

# PENCIL POINTS

Volume VII

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Number 3

## TEAM WORK

IN THE PURSUANCE OF HIS ART, the architect must work through many men of various minds. The work of an architect does not differ in essentials from that of the other creative arts, but in one important particular it differs from the arts of the painter, the sculptor and the writer, in that the expression in concrete form of an abstract idea must be deputized by the architect, while they are able to work without intermediaries.

The most important, the most necessary of the men through whom an architect must work are the draftsmen in his own office. Fortunately, in the United States there is no profession in which higher standards obtain than among the architectural draftsmen. They are often worked for unbelievably long periods at a stretch; they must always subordinate their own conceptions of design to those of their employer; and their salaries are often pitifully small—but they seldom fail to make good. Their kindness and helpfulness to each other are beyond words; jealousy and friction and determination to succeed at the expense of another, so common in other trades and professions, are seldom encountered. The newcomer in the profession is helped and taught; his faults are corrected and his abilities appreciated by his fellow draftsmen. Many of the most successful architects know that they have learned a great deal about architecture while they were draftsmen and that much of their knowledge was taught them by fellow draftsmen.

The broadminded architect, who becomes an employer of draftsmen, finds that he continues to learn from them. The architect must look to the draftsmen, not only to carry out his schemes, but to advise about them and as a rule he receives no criticism so valuable, so constructive, so trenchant as that given by the men who work for him.

The press of affairs—business, executive and otherwise—upon the time of the architect necessarily limits his drawing-board hours. His pencil is really in the hands of his draftsman and the mental understanding between them must be such that there is a sympathetic comprehension of his aims, interpreted not as the draftsman's personal opinion but as a full expression of the way the architect is endeavoring to realize them. Of course many suggestions and minor improvements will continually suggest themselves to the draftsman but they should always bear the stamp of the original conception.

The relation between architect and draftsman should be that of one artist to another or that of teacher to the pupil. That the boss is the boss proves that he has fully developed certain abilities which differentiate him from the draftsman. It is true that many draftsmen, who in their ability and knowledge of design, are on the same artistic plane as the man whose "shingle" is on the door, but they still lack one or more of the necessary component parts that go to make an architect.

Being artists themselves, the draftsmen should not substitute flattery for criticism, but should be sincerely anxious that the joint work of the office be as creditable as possible. They should never hesitate to point out defects or faults.

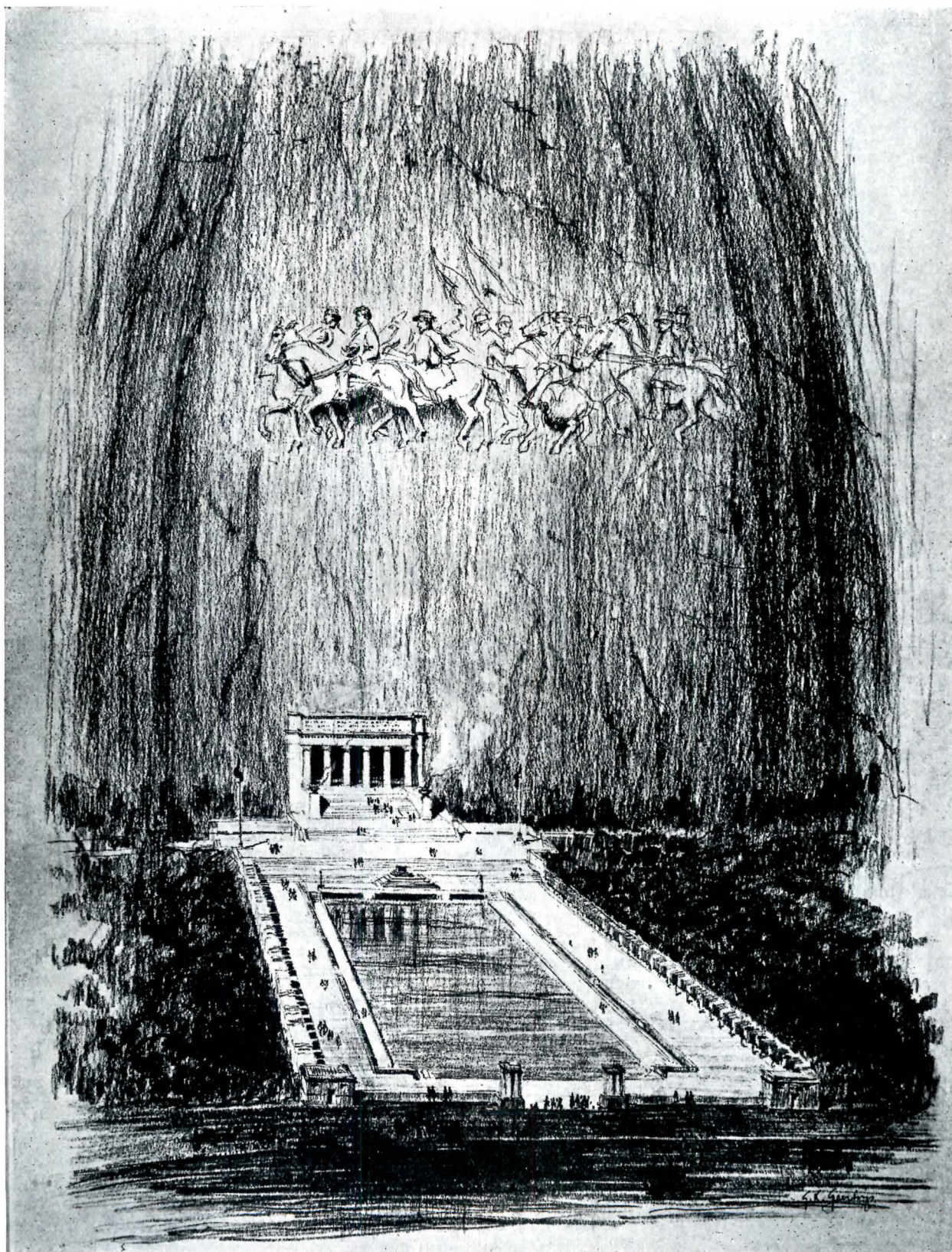
Loyalty to the boss is begotten only by the mutual respect of architect and draftsman. If a draftsman feels that he knows more than the architect for whom he is working, he is handicapping himself as well as his employer. He should seek another job where he could feel that the architect's criticism of his work was founded upon superior knowledge.

Among the better architects there is never any lack of appreciation of a man's talent, and if he is really capable and expends his best efforts for the good of his employer, the effect upon not only his own artistic career, but also upon the weekly pay envelope will be noticeable.

If the draftsman is satisfied that he is in the right office and has the proper respect for his employer's criticism, he can give to the work in hand a serious consideration which represents his best interpretation of the boss's idea and know that any effort he may make toward improving the scheme either will be accepted as such or frankly condemned because it is not a true interpretation of the idea. If the boss does not agree with him, it is usually because he has departed in some vital respect from the original conception, which, in the light of the boss's contact with conditions unfamiliar to the draftsman, is not considered warranted. The boss should always be the judge as to what is or is not right in the interpretation of his ideas.

It is not only personal loyalty to the office that should be kept in mind, but also loyalty to its accepted traditions of design. The ideal draftsman working for the ideal boss is an interpreter and not primarily a creator.

Most architects will agree that there is no appreciation of creditable work so pleasant as that of the men who have assisted toward its success.



STONE MOUNTAIN CONFEDERATE MEMORIAL, AUGUSTUS LUKEMAN, SCULPTOR  
RENDERING IN CARBON PENCIL BY GERALD K. GEERLINGS

# SILHOUETTES OF AMERICAN DESIGNERS AND DRAFTSMEN, II

GERALD K. GEERLINGS

I FEEL CALLED ON to say this for myself: I am white—and actually not nearly as black as the silhouette makes me out to be.

I started in Milwaukee.

I was not brought up on beer and pretzels, but on thumbtacks and crayons. Figuratively of course, but literally by the time I was four I had lost more valuable thumbtacks (the expensive, old-fashioned brass ones) and wrecked more colored pencils than my uncle's entire architectural force had used up in a decade. That leads me to explain my thumbtack career since infancy—I was blessed with two uncles, demigods, who used to return on vacations from studying architecture at the University of Pennsylvania, with toys such as no other neighborhood infant had. I was their only live plaything and the attention I got convinced me while I was still inhabiting a cradle that theirs was the life on Olympia. I would be like them.

By the time I had attained the veneration of fourteen years my elder uncle, Mr. Gerrit De Gelleke (of Van Ryn & De Gelleke, Milwaukee) took me into the fold at his office, as an apprentice nuisance and tolerated me goodnaturedly during my vacations and spare time. Working betwixt and between high school hours and terms I gradually gained the summit of being a captain of finance, pocketing the weekly sum of three dollars. Doubtless the damage I caused and materials I used cost thirty dollars.

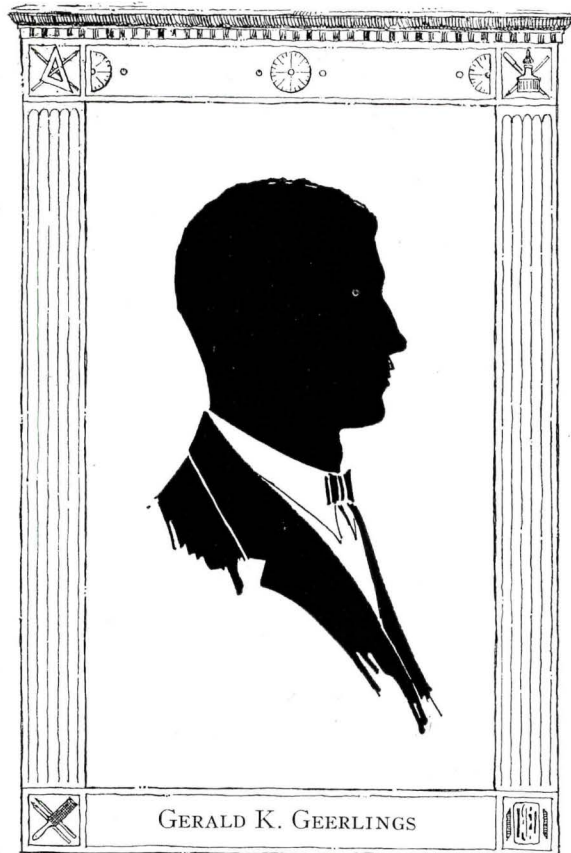
However, my uncle kept up his good nature; I kept on. As is the custom in Milwaukee, a draftsman, to earn that distinguished title, must know how to tangle rods in reinforced concrete, make ventilating ducts efficiently intertwine themselves, lay out electric hieroglyphics, do perspective renderings, design ornament without documents—in a word, be a complete organization personnel, a library and a "Kidder" all combined in one. I strove mightily,

but I was not equal to even a fraction of the guild's requirements.

I attended art school nights and ruefully gazed at casts of Greek cabbages and Homer's beard. I kept Windsor and Newton, Strathmore and several similar enterprises in a prosperous condition by taking "decorative design." I still feel sorry for all the red sables that needlessly sacrificed themselves to make brushes for me. The war saved their further extermination, because the day after the Big Noise became official, I joined the army with the rank of "Buck Private." As an important hindrance to the 32nd Division, 120th Field Artillery, I got a free passage to Europe on the Leviathan, in the fifth American division which arrived to exasperate the French.

In due course of time when the Big Noise had officially quit with the Armistice, someone "slipped up" in an army order which commanded me to report to Winchester, England, for assignment to an English university. I can't decide if my funny Holland name got itself misread as code for some Major-General's son, or if the Powers That Were took compassion on

my ignorance. Anyhow, I got to Winchester in time to attend the first ball the Lord Mayor had given since pre-bellum days. I was forwarded to Liverpool where I spent my time while awaiting assignment, dancing by night and figuring by day on how I was going to exist as a furloughed officer and "scholar" on the pay of a "shavetail". The Gods of Luck rolled me another seven and I was sent to Cambridge. Here I was retained for two terms as a cowboy-Indian curio. During that time I ruined considerable paper making sacrilegious representations of buildings and details. I partially absorbed such fragments of learned lectures on the history and traits of art, archaeology and architecture as were not delivered in Greek. Weekends I commuted to Lon-



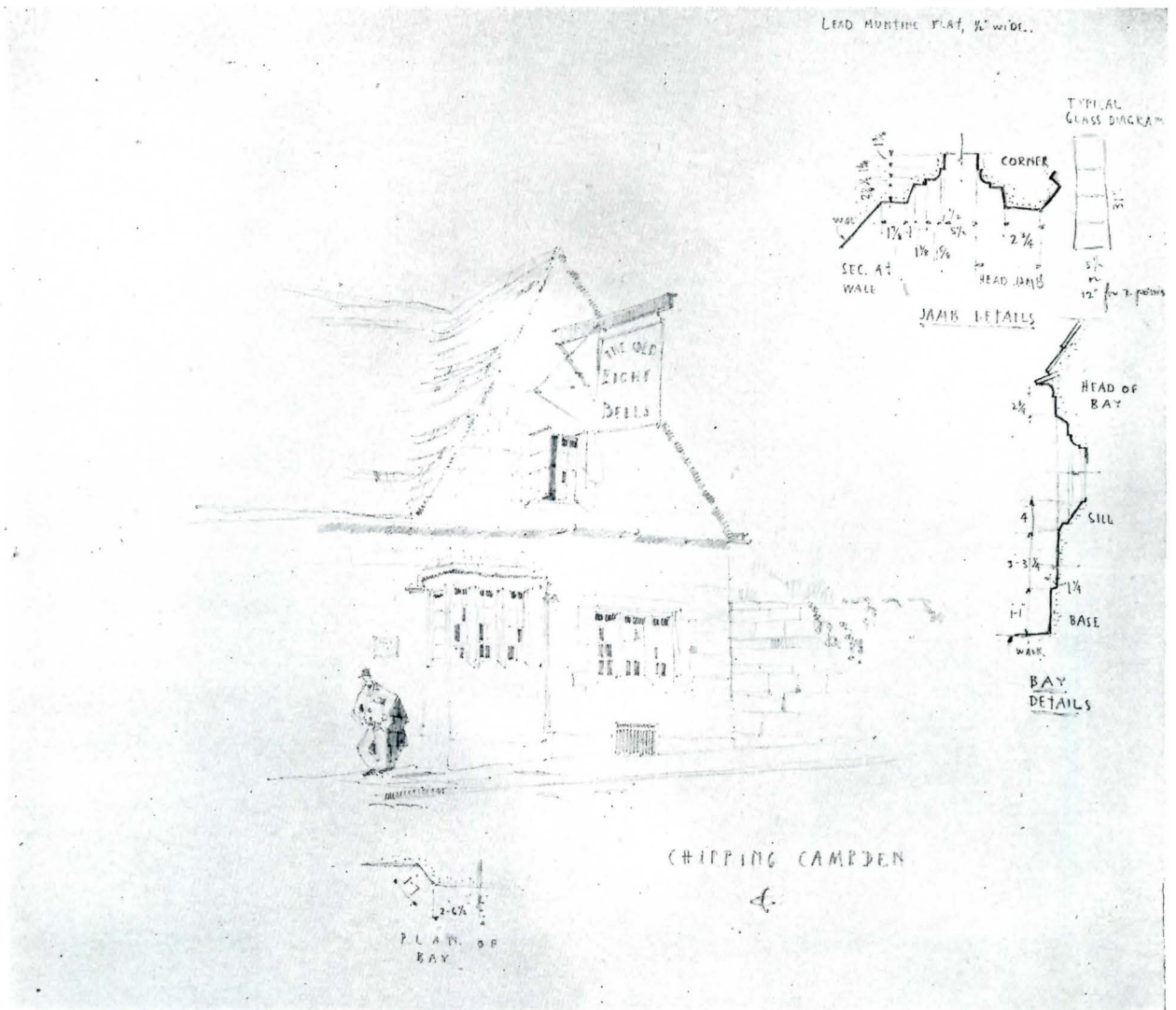
## PENCIL POINTS

don and infested the British and South Kensington Museums. Between terms and at other times I romped pretty much at random over the Isles.

Among my long list of architectural creditors I must give first mention to my father. He drilled into me the necessity and sanctity of hard-labor. All his life he has been in the building game and at the present moment probably knows more ingenious construction devices, and more about the anatomy of a building than any other mortal. Next my two uncles. Mr. Gerrit De Gelleke already mentioned, for affording the opportunity to learn concrete calculations, general school planning and details, superintending, pen-and-ink rendering and what not. His partner, Mr. Henry Van Ryn, I owe a similar debt. I also envy him the finest voice and personality in the profession. My other architectural uncle, Mr. Peter De Gelleke (of Armstrong & De Gelleke,

New York), has been a second father, a good pal, and a dispenser of much needed advice and information, both general and architectural. If he had not talked sternly and sensibly to me, when I returned from overseas with an advanced chronic case of wanderlust-itis, I should have gone to Tibet to sell mousetraps.

At the University of Pennsylvania I became one of the most devout disciples Mr. Paul Cret ever had. In the realm of architecture pure and simple I owe him the bulk of all indebtedness. For Mr. George Walter Dawson, president of the Philadelphia Water Color Club and professor in water color at the University, I cannot say sufficient, both professionally and affectionately. John Singer himself cannot have commanded a more magic number 12 brush, loaded with color and patience and sympathy. In two years at York and Sawyer, particularly the



SKETCH AND MEASURED DETAILS MADE AT CHIPPING CAMPDEN, ENGLAND

BY GERALD K. GEERLINGS



CITY GATE.  
VALENÇA DO MINHO, PORTUGAL

17 G. 14

SKETCH BY GERALD K. GEERLINGS, CITY GATE, VALENÇA DU MINHO, PORTUGAL

(Made with 5B pencil on cameo paper and small amount of brilliant color in figures.)

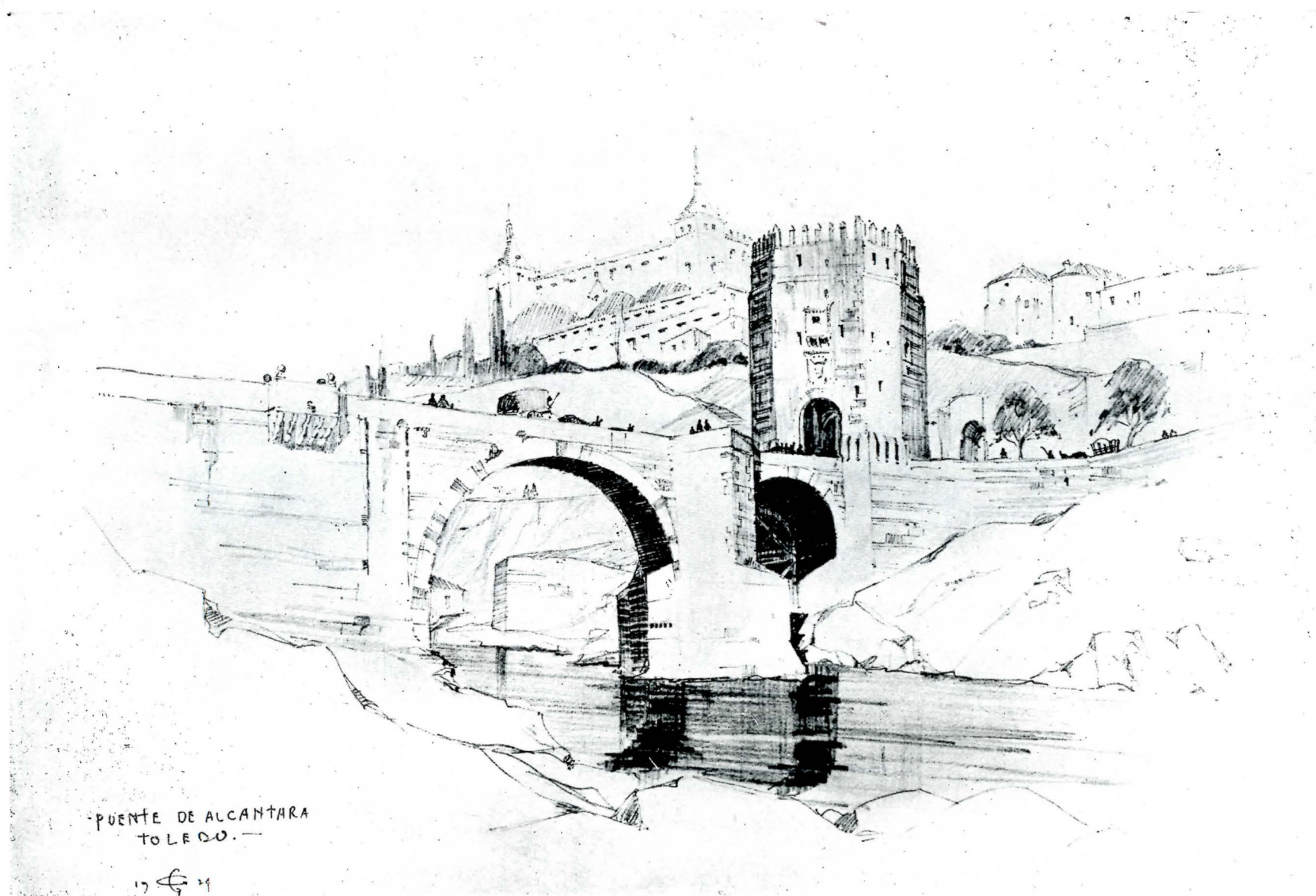


THE GORGE AND BRIDGE  
(On yellow charcoal paper.)



SANTA MARIA LA MAYOR  
(On pink charcoal paper.)

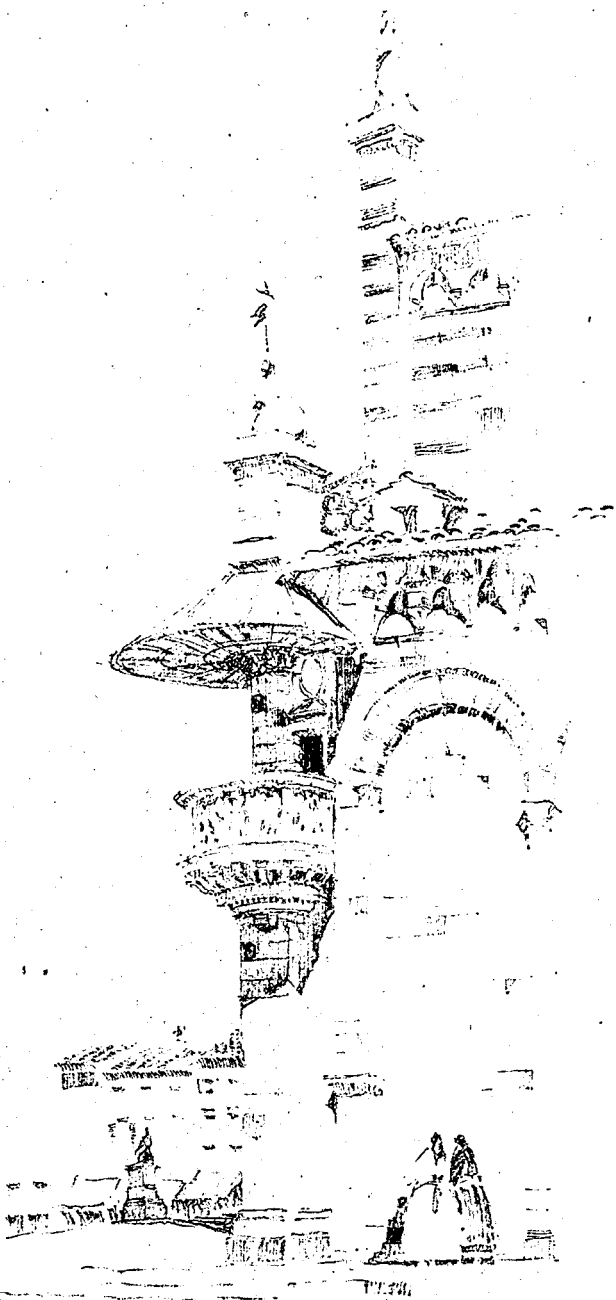
WATER COLOR SKETCHES MADE AT RONDA, SPAIN, BY GERALD K. GEERLINGS



SKETCH BY GERALD K. GEERLINGS, PUENTE DE ALCANTARA, TOLEDO, SPAIN

(Made with 5B Pencil on Cameo Paper.)

PENCIL POINTS



PRATO

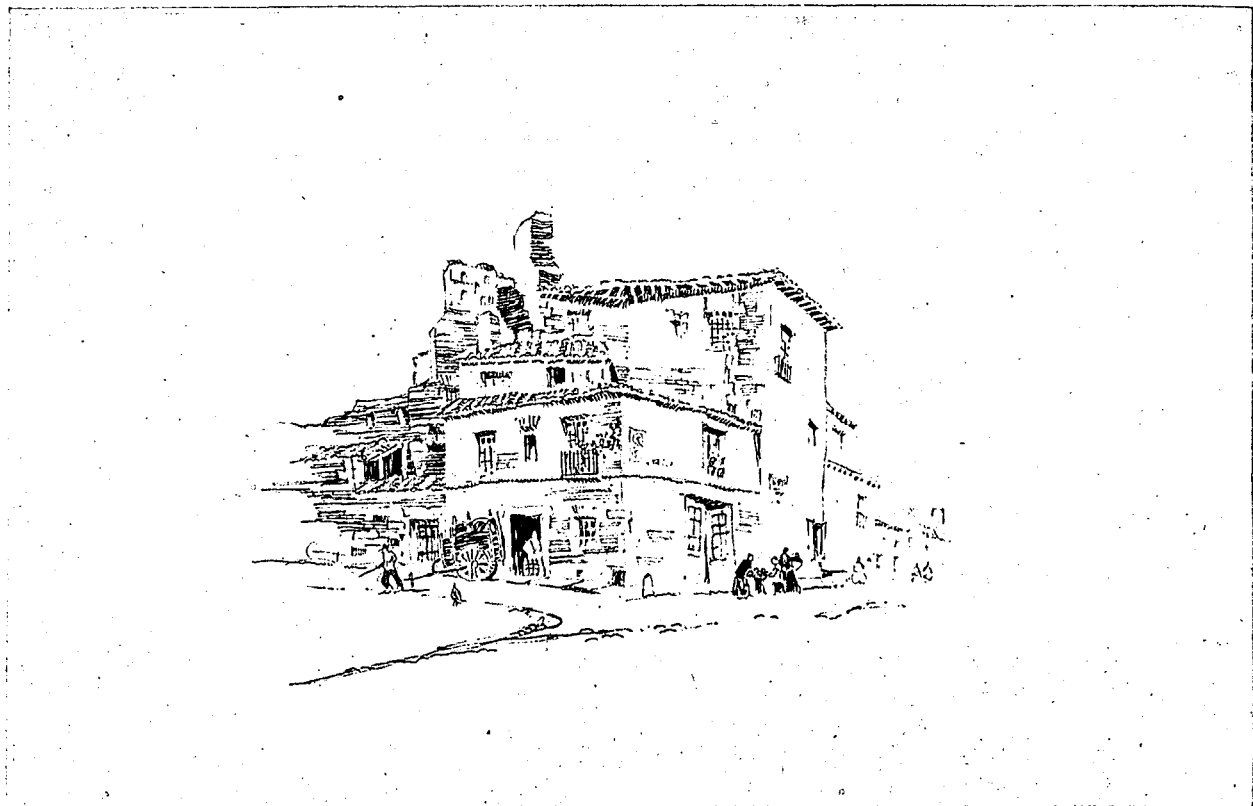


SKETCH BY GERALD K. GEERLINGS, DONATELLO'S OUTDOOR PULPIT AT PRATO

(Made with 5B Pencil on Cameo Paper.)



