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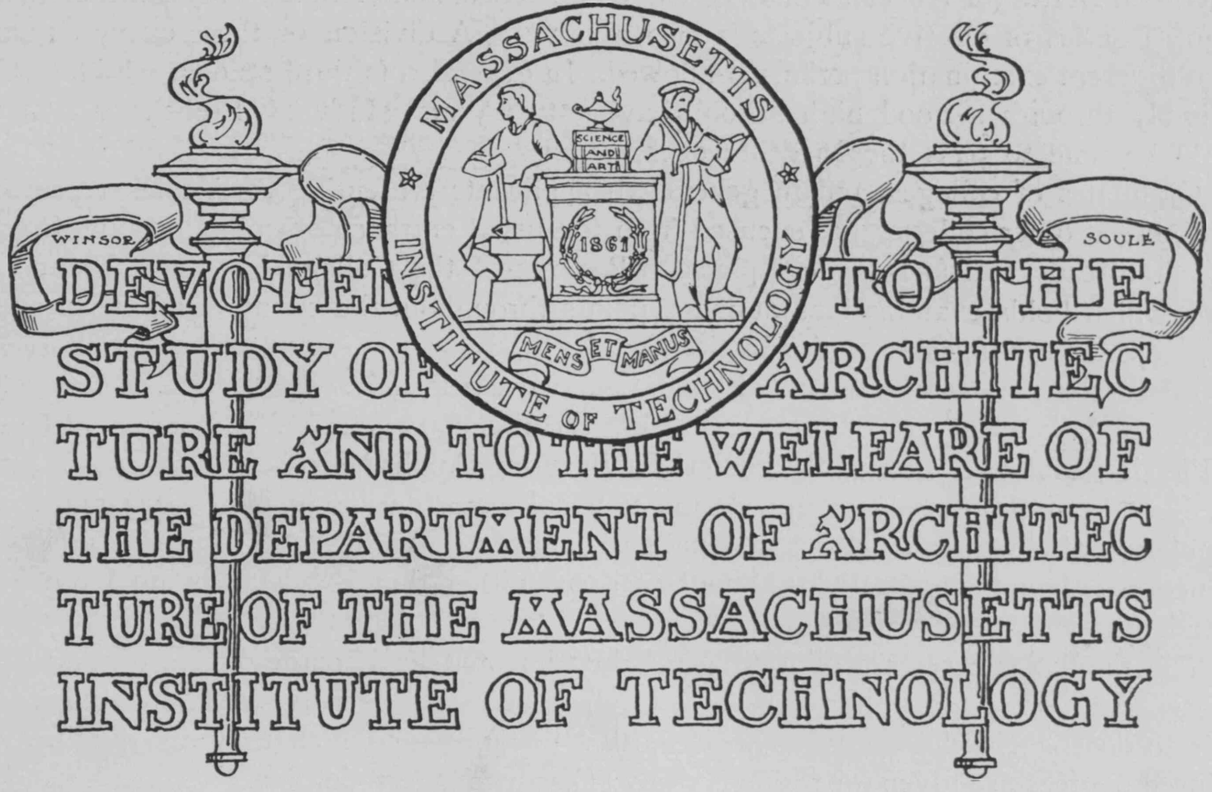
THE TECHNOLOGY ARCHITECTURAL RECORD



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DEPARTMENT OF ARCHITECTURE

General Statement

The Course in Architecture. The curriculum is designed to supply the fundamental training required for the practice of architecture. The reputation of the course has been sustained by the strictest adherence to that high standard of efficiency for which the Institute of Technology is noted. It recognizes that architecture is a creative art, and requires more knowledge of liberal studies and less of pure science than the profession of the engineer. This condition has been met through specially prepared courses. Full appreciation of the value of the important study of design is shown by the fact that the instructors who have it in charge are not only highly trained men, but that they have the experience which comes from an active practice of their profession.

Advantages of Situation. The school is in the heart of the city,— a great museum of architecture,— in which one is in close touch with the work of the best architects of the day. Building-operations can be watched from beginning to end. The nearness to architects in their offices is such that they show their interest in the school through constant visits. The Museum of Fine Arts is within easy reach, where every opportunity is offered the student to make use of its splendid equipment. The Public Library offers the students the use of its choice architectural library without any annoying restrictions. The Art Club near at hand is an element of instruction, as well as other exhibitions of pictures and fine arts so generally opened to the public.

Equipment. The equipment of the Department consists of a gallery of drawings including original envois of the Prix de Rome, unequaled in this country; as fine a working library as can be desired, containing four thousand five hundred books, sixteen thousand photographs, fifteen thousand lantern-slides, and prints and casts of great value.

Four-Year Course. The regular course leading to the degree of Bachelor of Science is of four years' duration. It includes two Options,— one designed for those to whom the esthetic side of Architecture makes the strongest appeal; the other designed for those who prefer the Engineering branches of their profession. The two Options run very nearly parallel for the first two years, and each embraces the fundamentals essential to the education of all architects. At the beginning of the third year the line of demarcation becomes more marked, and in the fourth year it is very sharply defined; but general subjects common to both Options continue through the four years, and emphasize the close relation between the two and the interdependence of one upon the other in a complete architectural equipment.

General Architecture, Option I., lays its greatest stress upon Design and Art, with only enough training in Engineering to enable the student to understand the structural necessities of his design and to discuss intelligently the general engineering phases of his practice.

Architectural Engineering, Option II., lays its greatest stress upon Structural Design and Engineering, but includes enough training in General Architecture and Art to put the student into full sympathy with the ideals of his profession.

Graduate Courses. Opportunities are offered in each Option for a further year of advanced professional work leading to the degree of Master of Science to graduates of the Institute, and to others who have had a training substantially equivalent to that given in the undergraduate course. The value of this graduate work cannot be overestimated. The good results obtained through a year's uninterrupted study of subjects essential to the highest professional success, and for which the previous four years' training has now prepared the student, are in extraordinary evidence. Perhaps the most convincing proof of the increased value of the student due to his year of advanced study is the fact that the practising architect invariably seeks first in the graduate class for his assistants.

Summer Courses. These courses, of eight weeks' duration, in second and third year Design and in Shades and Shadows, are open to students from other colleges, and to special students who have the required preparation and who desire to anticipate a portion of the professional work of the regular school year.

College Graduates. Students who have completed a college course before entering the Department will have covered much of the general work required and can usually obtain the degree of the Institute in two years and a summer course. College students who propose to enter the Department are advised to communicate with the Secretary of the Institute in order that in the arrangement of their college courses they may anticipate as far as possible the Institute requirements.

Special Students. Applicants must be college graduates or twenty-one years of age with not less than two years of experience in an architect's office or some equivalent and satisfactory preparation. All must include in their work at the Institute the first-year courses in Descriptive Geometry and Mechanical Drawing, unless these subjects have been passed at the September examinations for advanced standing, or excuse from one or both has been obtained on the basis of equivalent work accomplished elsewhere. Admission to these courses is dependent upon the approval of the Head of the Department of Drawing. In all cases applicants must demonstrate their fitness for the work of the Department of Architecture by personal conference with the Director or his representative, and by the presentation of letters from former employers, together with drawings covering their experience as fully as possible. In general, no student will be allowed to take fourth-year Design without a clear record in Descriptive Geometry. All special students and others entering the Department for the first time must register for second-year Freehand Drawing; the first week of this course will be considered a test period to determine the class in this subject in which the student will be placed.

The Catalogue of the Department, giving more detailed information, will be sent on application to the Secretary of the Institute, Professor A. L. Merrill.

Scholarships and Prizes

Scholarships and Fellowships. Certain funds are available for the assistance of well-qualified students for undergraduate and for postgraduate work.

Prizes. The Department offers the following annual prizes, which, with the exception of the Rotch Prizes, are awarded for competitions in Design:

Traveling Fellowship. One thousand dollars to be devoted to travel and study abroad for one year under the direction of the Department Faculty. The competition for this Fellowship is open to regular and special students who have passed two consecutive years in the school within the last three years, one of which must have been in the postgraduate class.

Rotch Prizes. The gift of Mr. Arthur Rotch. Two prizes of two hundred dollars awarded at the end of the senior year to the regular and the special student having the best general records. The special student must have spent at least two years in residence to be eligible as a candidate.

The Boston Society of Architects' Prizes. The gift of the Society. Two prizes of fifty dollars awarded to a regular and a special student in the senior class.

The Chamberlain Prize. The gift of Mr. W. E. Chamberlain of the Class of 1877. Twenty-five dollars awarded to a student in the postgraduate class.

The F. W. Chandler Prize, available in 1914-15. The gift of the alumni of the Department and of Professor Chandler's friends. A prize to be awarded to a student in the postgraduate class.

The " Class of 1904 " Prizes. The gift of the Class of 1904. Two prizes of ten dollars awarded to a regular and a special student in the junior class.

