The present activity in the building industry, an activity which is certain to continue because of the need for buildings of all kinds, provides unprecedented opportunities for young men in the field of architectural work. This means great opportunities for development and advancement. With architects' offices throughout the country busy, and in many cases employing more men than ever before, there are splendid opportunities for young men to assume responsibility and forge ahead. There is now no need for a man to stand still. He has a chance to show the stuff he is made of and whatever knowledge of architectural work he may possess. Under these conditions there is an incentive to earnest work and study.

More than opportunity is required, of course, for success and more than mere hard work. A man must make the most of his abilities and opportunities, must have a willingness to take more responsibility and show more initiative than is required of him. He must do more than is required if he is to go ahead.

It can be expressed in the little plus (+) sign. More than is required, always. This means that in addition to doing his work in a satisfactory way he should go at least a little beyond this. It also means that he must, in addition to doing his work, devote time and energy to improving his equipment. Most men who stand still do so because there is no plus element in their scheme of things. Energy plus is of the highest importance. Exercise, recreation and amusement have a value that is too often overlooked. As Mr. Harvey W. Corbett said recently at a dinner given in his honor by the members of the Atelier of which he is patron.

"Success is, after all, 40 per cent work and 60 per cent play."

There are plenty of opportunities now to do work that will win recognition and there are plenty of opportunities to study in one's free time. The ateliers in which the program of the Beaux-Arts Institute of Design is followed afford the best of facilities for study evenings and the incidental expenses are small. No young man engaged in architectural work can afford to neglect any of the available facilities for educational development along the lines of his chosen work. Schools, libraries and architectural clubs are valuable aids to men who live where they are accessible. Courses of home study can, naturally, be pursued everywhere.

In Pencil Points we endeavor to reflect, month by month, the life of the drafting rooms throughout the country. In order to facilitate the mobilization of the architectural forces for this advance movement the publishers of Pencil Points have established, as most of you know, a National Drafting Room Registry and a Free Employment Service. If you have not done so, send for registration card and fill it in. There is no charge. Make use of the employment service, too. Pencil Points is at your service. Here is to the young man who is going ahead!
Figure 40. Competitive Design for Kansas City Memorial, Bertram G. Goodhue, Architect. Portion of Detail at the Actual Size of the Original Drawing. Scale $\frac{3}{4}$ inch = 1 ft.
THE TECHNIQUE OF RENDERING, PART VI.

BY FRANCIS S. SWALES

In the serial article of which this is the sixth installment Mr. Swales explains practical methods of rendering. These methods, though based on what may be regarded as standard practice include variants that have been found effective in actual work. In preparing this article Mr. Swales has drawn freely upon the fund of experience he has gained in his architectural work.—Ed.

The Frenchman takes just as much trouble as we do to obtain correct and conventional effects, but he does one thing more; he adds a touch of ease and richness by a few strokes which seem accidental or careless but in fact are very carefully considered and deftly added. Note the effect of sunshine among the shadows of the trees in Fig. 41, the touching-up of the mosaic of the terrace, or sidewalk, around the front of Fig. 42, also the manner of defining the extent of the lobbies surrounding the auditorium of the latter figure, by the employment of a wide band forming a border, and at the same time extending the circulation through, at the corners, to the entrances in the angles.

The plan of the McKinley Birthplace Memorial (Fig. 36) by Messrs. McKim, Mead and White, is a type of rendering that is peculiar to American work. Washes are used to indicate planted beds and borders while the remainder of the work is put in with an air brush. A fine black line—or almost black—is used throughout the plan of the building, except for the floor mosaic, also for the planted borders, etc., in the Central Court. A wider diluted ink line is used to show the paths, borders, etc., surrounding the building.

The plan of the Burke Foundation (Figs. 43 and 44) is made with very fine line work. All of the outlines of trees and the lines of contours of the land are inked-in. The graded washes, of which several have been employed, are all made with a brush. The group of buildings is left white. One very light wash cuts around the paths which follow the perimeter of the buildings but covers the rest of the drawing. The second omits the paths but covers the main roadway. The upper part of the drawing—above the group of main buildings—and the entire space forming a border outside the boundary line of the site is mottled by using an open technique—a lot of little dabs of the brush with spaces between—the wash being heavy enough to cause the pigment to settle to a hard edge. This, however, is softened by the next series of dabs. The mottling is kept clear of the paths.

In the middle part of the drawing, containing the group of buildings, the washes, which are light and slightly toned with yellow, are kept almost flat, that is, with very little grading. Shadows cast by the buildings are kept very light on the walks but are darkened and sharply graded where they fall on the grass. The shadows cast by trees are kept light throughout, but the shades on the trees are made dark with fine touches of the point of the brush. A single touch of color, (Continued on Page 73)
Figure 41. Design by M. Maunoury for "A Small Museum," Projet, Ecole des Beaux Arts.
Figure 42. Design by Jean Hulot for "A National Convention Hall," Projet, Ecole des Beaux Arts, Prix Américains.
Figure 43. Plan of the Burke Foundation Buildings and Grounds, McKim, Mead & White, Architects.
Figure 44. Burke Foundation Buildings and Grounds. A Portion of the Plan Reproduced at Actual Size of the Original Drawing to Show Technique. McKim, Mead & White, Architects.
ARCHITECTURAL HUMANITIES

BY WILLIAM EMERSON

In this article William Emerson, Head of the Department of Architecture of the Massachusetts Institute of Technology, emphasizes the importance of a side of architectural training that is not now sufficiently provided for and gives outline for the presentation of this subject, which he will name "Architectural Humanities." Professor Emerson's expression will be welcomed by other educators who have recognized this need and should give to the student reader an enlarged view of the meaning of the study of architecture.—En.

THE schools architecture of this country have long recognized that their responsibilities covered a much wider field than that indicated by the teaching of the four or five important subjects in their curricula. No school has even ventured to offer a course in Architecture that did not include the standard essentials in Design, Construction, Drawing, and History. It is, furthermore, now generally recognized that courses in general culture,—Languages, Literature, and the Arts in general, if not essential are of great value, particularly for the student who has come to his professional course without any college background.

Another step now lies before us if we are really to fulfill our obligations to our students. This step, as indeed is true of those previously taken, leads along one of the great highroads of life,—the road to human relations, and for us, students of Architecture, might be entitled "Architectural Humanities." This is by no means a new discovery. Leaders in the profession for a generation have recognized the essential value of such a procedure. When I was a young boy not yet finished college, my father inquired of Mr. Russell Sturgis what sort of an education an architect should receive. Mr. Sturgis' response was unhesitating, even if not very helpful: "Why," he said, "an architect should know more about everything than anyone else." It is a goal that we all may well keep before us, and one that is so impossible of attainment that it is certain to continue as an incentive to further effort throughout the years of our life.

Architectural Humanities is perhaps the closest realization of the comprehensive standard outlined by Mr. Sturgis that any of our schools is likely to offer, but that it should be offered seems to me essential. Consider for a moment the background of many of the students at the Architectural Schools throughout the country. They come, perhaps, from small towns or from country localities where the wonder is that they should ever have heard the word architecture, or been fired by it to earn or to save the money, as they often have, to bring them to the foot of the architectural ladder. They have everything in the world to learn,—which indeed is true of every such student arriving at any college. But the study of Architecture demands perhaps more of its notaries than any profession except possibly medicine. It must not only train them as experts; it must also open to them the door to the beauty and culture of the past as well as of the future that is to be theirs. "Without vision the people perish."