ORVIETO



OLD HOUSES ON FOUNDATIONS OF ROMAN WALL AT LEON, SPAIN  
PENCIL SKETCHES ON CAMEO PAPER BY GERALD K. GEERLINGS

# PENCIL POINTS



IN THE BAZAAR



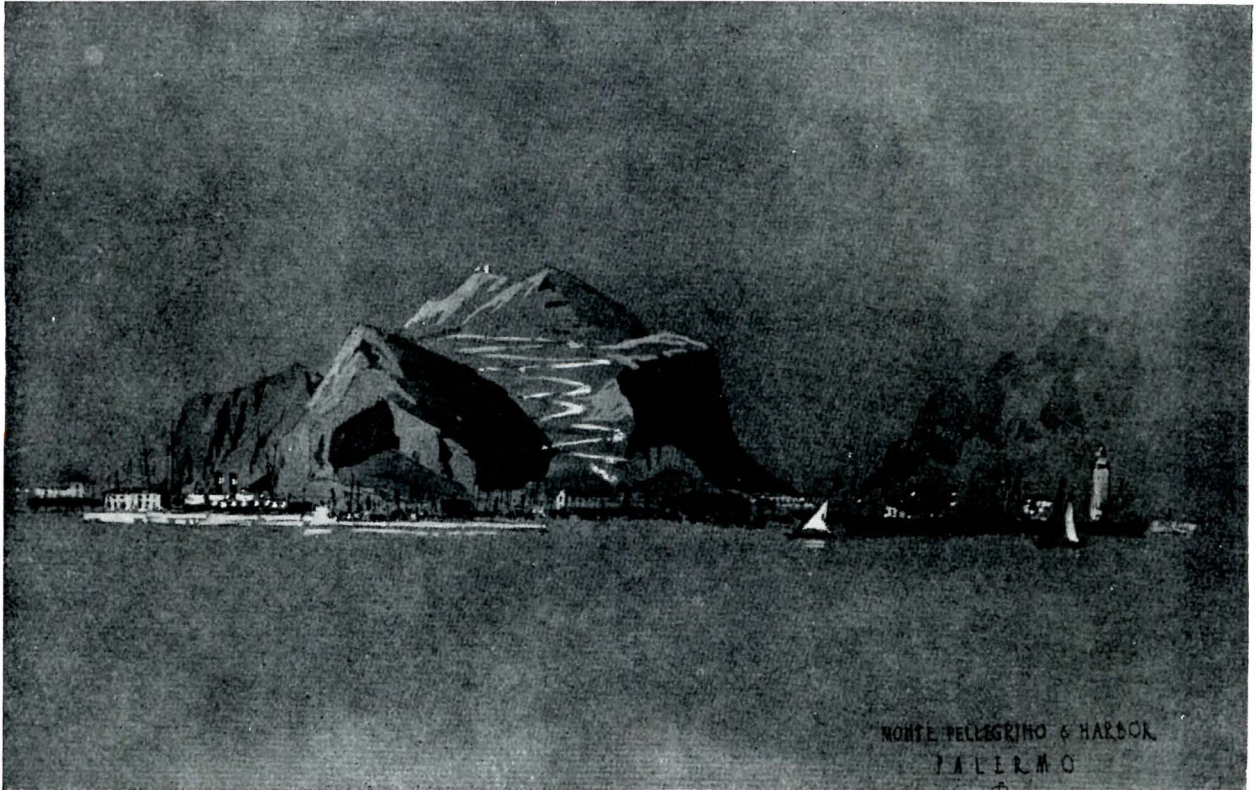
GULLS

IN THE HARBOR

CONSTANTINOPLE



PENCIL STUDIES MADE AT CONSTANTINOPLE BY GERALD K. GEERLINGS



WATER COLOR SKETCH ON CERULEAN BLUE CHARCOAL PAPER BY GERALD K. GEERLINGS

last one and a half years, I worked constantly under the eyes of Mr. Philip Sawyer and Mr. Louis Ayres. I was allowed to play with new projects, beginning them from the white-paper stage. To daily work with and witness Mr. Ayres' genius for intense concentration, his amazing power of solving problems in plan or design in hitherto unthought of brilliant schemes, his rapidity in perceiving a solution and seeing its limitations as well as its possibilities—is one of my richest architectural endowments.

The University of Pennsylvania was too generous in bestowing on me the B. A. and M. A. degrees, and in 1924-1925, in sending me abroad. During that time I used up a considerable quantity of cameo paper for pencil sketching and eight shades of Strathmore charcoal paper for water-colors. The fact that I religiously kept using up paper was partially because my frugal nature dictated that I had better make use of what I had bought. But the real reason is that my many-talented wife bolstered up my flagging impulses and dispelled chronic "blues" over poor results.

The best luck I had in sketching during the year abroad was on the eight shades of Strathmore charcoal paper. It comes in sheets 40 x 26 inches which I cut into eight pieces each 10 x 13. The tones are so excellent and pleasing to look at, that I soon discovered the less I did to them the better the result. The more the paper counted, the more successful the

sketch. Using either charcoal or 3B pencil I tried to execute a carefully edited drawing, not much heavy prose but considerable punctuation. Washes in transparent color where possible and opaque where necessary, applied in scanty paragraphs, created an effect quickly after I had the color scheme worked out mentally. With my particular cerebrum that was the lengthiest process in producing the sketch.

The initial problem in working on tinted paper is fitting the color to the subject, not vice versa. A seascape does not enjoy itself on terra cotta colored paper, while a sizzling hot Bologna street scene is seven-eighths finished before beginning. The cerulean blue shade worked well on water subjects, or where there was considerable blue sky and shadow. The dark green tone seemed to be good moonshine paper (literally speaking), but was not a substitute for foliage. At least I could not convince it. The light green and light pink did for almost anything, but were particularly pertinent where the outline of the mass was not too overwhelmingly exciting, and the composition had to be tricked into doing a "fade-away." The gray paper served so adequately for mist, fog and rain that all I needed to contribute was a furry drawing and an appropriate title. A golden toned paper invited sunshine of its own accord. All one does is define a few well-chosen, interesting shadows in cerulean, add several gnarled shrubs



WATER COLOR BY GERALD K. GEERLINGS, "WEISSER TURM," NURNBERG

*(Made with transparent and opaque water color on cerulean blue charcoal paper)*



WATER COLOR BY GERALD K. GEERLINGS, HOHENZOLLERN BRIDGEHEAD, COLOGNE  
*(Made on dark green charcoal paper)*

PENCIL POINTS

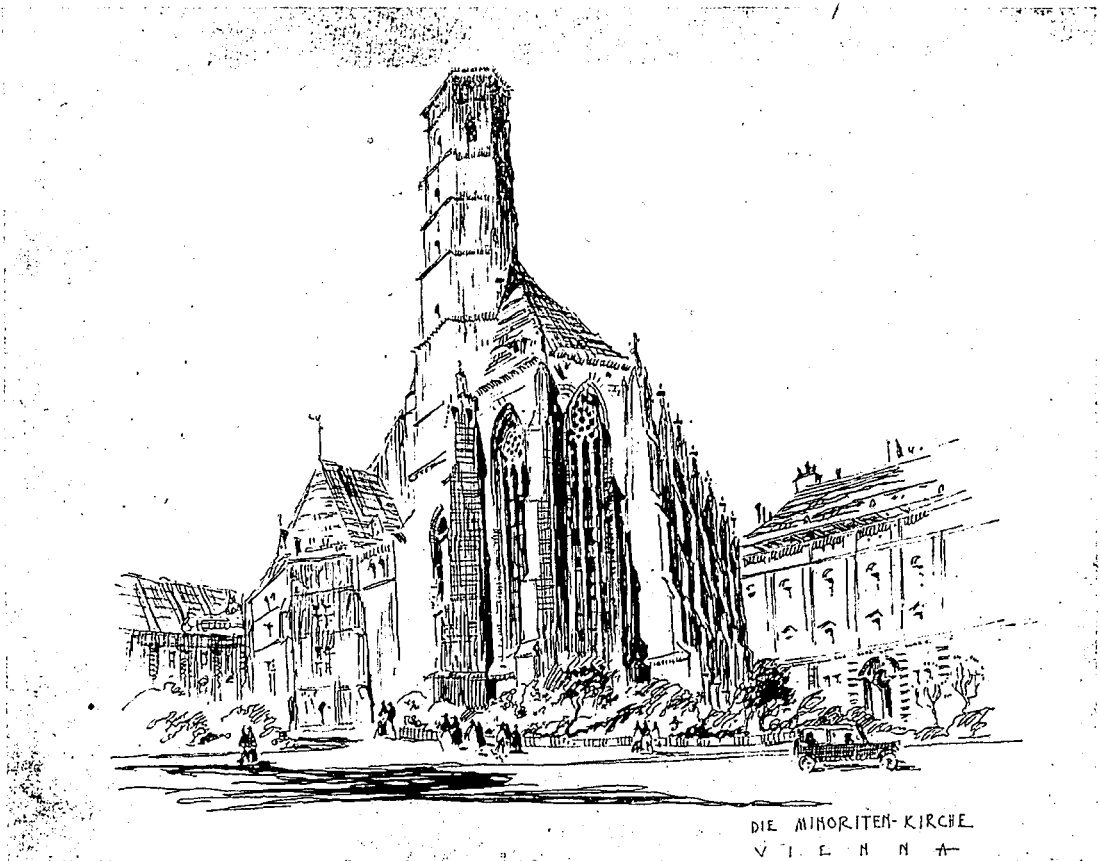
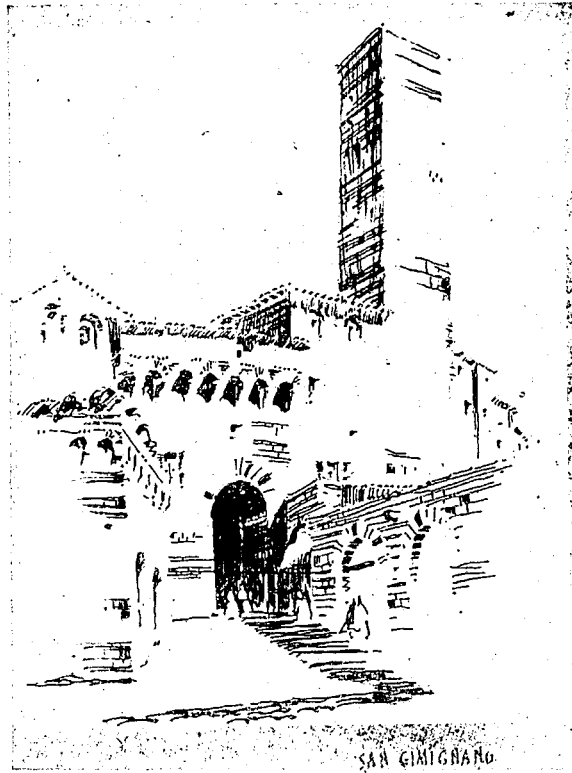


WATER COLOR BY GERALD K. GEERLINGS, ST. WOLFGANG'S KAPELLE, ROTHENBURG, GERMANY  
(Made on yellow charcoal paper with cerulean blue strips in the sky and emerald green foliage)

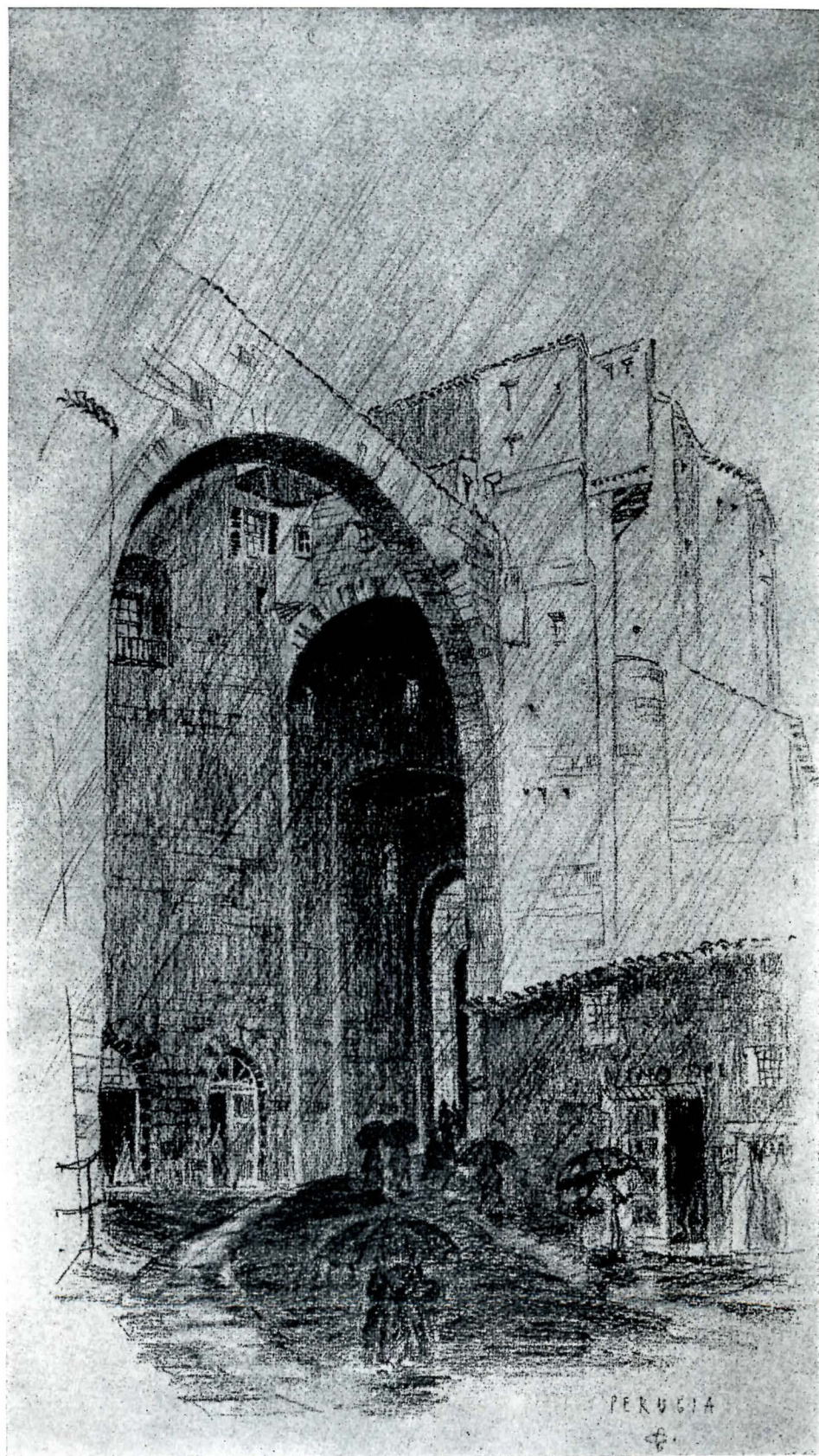


WATER COLOR BY GERALD K. GEERLINGS, NARBONNE, FRANCE

*(Made on water color paper in brilliant, contrasting colors)*



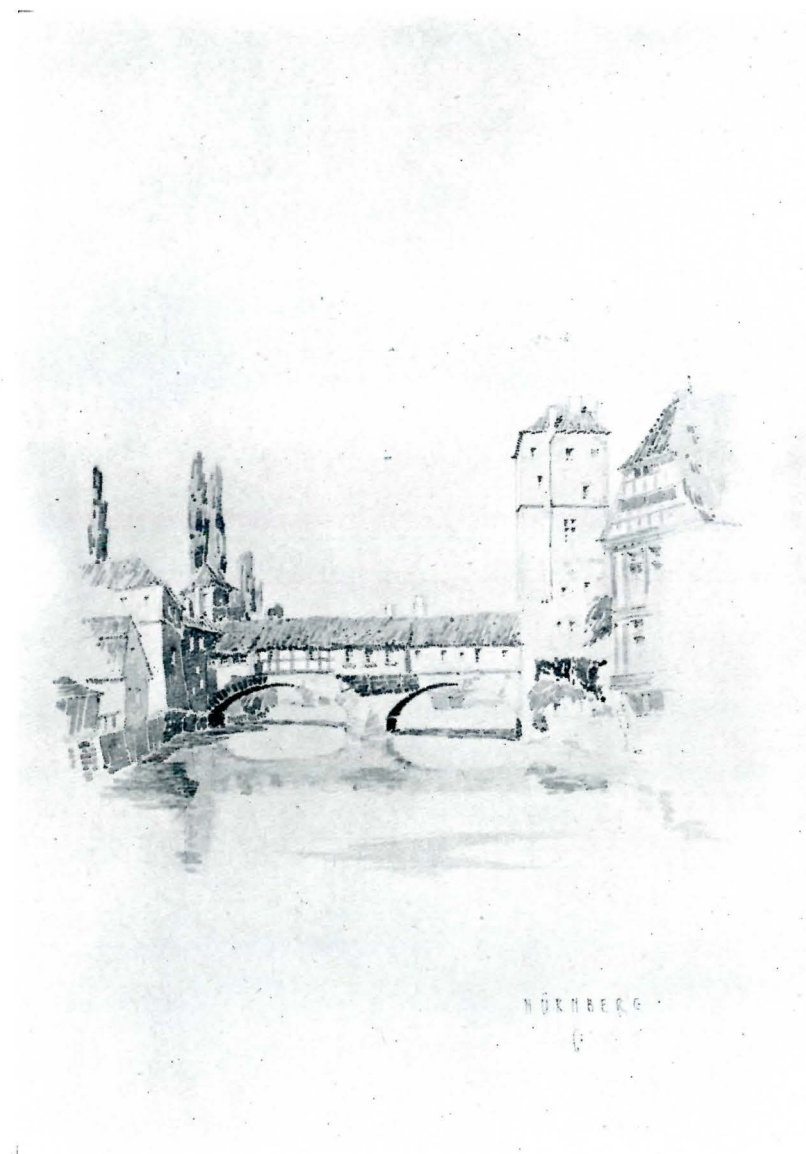
FOUNTAIN PEN SKETCHES BY GERALD K. GEERLINGS



CHARCOAL DRAWING BY GERALD K. GEERLINGS, PERUGIA

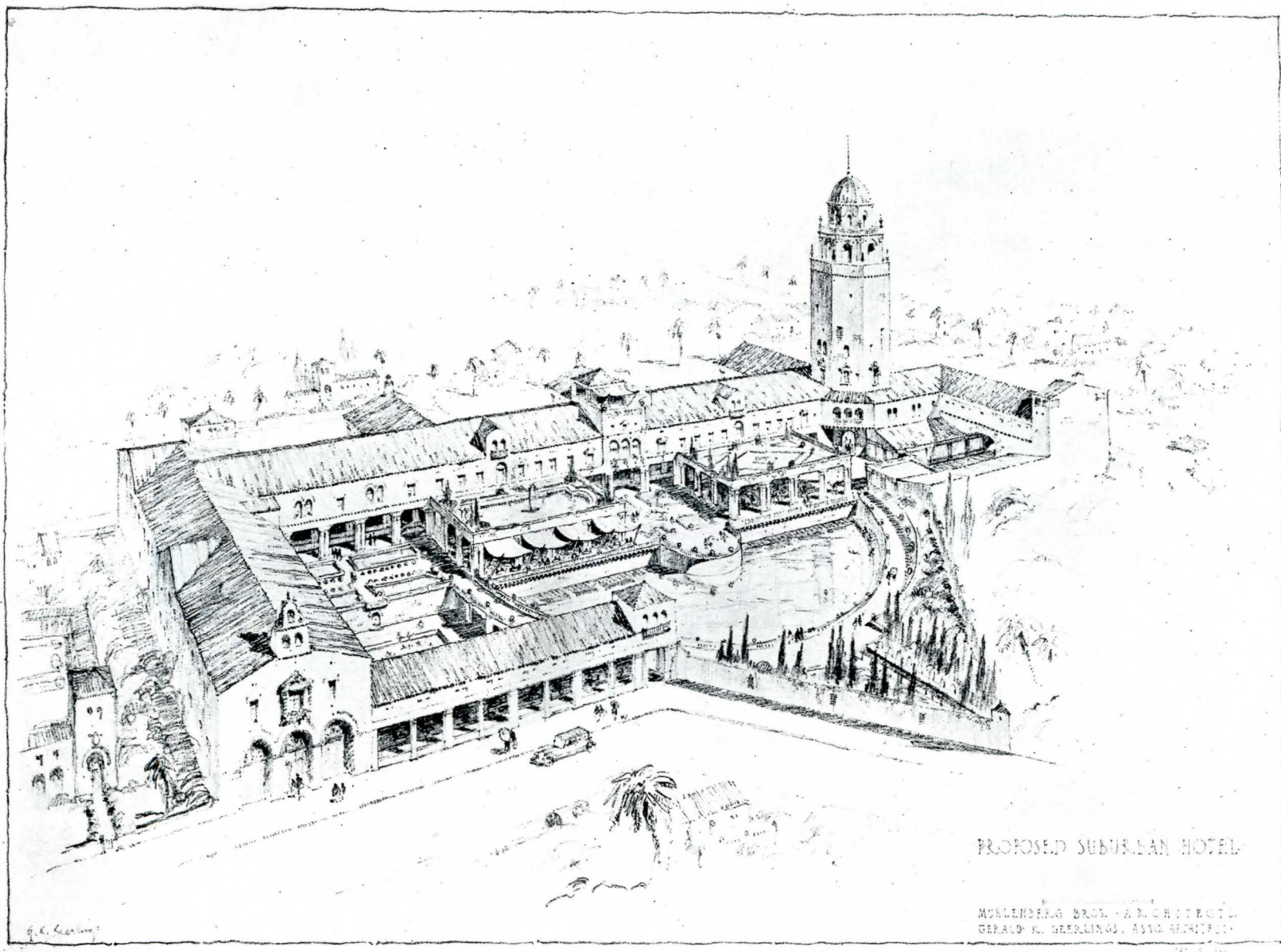


STREET IN BRUGES, BELGIUM  
(Made on yellow charcoal paper)



THE RIVER AT NURNBERG, GERMANY  
(Made on light pink charcoal paper)

WATER COLOR SKETCHES BY GERALD K. GEERLINGS



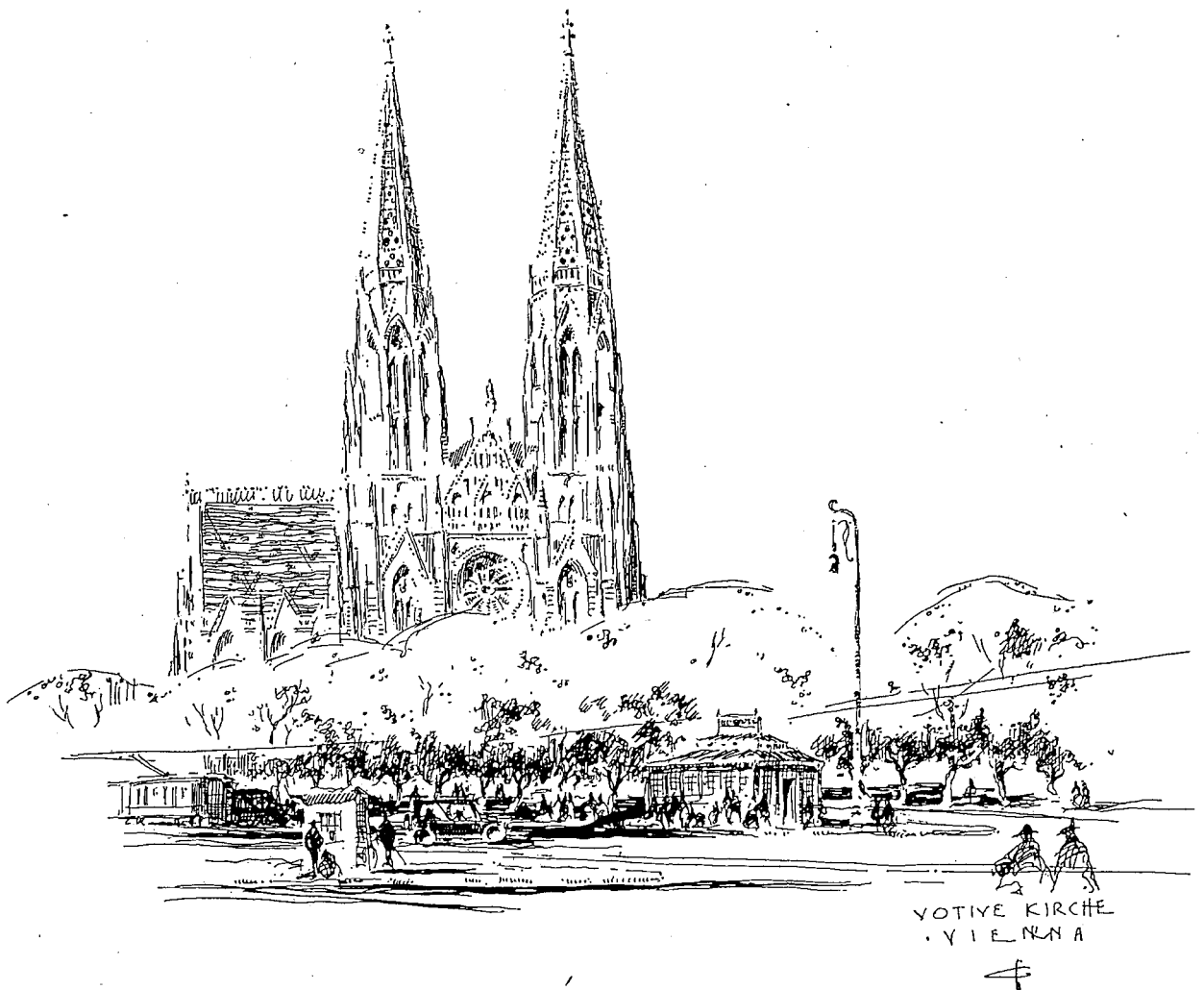
SKETCH ON MOUNTED TRACING PAPER WITH CARBON PENCIL BY GERALD K. GEERLINGS, PROPOSED HOTEL AT MIAMI, FLA.  
MUHLBERG BROS. ARCHITECTS, GERALD K. GEERLINGS, ASSOCIATE ARCHITECT

or a shapely tree, throw in a figure with vermillion cape, and the battle is over. There is a golden brown shade which is complete in itself. However, it seems to welcome every brilliant color on the palette, so that no matter what kind of a chess game you play with cadmium orange or emerald green, vermillion or cerulean, you always come out the winner.

