

SUBSTITUTION

**\HE** substitution of items acceptable to the architect and approved by him in cases where the specifications contain an "or equal" clause is quite a different thing from the substitution that exists in many cases, some of which have recently come to our attention. In the cases we have in mind the architect's specifications called for a given material to be furnished by a certain manufacturer without the mention of any alternatives or any "or equal" When the work was finished it was disclause. covered that a similar material to that specified had been substituted and had been passed by the architect or his representative. In such cases as these the manufacturer of the specified material is usually powerless to secure redress. The owner pays for the specified article, which he does not receive, and the contractor in most, if not all cases, reaps a benefit from the use of an article which he obtains at a lower price. Both the owner and the manufacturer suffer and the contractor makes whatever difference there may be in price, because the architect's specifications do not mean what they say unless they are made effective, unless the representative of the architect on the job sees that they are carried out.

Now it is perfectly clear that if the closest kind of supervision is exercised such substitution can not occur. But to put the blame upon the architect entirely, without considering other elements which enter into the matter would be hardly fair.

It is well to look into some of these conditions by way of seeking a remedy. One reason it is possible for the contractor to make unauthorized substitutions is that the architect or his representative cannot be on the job continuously and when the material is substituted is not of a nature to be easily detected after it is placed in the building, substitution is comparatively easy. A certain remedy would be the employment of a clerk of the works but in the case of buildings of moderate or small size this is prohibitive in cost. It is probably true that in most such cases the architect's fee is not sufficiently large to permit as close supervision as he would like to give or as his client believes the work is receiving.

Another cause of this evil is the tendency of many

owners to disregard the advice of the architect in the selection of a contractor and to let the work to someone of whom the architect knows nothing, or at least nothing favorable, because of the lowness of the estimate. When this happens it is almost impossible for the architect to watch the contractor closely enough to insure the carrying out of his specifications. When the work is done by a contractor the architect knows to be reliable, the owner may be reasonably certain of satisfactory results and of receiving the goods specified.

The most practical means of reducing this evil is naturally the marking of the goods by the manufacturer in such a way that they may be identified easily by the architect or his representative on the job. In the case of many materials this is not easy and the stamping of goods with glaring trademarks which would show in the completed work, is, of course, not to be recommended. But in most, if not all, cases some mark in the nature of an identifying design may be placed on the material in such a way as not to mar the appearance of the work, while it enables the architect or his representative to see at a glance that the articles specified have been supplied, even though they may have been installed during his absence.

This is a serious matter for when an owner or an architect expressly calls for an article it may be assumed that he has good reasons for doing so and certainly, the owner should receive what he is paying for, not something else. Some of the steps, then, which will tend to reduce this evil seem to be: the closest supervision possible under the circumstances, greater firmness on the part of the architect than is often shown in advising the client in the selection of a contractor, and the marking of items that enter into building construction or equipment with unobtrusive but characteristic identifying marks.

There are many angles to this question and we would like to have expressions of opinion and comments upon substitution from our readers. Won't you write us an informal letter about this matter as you see it?



Sketch in Semur, France, by Wilson Eyre, 1923.

# MASTER DRAFTSMEN, XIII

WILSON EYRE

VILSON EYRE, although Philadelphian by descent and by long residence in the Quaker City, was born in Florence, Italy, and spent his early years in that wonderful romantic Tuscan city. Under such good influence directing the

necessary to mention that the influence of Mr. Eyre's work has been the mainspring of the Philadelphia movement.

Every architect worthy of the title is primarily a draftsman and his interest in architecture usual-1ybegins by taking note of artist presenta-

natural instincts during the formative years, no harm could be expected to come to the spirit from future associations, however bad they might be. To one naturally endowed with instinct for the beautiful, the poetic and romantic, with an eve to the glorious and quaint in the art of the past, Florence would seem to be the ideal instructor as to the right path and her protégé be ex-pected to hold fast to the faith early instilled into his mind by all that his eyes perceived about him, during the years when the first habits of mind were formed.

Wilson Eyre and his friends, Walter Cope, John Stewardson, and a few others, founded the interesting most architectural society in existence-the T-Square Club of Philadelphia — at a time when that which passed as "architecture", in that city, was at the lowest ebb that the tide of building de-



Wilson Eyre

sign has ever reached. All about them were new, huge and hideous monstrosities, evidences of dull or callous mindedness-the very devil to the mind nurtured in Italy's most alluring city. Who that can remember the early work of the members of the T-Square Club, in its monthly sketch competitions, does not realize that out of those young, earnest, artistic efforts has developed the excellent school of Philadelphia residential architecture of today,-an architecture distinctive of its locality, permeated with charm and the lovable qualities expressive of good home life? One cannot say too much of it! It is hardly

are those which educate by drawing out of the embryo artist-or even the simple observer-all of the best qualities in his nature rather than by trying to cram into his mind the ideas or thoughts of another. The spirit of emulation is generated by the suggestion that some given thing is an easy path-for it is only human to seek that which seems to be the line of least resistance. How very easy it would be to make a simple drawing such as Eyre's! Every young student is sure he can-and many try, begin, and discover something! It is easy to make (Continued on Page 54)

tion of architectural designs. Mr. Eyre's drawing has always been of an individual and unique style. Nobody else draws like him, and none that has imitated h's work has done so with sufficient success to cause him to continue. More than a few have attempted to follow his style but have, through doing so, found a style of their own and soon branched off into it. That seems to me to be the best influence possible - one that suggests and points a way to new individuality of a fine kind, rather than one that dominates and makes mere followers and copyists.

If something must dominate a student it should be scholarship — the broad copyism of the best that has been done during all time rather than a personal influence which tends to make a mere stereotype of itself. The best influences in all matters of art



Sketch by Wilson Eyre, 1923. Street Café, Paris, France.



Sketch by Wilson Eyre, 1923. Caudebec, France.



Fanciful Composition Sketch by Wilson Eyre.



Drawing by Wilson Eyre. Interior of Living Room, Sparrows Point, Maryland.



Drawing by Wilson Eyre. Proposed House in Ohio.





Sketch of Dining Room Mantel for Dr. Harte, Philadelphia, Pa., by Wilson Eyre.



Drawing by Wilson Eyre. University Museum, Philadelphia, Pa., Wilson Eyre & McIlvaine, Stewardson & Page, Day & Klauder, Associated Architects.



Proposed House near Chestnut Hill, Philadelphia, Pa., by Wilson Eyre.



Carvings in Oak for Mantel Corbels. Designed by Wilson Eyre.



Drawing by Wilson Eyre. Farren Memorial Hospital, Wilson Eyre, Architect.



Drawing by Wilson Eyre. School and Dormitory Building for the Augustinian Fathers, Staten Island, New York. Wilson Eyre & McIlvaine, Architects.



Proposed Garage by Wilson Eyre.



Drawing by Wilson Eyre. School and Dormitory Building for the Augustinian Fathers, Staten Island, New York. Wilson Eyre & McIlvaine, Architects.



Designs for Leaded Glass Windows by Wilson Eyre.

#### (Continued from Page 43)

a copy of one of those simple drawings-but it must be a copy, or nothing! Why? Immediately the student discovers that the charm of the drawing depends on the charm of the design, and for further "models" there are only the other works of the same designer. All are different. Every composition is an instinctive expression. It does not admit of improvement-at least, certainly, the kind of improvement that a follower could attempt. The kind of student who is attracted to, and studies the work of Wilson Eyre, is possessed of a certain instinct himself, which is more prone to follow the suggestions of the work of another than to copy it. That which he finds in the work of such an artist is an individual expression of his own conception of beauty, and an inspiration to self-expression. It is, therefore, not easy to point out this, that and the other pupil of Wilson Eyre; but neither is it difficult

to observe his influence in the work of nearly every younger architect practicing in the neighborhood of Philadelphia—and in many other places.

His work is, of course, widely known—for the press of Europe does not ignore our publications and many are his admirers among the French and British architects. He was described in his younger days by Mr. Githens as "a polished Bohemian" capable of singing a good song, or telling a good story worth remembering. Then I have been told a little story that is "on" him. Several years ago he altered an old house and at the time was rather proud of the results. Recently the client called upon him to make further alterations and he had forgotten the job. When he visited the building his first question was, "For goodness' sake, why did you build that roof so high?" "You ought to know," replied the client, "you *did* it !"

FRANCIS S. SWALES.

PLATE XXV



ETCHING BY EMIL FUCHS. "THE READER.'

The delightful little etching reproduced on the other side of this sheet, at the exact size of the original, shows the ease and freedom of drawing that reveal the artist's mastery. It is remarkable for the subtlety of its line and tones. Etching is not usually regarded as a satisfactory medium for the rendering of figure subjects because of the uncertainty as to quality and character of the lines produced. but Emil Fuchs has conducted experiments which have led him to certain methods that enable him to watch the progress of the etching and control the process with unusual precision.



SKETCH BY FRANCIS S. SWALES. GUILD HALL, GUILDFORD, ENGLAND.

The sketch by Francis S. Swales, reproduced on the other side of this sheet, represents an excellent type of sketch for the architect or student to make while travelling. It is a true sketch, embodying the spirit as well as the facts regarding the subject, made without undue expenditure of time and with skill and knowledge, as well as perception.



R. HINTON PERRY, SCULPTOR. DAUGHTER OF PAN.

On the other side of this sheet we reproduce a delightful garden sculpture by R. Hinton Perry. Mr. Perry is perhaps best known for his "Fountain of Neptune," Library of Congress, Washington, and for "Pennsylvania," on the dome of the capitol at Harrisburg, Pa.



SKETCH BY HERBERT J. POWELL. SANTA MARIA MAYOR, RONDA, SPAIN.

On the other side of this shect is reproduced one of the many interesting sketches made by Herbert J. Powell during his travels in England, France and Spain as winner of the Shelden Travelling Fellowship. Mr. Powell has just returned to this country. A brief account of his architectural training is printed on another page of this issue.

# DRAFTING ROOM PRACTICE

## BY HAROLD D. WAY

**I** T IS our purpose to consider here the plain, every-day draftsman's problem, that of turning out drawings for the builder. We are interested just now in this one part of the architect's workshop, in so far as we can isolate this part

Approached from the draftsman's view point or the boss's vantage point, "disadvantage,"

the bosses might saythe problem is the same, to turn out work expeditiously at a minimum cost, commensurate with good results. There has been much discussion recently, pro and con, in regard to efficiency in an architect's office. We can avoid argument, however, for having saved a minute we are not like the stranger in our midst who, having been hustled from the local to the subway express, didn't know what to do with the minute he had saved-we can apply it to better design. Brunelleschi had difficult problems, but they were much less intricate than ours. We may do what we please with our time, energy and money saved, use it for the butcher and baker, or do better design; the problem is to save it.

from the others.

The work of the various offices all over the

country shows clearly the desire for better drawings and labor saving devices, for the elimination of various forms of waste. Mallock, the English economist, in his "Aristocracy and Evolution" says, as we remember, that advancement is made by those rare, erratic, individuals who push ahead in advance of common folks, break loose from the conventional way of doing things and try out the new. When proven good, the common herd just adopts the new as its own. The same thing is happening in architectural work. The making of working drawings on tracing paper, not for a moment tolerated a few years ago, is a simple case in point. Photographic processes for enlargement from small to larger scale with a very considerable saving and at the same time preserving faithfully the character and scale of the smaller drawings is worthy of consideration by every architect.

A word of warning should be given, however, lest the ambitious man and the one set in his ways.

should be encouraged not to adapt himself to his environment. Some draftsmen are stubborn as well as some bosses. There is the fellow who simply will not make any attempt to find out the traditions and methods of the office he is in. An office force should be a unit, just as a base ball team, a ballet chorus, or an orchestra is. Some men will not letter, dimension or do anything else like the rest of



Sketch Study for Plymouth Fountain. McKim, Mead & White, Architects.

the force. They will express elevations in feet and decimals of a foot even though every other drawing in the set has elevations given in feet and inches. Follow the system no matter what it is, consistently. When it comes to innovations, they should be carried out in the same way, consistently.

