadows where they are to be, local color where it will be an accent, for these things will be a part of the final effect and will greatly affect the composition. In studying the arrangement of the small scale drawing, if it is in perspective, it will be useful to study photographs, especially European ones, for ideas in composition. Note in Figure 14 how the sharp perspective of the buildings at the right literally "makes" the composition. Cover this portion and see how much is lost in the effect. Figure 15 shows how much interest may be added by part of the composition coming well into the foreground; such a part in a rendering would be treated simply—almost "out of focus," as would happen to similar portions of a photograph.

When you have made an arrangement at small scale that is satisfactory, it may be then laid out in charcoal directly at the final scale on a large sheet of tracing paper, or at any rate at half the final scale. In either case, block in the work in charcoal, locating the big masses of the small scale drawing, whether perspective or elevation, especially the larger shadows, and rough in the details. When this is all blocked in in this way, stand the drawing up against the wall and look at it from five or six feet away, for that is the best test of a composition of this size. You can now see if there are any portions that need to be rearranged; if the details form a pleasing silhouette; if the lines of the composition lead into the "focus" or important area.

As the charcoal is very easily wiped out with a chamois skin to a surface sufficiently clean to be again drawn on, it is possible to study the composi-

## PENCIL POINTS

tion on this one sheet until the massing is satisfactory when seen from five or six feet away. Until it is satisfactory in composition in this charcoal stage it is useless to pass on to the next, for the final rendering will not hide anything that is "unhappy" at this stage.

Passing to the final drawing is now a simple matter, though it will occupy, as before stated, three-fourths of the time given for the problem.

The different portions of the drawing may be drawn in pencil on separate sheets of tracing paper over the charcoal study and these rubbed on the final sheet, or the entire composition may be drawn on one sheet of tracing paper over the charcoal study and rubbed on the final sheet, or the work may be drawn directly on the final sheet, laying off the arrangements to the measurements of the charcoal study. To some extent the character of drawing on the final sheet will depend upon the technique adopted for the rendering. If it is to be pen-and-ink, for instance, and the pencil rubbed off, or in opaque water color, in which case the pencil lines will be covered up, the actual drawing will not matter much, provided it serves as an indication for the later medium.

If the rendering is to be in water color, which is transparent, or in pencil, the individual lines are important. Lines should not go further than the object they are supposed to delineate, for in a perspective the crossing or "snapping" of lines gives a very thin and "papery" effect.



Figure 12. *Italian Faience, Late Fifteenth Century, Metropolitan Museum of Art.*

Carry the rendering of the whole drawing on at the same time, put the early washes over each part before finishing up any one portion.

One who has worked only in water colors and used these mostly in washes, will find it interesting to finish an archæo, after the color washes are all on, with a "Wolff" pencil (2-B), an English carbon pencil that does not "shine" or reflect light rays as do graphite pencils. With this pencil it is possible to render texture for it lends itself equally to work in lines or in tones in which the actual lines are not visible, almost like charcoal, in fact. A drawing so finished should be sprayed with "fixative" before being cut from the board.

Another interesting way to finish an archæo rendered in water color washes is to take a ball-pointed pen, a "6-B pen" as Professor Arnal calls it, and render freely on top of the color, observing the usual rules of pen-and-ink, such as avoiding the cross hatching of lines, omitting lines on the lighted edges of surfaces, etc. This technique was used in Figure 3, (Feb. issue).

The rendering may often be inspired by the style of the program. A Louis XIV composition would look well with a presentation studied from Lepautre or Marot. The mention of English Tudor immediately brings to mind the drawings of Nash's mansions of England in the olden time, of one of which Figure 18 is a reproduction.

(Continued on page 37)



Figure 18. *The Banqueting Room, Bramhall Hall, Cheshire, England.*

# PENCIL POINTS

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## CARNEGIE INSTITUTE OF TECHNOLOGY.

THE recent election of Dr. Thomas Stockham Baker to the Presidency of Carnegie Institute of Technology at Pittsburgh calls to mind the remarkable growth of this college since its establishment twenty years ago. Founded in 1903 by Andrew Carnegie as an industrial school for young men of small means, it has since become one of the largest technological institutions in the world, rated at a high standard.

Its enrollment this year is about 4,200 students representing 26 foreign countries, and 41 states, in addition to Alaska and the District of Columbia. The faculty numbers nearly 400. Primarily it is an engineering college, but the wide range of its courses touches nearly every industry and the field of art. Its college of Fine Arts has a reputation from coast to coast for its work in arts, music, and drama, and its women's college is increasing rapidly in student enrollment yearly.

