



WE CELEBRATE

JUST when a publication becomes a year old and, therefore, may properly stage a birthday celebration is a matter concerning which we are unable to find anything in the encyclopaedia. So, being thrown upon our own resources, we have decided to celebrate with this, our twelfth number, on the theory that when our thirteenth issue comes out we shall certainly be *more* than a year old—and we don't intend to be late on this particular occasion.

Now let us assume that we have hired a hall and that every *Pencil Pointer* is present at our party—and speaking of such things as halls, competent authorities tell us that the only place around here that would hold the present PENCIL POINTS family is the Madison Square Garden. When you consider that this group of more than 7,800 people has been brought together within slightly less than a year's time, we think there is ample reason for us to be very thankful and, perhaps, a little proud.

Now that the entire 7,800 of us have our feet under the festive board and have reached the stage at which cigars and informal discussion are in order; let us consider for a moment what has been accomplished within the past year, what remains to be done, and what may reasonably be expected during the coming year.

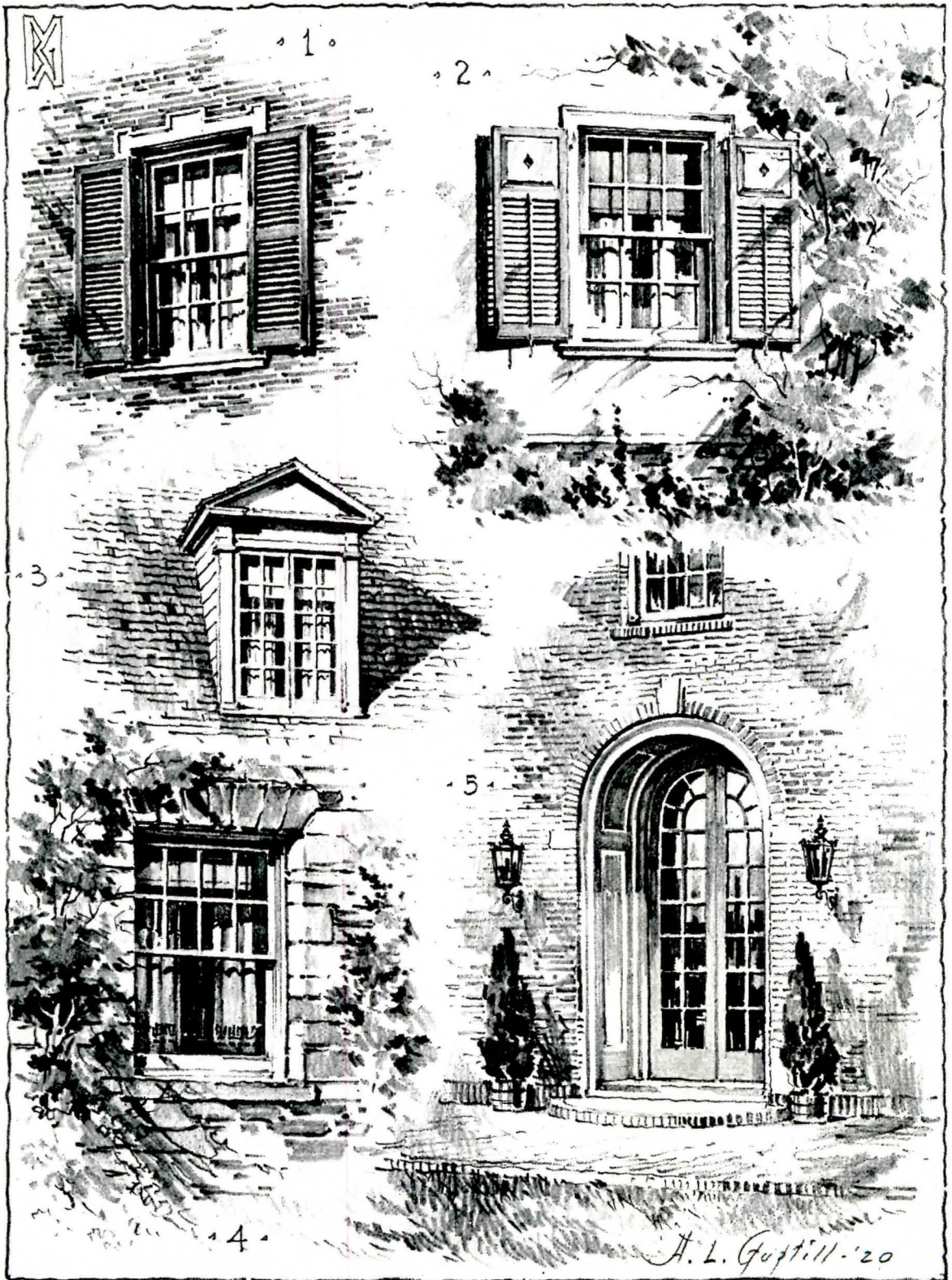
We started with an idea and we have expressed that idea in twelve issues of PENCIL POINTS. How do you like the way we have carried it out? (Applause.) The applause is grateful, but we know it is dangerous. We want to hear also from the men who think we might have given them something we did not put into PENCIL POINTS, from the men who may think that we are not entirely or at all on the right track. Frank criticism will serve as an antidote for any tendency we may have to get puffed up and quit trying or to become too sure our way is right. Fortunately, practically all the original Charter Members are renewing, and for every one who drops out more than five new members are joining the family.

We will now pass the hat, and each person present is requested to write an opinion, criticism or suggestion on one of the small pieces of paper that have been distributed among you and deposit it carefully as the receptacle is circulated. If you like the material that was presented in PENCIL POINTS during the past year, please say so, and sign

your name. If you have any criticisms of PENCIL POINTS to make, don't hesitate to state them. If you have any suggestions for the improvement of the paper in any way, such suggestions are especially desired. As we told you when we started, we want to build this paper *with* you not *for* you, and we still feel the same way about it. If there is any subject you would like to see treated during the coming year, out with it, and when you get back home and run across a piece of news or an item of interest, let us have it. If you have a drawing or an article that you think PENCIL POINTS should publish, send it along and let's have a look at it. We want more personal news, and we can get it only from you. We want more questions asked. The problem that bothers you is probably of interest to many others in the field. If you have developed a short-cut or a better way of doing something let us tell the others about it. Let us do everything possible to make the next twelve issues of PENCIL POINTS helpful, entertaining, snappy and full of pep.

Now a word about another way in which you can help along. You know that the ability of a magazine to publish an increasing amount of good material, more pages of reading matter and more illustrations, depends on an increase in the advertising section. So, when you write to a firm that advertises in this journal will you mention PENCIL POINTS? Give the paper credit for carrying the advertiser's message to you. A few firms with a keen appreciation of the part played by the men in the architects' offices throughout the country in the marketing of their products, used advertising space in the first issue of PENCIL POINTS. This number has increased gradually. They are pleased with the progress of the paper and with the responses their advertisements have brought—but we want them to know more fully how alert PENCIL POINTS readers are in keeping informed on the practical side of architecture through reading the advertisements as well as the text of this journal.

We are glad to have had all of you sit in with us on this occasion and we hope you will all be with us again on a similar occasion a year from now. When in our neighborhood drop in at our new offices, now on the seventeenth floor, instead of the thirty-fourth floor of the Metropolitan Tower, and talk things over.



Sketching and Rendering in Pencil. Figure 25.

SKETCHING AND RENDERING IN PENCIL, PART X

BY ARTHUR L. GUPTILL

In this series of illustrated articles the first of which appeared in the August issue of this journal, the technique of pencil sketching and rendering is being taken up step by step, carrying the architectural draftsman or student through a systematic course of study which has been gradually developed and put into practice by Mr. Guptill in his classes at Pratt Institute, Brooklyn, New York City. The illustrations are not merely copy plates, but each is drawn to illustrate some principle of composition or some suggestion for technique given in the text. Although these plates are primarily intended to assist the student in freehand work, they will prove helpful as well to those making pencil renderings of subjects prepared instrumentally.—Ed.

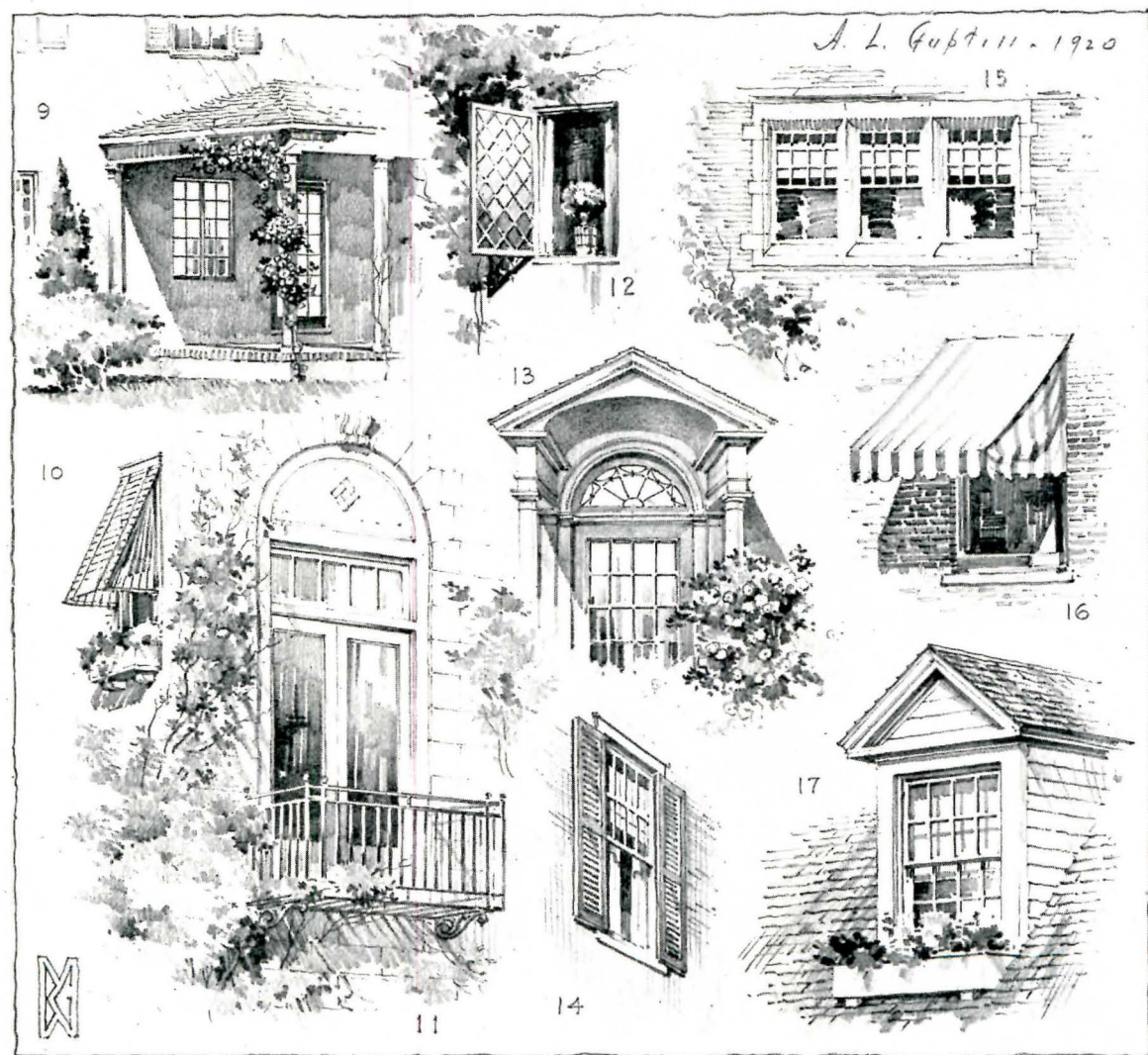
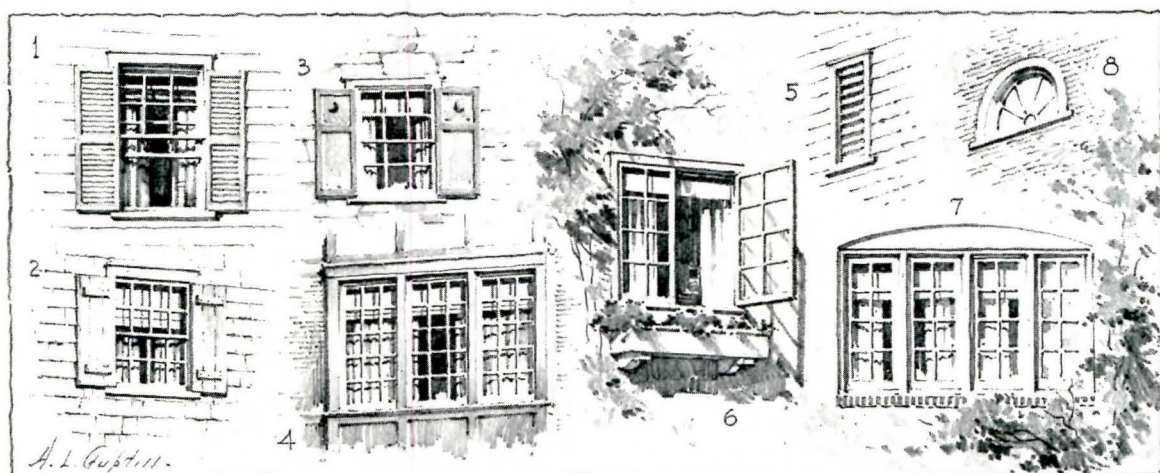
The Representation of Details—Continued

THERE is no great difficulty in acquiring the skill to render a wall of brick or stone, or a roof of slate or shingle, but when it comes to successfully representing windows or glazed doors or any objects containing large areas of glass, our task proves less simple, for glazed surfaces are so complex and changeable in their appearance as to demand special care and skill in their indication. It is not hard, to be sure, to learn to draw a typical window or two, especially if shown at small scale, but if the scale is so large as to make any considerable amount of detail necessary it is no easy task for the beginner to do even this much well, while it is still more difficult to so render a number of adjacent windows as to give them the best effect in relation to one another and to the remainder of the building. If they are made too dark or too light they may, even though good in themselves, attract more than their proper share of attention, and if all are drawn in the same way the result will probably prove monotonous, while if, instead, too much variety is shown, the breadth of effect of the whole drawing is almost sure to be destroyed. Before attempting finished renderings of windows the student should, therefore, acquaint himself through observation and study with the appearance of glass under different circumstances and conditions, for it is only by so doing that he can represent it to the best advantage in any given problem. Walk along a street and study the windows that you see,—not only those near at hand but those in the distance as well. Compare those on the sunny side with those in the shade, and those in the upper stories with those in the lower. As you make these comparisons ask yourself such questions as the following: What is the difference in the appearance of glass in sunlight and in shade? Do windows in the upper stories have the same general effect as those in the lower? How do windows in the distance compare with those near at hand? Can you see the curtains or shades distinctly in all the windows? How much of the interiors of the rooms do you see as you pass? Is the glass always plainly visible? Is it hard to tell if panes have been broken from a sash? Is it easy to distinguish plate glass when you see it? If so, why? Do all the lights of glass in one window look the same? Does the glass usually seem lighter or darker than the sash itself? Do you see images reflected in the glass? If so, are they sufficiently definite to permit you to tell trees from buildings? Does your own image appear in the windows? Are images more distinct in glass in shade than in glass

in the sunlight? Are reflections as clear on a rainy day as they are when the sun is shining?