Because of the colored paper being virtue herself, it is best to let well enough alone and not attempt to force an all-over sky wash. It seems wiser to sneak a few meandering stripes of blue across the horizon to suggest clouds or sky. The paper came in loose sheets as described but acquitted itself satisfactorily in submitting to being held down head and toe with two rubber bands. Of course it will buckle a bit but that does not matter. After completing the sketch and on returning to civilization, wet the back of the paper all over slightly by a squeezed-out

sponge of water. Then place the limp sketch between several virgin-white blotters and surmount by a pile of unread architectural magazines. On completing the drawing and before adding color, I attempted to visualize accurately the ultimate result. When I succeeded in doing so the product looked somewhat plausible. On the darker shades our old acquaintance, Chinese White, comes in for a big share of the glory in making himself necessary to opaquing the other colors of course.

The outstanding thing about the year's sketching abroad—in fact the only outstanding thing about me—is that I never wear a hat the year around. When I check my coat on breezy, wintry days I am invariably offered a choice of several hats. When building slumps I may be forced to leave off my honest ways, accept the proffered hats, and earn a comfortable living as a prosperous dealer in second hand chapeaux.



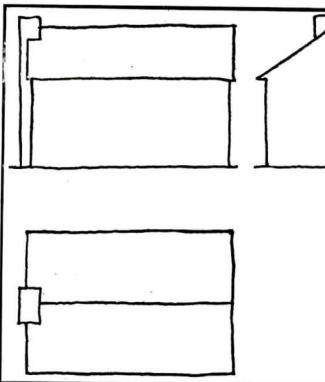
PEN AND INK SKETCH BY GERALD K. GEERLINGS

## THE SELECTION OF A STATION POINT

# A METHOD OF PERSPECTIVE DRAWING WHICH ASSURES A GOOD AS WELL AS ACCURATE PICTURE

*By John W. Dawson*

MOST DRAFTSMEN SEEM to know how to make perspective drawings, more or less well, depending on the number they may be called upon to do, but very few of them seem to be able to tell before hand how a drawing will look when finished. Due to a mistake in the choice of a station point, the result is oftentimes not a good picture, though the drafting may be excellent. This is true despite the fact that it is possible to tell quite accurately how the drawing will look before the first line is put down, and it is equally possible so to choose a station point that the perspective drawing will approximate very closely a freehand sketch which may be made before the drawing is started.

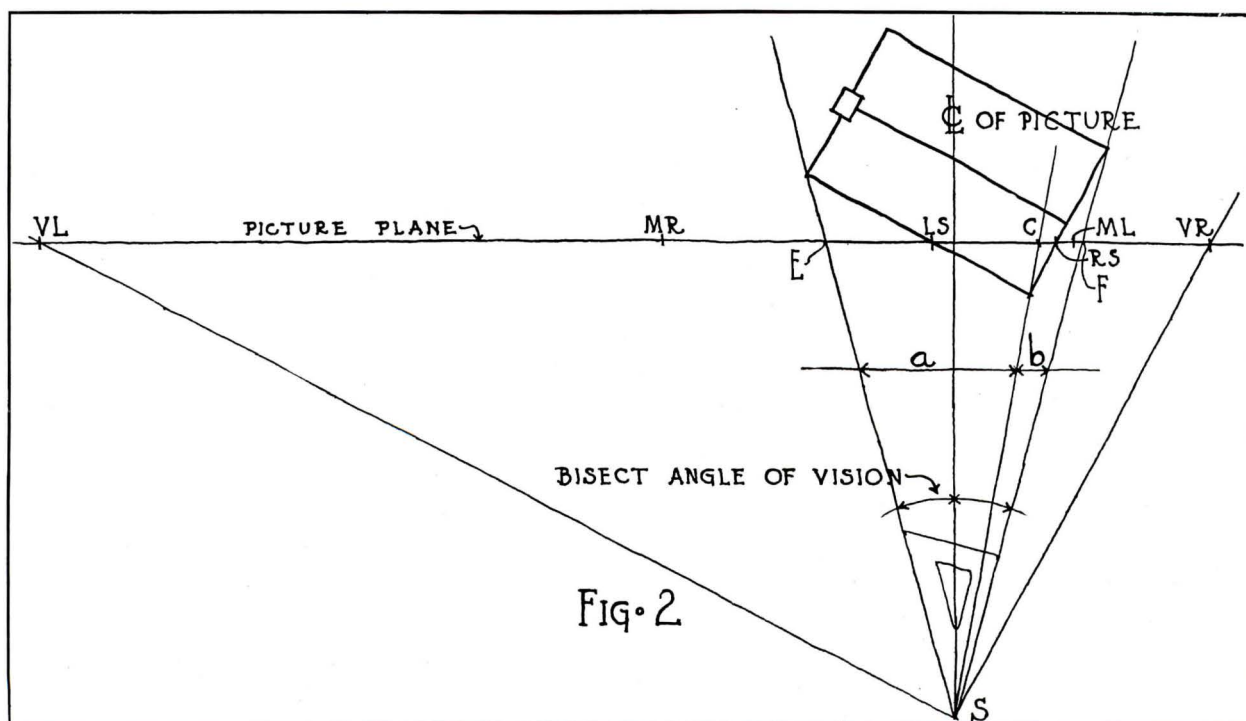
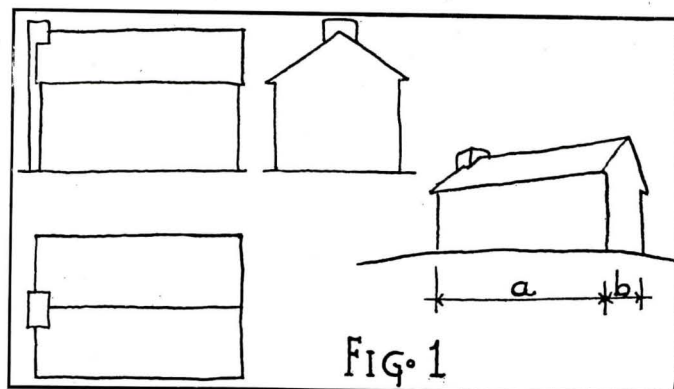


The ordinary method of procedure seems to be as follows. The building or object is set at an arbitrary angle to the picture plane and then the station point is located in front of a corner of the building. This is really a backward way of setting about things. A more logical procedure is to do things in the following order: first, decide how the finished picture should

look, by making a rough thumbnail sketch; second, find a station point from which the building will look like this sketch; third, find the center line of the picture; fourth, locate the picture plane; fifth, locate vanishing and measuring points. Then draw the picture.

This method can best be explained by assuming a simple problem which we can follow through in detail. In Fig. 1 we have a house which has a chaste rectangle for a plan and an orthodox gable roof. Also we have the thumbnail sketch which shows how we wish our perspective to look, and so the first step is accomplished.

Before we take up the second step we must generalize a bit. A station point in common with any other point in space may be located by three co-ordinates, or dimensions, or conditions. In the case of a station point one co-ordinate is determined by the height of the eye above the ground. This confines the station point to a horizontal plane and it remains to locate the point in that plane, which



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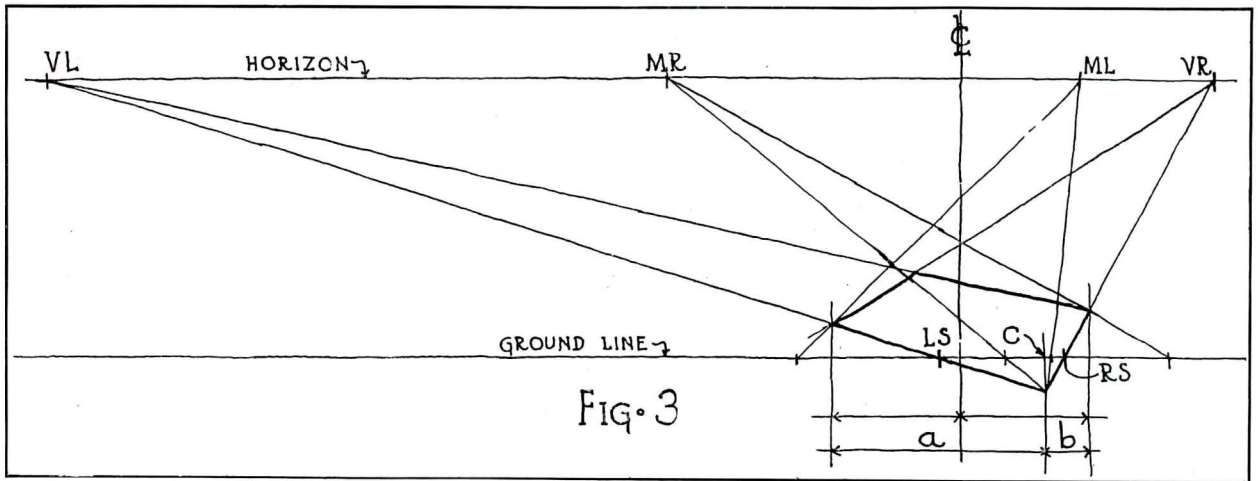
requires two co-ordinates or conditions. Obviously it would never be possible to find a point from which a building would look exactly like the preliminary sketch. The proper procedure is to pick two characteristics of the sketch which it is desired to preserve, and to translate these characteristics into two co-ordinates which will locate the station point.

Very often one characteristic will be the distance from the building to the station point, or the angle of vision at the station point, which is of course another way of expressing the same thing. Every drawing in perspective is distorted to a certain extent, and the greater the angle of vision at the station point the greater will be the distortion. When the angle is 30 degrees the distortion is scarcely noticeable, but when the angle gets larger than 30 degrees the distortion begins to show. For any one of a number of reasons the distance from the building to the station point may be increased and the angle of vision made less than 30 degrees, but rarely should the angle be greater than 30 degrees. This

sketch and the second step has been accomplished.

Third, we shall locate the center line of the picture. This is merely a matter of bisecting the angle of vision at S; but it is essential that this angle really be bisected. Distortion increases with the distance from this center line to the object pictured, and if the line from the station point to the near corner of the building is assumed to be the center line, distortion at one side of the picture may be several times as great as at the other. If the center line is found by bisecting the angle at S, distortion at the two sides of the picture will be equal and will be less noticeable. We shall therefore locate this center line, as in Fig. 2, by bisecting the angle of vision at S.

Now comes the Picture Plane, as the fourth step. This must be perpendicular to the center line, as in Fig. 3. It might have been drawn through the near corner of the plan but we placed it where we did to make the problem more general, and to illustrate another point. The size of the picture may



angle is assumed to be one which will include the geometrical or mechanical parts of the picture. Trees do not count.

A second characteristic which it is sometimes desired to preserve is the proportion of front and side of the building to be shown in the picture. Nearly always it is desirable to show more of one than the other and often in a fairly definite proportion. So let us assume in our problem that we wish to have the picture included in an angle of 30 degrees and have the front and side appear in the proportion of a to b. These will be the two co-ordinates by means of which we shall locate the station point.

The preliminary work is most easily done at a reduced scale, so lay out the plan, as in Fig. 2, at a convenient scale which we can assume to be one fourth the scale of the drawings from which the perspective will be made. Now use the point of a 30 degree triangle for a station point and shift it about until the sides of the triangle include the plan of the house, and lines from the corners of the house divide a line drawn across them in the desired proportion of a to b. When this has been done, we have found the station point from which the house will look as it does in the preliminary

be controlled by the location of the picture plane, and can be determined quite accurately by scaling the distance from E and F. We locate the picture plane perpendicular to the center line, either through a convenient corner on the plan or where EF gives us the desired width for our picture.

If you are one of the men who tacks his plan at the top of the board, you will now enlarge what we have drawn up to this point, four times, to the scale of the original drawings, then tack the plan in the proper place and proceed. However, if you are addicted to the perspective plan method, there are a few more things to be done.

Locate vanishing points VL and VR and their corresponding measuring points ML and MR. Note the points LS and RS where the left side and right side of the plan cut the picture plane. Project the corner from S to the picture plane at C. Now note beside each of these points its distance from the center line, using four times the distance on this diagram, which will be the proper distance for the final drawing. A quarter inch scale is convenient to use for this purpose, calling each division an inch instead of a foot. With so much done, this diagram is complete, and we are ready to start the drawing.

## THE SELECTION OF A STATION POINT

The beginning of the drawing is shown in Fig 3. Lay off the horizon and ground line and on the horizon locate the vanishing points, measuring points and center line of picture, using the distances found on the diagram. Continue the center line down to the ground line and lay off LS, RS and C on the ground line, using the proper distances from center line. Draw from VL through LS and from VR through RS. These lines should intersect on a vertical line through C, which intersection is the perspective plan of the corner of the house. This serves as a check on the accuracy of the drawing. From this point on, the process is the usual one, and when the drawing is finished, it will meet the requirements assumed in the beginning; that is, it will be included by an angle at the station point of 30 degrees and the end and front will appear in the desired proportion of a to b.

Sometimes it is desired to preserve certain other characteristics of a preliminary sketch. For example, as in Fig. 4, it may be that we wish to show a certain amount of the roof. This amount can be expressed as having a certain ratio to the height of the wall as c to d.

The problem is to find a station point from which the building will look this way, and to do so, we go to the front elevation and the plan. It should be evident that from any point along the line GH, the roof and wall will appear in the proportion c to d; the exact point on GH is found by assuming a distance from the building to the station point, or by using any desired angle of vision, or by getting a desired proportion of front and side, as we did before.

After finding S, draw the center line, locate the picture plane, and proceed as before.

This same construction may be used when it is desired to show a certain amount of a dome above a cornice, or a certain amount of a spire or tower on a church.

Another condition might be that the designer or delineator or renderer wishes to have a vanishing point come at a certain point in a picture, as indicated in Fig. 5. This may be for purposes of composition or for some other reason, or simply because he thinks he would like it to be there. It takes a bit of juggling to get this just right but it can be done. Assume that the distance from the front corner of

the building to the vanishing point is the thing we wish to keep and this is KV in the figure.

Of course when we start we do not know the proper location for the picture plane. We know the distance KV, but not the location of V. So we assume L, making KL somewhat less than KV and draw LN parallel to the side of the building; then locate S on LN, assuming again a proposition of front and side or a distance from the building. After S is located we can find the center line of the picture, the picture plane, and determine V. Probably V will not come exactly in the place where we want it, and it will be necessary to make adjustments until it does. The remote vanishing point can be handled in a similar way in order to get any desired conver-

gence to the lines which are nearly parallel to the picture plane. Sometimes other problems will arise, but for one accustomed to working by these methods their solution will be just a matter of geometry.

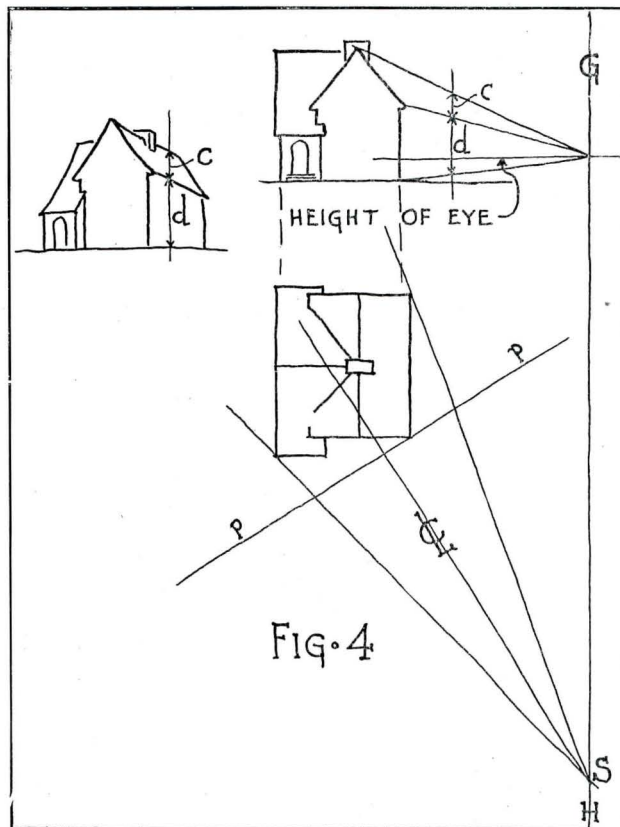
There are two other cases that deserve some consideration. Sometimes it is desired to know just how a projected structure will look from a certain point on a known piece of ground. The problem is simple. Make the preliminary diagram, as in Figure 2, right on the plot plan, using the desired point for the station point. Determine how much is to be included in the picture and find the center line of the picture. Then locate the picture plane perpendicular to this center line, and in a location which will give a picture of the desired

size or scale. It is now simply a manner of locating the necessary vanishing, measuring and other points and making the pictures.

The other case is the one in which it is desired to make a plaza, or court, a part of a picture, possibly showing only a part of a building. This involves making the plaza, or court, a part of the preliminary diagram, Fig. 2 again, and letting the center line be the center line of the whole picture; not aiming it at the building which is only a part of the picture.

To resume briefly, the following are the logical steps to take.

1. Decide how the building should look.
2. Lay out the building in diagram form at reduced scale, usually one fourth or one eighth the size of the picture and locate on this diagram the point from which the building will look as desired.



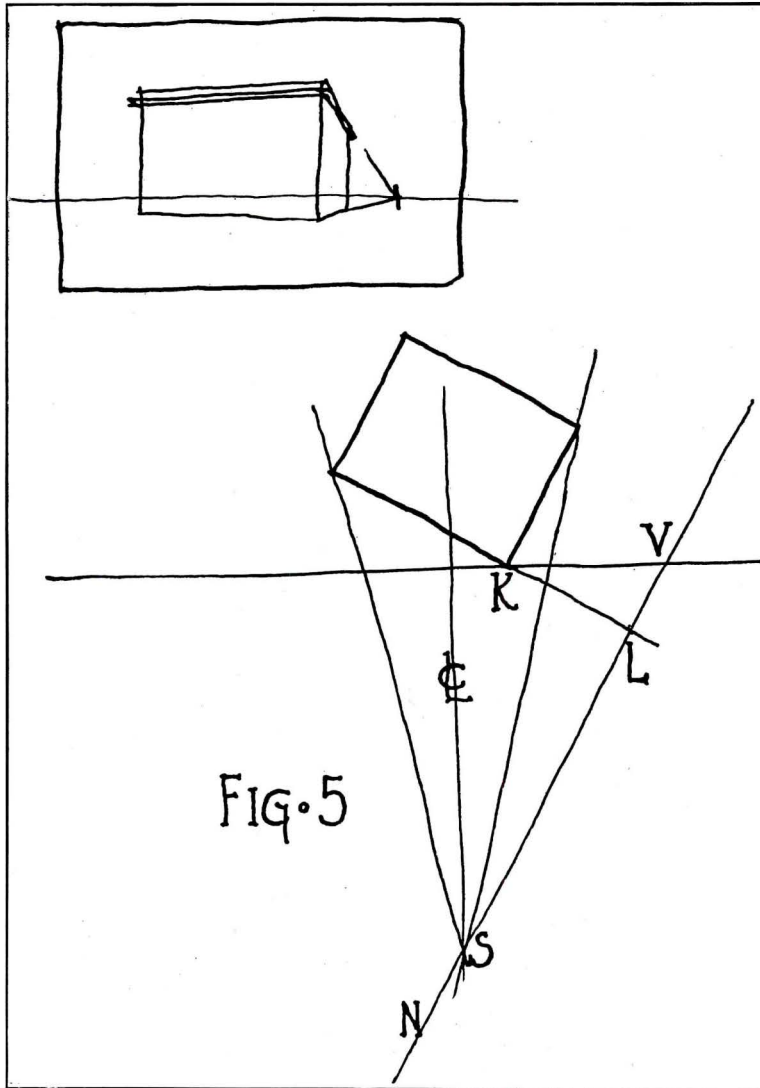
## PENCIL POINTS

3. Find the center line of the picture by bisecting the angle which will include all the picture.

4. Locate the picture plane, making it perpendicular to the center line. At this point the size of the picture can be controlled by making the picture plane nearer or farther from the station point.

5. Locate the vanishing points, measuring points, corner of the building and points where one or both

sides pass through the picture plane. Transfer these points to the horizon line of the final drawing and proceed to draw. The man who does much drawing in perspective will find that this method is good in practice as well as in theory. All of this preliminary work is done very quickly and roughly, much of it freehand, with only sufficient accuracy to suit the needs of the case. He will find that it will lead to results that will be consistently good.



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WITH

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- II. Great Variety of Geometrical, Elliptic, and Polygon Figures, with Rules for their Formation. Centering of all Sorts for Grounds, Brick and Stone Arches, &c. both Circular and Splay'd, also with Circular Softs in a Circular Wall: Many Examples for Glewing and Vaneering, Niches, &c. with Rules for tracing the Cover of Curve-Line Roofs, Piers, Vases, Pedestals for Sun-dials, Busts, &c. and their most suitable Proportions.
- III. General Directions for Framing Floors and Partitions, Truss-roofs, &c. and Methods to find the Length and Backing of Hips, Strait or Curve Lines to any Pitch, Square or Bevel.
- IV. Of Stair-Cases, variously constructed; the Methods of working Ramp and Twist-Rails—Profiles of Stairs

to shew the Manner of setting Carriages for the Steps, also the framing of String-Boards and Rails, and likewise of fixing them.

- V. The Five Orders of Architecture from *Palladio*, with the Rule for gauging Flutes and Fillets on a diminish'd Column, by a Method extremely easy, and entirely new.
- VI. Doors, Windows, Frontispieces, Chimney-pieces, Cornices, Mouldings, &c. truly proportion'd, in a plain and genteel taste.
- VII. Sacred Ornaments, *viz.* Altar-pieces, Pulpits, Monuments, &c.
- VIII. Gothic Architecture, being a various Collection of Columns, Entablatures, Arches, Doors Windows, Chimney-Pieces, and other Decorations in that prevailing Taste—And it may be noted of these, as of all the foregoing Examples, that they are immediately adapted to Workmen, and may be executed by the meanest Capacity.

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By *WILLIAM PAIN*, Architect and Joiner.

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L O N D O N :

Printed for the AUTHOR, and ROBERT SAYER, at the Golden Buck in Fleet-Street,

MDCCLXII.



# P R E F A C E

## TO THE

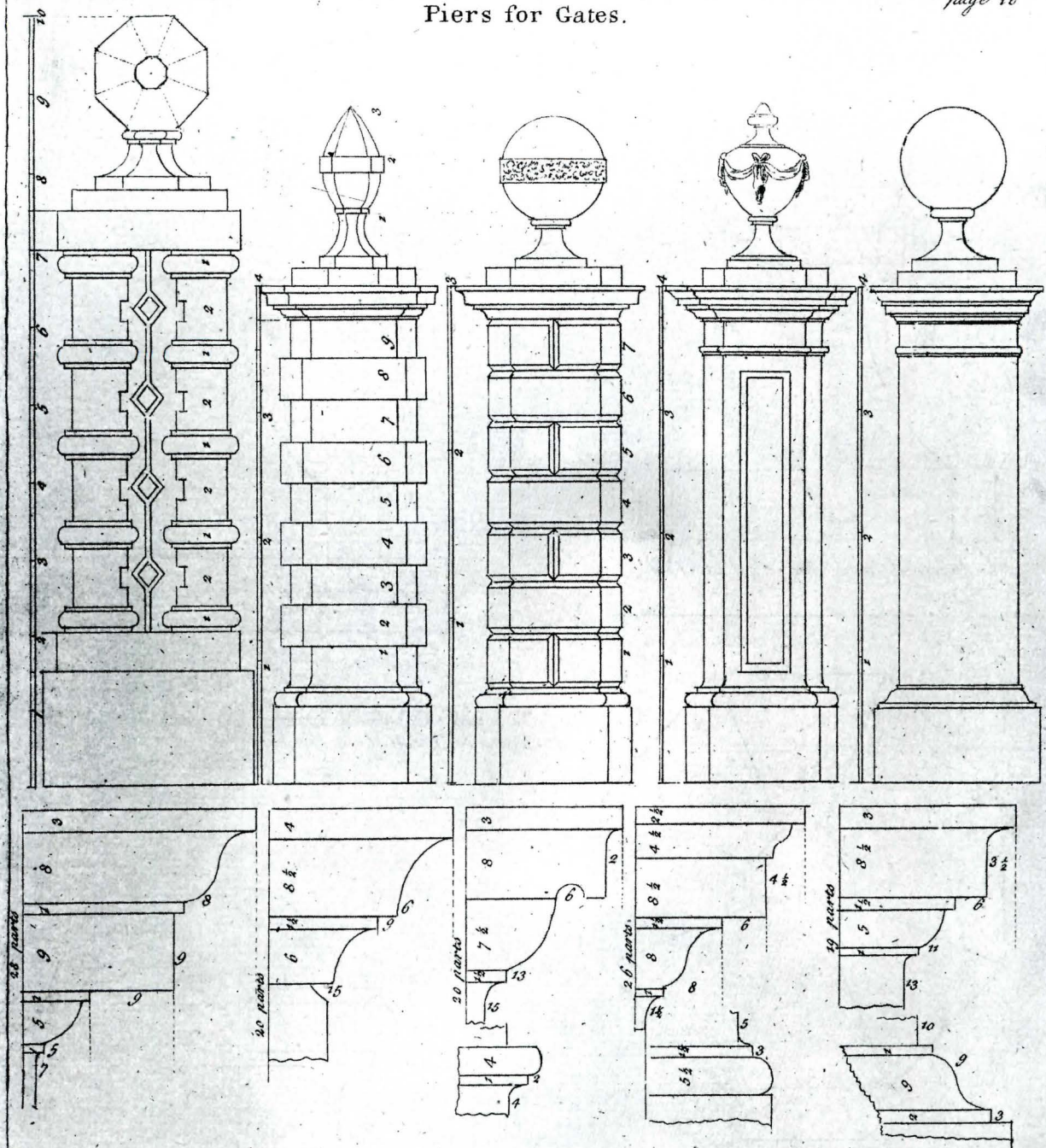
# R E A D E R.