In the conduct of the engineering and the industrial courses, the institution has an unusual degree of support and co-operation from the industries in the Pittsburgh District. A great amount of research work is carried on at the college, and financed by various industrial enterprises.

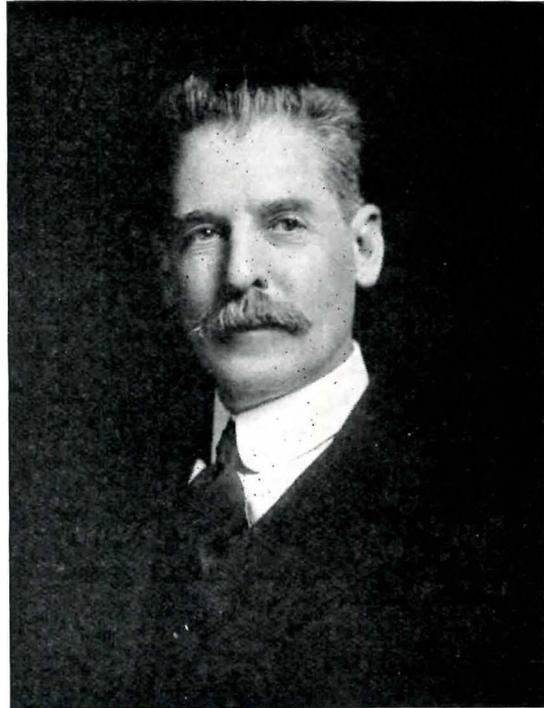
Dr. Baker, who succeeds Dr. A. A. Hamerschlag, the President for nearly twenty years, has been secretary of Carnegie Tech. since March, 1919, and Acting President since June, 1922. He is widely known in the East as an educator, speaker, and contributor to literature. He was born March 23, 1871, in Aberdeen, Hartford County, Maryland, and is a graduate of Johns Hopkins University with degree of A.B. in 1891, and Ph.D. in 1895. From 1895 to 1900 he was Associate in German Language and Literature at Johns Hopkins, and from 1900 to 1908, he occupied the chair as Professor of German. In 1909, he became Director of Jacob Tome Institute, at Port Deposit, Md., where he remained for ten years, leaving to accept the Secretaryship at Carnegie Institute of Technology.

Dr. Baker is extremely popular with the faculty and students, and his election to the Presidency has been heartily endorsed at the Institute and throughout the District.

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## ARCHITECTURAL LEAGUE MEDALS.

MEDALS were awarded by the Architectural League of New York as follows: Architecture, Dwight James Baum; Painting, Edward Simmons; Sculpture, Edward McCartan; Landscape Architecture, Harold Hill Blossom; Craftsmanship, The Herter Looms.



LEONI W. ROBINSON.

LEONI W. ROBINSON, of New Haven, Conn., died at his home, February 12, after a short illness. Mr. Robinson was in his seventy-second year and was regarded as the dean of the architectural profession in New Haven. He was one of the first members of the American Institute of Architects, a member of the New Haven Chamber of Commerce, and of the New Haven Colony Historical Society. Mr. Robinson was one of the founders of the New Haven Architectural Club and its first president.

He was born in Jamesville, Wis., but was brought to New Haven when a child. He served with distinction as a commissioner in charge, with his associates, of the building of the state library and acted as consulting architect in improving the state capitol building. As the architect of the state commission directed by the Legislature to prepare plans for a new state prison he made a close study of prison needs and presented a scheme of development that marked a distinct advance in the designing of prisons. Mr. Robinson was the architect of many important buildings, including the First National Bank Building, in which he had his offices; the New Haven Water Company Building, the Western Union Building, the Southern New England Telephone Company Building, and many of the public schools of New Haven. Most of the Winchester buildings are his work and several of the Sargent & Co. buildings. Mr. Robinson took a leading part in the drafting of the New Haven building code.

Mr. Robinson commanded the respect of clients and friends alike for his sterling qualities, and his loss is keenly felt by many.

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## THE FONTAINEBLEAU SCHOOL.

HEADQUARTERS for the American Committee for the Summer School of Architecture and Painting at Fontainebleau have been opened at the National Arts Club Studios, 119 East 19th Street, New York City, where information and admission blanks may be had. An account of the formation of this school was published in the February issue.

## PENCIL POINTS

### SECOND ANNUAL DINNER OF THE OFFICE OF SCHWARTZ & GROSS.

THE second annual reunion of the present and former employees of the firm of Schwartz & Gross was held on Saturday, January 27, at Giotto's Restaurant, 236 West 46th Street, New York.