In every office it is a problem to maintain unified action and at the same time not to kill initiative. The draftsman should be more than a cog in the wheel. He has a close-up view of things that should make his suggestions especially welcome and if they are not, he is not in the right place. A man should choose his boss as carefully as the boss picks his men.

It must not be forgotten that methods must be adapted to the office. An "Ingersoll" and a "Wal-

tham" are both built to tell time, but the factory methods in producing them are necessarily vastly different. We have "Ingersoll" offices, of course, and "Ingersoll" jobs as well, where an elaborate system would be superfluous.

It is the intention to follow in a later number with a discussion of plans, schedules and various short cuts, which will be of interest to the younger draftsmen, and to talk of those obvious things which it is well for everyone to consider now and then.

It was the good fortune of PENCIL POINTS to be able to secure for this number some especially noteworthy drawings. As the writer has no first-hand acquaintance with the work shown or with the working of the office in which they were made, he cannot explain them as he would like to. In fact, any explanation would be unfair to the drawings and the office.

A good many times a junior draftsman has said he thinks he could do a set of working drawings, but he would not know just where to start after the sketches were turned over to him (we will forget for the time being the finishing of the job). The thing that has impressed the writer most in looking at the drawings illustrated is the clear crystallization of the idea in the first sketch and the straight-a-way and thorough de-velopment of it in the working drawings and again in the details, without the usual floundering It is evidence of the around. definite thinking that obtains in few offices and is not to be mistaken for lack of study. There is a great temptation to point out in detail all of the places where this may be observed and having written it, we have scrapped it as being less interesting than letting the reader have the fun of following it through for himself from one stage to the next.

We would like, however, to call attention to such items as the arrangement on the sheet, the stage of completion to which repeated motives are carried, method of showing elevations and grades, stone jointing, the extent to which the jointing of stone work is indicated, the method of dimensioning, the various notes, such as the submission of models, reference to other drawings, work not included

in this contract, the allowance of stone for carving, etc.

Were a draftsman to list up items for himself from the drawings illustrated and other drawings, not only for reference and for use as a check list but for clarification of the subject in his own mind, it would be well worth the effort. It would probably result in less foolishness and more of the essentials being put on a drawing.

In general, it is obvious that the extent to which repeated and symmetrical ways and motives need be drawn out in detail depends upon the character of the job. It certainly would be wasted effort to draw every window in an elevation for a loft building. Even some restraint was felt in the character of work illustrated when it came to the windows in the terrace wall. The words "ditto" and "repeat" must be used with great care to make sure that it is clear just what is repeated and where. A note as to symmetry about an axis is a great labor-saving device when applicable.

The extent to which stone jointing is to be shown can be determined by a choice between showing the complete jointings at small scale, indicating it at the one-eighth or one-quarter inch scale for the purposes of estimate, leaving the detailing of it to be done in



Sketch Study for Plymouth Fountain, McKim, Mead & White, Architects.

the office or indicate it and let the stone contractor do the laborious work. The difficulty with the last method is that it requires considerably more work in checking.

When it comes to the matter of careful detailing of ornament, we will always find architects who do not like to make the decision until they have to, those who can make it much better in the model and those who object to paying for the drawing of something that has to be modeled.

In draftsmanship the personal equation is bound to enter. A man is tempted to make a snappy drawing, if he knows how, rather than one easily read and definite. This applies to the line used, arrows, lettering, and the like. An arrow is useless unless it is definite and clearly indicates the point to which the dimension is taken. Lettering should be sufficiently large and of a character to be easily legible, and this is especially true of figures.

Accuracy of drawing, within reason, is conducive to a considerable saving of temper and time. A method, simple enough, but apparently not often used, is to draw elevations by scaling from *datum* or some *datum* assumed for the particular drawing. This eliminates that troublesome accumulative error which is not only an an-

noyance but a great waster of time. It is certainly a help to have the over-all dimension scale within reason and to have the proper relation of parts maintained.

Too many dimensions are as bad as too few. Window heights must be fixed, for instance, on the exterior of the building, but the dimensioning of the same windows on the interior, unless required by the coursing of interior masonry, is dangerous business. The window detail may be settled once for all, but even then there is chance for error and unless required this procedure should be avoided.

Careless work or the failure to consult all of the other drawings related to the work in hand results in some curious and, at the same time, exasperating disagreements. An example of this would be the case of fixing the pitch of a roof on one drawing as thirty degrees, on another by a note that the roof had a rise of seven inches in twelve and on another it might have a dimension of fourteen feet to the ridge with a span of forty-eight feet, four inches. The results are almost the same but not exactly—the question is, which is right, and will all the trades pick on the same pitch without correspondence.

The mere putting on of notes without thought, without reference to the specifications, other drawings, thought as to what the contractor wants to



Plans and Elevations (Quarter-inch scale contract drawing). Memorial Fountain, Plymouth, Mass. McKim, Mead & White, Architects.



Three-quarter Inch Scale Details (Contract drawings). Memorial Fountain, Plymouth, Mass. McKim, Mead & White, Architects.



Full Size Detail—Memorial Fountain, Plymouth, Mass. McKim, Mead & White, Architects. (See other half of sheet on page 68)



Full Size Detail-Memorial Fountain, Plymouth, Mass. McKim, Mcad & White, Architects.



Elevation, Butler Art Gallery, McKim, Mead & White, Architects.

know and needs to know is a great past-time, but is not as much fun for the man in charge of the job, the man who checks, the contractor and the boss. Very often a note seems perfectly clear to the man who formulates it but is utterly meaningless to the man who has it thrust at him. If it is something worth adding to a drawing it deserves careful framing. A draftsman should put himself in the contractor's shoes, mentally, and see how he would interpret the words after he had twisted their meaning around a few times. It is surprising how many meanings spring from a telegraphic sentence. Then again the drawings should be carefully examined to see what additional information is required—what there is that the contractor would be in doubt about. Titles

likewise require attention to avoid ambiguity and to define carefully just what is included in the drawing.

The practice of putting a partial specification on the drawing is not in conformity with the best practice, be-cause in the first place, the note cannot usually be complete, and in the second place one naturally expects to find it in the specification. The result is like a poorly indexed book, the information is there but cleverly hidden. Of course if one wishes "to put it over" on the contractor, this is one method. The builders will tell us in confidential moments, though, that a ten per cent item added to his total bid is his best protection.

Drawings are in the nature of things best fitted to portray to what extent a given material is used—its form and its setting; the specifications should define the quality and other physical properties of the material, particulars as to delivery and the quality of workmanship. It makes for convenience in reference to keep these two methods of definition distinct.

Another objection to the specification-like notes is the unnecessary crowding which they cause. There is enough really pertinent information to a drawing to make it interesting if not 'busy' if that is the effect that the draftsman desires. It is difficult and requires considerable ingenuity to so place the dimensions, captions, and the notes so they may be easily read and not interfere with the drawing itself. Dimensions should, of course, take precedence in the scheme of things as notes clearly worded and sufficiently prominent may be placed almost any where.



Pencil Sketch for Elevation. Washington Heights Educational Building, McKim, Mead & White, Architects.

Careful arrangement of work on the sheet contributes greatly, not only to the appearance but also to the legibility of the drawing. For instance, several elevations or sections placed side by side, on the sheet, should, when possible, be referred to the same *datum*. Errors in draftsmanship are reduced to a minimum when elements occurring at the same level can be so drawn For convenmechanically. ience the datum lines or floor levels can be carried through from one drawing to the next. This is especially of value when a whole series of small sections can be grouped together and placed at the proper relative levels. It certainly is better thus than when, in a moment of sudden inspiration or burst of enthusiasm, a draftsman decides to spatter the drawing with a new section.

(Continued on page 87)

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Contract Drawing, One-eighth Inch Scale. Cloth. Washington Heights Educational Building. McKim, Mead & White, Architects.



Three-quarter Inch Scale Elevation, Cloth. Washington Heights Educational Building. McKim, Mead & White, Architects.

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Three-quarter Inch Scale Elevation. The Butler Art Gallery, McKim, Mead & White, Architects.



Full Size Detail. The Butler Art Gallery. McKim, Mead & White, Architects.

# HERE and THERE and THIS and The PITTSBURGH'

DEPARTMENT



Copyright, Altwater & Bro., Pittsburgh, Pa. The Silhouette of Pittsburgh, Pennsylvania, on one of its 365 days of sunshine



The Pittsburgh Architectural Club and The Pittsburgh Chapter, A. I. A., at a joint meeting, Carnegie Institute on Technology, May 19th, 1925. Photo specially made for PENCIL POINTS.
## THAT for JULY CONTRIBUTED by **TECTURAL'CLUB**

CONDUCTED BY R.W.R.



uilt by the Pittsburgh Architectural Club Members, but not yet entirely finished.



fficial Group. Left to right—W. H. Harrold, Treas., P.A.C.; Edward B. Lee, Editor; Max Nirdlinger, V.P., A.C.; Frederic Bigger, Director A.I.A.; H. K. Jones, Pres. A.I.A.; T. W. Ludlow, Sec. A.I.A.; K. R. Crumpton, Pres. P.A.C.; Thos. Pringle, Director; Samuel Yellin, Guest.



**P**ENCIL POINTS has opened its pages of this issue to the Pittsburgh Architectural Club. What is the Pittsburgh Architectural Club? It is an association, a gathering, a caucus, a conglomeration of men, presumably architects or draftsmen, with here and there a stained glass man or a material man to liven up the mass and add that variety which we are told is the spice of life. It is incumbent upon an American Club to be full of bustle, to have great undertakings, to pervade the atmosphere surrounding it with the continual news of its activities. The Architectural Club does this to the best of its abilities. It maintains an exhibition of architecture in which each year the people of Pittsburgh are afforded the precious opportunity of surveying the marvelous advances in architecture which have been made by the profession in the city and elsewhere. We have had good exhibitions; we have had not so good, but they have done something. It has afforded us an opportunity to chatter, to see somebody's else work, to get ribald over this, to wax enthusiastic over that, and generally freshen our minds.

The PITTSBURGH'

We have also endeavored to kick up a racket aimed at that vast and impenetrable mass called the outside public, and register at least a dim impression upon it of such a thing as an architectural profession. Like every other club, we have been torn at times with divided counsels, the variety of opinions held in the club being as numerous as the members. There has been much squabbling, much argument, some agreement, some violent quarrels and from time to time one party or another emerges from the yeastly stirring to voice the opinions of its crowd as to how the Architectural Club should impress public life and shed honor upon the noble profession to which we belong.

In brief, the Pittsburgh Architectural Club is like every other professional club that ever was. With a carefully managed publicity we could pose as a most four-square organization solidly planted behind continuing balances, well meditated and divinely inspired, but we do not wish to pose thus. We prefer to look the facts in the face. When we dig into the minds of people and reflect on the way our slow and imperfect civilization has developed, common honesty requires us to recognize that the purpose of a club is not primarily to present to the outside world the front of a highly developed and efficient organization—relentlessly pursuing chosen ends to a certain consummation—but rather a means whereby many minds can clash, rub against each other, stimulate each other and so reflect itself in less direct but more substantial ways upon the profession itself. At least the most fundamental justification for the future of architecture does not lie with propaganda but with that which the propaganda is supposed to benefit, namely, the architects themselves. For this and other reasons which, chased down to their sources, come back to the same thing, we have published for several years *The Charette*, and styled in its first issue, the "Official Wurlitzer" of the Pittsburgh Architectural Club, a brand of humor which every architect will recognize affectionately, and later the "Official Vehicle", and finally, "A Little Journal of Rejuvenation". In this little paper much nonsense has been published, some fun, here and there a grain of sense, but altogether it has provided a place where the members can moderately abuse each other or express their dogmatic opinions about the theory, the practice, and the prospects of this so-called profession to which we all are bound.