S. in all Things Order is to be observed, so especially in this excellent Art of Architecture it is requisite that every Part and Member have its right Order and due Proportion: There have been many Masters who with great Care and Industry have brought this Art to a great Perfection, among whom the famous PALLADIO deserves to be placed in the highest Rank by all judicious Artists; therefore for the Benefit of Workmen, and that it may be made more useful for all Artificers in Building and Lovers of this most noble Art, I have laid down the five Orders of Architecture according to PALLADIO by an intire New SCALE, to proportion the Orders to any given Height, and to find the Model or Diameter of the Column, with every Part of the Orders by the said Scale; and for the better understanding of which, the Reader is desired to take notice, that by the Model is signified the Measure of the whole Diameter of the Column: As for Example; Let the Diameter be twelve, fifteen, or eighteen Inches for the Model, to be divided into sixty Parts or Minutes, as may be seen by the Scale on the Diameter of the Column in Page 32, that Scale measuring every Member in the Order, which will be proportionable one to another; this dividing of the Diameter into sixty Parts or Minutes, must be used in all the Orders, in which I have, with my utmost Endeavours, rendered it very intelligible, with a great Number of other useful Things for the Benefit of Workmen.

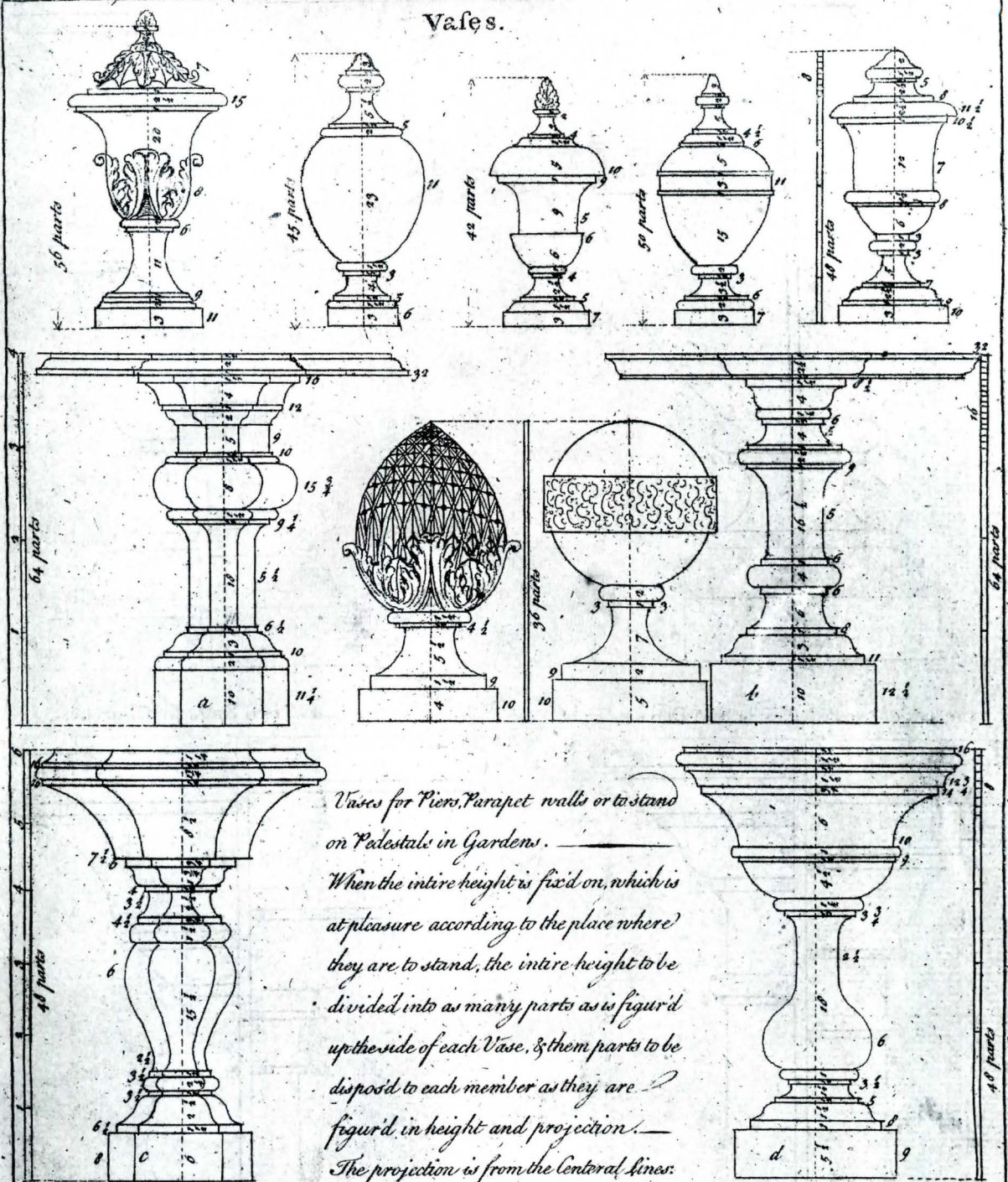
## Piers for Gates.

page 16



*Five piers for Gates with scales and proportions for the Bases and Cornices of the piers the height of Each Cornice to be divided into as many parts as is figur'd at the Back of Each Cornice and these parts disposed to Each member as they are figur'd in height & projection. The height of the Balls and Vases above the Cornices may be one third of the height of the piers or one fourth of the piers height by the Scales up the side of the piers and the height of the Cornices to be one sixteenth part of the piers height &c. the height of plinths is two thirteenth of the piers height.*

Vases.



Vases for Piers, Parapet walls or to stand on Pedestals in Gardens.

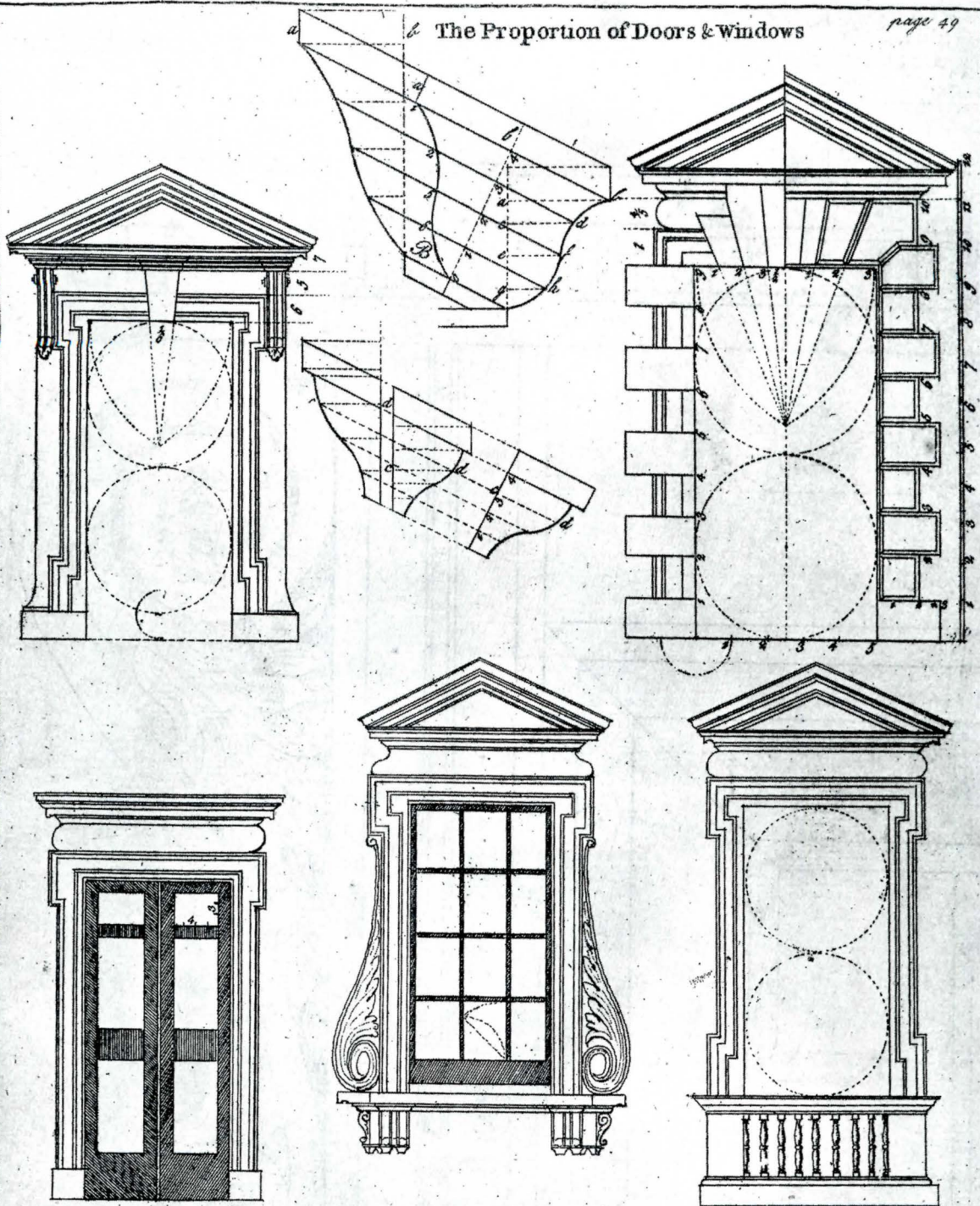
When the intire height is fix'd on, which is at pleasure according to the place where they are to stand, the intire height to be divided into as many parts as is figur'd up the side of each Vase, & then parts to be dispos'd to each member as they are figur'd in height and projection.

The projection is from the Central lines.

a. and b. are two Stone Tables for Gardens or Grotto's, the given heights may be from 2 foot 4 inches to 2 foot 6 inches, and the heights to be divided into 64 parts or into 4 and one in 16 parts, and then parts dispos'd to each Member as they are figur'd in height and projection. c. and d. are two Fonts for Churches, & the height may be from 3 foot 6 inches to 3 foot 10 inches & to be divided into 48 parts, & then parts to be dispos'd to each Member as they are figur'd in height & projection, the projection is from the Central Lines, &c.

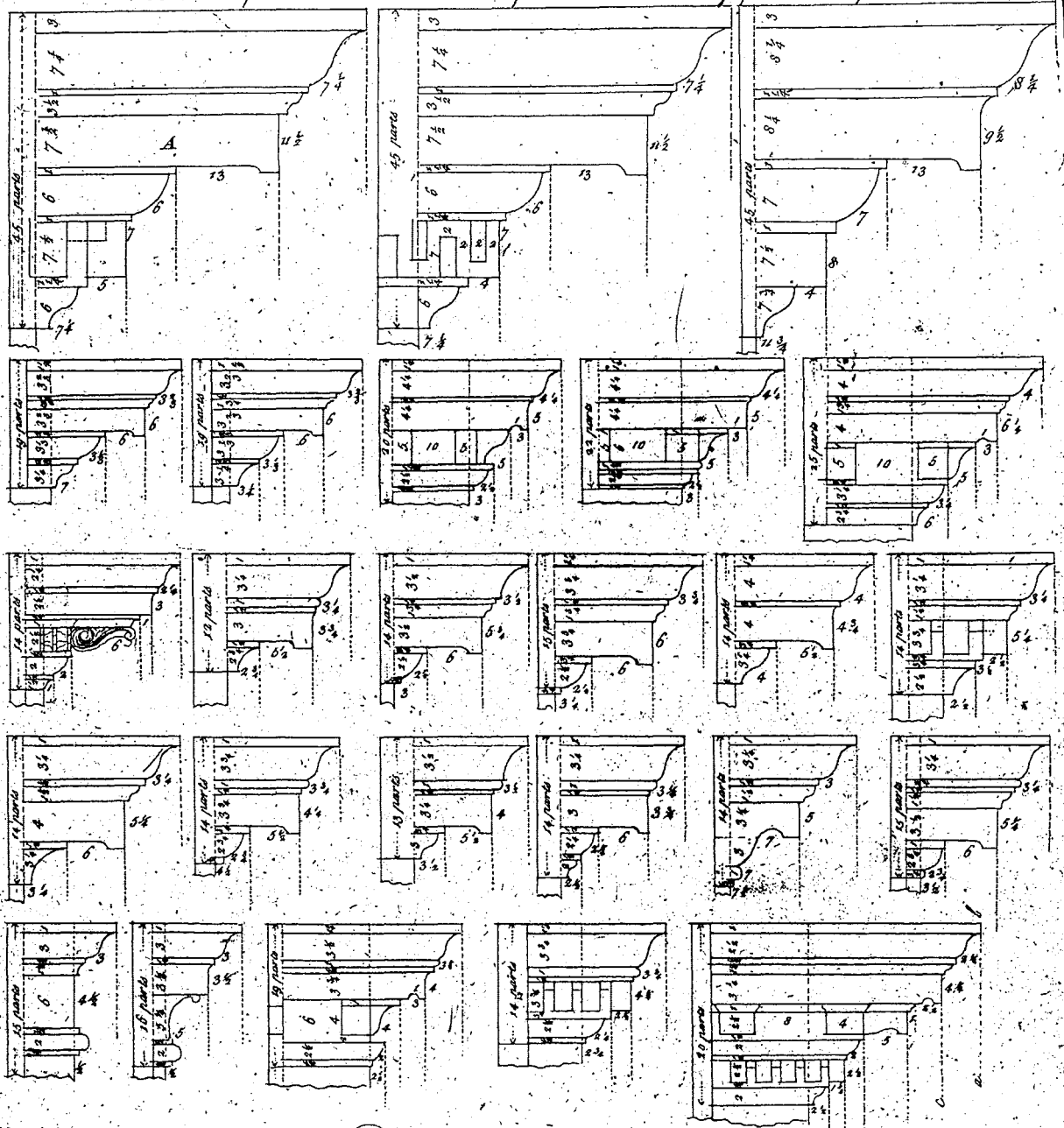
## The Proportion of Doors &amp; Windows

page 49

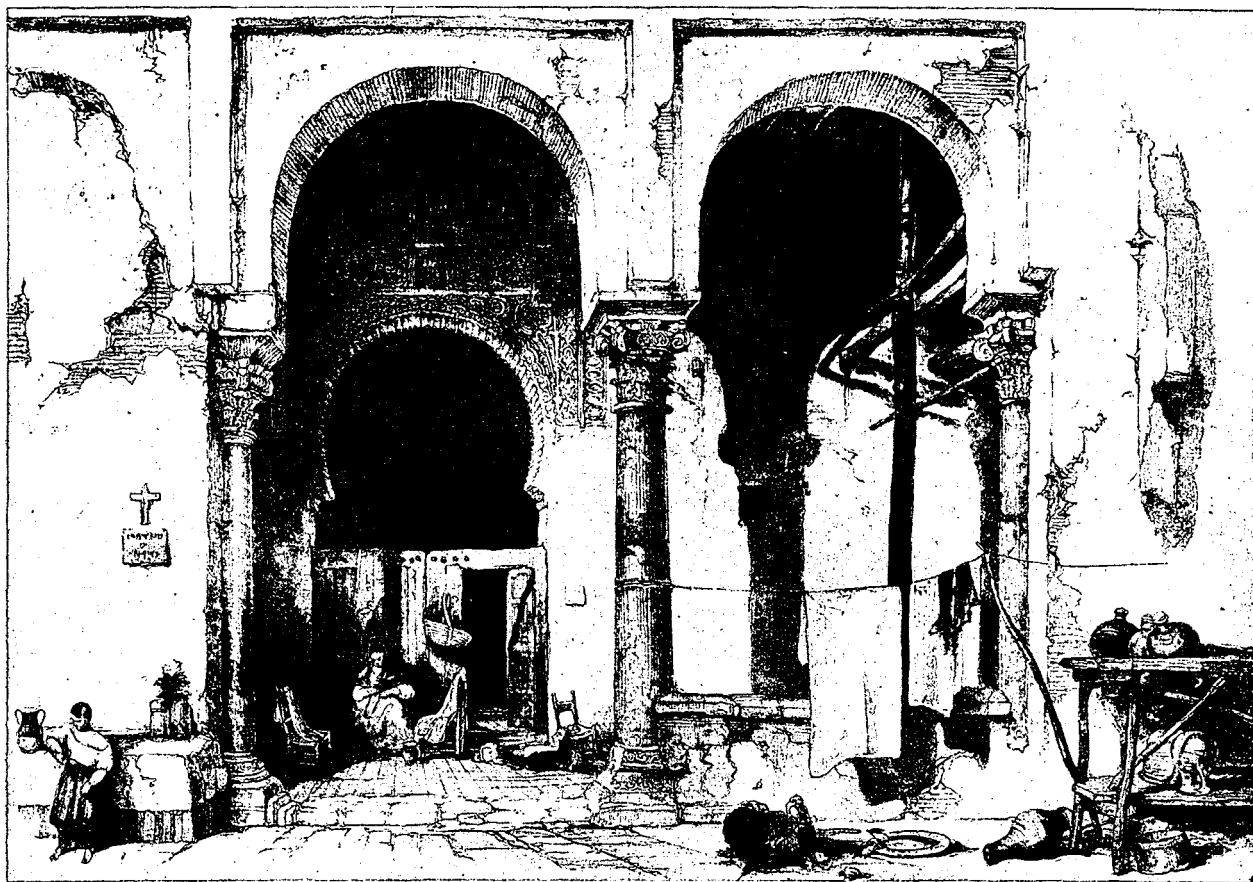


The manner of Striking Raking Cornices as at B. divide the height of the Raking mold o.4 into four equal parts, and draw the lines parallel with the Raking, then make the projections all equal as a b. then take the projections from the Level Cornices as a. b. c. d. e. f. g. h; set them on the Raking molding as a. b. 4 1 3 2. 2 5. 1 6 that will give the Curve of the molding, and for upper Returnid molding, Set on the same parts square from the Back, to meet the Raking Lines, and that will be the Curve of the Returnid molding, then at those points tack in Nails, and Bond a thin slip to the Nails, and mark it by, that will be the Curve Line or faces of the moldings q: hear is three doors and two windows which is plain by the parts and figures. — The Length of the knee twice the Breadth of the Architrave for if margents of doors divide the width of the door into 9 parts and give one to the margent and the Bottom Raile and Lock Raile double the margent.

Cornices for Rooms or Eves of Houses or any place Required. page. 59.



25. Cornices for Rooms or Eves of Houses with the Grose Measures, all figured; how many parts Each Cornice is to be Divided into, and then parts disposed to each Member, as they are figured in height and projection. To find the Grose measures of the Cornice in height divide from the Floor to the Ceiling into 15 parts, take one for the Cornice, or divide into 16 parts, one is the Cornice; or if the height be divided into 35 parts, take two for the Cornice and in some Cases the height may be divided into 18 parts then take one for the Cornice. any of these Grose Measures may be used at pleasure according to the Places they are Required to set on the Projections, drop a plumb Line as a, b, then set Back  $2\frac{1}{2}$  and  $4\frac{1}{2}$  then drop one at c, set Back  $2\frac{1}{2}$  and so for all the rest which is plain to Inspection.



## THE RENDERINGS OF AN EARLY MASTER

PART II—SELECTIONS FROM THE LITHOGRAPHS OF DAVID ROBERTS, R. A.  
TO ILLUSTRATE THE PORTFOLIO OF "SKETCHES IN SPAIN"

*By Kenneth Clark*

SELECTIONS FROM DAVID ROBERTS' "Sketches in Spain" have been made to illustrate the interesting contrast between the technique of Roberts in his "Egypt and Nubia" lithographs (published in the January issue of *PENCIL POINTS*) and the examples of his sketches made in Spain. The Spanish sketches are a later series than the "Egypt and Nubia" and show a decided difference in the manner of rendering and in the general treatment of the subjects. The severe but beautiful rendering of the Egyptian antiquities gives way to the more romantic but no less beautiful technique of the present examples—full of life and color and drawn with a freer but no less truthful line. These plates express the joy of Spanish life and scenes just as the more severe rendering of the Egyptian series truly expresses the dignity and "in-the-pastness" of the Egyptian monuments.

The lithographs in the Spanish series were drawn on the stone by Roberts himself and this, of course, accounts for much of the difference in technique as the Egyptian series was lithographed by L. Haghe after sketches made "on the spot" by Roberts. The differences are marked and very interesting; both men were masters of line, each had a distinctive method—Haghe's precise, accurate and almost

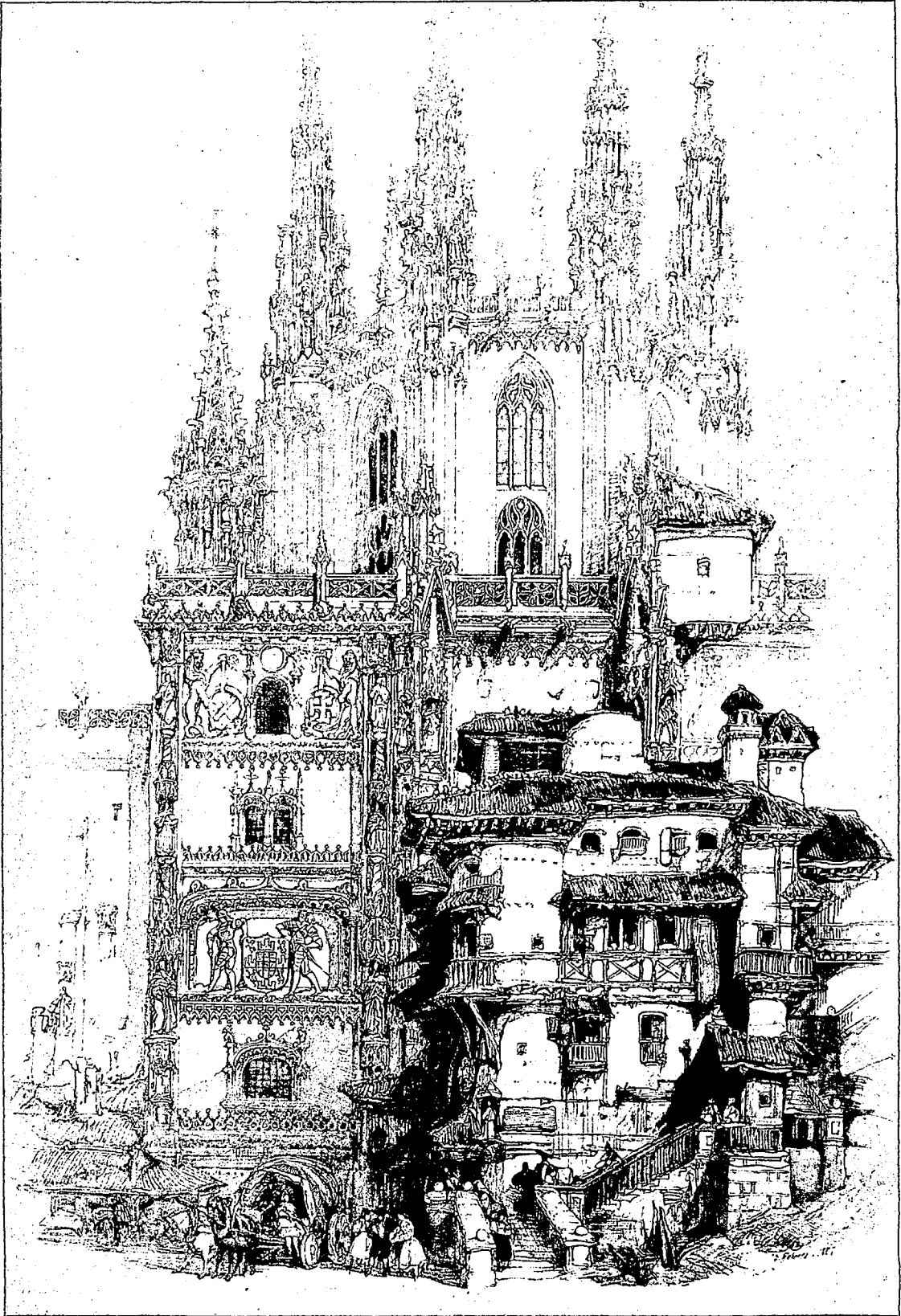
microscopic in rendering of detail and texture,—Roberts' free, more pictorial and more truly artistic. Where Haghe is absolutely definite in his expression, Roberts shows by his eliminations how well he realizes the essential points and the "bones" of the picture which he dresses to a finished creation with great talent and ability. The architectural sense in the present series is wonderfully expressed and it proves Roberts' remarkable feeling for the subjects, which is doubly remarkable in that he was not an architect nor had he any special training in that branch of art. Primarily a portrait painter, with an early foundation in scenic art, he has produced some true architectural renderings that should be rated among the finest of their type. The few examples shown are merely a suggestion of the wealth of material included in the portfolio of Spanish Sketches. Complete sets are hard to find except in the collections of large public libraries. It would repay anyone interested to dig them out and give them careful study—particularly worthy of consideration will be found his sense of composition, his spacing of the picture space into general divisions and the aerial perspective or sense of distance planes that he handles so admirably and that do so much to give a subject realization and depth.