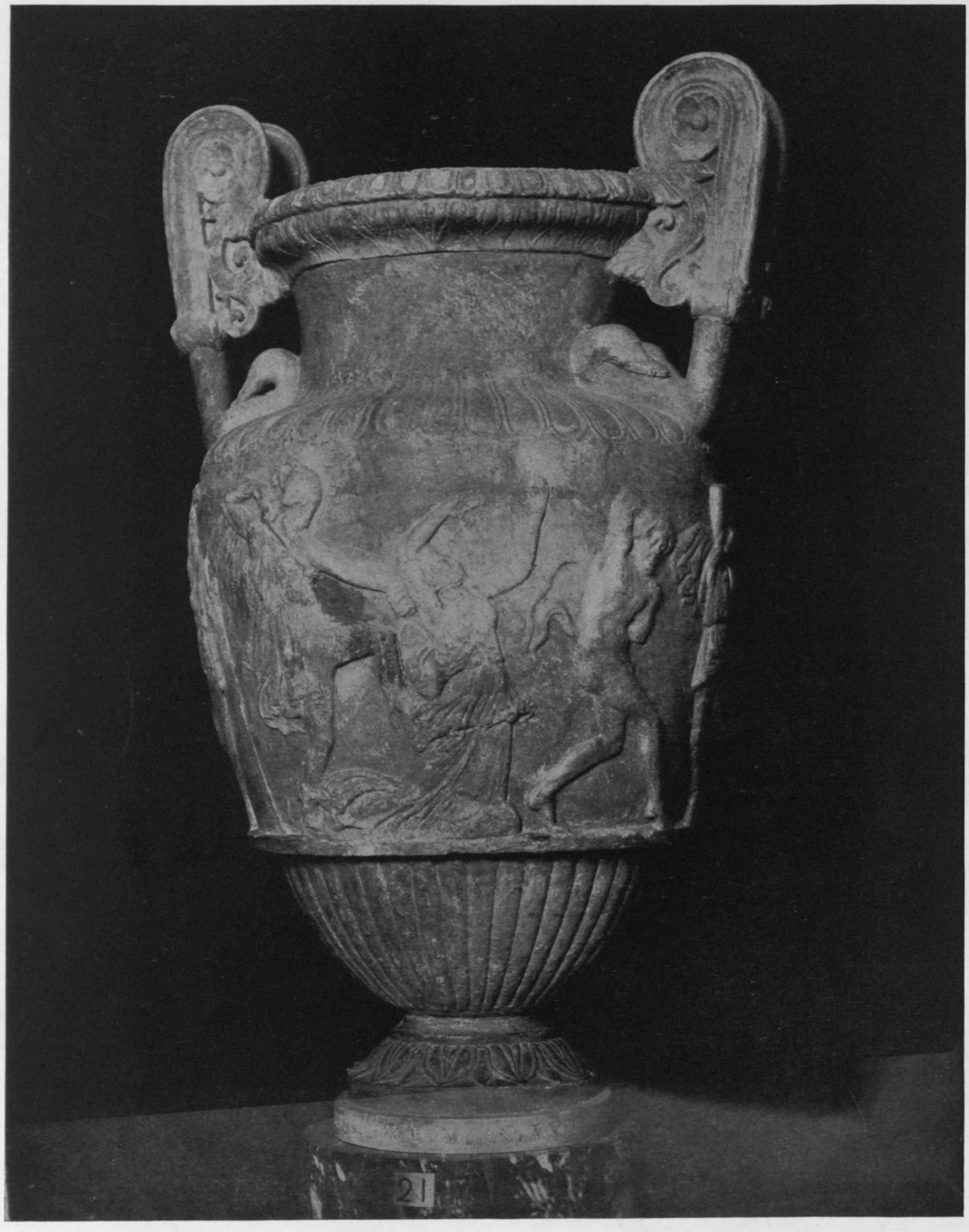
Architectural Society Scholarship Fund. This fund is the gift of the Architectural Society of the Institute. The income to be used for loans to such students of the Department as may be approved by the Trustees.

Graduates of the Department are granted special advantages:

The American Institute of Architects accepts them as candidates for membership without the examinations usually required.

The American Academy in Rome admits them to the preliminary competition for its Fellowship in Architecture.

The Rotch Traveling Scholarship Committee excuses them from the preliminary examinations of competitions.



ANTIQUE VASE, VATICAN MUSEUM

The Technology Architectural Record

Vol. VII March, 1914 No. 2

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Published by the Department of Architecture of the Massachusetts Institute of Technology.

AFTER careful consideration and the experience of two years, the Institute has decided not to enter the Interscholastic Competition for 1913-14. Although withdrawing for the present, it wishes to put itself on record as being heartily in sympathy with any movement of coöperation between the schools of architecture which will bring about real educational benefits. That a coming together of the schools might be made beneficial and stimulating both to the students and to the instructing-staffs is unquestionable; but it is equally true that with mistaken methods the spirit of competition may lead to results injurious, rather than helpful, to sound teaching. This we believe to be the case with the Interscholastic Competition as at present conducted.

The greatest educational good that can come from one group of students, working under one set of instructors, meeting upon common ground with another group under a distinctly different personal influence, is the opportunity for both students and instructors to see what others are doing and how they do it. We believe this can best be done through a problem taken in common by the several schools, where each school shall make the awards on its own work, in its regular routine, with prizes and medals. The real educational benefit of coöperation would then come through the opportunity given to compare the work of the various groups participating in the exhibition which would be shown in turn at each institution.

In this way the exhibition would give evidence not only of the quality of individual work, but of standards of criticism characteristic of each institution, while the problematical element of a general exhibition jury would be eliminated. The work of each school would then stand, as it ought, upon its own merits, without any one of them enjoying the exaggerated prominence conferred by an official tag.

As at present constituted, the Interscholastic Competition has but one award available in each of the two classes for all the competing schools, and the importance of this single medal is greatly exaggerated by an indiscriminating public, and even by the students themselves, for this award really gives no adequate evidence of the value or efficiency of a given system of architectural education. The judgment necessary to pass on so important a question can come only after an intimate study of ways and methods, which is beyond the reach of an exhibition jury.

How still further to improve our methods of instruction should be the one object of coöperation, and satisfactory results can be brought about only through comparison of systems of instruction and interchange of aims and ideals between the instructors and the pupils of the several schools.

We need coöperation, not competition.

With the effort now being made by the American Institute of Architects to place the profession of architecture in the proper light, and to bring about a better understanding of it in the minds of the general public, it would seem desirable for the schools to do their part in removing wrong impressions. The Interscholastic Competition at present is misleading. We regret further to read in the recent report of the Committee on Education their recommendation to the American Institute of Architects. The recommendation has been adopted, "that the Board of Directors be and they are hereby instructed to establish, out of any funds available for that purpose, a medal or medals for Intercollegiate Competitions in Architectural Design along the general lines suggested in the report of the Committee on Education." This, it seems to us, will have the effect of giving a distinctly official endorsement in these awards of the A. I. A. medals, and will still further aggravate the undesirable features of the present Interscholastic Competition.

Whenever joint exhibitions can be established in the spirit of the plan here set forth Technology will be glad to participate in them, believing that they would then be of real educational advantage to all architectural students.

Through Professor LeMonnier, we have received notice that the Société des Architectes Diplomés par le Gouvernement has placed at the disposal of the Department two medals, one of gold, the other of silver, to be awarded in a competition in Design.

The competition will be held in the advanced and fourth year classes. The prizes will be known as those of the "Société des Architectes Français;" and in further recognition of this gift, the subject of the competition will be distinctly French in character.

We believe this is the first instance of an American School of Architecture receiving recognition in this particular form. It will be of the greatest value as a stimulus to the students in their work in Design; furthermore, we look upon it as a graceful expression of the fact that since its inception some forty years ago Technology has adapted its methods and the spirit of its instruction in Architecture from those of the Ecole des Beaux-Arts and has had two notable graduates of that school — Professor Létang and Professor Despradelle — at the head of its courses in Design.

Attention is called to the change in our requirements for admission of special students. These are given in full in the General Statement on the second page. It will be noted that among other changes the former requirement of entrance examinations in Plane and Solid Geometry has been withdrawn. We believe the entrance requirements are now on a broader basis, and will prove a fairer test of the applicant's fitness to undertake our courses.

The second annual meeting of the Association of Collegiate Schools of Architecture was held in New York, at Columbia University, on Dec. 27, 1913. Technology was represented by Professor Lawrence.

Heating and Ventilation

By ALLEN HUBBARD

An Informal Talk to the M. I. T. Architectural Engineering Society

IT may be interesting to compare the old with the present methods of building-construction in this country, and to note the evolution. By "old" I mean dating back approximately fifty years. Of course there were many architects in those days; but I should say that, as a rule, when an owner wished to construct a building he went to some reputable contractor in whom he had confidence, and said to him that he wished to build, stating the kind of building. The contractor would then do the designing, such as it was, buy the material, and erect the building on what is known to-day as the "cost-plus basis;" that is, he would charge the owner a certain profit on top of the cost of his labor and material. Any mistakes made, of course, were charged up as labor and material.