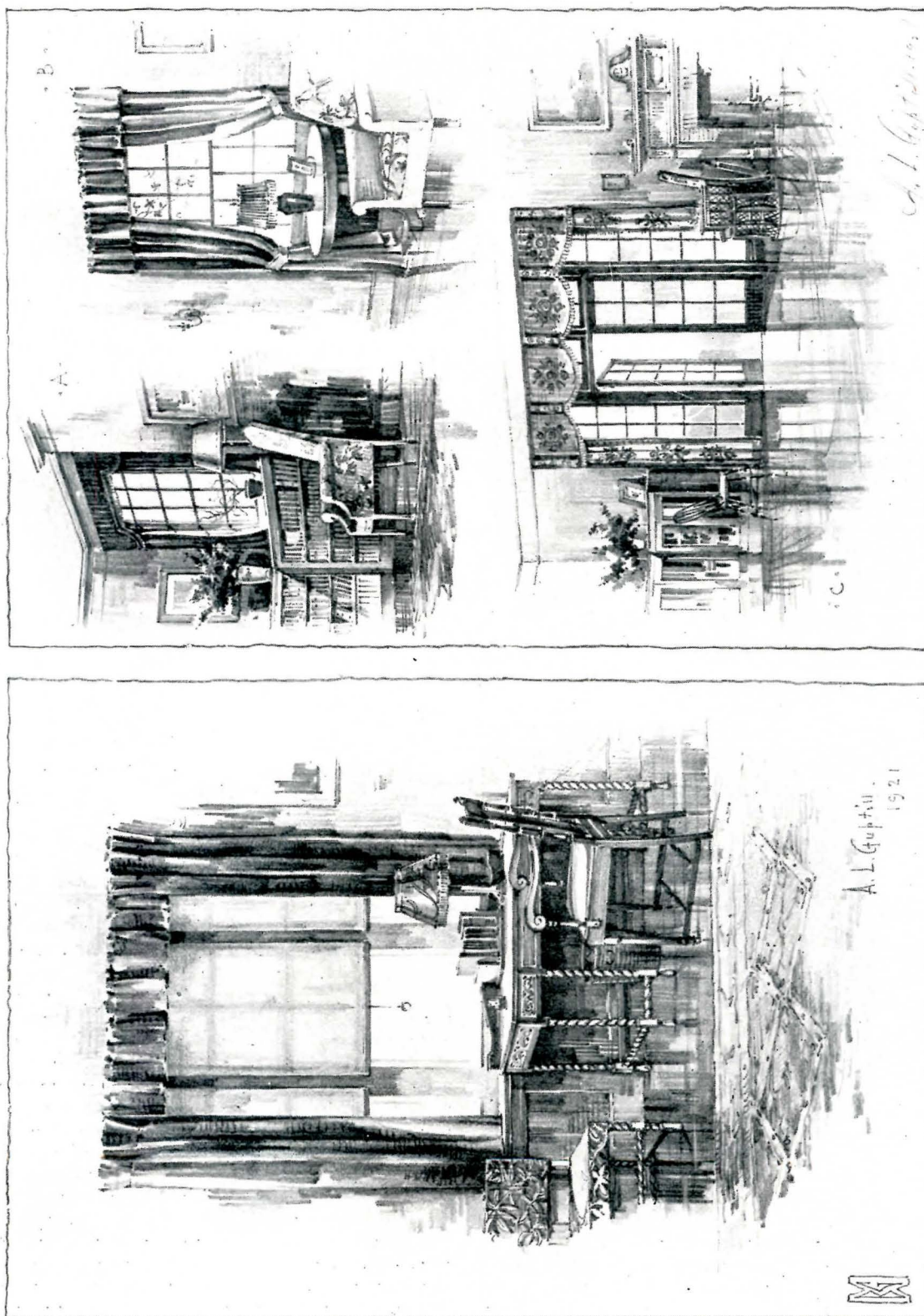
A little observation will answer such questions as these and make it evident that ordinary window glass has two leading characteristics which relate especially to its appearance, and which are, therefore, of the greatest importance to the student. First comes its transparency. Under certain conditions glass seems practically invisible. This is especially true of clean plate glass favorably lighted. We are sometimes able, then, in our representation of windows, to neglect the glazing and treat the sashes just as though the panes were non-existent, showing distinctly the shades and hangings within, or, if the drawing is made from an interior, looking out, the foliage and sky beyond. The other characteristic, and the one which causes much of the trouble of the beginner, is the power that glass has to act as a reflector or mirror, giving, very often, a shiny effect to the window, and usually images of objects as well, which in some cases are almost as clear as those obtained in the usual "looking glass." One of the difficulties confronting the student who tries sketching directly from buildings is the complication in the effect of glass resulting from these reflections, for often trees and buildings and skies and clouds and people are all pictured in the windows, showing so plainly as to prove confusing, for the images are not only somewhat distorted, as a rule, because of imperfections in the glass, but are crisscrossed by the sash bars and mingled and blended with the curtains in a most bewildering manner. It is not easy, therefore, to know just what to put in and what to leave out, so considerable experience will be necessary to teach what really is essential and what should be subordinated or omitted. It is worth remembering that as a rule the two characteristics of glass which we have mentioned appear in combination;—the glass seems sufficiently transparent to enable us to see through it quite easily yet has enough reflection to give it a shiny appearance. Sometimes, however, this power to reflect neutralizes the effect of transparency to such an extent that we find it impossible to look through the panes at all. This is especially true in windows near the top of a building where the reflection of sunlight or bright sky is frequently so strong as to make the curtains within either invisible or very indistinct. Such windows, and particularly those of the upper stories of very tall buildings, often take on much the same color and tone as the sky, and if the sun itself is reflected, the windows become dazzling in their brilliancy. A reflected light cloud may make the glass almost white while a blue sky may cause a blue reflection

PENCIL POINTS



Sketching and Rendering in Pencil. Figure 26.

PENCIL POINTS



Sketching and Rendering in Pencil. Figure 27.

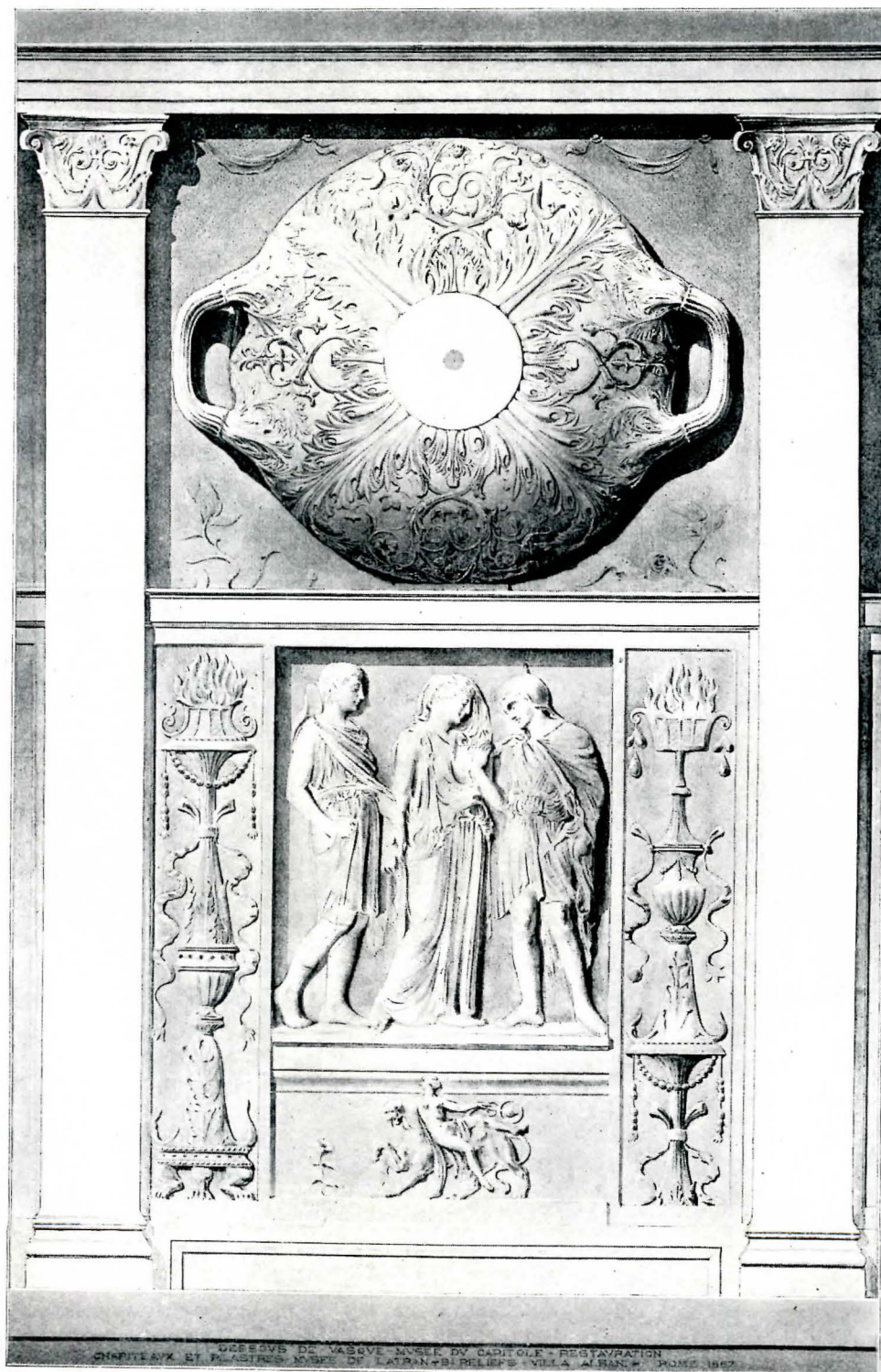
PENCIL POINTS

of a value similar to that of the sky itself. If we observe the windows nearer the street level we find as a rule that most of them seem darker, for in place of the sky reflections we have those of nearby buildings and trees. It is useful to bear in mind, then, that when rendering tall buildings the general tone of the glass, taken as a whole, may often be correctly shown lighter in the upper than in the lower stories. Even in the ordinary suburban home or country house the windows of the lower floors frequently seem darker when viewed from without than do those above, especially if the nearby foliage is comparatively low, so as to reflect in the downstairs windows only. It is true, too, that glass within shadow, or on the shady side of a building, usually seems much lighter than we would expect, so it is by no means necessary to represent it by a dark tone simply because it is within shade or shadow. Its light appearance is generally due to the fact that it mirrors the brightness of the sky or some nearby building in sunlight. This power which glass has to reflect varies under different circumstances. If glass has black or darkness as a background, or is in shadow as we have just mentioned, it usually proves a stronger reflector than it does when in light or with light shining through from behind, or with a light background. Paint glass black on the back and it becomes a good mirror, reflecting objects very distinctly. When we look at a window from without, in the daytime, and it has no shades or curtains, its glazing may be likened to the painted glass just mentioned, the darkness of the interior being relatively of a deeper value than the outdoor tones and therefore taking the place of the black paint, and such a window shows reflections more distinctly than one with light curtains behind. If a window by chance shows portions of a black, or any very dark window shade and of a light one as well, the reflections will be more distinct on that portion of the glass which has the dark shade behind it, and contrarily if a similar window has a light shade lowered to the sill so as to fill the whole opening the reflections will be comparatively indistinct. As a further proof that glass is a good mirror when backed up with black, stand facing a window in a lighted room at night, with the shade raised, and if it is dark out-of-doors your own image can be easily seen. In the daytime, however, if you stand in the same place and look out into the sunlight you will find your reflection to be quite indistinct or even invisible. When making a drawing of an interior as it appears in the daytime it is, therefore, seldom necessary to show any reflections in the glass of the windows or doors of the outside walls, as the brighter light without renders them impotent. In fact, in architectural drawing it is only occasionally that definite reflections of objects are shown, for unless extreme care is used to keep them inconspicuous they may become so noticeable as to seriously detract from the result. It is not often advisable, for instance, to show the reflections of tree trunks or nearby buildings, and if such images are indicated they should be drawn correctly and kept

subordinated. There are times, however, when a reflection of a window reveal or an arch intrados or some similar adjacent part of a building may prove interesting, and in the sketch at "5," Figure 25, a dark reflection of the shaded intrados is shown. Even though comparatively little use is made of definite images of objects, when representing glass, the effect of most windows is, nevertheless, modified to such an extent in general tone by the indefinite reflections of the sky and distant objects as to demand some expression of this modification, but as the spectator, when viewing a drawing, seldom has an exact knowledge of what these objects influencing the appearance may be, the artist is usually at liberty to assume such conditions as best suit his requirements and convenience. This means that if it pleases him to draw his windows light, on the assumption that they are reflecting a bright sky, or dark for some similar reason, he is at liberty to do so, and as windows often change in effect completely and suddenly, it is hard to dispute his authority.

Now to get down to a few practical facts of value to the beginner. First of all, decide whether the glass is to be shown light or dark. This depends largely on the surrounding material. If the walls are of light plaster, and strong contrast seems desirable, keep the glass dark; if, instead, the walls are of dark material, light windows will attract more attention. There are many cases, however, where it seems wise to keep certain windows inconspicuous, as a matter of presentation, and under such conditions strong contrast is of course to be avoided. The best way to determine which windows should be dark and which light is by making a preliminary study on tracing paper before starting the final rendering. As a rule those windows nearest the spectator, or, in some instances, nearest the center of interest, should show, not only the sharpest contrasts but also the greatest amount of detail. This gives us an opportunity to get a certain variety of treatment in the different windows, which is essential, but at the same time care must be taken not to provoke unrest by overemphasizing the differences of representation. Once a general scheme for the values has been determined upon, it is necessary to reach a decision as to how much detail is to be shown through the glass. This will depend largely on the location of the windows and on the nature of the building. If a dignified façade is to be rendered, it is seldom wise to show much inside the glazing, as curtains and the like sometimes detract from the architectural character of a formal building unless rendered in a very conventional manner. An informal building, such as a suburban residence, permits greater freedom of expression, however, so in a building of this sort it is usually best to show the shades and curtains quite distinctly. Stiffness of effect is avoided if an occasional window is shown open, or with the shutters partly closed, while awnings and screens and such things sometimes add to the feeling of reality. In a formal building if shades are shown in the

(Continued on page 41)



MOTIVES FOUND AT ROME

RESTORATIONS BY H. D'ESPOUY

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

In the plate reproduced on the opposite side of this sheet are shown a number of motives of great excellence of design. The basin, the under side of which is shown, is regarded as one of the finest works of Roman art produced under strong Greek influence. This basin apparently was designed to be placed horizontally on a rather high pedestal. It was found on the Esqueline Hill, near the modern Piazza Dante. The basin is in the Capitol Museum. The restorations of the capitals and pilasters are from the Lateran Museum. The reliefs are from the Villa Albani.



CHARCOAL DRAWING BY SCHELL LEWIS. DETAIL OF RESIDENCE

CHARLES A. PLATT, ARCHITECT

The drawing reproduced on the other side of this sheet is one of the charcoal drawings made in the office of Mr. Charles A. Platt for the purpose of studying the detail of buildings in the process of designing. These drawings are not intended as presentation drawings to show to the client. They provide a rapid and effective means of studying the design, for they can be made more quickly and they present the character of the detail remarkably well.



STUDY IN PENCIL BY FRANK VINCENT DU MOND, FOR A MURAL DECORATION
FOR THE PANAMA-PACIFIC EXPOSITION

Over the page is shown a reproduction of a study by Mr. Frank Vincent Du Mond for one of his mural decorations for the Panama-Pacific Exposition. These decorations represent the influx of the widely different human elements that went to make California. The Spanish adventurers and the missionaries, the scholars, the "forty-niners" and all the others. In this spirited sketch we see a group of home seekers pressing on across the plains to the new land of promise. The study is in pencil on gray paper, size about 30 in. x 40 in.



FIGURE STUDY BY BARRY FAULKNER, FOR ONE OF HIS MURAL PAINTINGS FOR THE
CUNARD BUILDING, NEW YORK CITY

On the other side of this sheet is shown a reproduction of a study by Mr. Barry Faulkner for one of the figures in one of the mural decorations he is painting for the great Cunard Building which is nearing completion and is one of the architectural features of down-town New York. This particular figure is for the decoration representing "The South Seas." This study is an extremely fine example of technique in drawing from life.

ARCHITECTURAL DETAIL, PART I

BY JOHN VREDENBURGH VAN PELT

This is the first 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 "A Discussion of Composition, Especially as Applied to Architecture," will discuss the essentials in 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.

AN analysis of requirements for the production of good detail necessarily takes us into the whole field of architectural composition. The qualities of a building are those of its parts. Most of us know the characteristics, rules if you like, that make for good design, yet we continually transgress them.

When I was a lecturer on this subject, I often sensed that the students felt they knew it all. Although agreeing with what I said, they thought it "old stuff." Yet on succeeding trips of criticism through the drafting room, I was still confronted with the old mistakes by these same students.

Unquestionably the authors of some of the buildings that disgrace, and even of some that grace our streets, must be theoretically informed of the general laws that govern design. They know better, but like my students, do not always put their knowledge into practice. It is true that a design sometimes looks different when it has been carried out in the building. The effect of a small sample of color is quite other than the whole wall that matches it exactly. Still I have been more impressed by the resemblance executed work bears to the drawings than by its dissimilarity and repeatedly have found myself astonished that, having allowed for perspective and relative scale, the erected building has looked so much like what was intended.

Probably when an architect fails to design intelligently, the fault arises from carelessness as often as from insufficient familiarity with the requirements of good composition. In any case it will be helpful to all who wish to produce the best possible detail to review these requirements and to trace their direct application to the design of detail.