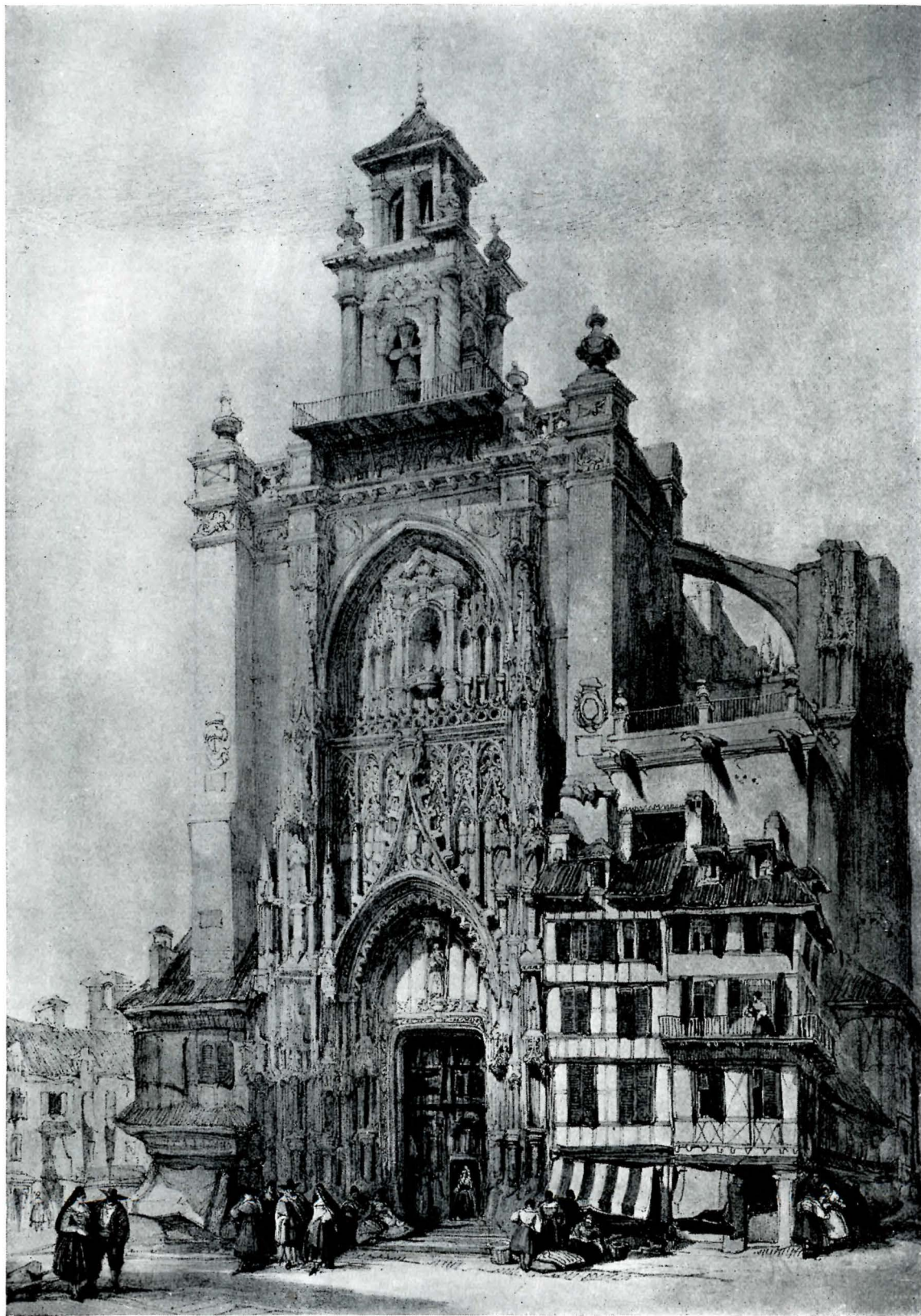
MARKET PLACE, SEVILLE  
HAND COLORED LITHOGRAPH BY DAVID ROBERTS, R. A.



REMAINS OF A ROMAN BRIDGE ON THE GUADALQUIVIR—CORDOVA  
HAND COLORED LITHOGRAPH BY DAVID ROBERTS, R. A.



PART OF THE CATHEDRAL—BURGO'S  
HAND COLORED LITHOGRAPH BY DAVID ROBERTS, R. A.



CHURCH OF SAN JAGO

HAND COLORED LITHOGRAPH BY DAVID ROBERTS, R. A.



GRANADA

HAND COLORED LITHOGRAPH BY DAVID ROBERTS, R. A.

# DRAFTING ROOM PRACTICE

## PART IV—ALTERATION WORK

*By Harold D. Way*

THE METHOD OF PROCEDURE to be followed in the use of the checking list depends upon the nature of the work and is best determined by the one using the list himself.

It is evident that to wade through the list out on the job, item by item, would be laborious and wasteful of time. Furthermore, it does not seem practical to compile a shorter list designed for a particular type of construction. The exotic element of construction is often present and this is the very thing one is most apt to be tripped on. For this reason a comprehensive checking list is offered here and it is consequently long and cumbersome.

As a reminder, a 'self-starter' to set the mind in action before going out on the job, it should repay amply for the time expended in browsing through it.

How often one has the experience of having a clear mental picture at the building which fades into a confused blur in the drafting room a few hours later. The second visit, however, is like reviewing any subject on a second reading. It is just after the first visit that the checking list will prove of greatest value. One has then sufficient acquaintance with the job to be able to pick out those items that apply and call for particular attention. A check might be made or notes taken of such items.

It will be observed that a complicated classification has not been attempted, neither has a perfect and

logical classification been aimed at. The amount of research already involved in the preparation is considerable. While a more logical arrangement might be desirable, it is not essential for a tryout because the list is used only as a reminder and not as an index.

A summary of data to be obtained from the owner is not included here but this should not be overlooked. Its application is not confined to alteration work, of course, but will be generally useful.

If the seriousness of the alteration job appears to have been emphasized too strongly, it calls for no extended apology. The alteration job is not the place for the inexperienced, neither is it the place for an aloof or an elegant manner. No work makes the architect less a gentleman in the elegant sense of the word and perhaps more a builder in materials than this class of work. For instance, the explanation of the development of the usage of the walking stick according to Veblen in his "Theory of the Leisure Class," is that the gentry carried it as a symbol that the possessor was not required to keep his hands free for manual labor. While manual labor is not required of the architect, the walking stick seems, through its symbolism, just a little out of place on the alteration job and this in spite of the fact that it provides an elemental poking device for testing the soundness of materials.

## CHECKING LIST FOR AN ALTERATION JOB

*(Continued from the February Issue)*

NOTE: Asterisk indicates items to be checked at job

### SOLID STEEL WINDOWS

- \*MAKERS of present windows.
- \*DETAIL of section.
- \*DIMENSIONS.
- \*TYPES.
- \*HARDWARE, condition of.
- SASH OPERATOR.
  - \*MANUAL.
  - \*POWER.
  - \*LOCATED from what point.
- \*VENTILATING SASH.
- \*CASEMENTS opening in.
- \*CASEMENTS opening out.
- DETAIL showing complete condition.
  - \*HEAD section.
  - \*JAMB section.
  - \*SILL section.
- \*CLEANING and removal of paint and rust, see painting.
- \*GLAZING and puttying, see glazing.

### HOLLOW METAL WORK

- \*MAKES of present windows.
- \*LABELED doors and windows.
- \*DIMENSIONS.
- \*DETAIL of section.
- DETAILS showing complete condition at
  - \*HEAD section.
  - \*JAMB section.
  - \*SILL section.
- \*NUMBER of lights in doors.
- \*NUMBER of lights in windows.
- \*DETAIL of paneling.
- \*DETAIL of trim and mouldings.
- \*DETAIL of door frames.
- \*PAINTING, see painting.

### VAULTS

- \*MAKE note of special features of old work.
- \*DIMENSIONS of old work.
- \*STATE of repair.
- \*SIZE of lights.
- \*TYPE of lights.

## PENCIL POINTS

### VAULTS (*Continued*)

PERMITS required for new work.  
CUTTING and patching by other trades.  
SIZE allowed by city ordinances.  
LOADS allowed per square foot.  
INSPECTION by specialist for special vaults.

### CARPENTRY

#### STRUCTURAL FRAMING.

- \*JACKING up to take care of settlement.
- \*NOTE of weakened framing.
- \*ADDITIONAL posts, columns, piers.
- \*GIRDER reinforcement required.
- \*NOTE of dry rot.
- \*ADDITIONAL ventilation required.
- \*MAKE weather-tight at sills.
- \*ANCHORING new to old sills.
- \*GENERAL type of construction.
- \*DIMENSION of timbers.
- \*KIND of wood with relation to long spans.
- STRUCTURAL bearing not to rest on.
- \*NON-BEARING partition.
- ADDITIONAL bridging.
- \*STRENGTHENING framing to carry concrete fill and tile floors.
- BEVELING beams for cinder concrete fill.
- \*DIRECTION of beams.
- \*BLOCKING up beams that have been beveled concrete.
- \*CUTTING and patching for other trades.
- \*THICKNESS of partitions.
- FURRING for pipes in old building.
- \*DETAIL of trusses in special cases.

#### EXTERIOR WOODWORK.

- \*STATE of repair.
- \*DETAIL of mouldings.
- \*DETAIL of beveled siding.
- NEW moulding to match old work.
- REPAIRING old work.
- \*CANVAS deck.
- \*EXTERIOR shutters to be repaired.
- EXTERIOR shutters to be removed.
- \*STORE front, detail of sections.
- STORE front, made by whom.
- \*STORE front, dimensions.
- \*DETAIL of bead, jamb and sill of windows.
- \*STATE of repair of windows.
- \*NEW sash required.
- NEW muntins added to old sash.
- \*NEW sash cord or chains and pulleys.
- \*STORM sash.
- \*SCREENS.
- \*WEATHER strips required.
- \*RECAULKING of old frames.
- \*EXTERIOR doors, size and thickness.
- \*EXTERIOR doors, paneling.
- \*EXTERIOR doors, kind of wood.
- \*EXTERIOR doors, state of repair.
- \*EXTERIOR doors, solid or veneered.

#### METAL COVERED WORK.

- \*LABELED work.
- \*SIZE and thickness of doors and sash.

\*KIND of metal.

#### INTERIOR WOODWORK.

- \*NOTES on kinds of wood throughout.
- \*STATE of repair.
- \*DETAIL of mouldings.
- NEW work to match old mouldings.
- \*REPAIRING and piecing required.
- CARVING to match old carving.
- \*DOORS, size and thickness.
- \*DOORS, detail of paneling.
- \*DOORS, veneering.
- \*DOOR frames, rabbeted or stops applied.
- \*DOORS rehung.
- \*WOODWORK to be used elsewhere.
- \*DETAIL and dimensions of dressers.
- \*DETAIL of mantels.
- \*KIND and condition of saddles.
- \*DETAIL of stairs.
- \*DO stairs require wedging up.
- \*STAIRS, state of repair.

#### FINISHED FLOORING.

- \*KINDS of wood.
- \*WIDTH of face.
- \*PATTERN of parquet.
- \*STATE of repair.
- \*PIECING out.
- \*SHIM for new floors.

#### HARDWARE.

- \*MAKE of hardware.
- \*TYPE of hardware.
- \*KINDS of material.
- \*KINDS of finish.
- \*STATE of repair.
- FURNISHED by owner or allowance.
- CREDIT for old hardware used.

#### CORK, LINOLEUM AND RUBBER FLOORING.

- \*STATE of repair.
- CLEANING.
- NEW to match old work.
- \*DESIGN.
- \*REPLACING and patching.
- \*COLOR.
- \*FOR treads of stairs.

### PAINTING AND GLAZING

#### PAINTED WORK.

- \*CONDITION of painted surfaces.
- \*WORK already painted.
- BURNING off.
- SCRAPING.
- SANDPAPERING.
- WASHING and "cutting" surface.
- THINNED paint for first coat to furnish oil for chalky paint.
- PUTTYING.
- \*STRUCTURAL steel, cleaning, removing rust.
- \*IRON work, cleaning, removing scales and rust.
- \*PIPING and radiators.
- KIND of paint.
- PRIMING new work.

#### VARNISHED WORK.

- \*WORK already varnished.
- \*CONDITION of varnished surfaces.
- REMOVING varnish.

## CHECKING LIST FOR AN ALTERATION JOB

### PAINTING AND GLAZING (*Continued*)

- WASHING and "cutting" surface.
- SANDPAPERING.
- REMOVING varnish to bare wood.
- EVENING color by staining bare wood.
- BLEACHING wood.
- \*NUMBER of coats.

#### STAINING.

- STAINING of new to match old work.
- BLEACHING and staining.
- \*COLOR of old work.

#### WAXING.

- \*NOTE of old surfaces waxed.
- ENAMEL.
- \*WORK already enameled.
- \*CONDITION of enamel.
- WASHING and "cutting" surface.
- SANDPAPERING.
- \*NUMBER of coats required.

#### WALL FINISH.

- \*NOTE of finish on old plaster.
- \*CONDITION of paint.
- \*CONDITION of paper.
- \*KIND of paint.
- \*SIZING old walls, kind of size.
- \*SIZING new plaster, patches, etc.
- \*CUTTING out cracks and pointing.
- \*SMOOTHING wall surfaces.

#### GLAZING.

- \*KINDS of glass.
- \*BROKEN glass to be replaced.
- \*NEW glass to match old glass.
- \*CUTTING glass for smaller panes.
- \*REPUTTYING.

### FURNISHINGS

- \*DIMENSIONS of lockers.
- \*DIMENSIONS of furniture as required.
- \*DIMENSIONS of seats and benches for storage and trucks.

### PLUMBING

COMPLY with local laws, rules and regulation.  
PERMITS and payment of fees.

NOTIFY architect of disagreement between old work  
and old work as shown on drawings.

GUARANTEE.

CUTTING and patching required by other trades.

CUTTING and patching required of other trades.

EXCAVATION—See Excavation.

- \*EXTENT of excavation required for street connections.

- \*EXTENT of trenches required inside of building.

#### MATERIALS.

- \*GALVANIZED WT. I, where used.
- \*STEEL, where used.
- \*CAST Iron, where used.
- \*EARTHEN ware, where used.
- \*VITRIFIED tile, where used.
- \*LEAD, where used.
- \*BRASS, where used.
- \*NICKEL plated brass, where used.
- \*NOTE condition of materials.
- \*AGE of installation.
- \*OBTAIN specimen of water pipe.

- \*OLD pipe and fittings to be used.

- \*OLD materials to be replaced.

#### DRAINAGE SYSTEM.

- \*COMBINED sanitary and storm water sewers.
- \*SEPARATE sanitary and storm water sewers.
- \*SANITARY sewers only.
- \*PRIVATE sewage disposal system, investigation by specialist.
- \*PUMPING system, type, height to pump, capacity, kind of power, automatic.
- \*"BACKING UP" from mains, data on.
- \*PROBABILITY that house sewer has been clogged with roots.
- \*UNIT price for relaying house sewer.
- \*DIAGRAM of layout of old system with sizes and materials noted.
- \*TRAP pit, size and kind of cover.
- \*KINDS of supports and hanger.
- NEED for acid proof piping.
- \*BACK-WATER trap.
- \*EMERGENCY gate valve.
- \*OIL separator, type, size.
- \*FRESH air inlet, type and location.
- \*MANHOLE covers, size and kind of materials.
- \*TRENCHES, size.
- \*TRENCH covers, size and kind of.
- \*CESSPOOLS, size, design and construction.
- \*SUMPS, size, design and construction.
- \*CATCH basins, size, design and construction.
- \*CISTERNS, size, design and construction.
- \*DO all drains have water supply.
- \*OUTSIDE leaders, design, size, condition of.
- \*DEFECTIVE leaders indicated by spalling of masonry.
- \*EVIDENCE of electrolysis at connections of sheet metal with cast iron.
- \*NEED for "splashers" under "boot" of leaders.
- \*OLD piping to be concealed.
- \*SUFFICIENT headroom.
- TESTS in connection with old work.

#### WATER SUPPLY SYSTEM.

- \*MUNICIPAL water supply.
- \*DEEP well water supply.
- \*ARTESIAN well water supply.
- \*RAIN water—cistern.
- \*PRESSURE tank.
- \*STORAGE tank.
- \*PUMPS, capacity, type, kind of power, automatic.
- \*REDUCED pressure system.
- \*DIAGRAM of layout of old system with sizes.
- \*SUFFICIENT headroom.
- \*EXPOSED piping to be concealed.
- \*CONCEALED piping to be exposed.
- \*DOES old work completely drain.
- \*DIAGRAM layout of cold water system with sizes.
- \*DIAGRAM layout of fire lines with sizes.
- \*DIAGRAM layout of hot water system with sizes.
- \*SIZE of street connection.
- \*WATER tight sleeve in foundation wall.
- \*DISTILLING apparatus, data investigation by specialist.

## PENCIL POINTS

### PLUMBING (*Continued*)

- \*FILTRATION system, data, investigation by specialist.
- \*DATA on water heater for hot water system.
- \*SIZE of flue or vent for water heater.
- \*CAPACITY of hot water storage tanks with special reference to use of showers.
- \*DIMENSIONS of fire hose cabinets, reels, racks.
- \*WATER softening apparatus, data, investigation by specialist.

#### TESTS.

### PLUMBING FIXTURES.

- \*TYPES and number of each.
- \*MATERIALS.
- \*DIMENSIONS.
- \*CONDITION
  - OLD fixtures to remain.
  - OLD fixtures to be reset.
  - NEW fixtures to be furnished and installed
- \*CUT-OFF valves required.
- \*NEW tanks, seats, faucets, et cetera, required.
- \*OLD fixtures to be put in working order.

### INSPECTION AND SURVEY BY SANITARY ENGINEER.

### HEATING, OIL BURNING EQUIPMENT AND VENTILATION

#### HEATING

- CUTTING and patching required by other trades.
- CUTTING and patching required by other trades.
- \*TYPE of heating system.
- \*DATA on steam supply from central heating plant.
- \*CAPACITY of coal room.
- \*BOILERS, make, manufacturer's number, type, number dimensions.
- \*ARRANGEMENTS for operation of boilers, independently.
- \*WATER level of boilers.
- \*CONDITION of boilers.
- \*TYPE and condition of covering of boilers.
- \*SETTING of boilers.
- \*ASH pit.
- \*MECHANICAL stoker.
- \*FLUE, dimensions, clean out door.
- \*THERMOSTATIC control, location, type, make.
- \*TRENCHES, dimensions, trench covers.
- \*BLOW off cock, drainage.
- \*DIAGRAM layout of piping with size.
- \*DRAINING of entire system.
- \*REMOVAL of "pockets" in piping.
- \*PIPE supports and hangers.
- \*SLEEVES and flanges.
- \*RADIATORS, sizes, make, type.
- \*COAL handling, devices for.
- \*ASH handling, devices for.
- \*PIPE covering, type and condition.
- \*PAINTING.
- \*INSPECTION and survey by heating engineer.

### OIL BURNING EQUIPMENT

- \*SYSTEM to comply with authorities having jurisdiction.
- \*CURB box and fill pipe, location of.
- \*TANK, capacity and location of
- \*VENTS, location of.
- \*BURNERS, type, make, minimum dimensions required for working space.

- \*MOTORS, current required for.

INSPECTION and survey by heating engineer.

#### VENTILATING.

- \*TYPE of System.
- \*VENTS, size of.
- \*GRILLES, size, material of.
- \*CURRENT required by fans.
- INSPECTION and survey by engineer.

### ELECTRICAL WORK

#### GENERAL.

- CUTTING and patching required of other trades.
- CUTTING and patching required by other trades.
- COMPLIANCE with all laws, rules and regulations.
- \*NUMBER of amperes permitted on branch lighting circuits by local regulations.

#### CURRENTS.

- \*LIGHTING current, alternating or direct.
- \*POWER current, alternating or direct.
- \*VOLTS, cycles, phase, two or three wire.
- \*SERVICE over head.
- \*SERVICE underground.
- TEMPORARY lighting, how paid for.
- \*TRANSFORMERS.
- \*TRANSFORMER room.

#### CONDUIT.

- \*RIGID.
- \*FLEXIBLE.
- \*KNOB and tube.
- \*CONCEALED or exposed.

#### WIRING.

- \*TWO wire.
- \*THREE wire.
- \*SERVICE switch, location type.
- \*METERS, location.
- \*SWITCH board, type, make, size, location.
- \*DISTRIBUTION panel boards, type, make, size, location.

#### OUTLETS BOXES.

- \*TYPE.
- \*SUPPORTS for fixtures.

#### SWITCHES.

- \*TYPE.
- \*CIRCUIT.
- \*LOCATION including height above floor.

#### BELL SYSTEM, ET CETERA.

- \*MOTOR generator.
- \*BELL ringing transformers.
- \*BATTERY.
- \*RECTIFIERS.
- \*BELLS, type and location.
- \*CONTROL and annunciators.
- \*BURGLAR alarm system.
- \*CALL bell system.
- \*FIRE alarm system.
- \*TIME clock system.
- \*WATCHMAN recorder.
- \*TELEPHONE.

INSPECTION and survey by Electrical Engineer.

NOTE: General notes on and inspection and survey by specialists on:

- ELEVATORS.
- REFRIGERATION Plant.
- SPRINKLER system.
- VACUUM cleaning system.
- ET CETERA.

PENCIL POINTS  
SERIES  
*of*  
RENDERINGS  
IN  
COLOR



OPAQUE WATER COLOR SKETCH BY GERALD K. GEERLINGS

*On terra cotta color charcoal paper size 9¾" x 12½"*

*Octavius' Arch, Rome*



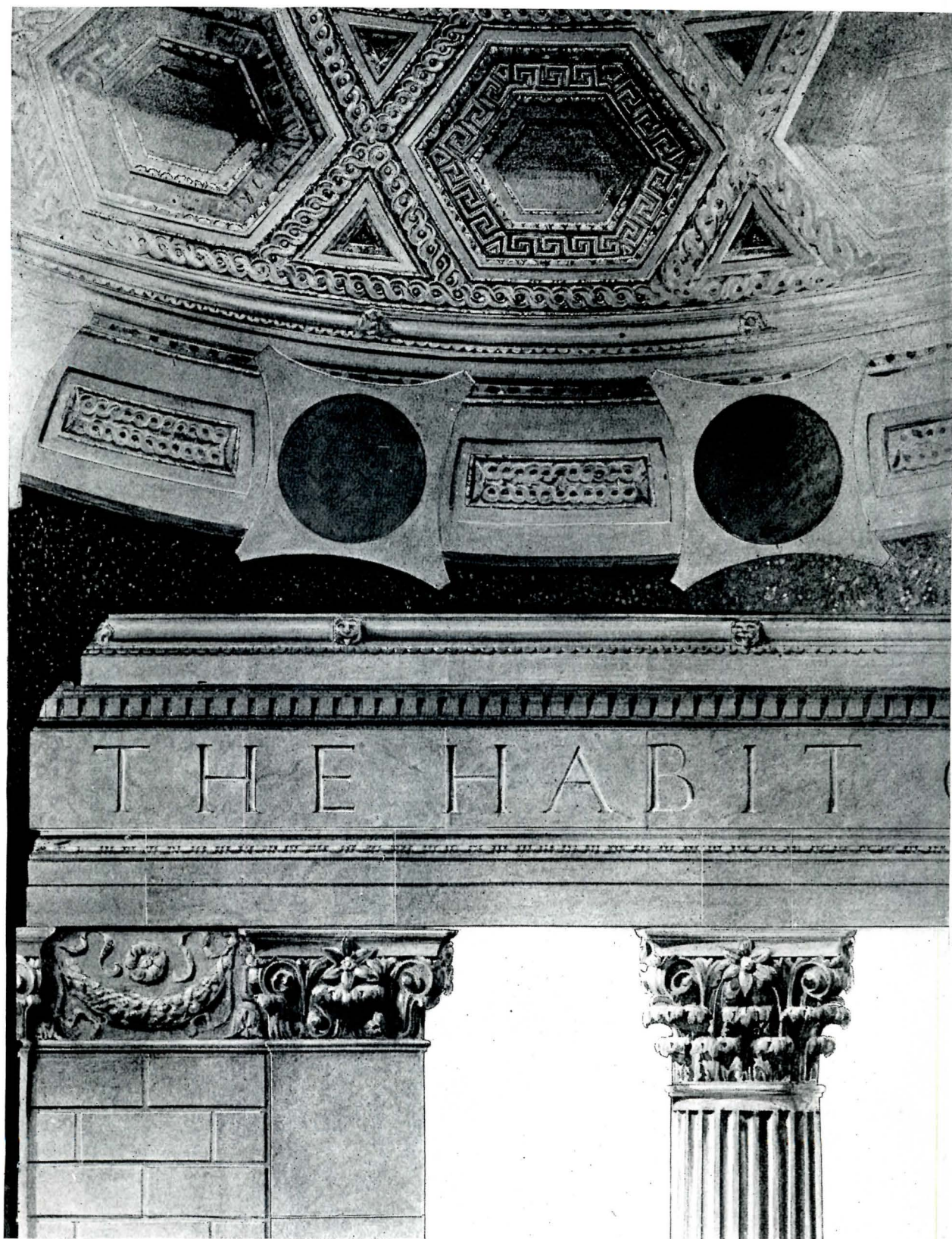
RENDERING IN GOUACHE BY ADOLPH TREIDLER

*Size of Original 18" x 24"*

*Residence for Mrs. Clyde Carr, Lake Forest, Illinois*

*H. T. Lindeberg, Architect*

PENCIL POINTS  
SERIES  
*of*  
RENDERINGS  
IN  
COLOR



RENDERING BY A. MAGNANTI, CEILING OF THE GREENWICH SAVINGS BANK, NEW YORK.  
YORK & SAWYER, ARCHITECTS

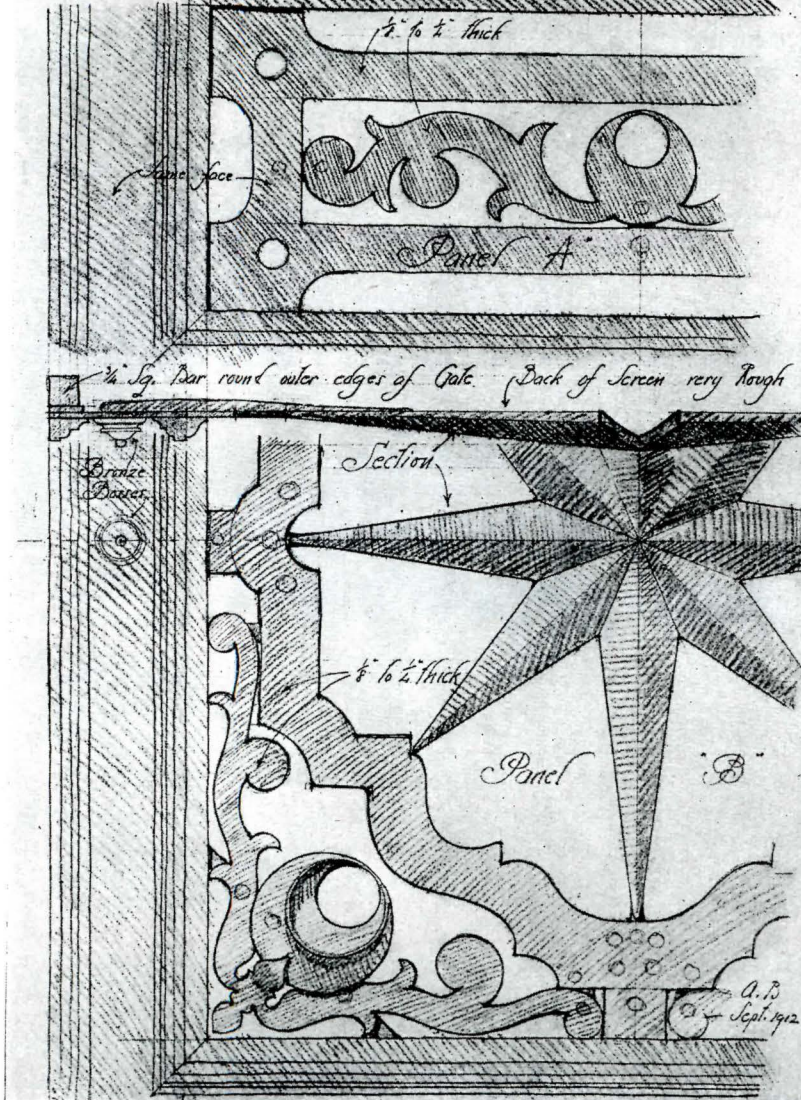
PLATE IX

VOLUME VII

NUMBER 3

*The original of the drawing shown on the other side of this page was made at the scale of three quarters of an inch to the foot and rendered with water color to show the decorative scheme for the ceiling of the Greenwich Savings Bank. The detail was emphasized with Chinese white.*