As competition became keener it was found that this sort of arrangement did not always carry with it the proper degree of honor on the part of the contractors, so that the owner paid more for his building than he should have paid. This soon developed the fact that to employ a trustworthy and well-trained architect (who would draw plans and specifications, and get real competitive bids, and after the contract was awarded see that the contractor furnished exactly what he contracted to give) was the cheapest and most satisfactory method of building.

In those days, before plumbing, electric lighting, power, heating and ventilating, steel and concrete, elevation, etc., were considered necessities, an ordinary office building would consist simply of the proper arrangement of the rooms, each room having a fireplace with a flue, or simply a flue to which a stove-pipe could be attached, and possibly gas-piping for lighting-purposes. That construction as compared with modern construction made the problem comparatively simple. As steam heating gradually came into use the architects absorbed as much of the knowledge of the subject as possible, but depended principally on contractors to make the layout of the apparatus. The method of procedure would be something like this:

Having settled the arrangement of rooms, the story heights, etc., the architect marked off a space in the basement for the heating-apparatus. If he was especially careful he would find out from some one the proper size chimney for the boiler, and have this designed with the building wall. He would then let the contract for the building, and the building-work would soon start. As soon as he could get to it he would call in four or five heating-contractors, show them the drawings, and ask them each to submit a layout for the steam heating-apparatus. Sometimes he would give them blue-prints which they could take to their office and lay out the apparatus right on the blue-print, or they would trace the blue-prints in the architect's office and have a set of separate drawings made showing the layout. Each contractor would do this, putting in a price with his plans and specifications. Often there was not sufficient room, so that his layout was made to fit the space available and not really what ought to be. The architect and the owner would then consider the prices. Generally, the lowest price was the one they considered first; and if the contractor was a responsible one, or if they thought his price was sufficiently low so that they would be warranted in "taking a chance," they would award the contract to him without going far into details or considering the others. The contractors, knowing that the man who put in the lowest price would probably receive the job, made a very careful study of how to lay out the work in the cheapest manner possible, supplying the required radiators, and having the apparatus in condition so that they could fire it up and have the work accepted. To do this the contractor was obliged to figure on the cheapest grade of valves and the smallest-sized boiler that he dared take a chance on. As he was his own expert and presuming on the architect's lack, he did about as he pleased.

A great many contracts were carried out in this way, with the result that in the long run, while the owner saved something in the first cost, he many times more than made it up by being obliged to force his boiler to an uneconomical point year after year, and by having to pay for repairs on various parts of the apparatus, which, if first class, would have needed no repairs.

There was another loss which after a time came to be recognized by the contractors. If an architect invited five different contractors to make plans and specifications for the same apparatus, and only one was successful, the other four had wasted their time in doing the same work as the successful contractor, and were obliged to stand this overhead expense. In order to keep in business they were obliged to charge the loss onto some other job, so that the general public had to pay for this loss or the steam contractors would have had to go out of business. At this, practically every steam contractor was obliged to carry his own engineering-force capable of laying out any kind of a plant. It was not uncommon for each of the contractors to spend $300 or $400 or $500 on a large job in making the competitive layout. Various methods were tried by the contractors to recoup themselves for this loss.

As time passed, however, and more engineers came into the field, the necessity for contractors to carry an engineering-force who made competitive layouts for large buildings practically ceased; so that to-day, while contractors of course have in their employ competent engineers, as a rule their time is spent on special work or in estimating on layouts made by specialists.

There can be no sharp line drawn between the old method just described and the custom of to-day. It is a matter of development. It is safe to say, however, that expert engineering in modern building-construction has been recognized as a necessity, not only by the architectural profession, but also by the public to a certain extent. Nearly every one of the leading architects in the country, when he has a large building on hand, pursues the following course:

Having been appointed architect for the building, he takes up with the owner the question of agreements, especially if the building is a public one. A regular contract is drawn up which specifies just what the architect is to furnish, and what the owner is to do, and places responsibilities. It is not uncommon to have a clause in

this contract that stipulates that the owner shall pay for the services of such outside expert engineers as may be necessary for the domestic engineering (including plumbing, heating, lighting, and possibly elevators and refrigeration work, also steel and concrete). It is generally stipulated that the architect shall have the appointment of the engineer. This is a wise arrangement, as it is absolutely necessary that the architect and the engineer shall work in perfect harmony. In fact, the engineer under these conditions becomes practically a part of the architect's office.

In cases where there is not a regular, formal contract between the architect and the owner the architect often tells the owner that it will be necessary for him to employ specialists on the heating and ventilating and the electrical work or such other engineering work as he does not care to assume responsibility for in his own office. In the past this sort of a statement from an architect has come as a surprise to the owner, and even to-day there are numbers of the smaller architects who have not yet made a sufficiently large reputation to have the nerve to tell this to an owner. However, my experience is that all of the larger architects in the country do this. The owner pays the regular commission to the engineers, and also pays to the architect a commission on that part of the work taken care of by the engineers. This commission at the present time varies somewhat; roughly speaking, however, it is my opinion that $2\frac{1}{2}\%$ of the cost of the work taken care of by the engineers is a reasonable percentage in most cases to cover the cost to the architect of the work which he has had to furnish in connection with the engineer's work. (Engineer ought not to take part of the architect's commission.)

Having settled with the owner that he (the owner) will furnish and pay the special engineer, the architect usually employs the man he prefers. The work then proceeds as follows: After the architect has blocked out on 16th or 8th scale (in very rare cases 32d scale) the building plan and elevation, the engineer goes over the matter with him and makes a rough calculation of the size of the boilers and the amount of power required, and gives the architect the size of space which will be necessary for boilers and engine-room, size of chimney; and, if it is a building where large amounts of air will be necessary for ventilation, the engineer gives the architect a rough idea of the space required for primary heaters, fans, air-washers, etc., also some rule for determining roughly the size of the flues for various rooms, and possibly general locations. With this data the architect proceeds to draw his working scale-drawings. There are many matters which have to be considered during this process. We often go to an architect's office, trace off his unfinished plans, and from these tracings, in our own office, lay out as carefully as possible the sizes of radiators, ducts, location of pipes and various other parts of the apparatus; and after taking blue-prints, give this data to the architect, of which he can incorporate in his own drawings as much as he considers necessary.

After the architect's drawings are completed the engineer is able to make complete, accurate tracings of them and lay out carefully in detail all parts of the apparatus. Then the engineer draws up his specifications and obtains figures. You will see by this method that instead of the apparatus having to be crammed into spaces which are too small, and worked in around corners in such a way that it seriously hampers the operation of the plant, if the engineer has worked in harmony with the architect proper spaces have been provided in the building-construction for the entire apparatus, so that if there is any failure it is because the engineer has not properly done his work. If the work has been properly done the apparatus is a source of satisfaction.

The bids received on a layout of this kind will all be based on identically the same apparatus, so that it becomes a question of which contractor has the best business organization and looks after his workmen to the best advantage.

The owner can safely sign a contract with the lowest bidder, because there can be no misunderstanding in a properly drawn specification as to just what is to be furnished. It is assumed, of course, that the engineer has consulted with the architect and the owner as to just what results are to be accomplished in the building, and it is assumed also that the engineer is sufficiently skilled to be able to lay out the plant in the most reasonable, practical, and economical manner. When the work is being installed the engineer must look after it carefully, and see that it is installed in accordance with the intention of the drawings and specifications. No matter how carefully a heating and ventilating system may be planned and specified, there is always more than one way to install the parts of the apparatus. It is "up to" the engineer's superintendent to see that the best way is adopted.

For several years I acted as engineer for a contractor. I saw plants installed by our own firm and I saw plants which were installed by other people. I learned that no matter how well a system might be laid out, unless it was installed in accordance with the properly prepared drawings there was sure to be trouble.

A heating-apparatus is somewhat like a watch. It runs smoothly and keeps good time; it is unreliable and does not keep good time. This is most annoying. It is the same with a heating-apparatus: it either runs along smoothly and does its work, or it runs along with a snapping, cracking, and gurgling, and does not do proper heating, which, as in the case of the watch, is very annoying and something must be done.

So much depends upon the careful installation of a heating-apparatus that we have made it a practice to make no layouts and to write no specifications for work to be installed by others over which we do not have complete charge during installation. The mere fact that an engineer is connected with a job causes him to be blamed if anything goes wrong, regardless of the fact that he may not have supervised the installation and may not be really at fault. Such blame, of course, hurts the engineer's reputation even though undeserved.

I might go on further and give you the details of how the work is checked up, extra orders and credits attended to, and how certificates of payment are made out. These are details, however, which it does not seem necessary to go into. The above gives you a general idea of the methods pursued when the heating-engineer is employed with the architect. In a good many pieces of work the engineer is employed directly by the owner, such as rearranging old work or putting entirely new plants into old buildings. In this case the engineer, of

course, treats only with the owner, and acts very much in the same capacity as the architect does for a new building.