"The Schwartz & Gross Alumni," as it is called, came into being last year when at the opening dinner there were present about thirty men. This year the work of re-uniting the men was much simpler and at roll call fifty-one responded.

The party enjoyed an excellent Italian dinner and between courses Mr. John Weiss and two fellow artists of the Commodore Hotel Orchestra rendered selections. At intervals various men entertained with impromptu exhibitions of the art of Terpsichore, æsthetic and eccentric. Contrary to the usual practice the speeches were short and to the point.

Mr. Gross and Mr. Schwartz spoke briefly but their remarks contained thoughts well worth remembering.

Mr. Wm. H. Meyer was unanimously elected to act as chairman with power to select his fellow officers and committees and he now has nothing to do but wait until it is time to reunite the present and former employees of Schwartz & Gross for their third annual banquet.

### THE SKETCH CLUB OF NEW YORK

THE Sketch Club of New York held its Nineteenth Annual Alumni Meeting and Dinner at Murray's, 228 West 42nd Street, New York City, in The Tut-Ankh-Amen Room, on March 31, 1923.

The members of the Alumni wish to extend a welcome to all old members of the Sketch Club. The eligibility to the Alumni consists of the appearance of the applicant's name on the membership records of the club from the year 1889 to 1904. All other conditions have been waived in the interest of good fellowship. Notice of meeting will be mailed to all old members on receipt of information establishing proof of former membership. All communications should be addressed to Henry C. Van Cleef, Chairman of Alumni 1923, 71 Livingston St., Brooklyn, N. Y.

## PERSONALS.

CRANDALL & STROBEL, Architects, have dissolved partnership. JOHN F. STROBEL will continue the practice of architecture at 622 Ellwanger & Barry Building, 39 State Street, Rochester, N. Y.

FLOYD A. NARAMORE, A. I. A., and A. FREDERICK MENKE, A. I. A., have formed a partnership for the practice of architecture under the name of NARAMORE & MENKE, Architects, 631 Central Building, Seattle, Wash.

L. KANE and MONROE R. SANDEL, Architects, 64 West Randolph Street, Chicago, Ill., have dissolved partnership. MR. SANDEL is now associated with ARTHUR FOSTER, Room 608, 56 East Randolph Street. MR. KANE will continue at the old address.

GEORGE L. NELSON has opened an office for the practice of architecture and engineering in the Pine State Building, Portland, Maine.

GEORGE H. LEVY and BENJAMIN SCHREYER have formed a partnership under the name of Levy & Schreyer, Architects, 17 West 42nd Street, New York City.

ARCHAVIR H. GARINIAN, Architect, 32, Bolbitine Street, Camp de Cesar, Alexandria, Egypt, a PENCIL POINTS reader, is doing interesting work in a far away country. One of his most recent buildings is an up-to-date fire house.

### THE CHICAGO ARCHITECTURAL EXHIBITION.

THE Chicago Architectural Exhibition will be held May 1 to May 31, inclusive, at the Art Institute, under the auspices of The Chicago Architectural Club, the Illinois Chapter of the American Institute of Architects, and the Illinois Society of Architects.

A notable collection of exhibits has been arranged for but additional exhibits consisting of photographs or water color drawings of fine examples of architectural work, examples of mural painting or sculpture from any part of the country will be welcomed. All exhibits must be submitted before March 30. Entry blanks and full information can be had by addressing Clare C. Hosmer, Director of the Chicago Architectural Exhibition, 1808 Mallers Building, Chicago, Ill.

*- The Schwartz & Gross Alphabet -*

*A* stands for Abie a boy about twenty,  
*B* is for Bowers with knowledge plenty.  
*B*rummer we also can place under *B*.  
*C* stands for Cohen, proud papa is he.  
*D* is for Daucher, spee-are his line,  
*F* stands for Fuchs who is always on time.  
*G* stands for Gross, you all know this man  
 and also for Ginsburger, a wizard at plan  
 Herbert and Hermann and then Julius Haut  
 wild up the "H's", which I must not leave out  
 Of Puttenhouse now you will hear tell.  
 He comes number twelve to fill letter *L*.  
*M* stands for Mueller prize clock designer  
 For Monrous and Moyer a real good old timer  
 Mc Sorley, a new man I'll introduce here.  
 While *O* is for Oberantz our engineer  
 Richfield and Rubin make up the *R* force  
 And you all know that *S* is for Simon S.  
 Schwartz  
 Also Scacchetti and Shwader and Smith.  
 The last a new daddy and real proud of it  
 Turcotte and Tearle and Todd you will see.  
 Come in to fill up the good letter *T*.  
 Of Weinberg, I came very near losing sight  
 And last is our office boy William Mc Knight