WROT. IRON SCREEN • SIENA CATH.  
DETAILS



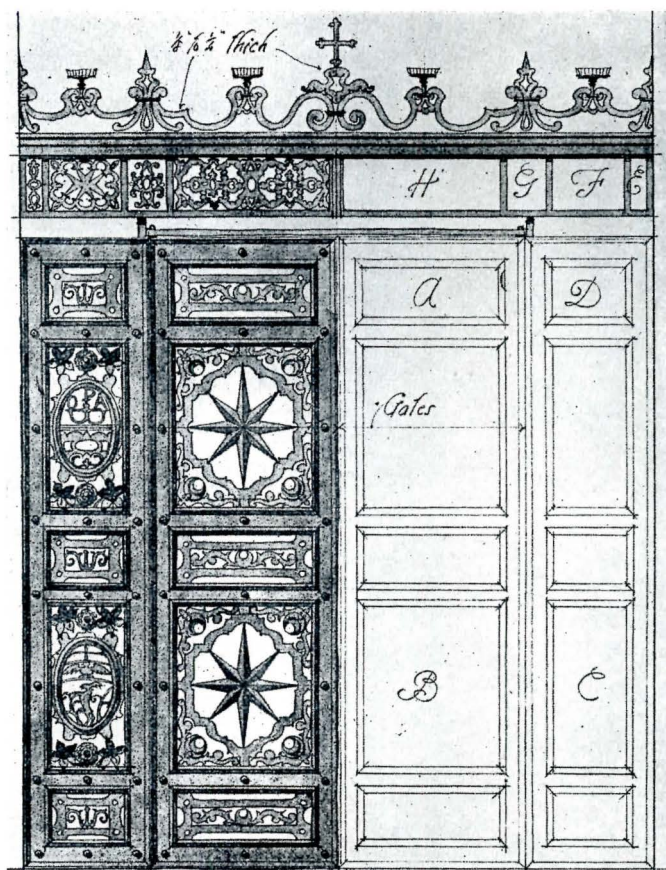
MEASURED DRAWING—WROUGHT IRON SCREEN TO CHAPEL OF ST. JOHN-BAPTIST—SIENA CATHEDRAL

BY ALAN BINNING

PLATE X

VOLUME VII

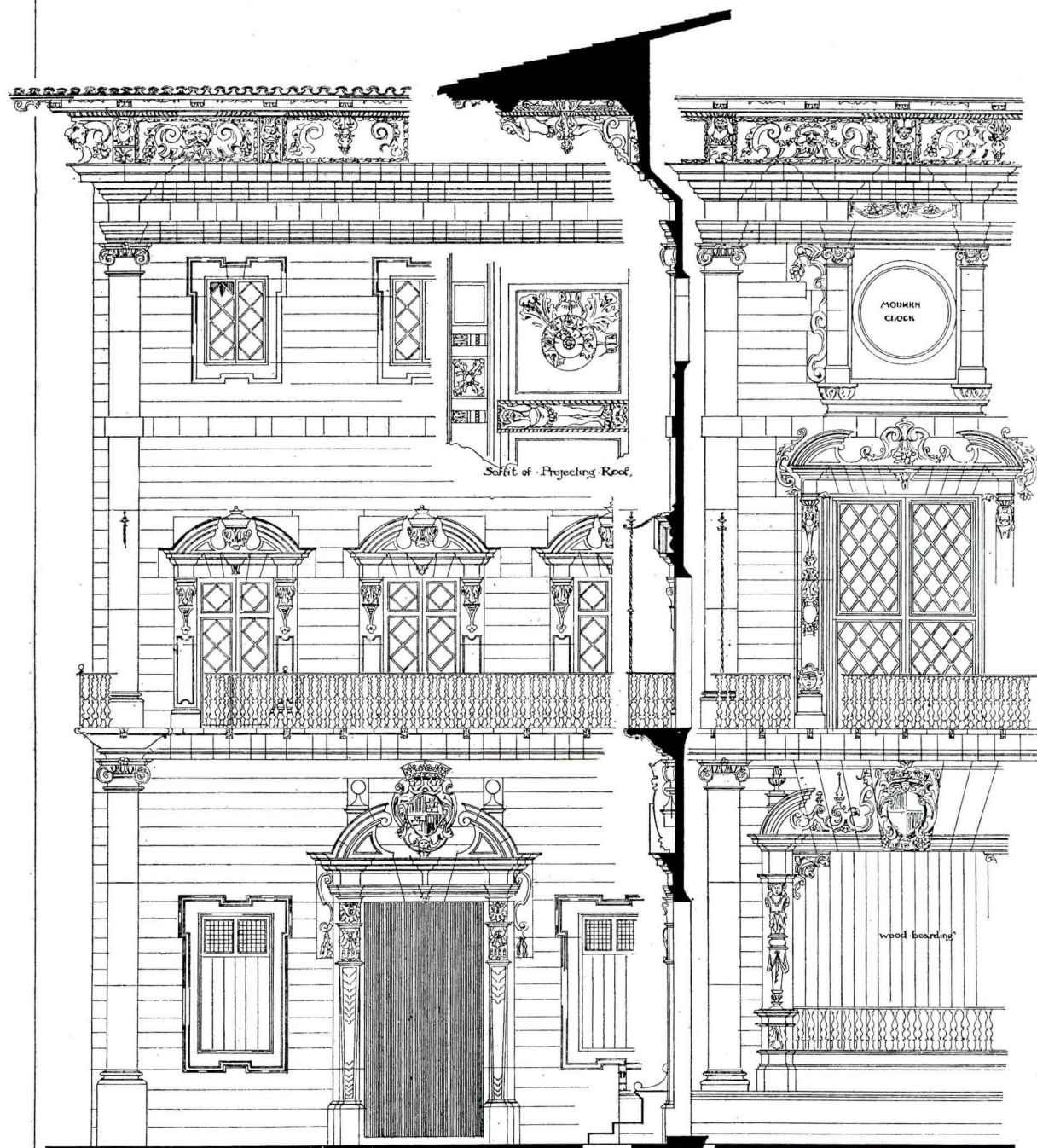
NUMBER 3



KEY PLATE TO WHOLE SCREEN, SIENA CATHEDRAL

·PALMA ·MAJORCA·

Casa Consistorial ·built of ·Yellow ·Stone ·  
with ·Projecting ·Cornice of Dark Wood



Part Elevation of Façade with Section

Scale of 10 5 0 5 10 15 20 25 feet

RENAISSANCE ARCHITECTURE AND ORNAMENT IN SPAIN

A PLATE FROM THE WORK BY ANDREW N. PRENTICE

PLATE XI

VOLUME VII

NUMBER 3

*This building dates from the end of the XVIth Century and is chiefly remarkable for its projecting wooden cornice, divided into compartments, and supported at intervals by long horizontal caryatides, carved to represent grotesque figures of men and women. The arms of the State of Palma appear over the doorways, between which is situated a large opening, or window, at present boarded up, which was used at one time for the sale of lottery tickets. On this plate will be found measured details of the various parts of the facade. The iron balustrade of the first floor has a rich effect which is very simply obtained by each of the balusters being cut out of a single sheet of iron about two eighths of an inch thick.*

# PENCIL POINTS

REG. U. S. PAT. OFF.

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## MARCH, 1926

### 59th CONVENTION OF THE A. I. A.

THE 59TH CONVENTION OF THE American Institute of Architects will be held in Washington, D. C., from May 5th through May 7th, in the Chamber of Commerce on Lafayette Square. Notable men will address the convention and the delegates will have opportunities for discussion of subjects upon which there are divergent opinions.

Chapters should be warned that there is a possibility of some new policies being inaugurated and of some old ones being modified. The delegates who are coming (and as many members as possible who are not voting delegates) should know their Chapter's mind and be ready to discuss "The Small House Service Bureau," "The Scientific Research Department," "The Structural Service," "State Registration and Architectural Education," "Significance of the Fine Arts," "Architecture and the Public," "The Proposed Development of the Octagon Property," "The Plan of Washington," and "The Proposed National Department of Public Works". The Convention will consider also the raising of dues, etc., and the election of new Officers and other Directors.

The Washington Hotel will be official headquarters.

### THE ARCHITECTURAL SENSE

TO THE EDITOR OF PENCIL POINTS:

Dear Sir:—

May I take the liberty of placing before you my thoughts in connection with your inquiry as to what is generally termed as "Architectural Sense and its place in the life of a draftsman or Architect."

The "Architectural Sense"—what is it? Webster defines an "Architect" as a chief builder, a contriver, and "Architecture" pertaining to building sense, is a faculty by which external objects are perceived.

Now, what is the answer to these two definitions? Suppose we change the words, "Architect, who is a chief builder" to "Designer" so as to fit in, to a degree, the Draftsman, as he is the one we want to discuss. Therefore, the "Architectural Sense" of a Designer is his ability to perceive the building as it is to appear when it is finished, while he is designing. I believe it is safe to say that there are many designers who are capable of doing this, but, on the other hand, there are so many who never see the building during its erection, and they, therefore, never really attain the "Architectural Sense."

Again, there are a great many designers who allow themselves to be carried far away from the limits of the needs of a project by the dream of what they think they would like to see built. I recently heard Mr. Cass Gilbert say that he believed that the best architecture designed

was never built, because it always remained on paper, as the funds available would not meet the design. This is certainly true in a certain sense, but still, if the result of the completed building with the funds available, is a success, it cannot be denied that it is the best.

Getting back to the draftsman and how he selected the Architectural Profession. I believe if you ask the average draftsman this question, nine out of ten will not be able to tell you exactly why he selected Architecture as a profession. I believe he will answer, just as I should, that he doesn't know, he just sort of drifted into it. He simply started, found it fascinating and it just urged him on. I further believe that at the time of starting he never had the "Architectural Sense", nor the idea that he would develop to be the Michael Angelo of the Age. I believe that any that might have such an idea, have failed entirely, with the exception, possibly, of sons of successful architects, and we eliminate them from this entire discussion. Why? because the profession of Architecture has so many sides, that one simply has to develop and push one's self into the place best fitted for him.

For instance, take the young man starting out. He enters as an office boy and if he is really interested in Architecture, he is awed by the architectural terms etc., that he hears continually. I can remember when I started that I often found myself wondering if and how long it would take me, to learn all the names of the mouldings of the Corinthian Order. Would I ever be able to place my hands at a distance of 12", 16", 18" without a rule and come as close to the desired dimensions, as the head draftsman was able to do! I am sure that I never, at that time, had the "Architectural Sense," nor did I expect to develop to be a great architect.

When I conquered these, I wondered when I would be able to understand the terms of the different parts of a building on plans and in specifications. When I started Beaux Arts problems, the Ateliers fascinated me, and when I received my first "mentioned place," I felt great and dreamed of the Paris prize—still, I wondered if I would ever get to the point of trying for it. But, in later years, I drifted into the administrative side of Architecture, in which I seemed most fitted.

It seems to me that this is the average experience, and that because of the crowding of events, as just outlined, I did not have the time to develop any "Architectural Sense," I was intent on conquering these different matters and each one seemed to just simply develop.

I believe, therefore, that the "Architectural Sense" has a definite place in the development of an Architect or Draftsman. It comes after the rudiments have been conquered, to a certain degree, and it is not a part of the Draftsman's make-up at the beginning of his career. It is far too big a thing for him to comprehend or to be taught in the short time that he is learning Architecture.

As to the time that "Architectural Sense" develops, I believe that the first time it starts, is the Draftsman's first visit to a job upon which he has worked. When he has the chance to see how his drawings are carried out and how the building has developed from his drawings, then, he gets his first thrill and that thrill is his "Architectural Sense" developing.

Unfortunately, there are many draftsmen and designers who never see the building upon which they have worked, until it is completed. Then it is, to a certain degree, too late to get a real thrill. If you plant a seed and go away to come back later when it is in bloom, you admire its beauty, but if you have watched it grow day by day and nurse it along, then, it is a greater thrill when it finally blooms.

Therefore, it seems to me, that "Architectural Sense" is simply a development that is arrived at, at a definite period of training, and as such, of course, many men think they have it, but, unfortunately, they have not. It can only be obtained by close study and application to the job in hand, large or small. It can be developed in a small building, or a large building, if each is done with the best thought each time, and it must be built on former mistakes and observations.

I may be wrong, but I think that I have a certain degree of "Architectural Sense," due to the advantage of being able to see buildings grow. Still, I am wondering if I will ever be a great Architect with a real "Architectural Sense", as there always seems to be something new to develop this "Sense."

AARON G. ALEXANDER

THE NEW YORK ARCHITECTURAL CLUB, INC.

WE HAVE AN EXCEEDINGLY pleasant duty to perform, and that is to announce herewith to all our friends, to our enemies if we have any, to the anvil chorus, to other minor organizations including the League of Nations, as well as to Calamity Jane and the rest of the community at large that the *New York Architectural Club's Headquarters* is now, and will be henceforth for possibly the next five years, or less, at No. 118-120 East 42nd St. in this city, the Capital of the World. In order to avoid misunderstanding, we wish to elucidate parenthetically the "or less" in the above statement with the prediction that within the next two years we expect to be established in *our own* building. We haven't been far wrong in our other modest predictions to date, and this one is even more reasonable than the others, comparatively speaking. Hence, "or less."

Subsequent to our announcement in the February number of PENCIL POINTS, the Executive Committee of the club has leased space at the above address for a period of five years. At this writing, the place is a regular rip-snorting bee-hive of activity in the act of transformation, due to the kindest of co-operation from "the trades," who are extending most valuable and generous assistance in the alteration of the premises to suit our requirements. In a future article we hope to describe more fully the extent of this appreciated assistance and mention who they are by name.

The atelier committee, in collaboration with the rest of the Board of Directors, has evolved a very decent layout for the floor, and to judge from the indications, we will certainly have ideal and comfortable quarters. The floor is rectangular in shape, and has a frontage of 50 feet on 42nd St. The plans provide for a club lounge across the entire front of the floor and 26 feet in depth. The atelier will be L shaped, and will provide comfortable working space for 32 students, each of whom will have individually adjustable light over his board. Continuing around from the drafting room will be ranged the smaller, or accessory rooms such as storage, cloak room, conference room, dressing room, library, etc., and these together with the drafting room will form a U around the sides and rear end of the floor. The remaining floor space inside the U will be the life class, 18x35 feet, which will easily and comfortably accommodate 30 to 40 students with easels. This room will be separated from the lounge by folding doors across the entire width of the room, which will be opened up whenever social functions or lectures are held, in which case the class room will become a dance floor, or auditorium as the case may be. The interior treatment of the main rooms has not been decided upon up to this writing, and for a very unusual reason. That being, that various manufacturers have offered us their products for this purpose, with the result that instead of being hampered by a limitation in choice of materials as is the case in the majority of building projects, the boys who are handling this portion of the work are faced with an abundance of material to pick and choose from, with the result that every so often they have to be brought up with a jerk by the supervising committee, to keep them from making the place over elaborate or luxurious. In the mean time all concerned are getting a barrel of fun out of the experiment.

We mentioned in the previous number, that the Patron of the atelier will be one of the famous architects of this city. We have even more ambitious plans than that, and when they are announced, some people will keel over with surprise, and then sit up and take notice of the infant club. But—we are not ready to mention any names yet. Sufficient for the time being, that rumors have gotten about, and those who are wise are flocking to the fold, both in class A and class B club memberships.

Incidentally, before closing the subject of club and atelier, we wish to mention that the response to the announcement of the contemplated opening of an atelier has been even greater than we expected. We now have more applications for the various classes than the space provided, and the committee does not feel at this time that the sizes of classes ought to be increased, until the present system is well established. The surplus applicants are being listed as they come in, and will be taken up in this order whenever vacancies occur, or when additional space shall have been allotted. Therefore it would be advisable for all those who feel that they would like to join the atelier, to send in a request in writing without delay. This will place their name nearer the top of the list, and will give us an indication as to what requirements to provide for.

The club membership applicants who have not as yet heard from the membership committee up to the time this number is issued will without a doubt receive notification soon after. This being one of the busiest committees of the club, it has been swamped with work for the past several months, in as much as their work, as well as the work of the other committees has to be done outside of business hours. Someone said to us once, "Patience, thou art a jewel," and we are sure that all our good members and prospective members are richly endowed with the gems.

BOWLING LEAGUE DIVISION

The Architectural Bowling League is now within a few games of the end of the second and final round of the 5 man team tournament. The leading teams are very close to one other, and as some of the leaders still have some games to bowl off against each other, the standing of the teams may be upset with each game. Needless to say, the interest and speculation in the final result is at a high pitch.

The standing of the teams up to and including February the 4th is as follows:

No.	Office of	W.	L.
1.	Cass Gilbert .....	28	3
2.	Warren & Wetmore .....	27	4
3.	Donn Barber .....	25	6
	Guilbert & Betelle .....	25	6
4.	Alfred C. Bossom .....	21	9
	James Gamble Rogers .....	21	9
5.	McKenzie, Voorhees & Gmelin .....	21	10
6.	McKim, Mead & White .....	20	11
7.	Starrett & Van Vleck .....	19	11
8.	Andrew J. Thomas .....	14	15
9.	Thomas W. Lamb .....	14	16
10.	John E. R. Carpenter .....	15	17
11.	Peabody, Wilson & Brown .....	14	17
12.	Holmes & Winslow .....	12	18
13.	Schwartz & Gross .....	9	22
14.	Benjamin Wistar Morris .....	7	21
15.	Allen & de Young .....	4	21
16.	Shape, Bready & Peterkin .....	3	25
17.	William L. Stoddart .....	0	(F)25
18.	Schultz & Weaver .....	0	(F)25

The 3-man team tournament will begin as soon as the 5-man tournament ends, and as the three best bowlers in each organization will be on the firing line, some very good games are in prospect. Our open invitation to all our friends, and those who would care to become our friends still stands. Drop in any bowling night and look us over. The place is Joe Thum's Bowling Academy, 1241 Broadway, at 31st St, New York City, and the time is every Thursday evening from 8 to 12 P M, on the entire 4th floor.

Wednesday evening, March the 10th, will be the big night for the Bowling League. On that night will be given the annual ball, which will take place in Palm Garden, 58th St. & Lexington Avenue, New York City.

In a previous number we did *not* claim to be the king pins of bowling in this profession and our shrinking modesty still prevents us from claiming any such thing now. However, what we did say, still stands. We expected a shower of challenges, but the only response was an invitation from the bold rising west for us to challenge them. That brings to mind a very pleasant experience that we had last year with the afore mentioned youthful territory consisting of a most interesting series of games. If our memory does not deceive, the contest stood at a tie, it being left to our beloved enemies to arrange the date for the rubber games, and which same they never did. We *never* could figure out why.

Such being the case, it is a question whether it wouldn't be harassing for us to bombard them with a challenge. However, we are willing, with a wide gesture of magnanimity be it understood, to let by-gones be what they are, and will condescend to stoop from the heights of our Elysian glory to consider another series of games. All we ask is that definite dates be sent us with reasonable time allowance in advance of the first set of games, and we will do our best to arrange for them.

In closing we wish to state, that if our friendly enemies or enemy friends have had half as much pleasure out of it as we did, they surely had a barrel of fun, and we look forward to more of it. *How about it young west?*

Henry Sasch, Secretary,

### THE AMERICAN ACADEMY IN ROME

FROM A LETTER RECENTLY received by C. Grant La Farge, Secretary of the American Academy in Rome, from Gorham P. Stevens, Director, we quote the following:

"Two Fellows in Painting have just registered with us, bringing the total registration to 81."

"The perspective drawings of the Temple of Fortune at Rome, made by Mr. Deam, Fellow in architecture, have been published in a leading Italian paper, and photographs of three of these drawings are on exhibition in the temple itself."

"Mr. Ferruccio Vitale spent a day and a half in Rome on his way to Florence."

"Mr. Remsen Whitehouse paid us a visit. He informed me that the library, which he is planning to bequeath to the Academy, now numbers 20,000 volumes."

From Frank P. Fairbanks, Professor in Charge, School of Fine Arts, we quote the following.

"Our drafting room for visiting students is now completely occupied with men who are getting into shape the *envois* of their various Fellowships. There are Rotch, Plym Stewardson, Perkins-Boring, Winchester, Chicago Architectural Club, and several Harvard Fellowship holders represented in this activity."

"The men affiliated with the Academy now outnumber the regular men, which is the usual condition with us at this time of the year."

"We have just enrolled two painters from the National Academy of Design, Renwick Taylor, Pulitzer traveling scholar, and Andrew Winter, Mooney traveling scholar. They are together occupying the last vacant studio on the painters' floor."

"The loadstone of the Academy's residential facilities has six men on the waiting list. As many more have been turned away because of the slight prospect of living at the Academy."

### ALPHA RHO CHI CONVENTION

THE ELEVENTH ANNUAL CONVENTION of the Alpha Rho Chi Architectural Fraternity was held at the University of Virginia, January 1st and 2nd.

The University of Virginia and its vicinity made an ideal setting for a convention of architectural students because of its association with the life of Thomas Jefferson, who is almost as well known as an architect as he is a statesman.

The convention was made a momentous occasion by the presence of one of the best known architects in America, Mr. Cass Gilbert, "Master Architect" of the Fraternity.

An interesting event of the convention was a trip to the home of Jefferson, Monticello. This national shrine is now being brought prominently before the public in connection with the Thomas Jefferson Memorial Foundation.

The local chapter was ably assisted by Prof. Joseph Hudnut, of the School of Architecture, University of Virginia, in entertaining the delegates.

At the conclusion of the convention, the delegates were entertained with a dance one night and the next night, a banquet, at which Mr. Hudnut and Mr. Gilbert were the principal speakers. A photograph of the delegates to the convention is reproduced below.

### PRATT INSTITUTE ARCHITECTS' DINNER

PRATT INSTITUTE ARCHITECTS' first get-together dinner at the Fraternity Club House, Thirty-eighth Street and Madison Avenue, New York City, was a great success. Seventy-five men were present and all had a wonderful time. That was only the start. Tentative plans were discussed for the forming of a permanent Club (with residents and non-resident membership) and will be presented for the approval of the men at the next dinner on April Seventh, 6.30 P. M., at the Fraternity Club House. Notices will be forwarded shortly.



DELEGATES TO THE CONVENTION OF ALPHA RHO CHI ARCHITECTURAL FRATERNITY

TOP ROW: C. M. Loving, P. C. Edmunds, T. C. Parker, Fred Lupton, Ralph Little.  
 SECOND ROW: S. J. Makielski, associate professor; Prof. Joseph Hudnut, H. A. Browne, R. Navarro, O. W. Brown, H. R. Peterman. *All of Virginia.*  
 THIRD ROW: A. S. Philips, Illinois; W. B. Simboli, Carnegie Tech; A. R. Naser, Michigan; R. B. Mitchell, Illinois; F. J. Abendroth, Ohio State; R. G. Gulley, Virginia; R. T. Allison, Southern California.  
 BOTTOM ROW: O. B. Flannagan, Virginia; H. F. Naser, Michigan; W. M. Brown, Virginia; D. P. Ely, Grand Council; Cass Gilbert; H. W. Tousley, editor "Archi."; J. W. Law, Texas; A. C. Flegal, Minnesota; F. L. Gregory.



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KING COTTON HOTEL, QUEENSBOROUGH, N. C.

*Shupe, Bready & Peterkin, Architects*



## LOS ANGELES ARCHITECTURAL CLUB ATELIER BANQUET

THE ATELIER OF THE LOS ANGELES ARCHITECTURAL CLUB held one of its semi-respectable banquets on the evening of the twenty-second of January, at a French café down in the Latin quarter of our Spanish city. The boys literally over-ran the quaint little place, to the apparent discouragement of other patrons. Altho a map of the vicinity appeared on the announcements, some difficulty in orientation was experienced among the personnel, as evidenced by their late arrival.

The decorative scheme, as carried out over the walls and ceiling of the tiny hall, was really a revelation, consisting of festoons of crêpe paper fastened with thumb tacks and pins to picture mold, door trim and chandelier. Much favorable comment was expressed over the fact that such an elaborate motif could have been carried out at a total expenditure of only twenty-five cents, fifteen of which provided thumb tacks, the balance defraying the cost of the roll of paper.

A pleasant touch of atmosphere was gained by the substitution of candle light for candle-power. As a reminder of a day long departed bottles of beer, without the beer, were used for candle sticks, their unstability being the only objectionable feature.

A rather informal program was furnished by the committee in charge, good fellowship and reunion being stressed rather than entertainment by individuals. A bit of boxing by experts was scheduled, but due to the inability of the boxers to read their maps correctly, the Massiers, Abrams and Smith, donned the gloves and did a very clever burlesque of a world's champion about to lose his crown.

Mr. Roy Kelley favored us with a few brief remarks of a light nature, followed by Mr. Lee Fuller in a still lighter and briefer vein. Mr. Lee Rombotis, one of our Patrons, gave an inspirational pep talk, after which the evening was given over to an effervescence that will be remembered for a long time.

## PERSONALS

SIEWERT & FRIES, ENGINEERS, have removed their offices to 805—36th St., Milwaukee, Wis.