I wish to say a word to you concerning the relation of these three parties. I have shown that the architect should determine the selection of the engineer for his buildings. I also stated that the engineer really becomes a part of the architect's office. You can readily see that with the engineer's work forming, as it does, an essential part of the building-construction, in order for the architect to get the best results he must have entire charge of the design. It often happens that what the engineer desires and would like best seriously interferes with the effect which the architect is after. In this case a compromise is usually effected which will give the best results to the owner.

It is important that a careful line be drawn, or rather a careful understanding exist, between the architect and the engineer as to just what parts of the work the architect is to embody in his specifications, and just what parts the engineer is to attend to, so that there will be no hiatus between the two; in other words, there will be no part of the work which each expects the other to do and which, consequently, is unprovided for. Take for an example the matter of painting on pipe-covering. This must be carefully understood as to whether the architect will specify the general contractor to do all painting, including the painting of the pipe-covering, or whether this is to be covered in the heating-contractor's specification: whether the foundation for the boiler is to be furnished by the general contractor or by the building-contractor. In case of a misunderstanding and an omission from both specifications the result is an extra payment which has to be "put up" to the owner. He, supposing that the contracts covered all such matters, is naturally "peeved." The owner may be nice about this or he may not be, depending on the character of the man; but the fact remains in either case that an omission has been made, and it does not help either the architect or the engineer.

In working up plans and specifications with an architect we have a regular list of forty or fifty items which cover all of the usual items which may be provided by the architect or the engineer. We give this list to the architect in duplicate, and ask him to fill out the two, designating what items he will take care of, etc.; he then keeps one copy for himself and returns the other to us. This arrangement has in the past saved a great many disputes between the architect and ourselves, and has settled a great many, so that the responsibility was placed just where it belonged. Another advantage of this list is that it brings to the attention of the architect in a forcible manner, as well as to our own attention, the fact that these various matters must be determined and provided for in the specifications.

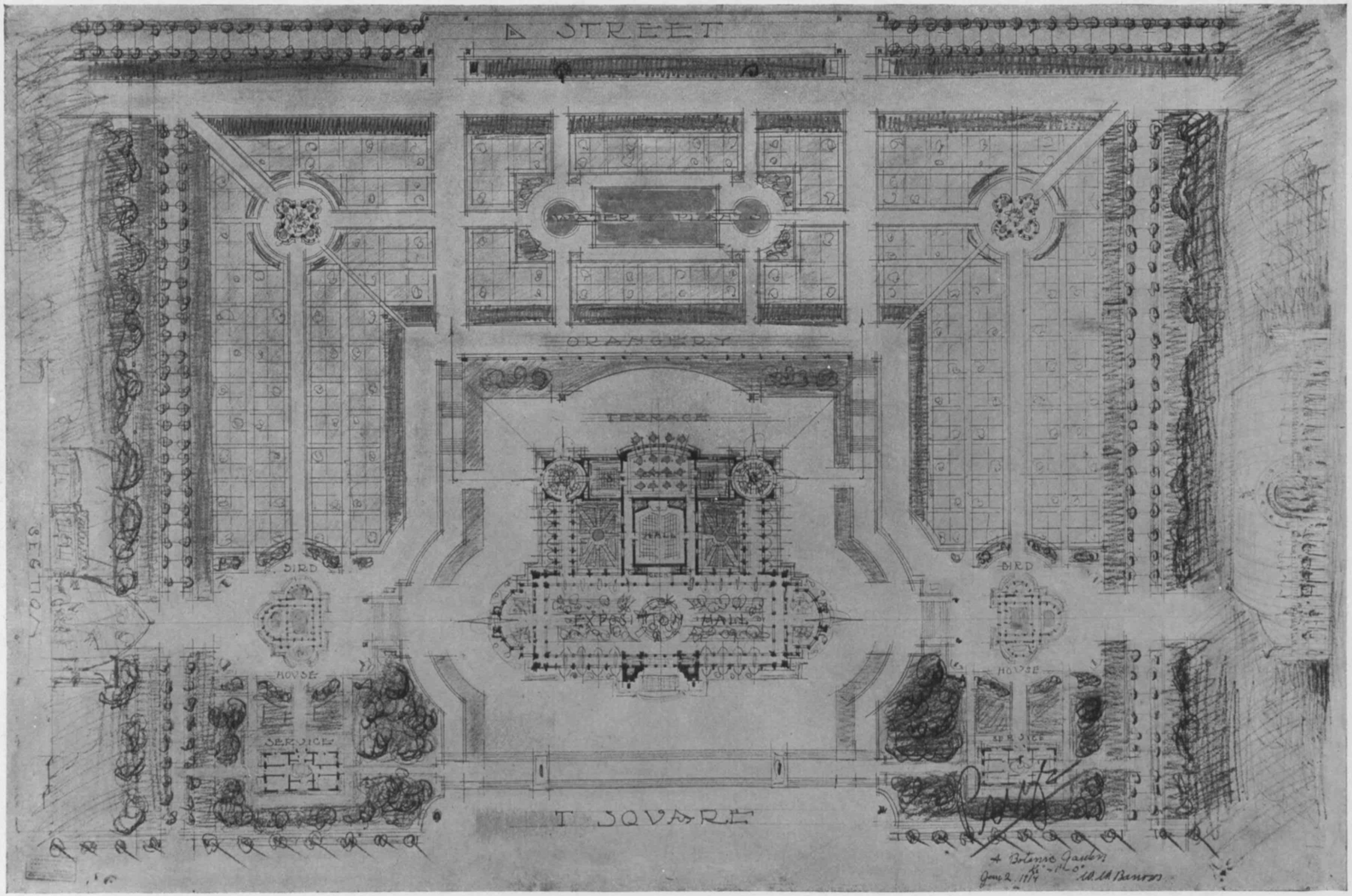
Human nature is the same the world over; every man in business to-day — at least, this is my observation — takes steps to put the responsibility wherever possible onto others, so that if any particular thing goes wrong he himself will not be held responsible. Architects and engineers are no exception to this rule, and unless one can show beyond question that he is not responsible when things go wrong he will have to shoulder the blame, and often the expense.

The necessity for carefully drawing plans and specifications was never greater than at the present time. As stated above, the contractors who figure on an engineer's plans and specifications are competing in earnest. They have definite quantities of material and labor to furnish, and consequently, if they figure to take the job at a low price they do not have very much leeway. The result is that during the progress of work, if omissions or errors appear, the contractor simply says to the engineer, "That is not called for on the plans, and my price will be so much extra for doing it." If this is a clear oversight on the part of the engineer he is in an awkward position. The contractor, in such a case, of course, is free from responsibility, and, like the architect and the engineer, he does all that he reasonably can to keep clear.

All this goes to show that the heating and ventilating engineer, in order to be successful, must have a thorough knowledge of his subject. He must be careful in making his calculations; he must have a large experience before he will be able satisfactorily to pass judgment on the various matters that will come up. Right here I wish to say that accuracy is one of the essentials which is overlooked in teaching boys in the lower grades, and in college as well. I have had in my employ numbers of college graduates in which I could not place confidence, for the simple reason that they did not realize the necessity of being accurate. I myself was in the same class when I graduated, and it was only after I had received several hard knocks that I learned my lesson.

When one gets into the business world he will find that almost universally the measure of success is the dollar, and one can be successful only by being accurate. If an employee's errors cost his employer money his value will be very much decreased. The same is true if one is his own boss. Consequently, training in being careful is absolutely essential.

One of the greatest helps in successful heating and ventilating engineering is a broad knowledge, which must come largely from experience, not only in sizing up matters pertaining strictly to heating and ventilating, but also in general building-construction and engineering questions. Common sense and judgment all have for their foundation a knowledge of general things, and this knowledge must be more or less accurate. In making calculations for heating and ventilating you will find that there are a great many things to be taken into account besides the actual tables and rules which will be learned in school. By this I mean, for one thing, that no matter how carefully your calculations may be made, or how accurate they may be, if a building is carelessly built, windows badly fitted, or the building used in a different manner from what it was planned for, the heating and ventilating may not be satisfactory. All this has to be taken into consideration.



PRIZE DESIGN

COMPETITION FOR THE WILLIAM E. CHAMBERLAIN PRIZE

W. W. BARROWS

ADVANCED DESIGN

A BOTANIC GARDEN

Awards

Prize: W. W. Barrows Mention: L. C. Rosenberg

PRIZE DESIGN P. L. SMALL

COMPETITION FOR BOSTON SOCIETY OF ARCHITECTS' PRIZES

THIRD YEAR OF DESIGN — A CHIMNEYPIECE FOR AN ARMY AND NAVY CLUB

Awards for Regular Students

Prize: P. L. SMALL
First mention: F. H. KENNEDY
Second mention: F. A. CHANDLER
Third mention: J. A. ROOT
Mention: D. DES GRANGES
Mention: F. WHITTEN, JR.