*Verse by L. Scacchetti      Cartoons by Richfeld*

SECOND ANNUAL DINNER  
**SCHWARTZ & GROSS**  
 ATTENDMENT ASS'N

OUR PHONE  
 CHANGED  
 TO  
 ASHCAN  
 6520

OUR CHIEF  
 WILL BE

ALWAYS  
 ON THE  
 GO

**B. N. MARCUS**  
 JAN 27<sup>TH</sup>  
 1923

OUR CARUSO

*MENU*

Hors D'oures -  
 Celery-Olives-cold Cuts.  
 ~ Soup ~  
 Munnie Stromme  
 ~ Entree ~  
 Wheel Cutlets-A la Spoke  
 ~ Roast ~  
 Chicken-A la Chamber  
 ~ Saïad ~  
 S. Carrol ~  
 ~ Desert ~  
 D. Sauce-Torioni-  
 Derr - F - Tasse -  
 And - ?

OPEN ALL NIGHT  
 SMITH & COHEN  
 OWNERS

J. A. H.  
 BY GOLLY THAT'S  
 THE BEST ONE  
 WE EVER DID.

NO GRASS GROWS  
 ON A BUSY STREET.

F. E. D.  
 HE KEEPS HIS NOSE TO THE  
 BOARD

IT CAINT BE  
 DONE THAT  
 WAY

FOR THE  
 BEST  
 MAN IN  
 THE  
 HAND

D. E.  
 DICK FROM PHILA.

K. J. M.  
 ENUF SED.

OR WELL YOU-KNO  
 GIDIE

BRASS  
 FIRM  
 RUD-IN

Above is Shown at Reduced Size the Design for the Menu of the Second Annual Dinner of The Office of Schwartz & Gross, Architects, New York City.

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# 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, 19 East 24th Street, New York City.

*Question*—Can you tell me the name and price of a book on show-card writing? C. H. E. *Answer*—We find that there is a book on this subject published under the title "Showcard," by Atkinson, price \$5.25.

*Question*—Can you refer me to some book that could be used in teaching a class of young men, carpenters and masons, how to estimate? A. G. B. *Answer*—We would suggest that you examine the "New Building Estimators' Handbook," by William Arthur, if you are not already familiar with it. This book is published by The U. P. C. Book Company, New York, \$6.00, postpaid.

*Question*—Will you kindly give me the name of a brief history of architecture, preferably one volume, one giving the origin, styles and periods of architecture only and not dwelling too much on ornament or description of buildings? R. W. L. *Answer*—We believe that the book that will best meet your requirements is "A Handbook of Architectural Styles" by Rosengarten. This book is published by Charles Scribner's Sons, New York City.

### THE STUDY OF ARCHITECTURAL DESIGN.

(Continued from page 34)

Of course, a good technique of presentation can be used as a document for any problem. The plates of Piranesi, for instance, will serve as inspiration for a severe and new structure as well as for time-worn, moss-grown pieces. Compare Figures 16 and 17, both by Piranesi. It will be seen that any scheme of rendering inspired by documents requires infinite patience and care, as well as a great amount of time. On the other hand, there is nothing that serves so well to increase one's ability in rendering and in presentation as an archaeology problem, unhampered by thoughts of parti, of arrangements of difficult corners in plan, of mosaic made up of an infinite number of lines; his attention is left free to concentrate on presentation, on the arrangement of the lines in the composition, of the masses of different value; he will learn how uncomfortable arrangements of the lines may be softened and made inconspicuous by the treatment of the tones of the masses. In fact, nothing is better as a training for a renderer than studies in these archæo projets, especially if he is fortunate enough to work under a critic who understands composition and rendering.

### SKETCHING IN AND ABOUT THE CITY.

(Continued from page 27)

Again I would caution against loading up with materials and becoming conspicuous by reason of a large display of sheets of paper, a sketching stool, board or easel, and other sketching paraphernalia. Instinctively you expect more of a man in flowing tie who wields his brushes in the shade of a painter's parasol, than you do of one who looks normal and stands or sits unobtrusively in a doorway with an insignificant looking sketch block. You will note how my remarks are all directed toward that one idea, of making yourself conspicuous, the carrying out of which makes sketching possible in New York. You will start probably just as I started, with results that you would hide rather than display, and the thought that others would see, and criticize, might alone act as a deterrent. It has done just that for so many, that I stress this idea of camouflage to the utmost.