ITECTURAL'CLUB

The Pittsburgh Architectural Club sketches; it picnics; it draws from life; it listens to lectures. None of these activities perhaps is as whole heartedly attended to as the eating of dinner. But what would you? It is said on high authority that man does not live by bread alone, but we are an improved people. Does this tell you anything about the Architectural Club? We fancy no more than could be told by any Architectural Club throughout the land. Ups and downs, successes and failures are a portion of all of us, but the Pittsburgh Architectural Club has one expressing faculty, one gorgeous characteristic, one indomitable fact in its makeup—it will persist in being, come up, come down, slow going or fast going; the Pittsburgh Architectural Club has lived for thirty years and will live for three hundred years to come, if so be it that architects may eat and live for such a space of time.

It is fun to belong to the Pittsburgh Architectural Club because it makes life interesting. There are such abundant opportunities to get hopping mad or indulge one's self in gayety, and whatever may be on the knees of the gods, this much is certain—that the Pittsburgh Architectural Club serves the profession in ways no other organization could.



1. M. Nirdlinger, 2. Kaiser, 3. Frank Hitchens, 4. Kleber, 5. Guest, 6. J. V. Wilson, 7. Simboli, 8. Campbell, 9. Wolf, 10. Weber, 11. Chalfant, 12. McWilliams, 13. Trimble, 14. Kirchenbauer, 15. Neal, 16. Walters, 17. Roebling, 18. R. A. Willson, 19. Pringle, 20. Stulen, 21. Hoffman, 22. Dunnells, 23. Ingham, 24. S. Brown, 25. Ishen, 26. Vieman, 27. R. McQueen, 28. Bigger, 29. Ludlow, 30. Jones, 31. Marks, 32. Broida, 33. Simboli, 34. Guest, 35. Schwab, 36. Kroff, 37. Crumpton, 38. Boyer, 39. Reuitti, 40. Hagan, 41. Gellins, 42. Wilkins, 43. Harrold, 44. Lee, 45. Hornbostle, 46, McLean, 47. J. M. McQueen, 48. Guest, 49. Shaw, 50. Collins, 51. Bedner, 52. Henry, 53. Steffler.

Key to Group Photograph on Page 76.





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The Design Winning the Competition for the Selection of an Architect for the New York State Roosevelt Memorial, John Russell Pope, Architect.



Copyrighted by Office of John Russell Pope The Design Winning the Competition for the Selection of an Architect for the New York State Roosevelt Memorial, John Russell Pope, Architect.

#### JOHN RUSSELL POPE APPOINTED ARCHI-TECT FOR NEW YORK STATE ROOSEVELT MEMORIAL.

**J**OHN RUSSELL POPE has been appointed architect for the New York State Roosevelt Memorial as a result of his design submitted in the "Competition for the Selection of an Architect for the New York State Roosevelt Memorial". for visitors from the City and State but should be so planned that it would also become an integral part of the school and public educational system of the State; and likewise form an extension to the educational work of the American Museum of Natural History in the City and in the State."

The site of the memorial has been so chosen as to give it a close and significant relation to the American Museum of Natural History, which is

On pages 80 through 82 we reproduce some of the drawings submitted by Mr. Pope.

In the general statement of the Program of the Competition, Professor Henry Fairfield Osborn, Chairman of the Board of Trustees of the New York State Roosevelt Memorial, stated that:

"The design should symbolize the scientific, educational, outdoor and exploration aspects of Theodore Roosevelt's life rather than the political and literary.

"The design should be consistent with the dignity of the Empire State and reflect the national and international influence of Theodore Roosevelt.

"The Memorial should be harmonious with and embody the ideals, purposes and plans of the American Museum of Natural History to which Theodore Roosevelt devoted the early and closing years of his life.

"The Memorial should provide not only



Copyrighted by Office of John Russell Pope Plan.

located in the City of New York on a plot of ground bounded on the south by 77th Street, on the east by Central Park West, on the north by 81st Street, and on the west by Columbus Avenue. The memorial will be erected on a plot adjacent to the southeast wing of the museum.

The Jury which passed on the drawings was composed of the Trustees of the New York State Roosevelt Memorial and two architects, one selected by the Trustees and the other selected by the competitors and consisted of the following:

- Henry Fairfield Osborn, Chairman of the Board of Trustees,
- Peter D. Kiernan, of Albany,
- Mrs. Douglas R. Robinson, of New York,
- Chauncey J. Hamlin, of Buffalo,
- Charles W. Flint, Chancellor of Syracuse University, (Continued on

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Copyrighted by Office of John Russell Pope. Longitudinal Section—The Design Winning the Competition for the Selection of an Architect for the New York State Roosevelt Memorial. John Russell Pope, Architect.

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#### THE AMERICAN ACADEMY IN ROME

FROM a letter recently received by C. Grant LaFarge, **F** Secretary of the American Academy in Rome, from Gorham P. Stevens, Director, we quote the following:

"Another Annual Exhibition of the work of the Fellows has come and gone. The King's visit, the reproduction of the musical works, and the general exhi-bition, attended by 450 people, took place, all on the same day. It was such a strenuous affair, that next year I believe it will be better to have the exhibition spread over three days. three days. The exhibition was unusually good. We are keeping it in place for Mr. Edwin H. Blashfield to see— he is expected any day."

"The French Academy and the English School have also had annual exhibitions. It is interesting to compare the tendencies of the artists in these institutions with those of our Fellows. Some day perhaps there will be a combined exhibition of the work of all these talented young men.

"Prof. Kelsey has returned from Carthage, where his assistants have just successfully terminated the excavation of a concession. He has gone to London; then he returns to Ann Arbor for a few months.

The following gifts have come in: \$1,000 from Mrs. Mary Brooks Otis for general ex-

100 lire, anonymously for general expenses. "Members of the Academy are beginning to scatter. Prof. and Mrs. Merrill of the Classical School have per-manently left and so have a number of students of that School."

"Sculptor Tom Jones and wife walked into my office this morning. They are staying with Professor Fairbanks.

Jones has a commission to execute. "During the first days of the month, I attended an arch-aeological gathering in Tripoli. The Governor of Tripoli invited about fifty representatives from approximately a dozen different nations to be his guests in Tripoli and to see, in addition to Tripoli itself which is very interesting, the important excavations, which he is making at Sabathra and Leptis Magna. We also made one or two trips into the heart of the country with the Minister of Colonies, and we thus had an exceptional opportunity to see some of and we thus had an exceptional opportunity to see some of the habits and customs of the natives. The Italians have done a great deal to raise the standard of living through-out the province. The latter is well worth visiting, and can now be reached conveniently by boat from Naples, Syracuse and Malta." "All Rome has been treated to a most unusual sight, the illumination of the dome and the Pierre of

namely, the illumination of the dome and the Piazza of St. Peter's. Thousands of electric lights and flickering torches vied with one another in producing a gorgeous effect. The great dome fairly vibrated with life."



#### DONN BARBER

DONN BARBER died at his home, 125 East Seventyfourth Street, in his fifty-fourth year, on May 29th, 1925.

He died after a short illness and had hoped to make the new Broadway Temple his crowning achievement.

Mr. Barber probably was one of the most versatile of the artistic leaders in this country, and death came just as he was at the peak of a brilliant career in architec-tural work, displayed in many buildings in New York and in other cities.

Secretary Herbert Hoover had appointed him as the American delegate to represent architecture in the Inter-national Exposition of Modern Decorative and Industrial Art, now being held in Paris, where he was scheduled to speak on June 20.

Mr. Barber was a champion of simplicity and an ardent advocate of durable construction in this country. He gave time between the designing of the Hartford, Connecticut, time between the designing of the Hartford, Connecticut, Tower and the State houses in various parts of the country to develop the plan for the solution of the problem of congestion for the 7,000,000 people of New York. In addition to this he championed the work for "Better Homes in America", preached it on many occa-sions and gave freely of his time and his talents to the practical development of these programs.

But the ambition of the closing days of his life was the building of the Broadway Temple. It was said by those interested in this project that Mr. Barber originated the idea of this new type of American self-supporting cathedral, and that when pictures of last plans for it were distributed over the country he received more than 5,000 letters of inquiry about it.

Mr. Barber's career was brilliant from his student days in Paris, where he completed the work of the Ecole des Beaux Arts, in 1898, in the shortest time of record. He was the first American architect received as a member of Beaux Arts, and was decorated both by the French and British Government for his distinguished work. Mr. Barber was President of the Architectural League of New York and took this office last May.

He was born in Washington, D. C., Oct. 19, 1871, and was a descendant of Thomas Barber who came to Ameri-ca in 1634 and settled in Windsor, Conn. After grad-

uating from Yale, class of '93, and having determined to follow the profession of architecture, he took a special course at Columbia University during 1893-94, and then went to Paris to continue his studies. He was one of the originators of the atelier idea in the United States, and was head of Atelier Donn Barber, which made it possible for young and ambitious students to become successful architects. His pupils have been winners of many scholarships.

Among the more important monuments that testify to Among the more important monuments that testing to the value of his work in New York are the New York Cotton Exchange, National Park Bank Building, Mutual Bank, Lotos Club Building, Randall's Island Hospital group, Institute of Musical Art Structure, National Head-quarters Building, Central Branch of the Y.W.C.A., Valuetabalwa Harpital and Daramatica Theatra Knickerbocker Hospital, and Dramatists Theatre.

Few architects have covered the wide range of subjects that were entrusted to Mr. Barber over the period of twenty-two years that he practiced under his own name. He designed a number of admirable private houses, in-cluding those of Edward H. Litchfield, the late E. C. Converse, Horatio S. Shonnard, E. S. J. McVickar, Richard Delafield, Lorenzo D. Armstrong, William B. Dinsmore, Adrian H. Larkin, E. S. Ryenal, Charles Smithers, Waldron Williams and H. Edward Manville.

Mr. Barber was the architect for many buildings in the South and in New England and was consulting architect in charge of design for the Yale Bowl. He won from in charge of design for the Yale Bowl. He won from twenty of the foremost architects in the country the De-partment of Justice Building for Washington, D. C., The Connecticut State Library, Traveler's Insurance, Supreme Court Building and the Hartford National Bank Build-ing, all of Hartford; the Chattanooga Union Station buildings at Chattanooga, Tenn.; the Capital City Club at Atlanta, Ga., and the White Plains Hospital are other interseting averables of his work.

interesting examples of his work. He was editor of the *New York Architect* for four years, and President of the Society of Beaux Arts Archi-tects in 1909 and 1910. At the annual Beaux Arts ball, given for the benefit of struggling students, he was always one of the principal figures. In 1923 he represented the American Institute of Architects and appeared before the Board of Estimate against the proposed demolition of High Bridge.

Mr. Barber was also a member of the National Academy of Design, National Sculpture Society, and an honorary corresponding member of the Royal Institute, British Architects.

Among his clubs were the Union, University, Century, Lotos, Players, American Yacht, Apawamis, Racquet and

Tennis, Westchester County Hunt, and Knollwood Country. Mr. Barber was married to Miss Elsie Yandell, a daughter of Dr. and Mrs. Lunsford Pitt Yandell and sister of Enid Yandell, the sculptor, in Louisville, Ky., on Nov. 22 1899 He is survived by his wife three daughters 22, 1899. He is survived by his wife, three daughters, Mrs. Joseph Larocque Jr., Mrs. Richard S. Hoffman, Miss Elsie Y. Barber, and a son, Donn Barber, Jr.

#### PERSONALS

MORRIS ROTHSTEIN, ARCHITECT, has removed his offices to 186 Joralemon Street, Brooklyn, N. Y.