PRIZE DESIGN F. S. WHEARTY

COMPETITION FOR BOSTON SOCIETY OF ARCHITECTS' PRIZES

THIRD YEAR OF DESIGN A CHIMNEYPIECE FOR AN ARMY AND NAVY CLUB

Awards for Special Students

Prize: F. S. WHEARTY
No mentions

PRIZE DESIGN

COMPETITION FOR THE "CLASS OF 1904" PRIZES

S. M. SPAULDING

SECOND YEAR OF DESIGN

A GOVERNOR'S REVIEWING STAND

Awards, Regular Students

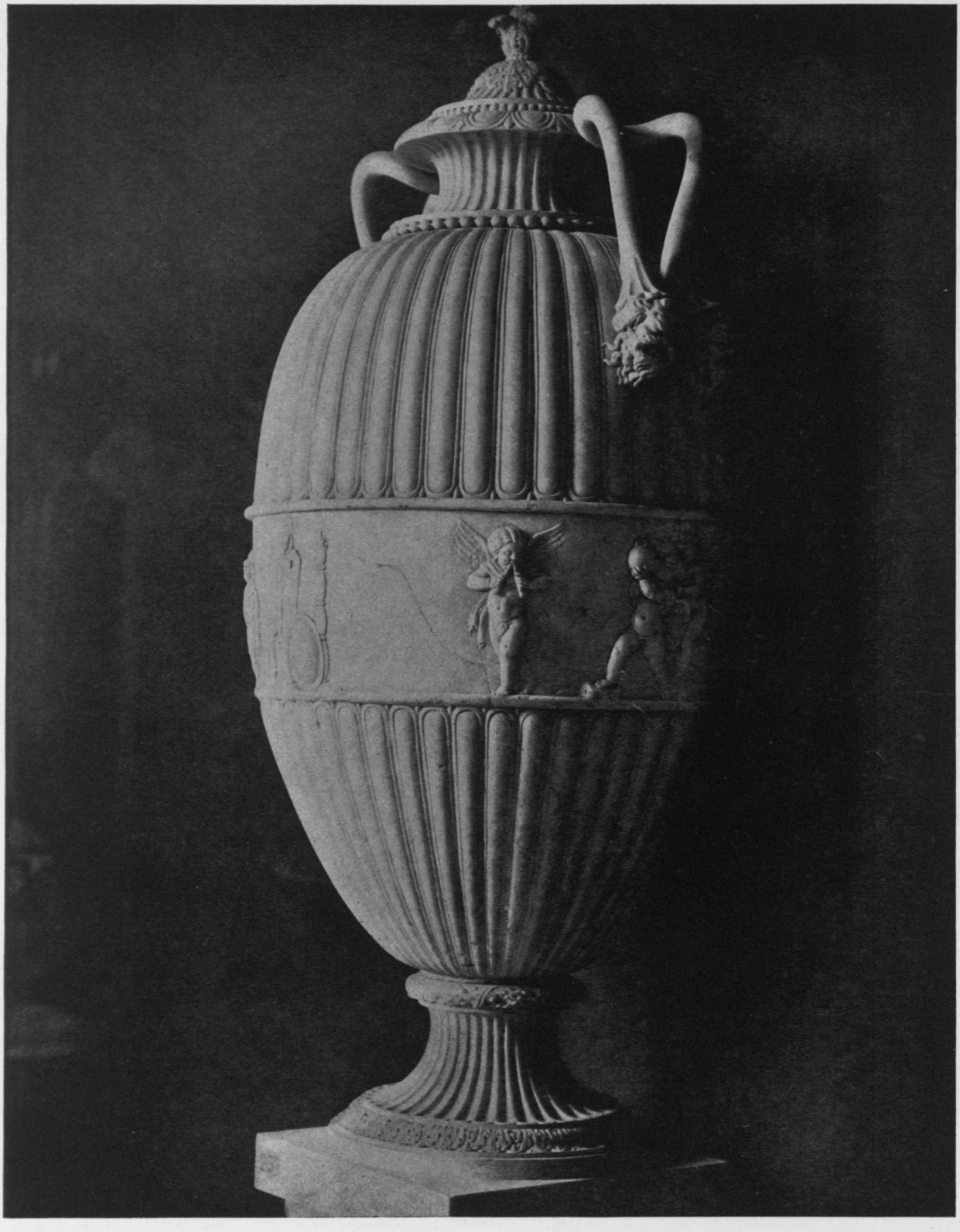
Prize: S. M. SPAULDING
First mention: L. S. ROBINSON
Second mention: O. R. FREEMAN

Mention: H. P. SABIN
Mention: S. T. PIZA

Mention: M. W. PETTIBONE
Mention: E. B. GOODELL, JR.