Let me say, by way of a final word of advice, that practice and perseverance are the key-notes to success,

rather than the close observance of any set of rules or any man's advice. One must sketch often to develop a style and as frequently to retain it after having once gained it. And in out-door sketching, not only in the city, but in the country as well, there are so many things that might act as deterrents, that perseverance is requisite in no small measure. But having once acquired both these necessities, the joys that come with the positive results are such as to fully compensate for all the time and effort spent in their acquisition.

### THE COVER PICTURE.

ON the cover of this issue is reproduced an etching of Harlech Castle, by George C. Styles of the office of Bertram Grosvenor Goodhue. Harlech Castle is twenty-nine miles from Carnarvon in North Wales, and is built upon a rock a half mile from the sea. The present structure dates from the time of Edward I. It was here in 1460, Margaret wife of Henry VI, defeated at Northampton, took refuge.

Dafydd ap Ieuan ap Einion, held it for the Lancastrians until famine, rather than Edward IV, made him surrender. From this time is said to date the well known air, (Rhyfelgerdd Gwyr Harlech), "March of the Men of Harlech."

### FÊTE CHARETTE.

THE First Annual Fête Charette of the Pen and Brush Club of the Harvard School of Architecture is announced for the evening of February 22, at the Hemenway Gymnasium, Cambridge. The feature of the occasion is to be an oriental costume ball in the style of Mediæval Constantinople, arranged by the Harvard and Tech. Schools of Architecture in collaboration. The design of the invitation is an excellent pen-and-ink drawing representing a pageant in old Constantinople.

### TILE IN ARCHITECTURAL DECORATION.

THROUGH the special committee of the St. Louis Chapter of the American Institute of Architects, co-operating with the Associated Tile Manufacturers, a very interesting program was arranged for the evening of February 15, at the Hotel Statler, St. Louis.

First on the program was a private view of an exhibition of tiles and tile work. Walter L. Rathman, President of the St. Louis Chapter of the A. I. A., is scheduled to introduce the first speaker at 8:15 P. M. Rexford Newcomb, Professor of Architectural History at the University of Illinois, Urbana, Ill., is down for the principal address of the evening on "The Use of Colored Tiles in Architectural Decoration," referring especially to developments throughout the ages, illustrated with autochrome slides showing ancient and modern examples.

D. Knickerbacker Boyd, Architect, former Vice-President and Secretary of the American Institute of Architects, is scheduled to speak on "Utilization of Tiles by Architects."

Louis La Beaume, Architect and Chairman of the Committee, is down to lead the discussion on the subject of the evening, to be taken part in by members of the Chapter the St. Louis Architectural Club, students of Washington University, the public, and F. W. Walker, Secretary of the Associated Tile Manufacturers.

# THE SPECIFICATION DESK

## *A Department for Specification Writers*

*The contributions printed below were received in response to the suggestion published in the January number that the papers in that issue be discussed with a view to bringing out any additional ideas bearing on the specification problem. It is hoped that all who are interested in the preparation of specifications will feel free to submit their ideas for publication in subsequent issues of PENCIL POINTS.*

### MECHANICAL EQUIPMENT SPECIFICATIONS AS SEEN BY A MANUFACTURER.

By Charles E. Prout.

THE article which appeared in the January issue of PENCIL POINTS by Mr. J. B. W. Gardiner entitled "Specifications from a Manufacturer's Viewpoint" was undoubtedly written, and will be interpreted as applied particularly to basic materials, rather than to patented articles of mechanical equipment.

However, many things which Mr. Gardiner says are at least equally true of mechanical units. Most everyone will agree with the statement that the manufacturer has an interest in the specification. On mechanical equipment a little thought will show that the manufacturer's interest is even greater than that of the architect, because an installation, improper for any one of several reasons, will injure the manufacturer's reputation and prevent him from doing further business not only with the architect, but with the consulting engineer (if there be one), the owner of the building, the owner's plant engineer, or other man who may have charge of the operation of such a unit. In such a case while no blame may be attached to the organization that specified the article, the manufacturer will have to go to a great deal of unnecessary expense to preserve his reputation, thus freeing the architect entirely from any criticism.

Quite naturally, the leading manufacturers know the many pitfalls to be avoided when considering an installation. The reliable companies are usually glad to give, without obligation, the benefit of their experience so that not only a well designed unit shall be installed, but also that the proper type to meet the conditions be selected.

Such a course of action requires only the selection of a manufacturer who has a reputation for being interested in making a good job as well as making a sale. There are many such concerns who will suggest the use of the cheapest units "that will fully and adequately meet a given end."

No one expects an architect or specification writer to know *everything* about *each* article contained in the construction and equipment of a building. But everyone does expect that the architect knows *where to get* such information and engineering assistance.