Yet something would still be left undone, and a vital thing too, if an Architectural School left out of consideration or failed to provide for those contacts with the outer world which a practising architect meets in every opportunity that comes to him. And whether the job comes or not, the architect's responsibility to the community is always there. A sense of this coming responsibility should be brought home to every student so that when he graduates he should not only be searching for his first job but for his first chance to serve.

Such a course as this the Department of Architecture at the Massachusetts Institute of Technology has offered its students for the past three years. No one man exists in this day and generation adequately qualified to handle all the contacts that such a course should present, for it is in its very nature human and many-sided, and cannot be reduced to set formulae. Hence each lecture is given by a different man in order that the student's imagination may be stimulated by the personality and accomplishments of his teachers.

These teachers are preferably men whose life work has brought them in contact with architects rather than those whose interests are primarily architectural. Think for a moment of the possibilities that would be opened to the student by remarks on "Civic Opportunities" from the Honorable George McAneny, former Borough President of Manhattan; this man whose helping hand croachments from the sidewalks of our main guided the first steps of New York's present zoning law, whose sound judgment removed enterthoroughfares, and began an energetic campaign for the widening of our streets; also recognized the need for better transit facilities, for more municipal baths, and, in general, showed such a grasp and understanding of the City's needs that his official acts are an inspiration to those who are striving to make our cities better places to live in! Or, again, what value there is to students in a realization of the part that health considerations might properly play in the planning of buildings, plants, communities, let alone those smaller details that effect one's daily life, such as could be derived from a talk by Dr. Haven Emerson, former Commissioner of Health of New York City.

Similarly, William A. Starret, architect, engineer, and builder, from varied experience in these three great activities, can tell a story and point

(Continued on Page 84)
AMIENS CATHEDRAL, DETAIL OF PORTAL
FROM "SELECTED MONUMENTS OF FRENCH GOTHIC ARCHITECTURE"
One of the most beautiful of Gothic portals is that shown in the photograph reproduced on the other side of this sheet, the portal of the Virgin in the north transept of Amiens Cathedral. This plate is from the book soon to be issued by the publishers of PENCIL POINTS under the title “Selected Monuments of French Gothic Architecture.” The plates of this work are drawn from the archives of the French Commission of Historic Monuments.
FIGURE DRAWING BY KENYON COX

Detail reproduced at exact size of original drawing.
Of special interest, because it shows the pencil technique of the late Kenyon Cox at the exact size of the original drawing, is the detail of a figure study reproduced on the other side of this sheet. This and the other drawings by this artist reproduced from time to time in the pages of this journal are shown here through the courtesy of Mrs. Cox.
RENDERING BY BIRCH BURDETTE LONG, BUILDING FOR THE AMERICAN RADIATOR COMPANY, RAYMOND M. HOOD ARCHITECT.
The rendering by Birch Burdette Long reproduced on the other side of this sheet shows a building that marks a departure from the common practice in the matter of color. The windows of most office buildings form regularly spaced black spots that tend to ugliness. This difficulty has been overcome by the architect, Raymond M. Hood, in the case of the American Radiator Company's Building by making the wall surfaces of black brick. Stone of a golden yellow is used for accent. It is a bold and logical solution of the problem.
DRAWING IN RED CHALK BY E. N. DART. PORTRAIT OF ADOLPH S. OCHS.
A remarkably faithful portrait that is an example of skilful technique is the drawing in red chalk by E. N. Dart, of Adolph S. Ochs, publisher of the New York Times, which is reproduced on the other side of this sheet. The original drawing being in red on a paper of yellow tint can not be reproduced in black-and-white without altering the relative values to some extent, for even a faithful translation lacking the color has not the same effect as the original. The technique has been presented here with care, however.
THE SKETCH PROBLEM, PART IV

The Second Preliminary Competition for the Paris Prize

BY JOHN F. HARBESON

In this article Mr. Harbeson treats the sketch problem in the same manner in which he has discussed other problems in the pages of this journal under the general heading "The Study of Architectural Design."

The final competition for the Paris Prize is the most important educational competition of this country; the test by which one may measure his attainment in academic training, his knowledge of the theory of design, and skill in the presentation of this knowledge.

It is seldom in actual practice that problems arise that can equal in magnitude or difficulty such problems as are given for the Paris Prize. (See Fig. 163, PENCIL POINTS, 1922; Figs. 1, 2, 3 and 4 PENCIL POINTS, June, 1923.) Once in a while such a program as that for the "Hudson Fulton Memorial" in New York (Figs. 31 and 32) or the recent competition for a War Memorial in Kansas City (Figs. 33 and 34), or Mr. Cass Gilbert's plan for an Art Museum for St. Louis (Fig. 35) permit opportunities for an equal breadth of vision, fertility of imagination and ingenuity in arrangement. In the large competitions vast sums of money are spent to present the schemes as well as it is possible to present them; but they are judged on a "parti," it is the parti that is all-important.

To enter the Paris Prize competition one must first pass the "Second Preliminary," and this "preliminary" is itself a competition on a big scale—it is the biggest academic sketch problem given in this country; and here too the parti is all-important. This cannot be too strongly emphasized. Many times the best presented drawings have the most satisfactory parti. But this is not always the case. Of the successful drawings in the second preliminary competition for the 16th Paris Prize—A Summer Hotel—cleverness in presentation is more evident in those placed at the end of the group, Figs. 36 and 37, than those first chosen for admission. The drawing placed first in the preliminary competition for the 12th Paris Prize was also very simply presented, Fig. 38, while that placed fourth, Fig. 39, is much more elaborate and finished as presentation. It was a question of soundness of parti. Success in this competition depends first of all on one's ability to find a scheme for a program. It is for this reason that I suggested in my article in January PENCIL POINTS, that you "go into training" for this competition, taking a number of such problems, say one every two weeks. This is an excellent training in "parti." For the same reason it is well for the Class A man to work out a parti for every program—Class A or Class B—that is given out in the atelier whether it is one that you may send as an esquisse and may work up as a regular problem or not—simply as an exercise in the finding of a parti. Looking at the published work after the judgment will have an added interest to you if you have done so and be a greater stimulant in your development.

A man's ability to find a parti depends on the length and intensity of his training, on his experience, just as much as does his ability at presentation—his knowledge of technique; the better one

Figure 31. Winning Design by H. Van Buren Magonigle, Competition for Robert Fulton Memorial, New York City. Rendering by Birch Burdette Long.
Figure 32. Plan of Winning Design by H. Van Buren Magonigle, Competition for Robert Fulton Memorial, New York City.
Figure 33. Design by Paul P. Cret and Zantzinger, Borie and Medary, Competition for Kansas City War Memorial.
Figure 34. Plan of Design by Paul P. Cret and Zantzinger, Borie and Medary, Competition for Kansas City War Memorial.
Figure 35. Plan of Reclamation and Restoration of World's Fair Grounds and Museum of Fine Arts, St. Louis. Cass Gilbert, Architect.
Figure 35A. Birds Eye View of Reclamation and Restoration of World's Fair Grounds and Museum of Fine Arts, St. Louis, Cass Gilbert, Architect.
Figure 36. Design by R. B. Thomas for "A Summer Hotel." Beaux-Arts Institute of Design, Second Preliminary Competition for Sixteenth Paris Prize.