ERIC J. REEVES, LANDSCAPE ARCHITECT, KARL W. KRANZ, ASSOCIATE, have removed their offices to 505 Delaware Avenue, Buffalo, N. Y.

THEODORE H. SKINNER, CONSULTING ENGINEERING AND ARCHITECTURE, has removed his offices to Room 710, 103 Park Avenue, New York.

ADAMS & ADAMS, ARCHITECTS, have removed their offices to Builders Exchange Building, San Antonio, Texas. FRANK DUNHAM has opened an office for the practice of architecture at 1010-11 Tribune Building, Tampa, Florida. WELBY N. PUGIN AND HAROLD C. WALLACE have opened

an office for the practice of architecture and civil engineering under the firm name of Pugin and Wallace, with offices at 149 Sixth Avenue North, Nashville, Tenn.

HARRY LUCHT, ARCHITECT, H. G. ANDERSON, ASSOCIATE, have removed their offices to 432 Palisade Avenue, Cliffside Park, N. J.

CHARLES A. RAIG AND RICHARD H. Fox have opened an office for the practice of architecture in the Columbus Building, Westfield, Mass.



Plate made by Herbert S. Rosenberg, New York, as col-lateral work for the "History of Ornament" Course, given by Professor Hamlin at Columbia University.

#### UNIVERSITY OF LOUISVILLE

THE University Archi-Arts Society of the University of Louisville brought a successful year to a close on Thursday evening, May 21, with a big banquet, attended by thirty students, professors, draftsmen, and architects. The old drafting room was draped with colored crepe paper, its walls were covered with drawings made by the students during the past year, and with its horseshoe of white tables surrounded by merry faces it presented a very jolly sight. After everyone had eaten, the program of the evening began. The students were first introduced to the visitors by a song, each verse of which was about a different boy. The speeches of the evening followed, and there were plenty of them. Of course these speeches were varied, but the substance of them was: rejoicing at the success of the past years, farewell to the old quarters, and encouragement for the future. After the talks were over, Mr. W. E. Glossop, teacher of the class. awarded books prices teacher of the class, awarded books—prizes given by Messrs. D. X. Murphy, J. C. Murphy, W. E. Glossop and W. O'Toole—to the following students for their work during the past year: E. C. Lea, president of the society, first; Strattan Hammon, second; R. E. Schwab, third; and Debreit Hump. Robert Hunn, Jr., Arthur Drabnick, and Joseph Rade-maker, fourth. The meeting was then brought to a happy close. The members of the University Archi-Arts Society hope

that the other clubs have had as successful a year and wish them progress for the future.

Respectfully submitted, Robert W. Hunn, Jr., Sec.

#### UNIVERSITY OF MICHIGAN

'HE legislature of the State of Michigan has just THE legislature of the State of history and the first unit made an appropriation of \$400,000 for the first unit of a building for the architectural school of the Univer-sity of Michigan. This is probably the first time that a state legislature has made an appropriation for such a purpose.

### COLLEGE OF ARCHITECTURE, UNIVERSITY OF MICHIGAN

THE GEORGE G. BOOTH Traveling Fellowship in Architecture has been awarded to Kenneth C. Black of Lansing, Michigan. Honorable mention was awarded to LeRoy E. Kiefer of Detroit, there being four other competitors. This is the second year that the Fellowship has been awarded, which carries with it a stipend of \$1,200. Mr. Kiefer, the runner-up, is to receive \$150 given by the Detroit Chapter of the American Institute of Architects.

The jury consisted of the following architects: Maxwell Grylls, President Detroit Chapter A.I.A.; William B. Stratton, Past-President of the same Chapter; John B. Jewell, President of the Detroit Architectural Club; and Mr. Wirt Rowland, of Smith, Hinchman & Grylls, Detroit; and five members of the architectural faculty.

In the opinion of the faculty, there is an improvement in the designs submitted by the competitors this year over those of last year, and this improvement it is hoped will go on from year to year.

The purpose of the scholarship is to further a higher standard of preparation for architectural practice, the stipend being based on the endowment of \$20,000 given last year by Mr. George G. Booth of Detroit. Mr. Booth has taken a fine constructive interest in the architectural school, and along with the architects of the state has done much to co-operate with the faculty in advancing the school's standards and interest.

#### AN INVITATION.

THE example set by the Pittsburgh Architectural Club in contributing the material for the "Here and There" department in this issue of PENCIL POINTS starts something which we feel is well worth carrying on by other Clubs located in different parts of the country. Come on you Architectural Clubs and line up for future issues! Any reasonable amount of space will be alloted by arrangement to other Clubs, thus giving the members an opportunity to display their talents and put themselves and their city on the map, so to speak. Each organization may use its own ingenuity in selecting the material to be presented, subject only to reasonable editorial supervision at this end.





#### HERBERT J. POWELL

HERBERT J. POWELL, winner of the Shelden Travelling Fellowship from Harvard for 1924-25, has just returned from his travels in England, France, Italy and Spain. On another page of this issue we reproduce one of the many excellent pencil drawings made by Mr. Powell while travelling on the Fellowship.

Mr. Powell was born in Redlands, California, and was graduated in Engineering from the University of Redlands in 1920. He received his M. A. in architecture from Harvard University, School of Architecture, in 1924. While at Harvard he was presented with the Medal of the American Institute of Architects for general excellence in his work. Mr. Powell has been in the office of Mowll & Rand, and of Kilham, Hopkins, & Greely, both of Boston. At the present time he is with McKim, Mead and White, New York.

#### ATELIER CORBETT-KOYL

L UCHOW'S was the scene of the annual Patrons' dinner of the Atelier Corbett-Koyl, which took place on Friday evening, June 12. A jolly good time was had by all; the only disappointment being the absence of our inspiring patron, Mr. Corbett, who was out of town.

ing patron, Mr. Corbett, who was out of town. However, Mr. J. K. Smith, who has taken Mr. Koyl's place as patron, set forth his views on Atelier spirit. The rest of the evening was given over to frolic and song and the spirits which hovered low over the festive Board.

the spirits which hovered low over the festive Board. Victor Pribil, massier, presided as Toastmaster, ably assisted by his cohorts, Mr. F. J. Ryan, "souse" massier, W. G. Eichler, Secretary, and Albert Mohr, chairman, and the dinner committee.

Our friend the photographer who came to shoot the works, we are sorry to say, was the first casualty of the evening so, gentle readers, we must disappoint you with the Rogues' Gallery. The boys endeavored to take the flashlight but failed miserably because the powder was wet and the tripod lost a leg in this annual scrimmage.

Martin Beck, who just won the hundred dollars for his successful solution for the Aeroplane Landing Station, was given quite an ovation as he left to sail for France. You see it was quite an exciting evening.

Mr. Victor Candell designed the menu card. After the dinner we all went to the Village.....in taxis.

#### BOOK NEWS

Under this heading we shall publish brief notes of new books of interest to our field. Space does not permit of extended reviews but further information regarding any of the books may be secured from the publishers of the books themselves and may be ordered either through us or direct from the publishers thereof.-Ed.

Provincial Houses in Spain, by Arthur Byne and Mildred Stapley. A handsome volume containing 190 plates, 12  $\mathbf{x}$  16, with suitable text dealing with the subject indicated. Published by William Helburn, Inc., N. Y. C. Price \$25.00.

Architectural Construction, Vol. 1, by Voss Henry. A comprehensive book of 1267 pages, 9 x 12, dealing broadly with modern construction, with chapters on building materials and much other information of use in the drafting-room. Published by John Wiley & Sons Co., Inc., N. Y. C. Price \$20.00.

Price \$20.00. Standard Practical Plumbing, by R. M. Starbuck. A practical book of 432 pages, 6 x 9, covering subject indicated. Published by Norman W. Henley Publishing Co., New York. Price \$3.50. House and Garden's Second Book of Houses. A book of 192 pages, 9 x 13, containing about 600 illustrations on the subject of the modern residence. Published by House and Garden, New York. Price \$5.00. Principles of Decoration, by R. G. Hatton. A volume of 224 pages, 6 x 9, with numerous drawings covering the subject indicated. Published by Charles Scribner's Sons, New York. Price \$3.50.
The Home Owners Hand Book, by A. C. Lescarboura.

The Home Owners Hand Book, by A. C. Lescarboura. A guide for buying, planning and building. A book of 494 pages, published by the Scientific American Publish-ing Co., New York. Price, post paid, \$2.65. Manual of Office Practice, by Frederick J. Adams, A.I.A.

A tabulation of instructions covering the routine of an architectural office. 96 pages. Published by Charles Scribner's Sons, New York. Price \$1.25. American Colonial Architecture, Its Origin and Development

ment, by Jos. Jackson. An illustrated treatise with a bib-liography and index. 228 pages. Published by David McKay Co., Philadelphia, Pa. Price \$2.00. School Bonds, by John Guy Fowlkes, Professor of Education, University of Wisconsin. A guide for the



The Above Reproduces a Program Card Gotten Out by the Architectural Modelers Guild of Perth Amboy, N. J., in Connection with their Outing held on June 6th.



complete financing of a school building program. 180 pages. Bruce Publishing Co., Milwaukee, Wis. Price \$2.25. Drafting Room Mathematics, by De Witt C. Pond. Prob-lems of the drafting-room simply and clearly explained for the draftsman and architect. 153 pages. Published by Charles Scribner's Sons, New York. Price \$2.50. The Autobiography of an Idea, by Louis H. Sullivan, with foreword by Claude Bragdon, 329 pages. Published by the Press of the American Institute of Architects, New York. Price \$3.00. History of the Portland Cement Industry, by Robert W. Lesley. Covers subject indicated fully. 330 pages, 6 x 9. Published by the International Building Press Inc., Chicago. Price \$3.00. Practical Steam and Hot Water Heating, by Alfred G.

Practical Steam and Hot Water Heating, by Alfred G. King. A book of 551 pages, 6 x 9, covering the subject. Published by Norman W. Henley Publishing Co., New York. Price \$4.00.

#### COMPETITION FOR DESIGNS FOR ORNAMENTAL IRON WORK

J. G. BRAUN, as set forth more fully on another page of this issue, is offering money prizes for designs for ornamental iron work. This competition is open to all architects, draftsmen, designers, students of architecture and workers in iron. The purpose of the competition is to stimulate a wider interest in ornamental iron work and its application to various classes of modern buildings and was suggested by Mr. W. M. Buchroeder of Richmond, Va. All communications regarding this matter should be addressed: Ornamental Iron Contest, care J. G. Braun, 160 Greene St., New York.

#### EBERHARD FABER SKETCH COMPETITION

EBERHARD FABER SKETCH COMPETITION THE prize winners in the Eberhard Faber Sketch Competition are as follows: First prize, Miss Liz-ette J. Koch, River Edge, N. J., second prize, Mr. R. Alex. Willson, 646 Washington St., Mt. Lebanon, Pa., third prize, Miss E. M. Rogers, c/o Gage Printing Co., Battle Creek, Mich., fourth prize, Mr. John W. Schmidt, 2015 Flatbush Ave., Brooklyn, N. Y., fifth prize, Mr. Carl Jensen, 1034-74th Street, Brooklyn, N. Y., sixth prize, Mr. Otho McCrackin, 722 R. W. Bldgs., Hutchin-son, Kansas. The sketches submitted in this competition were indeed

The sketches submitted in this competition were judged by Mr. F. R. Gruger, Mr. Franklin Booth and Mr. J. C. Leyendecker.

#### RESULTS OF THE VERMONT MARBLE COMPETITION

THE memorial design competition closed April 1st, and on April 7th the judges met at the company's New York branch and awarded the prizes. Among the three hundred odd designs submitted, were contributions from architects and designers in practically all parts of the country. The fact that honorable mention was accorded to work produced in cities as far apart as Saint Louis and Toronto, is good evidence that the interest in the contest was confined to no one locality. Thirty states were represented, and one hundred and six towns. There was one entry from Cuba and one from London.