It is always the privilege of the specification writer to question the manufacturer's suggestions, and he should feel free to ask for all the reasons behind each suggestion. This gives an opportunity

to determine the value of what has been recommended, and to make any changes which, in his judgment, are required.

The specifications should be then written so that there will be installed exactly the material which has been chosen as the best for that job. If it has been found that there are units produced by several different factories, which are actually of the same quality, and have the same properties, it is much better to state the several units *by name* than to say "or equal."

This method gives the contractor the proper opportunity to select materials on which he can secure best delivery and opens the way to the fairest method of securing satisfactory prices and terms.

A specification written in this manner will be one of which the architect or engineer can be justly proud, and one for which he can afford to assume full responsibility, because the evidence has all been submitted to him and his judgment has passed upon each of the component parts.

In the event of unsatisfactory results from articles so selected he can always feel sure he has a reliable organization to deal with and that adjustments, if necessary, will be made on a basis of justice to all concerned.

On the other hand, the "or equal" clause, tacked behind certain products, opens the door to recommendations by the contractor. Recommendations, it can be safely said, are frequently offered for no other reason than to increase the contractor's profit at the expense of the owner or the architect, or both. There are, however, reliable contractors of long and varied experience whose fund of knowledge is available to the architect. When unforeseen difficulties arise, a frank and friendly discussion among those involved (the architect, manufacturer, contractor and owner) will usually iron them out and enable *the architect to draw a just conclusion* as to the best interests of his client. This phase of the specification applies specially to mechanical units.

It is very important to everyone concerned (Mr. Gardiner probably had this in mind but did not include it) that the architect see that the items specified are installed: and that when complaints (such as those of slow delivery, or other apparent lack of interest on the part of the manufacturer whose goods are specified) are received from anyone, the matter be taken up immediately with the manufacturer involved. Sometimes these complaints are well founded. Sometimes they are only half true, and at other times they are false.

Some mechanical units must be built to suit the conditions at each job: in other words, built to

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order. Measurements must be taken, blue-prints made, and all must be verified before actual shop construction can be begun.

When electric motors are involved it sometimes takes weeks to get a special kind of motor, and none of this work can be started until a formal order is received.

Sometimes there are cases where the best delivery that is humanly possible is three months from the date of an order, and it will be seen that unless the order is placed early a comparatively small, unfinished portion of the entire building may be the cause of withholding payments amounting to thousands of dollars.

The writer fully endorses Mr. Gardiner's statement that many specifications can be easily interpreted several ways. When the specification writer has determined upon a particular mechanical unit because he is fully convinced it is best suited for the conditions at the proposed building, his specification should be so drafted that it will be clear to everyone exactly what was meant and what material he intended should be used.

Some mechanical units are so simple in construction and in operation, that the specification writer is apt to feel that he "knows all about it." This is human, but it is dangerous. Its very simplicity may be the result of years of experimental work and study. The article may have its limitations, or what is more frequent, its applications may be wider than is supposed.

Again, a thorough understanding of a mechanical article today might be of little value next year on account of the newer developments and improvements giving a greater range of possibilities.

One particularly desirable feature that deserves attention when preparing specifications, is that of providing conditions so that additions to the building and equipment can be made at any time by the owner at a minimum expense. A few dollars spent when the building is under construction can be made to save hundreds of dollars later.

### A LETTER ON SPECIFICATION WRITING

From M. Nirdlinger of Nirdlinger & Marlier,  
Architects, Pittsburgh, Pa.

AS one of many who have greatly enjoyed your specification number of PENCIL POINTS, January issue, I humbly accept your open invitation to become a contributor. As an uninvited guest for a few "public speakers" minutes, I would say that if I were the judge and a prize were to be awarded for the best, or we might say, most valuable article on specification writing for a draftsman or young architect, I would certainly award the prize to Mr. William Deming, of Donn & Deming, Washington, D. C. My report of award would state that this gentleman was the only one of all the contributors that made mention of one of the most important features of specification writing, a feature that all have encountered and one which we all dread—

"Various Tricks of the Trade." This little expression is like a sign board announcing "Danger Ahead" to the tourist. There may be thousands of attractive signs along the country road, most of which are passed unnoticed, but the one reading "Danger Ahead" commands immediate attention.

Mr. Deming's "Tricks of the Trade" suggests a good riddle, What is it? It can be found in every city, on every building during construction, it is recognized by every architect when he is confronted with it, reliable builders and sub-contractors shun it. Answer—"Tricks of the Trade."