Figure 37. Design by R. DeGhetto for "A Summer Hotel." Beaux-Arts Institute of Design, Second Preliminary Competition for Sixteenth Paris Prize.
Figure 38. Design by L. Fentnor for "A Terminal Railroad Station," Beaux-Arts Institute of Design, Second Preliminary Competition for the Twelfth Paris Prize.

is prepared, the more experience he has had, the better will he be able to acquit himself in this competition.

It is interesting to study the five drawings placed in the 13th competition, shown in Figs. 40-44, after reading program.

Program.

Second Preliminary Competition for the 13th Paris Prize of the Society of Beaux-Arts Architects. Program: The Annual Committee on the Paris Prize proposes as subject of this competition “A Sailor’s Y. M. C. A. at Manila.” Introduction: The entertainment of soldiers and sailors while on leave has been, during and since the war, the subject of a great deal of study and consideration by various societies and organizations. The Y. M. C. A., in continuing this work, wishes to establish at Manila a recreation center for the sailors from the visiting warships and the naval bases located there.

The climate is sub-tropical. It is desirable, therefore, that the plan be conceived in such fashion as to provide adequate shelter from the sun, and to allow the free passage to the breeze, securing in this manner, the greatest protection and comfort to those who are pursuing the various activities provided for them.

The Problem: The ground to be occupied by this recreation center is on the harbor, easily accessible to the ships at anchor by means of launches and other small boats, and to the naval base by a boulevard which runs parallel to the shore front. It is rectangular in shape, and its greatest dimension must not exceed 600 feet.

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Figure 40. Design by W. F. McCaughey, Jr., Beaux-Arts Institute of Design, Second Preliminary Competition for the Thirteenth Paris Prize.

Figure 41. Design by D. McLachlan, Jr. Beaux-Arts Institute of Design, Second Preliminary Competition for the Thirteenth Paris Prize.
Figure 42. Design by F. A. Chapman. Beaux-Arts Institute of Design. Second Preliminary Competition for the Thirteenth Paris Prize.

Figure 43. Drawn by E. R. Purves. Beaux-Arts Institute of Design, Second Preliminary Competition for the Thirteenth Paris Prize.
a similarity in expression—a use in each of some of the same forms. It is the same with government buildings—with all the different “types” of buildings, in fact. In the few days before doing a sketch problem of this sort, look through the books and get as many of these things as possible in your head. There is no time to stop or correct now. You must use all your time and speed in getting your ideas down, and then in rendering them out.

When you have made this second study in pencil, and carried it as far as possible, you are ready to transfer. This transferring is not—should not be—tracing—it is in reality another study, and you must do a certain amount of designing right on the final. The aim is to eliminate work and get ahead—to get your drawing of your solution completed in the time given. If it is only two-thirds completed—no matter how well this two-thirds is drawn, you have not given your idea a fair showing before the jury.

Do not be afraid of putting too many lines on the final—you can always lose some of them in rendering if necessary. The lines you want to count are the important ones, but they require many others to make them look well; too few lines leave a sketch problem looking empty—you can’t put an idea across if your drawing is incomplete. At the same time, do not scratch in a whole lot of lines that look like nothing. When you do have to “pad” pad within lines that thing.

After getting the big lines on your big study, it is best to work freehand on most of the remainder—it is much easier and much quicker than working with T-square and triangle. As long as the main lines are straight, you can transfer the rest just as well freehand, and with freehand you will be much better able to get the “character” in your plan—both the general character and the character of the small spots.

For you must get character in your plan* to get the idea across—there is a very different expression for a school, for instance (Fig. 131 PENCIL POINTS February, 1922) and a concert hall (Figs. 29 and 30, PENCIL POINTS February, 1924). Each type of building has a character of its own, (we are speaking of plan now). It takes some training to be able to recognize this character, some experience to be able to give it to a plan. But the attempt must be made—you should know what kind of detail to use in the different kinds of buildings—having a command of such details of poché, of spots, corners, niches, etc., saves you much time. You can go twice as fast in drawing your idea, if you know how corridors turn, different ways to treat central spots, etc., because you won’t have to stop your thought on the problem in general to work out these minor matters.

You can work up a vocabulary of such forms by going through two or three volumes of the

*See article “Character in Plan” in PENCIL POINTS for February, 1922.

“Concours d’Ecole” (des Beaux Arts) studying the published sketch problems with a notebook in hand jotting down different ideas. Putting it in a notebook is primarily to fasten it the better in your mind, though it is of value also to have such a book to look through the night before the second preliminary program is given out.

It goes without saying, for the reasons above, that the poché should not all be of the same thickness—any more than in a project; in fact in a sketch problem the differences in poché should be still more accentuated.

After you take up your transfer paper, your drawing looks like an inarticulate mass of lines—with your rendering you will bring out your idea—following for the general scheme your small scale sketch in the corner of your board. If you need a “white” rub out or rub down some of the lines. If your first washes show a “white” too large or small, make it wider, or narrower, by the next wash—but your rendering should be simple—just enough to express the idea. A lot of the actual drawing can be done for the first time on the final drawing (i.e., need not have been laid out on the study and transferred); do a lot with the freehand pen on the final drawing. Try to get the whole thing down on the final sheet, and rendered, and still have time to get away from it and look at it, to see if there is something more needed to get it “across”; to make other men see your idea as you see it. And this is very much like cartooning; to get a likeness it isn’t always necessary to put everything down, but what is put down should be what will be a “portrait” of your “part.”

The question of “mosaic,” of the filling in of a plan, is important. What shall we use as mosaic? The purpose of an esquisse-esquisse is to make your thought clear to some other people. The purpose of mosaic is to help make your idea clear. With poché alone, it would be difficult to explain the purpose of a certain room; mosaic shows without words the use of the room. It is not an ornament, but a means of explaining a scheme. It is closely allied to the theory of poché, of course; for instance, a stable and a greenhouse may be of the same size, but the greenhouse will have as poché just “points,” with glass between, while the stable will have continuous walls with a few windows, and as "mosaic" some small divisions—the stalls.

In the same way a number of different rooms—which may all be rectangular in shape—may be identified by their mosaic. For a “salle des fêtes,” or a ballroom, the typical expression is to show no “furniture” but to indicate the ceiling—usually an elaborate thing with vaults in penetrations, with highly decorated plaster work; this could never be mistaken for a library or a stable. A laboratory—which may be another rectangular room, will be expressed not by a ceiling, and with

(Continued on Page 73)
Figure 44. Design by Paul Simpson. Beaux-Arts Institute of Design, Second Preliminary Competition for the Thirteenth Paris Prize.
(See other illustrations on opposite page.)
Cover of Harper's Magazine Designed by John Mead Howells.

Photograph of Frieze of Giulio Romano in the Villa Madama Which Inspired Mr. Howells' Design for the Magazine Cover Shown at the Top of This Page.
Construction Details—Sprunt Memorial Presbyterian Church, Chapel Hill, North Carolina.
Hobart B. Upjohn, Architect.
PENCIL POINTS

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THE AMERICAN ACADEMY IN ROME

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

"January was a busy month for everyone at the Academy."

Mr. Mead and Mr. Blashfield arrived in Naples on January 21st, and Mr. Lascari and I went down to meet them. They were both in splendid health. Mr. Mead is not due in Rome until March. Mr. Blashfield came back to Rome with us. The mosaic decoration which Mr. Lascari is executing for him is going ahead at full speed.