LOCKWOOD, POUNDSTONE & BILLIE, ARCHITECTS, have opened offices in the Allied Building, Tampa and Cass Streets, Tampa, Fla.

EUGENE HENRY KLABER AND ERNEST A. GRUNSFELD, JR., ARCHITECTS, have removed their offices to The Tribune Tower, Chicago, Ill.

FRANK H. SMART AND PAUL R. SCHEUNEMAN have formed the firm of Smart & Scheuneman, Architects, with offices at 208-9 Apollo Bldg., Pittsburgh, Pa.

ROLAND S. WESTBROOK has opened an office for the practice of architecture at 110 Mayo Bldg., Utica, N. Y.

M. C. PARKER, ARCHITECT, has removed his office to Suite 1, Ray-Bynum Bldg., Amarillo, Texas.

ETHELBERT E. FURLONG, LANDSCAPE ARCHITECT, has removed his office to 940 Broad St., Newark, N. J.

GOVERNEUR M. PEEK has opened an office for the practice of Architecture at De Land, Florida.

MORGAN WALLS and CLEMENTS, Architects, have removed their offices to 1135 Van Nuys Building, Los Angeles, Calif.

DAVID C. LANGE has been appointed Head of the Department of Architecture at the University of Idaho, Moscow. Olaf Fjelde and Fred Hanaford will be associated with Mr. Lange in the teaching of Architecture.

## TIME EXTENSION FOR AUSTRALIAN WAR MEMORIAL COMPETITION

THE CLOSING DATE for submission of designs for the Australian War Memorial to be erected at Canberra has been extended to April 30th, 1926. A detailed announcement of this competition was published in our October number. All drawings must be delivered at or before noon of the closing date to the *Official Secretary, Office of the Commission for Australia, 44 Whitehall St., New York.*

## A FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

(Other items on page 84 of the Advertising Section)

Wanted: First class experienced architect, one familiar with general construction and capable of superintending. Permanent position to right party. Write stating experience and salary expected. Leon H. Lempert & Son, 1172 Mercantile Bldg., Rochester, N. Y.

Wanted: architectural draftsman. Organization specializing in the design and construction of high class bank and office buildings has an opening for a young architectural draftsman with good training and experience in designing and planning. Must be able to lay out perspectives. Preference will be given to American born citizen with college architectural school training. Box 51 care of Pencil Points.

Young man, 27 years old, desires to make possible permanent connection with an architect doing high class work, residential preferred, with the idea of developing in design and broadening experience, and giving service and profit in return. Have had two years' University schooling, several years of all around office experience in design, detailing and drafting, and some practical experience. Location in or about region of Detroit and Chicago. Box 52 care of Pencil Points.

Architectural draftsman wanted for moderate size office in Ithaca, N. Y. doing architectural and landscape architectural work. Must be experienced in fine residence work and capable of carrying drawings through to completion. It is necessary that they be amenable to direction and able to work in cooperation with those in charge. Its a splendid opportunity to learn the relation between architecture and landscape architecture. State full particulars, including salary required and send references. Box 53 care of Pencil Points.

Draftsman, 24 years of age, three years' experience in home detailing good references, moderate salary, desires position in architects office. Box 54 care of Pencil Points.

Architect, 37, married, Gentile, desires executive opening in small office on good grade work taking charge of drafting room or specifications, superintendence, etc. Thorough knowledge sketching, working drawings and details. A-1 references. Reasonable salary. Box 55 care of Pencil Points.

Young man, 17 years old, would like position in architect's office. Graduate of Bushwick High School. Box 56 care of Pencil Points.

Young man, 19 years old, would like position as clerk of works or superintendent's assistant, or work for architect by going to jobs and making out reports on their progress, doing tracing and other miscellaneous tasks which by so doing would have chance to raise to either a building or an architect's superintendent. Have been working for an architect the past four and a half years and had six months' experience on the drafting board. Completed a three year course in architectural drawing at Mechanics' Institute and following a course in building materials and construction for past six months at Columbia University Extension. Will go anywhere where assured of employment and fair salary. Box 57 care of Pencil Points.

Join the bachelors' art club: Paint and sketch in the land of the Waterfalls. Ideal camp life, limited membership, references required, architects and artists only. Address Lock Box No. 2, Bachelors' Art and Sketch Club, Davidson River, North Carolina, Transylvania County.

Architectural Engineer, technical graduate, 15 years' experience as superintendent, structural engineer, specification writer and in general architectural practice, desires place with architectural firm as general manager. Now in Florida. Licensed in Illinois and Florida. Box 60 care of Pencil Points.

FIFTH AVENUE ASSOCIATION  
AWARDS MEDALS

THE ANNUAL ARCHITECTURAL AWARDS made by the Fifth Avenue Association for the best new and altered buildings in the Fifth Avenue Section during the past year were announced at the annual dinner of the Association. The awards are based on the report of a committee of lay members and architects appointed jointly by the Fifth Avenue Association and the New York Chapter of the A. I. A. The committee was composed of Douglas L. Elliman, Chairman; John Sloane and C. Stanley Mitchell; and the following architects: Harry C. Ingalls, Jerome R. Allen and Joseph H. Freedlander.

The first prize for new buildings, a gold medal and diploma was awarded to Steinway & Sons for the new Steinway Hall at 109 West 57th Street. A certificate was presented to Warren & Wetmore, the architects. Carrère & Hastings received a certificate as architects of the Macmillan Building, at 60 Fifth Avenue and the owners, the Macmillan Co., were awarded second prize for new buildings, a silver medal and diploma. A gold medal and diploma, signifying the first prize for altered buildings, were awarded to Joseph Brummer, owner of the Brummer Building at 27 East 57th Street. The architect, I. N. Phelps Stokes, was given a certificate. The second prize for altered buildings was presented to E. Gerli & Co., Inc., owners of the Gerli Building at 49 East 34 Street. The designer of the building, Arthur J. Barzaghi, received a certificate.

## ADOLPH TREIDLER

ADOLPH TREIDLER, one of whose drawings is reproduced in color in this issue of PENCIL POINTS, was born in Colorado but went to California at a very early age. He was educated there at the University of California and had his only and very brief art training at the Mark Hopkins Institute. He came to New York after the earthquake or as they insist on it in California, "the fire". He has been in New York ever since except for the summers which he always spends in Europe.

Mr. Treidler began to draw as soon as he could hold a pencil and practically never attended any art school. His great interest is in the making of posters, for which he is perhaps best known, and in working in color on such things as the design we illustrate in our series of renderings in color.

Mr. Treidler is thirty eight years old and has a passion for hansom cabs and cats.

## ANNUAL DINNER OF SCHWARTZ &amp; GROSS

THE FIFTH ANNUAL DINNER of the Schwartz and Gross Alumni Association was held recently at 12 East 86th Street.

There were seventy-five members present. The dinner proved to be the most successful held thus far.

Davey Jones, aided by Richfield our noted cartoonist, made a good speech and we know who is going to be toast master next year.

Charles Strauss gave us a good exhibition of stepping as usual and we have a good Charleston dancer in the person of Tearle's aide-de-camp—Becker.

We never did hear that duet by Larry & John Scacchetti but we look forward to hearing it at the next dinner.

Bill Tennent dropped in at the right time, just as our Chairman was floundering around for a spar, and addressed the boys in true, scholarly fashion.

And didn't that joke go over good that Phillips pulled on Herbert. Of course we knew it was Herbert all the time.

Watch for next year's announcement, and don't miss the big dinner.

## CHARETTE PARTY AT ATELIER RECTAGON

THE BOYS OF THE ATELIER RECTAGON at Buffalo recently gave a party for the girls of the Interior Decorating Class of the Albright Art School. The Atelier was all cleaned up for the party which started with a "Paul Jones." Everybody wore smocks and the girls wore tams, too. The girls have promised a return party for the boys. The Sous-Massier has collected a lot of back dues, anyway, and everybody is anxiously waiting for that return party.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
DEPARTMENT OF ARCHITECTURE

## COMPETITION FOR TWO SCHOLARSHIPS

TWO SCHOLARSHIPS of three hundred dollars each are offered in the academic year 1926-27 for special students in the third or the fourth year of the course in Architecture at the Massachusetts Institute of Technology. They will be awarded as the result of a competition in design under the direction of the Committee on Design in the Department of Architecture.

The competition is open to citizens of the United States of good character, who are between twenty-one and twenty-eight years of age, and who have had at least two years of office experience.

The competition will be held from May 22 to June 1.

Competitors are allowed to prepare their drawings wherever conditions conform to the requirements of the Committee, but these drawings must be sent to Boston for judgment.

Applications should be received on or before April 12, addressed to Professor William Emerson, 491 Boylston Street, Boston, Mass.

## BRICKWORK IN ITALY

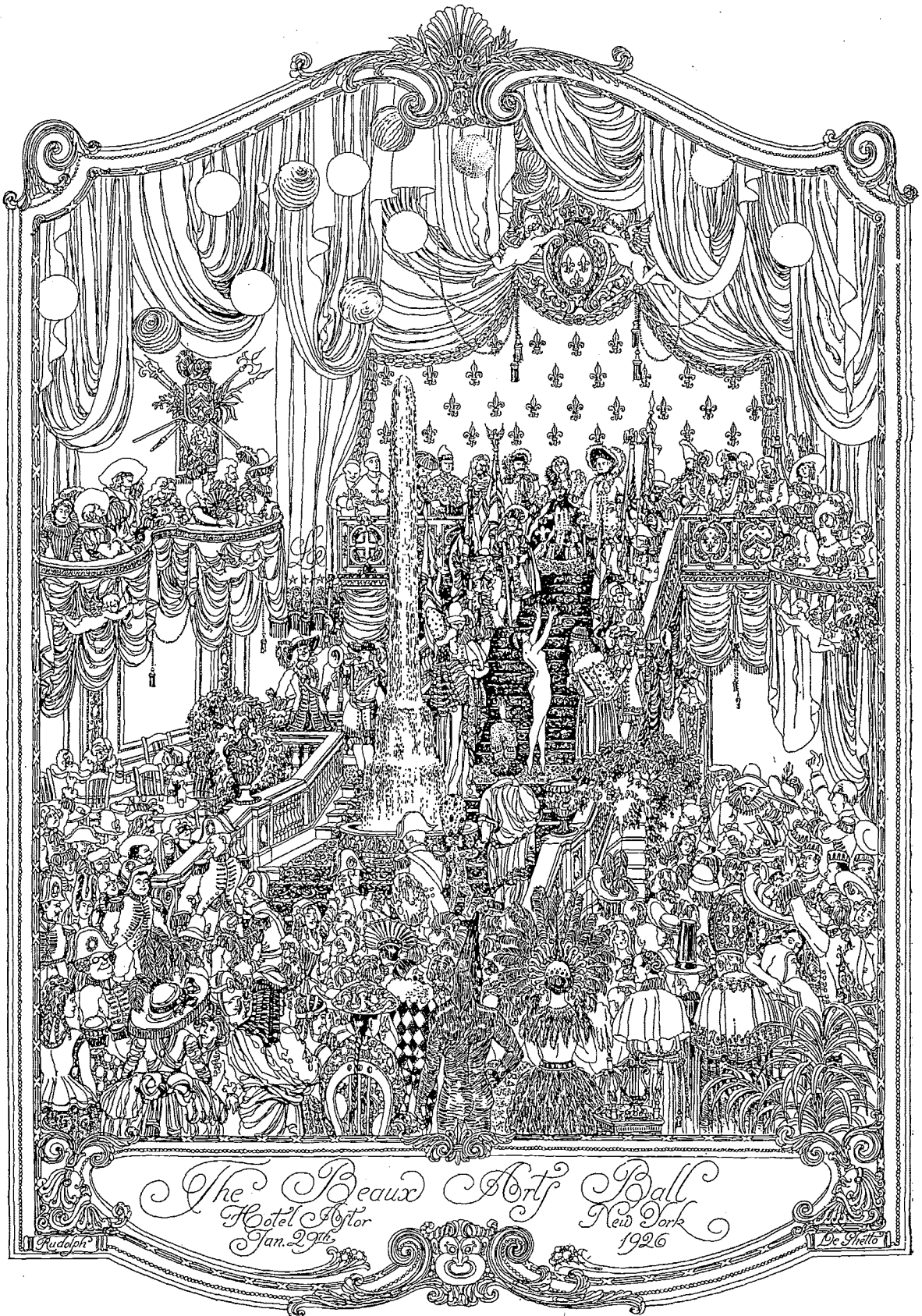
*A Brief Review from Ancient to Modern Times*

THE MATERIAL PRESENTED in this volume will prove of especial value to the young architect and all others interested in every form of cultural development.

The subject is divided into four parts—*Brick in Roman Antiquity; Brick in the Middle Ages, Renaissance and Baroque Brickwork; Brick in the Modern Period.* The book is profusely illustrated with 69 line drawings, 300 half-tones, and 20 colored plates with a map of modern and XII century Italy. G. C. Mars, Ph. D., collected and edited the work which is published by the American Face Brick Association, Chicago Price, linen, \$6.00; half morocco, \$7.00. Size 7½" x 10½".



DESIGN WINNING THE COMPETITION FOR A POSTER FOR THE BEAUX ARTS BALL OF PITTSBURGH ARCHITECTURAL CLUB



PEN AND INK DRAWING BY RUDOLPH DE GHETTO

# HERE AND THERE AND THIS AND THAT

CONDUCTED BY RWR

HERE IS WHERE WE SET up a claim for the world's long distance subscription championship. We defy all comers. What we mean by this is that one of our subscribers has paid for his subscription to PENCIL POINTS until 1941. The Reverend Emil Zumkeller, who has charge of the construction work for his church and who is located in Chicago, subscribed for PENCIL POINTS in May 1922. Since then from time to time he has extended his subscription until now, as stated above, his subscription is paid for until June 1941.

Maybe some other publication can beat this record. If so we challenge him, or her, to step up and do so.

Our bid for poetry seems to have had an unfortunate influence on the number of sketches submitted this month.

First prize goes to Lewis G. Adams of Paris, France, two of whose sketches are reproduced below. The prize in Class 2 goes to D. A. Hamilton, in Class 3 to Arthur R. Carpenter, and in Class 4 to Clifford Watson Branson.

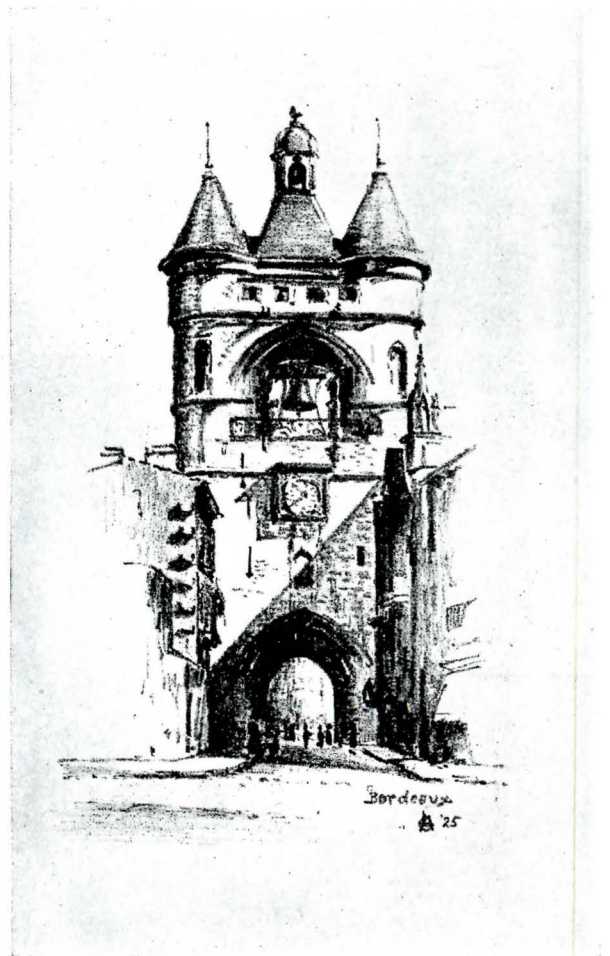
WE WILL PAY 25 cents each for copies of the *January 1926* issue of PENCIL POINTS sent in good condition to this office. The Pencil Points Press, 19 East 24th St., N. Y. C.

We had no idea that there was so much latent poetry lurking around the drafting rooms. This form of contribution is getting to be our best crop and from the looks of things we are going to have just lots of poetry all this Spring and Summer, and so far we are glad of it. Some of it has been pretty bad, quite a good deal not so good; but a few contributions have been very, very fine. It only goes to show what the readers of this paper are capable of doing when thoroughly aroused.

It is supposed to be a very low thing for a publisher to mention the name of an advertiser in the reading section of the paper. Well, this time we just can't help it. We refer to the Eldorado Sketch Club conducted by Ernest W. Watson in cooperation with the Joseph Dixon Crucible Company. A student of drawing who is not able to attend a school requires, if he is to improve in his work, intelligent criticism of his efforts. Such criticism, for a modest fee, is being offered by Mr. Watson and all who are interested in this subject are referred to Pages 52 and 53 of the advertising section of this journal for February. A circular giving all information may be secured by addressing the Eldorado Sketch Club, 181 Emerson Place, Brooklyn, N. Y.



Caudebec, France



(PRIZE—Class One—February Competition)

SKETCHES IN CHARCOAL BY LEWIS G. ADAMS, PARIS, FRANCE

REMINISCENT

'Tis St. Johns in the moonlight  
And the steamer wends its way  
Through pads of floating hyacinth  
And midnight mist and spray.

The palms that line the water's edge  
The lacy cypress, too,  
Beshrouded all in trailing moss  
Speak mystery to you.

The ship's eye picks a careful way,  
A zigzag, winding route;  
And great white birds flap past us  
As search-light drives them out.

And, over all—the moonlight,  
Liquid, calm, serene.  
One sits remote from all that's real  
Translated by the scene.

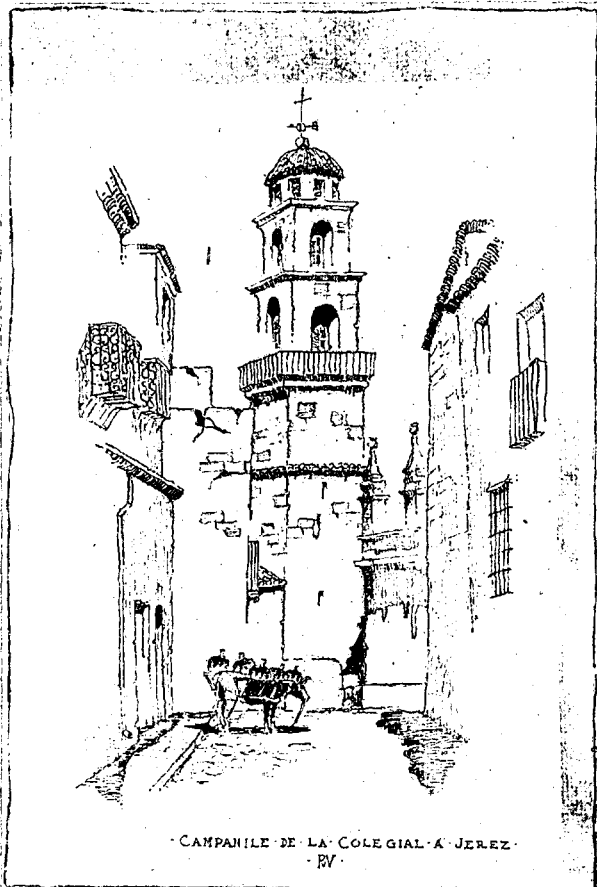
W. W. Beach

A CORRECTION

The caption under the cartoon appearing on page 132 of our February issue is all wrong.

This cartoon was done by Mr. Stuart Whiting of the office of Edward J. Wood & Son, Clarksburg, West. Va.

A sheet was received in that office with the first of the six drawings done by Clair Briggs. Mr. Whiting filled in the other five spaces so as to complete the sheet as reproduced in this department for February.



SKETCH BY ROBERT MOSLEY WILLIAMS,  
PASADENA, CAL.

"THE DESIGNER"

(PRIZE—Class Two—February Competition)

Bending over his drawings  
Searching for beauty of line  
Knowing not his surroundings  
Heedless of passing time.

The crayon held in his fingers,  
Seeming possessed of a soul,  
Flows noiselessly over the paper—  
A masterpiece for its goal.

This is the master designer  
Builder of buildings is he  
Seeking for scale and proportion,  
Little he cares for his fee.

His is a greater payment  
The knowledge of work well done,  
The joy in a splendid building  
Glistening under the sun.

Money he must have for clothing,  
Food and a good smoke or two,  
But he will never amass a fortune  
He has too much else to do.

Just now he's designing a mansion  
To be built on top of the hill;  
Tomorrow it may be a hospital,  
Or it may be a cottage for Bill.

He designed that bank on the corner,  
He planned that hotel on "The Drive",  
He visioned that great office building  
Where barons of industry thrive.

He sees, as he draws the mouldings,  
And studies the form and mass,  
The color and texture and finish  
Of wood and stone and glass.

He hopes that the workmen who follow,  
And execute that which he draws  
Will have the true spirit of craftsmen  
And build without any flaws.

This is the master designer  
Builder of buildings is he,  
One of the few men I know of  
Who cares more for his work than his fee.

—D. A. Hamilton

"ESQUISSE"

Perhaps you will say when you list to my verse  
Entirely the bunk—it couldn't be worse!  
No doubt you'll be right, but who gives a shucks  
Consider my uses for ten lousy bucks.  
I'll always be boosting for your magazine,  
Less money for value, the world's never seen;  
Photographs, sketches and info. galore  
On this and on that—one couldn't ask more.  
In case all you hand me is "Concours Hors"  
"Nil Desperandum," we've had 'em before.  
Till I'm grey at the temples, and weak at the joints  
Somebody's pulling for old "PENCIL POINTS."

John M. Kerr

Said our colleague, G. Whatsinhis Pate,  
"I don't like PENCIL POINTS' Color Plate";  
(Which gave us a terrible pain)  
But we happened to find  
That the man's color blind,  
(So now we are happy again).

Donald F. Brode



ROYAL BARRY WILLS RECEIVES HIS TEN DOLLARS

### IDIOSYNCRASIES OF THE ARCHITECTURAL ATMOSPHERE

I work in the office of Benjamin Huff  
Where they keep a selection of Dietzgen's best stuff  
And a chill azure gloom keeps the stranger at bay  
While the smocks and the smoke and the blueprints hold sway.

There are men to the left, there are men to the right,  
While before and behind in deplorable plight  
Benjy's draftsmen are losing their hair and their youth  
Over details they think are important forsooth.

There's one who attended Yale, Princeton and Tech.  
And now they just give him shop drawings to check  
That man goes to prize fights and when he's at home  
Reads Gene Stratton Porter—tome after tome

That one talks of Wagner and this one of Shaw  
But the third man up front saw the same plays I saw.  
As a strong man delighted to run in a race  
So it pleases that stalwart Norwegian to trace.

But his ponderous neighbor in high, well-built shoes,  
Has a weakness for marble of varying hues;  
He speaks of his "Lady Love", adding with tears,  
"You know we've been married for nigh on ten years".

That immaculate cheery officious young prince  
Interrupts the complacent monotony since  
In theosophy symphonies, riddles and wit  
He is trying to find where his talents best fit

There's the bald headed dreamer with vacuous gaze  
Whose underwear shows at his elbows like lace  
And others (who cannot be mentioned because  
'Twere unseemly to dwell on their faults and their flaws)

They all sit at the feet of Lord Benjamin Huff  
Who pretends he's an architect—Oh what a bluff!

Did you ever feed the pigeons outside of your window? If you haven't, you have missed something. Here's the prescription—go to any feed store or bird emporium, lay down two bits and ask for its equivalent in cracked corn; then go to your drafting room, or wherever your window is, and put some of the cracked corn on the window-sill—not too much and not too little—just the right amount. For two or three days or so maybe nothing will happen, but then one fine morning or afternoon you will look out and see a pigeon or two on the window ledge. The next day you will see more—and from then on you will have regular customers so long as you do your part. It certainly is kind of friendly and pleasant to have something besides people around the place, and pigeons serve the purpose extremely well and after you have had them around for a while you certainly do get attached to them—the same ones come day after day and week after week and some still visit our windows who were among our first customers two and a half years ago. I hear somebody ask how you can tell one pigeon from another. Just try the experiment for yourself and you won't have to ask. No two look alike and the various color combinations possible among the vagrant birds who make their homes in a big city are almost past belief.

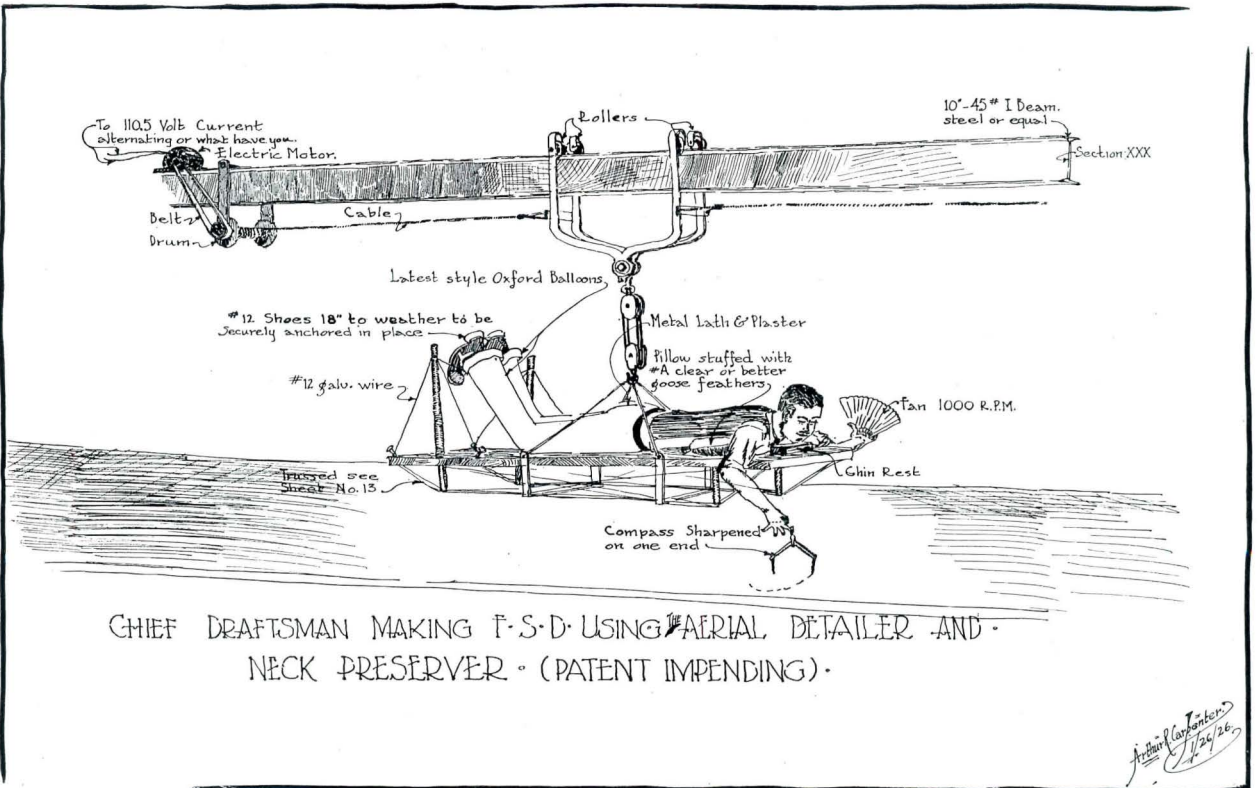
A good way to learn something is to read and study good books. "Good Practice in Construction, Part II", by Philip G. Knobloch, has just been published by The Pencil Points Press.—Adv.