Four prominent architects acted as judges: Charles A. Platt and John Oakman of New York, Guy Lowell of Boston, and C. C. Zantzinger of Philadelphia.

 By a strange coincidence both the first prize of \$400

 and the second prize of \$200 went to the same man—

 Alfred C. Cass of New York. The third prize (\$100)

 was also won by a New Yorker—Aaron A. Kiff. Seven 

 teen men received honorable mention (\$25) as follows:

 Norman Issott
 Omaha, Neb.

 Edward F. Toney
 Niles, Mich.

 Pierre Lord
 Chestnut Hills, Mass.

 Phil. A. Moe
 Rockford, III.

 Merrit F. Farren
 New York City

 Clarence O. Morrison
 Brooklyn, N. Y.

 P. M. Torraca
 Cincinnati, Ohio

 C. B. Tandy
 Denver, Colo.

 James C. Green
 New York City

 Melville Wood
 Toronto, Ont.

 Victor E. Johnson
 Morristown, N. J.

 (unsigned)
 St. Louis, Mo.

 (unsigned)
 St. Louis, Mo.

 The chief purpose of the contest was explained in the announcement: "As most small monuments are bought

The chief purpose of the contest was explained in the announcement: "As most small monuments are bought from stock, any improvement in their design must come through the effort of the manufacturer. The Vermont Marble Company, desiring to use only the best obtainable designs, hopes through this competition to draw upon the skill and taste of the best designers."

There was more to it, however, than a mere bid for designs. There was an effort to awaken interest in the subject of cemetery memorials, and to uncover latent talent in the field of creative art. It is felt that this competition has accomplished much along these lines.

#### DRAFTING ROOM PRACTICE (Continued from Page 69)

This suggests immediately the obvious thing of blocking out these various sections as the work progresses on small pieces of tracing paper, adding notes in script and then arranging these sheets in a sane and orderly fashion under the large sheet of tracing paper or cloth ready for tracing. The same scheme may be used to study the arrangement for all drawings. It may be done at one quarter full size, say. This system has its adherents, but the drawings at final scale may be made to serve an additional purpose as well and, if not too carefully done, require less time than the scaling of them at one quarter the size.

Again as to the small sections and plans. The number of questions that arise during the progress of a building are just about in inverse ratio to those brought out in this article. Worked out in advance they save untold blunders. It would be interesting to know on a big job how many times some particular detail has been thought out by different draftsmen but not recorded in a finished drawing. Each in turn gives it thought and time to satisfy himself that the thing will work, and that is all. The next fellow does the same thing.

Summing up the draftsman's job we find it is as the lawyer said about law—'it is just common sense after all'. Keep our eyes open to what the other fellow is doing and just use common sense. When it comes to the new methods and devices let's not be like the member of a certain organization who said, "We can't do that, it's never been done before."

We will pay 25 cents a copy for issue of PENCIL POINTS for March, 1922. Address Box K. G. care of PENCIL POINTS.



Central Portion of Causeway Between Rockaway Beach and Sandy Hook Proposed by Colonel William J. Wilgus, C. E. Drawing in Carbon Pencil by Francis S. Swales.



Ist Prize in the Brooklyn Chapter, A. I. A., Competition by Paul N. Heller. Student at Pratt Institute, N. Y. George Axt and Arthur L. Guptill, Instructors.



A Country Residence, by Bruce A. Mapes. 2 Id Year Architectural Design, Pratt Institute, Brooklyn, N. Y. Arthur L. Guptill, Instructor.

#### JOHN RUSSELL POPE APPOINTED ARCHITECT FOR NEW YORK STATE ROOSEVELT MEMORIAL.

(Continued from page 81)

Mrs. William H. Good, of Brooklyn,

Architect, Mr. William Richard Kendall, Architect, Mr. William Richard Kendall, Architect, Mr. Milton B. Medary, Jr., who met in the office of the Trustees in the American Museum of Natural History on Monday, June 1st, and Tuesday, June 2nd, for the consideration of the eight anonymous plans which were submitted.

After an extended and most deliberate consideration in which the advice of Messrs. Kendall, Medary and Butler was sought and freely given, the choice of the jury fell upon the architect of plan No. 6, which proved on opening

upon the architect of plan No. 6, which proved on opening the sealed envelope to contain the name of the suc-cessful competitor, Mr. John Russell Pope. The seven remaining Architects it developed were J. H. Freedlander, New York City; Gordon & Kaelber, Rochester, N. Y.; Edw. B. Green & Son, Buffalo, N. Y.; Helmle & Corbett, New York City; H. V. B. Magonigle, New York City; Trowbridge & Livingston, New York City, and York & Sawyer, New York City. The Trustees were unanimous in their opinion that the choice had fallen on one of the ablest of representative

choice had fallen on one of the ablest of representative American Architects. Shortly there will be taken up again many of the difficult problems which enter into the solution of the plan and Mr. Pope will make any necessary revision of his competitive drawings.

The ten dollar prize for the most interesting contribution in the "Here and There" department for June goes to Nathan Barth, Montreal, Que., for his very ingenious cipher puzzle as published on page 91.

Mr. M. L. Scheffer, manager of the Architectural All-Stars, 101 Park Ave., New York City, care Donn Barber, announces that he is desirous of booking games with all architectural organizations within a radius of one hundred miles of New York City.

Herbert Lippmann, 62 W. 45th Street, New York wants a copy of PENCIL POINTS for March, 1925.

R. L. White, architect, Austin, Texas, is anxious to secure a copy of PENCIL POINTS for January, 1921.

Wayne Everett Bell, 704 Mutual Home Bldg., Dayton, Ohio, requires a copy of PENCIL POINTS for December 1924, to complete his file.

J. Bradbury Minott, 43 No. Laurel St., Hazelton, Pa., needs a copy of PENCIL POINTS for October, 1924.

Bdo., Manilla, P. I., requires copies for November and December. 1924. Pablo S. Antonio, care Mas Construction Co., 407 Salasar

Rudolph Villani, 1931 E. Pratt St., Baltimore, Md., desires copies for December, 1924 and February, 1925.

"A Subscriber", care PENCIL POINTS, will pay 35c each for the following copies of PENCIL POINTS delivered to the office of the publication. June, July, August, September, 1920, January, Fe'ruary, March, April, May, December, 1921, January, 1922.

SPENCER & PHILLIPS, ARCHITECTS, (A.I.A.) Fidelity Bank Bldg., Memphis, Tenn., are opening branch offices at Miami and West Palm Beach, Fla., and wish to get in touch within the next couple of months with several first class men, good at sketching and capable along general lines; especially men experienced in high class Gothic Church work, hotel and other commercial work and with Spanish style as used in Florida and California. Opening for several men in Florida and one or two in Memphis office. All of the above desirable requirements do not have to apply to any one man. Write fully in applying.



Studies by Kate M. Kruth, Costume Illustration Class, Pratt Institute, Brooklyn, N. Y. Ida M. Haskell, Instructor.



Roman Lettering from Hübner's "Exempla Scripturae Epigraphicae Latinae." Pompeiis, in Theatro, Tabulae Marmoreae Litteris Pulcherrimis; Extant in Museo Neapolitano.





# ATERENTIOAFVARR MVRENAE PTOLEMAIEL-CYRENENS PATRONO 3

Roman Lettering from Hübner's "Exempla Scripturae Epigraphicae Latinae."

- 1. Caere, Tabula Marmorea; in Museo Lateranensi.
- 2. Romae, in Arcu Titi in Summa Sacra Via, Litteris Aere Olim Incrustatis; Ex Imagine Photographa.
- 3. In Civitate Lavinia (Gentiani, Inter Ariciam et Nemus Dianae), Tabula Marmorea; Romae in Museo Capitolino.

# SPEVRRANIVSEESPNEPRONFEAB PROCVEVSGELLANVS PRAFFABREERALFCVRATORVAALJEL TIBERISPRATFPROPREDINVRBELAJINIO 1.





Roman Inscriptions from Hübner's "Exempla Scripturae Epigraphicae Latinae."

- 1. Pompeiis, Parva Basis Ex Marmore Nigro; in Museo Neapolitano.
- 2. Pompeiis, Cippus Hermae Similis Ex Marmore; in Museo Neopolitano.
- 3. Pompeiis, Cippus Hermae Similis Ex Marmore; in Museo Neopolitano.





Design for a Small House. Royal Barry Wills, Architect. Boston, Mass.



Doorway and Window Details. This is one of the plates from Part II of "Good Practice in Construction," by Philip G. Knobloch, now in course of Preparation by the Publishers of Pencil Points.

## THE SPECIFICATION DESK

#### A Department for Specification Writers

#### SPECIFICATIONS By W. W. BEACH PART IX.

#### GENERAL CONDITIONS, Continued

'HE foregoing completes the portion of the General "THE foregoing completes the portion of the General Conditions which may be considered as essential and invariable for all major construction awarded under a general contract. There should immediately follow those "Special Conditions" or "Supplementary General Condi-tions" of which we gave a rather complete elucidation in Part IV of this series. These will vary for different build-ings and in different offices, but each office has them more or less standardized as best serves their work. or less standardized as best serves their work.

There will also be variation more dependent upon the size of the job than is the case with the general conditions. Even for the latter, however, it is advisable that more than one form be used. The long form given in Part VIII should be considerably curtailed for small jobs and for minor contracts on larger jobs as we will later show.

The following paragraphs are so arranged that the first portion may be standardized and certain of the final paragraphs, as found necessary, varied as occasions demand. (It will be remembered that we are reproducing a com-plete specification for a consolidated district school build-

ing). SUPPLEMENTARY GENERAL CONDITIONS ART. 22. SCHEDULE OF DRAWINGS. (A) THE DRAWINGS referred to in Art. 3 and made

part of the Contract Documents are as follows :-

(Here follows a list of all drawings submitted to Bidders.) ART. 23. LIST OF ADDENDA:

(A) THE ADDENDA referred to in Art. 3 and made

(1) ADDENDUM NO. 1. (Here follows addenda in regular numerical order, if

there be any.) ART. 24. TEMPORARY WORK AND EQUIPMENT. (A) SUPERINTENDENT'S OFFICE. The Contractor shall, immediately after award of contract, furnish a substantial, weatherproof building at the site, containing an office for the Architect's Superintendent, of 120 sq. ft. floor area. It shall be fitted with movable sash, substantial door (with butts, latch and cylinder lock), table for blue-prints, desk with drawers, chairs and locker. This building shall be constructed under direction of the Superintendent.

(B) CONTRACTOR'S OFFICE at site shall be a substantial building and the proper place of deposit for copies of the drawings and specifications and all file records perof the drawings and specifications and all file records per-taining to the work. The Contractor or his Foreman shall be constantly in charge of same during working hours and shall there receive all orders and instructions. This office shall not be used for storage of materials nor as a loafing place for Employees, for which purposes the Contractor shall maintain such other sheds as are necessary. (C) TELEPHONE SERVICE shall be provided by the Contractor at the site in location approved by the Super-intendent, for their joint use and for the use of others when necessary in connection with work on the building. when necessary in connection with work on the building. (D) TOILET CONVENIENCES for all Persons em-ployed on the work shall be constructed and maintained by this Contractor in accordance with local ordinance, properly lighted and kept clean and sanitary, to the ap-

properly lighted and Kept treat and proval of the Superintendent. (E)STAIRS, SCAFFOLDING, RUNWAYS, LAD-DERS and similar appliances shall be provided by the Contractor, of sufficient strength and rigidity wherever for all trades of this contract. There shall be necessary for all trades of this contract. There shall be not less than one set of double ladders from basement to each floor and roof to every 12,000 sq. ft. (or less) of floor area until same is provided with stairs. Temporary stairways of 2" planking, with substantial rails and guards, shall be provided connecting grade with each other level as fast as building progress will permit. Permanent steel stairs or rough construction of other stairs may be used for this purpose if properly protected.