Director Bert H. Hill of the American School of Classical Studies at Athens is in town. As that School is expanding rapidly, Director Hill has been studying our organization with some care. Mr. Davico explained the wonderful system of book-keeping, which he has devised, and I gave him copies of the various published statements which have to do with the organization and running of the Academy.

On January 28th the well-known Elizabethan Scholar Prof. Felix E. Schelling, Head of the Department of English at the University of Pennsylvania and a "Visitor" in the School of Classical Studies of the American Academy this year, delivered a splendid open lecture on the "Unity of the Arts." It was most beautifully presented, and it did us all a lot of good. We are going to see if he will permit us to publish it in small pamphlet form, so that copies may be given to future students.

We hear from New York that Composer Hanson's symphony is to be given by the New York Symphony Orchestra on February 3rd, and that he is to conduct it himself. It is a thrilling moment for us all.

Painter Schwarz has designed a frame decorated with pastiglia for his last year's composition, and we have engaged a master in pastiglia to do the work at the Academy, so that all who are interested may learn how to work in this medium.

Preparations for the Greek trip are advancing. There will probably be about twenty-five in the party. Professor Van Buren is to undertake the lecturing, and Professor Lord to look after the business arrangements. All are to be inoculated against typhoid and vaccinated. We have secured a 50% reduction in railroad fares in Italy and Greece and on the boat to and from Greece.

Ambassador Child returned to Rome early in the month and he very kindly let the new members of the staff and student body call upon him.

Professors Manship and Paulkener have left for Egypt. Professor Manship put the finishing touches on his models only a few hours before he departed. He changed the design of the seat almost at the last moment, to the great advantage of the composition as a whole. He has offered to donate to the Academy the two large plaster casts, one of his Diana and the other of Acteon. These are splendid groups, and they will greatly help to decorate the Main Building.

The following donations have been made to the Academy: Mrs. George M. Tuttle, $200, for the concert of last spring; Mrs. Woodruff, 2,000 lire, for the concert of last spring; Miss Millicent Drake, $100, for the library.

Sprunt Memorial Presbyterian Church, Chapel Hill, North Carolina. Hobart B. Upjohn, Architect. (See Construction Details on Pages 70 and 71.)
THE TECHNIQUE OF RENDERING, PART VI.

(Continued from page 41)

THE SKETCH PROBLEM

(Continued from Page 66)

cobalt blue, is used to denote the basin of the fountain; and a very gentle touching-out with an eraser, of a fine white line, and some fine touches of Chinese white are put in with a pen to suggest the fountain jet. The poche and lettering are full-black, all other lines are diluted ink. The washes are toned—that is color is added to the black—with yellow generally, but a touch of red is added to the border of the drawing. Points worth noting about this drawing include the well-considered border lines and beautiful drawing of the cartouche and title lettering.

PERSONALS

L. T. Bengtson, Architect, has removed his offices to the Virginia Railway and Power Building, Richmond, Va.

Sunderland & Besecke, Architects, 466 Interstate Building, Kansas City, Mo., have dissolved partnership. Mr. Sunderland will remain at the old address and Mr. Besecke will open offices at 611 Title and Trust Building.

Ralph Wilson Wattrick, Architect, has removed his office to 70 Fifth Avenue, New York.

W. V. Justus & Co., Architects, have removed their offices to Moose Temple Building, Clearfield, Pa.

Walter Earle Bort has opened offices for the practice of architecture at 601-2 Wilson Building, Chinton, Iowa.

Harry Silverstein, Architect, has removed his offices to 574 Jefferson Avenue, Brooklyn, N. Y.

Clyde M. Hites, Designer and Builder, has opened offices at 300 Commercial Building, Louisville, Ky.

Wayne E. Bell, Architect, has removed his offices to 613-14 First National Bank Building, Fort Wayne, Ind.

Emmer G. Martin, Architect, formerly manager of the offices of Albert C. Martin, Architect, has opened offices for the practice of architecture at 603 Citizens National Bank Building, Los Angeles, Cal.

C. E. Schermerhorn, Architect, and Watson K. Phillips, Architect, have removed their offices to 213 South Fifth Street, Philadelphia.

Ms. L. H. Osterhage, senior member of the firm of Osterhage & Sutton, died on December 12th. Byron Sutton has formed a partnership with Lester W. Rount and will continue to practice under the firm name of Sutton & Rount. Architects and Engineers, Citizens Trust Building, Vincennes, Ind.

ATELIER CUNNINGHAM, WASHINGTON, D. C.

CALLING to your attention the Atelier Cunningham, but a few months old, having been started on its wild career October last by a few architectural draftsmen desirous of learning the mystic secrets of designing in that master of the arts "architecture." Having thus far obtained one 1st mention place, they are "pepped" with enthusiasm and like wise energy to obtain a few more of the same and then maybe when they get a good medal may fall their way.

But back to our story—a brief history of the events leading up to the tragedy. After the organizing, consisting mainly of collecting money, a large room with heat and light was obtained, centrally located in the downtown section. It is four flights up and one forward, being located right under the roof (that's where the heat and light is).

Now for the Patron. Major Harry F. Cunningham kindly offered to act as Patron, gratuitously, and encouraged the organization. Now Major Cunningham is a good scout (not boy scout), and he always carries with him an overload of enthusiasm for anything architectural, which he imparts in severe doses to those around him. He was patron of an atelier here before the war and after the armistice was signed was Director of the School of Decorative Art at the A. E. F. University at Meaux, France, and practiced his profession for two years in Paris and the devastated regions. After his return he was assistant professor in design at George Washington University until the Atelier was founded. He is practicing architect, and secretary of the local Chapter of the A. I. A., and has some very important work to his credit.

Of the membership of the Atelier, M. C. Hobson is Massier, Chas. L. Nutt is Sous-Massier, and Fred McCrory is Sous-Sous-Massier (he keeps the secrets of the mystic order).

HENRY BACON

HENRY BACON died Saturday, February 16, 1924 at the Post-Graduate Hospital, New York. He went to the hospital the preceding Monday suffering from an infection of the intestines. An operation was performed and he was believed to be on the way to recovery. Friday evening a relapse occurred and despite the efforts of the physicians he passed away early the following morning. Henry Bacon is best known by the crowning achievement of his career, the Lincoln Memorial at Washington, D. C., which is recognized as one of the noblest and most beautiful examples of architecture ever produced.

Mr. Bacon was born at Watseka, Ill., November 28, 1866. He graduated from the University of Illinois in 1888.

In 1885—1888 he was connected with the firm of Chamberlain & Whidden, Boston, and 1888—1889 with McKim, Mead & White. He won the Rotch Traveling Scholarship and traveled in Europe 1889—1891. He was with McKim, Mead & White again from 1891—1897, then a member of the firm of Brite & Bacon until 1903. After that date he practiced architecture alone until the time of his death.

In 1923 Mr. Bacon was presented with the gold medal of the American Institute of Architects, in recognition of his work as architect of the Lincoln Memorial.

THE CHICAGO ATELIER

THE Chicago Atelier took the 1st Preliminary of the Paris Prize on January 5. Norman J. Schlossman placed 1st Alternate and George Conner and Bob Minkus received 2nd mentions. The Atelier now has four men eligible for the 2nd Preliminary to the Paris Prize; this will be held February 22nd. These men are Loeb!, Bieg, Cerny and Schlossman.

Last Thursday, Charlie Morgan the well known Chicago delineator gave an interesting chalk talk. Norman Schlassman exhibited and talked on some sketches he made when abroad last year.