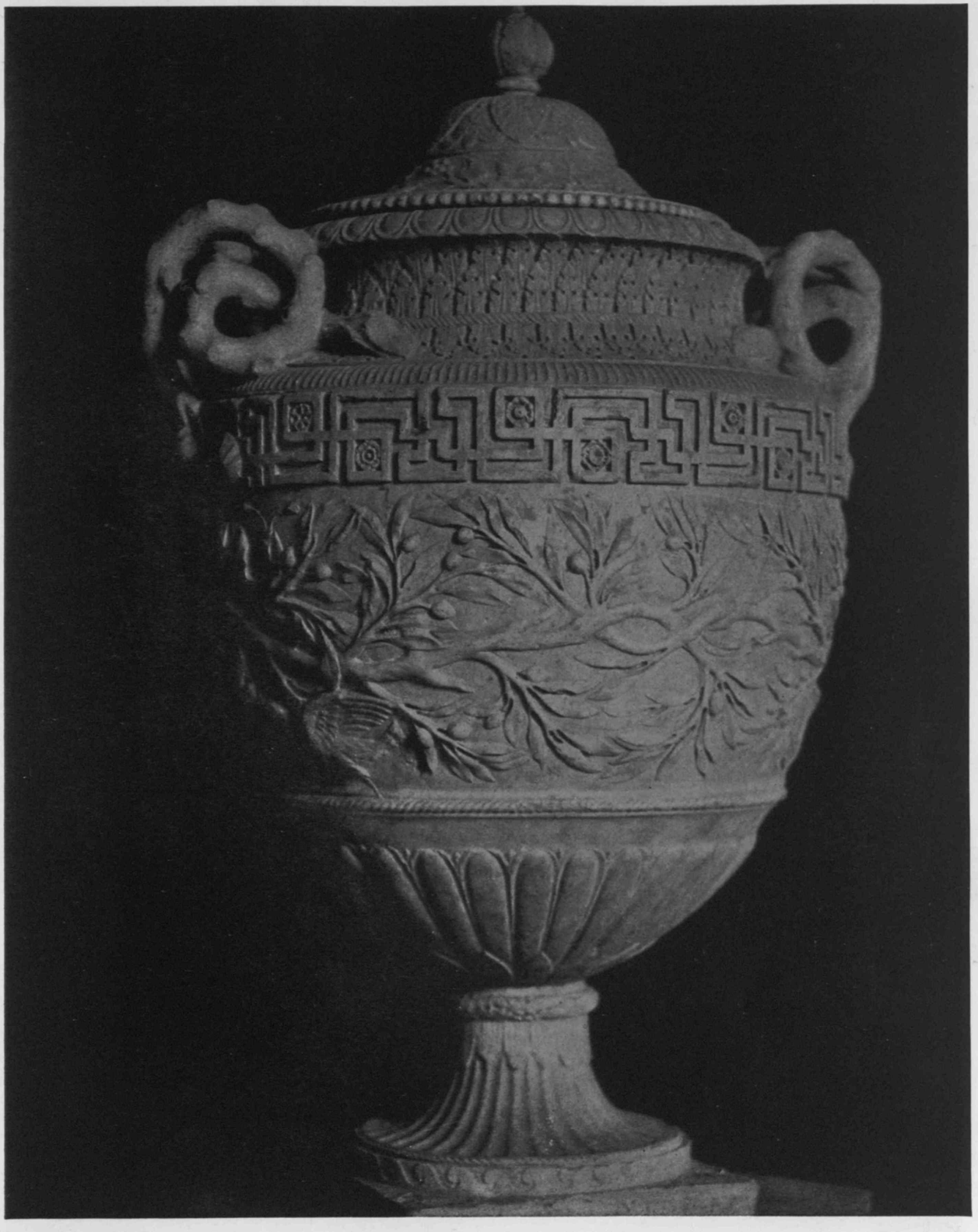
Awards, Special Students

No prize awarded
Mention: J. VON ROSENBERG

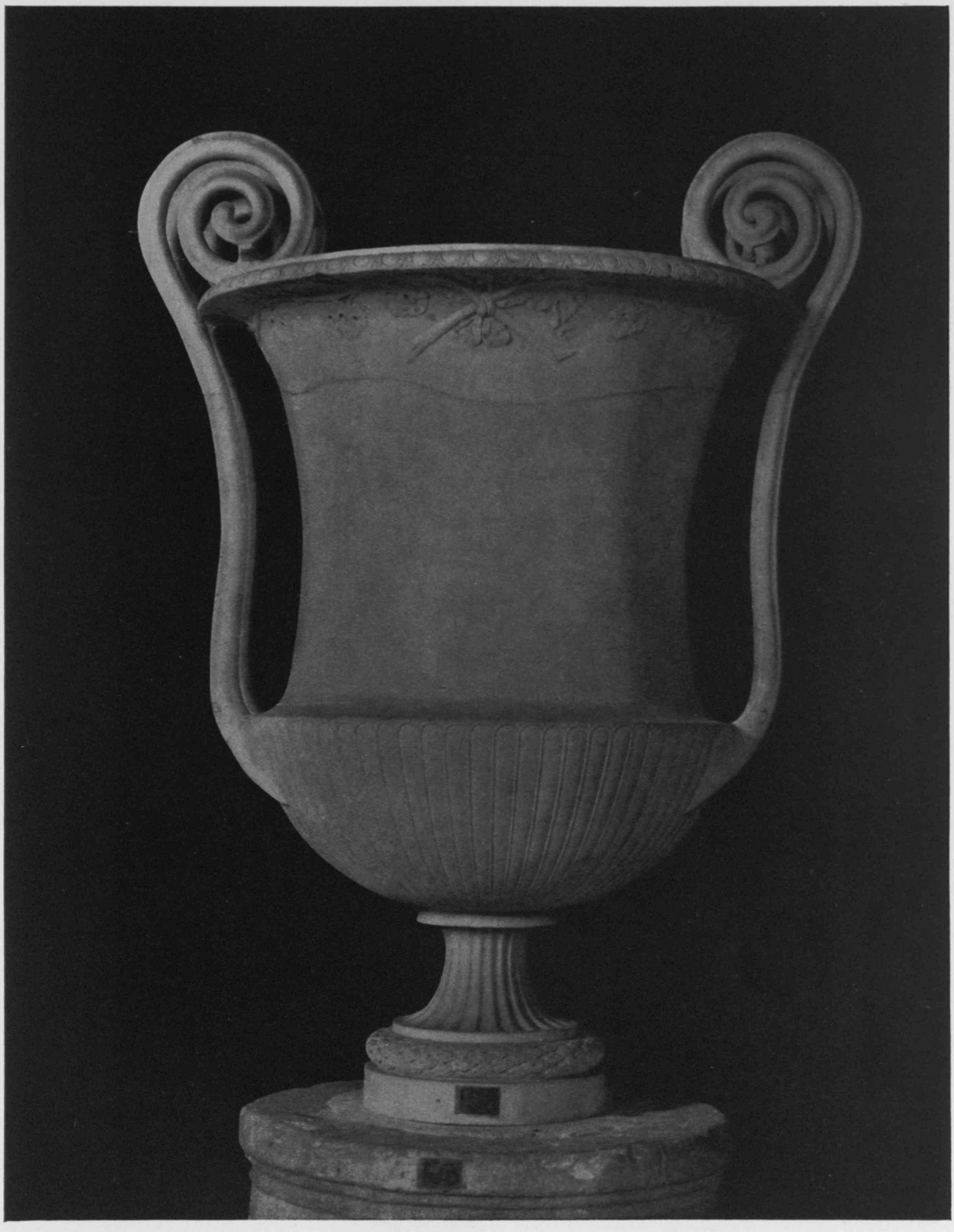


ANTIQUE VASE, VATICAN MUSEUM

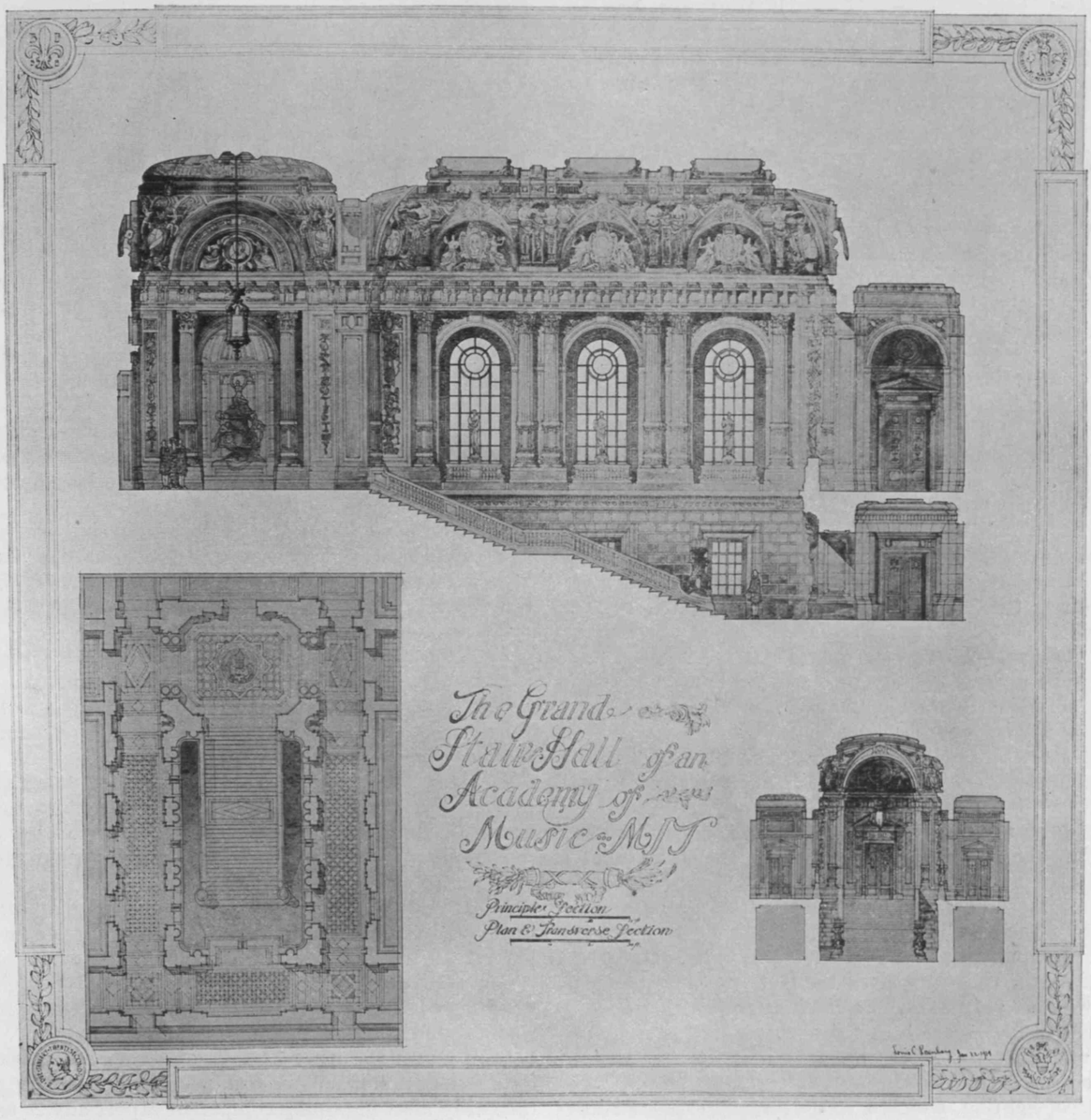
ANTIQUE VASE, VATICAN MUSEUM



ANTIQUE VASE, VATICAN MUSEUM



ANTIQUE VASE, VATICAN MUSEUM



ADVANCED DESIGN

A STAIR HALL FOR AN ACADEMY OF MUSIC

First First Mention: L. C. ROSENBERG

The Architectural Society

President	F. WHITTEN, JR., '14
Vice-President	D. DES GRANGES, '14
Secretary	R. F. BARRATT, '14
Treasurer	H. P. SABIN, '15

Executive Committee

L. C. ROSENBERG, '13

S. H. TAYLOR, '14 S. H. HARPER, '14

ON the evening of January 13 Mr. L. C. Newhall, of the firm Newhall & Blevins, gave a "shop talk" to the Architectural Society. From the basis of his own experience Mr. Newhall gave the students much wholesome advice for their careers as practising architects.

At a most interesting and enthusiastic joint smoker of the Architectural Societies held February 18, Professor H. E. Clifford, of Harvard University, formerly head of the Electrical Engineering Department at the Institute, spoke on the subject of "Illumination in Architecture" from the view-point of the illumination engineer. He was followed by Mr. C. Howard Walker, who presented the same subject as viewed by the architect. After these two very interesting talks Professor Taylor announced the prizes and mentions awarded in the competitions which have recently been held in the third, fourth, and fifth year classes in Design. The evening ended most enjoyably with a social hour, while the feeling of good-fellowship showed itself in occasional bursts of singing and cheering.

Professor Clifford won his listeners at the beginning by his amusing confession of a lack of knowledge of architecture. He showed the close relation of illumination to architecture, and cited many examples of failure in obtaining the proper effect of otherwise excellent buildings caused by poor systems of lighting. From his view as an engineer he told of the inattention of the architectural profession as a whole to the importance of a study of illumination and other engineering details of construction. He emphasized the fact that many architects were as yet paying too little attention to the adjustment of illumination to color-scheme and to proportion, and thereby losing opportunities for enhanced architectural beauty.