It appears to me that all the articles lack an effort to nurse the draftsman or the coming architect. They all seem to dwell on a long accepted practice, more of the arrangement of the specifications than how they should be written. I, therefore, take the liberty of suggesting that an average specification be published for a good brick and hollow tile residence. If necessary run it in serial form but in duplicate, the first copy to be as written by the architect, the second copy to be corrected as some of your well-known contributors consider proper. It might also be possible that the original specification could be published (omitting the duplicate) with corrections noted. This would clearly point out its weaknesses, pitfalls, etc., and by additions here and there its new strength would be easily recognized.

From personal experience I have found it just as important to insert cautions as to specify materials. As an illustration let us consider a specification for brick work that is laid up from outside scaffold. Unless the prohibiting of putlocks is mentioned you will find the average brick contractor will argue his right to use them. Next example would be the flashing around a vent pipe. If we adopt the principle recommended by one of your contributors to leave the various little details to the practice of the respective trades, we would specify a certain weight lead flashing around all vent and soil pipes, making same waterproof. Yet from actual practice you will not find one plumbing contractor in fifty that will carry the lead flashing up to the top of the vent and soil pipe and bend the lead flashing inside the pipe. The more economical method which is commonly practiced is to slip the lead flashing around the pipe, the top of the flashing often stopping as much as 2'-0" below the top of the vent or soil pipe. This latter method permits rain water to run down between the pipe and flashing causing trouble inside the building.

I fully appreciate that the majority of the contributors to the January issue are men far above the average architect, which enables them to obtain contractors of the highest type, but it is the draftsman and the young architect that this campaign is supposed to benefit and it is with this aim I write.

*Note.—We have acted on Mr. Nirdlinger's suggestion contained in the above letter and have arranged to publish a specification with criticisms. This will appear in an early issue.—ED.*

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### MISCELLANEOUS ITEMS OF CONSTRUCTION, PART XI.

BY OTTO GAERTNER.

*In this series of notes Mr. Otto Gaertner, A. I. A., Associate Member American Society of Civil Engineers, is treating 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.*

**Garages (Continued)**—Generally the type, capacity, and number of ramps depend upon the nature of the business of the building that is to be served, because the kinds of traffic in the different buildings vary. In the ordinary type of commercial garage, a single-track ramp will serve a building having a capacity of three hundred cars, but in a large building where there is a continuous stream of two-way traffic, two single-track, one-way ramps or a two-track ramp may be needed. Single-track ramps are more desirable than double ramps.

Often two single ramps are more easily incorporated in the plan than one double-track ramp and are preferable. Upward and downward traffic can use the same single-track ramp but if the amount of traffic warrants it, the ramp can be doubled or two can be provided. It is just as important to be able to have facilities for inter-floor travel as for travel into and from any floor to the outside, and at times simultaneously.

If necessary a ramp may be temporarily used entirely for upward or downward traffic. In a truck storage garage, or one housing vehicles for distribution services, most of the traffic occurs at the beginning and at the end of the day, when all the cars leave or return to the garage within a short period of time. In such a case the temporary one-way system may be used if only a single-track ramp is provided. This also applies to commercial garages that are located in the theatre districts where the cars are left before performances and called for soon afterward.

The ramp may be made wide enough for two lines of traffic moving in opposite directions, if the space permits, but there is a saving of time because the traffic can move faster, if all the traffic on the ramp is moving in the same direction. There is also less likelihood of accidents and collisions occurring on a one-way ramp. This is especially true where the ramp is curved, enclosed by walls, or where it has a turn.

Naturally, the amount of space required by a ramp depends somewhat upon its shape, slope, location in the plan, the column spacing in the building, and the sizes of the vehicles that are to use it. Usually, the straighter the ramp the less is the amount of space needed. If the ramp is curved, or if it has a right angle turn, its width must be such as not to cause large automobiles to scrape their fenders. Sometimes the curve is made ample but at times it is made too large, thus wasting valuable car storage space. A ramp with a right angle turn, unless very wide, should have a curb to help guide the wheels around the corner in such a way that the fenders, especially on the larger cars, cannot reach to the walls. The largest cars can perhaps be kept on the ground floor. We are assuming above that the ramp is enclosed by supporting walls. The right angle turn ramp is the least desirable of any.

When possible, the ramp should start at the same point in the plan on each floor, to insure the most serviceable and economical layout without interference with structural columns on the various floors. Curved or circular ramps should not have a diameter of less than sixty feet on the inside, to accommodate the large passenger cars and trucks; but for trucks the turning radius of the largest truck that is to be accommodated must be ascertained. Some trucks can turn in sixty feet but others need eighty feet, and some need still more. But then again, the largest trucks can generally be accommodated on the ground floor.