Doubtless all designers will claim full knowledge of the potency of details to make or unmake a piece of work. Granted mass composition is of first importance, bad mouldings and coarse or vulgar ornament will fill us with disgust for the building. Pass up New York's Fifth Avenue and examine the buildings. How painful is the experience. But the general composition of many of the ugliest buildings is not bad. St. Patrick's is really a beautiful cathedral—it is not popular—the detail is at fault. It has not quite the cast iron quality of Cologne, but it tends that way. It is learned but it lacks feeling. That its author was one of the ablest students of Gothic of the late generation, suggests that he did not draw enough of it with his own hand.

The trouble with most of us is that we expend too little personal care and love on our work. A

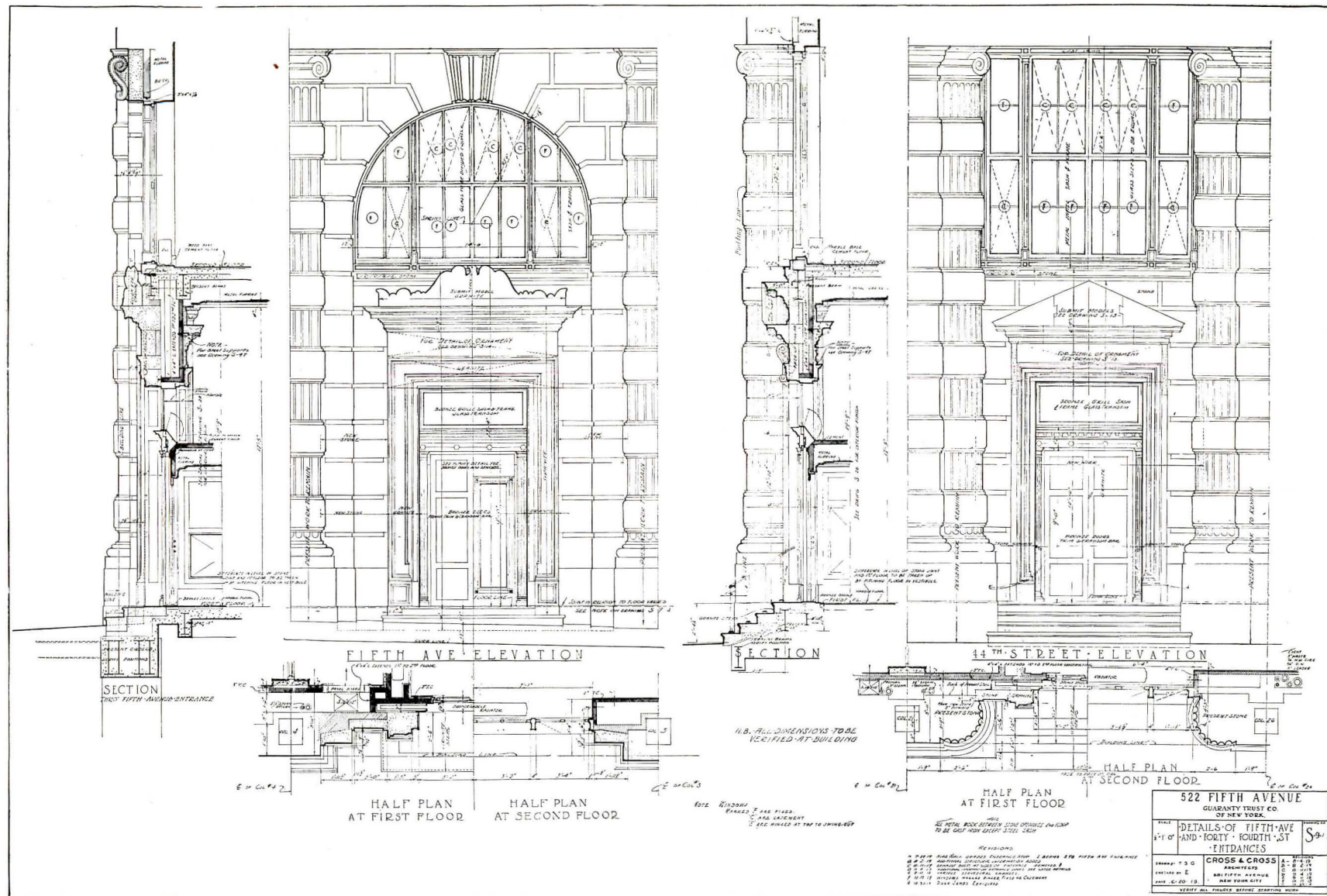
factory of architecture can never produce art. Each man must feel that his part in the work offers a real opportunity to develop something beautiful and to contribute to the making of a masterpiece of its kind.

Every part of the work is important, the making of the full-sizes as well as the architects' sketch of the ensemble and all the other usual drawings. The specification writer plays a part, too, that affects the final appearance of the building more often than is usually realized. The lack of texture and finish in much of our wall treatment—detail just as important as mouldings or ornament—is often due to the unfamiliarity of the specification writer with the original design and to the fact that he is a type of man who cannot comprehend and so can not possibly define or describe the subtleties that a master designer has felt.

Architectural designers are divisible into two main groups. For convenience let us call them "Conservatives" and "Radicals." The "Conservatives" base their creations on the achievements of the architects of the past. One man believes that all buildings should be designed in Romanesque, another that English Gothic is the only vehicle for beauty. The votaries of Italian Renaissance and Colonial make a very strong argument on historic grounds, while at least one well known firm swings the censer before the altar of Louis XVI. The "Radicals" are those who reject all precedent and who believe that art must progress and change in its expression.

The difference between the two groups is usually shown markedly in their interpretation of detail and ornament. The underlying factors of their success in making beautiful buildings are common to both groups. The points of similarity and the points of divergence in attacking a problem and the qualities and defects inherent in the attitude of each group are worth considering for the purpose of arriving at as clear an understanding as possible of the essentials in the design of detail.

The "Conservatives" may be divided into two distinct sections, the "Adapters" and the "Cribbers." The cult of the "Adapters" is a beautiful one and has produced some of our most charming buildings. "The best art has always a precedent," says its votaries. "Let us, therefore, take a bit here and a bit there and we shall be sure of our result." Of this more anon, for beautiful bits placed in unskilled juxtaposition may resolve into an ugly picture. But the men I have called "Adapters" are not those who copy the past textually and without consideration of the problem. They work out their



PENCIL POINTS

Architectural Details, Sheet No. 1. Details of Entrances. Building at 522 Fifth Avenue, New York City for The Guaranty Trust Company of New York. Cross & Cross, Architects.

PENCIL POINTS

compositions with the utmost care, exhibit an affection for beauty of mass, line, form and color that is usually intensified by their love for the period or style to which they revert for inspiration, and vivify their designs with the imprint of their personality, making the work theirs individually, even though it may be the descendant of the past.

It is with the "Cribbers" that I take issue. These men have not convictions or are too lazy and take too little delight in doing the work itself to produce something significant.

What care I though glorious European works of the past be still lovely when copied in New York or New England. If they retain their beauty in these copies, they seem to me the more vampires, sucking out the life blood of an art that should grow and be virile. The future is served by a striving to do better, not by effortless satisfaction with the good. Shakespeare adapted the plots of old Italian plays and tales, but who would say he cribbed them. Brunelleschi studied and revived the architecture of Rome without copying it.

Just as I cannot understand the state of mind that allows an architect to take so little personal interest in his work that he resembles the unnatural mother who leaves her children to a governess and nurses, so I cannot comprehend the other state of mind—perchance it is a similar one—that takes so little joy in creation, that parts or the whole general scheme of a building are taken as one might adopt a child from a foundling home. More shame when this course is not forced upon the architect by sterility of imagination. There are some minds that cannot conceive anything individual. They are pitiable. There are some that can, but are afraid or too slothful to try. They are accursed.

The "Radicals" are also of two sorts, whom we may call "Evolutionists" and "Differentists."

The "Evolutionists" are not content with adapting motives from the past. Their name would have fitted any of the contributors of old who wrought the development of a great period or style. Greek architecture was an evolution; so also were Roman, Romanesque and Gothic. Renaissance, in France at least, was a direct development from late Gothic through the transition period of Louis XII, as, when one pours milk into a coffee cup, the color changes progressively from brown to white, a trace of the brown remaining to the end. Although these changes were all gradual they were brought about by the very fact that each artist was trying to emancipate himself from earlier examples. It was creation within well-defined limits; but it was creation and brought forth as originals, the beautiful examples to which our "Adapters" revert with so much pride.

There is, however, another kind of evolution, even less like adapting. It grows out of response in design to the requirements of new social conditions or new materials of construction. Of this also more anon. I merely wish now to touch upon the basic difference of the attitude of mind whereby one man is actuated primarily through his reverence for precedent and his love for beautiful ex-

amples of bygone times, and another through his desire to respond to a sentiment or a need. Both are good; the first, if there is some creative germ and the result not incongruous with its time and use, the second if, withal, it is beautiful and not forced.

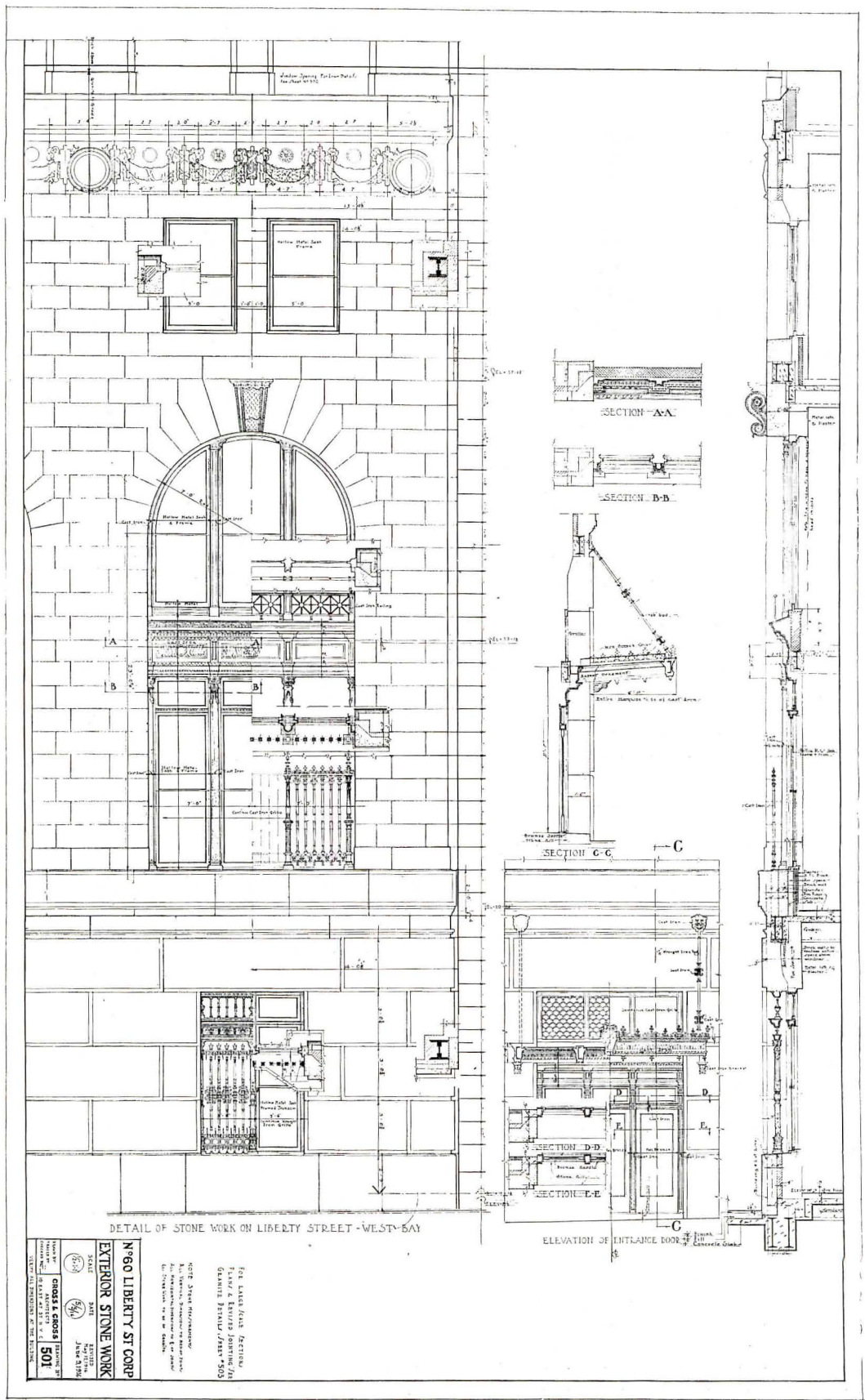
The dark side of the Radical picture shows us frenzied seekers after the *outré*. These men have as little real love for their work as the "Cribbers" though their insincerity expresses itself in an opposite direction. They care only for the glare of the spotlight and center their efforts on perpetrating something "different." Presumably they do not know whether their works are really good or not. It suffices if they are unlike anything that has gone before. No section of our country is without examples of the enterprise of members of this band of tyros. If the "Cribbers" are the apes and parrots of art, the "Differentists" are the gorillas. The danger from the first is that they may copy a good example and so gain a following; from the second that they sometimes evince a sort of brute force that casts a glamour over the rottenness of what they perpetrate and attracts to their standard ardent and impressionable youth. The lure of escape from serious, perchance tedious, study is strong and dangerous to all of us. This is a great inducement that helps to recruit the "Differentist" ranks.

It is not sufficient to criticize, tear down, and I cannot end this introductory word without a little more consideration of the best elements of our two main groups of creative architects. Each has produced beautiful examples of modern art. Wherein lies the power of each?

Just as the animus of those who copy and those who scorn precedent comes from a desire for easy success, that is, from something having no part with the creative instinct, so the mainspring of the really beautiful and virile architecture is love of the work itself. This is true, whether the worker chooses to use an earlier style as a point of departure or whether he prefers to forget the past and be guided solely by the requirements of his problem, his sense of composition and his personal inspiration. Technical ability is a requisite whether one works in a particular style or not, and with this must go hand-in-hand scholarliness. Doubtless Baroque was new when it came into vogue in Italy; but much of it was neither scholarly nor refined and the stamp of passing centuries has not sufficed to make it appear so. All of this, those who adapt and those who forswear the old have in common. Each group derives special advantages from the point in which they differ. The "Adapter" delights the critic familiar with the beautiful monuments of bygone days by reviving the memory of the agreeable sensations the latter has experienced in beholding the originals. This delight is more keen in proportion as it is more subtle. If the artist can throw about his building the misty atmosphere of the past without recalling too definitely any particular example, without seeming to have copied, the enjoyment he gives, (excepting to the vulgar

(Continued on page 40)

PENCIL POINTS



Architectural Details, Sheet No. 2. Exterior Stone Work. Building for No. 60 Liberty Street Corporation, New York City. Cross & Cross, Architects.

THE STUDY OF ARCHITECTURAL DESIGN

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

THE "ANALYTIQUE" OR ORDER PROBLEM. PART IV.

Studying the Problem (Continued)—The Use of Documents

BY JOHN F. HARBESON

In this series of articles, which began in the January issue, 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. This series is designed to cover matters of method and leave the time of the instructor and of the student free for the individual problem. It is not intended as a substitute for personal instruction and criticism.

ARCHITECTURE—at least that part of it that has to do with design—is not a mathematical science, and its study is not based on fixed rules, logically following one another, as is the case with geometry or calculus. It thus seems sometimes to the student as if there were nothing to start on, nothing to use as a basis on which to build.

And yet trained designers go about their work with assurance: one watching them sees that there are evidently some principles underlying their work—that there is a point of departure, and that from this their thoughts develop in an orderly sequence as they work on a problem, though they might be at a loss to put into words reasons for each step in the development.

Now to design is to compose, but to compose one must have objects with which to compose: these are the "elements of architecture" already mentioned.

Each one of us has certain elementary ideas of proportion. We should probably all agree—I include the layman—that the window in Figure 33 is fat and squat, that the door is too thin. This feeling is the result of tradition. We and our ancestors have become accustomed, through the centuries, to doors and windows of certain proportions; this is true in some degree of all the "elements." Changes in these proportions have been made only when forced by structural or other considerations. Each door, each window, each building that has been done is a step in a big evolution. Once or twice a break has been made—the beginning of the Renaissance, and the so-called "revivals," but these were breaks back to an earlier tradition, not a cutting loose from all tradition. The one-man "original" styles—such as the Sullivan style, etc.—have not made headway because they cannot find an audience,

the forms being strange to the average beholder, who does not take kindly to them.