(F) TEMPORARY PLANKING shall be provided where required for flooring over portions of framing in order to facilitate work above same.

(G) ENCLOSING BUILDING. As soon as construc-tion is sufficiently advanced, this Contractor shall enclose the building, using temporary tight-board barriers and doors (with suitable locks) in all outside doorways. When plastering is complete (or sooner, if weather conditions necessitate), all window openings shall be closed with per-manent glazed sash. In summer time, finished wood sash shall not be installed for enclosing building before or during plastering. If such enclosing is needed, the Contrac-tor shall provide muslin sufficient for the purpose. (H) PAINT SHOP. The Contractor shall set aside a

room or rooms as soon as possible after building is enclosed, to be used as a paint shop, to and from which all wood finish shall be taken by this Contractor. This space shall be completely enclosed with temporary doors and sash and made dry for Painter, using salamanders or stoves, if needed. When this paint shop is thoroughly dry, finish woodwork may be stored therein but will not be allowed elsewhere in the building until all concrete and plastering are finished and dry.

ART. 25. MECHANICAL CONVENIENCES.

(A) HEAT FOR MATERIALS. The Contractor shall provide all necessary heat to warm aggregate, protect concrete, dry plaster and as may be needed for any other work in this contract, using therefor methods approved by the Architect.

(B) HOISTING PLANT. The Contractor shall provide, install and operate ample hoisting plant (or plants) as needed to insure maximum speed in prosecution of the work. consistent with safety and good construction. The locaconsistent with safety and good construction. The loca-tion, character, capacity and details of construction and operation of all hoists shall be subject to approval of the Architect, but such approval will not relieve the Contractor from all responsibility for damage due to defects in or operation of any hoisting apparatus or parts thereof. Stacks of steam boilers shall be of sufficient height to carry smoke above all parts of the work in progress or complete

(C) TEMPORARY HEAT FOR BUILDING. This Contractor shall provide such temporary heat as may be necessary for the work in the building, subject to ap-proval of the Architect. After heating plant is in readi-ness, this Contractor shall operate same (when heat is needed) for the benefit of all having work in the buildneeded) for the benefit of all having work in the build-ing and until completion of this contract, during which time the temperature in the building shall not be allowed to fall below 40° F. The Contractor shall provide suit-able fuel and attendance for the plant and shall properly care for same. Before its final acceptance, he shall re-place or repair any portions that have been damaged while in his care to the satisfaction of the Architect

in his care, to the satisfaction of the Architect. (D) LIGHT, POWER AND WATER. This Contractor shall provide all temporary light and power necessary to the operations under this contract, including connections needed to supply same. He shall also provide water for his own and all other operations in connection with the building. The Owner will provide City main tap, meter and cut-off, from which this Contractor shall extend such piping as is needed, with hose-bibbs for the use of all requiring same.

#### ART. 26. RESPONSIBILITY FOR PREMISES.

(A) THE BUILDING AND PREMISES will be in charge of this Contractor who will be responsible for same from the time site is turned over to him until the work

of the contract is accepted. (B) GUY WIRES AND ROPES shall not be attached

(C) KEEPING PREMISES CLEAN. The Contractor (C) REEPING PREMISES CLEAN. The Contractor shall keep the premises clean and free from rubbish as provided in Art. 19 and shall see that each of his Sub-Contractors keeps his rubbish and waste material to a minimum and completely removes all that may remain when his work is complete. Paragraphs B and C of Art. 19 will be strictly enforced.

#### ART. 27. PROTECTION.

(A) BOXING TREES. All trees and shrubs endangered by operations under this contract shall be carefully and adequately boxed with good planking before any hauling or excavating is begun.

(B) ALL WALKS, CURBS AND FENCES that are to remain shall be adequately protected wherever liable to damage. Sections of fence may be removed for passage and stored on premises, then placed in original condition at completion of work.

(C) SAFEGUARDS. In addition to the safeguards called for in Art. 11, the Contractor shall provide such tempo-rary walks and fences as may be required, also guardalso guardrails around well-holes, plank protection of all projecting masonry below cornice and of jambs and sills of openings used for passage, and shall maintain such guard and protection members until work is completed or same are ordered removed. Temporary fences, walks and sidewalks enclosures shall conform to ordinances and to drawings and details, where same apply.

(D) EXPOSED FOUNDATION FOOTINGS shall, in cold weather, be protected by straw or other approved material, sufficient to prevent damage from frost.
(E) SNOW AND ICE shall not be allowed to remain on any part of the structure (other than finished roofs), but shall be removed by this Contractor as soon as possible in the structure are until completion of exterior of building. sible in every case, until completion of exterior of building. (F) STORM-WATER and water from springs and pipe-leaks shall be adequately guarded against by ditching, plumbing or other means.

(G) WATCHMEN shall be provided by the Contractor during time premises are under his control, to furnish adequate protection to all parts of the building and site at all hours when, in the judgment of the Contractor or the Superintendent, conditions make such protection advisable.

ART. 28. PROCEDURE.

(A) LINES AND LEVELS. The Owner will have established lot lines and restrictions which are matters The responsibility for all other lines and levels of record. necessary for proper location and erection of the building and appurtenances rests upon the Contractor who shall em-ploy a competent Instrument Man. Points from which finished floor and wall surfaces in each room can be determined shall be established and maintained by this Contractor for coordinating the work of the various trades. All bench-marks and reference-points shall be carefully protected.

(B) TIME SCHEDULE. The work shall proceed in general as stipulated in Art. 16, each branch of same being carried on and finished in ample time to assure completion of the major sections and the whole work on or before the dates fixed in the following schedule, which schedule is agreed by all concerned to be fair and reasonable and is based upon the assumption that the Contractor can take over the premises and start work on June 15th, 1925 :

(1) Footings ready for column forms:	July 25, 1925.
(2) Foundations and masonry to grade:	Aug. 29, 1925.
(3) Walls ready for roof construction:	Oct. 31, 1925.
(4) Building enclosed:	Nov. 7, 1925.
(5) Temporary heat ready:	Nov. 14, 1925.
(6) Roofing completed:	Nov. 21, 1925.
(7) Plaster completed, except patching:	Dec. 31, 1925.
(8) Entire contract completed:	Mar. 31, 1926.

(C) DIVIDED PROCEDURE. (Where size of building permits) The Contractor shall proceed with foundations and masonry of one-half of building in advance of other half, when such procedure will operate to facilitate prog-ress by enabling other trades to work in one section while masons are on the other. All floor construction, metal or concrete stairs, interior partitions and furring in each section shall be done story by story as rapidly as the prog-ress of the work under other trades permits. (D) PROGRESS PHOTOGRAPHS shall be taken at

the expense of the Contractor, by a professional Photog-rapher approved by the Architect, at intervals, as desig-nated by the Architect, 12 negatives in all, on 8" x 10" plates. Three prints from each negative, mounted on linen, with binding margin, shall be delivered promptly to the Superintendent.

The following letter, submitted by Mr. John F. Gowen, of the Copper and Brass Research Association, comments upon the "General Conditions" as published in this de-partment for June. It is hoped that others interested in this subject will feel free to add their comments to those of Mr. Gowen.—Ed.

#### PENCIL POINTS,

HAVE read the Specification as published in your June I issue with much interest. It is very well done, I con-gratulate Mr. Beach. All in all these are about the most lucid and least vague and involved "General Conditions" I have ever read.

However, there are several places where, unconsciously, the law of self-preservation has been at work. This is not unusual, for specification-writers are prone to write complete alibis for the architect into the "General Con-ditions." Not only is this unfair, but it is poor practice, because, in the first place, the experienced contractor adds an increasing percentage for every clause wherein the architect disclaims responsibility for his own errors, and in the second place, such clauses do not stand the scrutiny of the courts they often lead to.

This specification contains several of these "alibi" clauses. They are the inheritance of the past, when the building contractor and the architect did not understand each other as well as they do now. If they are corrected the "specification" will be in a class by itself.

I shall discuss the specification in order of its articles. You will note that there are one or two other points included.

1. Should not the paragraphs beginning "It is important . . ." following Art. I, sec. B, be moved to position in front of Art. I? This is editorial matter by Mr. Beach.

2. Art. II, sec. F. If the architect once approves ma-terials or work of any kind, it is well nigh impossible to reject it later, unless fraud can be proven. I believe it has been established by the courts that clauses of this kind indicate an attempt by the architect to avoid responsibility for his acts.

In this clause there is no time limit except "later", which is indefinite and, if used literally, gives the architect un-limited power. Definitions of "later" and "defective" should be added to make the clause binding. 3. Art. III, sec. D. While this section is clear and concise it would be better to add, "However, upon request the architect will assist in delimiting the divisions of work"

the architect will assist in delimiting the divisions of work".

the architect will assist in delimiting the divisions of work". No matter how well done, there is going to be some con-fusion in the divisions, and the architect, who made them, will have to arbitrate all differences of this kind. 4. Art. III, sec. F. Here is the old clause by which the architect ducks responsibility for his errors of omis-sions,—with a new tag to it. I believe the tag makes it sound the only difficulty being to prove that the work omitted from any of the documents is "clearly within the scope of the contract". This clause makes the contractor increase his bid by a bigger provision for contingencies increase his bid by a bigger provision for contingencies.

I believe the contractor could be held to the proper execution of the work as shown by the reasonable intent of the Contract Documents as a whole without this clause.

My experience has been that the majority of these discrepancies (which are recognized by the courts as bound to occur) are found when the estimate is being made, and have always made it mandatory for bidders to have them adjusted before bids are submitted, under penalty of no redress from the architect's decision or interpretation after redress from the architect's decision or interpretation after the contract is signed. It is an open question as to which method is best. On small work (\$50,000) I have found that my method works admirably. 5. Art. III, sec. H. There should be some statement in this clause as to the obligation on the owner, through his architect, to furnish working plans at proper times,

and in time to allow the working pairs at proper times, and in time to allow the work to progress satisfactorily. 6. Art. IV, sec. B. The architect who approves drawings cannot avoid responsibility for errors in them unless they are errors of detail, etc. For instance, an "approved" wrong general dimension, such as 110 for 100 feet, if it were copied from the original drawings of the architect, would not relieve the owner and architect of financial responsibility therefor. This is an attempt to eat and have one's cake, and the courts are fond of pointing

out the errors in such clauses. It should be enlarged to include the errors for which the architect will assume responsibility.

7. Art. V, sec. A and B. These are excellent, so long as the architect remembers that, though he is being paid by the owner, he must be meticulous in his efforts to interpret the contract documents fairly. Because the docu-ments say he is the "unbiased arbiter" doesn't make him so, and he has, under this clause, much greater responsi-bilities than if he remained the agent of the owner alone. 8. Art. V, sec. D. This is all right and usual, but,

as everyone knows, it will be honored mostly in the breach. Therefore, why not admit it? If the contractor is wise he will make all verbal orders a matter of record by acknowledging them as soon as possible on his letter head, thus putting the onus on the architect. Unless the latter a breach of contract. The clause is altogether too rigid. It is, moreover, a direct contradiction of Art. VI, sec. C.

9. Art. VI, sec. C. The second sentence of this clause infers "verbal" instructions and is in direct opposition to Art. V, sec. D. In the former the architect admits that he expects to give verbal orders by refusing to abide by the consequences of them only "in case of dispute"; in the latter the specification calls for a representative of the contractor to "carry out all instructions of the architect". Then the architect, knowing that he is going to give verbal orders and forget to back them up in writing, says "All such instructions shall be as binding as if given di-rect to the contractor". What is the contractor to do?