*To Be Continued.*

### PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER.

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

**G. & G. Ash Removal Equipment.**—Pamphlet No. 280 illustrates and describes the equipment used with the G. & G. Telescopic Hoist. Of special interest to architects will be the half size section through the G. & G. Sidewalk Door frame, showing an unusual design of a door which is watertight. Copies may be obtained by addressing Gillis & Geoghegan, 548 West Broadway, New York, N. Y.

**Seamless Brass Pipe.**—Bulletin No. 1. This bulletin contains typical layouts of hot water systems of various kinds, giving tables of weights, price lists and other data of value to architects and specification writers. Size  $7\frac{3}{4} \times 10\frac{3}{4}$ ". 24 pp. Rome Brass & Copper Co., 105 Dominick Street, Rome, N. Y.

**Hand Power Elevators and Dumb Waiters.**—Dumbwaiters, elevators, invalid lifts, automobile elevators, sidewalk lifts, etc., Catalog O shows complete line of hand operated equipment for vertical conveying. Also specification data. 52 pps. size  $4\frac{1}{2} \times 8$ ". Sedgwick Machine Works, 158 West 15th Street, New York, N. Y.

**Sash Chains.**—Catalog No. 11 covering sash and other chains used in building construction, together with a line of padlocks and a variety of other specialties. Smith & Egge Mfg. Co., Bridgeport, Conn.

**Structural Slate.**—A series of bulletins prepared by the Structural Service Bureau dealing with the various uses of structural slate. Also a specification, with appended suggestions for preparatory work by other contractors, necessary to receive the slate. The Structural Slate Company, 130 Robinson Avenue, Pen Argyl, Pennsylvania.

**The Regulation of Temperature and Humidity.**—Complete catalog, handbook and specification guide, showing in detail the entire line of Johnson Temperature Controlling Devices for all types of buildings. 64 pps. size  $8\frac{1}{2} \times 11$ ". Johnson Service Co., Milwaukee, Wis.

**Dampproofing.**—Specification sheet covering descriptions and specifications of compounds for dampproofing interior and exterior surfaces. Size  $8\frac{1}{2} \times 11$  inches. L. Sonneborn Sons, Inc., 114 Fifth Avenue, New York City.

**Fireproof Veneered Doors and Trim.**—A 16-page book. Size  $8\frac{1}{2} \times 11$  inches. Containing full information and complete details and specifications relative to Pyrono Fireproof Veneered Doors and Trim, also Pyrono details in sheet form for tracing, are now ready for distribution by The Compound & Pyrono Door Co., St. Joseph, Mo.

**Fire Doors and Hardware.**—The full line of tin-clad and corrugated firedoors, complete with automatic closers, track hangers and all the latest improved equipment—approved by the Underwriters' Laboratories—manufactured by the Richard-Wilcox Mfg. Co., is shown in their new 64-page booklet, size  $8\frac{1}{2} \times 11$  inches, and may be obtained by writing Richard-Wilcox Mfg. Co., Aurora, Ill.

**Selling Arguments for Tin Roofing.**—Standard specifications, general instructions and detail methods of application are given in an 80-page booklet, illustrated, arranged by the N. & G. Taylor Co., 300 Chestnut Street, Philadelphia, Pa. This booklet contains much interesting information, and will be sent upon request.

**The Arrow.**—Bright and newsy little publication issued every little while containing material of special interest to architects, draftsmen and specification writers. N. & G. Taylor Co., Philadelphia, Pa.

**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.,  $8\frac{1}{2} \times 11$ . 70 pp., with supplementary portfolio containing 16 full page color sheets showing various varieties of Vermont Marble. Vermont Marble Co., Proctor, Vt.

**Specification for Cut Indiana Limestone.**—Condensed specification forms covering various classes of limestone work. Loose leaf,  $8\frac{1}{2} \times 11$ . Indiana Limestone Quarrymen's Ass'n., P. O. Box 784, Bedford, Ind.

**The Story of Plate Glass.**—From the raw materials to its finished product is interestingly told in a booklet issued by the Plate Glass Manufacturers of America. 16 pps. Size  $6" \times 9"$ . Address 2107 First National Bank Bldg., Pittsburgh, Pa.

**Fans and Heaters.**—Capacity tables and dimensions, engineering data, etc., describing the use of the Clarage Kalamazoo Multiple Fans and Heaters in schools, churches, hospitals and industrial plants, is fully set forth in an illustrated, 84-page catalog, size  $8\frac{1}{2} \times 11$  inches and will be sent upon request by the Clarage Fan Company Kalamazoo, Michigan.