At this writing, February 13, we are looking forward to the sketch on February 16th. This is one of our own local competitions. Inasmuch, as one of Mr. Campbell's valuable water colors is the prize, a keen competition is expected. The results will be announced at a future writing. Mr. Sam Marx will be judge.

FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

(Other Items on Pages 86 and 90)

Position Wanted: By a senior general draftsman. Boston Tech. man as a general superintendent of construction for a New York firm of architects or engineers. Best references, hard worker, salary $75. per week for at least three months. Available April 1st. Box L. J. D., care of Pencil Points.

Spare Time Work Wanted: Electrical designs and layouts for lighting, power, low-tension, etc., for all types of buildings, capable of making complete drawings, calculations and specifications. Will work at architect's office or outside. Box H. P. Z., care of Pencil Points.

Chandelier Designer: Steady position, fine opportunity. Cox, Nostrand & Gunnison, Inc., 339 Adams Street, Brooklyn, N. Y.

J. E. Serrine & Company, Engineers, Greenville, S. C. are desirous of communicating with experienced draftsmen capable of designing reinforced concrete structures. Applicants should be capable of working up designs and figuring stresses and scheduling materials. Applicants are requested to give past experience and salary expected.

For Sale, 1 set of 10 volumes Ragueneau's "Materiaux et Documents D'Architecture et de Sculpture" arranged in alphabetical order. Condition good as new. Price $100.00. Address W. J. Brown, 208-10 Bever Building, Cedar Rapids, Iowa.—Advt.
HERE and THERE and THIS and THAT
Conducted by RWR

HERE AND THERE AND THIS AND THAT

Mr. John A. Ahlers of Baltimore wins the ten dollar prize for the most interesting contribution to this department in February. The winner of the prize for this issue will be announced in the April number.

The Charette, a bright and newsy little paper published by the Pittsburgh Architectural Club, has this to say about our already famous department in its February number.

We note a new department has opened by R. W. R. which may be a radio broadcasting station for all we know, entitled “Here and There and This and That.” Not so bad we critically opine. On the second page we see a sketch by Charles Morse Stotz “Old Houses, Pittsburgh.” A smart little sketch of the very best handling. We should like to welcome a new real sketch artist to town. There is a dandy poem “The Fifty-seven Lamps of Architecture” that has a real kick, if a poem can have such a spiritual quality.

The editor of the Charette has exactly hit our idea and has expressed it much more ably than we were able to do. Broadcasting is just what we are striving to do. We want to collect the ideas, sketches and other valuable material from our readers and broadcast them for the benefit of everybody. What is the use of an idea if only a few people know about it? Every reader of Pencil Points can make some valuable contribution to this department, so get busy and send them in.

Here are a couple of verses submitted by D. C. Barbot, Charleston, S. C., inspired by the “Fifty-seven Lamps of Architecture” previously published.

I lived for a while in my tenement style,
For buckets of brew I was brewing,
And I had to be up and be doing.

I'm sitting alone. On a tablet of stone,
Inscribing my story so telling,
I'm living the life, with a cliff dwellers wife,
In my rude pro-historian dwelling.

The busy architect who writes his own—has little time to keep up with the “latest” in the building world, specialities such as toggle switches, etc., etc. Would it be possible (I am sure it would be exceedingly valuable) to publish in a small section always and particularly set aside to it, each month, a list of the most up-to-date and valuable improvements in existing building elements such as, for example, servitors, inserts, casement adjusters, etc., etc. I would limit this list to perhaps a dozen or more articles each month, picked with the greatest care and noted with the briefest of descriptive notes and the name of the manufacturer.

“This would certainly be a most handy reminder to the busy specification writer and would add greatly to the already high office value of your magazine.”

Here are specifications of the 1923 Christmas Dinner of the office of Cram & Ferguson, Boston. Here is an opportunity for specification writers to compare their work with that of an office nationally known for the quality of its output.

SOUVENIR SPECIFICATIONS
FOR THE 1923
CHRISTMAS LUNCHEON

General Conditions. This joint is designed to develop the full strength of the assembled members. Make proper allowance for expansion and contraction.

The Committee guarantees to make all members tight, and keep them in repair at their own expense for three years, and will make good all damages caused by leaks.

Any shoring required in connection with this work will be done by the Committee free of charge.

Leave necessary openings for ice cream. Ascertain its location before commencing work.

Clean up at completion.

Cider. All cider used throughout the building, unless otherwise specified, is to be best quality pure apple cider.

Chicken Salad Sandwiches. All to be selected, water soaked, long, winter slaughtered chickens, and run through the picking machine at the building before being served. Use hair and sand in proper proportions.

Cheese and Nut Sandwiches. Wherever paleolithic sandwiches are called for, a topping in the following proportions is to be applied: 3 parts clean, sharp, well graded nuts.

Sliced Ham Sandwiches. Wherever ham sandwiches are called for, stretch one thickness of sliced ham, laid with lapped joints, and securely fastened. All to be first class, or equal.

Cheese. Holes to an aggregate percentage of not over 99% will be permitted, provided they do not affect the strength and edibility of the cheese.

CHRISTMAS LUNCHEON
FOR THE
1923
H ARCHITECT Robert W. Snyder of San Diego, Calif., sends a little suggestion of a practical nature. What does anybody think about the value of such material for publication in Pencil Points?

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Cheese and Nut Sandwiches. Wherever paleolithic sandwiches are called for, a topping in the following proportions is to be applied: 3 parts clean, sharp, well graded nuts.

Sliced Ham Sandwiches. Wherever ham sandwiches are called for, stretch one thickness of sliced ham, laid with lapped joints, and securely fastened. All to be first class, or equal.

Nuts. All nuts and washers to be of standard size and design.

Candy. All candy to be clean, sharp, well graded, and free from foreign matter, and acceptable to the Architects. No rubber footings will be permitted.

Ice Cream. All bricks not otherwise mentioned, to be best quality, merchantable, common bricks of standard size and free from defects impairing their strength and durability. The bricks shall contain at least 30% of the dark variety. No soft or misshaped bricks will be accepted. All to be delivered to the job in their original packages, and opened in the presence of the Architects.

Doughnuts. Leave handholes in doughnuts where called for.

Cheese. Holes to an aggregate percentage of not over 99% will be permitted, provided they do not affect the strength and edibility of the cheese.
R. B. WILLS, draftsman and Pencil Pointer of Boston, Mass., submits the above drawing which he claims represents a most excellent type of office organization which has been found to work successfully under the most trying conditions. He has reduced this organization to chart form for the benefit of those who may have had difficulty in working out a correct and successful office system.

Charles W. Johnson, Payette, Idaho, says he would like to see samples of lettering from the best drawing boards in the profession. We would like to consider for publication material of this sort and would be glad to receive either originals or photostates of good lettering; either complete alphabets, inscriptions or mere fragments.

MORRIS HENRY HOBBS of Chicago, cannot get along with one copy of PENCIL POINTS. Read what he says in a recent letter.

"PENCIL POINTS is certainly getting into a class by itself. I just sent in my subscription to be sent to my home, for while I read it constantly at the office I begin to feel I would like to keep a permanent reference file at home as well. Keep up the good work! The 1924 sketch competition is welcome news. It helps bring out new talent among those who are just developing."

OF COURSE we are just as human as anybody else and like to have nice things said about us. Capt. J. E. Wood, Assistant to Engineer Commissioner, Washington, D. C., says a lot in a few words.