Indirect lighting, which is so universally exploited today, Professor Clifford said, is not entirely successful; for by making the ceiling the brightest spot in a room it makes that part seem the nearest, and this, with the absence of shadows, gives a most depressing and cramped sensation to persons remaining long in a room so lighted. This is not the best system to use in department stores, or similar places where goods are displayed, as it distracts the attention. By eliminating shadows the indirect system destroys the artistic effect of interiors, making them monotonous and offering the eye no relief of contrast. These faults are largely overcome by the use of a semi-direct system in which enough light is provided elsewhere to give some shadow and to lessen the unpleasant effect of the unusually bright ceiling.

(*Continued on page 44*)

The Architectural Engineering Society

President	C. H. HOPKINS, '13
Vice-President	J. H. MACKINNON, '14
Secretary	G. L. MACKAY, '14
Treasurer	T. J. BARRY, '15

Executive Committee

S. A. SMITH, '14

R. H. ANNIN, '13 U. C. SCHIESS, '15

THE following "Don'ts" in Foundation Work were emphasized in a most instructive talk given, on the evening of January 16, at the smoker of the Architectural Engineering Society, by Mr. Charles R. Gow:

(1) Don't underestimate the importance of carefully considering the foundation features before erecting any structure.

Mistakes in connection with the superstructure can usually be corrected at a moderate expense; those in the sub-structure almost invariably entail serious financial loss.

(2) Don't fail to make a thorough physical examination of sub-soil conditions of the proposed site, unless adjacent structures have furnished you with the necessary information. Failure to make such an examination has often resulted in disaster.

(3) Don't allow economic considerations to prevail too strongly in selecting the foundation design.

The integrity of the entire structure is dependent on the security of the foundation, and therefore expense is justified here if anywhere in the structure.

(4) Don't attempt to pass judgment on foundation matters if at all in doubt, unless qualified by experience so to do. Judgment in the handling of difficult foundation situations is acquired only by long experience in such matters.

(5) Don't adopt ideas copied from the design of others until assured that your conditions are similar in all respects.

The considerations leading to the selection of a given design in one case may have an entirely different bearing when applied to your problem.

(6) Don't use such materials as filling, peat, or silt for a foundation if such use can possibly be avoided, and then only after obtaining competent expert advice as to how it may be used.

These materials usually have a negative value as a supporting medium, and their use is seldom justified.

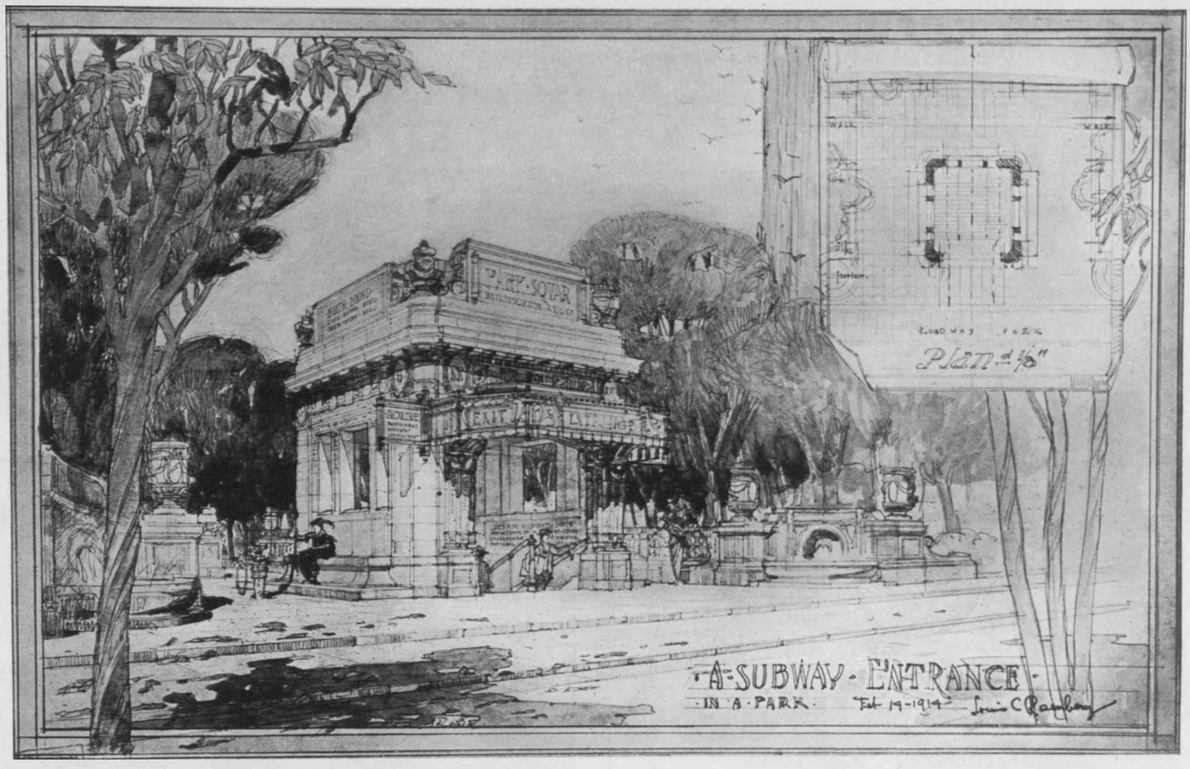
(7) Don't look for mysterious explanations if your structure fails in its foundations. The cause will usually be found in the failure to observe some well-known physical law.

(8) Don't overdrive wooden piles.

If the head of the pile shows signs of failure it is more than likely that the point is in a worse condition.

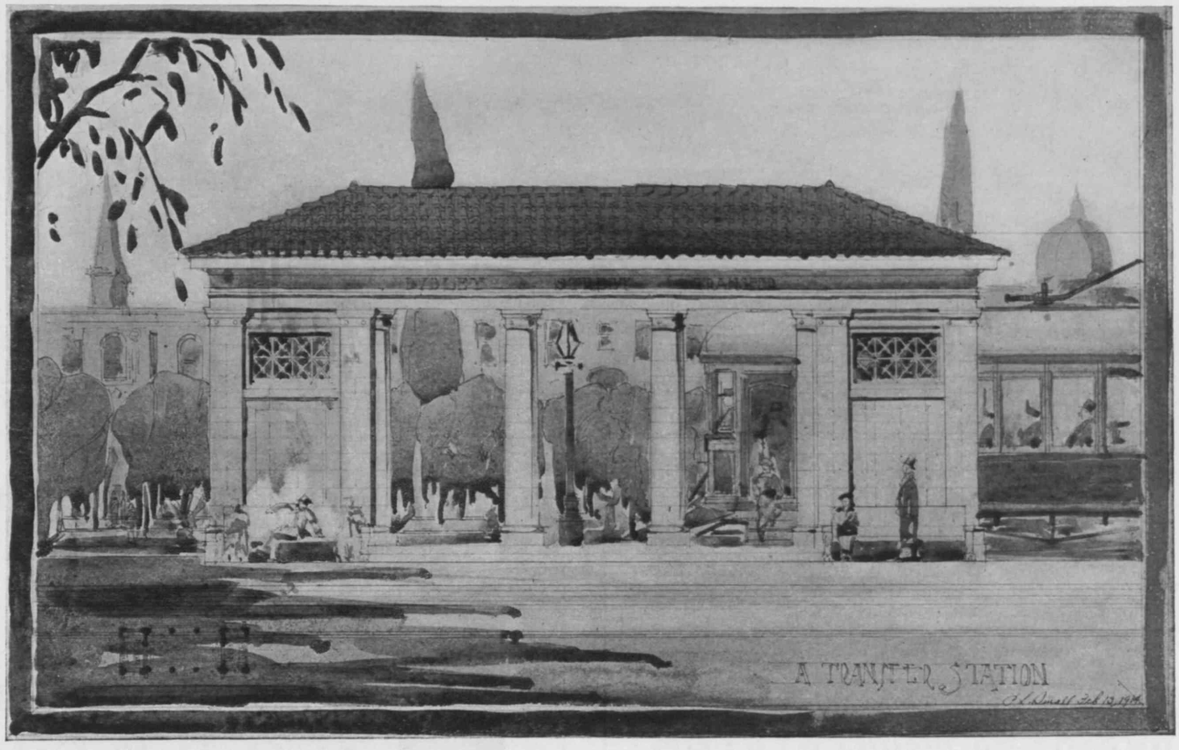
(9) Don't fail to supplement your previous study and careful design by the exercise of some judgment during the subsequent construction.

A constant watchfulness during construction will aid in checking the accuracy of your preliminary conclusions.