Therefore, the study of design—of proportion—resolves itself into a study of tradition, the study, in essence, of the worthy efforts of the past, the unworthy being passed by where there is such a quantity of material. To this the designer has added his contribution when his design is made to

suit new conditions, new methods of construction, new aesthetic requirements. So to study the proportions of the elements, we study the proportions used by the masters for those elements, from actual examples, if possible, or from books or photographs. We find that they vary, but within certain limits.

Your critic will help you to form your feeling for proportion; if you make an intelligent study yourself among the documents, always looking at

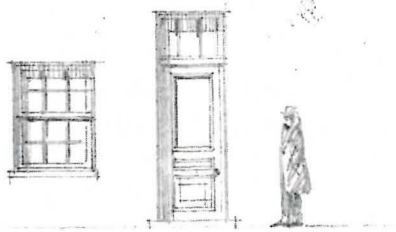
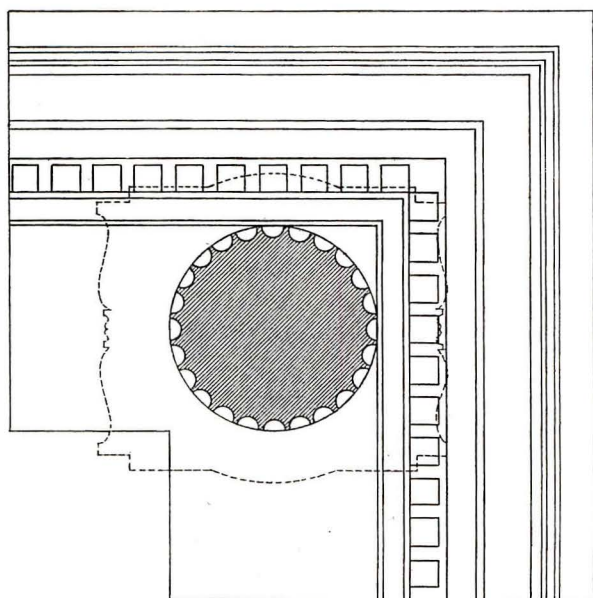


Figure 33

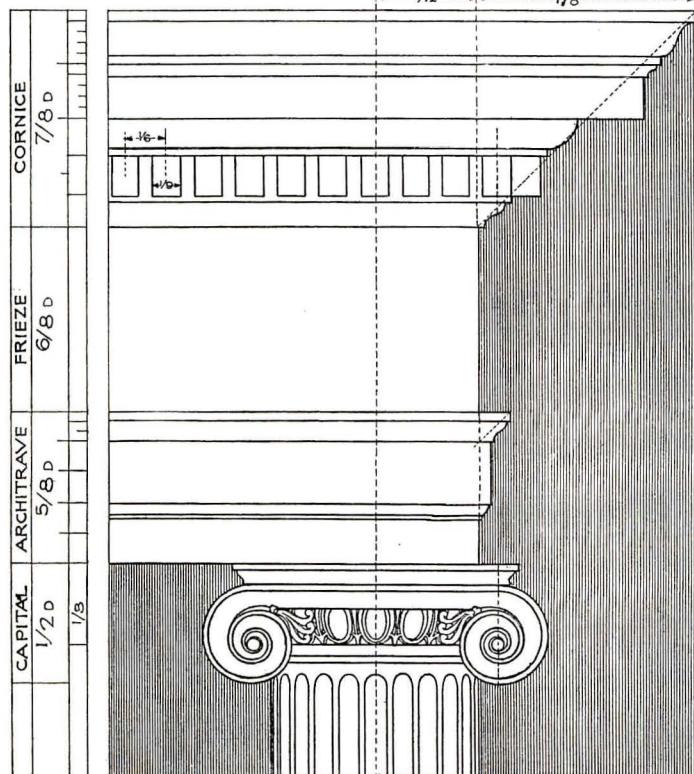
the scale at which they are shown to obtain an idea of relative size, your progress will be more rapid. You will also in this way discover interesting details, profiles and ornament to add to your "vocabulary."

A word or two as to what documents to use will not be amiss. Perhaps the best known and most widely used document among architects is "Vignola"—the Five Orders of Architecture—in one of its many editions. It is well to understand just what Vignola is. One of the plates, the Ionic order, is shown in Figure 34. This as first drawn was supposed to be an approximation of a number of examples of the Ionic order in antiquity, the effort being to retain the beauty of each, and yet reduce the proportions to a formula to serve for common use. You will note at the side some divisions of the height into simple proportions, and equally simple subdivisions of these proportions. It is for this that Vignola is good—to lay out an order rapidly and know that the proportions so drawn are

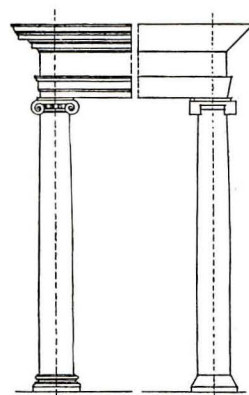
PENCIL POINTS



PLAN OF ENTABLATURE LOOKING UP

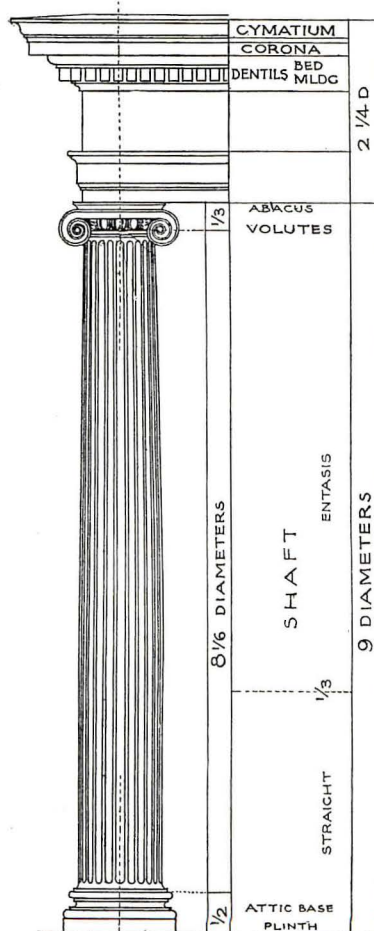


ELEVATION OF ENTABLATURE



BLOCK ORDER

COMPLETE ORDER



Copyright 1904, by The International Textbook Co., Scranton, Pa.

Copyright, 1902, by William R. Ware

Figure 34. The Ionic Order. From "The American Vignola." Through the Courtesy of the Publishers of That Work.

PENCIL POINTS

acceptable. Beyond this, however, the Vignola should not be used. To lay off details of an ornament at large scale from a Vignola plate is not sound, for his order is only an approximation.

Let us compare this approximation in Figure 34 with some of Vignola's executed work for he was an architect of great ability. Figures 35 and 36, from the Villa di Papa Giulio, show the Ionic order, as does also the small Roman palace on the Piazza Navona shown in Figure 37, both works of architectural charm. You will see that neither one of these orders is like the "approximation," nor are they like each other; each has a character of its own. The illustrations that are from geometrical engravings can readily be compared with the Vignola plate. Figures 38 and 39 show examples of the Ionic order as used by the Romans—fragments that were used by Vignola, no doubt, in making his approximation. If these are studied carefully, divider in hand, comparing projections and relations of members, and that is a good way to study proportion, it will be seen that, while the order in each is different, the variation is within rather narrow limits. Architectural proportions are not *fixed* but are living things, and change somewhat in relation to the use to which the elements are put.

The Vignola plate is good, therefore, in the early stages of an analytique, when the proportions between members are being studied. When this has been done, it is time to look for other documents to study the profiles and combinations of mouldings, the character and variety of ornament, stone jointing, the study of plan and section, and finally the actual presentation—both the arrangement on the sheet and the rendering.

It is here that the student in the large city, with its public library art collections, has quite an advantage over the man in the small town. The consolation of the latter should be that, if he has only one or two good books to consult, he can become thoroughly familiar with them, and will avoid the danger of becoming superficial by scattering his attention among many. He will be fortunate if he can use any one of the following books.

For the man in the city, the problem is simple: he has only to have enough ambition to go to the library to look up detail, and there make tracings and *frechand sketches* from documents, again noting *plan, section and elevation* wherever possible, or draw a profile line through the mouldings of an ele-

vation, this profile being drawn to conform to the modeling shown by shadows or rendering of the plate or photograph. A list of books that a student should become familiar with would contain, perhaps as first choice, the following:

a. Guadet: "Elements et Theorie de L'Architecture" (for analytique, especially Vols. 1 and 4). This is invaluable in giving an idea of appropriate character in architectural design. It has been called "The Bible of Architecture," with good reason, for it contains all the principles of a thorough knowledge of the art: a student cannot too early become familiar with it. In addition to a full explanation of all the "elements," it contains a complete exposition of the "orders"—complete except for the visualization of proportions by convenient divisions for rapid drawings (mentioned above in reference to Vignola). In later work, it will be of constant value for its analysis of the various divisions of architectural problems.

b. D'Espouy: "Fragments d'Architecture Antique," two volumes, and "Fragments d'Architecture—Moyen Age et Renaissance." These plates are reproductions of the measured drawings by the men at the French Academy in Rome who have won the Grand Prix at Paris. In addition to being well-chosen examples of the details of architecture of antiquity, they are completely modeled in the rendering, and are of the greatest assistance in making a rendering of the large-scale details called for in the analytique. One cannot work from these plates without acquiring an insight into the whole theory of modeling as applied to architectural drawing to express form.

c. Gromort: "The Elements of Classic Architecture," a work of great usefulness and not expensive. It is a collection of plates showing the use of the elements of architecture—usually including the orders—in buildings that are now considered classic, some being Roman, some Italian Renaissance, some French Renaissance. There are also plates showing the cast shadows on the orders.

d. Letarouilly: "Edifices de Rome Moderne." I mention this work because an inexpensive reprint with plates large enough for all ordinary purposes can be obtained. It contains some of the best examples of Italian Renaissance architecture and has had a direct and strong influence on the architecture of this country.

(Continued on page 34)

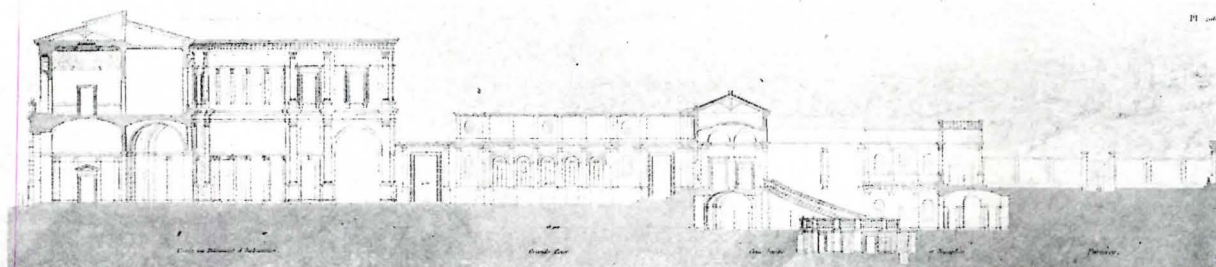


Figure 35. Section, Villa di Papa Giulio, an Executed Work of Which Vignola Was the Architect. From "Edifices de Rome Moderne," Letarouilly.

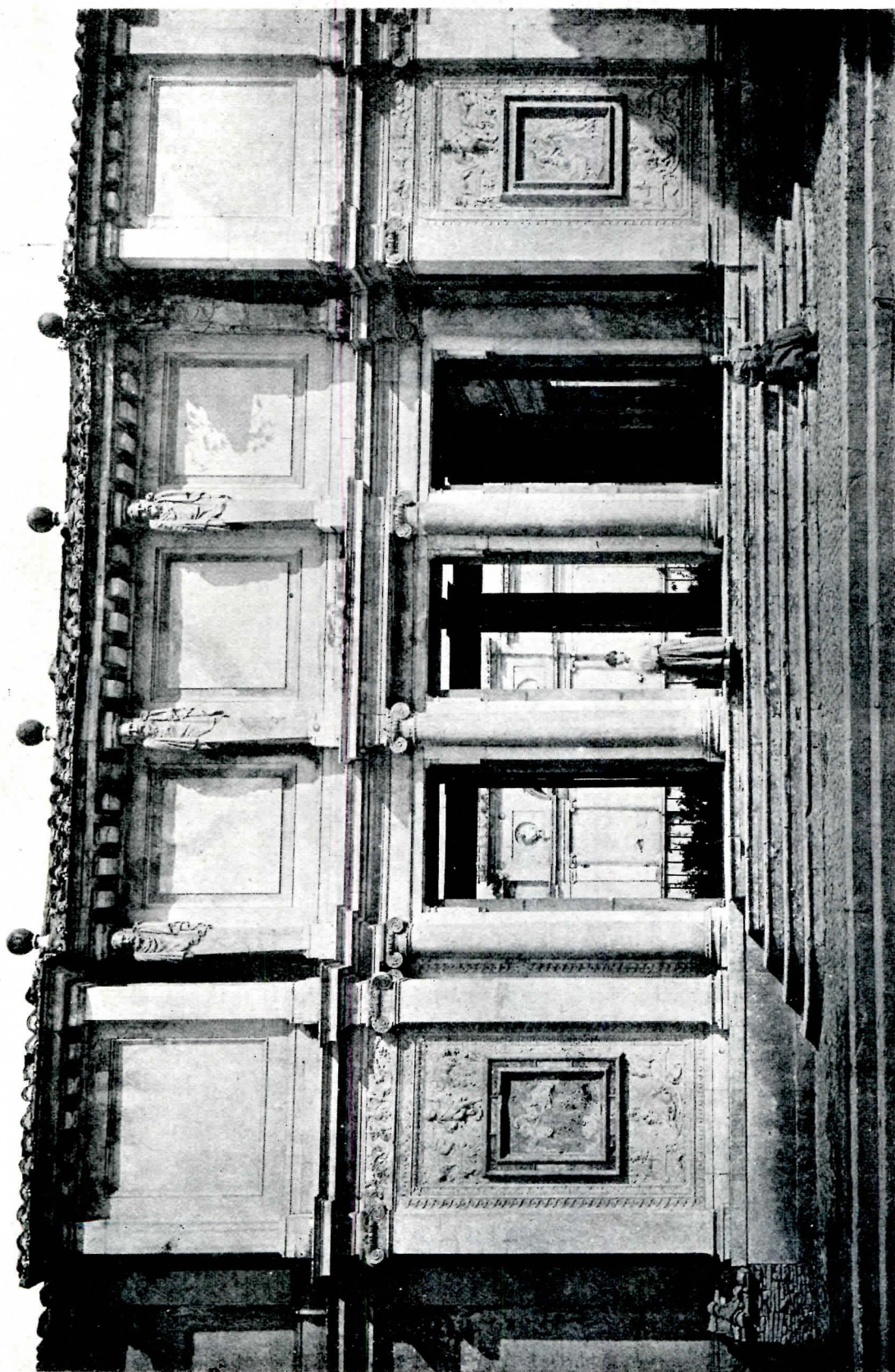
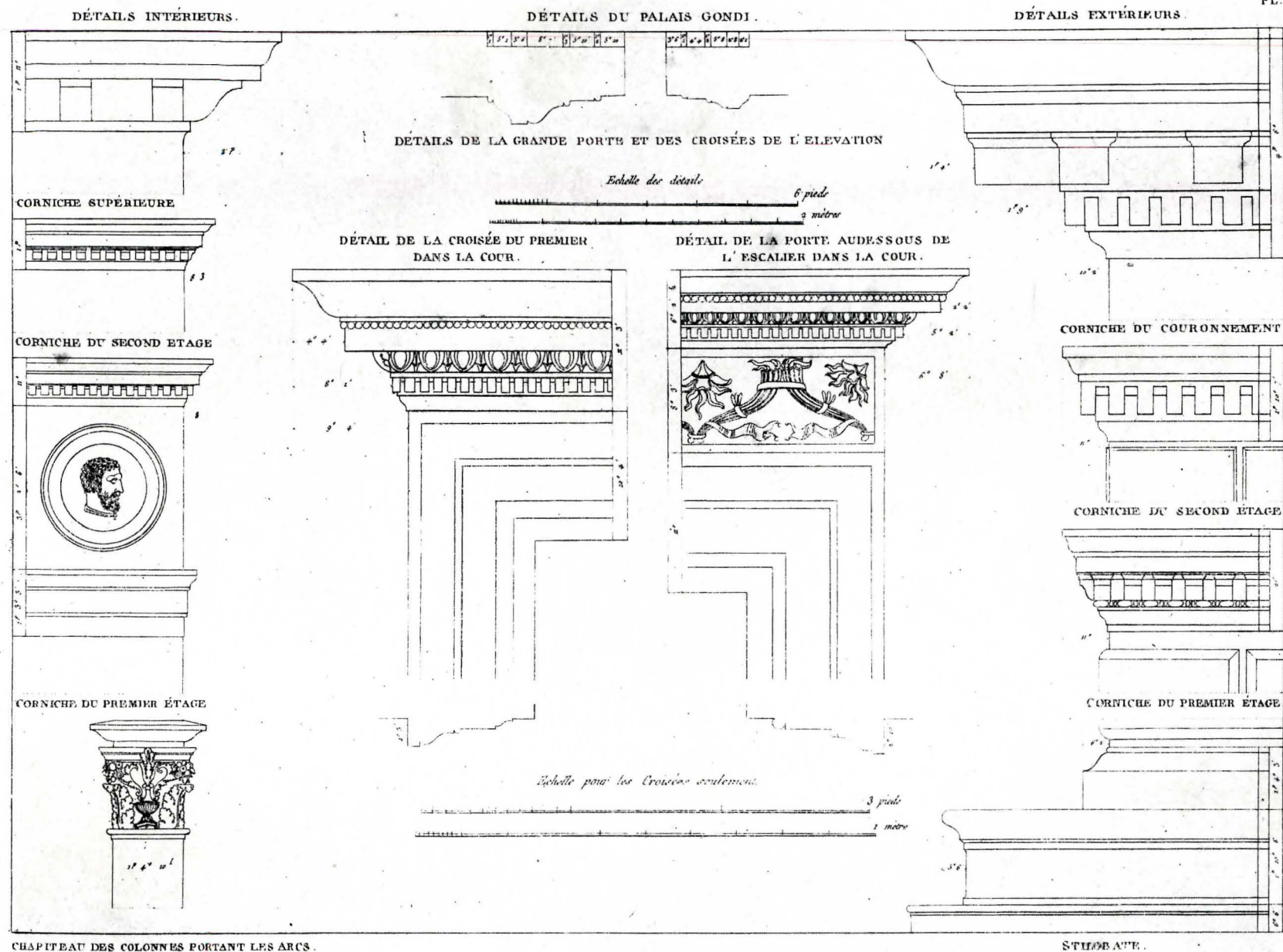