"The February number of PENCIL POINTS is one of which you should feel justly proud. It is real Pencil Points and the best ever. If you know how thoroughly I mean this you would find no interest in more lengthy or detailed compliments."

AND here comes Mr. G. F. Ashley of Ashley & Evers, Los Angeles, Calif.

"It is only a short time ago that your publication first came to my attention. I thought so highly of it that I requested the Rapid Blue Print Co. of this city to obtain a complete file of your back numbers for us, besides a current subscription. If you can assist them to complete our files I would appreciate it. It seems to me that the architectural juniors of today are very fortunate in having such a publication as yours to seek advice in. Reading Pencil Points cannot fail to be of vast benefit to college architectural students for the indications they will receive of the practical problems awaiting them. I cannot help thinking of the "grief" I would have been saved had Pencil Points been available in my own apprentice days. Your reprints are a great benefit to the profession, juniors and seniors both. Wishing you continued and great success."

THE draftsmen of the Civil Service Council No. 44, City of New York, had a blowout and party at the Hotel Majestic on January 23rd. In connection with this event they published an amusing little booklet, the cover of which will be reproduced in the next issue through the courtesy of A. L. L. Martin, Chief Draftsman.
CHARLES D. WHITE, of Portland, Me., submits the following as his contribution to the question of filing reference material. This subject seems to have aroused much interest and, in addition to the various suggestions submitted and already published, we expect in an early issue to publish an article by a man who has gathered together an extraordinary amount of excellent material and who will tell in picture and text just how he has done it.

The problem of filing magazine plates, articles and similar material so that any subject may readily be found is an important feature in offices and with individuals.

The writer has tried many systems and having found them inadequate has had in use for several years a method which has met every requirement.

All plates and articles of value and interest are ripped from magazines, trimmed to uniform size, the classification number is written in upper right hand corner with soft pencil and are kept in regular letter file folders.

These folders are cut with one right end tab which bears the classification number and subject name and are kept in vertical letter file drawers.

The classification list is the key to the situation. This is based on the Dewey Decimal System which is in use in most Public Libraries.

Some years ago the University of Illinois published a pamphlet, The Extension of the Dewey Decimal System to Architecture. This was taken as the basis of my classification list, and newer products and methods added to it.

Sometime later an article appeared in Architecture by Harry Leslie Walker who had developed and used the same half dozen places to which they must be turned, arrangement and revision (printing the heading on both sides of the index-card so that if I need to introduce a new heading I can simply reverse the cards beyond the new heading without disturbing the filing. Where I have a heading which covers a large number of associated things I use pink and blue index cards in one third and one fifth cuts. This system appeals to me because it is visible, easily altered or amended, is quite inexpensive and the cards can be used flat on the drafting table (much easier than a book) and can be put in the pocket note book and carried into the field to show to engineers in charge of work or clients as an aid to the explaining of presentation.

PENCIL POINTS

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compared with an alphabetical system this may sound complicated, in practice it is not so. once the classification list is compiled it becomes a simple matter to place proper number on each article as received and it is automatically cared for.

when a given subject is wanted, instead of pouring through magazines, or bound volumes, or by means of alphabetical catalogue finding articles that may be in a half dozen places to which they must be returned, a moment's work by office boy or stenographer puts the folder on your table and as easily returns it to its proper place.

the folders may be kept in one box letter file at the start and may be expanded to any number of filing drawers without any arrangement or revision.

briefly the dewey decimal system consists in using numbers for the different subjects using a decimal point and decimal numbers for subdivisions, for example:

landscape architecture is given the number 711. if one has only small interest and few plates on this subject, one folder with this number contains them all. but if interest or growth demands, it expands as follows:

711. landscape architecture
712. parks and grounds
713. roadsides
714. water
715. trees
717. accessories

perhaps this number grows and we have

717.1 arbors
717.2 summer houses
717.3 seats
717.4 outlooks
717.5 pergolas
717.6 garden walls
717.7 steps

717.8 statues, vases
717.9 lattice work

in like manner any number can be expanded.

schools, for example, are filed under 727 with subdivisions as may be needed.

727. schools
727.1 grade schools
727.12 private schools
727.14 preparatory schools
727.15 high schools
727.16 trade schools
727.2 academies
727.3 colleges
727.4 professional schools
727.5 laboratories

under architectural design we have

729.1 the elevation
729.2 the plan
729.3 wall treatment
729.32 supports
7221 piers
7222 orders, architectural
7223 tuscan
7224 doric
7225 corinthian
7226 composite
72233 arches and arcades

this shows to what extent the classification can be expanded or in what simple elements it can be retained.

any subject can be expanded to meet the amount of material or the wishes of the individual and once the list is arranged the work is simple and efficient.

here is another suggestion from e. c. styles, landscape architect of oakmont, pa.

in regard to the question by w. b. brown in the january issue i might suggest two things which i have found helpful to me and which i have been working up for the last three years. the first is a file of individual illustrations taken from pencil points, the architectural record, the national geographic, etc. in my particular profession information is desired on an extremely wide range of subjects and i use the heaviest grade obtainable of 5 x 8 plain cards (carried by any commercial stationary store). this size will accommodate all but very large illustrations if cut close. i mount the illustrations on the cards with thin paste and squeeze them with a triangle over sketch paper. then i put them under a heavy weight for 24 hours and file them in 5 x 8 pasteboard box files of the "pull-out" type. i will use steel files later on as they will be easier to handle and the insurance companies will carry them. i prefer this size because it is small enough to handle easily and i have the cards punched a thousand at a time so that they will fit a three ring pocket note book. the cards are filed under a system of headings which i have devised as being applicable to my work and i print the heading on plain yellow file index cards half cut and run the cuts alphabetically and alternately (printing the heading on both sides of the index-card so that if i need to introduce a new heading i can simply reverse the cards beyond the new heading without disturbing the filing. where i have a heading which covers a large number of associated things i use pink and blue index cards in one third and one fifth cuts. this system appeals to me because it is visible, easily altered or amended, is quite inexpensive and the cards can be used flat on the drafting table (much easier than a book) and can be put in the pocket note book and carried into the field to show to engineers in charge of work or clients as an aid to the explaining of presentation.
PENCIL POINTS

The grand splurge of the Architectural Bowling League of New York has at last broken down our natural modesty so we now bid for our place in the sun.

Not being in such close proximity to the millions of Wall Street, we have not been able to engage the services of an inspiring press agent. Nevertheless, we wish it to be known that the drafting force of Perkins, Fellows & Hamilton have for the past year been conducting a bowling tournament of their own at the X-10-U-8 bowling alleys, Chicago.

Realizing that the reputation of our fair city would depend to a great extent upon our skill, in one short season we overcame the difficulty of keeping the ball out of the gutter, so that now, despite a few well spotted "hills," we can chalk up quite a few "strikes" and "spares."

In the natural course of events a series of prizes was offered by the different departments. The first prize by the Mechanical Department—a slightly used steam radiator valve, is very useful in nailing down stubborn thumb tacks, and with a little Sapolio can be made quite decorative. The second prize is a most remarkable slide rule, donated by our Structural Engineering Department, and is guaranteed to compute anything under the sun, including your income tax. The third prize by the Architectural Department, a well worn and broken-in erasing shield, has created considerable interest as this is one of our most used drawing instruments. The members of our firm, always and ever ready to further a good cause, have offered as fourth prize a really remarkably beautiful hand-engraved cancelled pay check.