A SUBWAY STATION, 12-HOUR SKETCH — L. C. ROSENBERG

ADVANCED DESIGN, MENTION



A TRANSFER STATION, 9-HOUR SKETCH P. L. SMALL

THIRD YEAR OF DESIGN, FIRST FIRST MENTION

ENTRANCE GATE TO A UNIVERSITY DORMITORY — H. P. SABIN

SECOND YEAR OF DESIGN, FIRST FIRST MENTION

Alumni Notes

The Department is in receipt of many applications from architects and others for assistants. We have no information as to whether our alumni are satisfied with their present positions and prospects, consequently many opportunities for Institute men are doubtless lost.

The Secretary of the Institute will send application blanks to any of our former students who wish to register their names with the view of making a change whenever a suitable opportunity occurs.

H. K. Franzheim, '13, L. Grandgent, '12, and L. L. Wetmore, '11, are working on the New Technology plans in Mr. Bosworth's branch office on the Cambridge site. H. E. Kebbon, '12, is in charge of the office.

R. H. North, '13, has entered the office of Hewitt, Granger & Paist, Philadelphia.

R. S. Simonds, '12, A. MacNaughton, '11, and G. E. Robinson, '11, have formed a partnership for the practice of architecture, with offices at 6 Beacon St., Boston.

Miss Margaret A. Fulton, '11, and Mr. Robert Spencer were married on February 27, in New Hope, Penn.

At the annual election of the Cincinnati Architectural Club, E. H. Kruckemeyer, '11, was re-elected president, and C. R. Strong, '11, was re-elected secretary.

R. T. Walker, '11, and E. B. Baker, '12, were among the seven competitors chosen for the second preliminary competition for the Paris Prize, held February 21.

J. A. Kane, '07, F. G. Bates, and E. C. Doughty have formed a partnership, with offices in the Dime Bank Building, Detroit.

George Burnap, '06, has an illustrated article on "Landscape Architecture" in the *American Architect* of Jan. 28, 1914.

Miss Ida Annah Ryan, '05, and Miss Florence H. Luscomb, '09, are in business together, with offices in the Lawrence Building, Waltham.

The Oregon Chapter, A. I. A., has elected M. H. Whitehouse, '05, president; E. F. Lawrence, '01, secretary; F. Logan, '06, a trustee. The Washington State Chapter has elected C. H. Alden, '90, president; J. F. Everett, '98, first vice-president.

E. F. Lawrence, '01, and W. G. Knighton have been selected by the Board of Regents to prepare plans for the campus and for the Recitation Building of the University of Oregon.

Clausen & Clausen, '00, announce that Mr. Walter O. Kruse, formerly with Carrère & Hastings, New York, has become associated with them in partnership. The firm name is Clausen & Kruse, with offices in the Central Building, Davenport, Ia.

C. H. Stratton, '00, is superintending the construction of a United States Post-office at Owatonna, Minn.

C. Bennink, '99, spent last summer in Europe. Among other places he visited the little republic of Andona in the Pyrenees, of which he writes: "It is a relic of the times when Catalan peasants fled up into the peaks to escape the Moors; it is the most interesting and out-of-the-world place I have ever found, and I have been in parts of Mexico which were pretty old." Bennink is in the office of the Supervising Architect of the Treasury, Washington.

J. F. Clapp, '99, in addition to serving on the jury for the recent prize competitions in the Department, also gave the students a criticism of the designs.

Wilder & White, '99, announce the removal of their offices to the Hudson Terminal Building, 50 Church St., New York.

Hewitt, '98, & Brown, Minneapolis, have received the commission for the general scheme of arrangement for the new Polytechnic Institute buildings at Worcester. They were invited to compete, and won the award for the new gymnasium, which is to be built immediately. New buildings are gradually to take the place of those now in use. The commission followed the award for the gymnasium.

Putnam, '98, & Cox, '99, have prepared plans for the new Toy Theater in Boston.

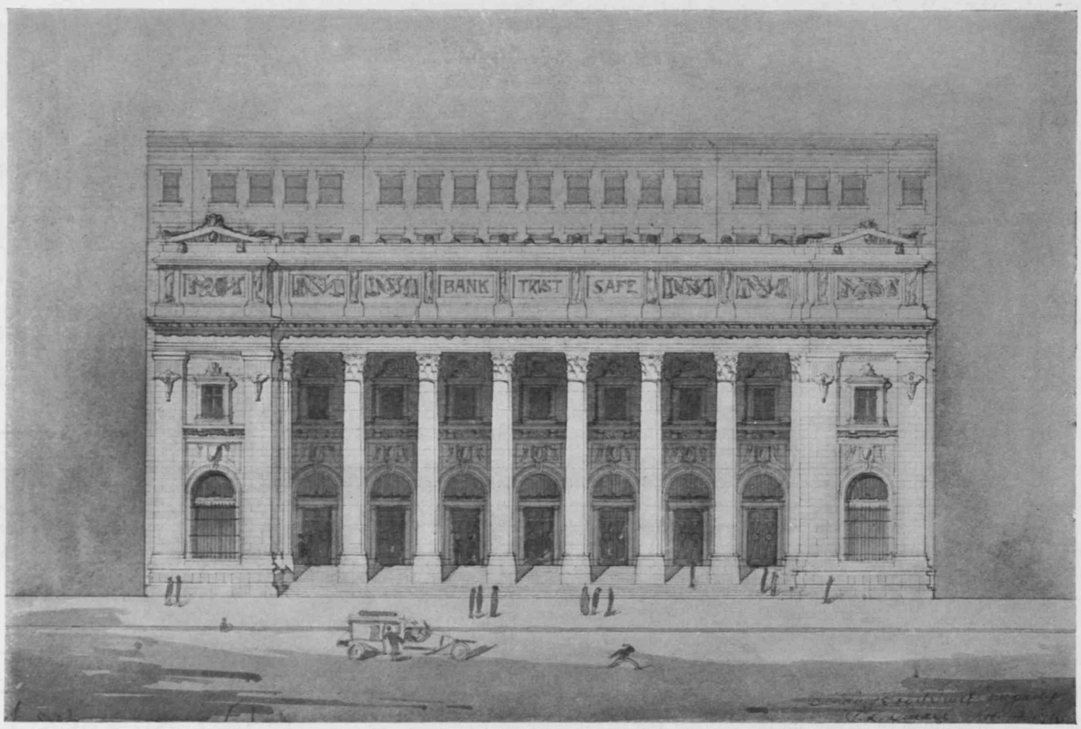
F. H. Keisker, '97, for some years located in Philadelphia, has moved to Louisville.

J. Randolph Coolidge, Jr., '92, a member of the firm Coolidge & Carlson, has been elected president of the Boston Chamber of Commerce. Mr. Coolidge is a fellow of the American Institute of Architects, a member of the Boston Society of Architects, and a trustee of the Boston Athenæum and of the Museum of Fine Arts.

The American Institute of Architects has lately conferred the degree of Fellowship on the following: C. H. Alden, '90; B. L. Fenner, '93; E. F. Lawrence, '01.

At the December meeting of the A. I. A. in New Orleans the following Tech. men were elected among the officers for the ensuing year: T. R. Kimball, '89, first vice-president; F. C. Baldwin, '92, second vice-president; J. L. Mauran, '89, treasurer.

E. B. Homer, '85, has been appointed by the Mayor of Providence chairman of the City Planning Commission of that city. This commission, created by the City Council, is given advisory and recommendatory powers in relation to the physical growth of the city, including the erection of public buildings, the laying out of streets, residential sections, parks, and all things relating to the orderly and progressive extension and development of the city. Mr. Homer's term of office is for three years.



A BUILDING FOR A TRUST COMPANY P. L. SMALL

(*Continued from page 34*)

The proper position for the sources of illumination is one of the most important and least understood elements of good lighting, said Professor Clifford. The sources should be adjusted to the height, the color-scheme, the size of the room, and to the magnitude of light desirable. By careful study of illumination many pleasing effects can be produced harmonious with the surrounding architecture.

In closing, Professor Clifford said that it was too much to expect any one man to have an intimate acquaintance with all the branches of work which go toward the completion of a designed building. The architect should consult an illumination engineer in the early stages of his design, and avail himself of expert knowledge in this branch, which is becoming a profession in itself.

After Professor Clifford had made his plea for a greater emphasis to be placed upon illumination and other engineering considerations of a structure, Mr. C. Howard Walker emphasized the view-point that however useful these sciences relating to building might be, each is "forever a servant of architecture, never the master; the architect welcomes their assistance, but will not brook commands."

Considering the advantages and defects of indirect illumination, Mr. Walker explained how he had come to the conclusion that a most satisfactory means of avoiding spottiness and too great brilliancy is to use the indirect fixtures for the room's general lighting, supplementing this source by occasional small spots of light, such as those given by candles. The candle, he said, is a most attractive form of light, because it gives illumination of pleasing quality broken in small particles. He contrasted the unpleasant glare of the arc with the much greater and yet beautiful light which he saw produced by the bursting of a fireworks bomb.

Speaking of another subject touched upon by Professor Clifford,— evenness of distribution of light in a room,— Mr. Walker said that he believes it distinct rest to the eye to look from a bright table to a comparatively dark corner. As a room is a ghost without shadows, it is more restful where there is a change of intensity.

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