Figure 36. *Villa di Papa Giulio, Northeast Side of Forecourt. Giacomo Barozzi da Vignola, Architect.
From H. Strack's "Baudenkmaeler Roms."*



PENCIL POINTS

Figure 40. Details of Gondi Palace. From "Architettura Toscana." Grandjean de Montigny et Famin.

PENCIL POINTS

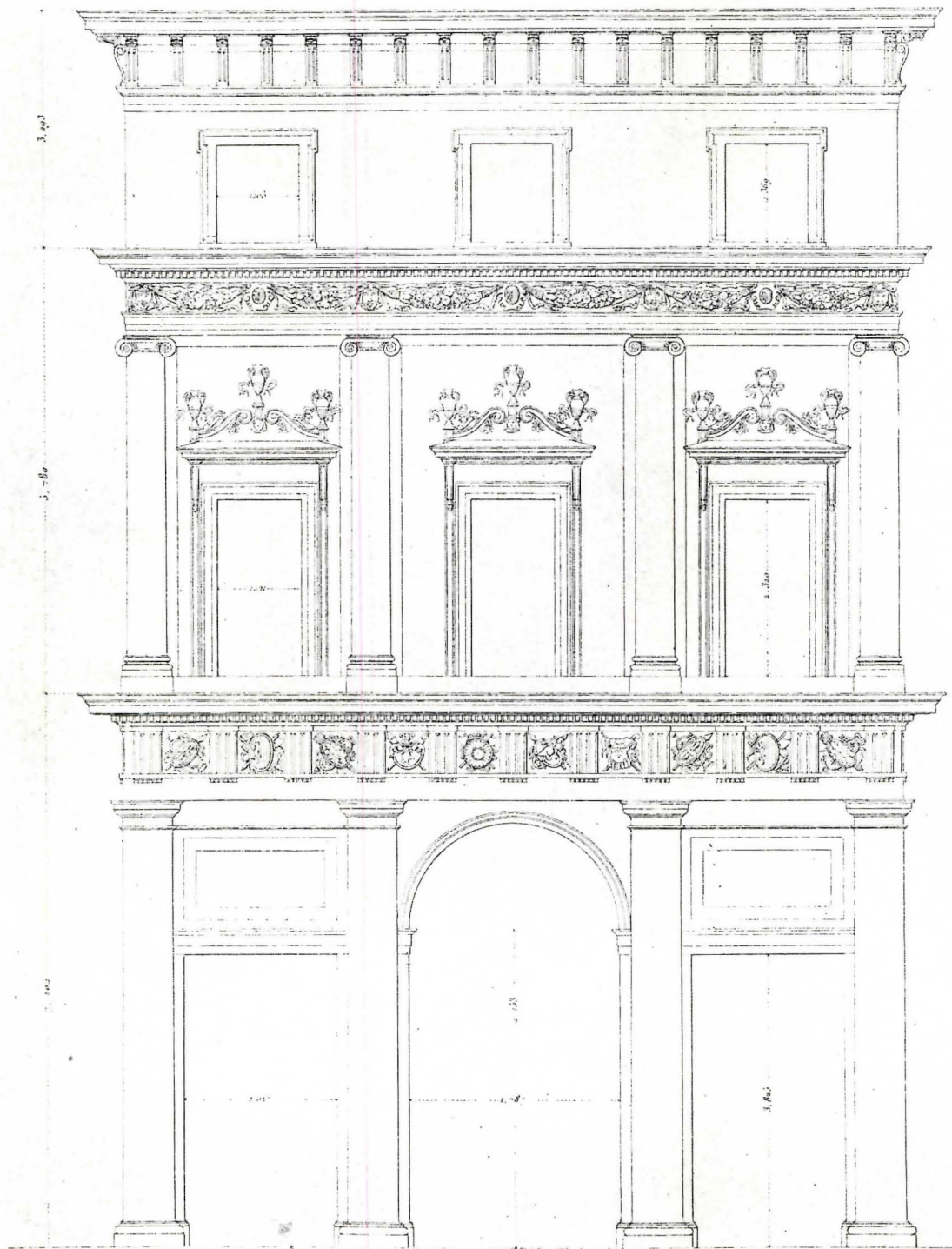


Figure 37. Elevation of a Small Palace, Piazza Navona. Giacomo Barozzi da Vignola, Architect.
From Letarouilly's "Edifices de Rome Moderne."

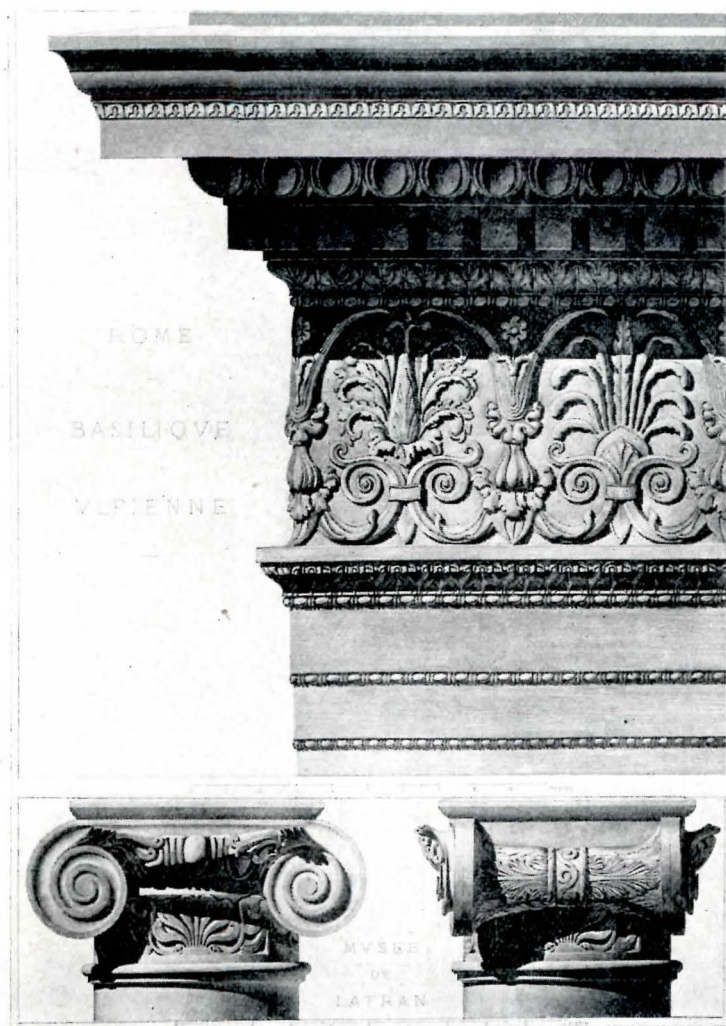


Figure 39. Detail of Ulpian Basilica, Rome. From H. D'Espouy's "Fragments d'Architecture Antique."

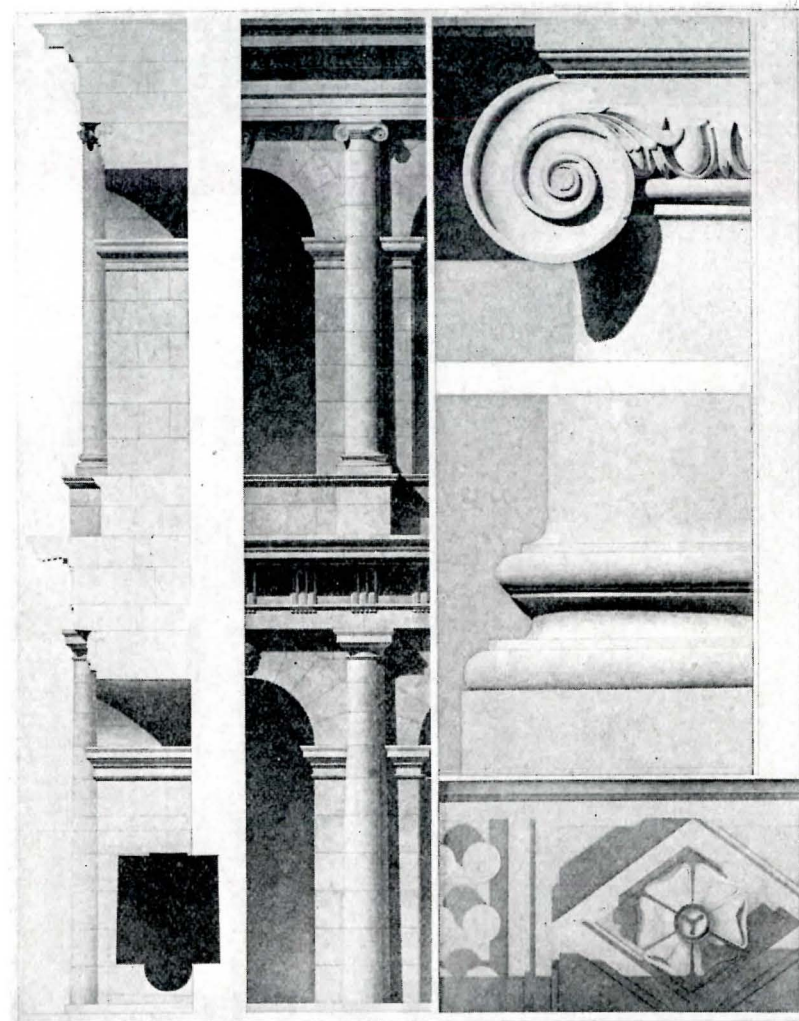


Figure 38. Detail of Theatre of Marcellus, Rome. From H. D'Espouy's "Fragments d'Architecture Antique."

PENCIL POINTS

PERSPECTIVE DRAWING, PART XII

BY PAUL VALENTI

THE diagram Figure 31 indicates further the method of finding depths by using the *reduced* distance point and eliminates the necessity of using the geometric plane, thus reducing our operations within the picture plane. For example: First construct 12 squares as in Figure 30, below horizon line at a convenient scale indicated by dotted lines.

A straight line from point 10 (which represents a distance let us say of 10 feet from point *A*) on the ground line *CF*, conducted to the *reduced* distance point $D \div 3$, will intersect line *AV* at point *A'* which is the perspective of point 3×10 feet away from point *A* in the geometric plane (see Figure 30), or 30 feet deep, since we have used the *reduced* distance point $D \div 3$. Consequently a line from point 20 on the ground line *CF* conducted to point $D \div 3$ will intersect line *AV* at point *A''* of $3 \times 20'$ being 60' away from point *A* in perspective, and so on as indicated in Figure 31. It is well to note again that all diagrams should be drawn out carefully by each student at a convenient scale.

The diagram Figure 32 is similar to the one shown in Figure 30 and is constructed in the same way, but in it we will proceed to locate in perspective and on the ground plane, line *A'B'*, which is represented by line *AB* arbitrarily located in the geometric plane as previously done (see Figure 30); first raise a perpendicular from points *A* and *B* to the ground line *CF*, to points *a* and *b* respectively. From the foot of these perpendiculars (from points *a* and *b*) conduct a straight line to vision point *V*. Centering first in point *a* with radius equal to $1/3$ of *aA*, rotate both to the left and to the right, intersecting the ground line *CF*. From these two intersections conduct straight lines

to distance points $D \div 3$ in the opposite directions as shown and it will be found that these lines intersect line *aV* in exactly the same place (the double process serving as a check) at point *A'* which, as in all previous cases, is found to be the perspective of point *A*. Perform the same operations with point *B* as was employed with point *A*, and uniting points

A'B', we will obtain a line in the ground plane of our picture representing in perspective line *AB* in the geometric plane. Upon close observation of this diagram, it will be noticed that if the distances *aA* and *bB* are known, and their location with respect to the ground line, (as is indicated by points *a* and *b*), the presence of the geometric plane is *unnecessary*, since by centering in these two points with

radius equal to $1/3$ of the full distances, using the *reduced* distance points $D \div 3$, we are able to obtain the same result. Thus we *eliminate* another plane or area outside our picture, reducing to a minimum the area of our operations.

THE experiment in training students of architecture with three dimensional models

has proved so successful in the regular work of the Columbia School of Architecture that courses in technique of model making will be given under the Summer Session, which begins on July 5 and continues for six weeks and for which an attendance of more than 12,000 students is expected.

The classes in the technique of model making will be given in the evenings so that students who are occupied in work during the day will be able to attend. Harold V. Walsh, instructor in architecture at Columbia, will give the course, which is one of a large number of courses in architecture offered for the summer semester.

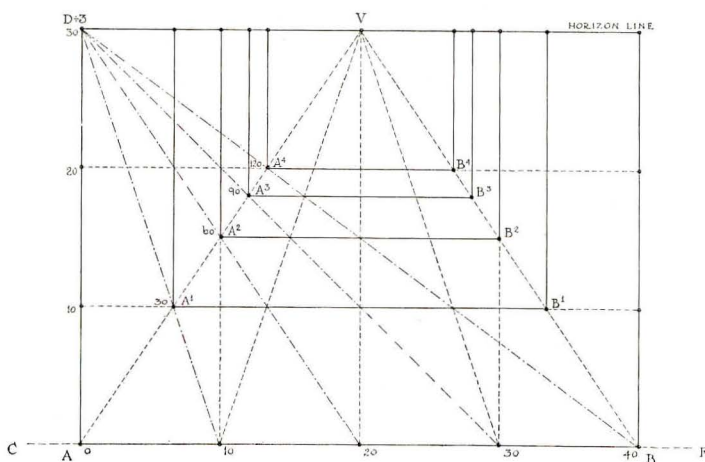


Figure 31

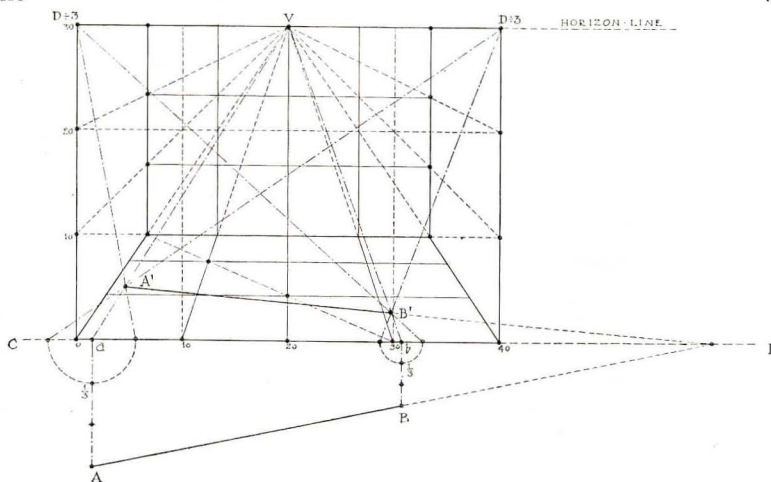


Figure 32

PENCIL POINTS

Published Monthly by

THE ARCHITECTURAL REVIEW, Inc.