Spurred on by these wonderful prizes we have almost made bowling history, as our high scores will testify.

Chief Draftsman "Dobe" ............................ 176
"Doc" Foster ......................................... 199
Tom Lavaty ......................................... 233
"Joe Duck" ........................................... 172
"Moe" Dunn ........................................... 186
"Little John" ......................................... 190
"Luke McClure" ...................................... 156
"Skeezix" ............................................. 135
"Mosher" Greenberg .................................. 139

Wishing PENCIL POINTS a prosperous year, we are

The drafting force of

PERKINS, FELLOWS & HAMILTON, Chicago, Illinois.

J. S. Crytzer, 1079 Boylston St., Boston, would like to secure copies of PENCIL POINTS for 1920, excepting September and October, and also a copy of June, 1922.

The Allen Decorating Co., 117 Cutler Bldg., East Ave., Rochester, N. Y., would like copies of Pencil Points prior to January, 1921.

Mr. Solomon Klein, 14516 Elizabeth Ave., Newark, N. J., has copies of PENCIL POINTS for November and December, 1922, which he would like to exchange for a copy of March, 1923, and a copy of June, 1920.

H. M. King, professor of architecture, North Dakota Agricultural College, Agricultural College, North Dakota, would like to secure a copy of PENCIL POINTS for February, 1922.

A. Wetter, 4042 No. Keystone Ave., Chicago, has PENCIL POINTS complete for 1923, and will sell them at 25¢ each.

The above notices are printed because we are unable to supply the copies required and are anxious to help our subscribers complete their sets. Communications regarding copies offered for sale may be direct with this office or with the person requiring them.
Here is a little pencil sketch submitted by George F. Spinti, Jr., Milwaukee, Wis.
and one from Ben Wyatt of New Orleans, La.

We are glad to see sketches submitted from so many parts of the country, especially from those who have heretofore been unknown to us. We are not able to accept for publication all material offered, but hope that all of our readers producing work of merit will submit it for publication in this column.

ON THE evening of January 26th the Alumni Association of the office of Schwartz & Gross held its third annual reunion and dinner. A photograph of the entire gathering is reproduced on page 80. Mr. B. Richfield is responsible for the menu card. A good time was had by all and Mr. William H. Meyer was elected chairman for the coming year. Mr. Meyer requests that all those eligible for membership communicate with him so that they may be included in the next reunion.

WE WOULD like to receive for publication in this department photographs of architects' organizations. Get the crowd together in the drafting room or elsewhere, with the boss in the middle, and send the picture to us with a list of those present. We may get bold sometime and publish a picture of ourselves. This is more in the nature of a threat than a promise. If enough of you will send pictures of your office personnel we may not have to fall back upon the desperate expedient of publishing one of ourselves.

THIS paragraph is addressed primarily to our readers located outside of the United States. We want you to feel just as free to contribute either to this column or to any other section of Pencil Points as those located nearer by. You who live in Canada, Great Britain, Australia, New Zealand, India, Japan, China or elsewhere we feel are just as much members of the Pencil Points family as anyone else. Let us hear from you! Do not hesitate to submit material, to ask questions and to take full part in all of our activities. Our columns are open to members of the architectural fraternity in all parts of the world.

Front Elevation, Library for J. Pierpont Morgan, New York City. McKim, Mead & White, Architects.
Detail of Entrance, (Reproduced at Exact Size of Original,) Library for J. Pierpont Morgan, New York City. McKim, Mead & White, Architects.
THE SPECIFICATION DESK
A Department for Specification Writers

MISCELLANEOUS ITEMS OF CONSTRUCTION
PART XVI
BY OTTO GAERTNER

In this series of notes Mr. Otto Gaertner, A.I.A., Associate Member, American Society of Civil Engineers, is treating of a number of the minor matters of construction that are troublesome unless the architect happens to have met a similar problem previously—matters of a more or less specific nature.

Garages (Continued)—It is often convenient to have apartments over the garages for the use of the caretaker or other employees. Sometimes this is desirable so as not to have the garage unprotected as otherwise it would be necessary to employ a watchman. It is not well and not safe to have too many tenants in the same building and for this reason the New York City Bureau of Buildings places a severe check on the encroachment of garages on apartments. It permits the use of a garage building for dwelling purposes. It will issue such a permit when the ground floor area of the garage does not exceed five thousand square feet and when the occupants are to be the applicant or his employees, by applicant they mean the owner or lessee although some one may apply for the permit for him. Also the applicant must be the applicant's employee and one other tenant. Furthermore, not more than two stories above the garage may be occupied or used as dwelling apartments, and such apartments must be separated from the garage proper by fire-retarding walls and floors. The walls and floors must not be pierced by more than one opening and the opening must be protected by a fireproof self-closing door. A direct entrance from the street without passing through the garage is also required. To keep gasoline and exhaust fumes from penetrating to the apartments it is preferable to omit the interior opening with the self-closing fire door and to have only an exterior entrance as required by the Bureau of Buildings. Whenever the building is occupied by two families and two stories above the garage, fire escapes or other approved secondary means of escape must be provided for each story above the garage.

If it is to be fire escapes, they must be made according to the Building Code which requires that they be of incombustible materials and sufficiently strong to carry with safety a superimposed load of one hundred pounds per square foot. The fire escape should be unencumbered and should be kept well painted and in good repair. It is generally specified to be steel with an angle iron frame, reinforced slat floor, angle iron brackets through the walls and provided with braces, a railing enclosure of steel bars, and stairs of steel plate strings with steel bar treads riveted to angles which are riveted to the steel strings, the stairs being provided with a hand rail on each side.

When the building exceeds five thousand square feet in ground floor area, and the above mentioned dwelling space is required it may be possible to divide the area into more than one unit by means of one or more masonry walls without openings, and if openings must be put into them, the opening may be protected by automatic self closing fire doors, one door on each side of each opening. In this way strictures on the practicability of that part of the plan is obviated.

Occasionally when the building stores cars, it may not really be a garage and such regulations do not apply. For instance, in the case of a sales or sales service building where only new cars are kept and where they are not moved about, however, the cars do not contain volatile flammable liquids are kept for storage or use and all that portion of the building which is on or below the floor or floors on which such automobiles are kept unless it is separated therefrom by tight unperforated walls and floors. The purpose of this in connection with the electrical work is to prevent the ignition of an accumulation of escaping volatile vapors by a spark. Some of the vapors are heavier than air and remain near the floor so that as much of the work as possible should be kept high.

All electric wiring and cables should be installed in approved metal conduit or approved armored cable. In garages and show rooms where the wiring is to be run in approved metal mouldings. Metal conduit, armored and metal moulding should be so installed that all outlet and junction boxes shall be located at least four feet above the floor. This does not apply to flexible pendant lamp or portable connections which may be run exposed.

Flexible cords for pendant lamps must be approved reinforced cord and flexible cord for electric lamps, motors, or other apparatus must be approved especially designed for rough usage. The end of the latter must not plug into an ordinary base plug outfit but must be so connected that the connection may be easily broken by a pull from any direction. Therefore, the portable cord must carry the male end of an approved pin type plug connector or equivalent, the female end being of such design or hung so that the connection can easily be broken. The female end would be directly connected to the wiring in the outlet box at a height to keep the connector at least four feet above the floor.

(By To Be Continued)

PUBLICATIONS OF INTEREST TO THE SPECIFICATION WRITER.