What is meant is that all orders given by the architect what is meant is that all orders given by the architect should be in writing, and, if given orally to the superin-tendent by the Clerk of the Works, or any other subordi-nate, shall be confirmed in writing. The architect can-not disclaim responsibility by clauses in the specification for normal and usual procedure, such as giving verbal orders. Why not be fair and recognize the work he work orders. Why not be fair and recognize the way the work is going to be done? Here the contractor suffers for the vagaries of the architect. Let us suppose, the latter gives a verbal order which the contractor knows is wrong. Un-der Art. VI, sec. C he has to proceed for a day or so Undoing work in the wrong way, waiting for the written confirmation of it he has asked for. The architect, who is not always a wise and just arbiter, finds out that he has made a mistake, and, because the extras are already large, does not write a formal order as required by the contract, but simply tells the contractor next day to do the work another way. The contractor claims an extra and the architect counters with the decision that the contractor has no redress because he proceeded in violation of Art. V, sec. D. The contractor claims he proceeded under Art. VI, sec. C. Who is right? This sounds im-possible? Look at some of the legal decisions.

This contradiction is the poorest thing in the specifica-tion, and demonstrates "alibi" clauses perfectly. It's a good example of straddling. 10. Art. VII, sec. A. Why not allow the contractor

to submit a list of sub-contractors whom he is asking to figure on the work. Then there will be no unpleasantness after the letting. The low sub, on whose figure the general has been awarded the contract, is sometimes persona non grata to the architect, with resulting complications. Such a situation always means a skimped job, for the contractor naturally makes up some how the difference be-

tractor naturally makes up some how the difference be-tween the figures of the approved and rejected subs. 11. Art. XI, sec. D. The phrasing is poor. It would be better if there was a period after "time" and a new sentence beginning "In such cases, etc." 12. Art. XIV, sec. E. I doubt if this clause has any legal value, because again the architect is attempting to avoid responsibility for his acts. It would be better to call upon the contractor to make mode any defects of call upon the contractor to make good any defects of workmanship or materials for a certain definite time after

the completion of the contract, and to bond him to do so. 13. Art. XVI, sec. A. This is a good statement of the "time" question. The sentence "he hereby agrees that such time limits are ample, etc." brings forcibly to the con-tractor the whole question of time, and gives him no alibi in case of failure to perform

in case of failure to perform. In this connection there should be incorporated in Sec. B—"Extensions"—a clause covering the failure of the architect to perform on time; the owner is covered, and also inforeseen conditions, but how about the dilatory archi-tect who fails to provide details or make decisions on time?

14. Art. XVII, sec. C. Would not "Inferior" be a happier word than "Faulty"? How can an architect, in fairness to his reputation (and his employer) accept work he knows to be defective? And how can he justify his he knows to be defective? And how can he justify his negligence in allowing faulty work to be done under his supervision?

Very truly yours, (signed) John F. Gowen

#### THE DRY CELLAR By Otto Gaertner

S PRINGS, too, are a nuisance often found in an excavation and the water from them must be properly taken The manner of doing this must be studied out at care of. the site as conditions may vary greatly. An excavation wholly or partly in rock may present peculiar problems. Such an excavation may be on the side of a hill and water from above may follow the top of the rock or the fissures in the rock, until it reaches the foundation. Then again it may be possible that other fissures will drain the water away from below the cellar floor or the top of the rock at the low side of the excavation may be deep enough to permit the water to drain away. Then again the excavation may be wholly in sound rock or impenetrable soil so that the water accumulates in the excavation and can not drain off. Then the building resembles a cup standing in a pan of water and its walls must be water-proofed if the water is not to penetrate. If the excavation is deep and without an outlet for the accumulating water, considerable pressure may be exerted to the surface of the walls and on the underside of the cellar floor, causing the water to enter the cellar rapidly. Although the space from the face of the cellar walls to membered that such backfilling is relatively soft and porous so that surface water will accumulate in the space, saturating the backfill material and wetting the foundations.

It does not matter how wide this filled-in space is; it may only be a few inches. But it is the depth of the water filling this space that counts. The deeper the water or the more its level is above a certain part of the foundation wall, the more will be the pressure driving the water through that part.

There may be a pond, a lake, or a stream of water near the excavation and in that case the same difficulty may occur if the bottom of the excavation is below the level of the top surface of the water. Unless there is some natural or artificial barrier between the body of water and the excavation which will prevent it, the water will find its own level and rise in the excavation. A bank of clay or a ledge of solid rock may prevent it, especially if there is nothing to keep the water from draining off in another direction. Then again, if an outlet is provided to drain the water away from the building, the pressure will be relieved and the problem will become one of dampproofing and not water-proofing; that is, if the outlet is low enough.

If the outlet is low enough it will even prevent the water from soaking through the floor by capillary attraction. There are several ways of specifying such an outlet. It may be a ditch filled with broken stone covered in such a way as to prevent the earth from washing into it and closing the voids between the stones. Such a ditch should be specified to extend around the outside of the foundaseveral cross trenches may be specified under the cellar Better still. floor, in addition, leading into the outer trenches. From the outer trenches there should be at least one such trench leading to lower ground so that the water accumulating in the trenches may be led off. Or the water may be lead to drywells or to other available places. Better still a line of agricultural clay tile pipe or, preferably, salt glazed vitrified tile sewer pipe with hubs may be specified to be laid into the bottoms of the trenches to drain off the This pipe should be specified to be laid with a water. slight fall or pitch and with open joints so that the water may find its way into the pipe and be led away as mentioned above. Some method should be specified for keeping the pipe from filling with earth or sand. Since the pipe is laid with open joints, that is, with out cement mortar to hold the pipe together and make the joints tight, the hub jointed pipe should be used if possible.

The hubs project over the ends of the adjacent pieces of pipe and prevent the earth from washing into it. Joints may also be protected by wrapping them with tarred paper or by covering them with straw. The space around the pipe should be filled with coarse broken stone or cinders through which the water may find its way to the pipe. To keep this stone from clogging with earth it should be covered with finer stones or cinders after which as an extra precaution it may be covered with a layer of straw.

The cellar walls may be of brick, stone, terra cotta blocks, concrete blocks, cinder concrete or stone concrete. The denser the material used the more impervious will be the wall. Therefore, brick, stone and stone concrete well rammed are the best materials to use. Brick should be hard and well burned, stone should not be porous, terra cotta should be hard and well burned and must be trowel plastered with at least three quarters of an inch of cement mortar on the inside and outside. The inside coat is sometimes unwisely omitted. Terra cotta should only be used for cellar walls in dry locations and only on solid concrete or other footings. Care must be taken not to over load it with too heavy a structure on top. The specifications should call for the cement mortar to consist of one part cement and three parts clean sand.

If concrete is used the stone or cinders should be clean and free from dirt. Well screened gravel is also used and is as good as stone for foundation work. Depending upon the conditions to be met with, a concrete consisting of one part cement, three parts of clean sand, and five parts of aggregate may be used. For heavy loads of water pressure one part less of sand and one less of aggregate are used. With cinders only two parts of sand are often specified. The aggregate should pass through a two inch ring and be retained by a three quarter inch di-ameter ring. Under favorable conditions, larger sized stone are thrown into the forms when placing the con-crete. In such cases the stones should not be too large and care should be taken that they occur toward the center of the wall and that the concrete is well spaded around The larger the stones are the longer the unbroken them. joints between the stones and the concrete will be and the more easily water will be able to follow them through the walls. The ideal concrete mixture is the one in which the aggregate is so proportioned that the smaller particles solidly fill the voids between the larger ones, the sand being used to fill the smallest voids and the cement acting as a binder to cover each particle completely and hold the mass together. Tests may be made of the materials which are available in order to see what proportions of each must be specified in order to have the most dense mixture. In the same way as the broken stone in the trenches allows the water to pass through the voids the denser the mixture the more water will be kept from passing through the concrete, since it can not readily pass from one void to another. Care must be taken that the concrete is well rammed and that the forms are well filled, leaving no porous spaces.

(To be continued)



The above cartoon, entitled "In Our Office", was submitted by PENCIL POINTER Miles Miller of Dayton, Ohio. Unusually good eyes or a reading glass will be required to decipher the legend.

#### PUBLICATIONS OF INTEREST TO THE SPECI-FICATION 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.

**Pivoted Sash, Catalog 12-A.**—Document containing many full page detail drawings, tables of standard sash units, data on wall design, specifications and much other useful information. 48 pp. 8½ x 11. David Lupton's Sons Co., Allegheny Ave. & Tulip St., Philadelphia, Fa.

Sons Co., Allegheny Ave. & Tulip St., Fniladelphia, Fa. Atlantic Terra Cotta.—Monthly magazine for architects and draftsmen, Vol. 7 No. 10 of which contains a plate in full colors and gold reproducing a design by Mr. Leon V. Solon. Four more color plates and articles by Mr. Solon will appear in subsequent issues. Atlantic Terra Cotta Co., 350 Madison Avenue, New York City.

**Portfolio of Mantel Designs.**—Photographic reproductions of 20 mantels suitable for various uses. Post card size. Georgian Mantel Co., 15 East 40th St., New York City.

Five Construction Details.—Factory and Area Floor Details, Roof Construction, Garage Floor Details, Hospital Floor Details and Urinal Stall Details. If you have not the complete set of details previously published they will be furnished on application. Josam Mfg. Co., 4900 Euclid Bldg., Cleveland, Ohio.

Architectural Terra Cotta.—Attractive brochure presenting illustrations of a variety of buildings of many types, together with 9 full page plates showing details of ornament and construction. 8½ x 11. Corning Terra Cotta Co., Corning, N. Y.

Reproductions of Early American Furniture.—Series of plates showing selected early American pieces faithfully reproduced in wood, manufacture and finish. These pieces are suitable for a wide variety of uses. Erskine-Danforth Corpn., 2 W. 45th St., New York City.

Light.—New brochure showing a large number of pencil drawings of attractive lighting fixtures of many styles. Done in Sepia on heavy plate paper. 80 pp. 1/2 x1. Curtis Lighting, Inc., 1116 W. Jackson Blvd., Chicago, Ill.

Heat Insulation for Houses. Specification document covering subject with technical data on heating losses and savings to be effected by proper insulation. Detail drawings, treatment for bungalows and larger houses carefully set forth. 24 pp.  $8\frac{1}{2}$  x 11. Standard filing form. Flax-li-num Insulating Co., St. Paul, Minn.

Sash Chain Specifications.—A.I.A. file No. 27 AL. Data and portfolio covering completely subject of sash chains. The Chain Products Co., Cleveland, Ohio.

**Contractors Atlas.**—Periodical issued in the interests of architects and builders. The June issue contains an article on swimming pools with drawings, principles of design and construction, etc. Atlas Portland Cement Co., 25 Broadway, New York City.

**Distinctive Floors.**—A.I.A. File No. 28 il. Set of five brochures with color reproductions of modern floor materials suitable for various uses. Bonded Floors Co., Inc., 1421 Chestnut St., Philadelphia, Pa.

Lodge Furniture.—Brochure dealing with furniture suitable for the lodge room and similar auditoriums. 24 pp. 8½ x 11. American Seating Co., 14 East Jackson Blvd., Cleveland, Ohio.

Published by the same firm, Sunday School Furniture, Catalog No. 11, covers all equipment required for Sunday School rooms. 32 pp. 8½ x 11.

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., New York City.

Lubricators for Elevator Guide Rails.—Bulletin describing modern equipment to cover this important phase of elevator operation. Elevator Supplies Co., 1515 Willow Avenue, Hoboken, N. J.