Publication Office—Stamford, Conn.

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

RALPH REINHOLD, President
F. W. ROBINSON, Treasurer

C. H. PETERS, Vice-President
EDWARD G. NELLIS, Secretary

EUGENE CLUTE, Editor

Associate Editors

W. V. MONTGOMERY

E. M. URBAND

Western Representative

J. W. DICKINSON
702 Security Building, Chicago, Ill.

Copyright, 1921, by The Architectural Review, Inc.

Subscription rates per annum, payable in advance; United States of America and U. S. Possessions, Cuba and Mexico \$1.00, Single copies 15 cents; Canada \$1.25 all other countries \$1.50.

PENCIL POINTS is on sale at the following book shops: New York, Brentano's; Chicago, McClurg's; Boston, The Old Corner Book Store; Washington, Brentano's. Wholesale Distributors, The American News Company, New York

ALABAMA POLYTECHNIC INSTITUTE

AT the quarterly meeting of the Alabama Chapter of the American Institute of Architects, it was decided to offer a prize for progress in Design to the students of the Department of Architecture of the Alabama Polytechnic Institute, Auburn, Ala. This prize will consist of twenty dollars' worth of architectural books, to be selected and awarded by the architectural faculty of the college.

Mr. John Davis, a graduate of the Department of Architecture in 1911, has been made an associate of the firm of Warren & Knight, Architects, of Birmingham. Mr. William W. Hatcher of the senior class has also been engaged by this firm.

One or more fellowships of the value of two hundred and fifty dollars are offered by the Alabama Polytechnic Institute to promote graduate study in Architecture. They are open to graduates of this or other colleges of Architecture of equal grade. Particulars may be had by addressing Frederic Biggin, Professor in Charge.

THE SCARAB FRATERNITY

SCARAB, the National Architectural Fraternity, has just held its Fifth National convention in St. Louis, Missouri on April 15th and 16th.

Scarab is probably the oldest Architectural Fraternity in existence. Originating at the University of Illinois, it is now represented at Washington University, St. Louis; Armour Institute, Chicago; Pennsylvania State College; Carnegie Institute of Technology, Pittsburgh; Massachusetts Institute of Technology, Boston; and Kansas State University, Lawrence.

Mr. Paul Valenti, who writes on "Perspective Drawing" for "Pencil Points" and is of the teaching staff of Washington University, is counted on its membership. Among other notable Scarabs, is Mr. Louis Sullivan of Chicago.

One of the chief matters of discussion at the recent convention as at the previous one was the establishing of an annual National Competition in a decorative problem. Heretofore the various Temples or Chapters of Scarab have held a local competition open to all students of junior and senior standing in the Department of that school. The prize being a bronze medal. Anyone re-

ceiving the medal for the second time was presented with a silver medal. Illinois University is giving fifty dollars as prize this year.

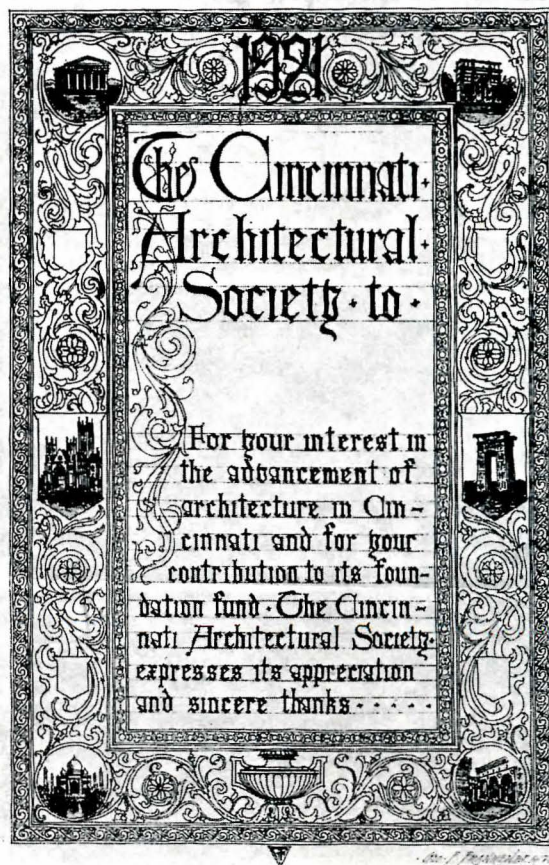
Now, for the educational benefit derived and to encourage intercollegiate competition, Scarab will endeavor to hold a competition next year among those schools wherein Scarab is represented. The ultimate aim is to make the competition a National one. The jury will consist of several practicing architects of reputation, regardless of their connections with Scarab. Each year the final judgment will be held in a different locality and the competition will tour the various schools competing, thus introducing another distinctive feature into the competition, which we do not find in the intercollegiate judgments held in New York with exhibition limited to that city.

Professor Gabriel Ferrand of Washington University has mapped out the details of this competition which seems to fill a place not covered by any other National competition, and which we hope, will stimulate clean, intercollegiate competition.

F. RAY LEIMKUEHLER, President.

GET A GREEN CARD.—Adv.

BELOW is shown, at reduced size, the winning design in a competition recently held among its members by the Cincinnati Architectural Society for a testimonial or expression of thanks to be given to those individuals or firms who contributed to the society. The design is about 7¼ inches by 11 inches, brown print. The winning design was that submitted by George F. Frankenberger.



Winning Design for Testimonial, Cincinnati Architectural Society.

PENCIL POINTS

THE STUDY OF ARCHITECTURAL DESIGN

(Continued from page 27)

e. Cesar Daly: "Motifs Historiques," Details of the French Renaissance, with examples of all the "period" styles. Note that profiles of the consoles and other details are shown, as well as sections through band mouldings, trim, etc. It is by studying the profile that the form is most easily understood.

f. Pfnor: "Architecture, Epoque Louis XVI." This work, among other useful details, shows examples of beautiful mouldings as well as wonderful examples of presentation.

g. Blondel: "Decoration, Exterieures et Interieures des XVII et XVIII Siecles."

h. "Architecture Toscane," Grandjean de Montigny et Famin. Exceedingly carefully drawn examples of the architecture of the early Renaissance about Florence, where detail was executed with great care. Figure 40 shows two interior cornices, which may be contrasted with an exterior cornice on the same plate, showing the difference in scale of the mouldings.

i. "Palast Architecture, Toscana, Bologna, Venice, Vicenzo, etc." These are measured drawings and photographs of the architecture of the Renaissance in Italy with a wealth of detail.

The details of an *analytique* must be taken from good documents if the student's work is to stand any chance of obtaining an award higher than a bare "mention" at a judgment. A Vignola cap or baluster will not be sufficient. As Guadet says, "Our art is an heir rich with the accumulated legacies of the centuries; its invariable principle is reason, logic, method . . . the classic is not the privilege of any time, country or school . . . its principles are the same in all artistic ages, in spite of differences in exterior forms."

With these books, or even with any one of them, the student will be able to develop a vocabulary of architectural forms—the elements with which he will compose. By an intelligent study of their contents, he may acquire a knowledge of many principles of design. If he will draw mouldings from several sources at the *same scale*, for instance, he will gain an idea of "scale," and will avoid a difference in scale in the mouldings of an impost and an entablature on the same drawing. By tracing or sketching a number of good profiles from these documents, he will come to understand why some combinations are pleasing and others not; by examining the use of ornament, he will see that ornament must do several things—that it must be in good taste, that it must fit the shape of a moulding, if on a moulding, or a panel if in a panel, that it must be in proper scale, and that it should be appropriate in character, or at least not inappropriate—a form from a classic temple, for instance, could not be easily used on an informal residence.

We have spoken of a number of documents that should be consulted if possible. There are one or two that should *not* be used for the *analytique*. They are the "Grand Prix" plates, or the "Medailles," or other work of the Ecole des Beaux Arts at Paris, or similar work of schools here. It should not be forgotten that they too are the work of students; they are not in any sense a substitute for constructed architecture that has stood the test of time. Reproductions of premiated *analytiques* of the Beaux Arts Institute of Design have one value—aside from their use in setting a standard of workmanship and presentation—and that is for the study of the composition of the sheet, the arrangement of the large scale details with the small-scale projections. This will be considered later.

Study from books and photographs will mean much more if at the same time the student carries on another means of study—sketches from actual examples of good architecture, the sketches to be made in plan, section and elevation primarily, even though the object sketched can be seen only in perspective. The object of such sketches is to develop the ability for grasping the actual form of architectural members. When one can

draw, for instance, the cornice of the University Club in New York City, from the street, in plan, section and elevation, he will comprehend its form much more clearly than if he drew a perspective sketch from the same position. The mind as well as the eye must be constantly used to do the former.

THE AMERICAN ACADEMY IN ROME

BELOW are printed extracts from the monthly news letter received by Mr. C. Grant La Farge, Secretary of the American Academy in Rome from Mr. Gorham P. Stevens, Director.

"Mr. Lawson, a Fellow of the Academy in Landscape Architecture, has started for North Italy, France and England. He expects to be a month in France and three months in England before returning to America. He was in Italy during the war, so that he has spent five years in this country, and during that time he has gathered an immense amount of valuable material in his profession. He should be a credit to the Academy in after-life, and we wish him all success. Painter Lascari has finished his portion of the Collaborative Problem, and his decorative scheme is likewise finished. Sculptor Jones and Architect Smith have just returned from a trip to Assisi, Perugia and Florence. Landscape Architect Griswold spent three weeks in Florence studying the villas. Since his return he has measured the upper garden with its Casino, at Caprarola; this is to be his chief work for the year. Knowlton of Harvard and Blouke of Tech. have measured the church of St. Marco in Rome. Rosenberg of Tech. has returned from a trip in the South with some very interesting sketches, and he has now left us for the North of Italy, France, England and America. O'Connor of Princeton has gone to Greece with the son of Mr. Richard Bissell. Blanchard of the Harvard School of Landscape Architecture has arrived and is hard at work. Hendrick of Harvard is measuring the Palazzo Linotte, which, by the way, is erroneously ascribed to Peruzzi, whereas a study of the mouldings clearly shows that Sangallo the younger was its architect.

"In the Classical School a student from Williams College, Mr. Albert T. Finkler, has just registered with us. He intends to stay with us all next year.

"Professor Magoffin delivered an interesting lecture at the Academy on the three Flavian Emperors, Vespasian, Titus and Domitian; this lecture was open to friends of the Academy by invitation, and was attended by about one hundred people. Professor Magoffin likewise delivered a lecture before the British and American Archaeological Society on Women in Classical Times. I have given the students three talks, two on the Erechtheum and one on the Entasis of Roman Columns.

"At present the entire Classical School and many members of the School of Fine Arts are at Pompeii, where Professor Kelsey, McDaniel and Van Buren are planning to lecture. They hope to sail on the 12th from Brindisi for their Greek trip, and to return to Rome on the 16th of May.

"The men have made three excursions; to the Palazzo Venezia, to the Palazzo Doria-Pamphili and to the Palazzo Berberini. The first trip deserves special mention, for interesting frescoes by Bramante and Mantegna have come to light. Also the architectural features of the palace, such as fireplaces, doors and staircases, are well worth seeing.

"We have decided to hold an exhibition in Rome this year provided the King and Queen will honor us with a visit. The Court is in mourning on account of the death of the King of Montenegro, who is the father of the Queen of Italy, but we hope, by making their visit as private as possible, that their Majesties will agree to come. His Excellency the American Ambassador, Mr. Robert Underwood Johnson, is taking the matter up with the Court authorities. The exhibition, if it takes place at all, will come in May.

"We have had a delightful visit of four or five days from Mr. Daniel C. French. We were extremely sorry when his visit came to an end."

PENCIL POINTS



BARRY FAULKNER

BARRY FAULKNER was born in Keene, N. H. His first studies were with Abbott Thayer and George de Forest Brush. He studied at the Art Students' League in New York, and in 1907 won the scholarship in painting of the American Academy in Rome and Italy, enjoying the great advantages that the academy offers for the study of mural decoration.

Upon his return from Rome he received a commission for two decorations in the house of Mrs. E. H. Harriman at Arden. One of these decorations received the medal of honor in painting of the Architectural League in 1914. His work has been confined to mural decoration, among which are a variety of paintings in private houses and public buildings. Some of his best known decorations are: the painted room in E. O. Holter's house at Mt. Kisco, the subject being "The Tempest"—a combination of an imaginative landscape with figures; a decoration in the store of Yale & Towne; and a series of paintings in the foyer of the Washington Irving High School. The subject of this series is the Knickerbocker History of New York. It is a combination of figure panels varied with pictorial maps and two panels of an ornamental nature.

In 1917 Mr. Faulkner enlisted in the engineers and helped form the camouflage corps in our army. He saw active service in France for a year and was commissioned a first lieutenant.

He has just completed four large panels for the new Cunard Building. They show the four quarters of the world and the various steamship routes connecting them. The drawing reproduced in this number is the study for the ornamental figure in the panel representing the South Sea.

Mr. Faulkner is a present engaged on a series of panels to go in the auditorium in the Eastman School of Music in Rochester, N. Y.

GET A GREEN CARD.—*Adv.*

ANNUAL MEETING OF THE ASSOCIATION OF COLLEGIATE SCHOOLS OF ARCHITECTURE.

THE eighth annual meeting of the Association of Collegiate Schools of Architecture will be held in Washington, D. C., on May 9 and 10 preceding the annual convention of the American Institute of Architects which opens on the 11th. The exact place of the meetings will be announced later, but the time for sessions probably will be closely as follows: Monday, May 9, at 3:00 and 8:00 P. M.; Tuesday, May 10, at 10:00 A. M. and at 2:00 and 8:00 P. M.; Wednesday, May 11, probably adjourned meetings.

All educational institutions offering courses for professional training in Architecture are invited to send representatives to these meetings which are open to all who are interested in the work and the problems. Visitors have the privilege of the floor in discussions and may vote on questions indicating the "sense of the meeting." The officers of the Association are: Warren Powers Laird, President; Emil Lorch, Vice-President, and Clarence A. Martin, Secretary-Treasurer.

COLLEGE OF ARCHITECTURE, UNIVERSITY OF MICHIGAN

THE College of Architecture, University of Michigan, will have an eight-weeks' summer session beginning July 5, during which time instruction will be offered in architectural design, freehand drawing and painting, descriptive geometry, and shades and shadows. There will also be a special course given for teachers of art in public schools.

A collection of oil and water color paintings, etchings, and pencil drawings has recently been shown there. During the last two weeks in April there was shown a collection of silks brought together by Cheney Brothers, New York, which illustrate historic patterns and different kinds of weaves.

THE jury which judged the work submitted in the preliminary competition in architecture of The American Academy in Rome for the prize of Rome has chosen for the final competition the following named gentlemen: W. G. French, Cornell '18; V. L. S. Hafner, Mass. Inst. of Tech. '18; H. G. Marceau, Columbia '20; L. H. Pries, California '20 and Penn. '18; L. Rich, Syracuse '14. The final competition will be held from May 9th to June 6th. The three years' Fellowship will be awarded to the winner.

PERSONALS

JOHN RUSSELL POPE, Architect, has removed his offices to 17 West 46th Street from 527 Fifth Avenue, New York City.

WELCOME R. STEINMETZ, Architect and Engineer, Stamford, Conn., has located his offices in the Gurley Building, Stamford, Conn.

LEE SAMENFELD and FRANK V. LASPIA have formed a co-partnership for the practice of architecture at 525 Grand Street, Brooklyn, New York City.

WM. H. MCKAY has announced the opening of a new office and studio at 179 West Rock Ave., New Haven, Conn., for the practice of architecture.

GEORGE BAIN CUMMINGS, Architect, has announced that the firm of Lacey, Schenck and Cummings having been dissolved by the withdrawal of Sanford O. Lacey and himself, he will continue the practice of architecture under the name George Bain Cummings, with offices at 602-604 Security Mutual Building, Binghamton, N. Y.