Any publication mentioned under this heading will be sent free, unless otherwise noted, upon request, to readers of Pencil Points by the following publication. When writing for any of these items please mention Pencil Points.

Kewanee In Service.—Profusely illustrated portfolio presenting hundreds of successful installations in industrial buildings as well as all types of business, residential and public buildings are included. 90 pp. $3.00 x 11. Kewanee Roller Co., Kewanee, III.

Published by the same firm Catalog No. 75 describing water heating garage burners, complete line of water heaters, fm. 6 x 9. Catalog No. 77 Kewanee Radiators. A valuable booklet on radiation with charts, tables of capacities, etc. Uniform with preceding, Catalog No. 78 Five-box Builders. Covers subject of insulation. Many blue prints, much technical and scientific data. 6 x 9. 50 pp. Catalog No. 79 Powers Boilers. A valuable booklet on the subject for architects, draftsmen and engineers. 36 pp. 6 x 9.


Through the Ages.—Monthly magazine published by the National Association of Marble Dealers. Attractive illustrations of marble work showing both exteriors and interiors. The January number contains illustrations of the Wisconsin State Capitol. 8½ x 11. 76 pp. $12 Rockefeller Bldg., Cleveland, Ohio.

Zinc as a Paint Pigment.—Technical treatise on the subject with many illustrations, reports of tests, etc. 24 pp. 6 x 9. New Jersey Zinc Co., 160 Front St., N. Y. C.

Published by the same firm, from the same one subject. Paint Films, The Microscopy of Paint and Rubber Pigments and Factors Governing Paint Consistency.


Brixment for Perfect Mortar.—Booklet with frontispiece illustration and ready reference tables giving all the necessary data for a garage apply in such a case. But the use of the building will be more flexible if it is built so that it can be turned into a garage as well.

The electric wiring requirements only apply in those parts of a garage building in which automobiles carrying volatile in-

flammable liquids are kept for storage or use and all that portion of the building which is on or below the floor or floors on which such automobiles are kept unless it is separated therefrom by tight unperforated walls and floors. The purpose of this in connection with the electrical work is to prevent the ignition of an accumulation of escaping volatile vapors by a spark. Some of the vapors are heavier than air and remain near the floor so that as much of the work as possible should be kept high.

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(By To Be Continued)
PENCIL POINTS

Rotary Ash Receiver.—Data sheet with drawing and specifications of this revolving hopper, giving all the necessary information about this type of equipment. 8½ x 11. Sharp Rotary Ash Sifters, Inc., 107 E. Washington St., Chicago, Ill.

Hard-nyl Engineering Service.—Booklet on the subject of specifications and maintenance with emphasis on performance under reference to industrial conditions. 16 pp. 8 x 11. G. C. Foos Co., 512 North Main St., St. Louis, Mo.

Solid Steel Reversible Windows.—Illustrated Booklet No. 1-34 covering equipment for office buildings, schools, banks, stores, churches, etc. 32 pp. 8½ x 11. Sharp Rotary Ash Sifters, Inc., 107 E. Washington St., Chicago, Ill.

Drainage Systems.—Data sheet giving all the necessary information about this type of equipment. 8½ x 11. Sharp Rotary Ash Sifters, Inc., 107 E. Washington St., Chicago, Ill.

Portland Cement.—Booklet illustrated with photographs and many detail drawings showing construction. Data regarding finishes, etc. 16 pp. 8½ x 11. Portland Cement Assn., 111 W. Washington St., Chicago, Ill.

Concrete and Brick Work.—Illustrated catalogue of a large variety of standard and special equipment, including equipment for all types of building. Published by the same firm. The Perfect Bathroom, describing modern conveniences and necessities. Uniform in style with other series.


Glass Cloth.—Illustrated catalogue of a variety of colors and patterns. Contains a section on the various uses of glass cloth, including window treatments, upholstery, and other uses. 24 pp. 8½ x 11. Mass. Institute of Technology.

Architectural Humanities (Continued from page 46) a moral that would be of lasting value to any one of his hearers. The same is true in different fields of Milton B. Medary, Jr., of Philadelphia, who is responsible for the new plan of Montgomery County Courthouse, with his extensive knowledge of the law in its application to the architect's problem; or of F. W. Wentworth, as to the economic significance of the fire insurance of J. Randolph Cooldidge, Jr., the "Graphic Arts"; Ralph Adams Cram, on the "Problem of Church Building," etc., through a long list of distinguished men, competent to inspire the student to be more than a draftsman, and to realize in its fullest sense the possibilities that lie hidden in the word "architect." That such a course has been started at the Massachusetts Institute of Technology is significant only as an indication, or recognition, of the tendency of the times in which we live.

That there is, furthermore, need for a course of this nature is perhaps truer now than it was before the war. For now, if ever, the solution of the many problems that confront mankind is dependent upon a recognition of the point of view and the rights of others. A sense of justice that goes far beyond the letter of the law and strives to interpret the prompting spirit is sure to result from such an acquaintance with the needs and problems of others as talks on the lines indicated above would inevitably suggest. Such a sense of justice is the desire for co-operation, and a will to serve, which, to my belief, are two elements essential to that existence for which we are all striving—an existence that is founded on intelligent recognition and appreciation of the rights of others.

**Specification.**—Covers subject of proper protection for steel and ironwork. Contains a large amount of typical and special drawings applicable to a wide variety of buildings. 64 pp. 8½ x 11. Milwaukee Corrugating Co., Milwaukee, Wis.


**Lithoprints, What They Are, How They Are Made, How They Are Used, What They Cost.**—Complete description with samples of lithography as it may be applied to all drafting rooms. Loose-leaf binder. 8½ x 11. Lithoprint Co., 43 Warren St., N. Y. E. B. Cuyler's "The Lithographer," a valuable textbook for students and lithographers. 260 pp. 6½ x 9½. E. B. Cuyler, Lithographer, Inc., 77 Pearl St., N. Y. C.

**"White" Door Beds and Space Saving Devices.**—Catalogue No. 2, with drawings and many suggestions for saving space in the modern apartment, residence and other buildings of various types. Shows section, cutaway drawings, details, specifications, etc. 8½ x 11. Ruff Mfg. Co., Pittsburgh, Pa.

**"White" Door Beds and Space Saving Devices.**—Catalogue No. 2, with drawings and many suggestions for saving space in the modern apartment, residence and other buildings of various types. Shows section, cutaway drawings, details, specifications, etc. 8½ x 11. Ruff Mfg. Co., Pittsburgh, Pa.

**Wrought Hardware.**—Complete catalogue showing complete line of steel, brass and bronze hardware. A valuable book in any office. 260 pp. 6½ x 9½. The Stanley Works, New Britain, Conn.

**Mortar and Brick Work.**—Illustrated catalogue covering the subject for all types of builders and under all conditions. Much technical information. 8 pp. 8½ x 11. C. F. Pease Co., 813 No. Franklin St., Chicago, III.

**Concrete and Brick Work.**—Booklet illustrating the subject for all types of builders and under all conditions. Much technical information. 8 pp. 8½ x 11. C. F. Pease Co., 813 No. Franklin St., Chicago, Ill.

**Portland Cement.**—Booklet illustrated with photographs and many detail drawings showing construction. Data regarding finishes, etc. 16 pp. 8½ x 11. Portland Cement Assn., 111 W. Washington St., Chicago, Ill.