**Colored Concrete Buildings.**—Treatise on the subject by Hazel H. Adler. Lehigh Portland Cement Co., Allentown, Pa.

**Bingo of Flathead.**\_A story done with pen and ink illustrations. Western Pine Mfrs. Assn., 510 Yeon Bldg., Portland, Oregon

Boilers and Tanks.—Catalog B covers all types of tanks for hot and cold water, pantry sinks and other similar work required in residences, club houses, etc. 36 pp. 6 x 9. John Trageser Steam Copper Works, 445 West 26th St., New York City.

**Roofing Facts and Figures.**—Booklet with samples of Canvas roofing. A material suitable for many uses in modern residence work. William L. Barrell Co., 93 Worth St., New York City.

The Evanston Sound-Proof Door.—Data sheets covering sound-proof doors, folding partitions and other similar equipment. Standard filing size. Irving Hamlin, 1822 Sherman Ave., Evanston, Ill. **Duplex Water Heater.**—Data sheet with sectional drawings, blue prints and complete information on this device which is offered as a great protection in the modern heating system. McDonnell & Miller, Conway Bldg., Chicago, Ill.

How You Should Buy a Heating System.—Chart 24 x 24 showing carefully points to be taken into considera-tion in considering a heating system. Warren Webster & Co., Camden, N. J.

**Tapestry Brickwork.**—Brochure illustrated in color containing both exterior and interior treatment. 48 pp. 8 x 11. Fiske & Co., 25 Arch St., Boston, Mass.

Structolite Homes .- Booklet containing blueprints and Structolite Homes.—Booklet containing ofdeprints and complete information with test data and specifications covering Structolite as applied to residence construc-tion. 16 pp. 8½ x 11. United States Gypsum Company, 205 West Monroe St., Chicago, Ill.

Ancient Beauty for Modern Buildings.—Illustrated rochure dealing with columns for both exterior and iterior uses. 10 full pages of sketches. 40 pp. 8½ x 1. Union Metal Mfg. Co., Canton, Ohio. brochure interior uses. 11.

Hints to Decorators.\_Brochure containing many sug-gestions for the attractive treatment of wall surfaces. 24 pp. Standard Textile Products Co., 320 Broadway, 24 pp. St New York.

Murphy's Blue Print Manual.—Covers subject of space saving appliances for the apartment, hotel and home. Blue prints and complete data of all types of installa-tions. Standard filing size. Murphy Door Bed Co., 22 West Monroe St., Chicago, Ill. Panel Boards.—Bulletin GEA-11. This document covers

**Fanel Boards.**—Bulletin GEA-11. This document covers the subject indicated with complete information for the drafting room. Illustrations, tables and much useful specification data. Views of typical installations. 50 pp.  $8\frac{1}{2} \ge 11$ . General Electric Co., Schenectady, N. Y.

pp. 8½ x 11. General Electric Co., Schenectady, N. Y.
The Right Angle.—Monthly magazine of interest to the architectural profession. The issue for June covers the subject of Better Plastering in an interesting way. General Fireproofing Co., Youngstown, Ohio.
Dorie and Gothic Brick.—Brochure in color showing artistic brick work. Chapter on art of stippling. 32 pp. 6 x 9. Western Brick Co., Danville, Ill.
Published by the same firm, The Cloister Brick, brochure showing adaptability of this brick in the modern residence and apartment, schools and churches, public buildings, factories and warehouses. Color plates. 6 x 9. 32 pp.
Structural Slate.—A series of bulletins prepared by the

houses. Color plates. 6 x 9. 32 pp. Structural Slate.—A series of bulletins prepared by the Structural Service Bureau dealing with the various uses of structural slate. Also a specification with appended suggestions for preparatory work by other contractors, necessary to receive the slate. The Structural Slate Co., 130 Robinson Ave., Pen Argyl, Pa.

130 Robinson Ave., Pen Argyl, Pa.
 Underground Conduit for Steam and Hot Water Pipes.
 Looseleaf portfolio 6-A covering entire subject of carrying steam and hot water underground with minimum loss. Diagrams and complete specifications. Standard filing size. Ric-Wil Co., Cleveland, Ohio.
 Poles Worthy of the Stars and Stripes.—Catalog covering the subject of flag poles for various uses. Diagrams showing best method of applying to buildings, etc. 4 x 9. 32 pp. The Pole & Tube Works, Inc., Ave. D and Murray St., Newark, N. J.
 Furniture for the Drafting Room.—Catalog E-24. New

**Furniture for the Drafting Room.**—Catalog F-24. New catalog showing up-to-date line of drafting room furniture and equipment. Useful wherever drafting is done. 40 pp. 6 x 9. C. F. Pease Co., 805 North Franklin St., Chicago, III.

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FIREPLACE Co., 4003 Roosevent Road, Chicago, In. Armstrong's Linoleum Floors. Detailed specifications and complete descriptions, 4th Edition. Loose-leaf portfolio with color plates, detail drawings and com-plete data for the specification writer. Standard filing size. 8½ x 11. Armstrong Cork Co., Lancaster, Pa.

plete data for the specification writer. Standard filing size. 8½ x 11. Armstrong Cork Co., Lancaster, Pa.
Decorative Linoleum Floors.—Large folio with 14 color plates presenting artistic scheme of decoration and furnishing for every room in the house. Furniture, both antique and modern, has been combined with suitable draperies, wall and floor coverings to create pleasing effects. Armstrong Cork Co., Lancaster, Pa.
Murphy's Blue Print Manual.—Covers subject of space saving appliances for the apartment, hotel and home. Blue prints and complete data of all types of installations. Standard filing size. Murphy Door Bed Co., 22 West Monroe St., Chicago, Ill.
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.
Furnace Pipe and Fittings.—Catalog No. 25 covers subject indicated completely, including registers and many accessories. Size of pp. 8½ x 11. Milwaukee Corrugating Co., Milwaukee, Wis.

Macbeth-Evans Glass Co.—Catalog No. 128. This at-tractive brochure illustrates with a wealth of color plates a line of lighting glassware applicable to all types of buildings. Complete specification data, thumb nail drawings of interiors. All completely indexed. 56 pp. 8½ x 11. Macbeth-Evans Glass Co., Illuminating Engineering Dept., Charleroi, Pa.

Engineering Dept., Charleroi, Pa. **Vulcatex.**—Folder with detail drawings covering the pointing of brick, stone and terra cotta, caulking be-tween steel and wooden window frames, filling expan-sion joints in concrete, pointing up and embedding glass on skylights, bedding slate and Spanish tile roofs, and pointing up flashings. Standard filing size. A. C. Horn Co., Long Island City, N. Y. **Solid Steel Reversible Windows.**—Illustrated booklet No. 1-24 covering equipment for office buildings, schools, hospitals and other structures. Sectional drawings and details. 20 pp. 9 x 12. Crittall Casement Window Co., Detroit, Mich. **Fireplace and Flue Construction.**—The Covert system

Fireplace and Flue Construction.-The Covert system with diagrams, sections and details. Specialties. Also includes data on sidewalk doors and wind-proof scup-per. 16 pp. 8½ x 11. The H. W. Covert Co., 137 East 46th St., New York City.

Acth St., New York City.
Skintled Brick-Work.—Brick-work, working details.
Vol. 1, No. 1 illustrates and sets forth this interesting type of brick-work showing both wall effects as applied to buildings and large close-up details. 8½ x 11. Common Brick Mfrs. Assn., of America, Cleveland, Ohio.
Celotex Specifications.—Loose-leaf folder with large sample of materials. Complete specifications for all uses, details of construction covering exterior finishing for frame buildings, sheathing for brick veneer buildings, roof insulation and a variety of other uses. 8½ x 11. The Celotex Co., 645 North Michigan Ave., Chicago, 111.
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Enameled Brick Data Sheet.—Condensed information

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

& Tile Co., 52 Vanderbilt Ave., New York. Evernu Hard Rubber Seats.—Catalog A. Complete in-formation for the specification writer. Sectional draw-ings, methods of application, etc. Standard filing size. Never Split Seat Co., Evansville, Ind. Telescopic Hoists.—New catalog in two colors. Il-lustrated with photographs of installations for handling ash cans and other loads between floors. Specifications. 24 pp. 8½ x 11. Gillis & Geoghegan, 548 West Broad-way, New York City. Window Glass Specifications.—Document prepared in co-operation with the U. S. Bureau of Standards. Grades and qualities of glass. Definitions of terms used. 8½ x 11. American Window Glass Co., Farmers Bank Bldg., Pittsburgh, Pa. Pittsburgh, Pa.

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Joseph E. Black, of San Francisco, sent us the clever little cartoon reproduced above which arrived too late for pub-lication in our birthday issue. Here it is and our thanks to Brother Black.

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burn, Ala. 1. Assistant professor of architectural design. Must hold a master's degree in architecture from an approved college or have had equivalent training abroad. Assistant professor of drawing, water color and modeling. Will have charge of freehand pencil and charcoal sketching, pen and ink, water color, life class and clay modeling. College degree desirable but not essential. Applicants address Frederic Child Biggin, Head Professor of Architecture care Alabama Polytechnic Institute.

Wanted, one estimator and one draftsman for Terra Cotta industry. Box 2 care Pencil Points. August Geiger, architect, 424 Calumet Building, Miami,

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National and articles and willingness to draw, have needed intelligence, loyalty and willingness to work hard. Box No. 3 care of Pencil Points. Wanted, position as junior draftsman in New York office by young woman in Class A design. Has had little expe-rience. Write Box No. 6, care of Pencil Points.

Wanted: Architectural man of practical experience and academic training for a position as Professor of Architecture in the architectural department of the Agricultural and Mechanical College of Texas, College Station, Texas. It is particularly desirable that applicants have a few years' experience in architectural office experience. Communicate with Henry Norton June, Head of Department of Architecture.

Architectural designer of long standing desires home work -elevations, details, plans, etc. Neat Work. Terms ar-ranged. George Jackson, 85 Boyd Street, Stapleton, S. I. Young man architectural student at Bryant High Evening School is looking for a position as a junior draftsman. Box No. 4 care of Pencil Points.

Young man (18) seeks position in a Chicago architectural office for the summer. Am now completing third year work in high school. Experience is wanted. Salary sec-Nels Swanson, 3118 Clifton Avenue, Chicago, ondary. Illinois.

Architectural Draftsman and Designer wishes some overtime work after 5:30 P. M. Specialist on apartment houses in all branches. Neat, accurate and rapid draftsman. New York City preferred. Eight years' practical experience. Box No. 5 care of Pencil Points.

Capable architectural draftsman wants work to do in spare time. Samuel Pelton, 1042 Lowell Street, New York City. Young man wishes position as junior draftsman in archi-tects office. Salary no object. Student at Columbia Unitects office. versity. V. Movchovitch, 602 East 139th Street, New York City.

Designer and draftsman, graduate of a European Technical School, wants position with a progressive firm. Three and one-half years' American and 12 years' foreign experience. Designs, perspectives, Renderings (water color, pen and ink), working drawings and details. Also carving and cut-ting experience. Address A. B. care of Pencil Points. Architectural Draftsman: Graduate of two New York City

architectural schools, 6 years' practical experience, apartment and residential work. Very ambitious and exceptionally industrious. At present employed and have recommendations from at least six reputable architectural con-Will consider a position anywhere with an office cerns. that needs an A-1 draftsman who enjoys full responsibility. Am an excellent letterer and can execute very neat draw-Salary scondary. Box No. 7, Pencil Points. ings.

Architectural draftsman, 38; twenty years' continuous experience in architects offices. Last four years in charge of small office. Studied at Pratt Institute. Eight years' New York City. Three years' private practice in Mississippi. All around man seeks permanent position. Transportation. Locate anywhere. C. H. Evers, 4085 South Broadway, Denver, Col.

Architectural Draftsman wants position, July 15th. Age, 33. Single. Twelve years' experience; six years in present office. Special course in Architecture at Southern College. Will go anywhere. Registered Architect, by examination. Box 57, Columbia, S. C.

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(Other Items on Pages 118 and 122)



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