Which of the two color plates published in this issue do you like better and why?

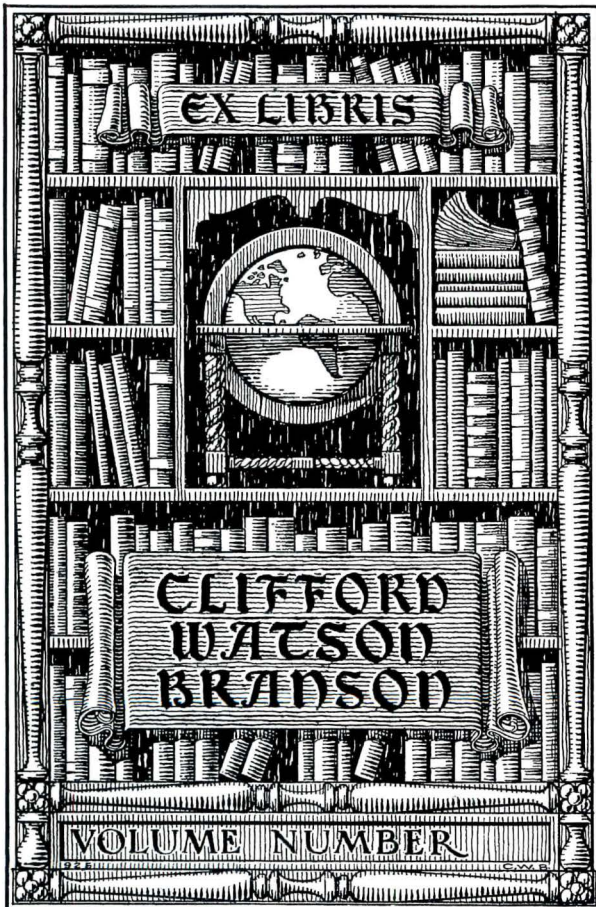


THE BOOKPLATE OF ROY SAMUEL MACELWEE

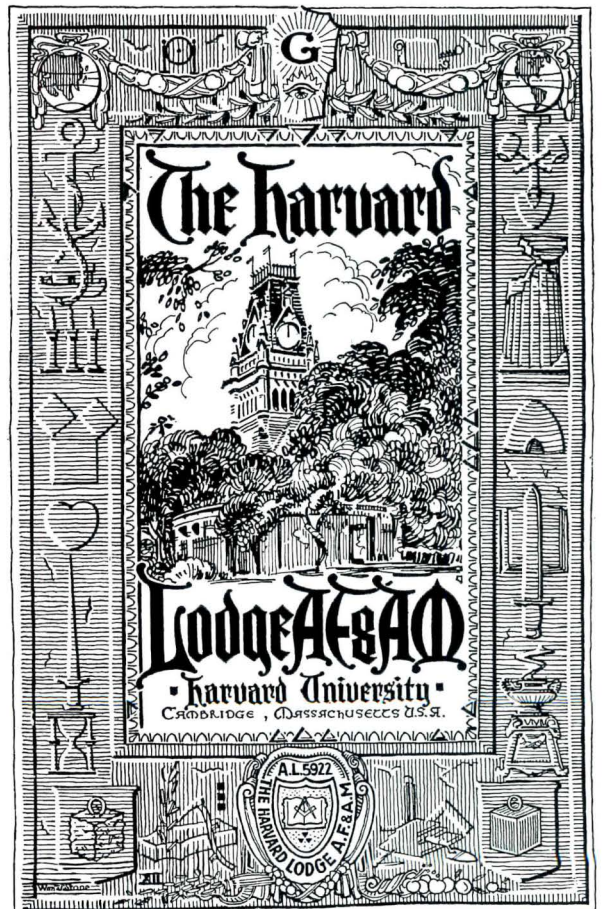
# PENCIL POINTS



ARTHUR R. CARPENTER'S INVENTION WHICH REVOLUTIONIZES THE DRAWING OF THE F. S. D.  
(PRIZE—Class Three—February Competition)



BOOKPLATE BY CLIFFORD WATSON BRANSON,  
(PRIZE—Class Four—February Competition)



BOOKPLATE DRAWN BY WILLIAM J. STONE,  
BOSTON, MASS.

# THE SPECIFICATION DESK

*A Department for the Specification Writer*

## SPECIFICATIONS

By W. W. BEACH

### MARBLE, TERRAZZO AND TILE WORK, PART XVII

PENCIL POINTS FOR FEBRUARY contained Division L, Plastering, of these general contract specifications for an imaginary consolidated District School Building of which there had been previously given the Divisions of A, General Conditions; B, Excavating; C, Concrete; D, Masonry; G, Structural Steel; H, Miscellaneous Metal Work; I, Roofing; J, Sheet Metal Work and K, Carpentry.

Division letters E and F were omitted from the sequence, being regularly set aside to designate divisions of Cut Stone, Terra Cotta or Structural Tile when these are thus segregated. In this case, we included cut stone and structural tile with other masonry and assumed a building without terra cotta, hence the deletion of said division.

Next in order, after Plastering, comes naturally Marble, Terrazzo and Tile Work.

It is a mooted question as to whether these should be combined in a single division or each treated separately. Like many other branches possessing similar characteristics, it is up to the architect to ascertain which procedure produces best results in the locality in which the proposed building is to be located.

For the present purpose, we will assume that there is not enough of any one of these materials in the building to warrant separation—that a concern equipped to install all three materials will give best service at lowest overhead, giving due consideration for foremanship, transportation of men and their local housing and boarding.

#### DIVISION M

#### MARBLE, TERRAZZO AND TILE WORK

*Note.* The Contract and General Conditions of these Specifications, including the Supplementary General Conditions, govern all parts of the Work and are parts of and apply in full force to these Specifications for Marble, Terrazzo and Tile Work. The Contractor shall refer thereto as forming integral parts of his Contract.

#### ARTICLE 1. *Work Included.*

(A) THE ITEMS under this Division include:

- (1) ALL MARBLE WORK.
- (2) ALL TERRAZZO WORK.
- (3) ALL ART MARBLE WORK.
- (4) ALL TILE WORK.
- (5) SUCH OTHER WORK as is herein specified.

#### ARTICLE 2. *General Description.*

*Note.* Under the headings of this Article, there is given, for the convenience of Contractors, a brief mention, not necessarily complete, of the work included in this Division, full description of which will be found in the following Specifications, beginning with Article 3.

(A) KINDS OF MARBLE. Marble in Assembly hall and vestibule of same shall be Vermont "Verde Antique". All other marble, wherever called for, shall be Tennessee "gray" or Tennessee "pink".

(B) IN ASSEMBLY HALL, marble shall be installed as shown for base, wainscot and plinths, also for window stools for certain windows, as indicated. Similar trim shall be installed in vestibule of assembly hall.

(C) IN TOILET AND SHOWER ROOMS, marble partitions, back slabs, compartment ends and tops and wall slabs shall be provided; also marble risers and 6" treads where steps occur in doorways.

(D) BRASS RAILS, STANDARDS AND CLAMPS shall be provided for the support of all free-standing marble as shown.

(E) TERRAZZO FLOORS shall be installed as follows:

- (1) IN ALL VESTIBULES and portions of stair halls as indicated.
- (2) IN ALL CORRIDORS, floors and borders as indicated.
- (2) TREADS, RISERS AND PLATFORMS of all concrete stairs, where so indicated on floor plans.
- (4) STAIR TREADS AND LANDING FLOORS for all steel stairs thruout building as indicated.

(F) CERAMIC TILE FLOORS shall be installed in all toilet rooms thruout the building, in passages leading to boys' and girls' toilet rooms, and in boys' and girls' locker and shower rooms.

(G) ART MARBLE BASE AND PLINTHS shall be installed in connection with all terrazzo and tile floors and for all stairs above basement (except those having steel strings) and wherever art marble base is called for. Cove base as detailed shall be provided under all free-standing marble partitions and fronts of toilet and shower stalls which extend to floor.

(H) SUB-FLOOR shall be laid on concrete structural slab under all terrazzo as may be necessary to bring same up to proper finished level.

#### MATERIALS

#### ARTICLE 3. *Marble Materials.*

(A) ALL MARBLE shall be of the variety and from the quarry selected and shall be of the best grade of that variety. If the selected variety is one of prominent figuration, the slabs shall show maximum variation in shading and figuration.

(B) QUALITY. All marble shall be free from defects. Any piece having any flaw, filling or repair will be rejected.

(C) COPPER ANCHORS shall be in accordance with approved samples.

(D) WATERPROOF CEMENT shall be litharge, properly mixed and applied.

(E) PLASTER PARIS shall be fresh and of best quality.

#### ARTICLE 4. *Terrazzo Materials.*

(A) GRAVEL OR BROKEN STONE for body shall be  $\frac{1}{8}$ " to  $\frac{3}{8}$ " in size, hard and clean, free from dust, dirt or other foreign matter.

(B) MARBLE CHIPS shall be of two kinds of crushed marble as selected,  $\frac{1}{8}$ " to  $\frac{1}{4}$ " in size and free from dust or other foreign matter. Floor colors shall be produced by the use of either kind of marble specified or by combinations of both, as directed.

(C) ALUNDUM CHIPS shall be of approved make and of same size as marble above specified.

(D) SAND shall be coarse and sharp, clean and free from foreign matter. Sand for finished surfaces shall be white.

(E) CLEANING. The foregoing materials shall be screened and washed, if necessary, as directed by the Superintendent.

## PENCIL POINTS

(F) CEMENT shall be Portland, of approved brand, fresh and free from lumps, cakes or other defects. It shall be delivered in original cloth bags, bearing the Maker's name and brand and shall be stored in a dry place, properly protected from the weather.

(G) TARRED FELT shall be an approved brand of tar-saturated felt, weighing at least 14 lbs to 100 sq. ft.

### ARTICLE 5. *Metal Trim.*

(A) TRIM FOR MARBLE, including all clamps, rods, standards, bolts and screws shall be of silver-bronze of approved weight and pattern. No pipe-shell shall be less than No. 10 gage. All screws and bolts shall have hexagonal heads and nuts. Ends of all bolts shall be flush with nuts and shall be set, to prevent removal of nut.

(B) BRASS LOCK-STRIPS for dividing terrazzo areas shall be  $\frac{3}{8}$ " x  $1\frac{1}{4}$ " and of length to produce panels called for. Strips shall be of approved pattern, punched or deformed for anchorage, and inter-locking in accordance with samples. Brass strips at edges of depressions shall be  $\frac{1}{4}$ " x  $1\frac{1}{4}$ ", with approved anchorage.

### ARTICLE 6. *Art-Marble.*

(A) ART-MARBLE for base and plinths shall be pre-cast, of approved make, and shall be composed of clean selected marble chips of size to pass a  $\frac{3}{4}$ "-mesh screen and remain on a  $\frac{1}{8}$ "-mesh screen. These shall be mixed with white Portland cement in proper proportion and thoroly tamped to eliminate all voids.

(B) FINISH. Art marble shall be in blocks of size shown, with all exposed surfaces highly polished and all joints smoothed for perfect fit.

### ARTICLE 7. *Ceramic Tile.*

(A) KIND AND GRADE. All tile for floors shall be selected, unglazed vitreous tile. Where "non-slip" tile is called for, the surface shall have alundum finish to correspond with approved samples.

(B) SIZE AND COLOR of all tile shall be as selected or as called for on drawings. Where not otherwise indicated, 1" hexagons shall be used.

### ARTICLE 8. *Samples and Shop Drawings.*

(A) SAMPLES of all materials shall be submitted to the Architect for approval. Work installed shall be in exact accordance with approved samples.

(B) SHOP DRAWINGS and setting diagrams shall be submitted, showing layouts and detailed dimensions of all work of this Division and shall be revised and re-submitted until approved, as called for in General Conditions.

(C) MAKERS' SPECIFICATIONS for art-marble and tile setting shall be submitted for approval, and duplicate copies of approved specifications filed with the Architect.

## WORKMANSHIP

### ARTICLE 9. *Marble Work.*

(A) FINISH of all exposed marble surfaces shall be smoothly honed for floors and dull-polished and waxed for standing members. Unless otherwise shown, all exposed edges shall be slightly rounded, except that external angles of wainscot and base members shall be square.

(B) SIZES. All marble shall be of sizes and thicknesses shown. Where not otherwise stated, all wall-slabs and back-slabs shall be  $\frac{7}{8}$ "; all partitions and other members finished both sides,  $1\frac{1}{4}$ "; all base  $\frac{7}{8}$ "; all plinths and wainscot caps  $1\frac{1}{8}$ "; treads  $1\frac{1}{8}$ " and risers  $\frac{7}{8}$ ". Back slabs on which plumbing fixtures are to be mounted shall be  $1\frac{1}{4}$ " thick. Unless otherwise shown, all partitions shall extend to floor or rest on art marble base as herein specified.

(C) JOINTS shall be ground to perfect fit and shall be located only as shown on approved shop drawings. All adjoining pieces shall be carefully dowed together with copper dowels in cement. Unless otherwise stated, all external angles of die slabs shall be mitered, with  $\frac{1}{8}$ " reentrant-angle joints; all other external angles coped.

(D) SETTING. All marble shall be in perfect planes and securely anchored in place by means of concealed copper anchors in approved manner. Special care shall be used in rigidly anchoring marble plinths. Screw-heads shall be sunk and holes neatly filled to be as nearly invisible as possible. Partitions resting on floor and coves shall be made

perfectly watertight with litharge cement joint. Partitions shall be secured to front and back slabs with 3 clamps at each vertical joint. Fronts shall be supported on  $1\frac{1}{4}$ " standards with head rods and supports of same, all put together with proper fittings, and with flanges secured to floor and walls with 3 bronze screws each, in lead expansion shells.

(E) DRILLINGS. All cutting and drilling shall be done by this Contractor in the most careful manner, as he will be held strictly accountable for all damage resulting from same. This Contractor shall drill floors and rough masonry where necessary to anchor his material and shall indicate to Mason precisely where he requires holes drilled in glazed brick, as only the Mason will be permitted to drill same. The Marble setter shall do all drilling of his material for the accommodation of others, such as register faces, piping, hardware, etc., as no one else will be permitted to cut marble.

### ARTICLE 10. *Terrazzo Work.*

(A) CONCRETE SLABS will be left about 3" below finished floor level, where terrazzo is specified and  $1\frac{1}{4}$ " where ceramic tile is specified, and the Contractor shall start his work from these levels.

(B) COMPOSITION. Terrazzo shall consist of an expansion course of sand, a waterproof course of tarred felt, a body course of concrete, a screed course of same and a topping of finished terrazzo, making a total thickness of not less than 3" nor more than the maximum indicated on drawings.

(C) EXPANSION COURSE shall consist of a  $\frac{3}{8}$ " layer of clean sand, laid after all conduit and piping are in place and the surface of concrete slab swept smooth. Sand shall be leveled off  $2\frac{3}{8}$ " below finished plane of floor.

(D) TARRED FELT shall be carefully laid over the sand to receive the concrete and shall be lapped 2" at all edges.

(E) BODY COURSE shall consist of 1" of 1:4:1 concrete, thoroly rammed and rolled to form compact and level surface  $1\frac{5}{8}$ " below finished plane of floor, care being taken not to disturb or tear the felt.

(F) SCREED COURSE shall consist of 1" of 1:3 cement mortar, into which the brass strips shall be bonded, ready to receive panels of dimensions, color and design as shown on plans. Screed course shall be laid before body course has begun to set, to secure perfect bond.

(G) BRASS STRIPS. Where sizes of panels between brass strips are not shown, the strips shall be located on center lines of columns and halfway between same. Intermediate strips shall be placed between these and in opposite direction to form panels about 30" square.

(H) TERRAZZO SURFACE shall consist of marble chips and neat cement mixed dry in such proportion that the cement will entirely fill the voids in the marble chips. This mixture shall be wet, then mixed again and laid between brass strips to level of top of same. A sprinkling of dry marble chips shall then be made and the whole rolled into a compact mass.

(I) FINISHING. After rolling, the surface shall be sprinkled with dry cement, before initial set, then hand troweled to an even finish to close all air pockets. Floor shall be allowed to set, then ground to a true, even surface and carefully grouted to fill all voids and to show at least 80% of marble in the finished surface, which shall be rubbed, cleaned and waxed. This finished surface shall be perfect in every detail.

(J) TREADS, PLATFORMS AND LANDINGS of steel and concrete stairs shall be laid in same manner as other terrazzo except that sand cushion and felt shall be omitted and there shall be included in the dry chips sprinkled on surface  $\frac{1}{4}$  lb of alundum chips to each square foot of area. Finished surfaces shall be  $\frac{1}{4}$ " above top of steel nosing and shall be neatly rounded over same. Terrazzo risers and nosings (of concrete stairs) shall be carefully formed to profile shown, using approved bonding cement grout to secure adherence to surface of concrete.

### ARTICLE 11. *Art-Marble.*

(A) COVE-BASE AND PLINTHS shall be provided as called for, and as specified in Arts. 2 and 6, properly and rigidly set in full bed and backing of 1:3 cement mortar, true, straight and neatly pointed, finished and cleaned. Lengths

of base shall be evenly proportioned to fit space, without use of short fillers. Where not otherwise shown, lengths shall average 3'6" to 5'0".

ARTICLE 12. *Tile Work.*

(A) FLOORS shall be provided in all locations called for, all furnished and installed in accordance with "Basic Specifications for Tile Work," First Edition, 1921, as issued by the Associated Tile Manufacturers, Beaver Falls, Pa., insofar as same apply.

(B) CONCRETE SLAB under tile floors will have rough surface about 1¼" below finished floor level. Finished floor in shower stalls will be about 4½" above that outside of same and this Contractor shall provide the additional fill of approved light weight filler to bring these floors to proper

planes and shall build into same the drains and lead pans provided and installed by Plumbing Contractor.

(C) CERTIFICATE. The Contractor shall furnish a "Grade Certificate" issued by the Associated Tile Manufacturers showing that each different tile used is in accordance with these specifications.

ARTICLE 13. *Guaranty.*

(A) PLEDGE. This Contractor hereby guarantees that he will, without expense to the Owner remove and replace all parts of the work of this Division which may develop cracks, chips, hollowness or other defects during a period of one year from date of acceptance of work, which defects are, in the opinion of the Architect, due to imperfections in workmanship or material furnished under this contract.

## PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER

*Publications mentioned here will be sent free, unless otherwise noted, upon request, to readers of PENCIL POINTS by the firm issuing them. When writing for these items please mention PENCIL POINTS.*

**Portland Cement Stucco.**—Booklet on the subject containing article on the Progress in Stucco Surfacing, 11 full page color plates, illustrations showing different methods of application to secure desired effects, condensed specifications, recommendations on design and construction, typical construction details and article on Overcoating. 64 pp. 8½ x 11. Portland Cement Assn., 111 West Washington St., Chicago, Ill.

**Fire Proof Doors and Hardware.**—Catalog and Price List No. 61.—Looseleaf catalog illustrating and describing fully this line of products. 8½ x 11. Coburn Trolley Track Co., Holyoke, Mass.

*Published by the same firm, Patent Rolling Ladders, Catalog No. 65. Overhead Conveying Equipment, Catalog No. 63. Sliding Door Hardware, Catalog 130.*

**American Walnut for Interior Wood-work and Paneling.**—Treatise on the subject by George N. Lamb. Contains many attractive illustrations, tables of comparative costs, specifications, wall treatments, comparative tests, pattern of panels, etc. 24 pp. 7 x 9. American Walnut Mfrs. Assn., 616 South Michigan Ave., Chicago, Ill.

**Vacuum Cleaning Data Portfolio.**—A.I.A. Classification No. 35-j-1, contains, in readily accessible form for the specification writer, complete data on installed vacuum cleaning systems. Layouts, tables of piping size, requirements to be considered, etc. Standard filing size, 8½ x 11. United Electric Co., Canton, Ohio.

**Knife Switches and Accessories.**—Catalog No. 25 shows this line completely. 33 pp. 8 x 11. Frank Adam Electric Co., St. Louis, Mo.

**Brass Pipe for Water Service.**—Bulletin B-1 monograph on the subject, typical layouts and valuable engineering data for architects, engineers and contractors. 8½ x 11. 32 pp. The American Brass Co., Waterbury, Conn.

**Enameled Brick Data Sheet.**—Condensed information with 8 detail drawings showing special shapes, construction drawings, etc. 8½ x 11. American Enameled Brick & Tile Co., 52 Vanderbilt Ave., New York City.

**English Precedent for Modern Brickwork.**—Book showing a selection of the best English buildings in brick. Colored frontispiece, many full page plates and measured drawings. Text on the subject, including chronology of English brickwork from 55 B. C. Heavy plate paper. 100 pp. 8½ x 11. Price \$2.00. American Face Brick Assn., 1760 Peoples Life Bldg., Chicago, Ill.

**Letters To and Fro.**—A booklet profusely illustrated in color presenting much useful information in attractive form concerning modern house heating, a subject sometimes regarded dull made interesting by its unusual and human treatment. 36 pp. 7 x 10. Burnham Boiler Corp., Irvington, N. Y.

**The Six Quick Steps.**—Illustrated booklet dealing with Bull Dog Floor Clips. Indexed. 8½ x 11. 24 pp. The Bull Dog Floor Clip Co., 108 No. First Ave., Winterset, Ia.

**Lumber Data.**—Loose leaf folder of information sheets on California White and Sugar Pine products. 9½ x 12. California White & Sugar Pine Mfrs. Assn., 680 Call Bldg., San Francisco, Calif.

**Real Roofing.**—Attractive booklet dealing with modern types of roofs, with an interesting chapter on climate as affecting roofs. Copper and Brass Research Assn., 25 Broadway, N. Y.

**Craftex.**—Folder illustrated with color plates showing methods of applying this modern material on interior wall surfaces. Textures and colors illustrated and described. Specifications. Standard filing size. The Craftex Co., 101 Park Ave., New York.

**Suggestions for Architects and Their Clients.**—A series of sheets in color showing installations of high-class equipment for the bathroom. Crane Co., 836 So. Michigan Ave., Chicago, Ill.

**Drawing Materials.**—Catalog No. 11 covering everything required in the drafting room with list prices. Fully indexed, cloth bound, 400 pp. 6 x 9. Eugene Dietzgen Co., 166 West Monroe St., Chicago, Ill.

**The Dunham Handbook No. 214.**—Covers subject of radiation and all other matters pertaining to the modern heating plant. Sectional drawings and typical layouts. Much engineering data. Handy pocket size. 144 pp. C. A. Dunham Co., 230 E. Ohio St., Chicago, Ill.

**Hard-n-tyte Engineering Service.**—Booklet on the subject of floor construction and maintenance with especial reference to industrial conditions. 16 pp. 8 x 11. General Chemical Co., 40 Rector St., N. Y.

**G. & G. Atlas Systems.**—Catalog No. 1755 A.I.A. File No. 25-h-21 illustrates and describes Atlas Pneumatic Tube System and supplies with details as to saving in floor space, personnel power and maintenance and time. 8 pp. Gillis & Geoghegan, 548 West Broadway, N. Y.

**Chimney Pieces.**—Portfolio of photographic reproductions of fireplaces and mantels in all styles and periods with plans and measurements. A valuable addition to the files of every architect and designer. Jacobson Mantel & Ornament Co. 322 East 44th St., N. Y.

**Jenkins Valves.**—Four convenient handbooks classified according to types of buildings. The series covers hotels, apartment houses, clubs, auditoriums, theatres, industrial plants, office and loft buildings, banks and stores, public buildings, schools, churches and community houses. Jenkins Bros., 80 White St., N. Y.

**Store Front Construction.**—Full size details showing Kawneer construction. 16 x 20. Kawneer Mfg. Co., Niles, Mich.

**Enameled Plumbing Ware.**—Catalog F. Very complete illustrated list of Kohler products. Indexed. 215 pp. 7½ x 10½. Kohler Co., Kohler, Wis.

**Saving Home Construction Costs.**—Technical booklet on this important subject. Long-Bell Lumber Co., R. A. Long Bldg., Kansas City, Mo.

**The Roof Beautiful.**—Brochure illustrated in color on the subject of roof treatment. 8 x 11. 32 pp. Ludowici-Celadon Co., Monroe Bldg., Chicago, Ill.

**Marbleloid—the Universal Flooring.**—Illustrated booklet covering subject of modern flooring in various types of buildings and for many uses. Industrial plants, restaurants, schools, hospitals, sales rooms, churches, theatres are covered. 24 pp. 8½ x 11. The Marbleloid Co., 461 8th Ave., N. Y.

**The Book of Decoration.**—Brochure profusely illustrated covering typical rooms in the various period styles, together with their finishing accessories. Notes on wood finishing. 50 pp. 8½ x 11. Murphy Varnish Co., Newark, N. J.

**Dependable Drawing Materials.**—14th Edition. Complete List of drafting room supplies. 356 pp. 6 x 9. The Frederick Post Co., 3617 No. Hamlin Ave., Chicago, Ill.

**National Steel Fabric.**—Illustrated book for the information of architects, draftsmen and builders. Covers various types of stucco work with working drawings and much useful information. 32 pp. 8½ x 11. National Steel Fabric Co., Union Arcade, Pittsburgh, Pa.