GEORGE C. HARDING, Architect, senior member of the firm of Harding & Seaver Pittsfield, Mass., died April 23, at his home. The office will be conducted under the same name as heretofore by the surviving member of the firm, Henry M. Seaver.

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, PENCIL POINTS, (Attention of E. M. Urband), Metropolitan Tower, New York City.

Question—Would you be so kind as to inform me if the series of articles on perspective drawing by Paul Valenti and the ones on Sketching and Rendering in Pencil, by A. L. Guptill, now appearing in "Pencil Points" can be obtained in book form? Also, do you publish or recommend any book dealing with shades and shadows, which shows the geometrical methods of casting shadows on all different shapes of objects? K. B., Lansing, Mich.

Answer—Neither Mr. Valenti's nor Mr. Guptill's articles can be had in book form. We know of two excellent books on the subject of shades and shadows, both of which are being used in the courses of Architecture in our large universities and in technical schools. There are McGoodwin's "Shades and Shadows," and Millard's "Shades and Shadows." The first book is excellently presented with large plate drawings of the conventional shadows cast by architectural objects. "Shades and Shadows," by Millard is a comprehensive treatise on the theory of shades and shadows, outlining the principles of the casting of shadows, and giving easily remembered rules.

Question—We have settled on the two-family house as the type we will construct for working men. We now want something showing us the various styles of four, five, six and seven room two-family houses in order that we may determine what will probably be the most economical and best for the working men of this community. Please suggest references concerning this kind of housing. W. W. B., East Downingtown, Pa.

Answer—Our catalog listing the available early issues of "The Architectural Review," contains under the headings "Houses, Medium and Small," and "Housing Developments," information that may be of use to you. We also submit the following references: "Some Principles of Small House Design" by John T. Boyd, Jr., in Vol. 47, 1920, of "The Architectural Record"; "Industrial Housing," Vol. 31, 1919 of "The Architectural Forum," with special reference to the article by Mr. F. L. Ackerman, "An Influence for Better Small House Design," Vol. 31, p. 167-170; "The American Country House" by Fiske Kimball, "The Architectural Record," Vol. 46, 1919, p. 291-350. This volume contains a good many houses in brick and stone. "Industrial Housing," by Morris Knowles, McGraw-Hill Book Company, publishers.

Question—Can you tell me where I can apply for information concerning perspective drawing and architectural rendering? E. G. W., Montreal, Canada.

Answer—For your studies in perspective drawing we would suggest Ben. J. Lubschez's "Perspective Drawing." Concerning architectural rendering, we know of no text books devoted entirely to this subject. The articles by Mr. Swales in "Pencil Points" are the only ones that we know of that have been published on this subject for the student in architecture. J. W. Jansen, 323 Caxton Bldg., Cleveland, Ohio, has published a portfolio containing some of Maxfield Parrish's and Jules Guerin's plates, which will be

found very helpful in water color rendering. For Chinese ink renderings, see D'Espouy's "Fragments d'Architecture," and the Paris competition drawings.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of PENCIL POINTS, published monthly at Stamford, Conn., for April 1st, 1921.

State of New York, } ss.,
County of New York, }

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Ralph Reinhold, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the Pencil Points, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of	Post office address
Publisher, The Architectural Review, Inc.,	Stamford, Conn.
Editor, Eugene Clute, One Madison Avenue,	New York, N. Y.
Managing Editor, None.	
Business Managers, Ralph Reinhold and C. H. Peters, One	Madison Avenue, New York, N. Y.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent. or more of the total amount of stock.)

The Architectural Review, Inc.,	Stamford, Conn.
Ralph Reinhold, One Madison Avenue,	New York, N. Y.
E. C. Nellis, One Madison Avenue,	New York, N. Y.
F. W. Robinson, One Madison Avenue,	New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent. or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is..... (This information is required from daily publications only.)

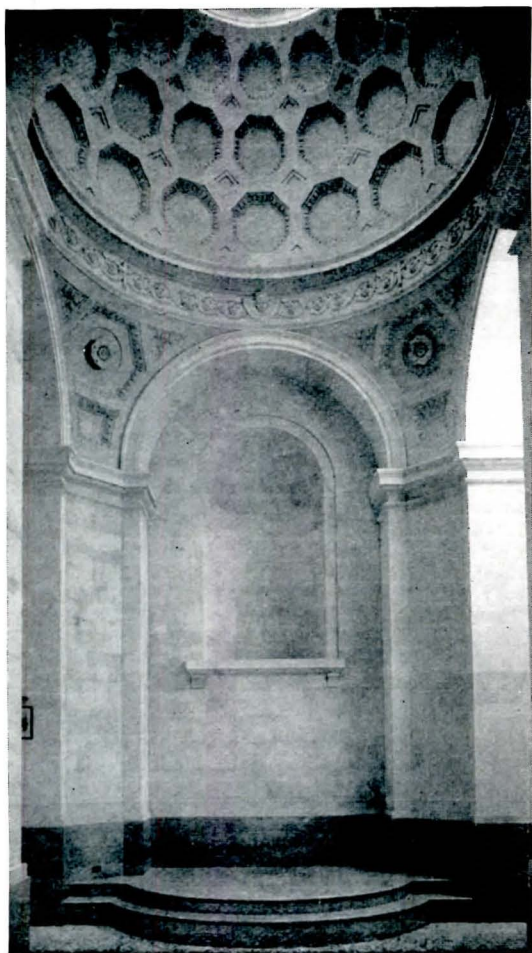
RALPH REINHOLD,
Business Manager.

Sworn to and subscribed before me this 7th day of April, 1921.

[SEAL.]

G. H. SYKES,
Notary Public.

My commission expires Nov. 30, 1921.



AKOUSTOLITH, a masonry material, has a sound absorbing or acoustical value approximately ten times that of ordinary plaster (see graph) and comparable with felt treatment as usually applied. It can be made in a variety of textures, usually of a fine granular appearance imitating caen stone almost perfectly (see illustration of Chapel in Notre Dame Church, New York) and is made in a wide range of colors—ranging from gray white through various shades of buff, gray, and the stronger blues, etc., if desired.

AKOUSTOLITH can be manufactured in any size from the smaller tile dimensions 3" x 12", 4" x 8", 5" x 10", 6" x 12", 6" x 15", 8" x 16", 10" x 20", and approximately one inch thick to the larger ashlar forms up to 12" x 30" by 1½" thick, and can be moulded or carved in usual ornamental architectural forms. Owing to its light weight and facility of manufacture AKOUSTOLITH can be easily adapted to simple or elaborate architectural treatment. Its adaptability as an acoustical agent is unique and of a wide range starting with the more obvious purpose of insuring correct acoustics in

churches and auditoriums. It is also being used in banks and wherever a quiet and dignified atmosphere is desired.

AKOUSTOLITH used on ceilings has primarily been installed in connection with our regular Guastavino arch construction, using it as a soffit course of tile and backing up the same with two or more layers of rough tile. It is, however, being largely used applying it directly on the soffit of the concrete floor slabs, or wire lath and cement plaster ceiling.

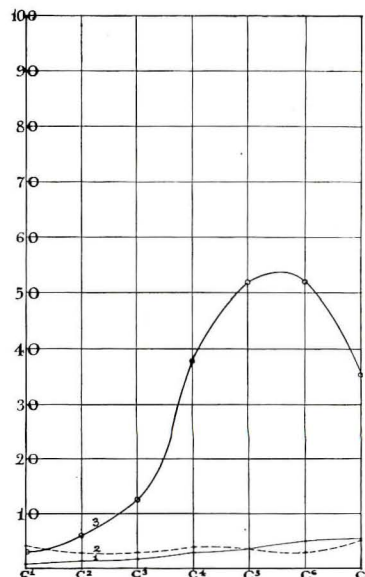
For side walls the installation can be made directly on any of the many masonry surfaces without scratch coat if surface is reasonably true, or applied on a wire lath backing as described for ceilings.

We do work anywhere in the United States and Canada

R. GUASTAVINO CO.

40 COURT STREET
BOSTON, MASS.

FULLER BUILDING
NEW YORK



The above graph shows the variation of absorbing power for reflected sound within the musical pitch. Curve 1 shows the absorption of unpainted brick surfaces. Curve 2 shows the absorption of soft plaster and wood lath. Curve 3 shows the absorption of AKOUSTOLITH sound absorbing stone.

THE SPECIFICATION DESK

A Department for Specification Writers

WHAT THE SPECIFICATION WRITER WANTS TO KNOW

By LOUIS R. HOLSKE.

Metal Covered Work (Continued).—Having decided upon the kind and gauge of metal the architect will have to determine the size of the various items, and in doing so will have to think in terms of carpentry. What will be the thickness of frames for exterior and interior doors? While the exterior frames must be the rebatted type, will the interior frames be single or double rebatted, or have a stop applied and let into the frame? Will there be transoms, and if so, will they be plain or moulded? How thick will the doors be, and will they have solid or glazed moulded panels, or both? How thick will the sash be, and will they be moulded and, also, how glazed? What window frames will be required and their types, casement, pivotted or double hung? If casement they must be rebatted, but what thickness shall they be? If pivotted what thickness of plank frame must be used and the size of the member which must be let into the frame and on which the sash pivots. If double hung, what size shall the members at the box be? What size and type of sill for any of the types? What type of hanging stile and who does the caulking of the joint with the masonry jamb? The stop bead for double-hung sash should be included in the work, but will not be furnished unless specifically so stated. Who will provide the steel anchors for securing the frames to the masonry, and the rough hardware for double-hung windows? If these are to be provided by the contractor who furnishes the metal covered work, they must be accurately described; the pulleys, either side or overhead roller-bearing, cast iron with bronze metal bearings; the chain, bronze metal or steel, either galvanized or sherardized; the weights of cast iron, sectioned type, or lead if necessary to properly balance the sash. Who shall furnish the glass, which, of course, will be wire glass of some type? If the contractor for metal covered work, it must be accurately described with the manner of setting. If the glass is to be furnished by another contractor, the glazing mouldings and screws only need be furnished. Who will apply the finishing hardware (usually the contractor for metal covered work)? These points having been determined, the architect will want to know something of the details of construction and assembling at the mill or shop. Will the wood cores be of merchantable white pine free from large or loose knots or sap? In using bronze metal will the core be of white oak? How is the wood treated before drawing, is it kiln dried? Will the cores for stiles and rails be built-up of strips glued and pressed together, or of one piece? Will the joints be sweated so full of solder as to be absolutely weathertight? Will the panels be so constructed that, with the removal of the moulding the fire retardant value of the door will not be lowered? In the case of doors covered on one side only will the metal be turned into grooves on the edges, and clinched in the wood, and the grooves filled with a small cleat flush with the edges of the door? In the case of double-hung frames will the metal be carried throughout the rebate for the parting strip? Will the junctions of window frames and their sills, and junctions of other members exposed to the weather, be made weathertight by soldering? In drawing all work, will the metal be carried around on the backs and thoroughly clinched into the wood? Will all exposed woodwork and all steel and iron be primed with a substantial paint before leaving the shop? What protection will be given the work in transit to the building? The architect will require the manufacturer to erect the work, to furnish all rough wood such as blocking, and all rough hardware such as nails, screws, bolts, etc., necessary in doing so. He will require frames to be erected plumb

and level and wedged and blocked to receive finishing hardware. Also all mouldings must be neatly mitred.

Interior Marble Work, etc.—In selecting a stone or marble for interior use, the architect will have in mind a particular color scheme and this fact will prove a limiting factor in each instance in the range of materials from which he may select. He will consider the characteristics of the material carefully. If a stone, its classification and degree of hardness. If used in floor work is it close grained and hard enough to be durable? If used on walls, what dressing is possible? Can it be half or full polished? If a soft stone, can the arrises be maintained in setting without damage, and, in the event of such a stone being selected for its color and texture, can it be hardened by the use of chemicals without changing the color? If the chosen material be a marble the architect will want to know of any defects peculiar to it. Is it a good dense material free from soft spots, well figured, and free from open seams which require what is known in the trade as "filling"? It will be necessary to decide how the marble shall be dressed, either half or full polished or how finished so as to best bring out the beauty of the particular marble under consideration. The setting details will have to be considered. What kind of mortars will be used for setting and pointing and who will furnish them? In the case of floor work what measures will be taken to overcome the serious defect of slack beds? In the case of wall work, whether slabs or ashlar, how will the pieces be anchored? To what extent will metal be used in anchoring and what kind of metal, steel or iron not being permitted? At corners will the work show the thickness of the slab only, or will specially cut pieces be introduced to show wider head pieces? In moulded work will the joints be kept away from the corners and interval angles to avoid mitre joints? How will the members forming W. C. compartments and urinal stalls be connected? How much brass work will be exposed and how will it be finished? In using slate it is necessary to know if the material is uniform in color and free from sulphur spots or ribbons. What protection will be provided for all of the above work until the completion of the building?

Mosaic—In considering marble mosaic it is important to know the possible range of tesserae from which to select, in both color and size. The composition of the setting bed of mortar and its thickness, also something regarding the grouting and rubbing must be known. In using slabbed work on vertical surfaces how are the slabs to be reinforced and what is the method of anchoring them in place?

Terrazzo—In considering terrazzo for use the colors of marble chips obtainable and the proportion used are questions of interest. Samples should be required to be submitted for approval to determine the proportions. What are the composition of the setting bed of mortar and its thickness? The architect will probably require the continuity of the work to be broken by laying it in panels, by the use of grounds, and where left in place, they should be of brass having proper anchorage and without wood members. Where the work is slabbed for use on walls, the same information as for slabbed mosaic will be required.

Tile Work—Excellent work has been done in this branch of the building industry looking toward standardizing or the setting of tile by the Associated Tile Manufacturers. They have issued carefully-prepared specifications covering the subject thoroughly, which may be obtained readily by any one interested. Moreover, they are continuing the good work, and we may expect shortly a more comprehensive specification the work of a well-known architect in collaboration with the manufacturers. In considering the use of tile it is necessary first to acquaint oneself with the range of wall and floor tile from which one may select. Outside the line of decorative wall tile, there are different

PENCIL POINTS

sizes of plain tile many forms of wainscot caps, bases, architraves, etc. There are different finishes, too, glazed and matte. In floor tile there is an even greater range of shapes and sizes and in vitreous and semi-vitreous material. Having selected the tile and base, cap and other necessary forms, it will be necessary to decide whether first or second grade tile shall be used. It is well to see that all tile furnished be the product of one manufacturer and that a certificate giving the grade and quantity be furnished by the manufacturer. In first class work glazed tile should be guaranteed against crazing for a definite period, either one or two years. In setting wall tile it is better that each tile should be buttered separately with mortar, set and tamped into its proper place, rather than the work floated, i. e. the setting coat of mortar applied to the wall in large areas, properly screeded, and the tile quickly placed on same and pressed in place. The composition of the setting mortar and the preparation of the wall to receive it are important. The pointing mortar should be, usually, neat white Portland cement. Where tile requires cutting it must be done neatly and the edge ground to give a fine joint and such tile should be placed in an inconspicuous place. In setting floor tile the thickness and composition of the setting bed and its foundation are points to look after. The bed should be accurately screeded, the tile laid on same and tamped firmly in place. In the case of the paper-backed tile, the work should be grouted after setting, and the surfaces cleaned off after grouting. Where large-sized units are used the width and color of the joints must be considered.

Cork Tile—In considering cork tile for use one will want to know the composition of the tile. Is it made of clear, clean cork shavings free from granular or refuse cork or bark? Are other ingredients present, and, if so, what? Under what pressure is it formed? The size of unit to be used and also the shade must be determined. The composition of the mortar coat to which the tile shall be cemented and nailed, and its thickness; the nature of the cement used, whether it is waterproof; how many nails will be used for each tile and their size and kind, are questions to be answered. In setting the tile will they be compressed laterally to give tight joints? The floors should be planned and sandpapered at completion.

Linoleum—In considering linoleum for use it is necessary first to decide upon the thickness to be used and the color, and in the case of inlaid work, both pattern and color. Manufacturers make two thicknesses, one about $\frac{1}{8}$ -inch thick, the other the so called "battleship" grade, about $\frac{1}{4}$ -inch thick, but the product of different manufacturers varies slightly. Some manufacturers make an intermediate thickness for which it is doubtful if there is much demand. It is important to know whether the linoleum it is proposed to use is the product of a reliable manufacturer and whether it has been thoroughly seasoned for not less than two months before leaving the factory. The U. S. Government where purchasing battleship linoleum subjects it to very strenuous tests. While impracticable in private practice as a whole, three of the tests might be used by architects to good advantage. They are the bending, indentation and absorption tests:

The first requires a 2-inch wide strip with the face out, to bend around a bar of 3-inch diameter, without the slightest signs of cracking: Temperature to be 70 degrees F. The second requires it to withstand a pressure of 80 lbs. for sixty seconds transmitted by $\frac{1}{4}$ -inch square iron bar, having a flat bottom and rounded edges, without breaking the surface or making a permanent indentation in same. Temperature to be 70 degrees F. The third requires that a 6-inch by 3-inch piece with burlap backing removed, after being submerged for twenty-four hours in water at 70 degrees F. shall not absorb more than $3\frac{1}{2}$ per cent. of its weight. Regarding the laying, if the linoleum is to be glued in place, the glue, its quality and water resisting properties should be considered. Is the linoleum to be laid directly on the cement mortar surface or wood floor, or will a layer of $1\frac{1}{2}$ pound unsaturated building felt first be applied and the linoleum laid on that. This latter method while more expensive, is better in any case. After laying, the work should be weighted down for not less than 48 hours.

PUBLICATIONS OF INTEREST TO SPECIFICATION WRITERS.

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

Denzar—The Unit of Day Brightness. The features of this type of illumination and types useful for offices, stores, where approximation in lighting to daylight is desired, are explained in a 16-page booklet, 8 x 10 $\frac{1}{2}$ inches in size, issued by the Beardslee Chandelier Mfg. Co., Chicago, Ill. The mechanical features, sizes and dimensions of interest to the designer in selection of type are shown by photographic illustrations and description in text.

Planning the Library for Protection and Service. To provide solutions for some problems in planning of libraries with an effort to eliminate steps and allow for maximum accessibility and flexibility in stack arrangement for books of all sizes, with practical illumination, etc. The Art Metal Construction Company, Inc., Jamestown, N. Y., has published this booklet, size 8 $\frac{1}{2}$ x 11 inches, containing 48 pages. It illustrates floor plans, and interior photographs show arrangement and details that aid in the construction of one and two-story standard stacks, and shelving to store newspaper and periodical binders. Some lifts and carriers are also shown by drawings.

The Gospel of Fresh Air—Swartwout. Conditions of proper ventilation that are sought as applied to industrial concerns, schools, hospitals, auditoriums, churches, moving picture theatres. Detailed illustrations of Swartwout Rotary Ball-Bearing Ventilators, with notes explaining construction, and sectional drawings of ventilation for a series of toilets one above another are shown in this booklet issued by the Ohio Blower Co., Cleveland, Ohio. Size of booklet 4 x 9 inches, and it contains twenty-four pages.

Colonial Fitments. A catalogue illustrative of wrought iron equipment from delicate accessories to fireplace equipments, lamp holders, and equipment which includes wrought iron snow scrapers, bell brackets, weather vanes, etc., has been issued by W. Irving Forge, Long Island City. The booklet is 11 $\frac{3}{4}$ x 9 inches in folder form, and contains sixteen pages.

Steam Specialties. Pipe closings and guides, variations, joints, anchors, fittings, flanges, curbs and valves for various needs, steam traps and repair trap parts, are given in a catalogue, No. 9, issued by the American District Steam Company, North Tonawanda, N. Y. Specification notes, tables of dimensions and sizes, weights, and other data of use to the specification writer and outside man are given. The booklet is 6 x 9 inches, and contains seventy pages.

Distinctive Mantels and Fittings. To suggest the general character and variety of mantels, tiles and works in bronze and iron, this 32-page booklet, published by Wm. H. Jackson Co., 2 West 47th Street, New York, contains photographic illustrations of an interesting and useful type for the designer. The mantels and collection of cast and wrought iron equipment shown, many of them of English and French design, show the designs obtainable from this company.

Doric and Gothic Stippled Brick. A little treatise on brick of the types that suggest Greek Doric work and those bricks that are of a character suggesting fitness for building in the medieval Gothic manner. The booklet containing 30 pages, size 6 x 9 inches, is well illustrated, and contains data for the specification writer and the designer in brick. It is issued by the Western Brick Company, Danville, Illinois.

Tiles—Basic Information. To promote a more thorough understanding of the characteristics, sizes, shapes and colors of tiles, explaining methods of production, The Associated Tile Manufacturers have published Tiles—Publication No. K-200, which gives this basic information. The ingredients and processes, gradings, sizes, shapes, colors and finishes, are given. For a further working aid to the specification writer, drawings are given showing tile shapes and decorative formations. Size 7 $\frac{1}{2}$ x 10 $\frac{1}{2}$ inches. 24 pages.

PENCIL POINTS

VERTICAL TRANSPORTATION.

THE importance of vertical transportation to the success of any building necessitates careful consideration of the elevator requirements from the inception of the plans. Ample provisions can then be made for the elevators, and the columns and beams can be so located as not to interfere with the proper layout of the elevators as to size and general arrangement.

For a modern office building, elevators of 600 ft. speed of gearless traction type should be used, with a capacity of 2000 lbs. or 2500 lbs. and car sizes to suit capacities at 75 lbs. per square foot. Care should be taken to proportion the car dimensions that the width is about 20 per cent. greater than the depth, so that the door openings may be as wide as possible. The elevators should be arranged in a battery, and if more than six in number for any one group should be equally distributed on opposite sides of the corridor.

To determine the number of elevators required: Depending on the location and class of tenancy, the average density of population will vary from 80 to 120 square feet of floor area for each occupant. This figure divided into the net rentable floor area will determine the population or the total number of people in the building.

The peak loads in the average office buildings occur in the morning, at noon hour and around five o'clock. At these times the rate of flow has been found to be equivalent to handling one-third the building population in about 15 minutes, or the entire population in 45 minutes. This is called the transportation period.

The round trip time of an elevator is the time consumed in making one entire trip, up and down, including stops, loading and unloading of passengers. Included in this time is the time consumed in opening and closing car gates and hatchway doors, and the time used in synchronizing with other cars in the group.

For maximum conditions this time is taken during one of the peak periods or busiest times, as in the morning when the building is being filled. At this time the cars will start with full load, making practically 80 per cent. of possible stops up and returning down empty without stops.

$$\frac{\text{Transportation period in seconds}}{\text{Round trip time in seconds}} = \frac{\text{Total number of round trips per car in transportation period}}{\text{trips per car in transportation period}}$$

$$\frac{\text{Number of round trips}}{\times \text{car capacity}} = \frac{\text{Number of passengers carried per car in transportation period.}}{\text{ried per car in transportation period.}}$$

$$\frac{\text{Population}}{\text{Number of passengers carried per car in transportation period}} = \text{Number of elevators.}$$

$$\frac{\text{Round trip time}}{\text{Number of elevators}} = \text{Interval or Schedule}$$

For good practice the interval should be between 20 to 30 seconds, depending on required service, and represents the time a tenant should be reasonably expected to wait between cars. If the calculation results in a longer period, the number of elevators must be increased.

A car 6 feet 0 inches by 5 feet 0 inches overall dimensions will have a capacity of 2000 pounds and comfortably carry 12 passengers in addition to operator; car size 6 feet 6 inches by 5 feet 6 inches—2500 pounds capacity—15 passengers; car size 7 feet 6 inches by 5 feet 9 inches—3000 pounds capacity—19 passengers.

For high buildings, good service requires express elevators. Usually the local and express elevators are equally divided in number, and the number of floors served by the locals and expresses should be such as to result in the same round trip time for each group. This division point is usually several floors above the middle floor.

Every elevator installation presents a different problem, which must be given careful consideration.

STANDARD SPECIFICATIONS

Gentlemen:—Advantage is taken in this letter of the invitation in the March issue of "Pencil Points" to suggest matters for discussion of interest to specification writers.

As no work of architecture, nor in fact any work of real importance can be done without a good standard as a reference; it will be found very helpful for a specification writer to work out a "Standard Specification" based on the type of work that he is most often called upon to do.

The "Standard Specification" may be in the form of a card index, using 5-in. x 8-in. cards, with each trade very carefully and completely indexed for ready reference and in fact the practicability of a "Standard Specification" depends in great measure on the completeness of the index. The index recommended by The American Institute of Architects would in general prove satisfactory.

Some of the advantages of a "Standard Specification" are as follows: (a) A check to prevent omissions, (b) A read reference. (c) A means of recording the best experiences. (d) A place where corrections can be made, recorded and repetitions of errors avoided.

"Standard Specifications" can be made in loose leaf form with each trade bound separately. Trade literature of value to a specification writer may be bound with the specification data forming a good reference.

The writer would be glad to see the question of "Standard Specifications" discussed.

Very truly yours,

CHARLES E. KRAHMER,
Newark, N. J.

ARCHITECTURAL DETAIL, PART I.

(Continued from page 23)

who like to tag their pictures) will be more intense. Furthermore it is easier for the "Adapter" to evince scholarliness and refinement. Detail that bears the hallmark of noble ancestry is more readily accepted by those who know the mark than something unfamiliar and strong even though time may eventually place upon the later its seal of approval.

On the other hand the "Evolutionist" intensifies his appeal by the novelty, rationalness and inherent beauty of his design. It is hard to create without precedent; but its absence can be offset by a firm conviction about the character of the work, or such a determining quality of the design as is found in suiting the general lines to a new type of construction, or the detail and texture to the special limitations of the material of which it is to be made.

While the task of the "Radical" is not easy, it offers all the attraction and mystery of an excursion into the unknown. Its appeal is irresistible to a robust spirit, minted in the die of genius. Such a man, not content with the cheap success of the "Differentist," will subject himself to the long course of hard training required to develop the scholarliness, and technic alability indispensable to the "Evolutionist"—making the highest use of a knowledge of the great works of the past, a genuine appreciation of their beauty, and a grasp of the basic principles that underly all worthy architectural design.

The College of Architecture, Cornell University will celebrate its fiftieth anniversary next fall under the auspices of its alumni advisory committee, appointed at the Semi-Centennial Celebration. The Alumni and Alumnae of the College now number about one thousand. The chairman of the committee is Former Dean Alexander B. Trowbridge '90. The other members are Robert J. Eidlitz '85, William B. Ittner '89, John C. Westervelt '94, Frederick E. Jackson '00, Francis Y. Joannes '00, Frederick L. Ackerman, '01, Richmond H. Shreve '02, Robert North '05, and Clark J. Lawrence '13.

SKETCHING AND RENDERING IN PENCIL

(Continued from page 12)

windows they are usually all lowered to the same point, generally about one-third to one-half way down from the top, or are arranged in some uniform manner, but greater variety of spacing is permissible in less formal structures. Inside draperies harmonize better with the structural lines of the building if shown hanging vertically or nearly so, and for this reason it is often well not to drape them in curves, as curved lines frequently attract too much attention. Neither is it necessary or desirable to show much detail or design in the hangings, though there is no harm in suggesting some simple pattern, as in "4," Figure 25, especially if a sash is unbroken by muntins or other objects. When it comes to the rendering of the sashes and the window frame, treat the woodwork very broadly, merely suggesting by one or two lines all the various members of which the whole is composed. The sash bars will usually be sufficiently well indicated if a single line representing their shady side, and their shadow on the glass is used. Sashes are, as a rule, left white on renderings, but there are instances where the glass is shown so light as to cause dark sashes to seem essential as a means of producing proper contrast. In "5," Figure 25, it will be noticed that the woodwork of the door is left light at the bottom where the glass is dark, but graded to dark at the top so as to count strongly against the light reflection. In "9," Figure 26, the sashes are in shadow and consequently dark, but the glass here is catching a strong reflection of light, as in the previous example. It perhaps seems a bit extreme to leave the glass as white as it is in this sketch and in the doorway at "13" on the same sheet, but an effect of transparency is obtained in this way, and the light tone of the glass pleasingly breaks up the monotony of the shadow. Often, however, the glass in such windows is shown very dark, this being a matter of choice, as both are found in actual buildings.

In most drawings of windows the shadows cast by the frame and by the sashes on the shades and curtains are made quite prominent, and this often adds greatly to the effect, and it is well as a rule to emphasize the shadows of the shutters also. There is another point worth considering and this is that if there is a large dark shadow near the top of a window it is best not to have a similar dark tone at the bottom, as such duplication may injure the result.

Figures 25 and 26 show a variety of suggestions for the treatment of windows. Figure 25 was drawn at exactly the same scale as here reproduced, but Figure 26 was reduced from a larger drawing measuring 8 inches by 11 inches. These sheets seem to call for no special comment in addition to that already made unless attention is directed to "6" and "12" in the latter plate. In "6" it should be noted that the open sash is shown transparent, the shadow cast by the sash itself on the wall behind being visible in its entirety. In "12," however, the sash appears as a reflector, the dark vine behind being invisible just as though the glass were opaque. These two sketches illustrate the two characteristics of glass already described.

In Figure 27 are shown several interior sketches in which windows are featured. These drawings explain themselves, though mention might be made of the fact that when facing a window or any glazed opening from the inside the sashes and frames usually appear dark in their relation to the outdoor light beyond. Because of this strong contrast even light woodwork often seems very dark if seen in silhouette.

When drawing an interior it is not wrong to show objects out of doors providing they are not made so prominent as to take too much interest from the interior itself. Unless such objects are quite near the glass, however, they should be drawn very simply and lightly.

Having studied the drawings on Figures 25, 26 and 27, as well as other reproductions that you may have at hand, and having demonstrated for yourself the truth of some of the facts mentioned here, try some studies of your own, attempting to get a glassy effect to each window, and crispness of drawing as well, remembering all the while that windows are too important to be slighted in representation.

Note—In succeeding issues Mr. Guptill will treat of the presentation of business buildings, the representation of interiors and of furniture and furnishings, pencil drawing on tinted paper and in combination with other media, and many other interesting phases of his subject.—Ed.



John Constable
1776 - 1837

CONSTABLE CHOSE WHATMAN

CONSTABLE'S bold stroke and robust style were a severe test indeed for any drawing surface. That is why he made constant use of

J WHATMAN

Genuine Hand-Made DRAWING PAPERS

Because these papers possess great strength and durability, they are universally used to-day by foremost Architects. They will help you bring out the best features of your work.

Write for sample book.

H. REEVE ANGEL & CO., Inc.,

7-11 Spruce Street, New York

Satisfaction At Last

in a

Fountain Ruling Pen

The

„Minerva“

Can be used with any ink.

One filling does a day's work.

**Will not leak
or clog**

Gives the user his entire time for concentration upon his work.

Triangle or scale can be held with one hand while pen is being filled.

Guaranteed to operate satisfactorily.

Price Postpaid, only \$5.00

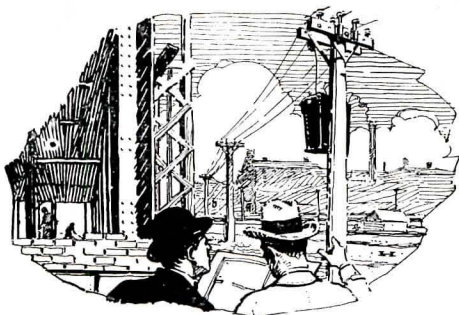
ORDER TODAY!

KOLESCH & COMPANY

138 Fulton St.,

New York





How Habirshaw Field Engineers Serve the Architect

HABIRSHAW Field Engineering Service is maintained for gathering information and for consultation on unusual problems of installation whenever Habirshaw resources and experience can be utilized by the technician in charge. An example of the usefulness of this service is in the architect's study of industrial installations requiring the use of materials which guarantee a high power factor. Habirshaw insulated wire and cable has been the accepted standard of the electrical industry for more than thirty years. Habirshaw engineers may be called in at a moment's notice to consult and furnish data on both the standard and special supplies needed.

As part of their plan of cooperation, other Habirshaw activities are of special interest to the architect.

National Advertising—stimulates

public approval of the architect's work, arouses the interest of the unexploited field of buyers in electrifying the home, and develops consumer goodwill which gives technicians the benefit of owner appreciation.

Habirshaw Research Service—is constantly functioning in mechanical, chemical and electrical laboratories, upholding and advancing Habirshaw standards of quality.

Volume Production—under modern manufacturing conditions enables Habirshaw to maintain its high position in the field and so reduces costs that Habirshaw products are obtainable at the market price.

Western Electric Service—maintains complete stocks of Habirshaw wire and cable at strategic points, making it independent of direct shipment and constantly available in every active market of the United States.



Habirshaw Wire
Manufactured by
Habirshaw Electric Cable Co.,—Inc.
Yonkers, New York
Distributed by
Western Electric Company, Inc.
Offices in all principal
cities

HABIRSHAW

"Proven by the test of time"

Insulated Wire & Cable

Plus Western Electric Company's Service