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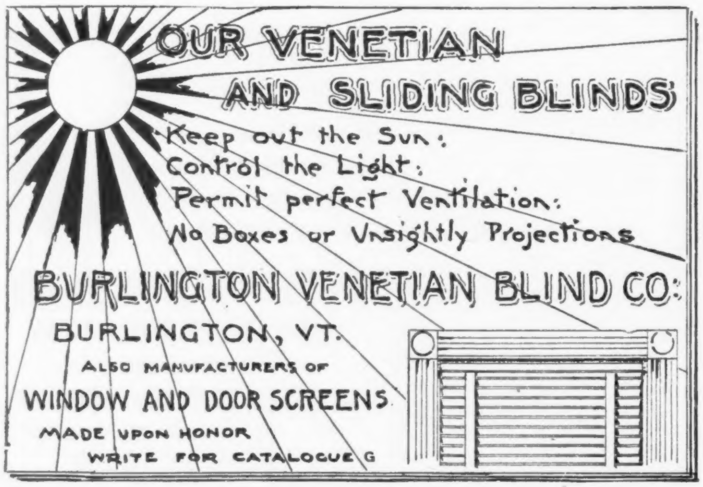

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THE INLAND ARCHITECT AND NEWS RECORD

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Study of Pure Design in Architectural Education.

While the third annual convention of the Architectural League of America, recently held, turned its attention toward several subjects along the lines of architectural advancement, its work in the direction of architectural education stands out as preëminently the most important and the most promising of great and permanent good. Under the influence, and it does not seem improper to say under the leadership of Mr. Emil Lorch, for the past two years, the League has devoted much attention to the discussion of the necessity for the study of pure design in architectural education in place of the time-honored practice of training the student along classical and historical lines. The clubs of the League have endorsed the movement for which the Chicago Club gave the initiative, and it has already grown so strong and developed such practical and feasible characteristics as to compel the attention of architectural educators everywhere. It is with the purpose in view of showing just the position taken by the League in this initiative that our pages are devoted this month to that phase of the convention in which the discussion of "pure design" takes the more prominent part. It is not a new theory nor a particularly new thought, but it has, we think, for the first time been clearly formulated into a practical proposition, and entering as it does at a time when old methods have proved inadequate, it seems destined to entirely revolutionize the form of teaching architecture in the schools. In addition to the papers on the subject submitted by members of the League, and more or less theoretical in character, which were read before the convention, the questions formulated by the Committee on Education were sent to a number of the best-known exponents in the field of architectural education. The answers received from these evidence the practical and logical quality of the proposition in relation to the study of pure design, and also show that, as we have said, the thought was not new, but needed some such united force as that of the League to bring it into concrete form for discussion and practice. This the League has done, and the endorsement received from Mr. C. Howard Walker, Prof. Arthur W. Dow and Prof. Denman W. Ross will encourage the members of the League and greatly aid in the effort to secure a sane, practical and comprehensive education to the architects of the future. The study of pure design as a basis for architectural education will not become a generally recognized practice in a day, but it is the only logical basis for study in any art, and through it lies the only possibility of architecture being practiced as a fine art. To quote Mr. Lorch, "Through pure and applied design, then, the young student will most quickly develop appreciation of composition or arrangement. Crude at first, such designs would soon grow in strength and significance, and the student enjoying his personal mastery and solution of the problems, would work with ever-increasing love and interest — really launched in creative work, discovering that within each problem lies its solution, that proportion is not fixed but relative in its nature — lead him to a true understanding of established forms and a much greater respect for their use, and above all help him to work with a fuller consciousness and realization of the completed or carried-out appearance of his design,

SOME CONSIDERATIONS UPON THE STUDY OF ARCHITECTURAL DESIGN.*

BY EMIL LORCH.

CREATIVE ability and beauty and fitness of expression distinguish the artist from the mere workman or laborer; in architecture it is this power, that of finding an artistic solution of an otherwise purely utilitarian problem, which distinguishes that greatest art craftsman, the architect, from the builder. And this full creative power comes, as a rule, only with the matured individual, who, arrived at a stage where having developed himself and mastered the technical side of his art, is able grandly to amalgamate all the elements of his problem into one powerful result or expression.

In architectural design instruction — how to strengthen and draw out the analytical power, the appreciation and invention of the architectural student, to healthfully develop his imagination, train him to represent his ideas clearly in order that he may convey them to others for execution, teach him the terms or materials of his own art and the fundamental principles of all art — and thus give him means for individual artistic growth; how best to prepare this student that he may build beautifully as well as soundly — finding for each problem a personal and appropriate solution, or, in other words, how to make him *not* an *adaptive* but a *creative* worker, or an artist-builder — an architect, is not, or should not, this be the highest and ideal end of architectural design study?

My belief is that this end can be most nearly attained by exercises in pure design, from the very beginning of the first year, followed by what is called applied or industrial design throughout the remainder of the course, parallel with the regular architectural design study, and *in order to develop as much as possible the student's perceptive power, his appreciation of the beauty of line, form and color, and the necessity of harmonious inter-relation between these to produce beauty,* leaving the study of historic forms to a later period in his course, studying the styles of art and architecture as illustrations of expression during various epochs and under certain conditions rather than as absolute standards for the designer of today; that if a student can not find time to make an original design of a support or other architectural member serving a structural and decorative purpose, how can he be expected to solve pleasingly, intelligently, and with sympathy, the larger and more intricate problems which involve considerations of location, light and shade, color of material, etc., and which will need a consistent treatment of the whole and its parts? Further, that it is easier to teach the student certain dominant, fundamental principles, by beginning with exercises with elements of one and two dimensions than of three, of which latter he has at first little or no conception, and that when the third dimension is employed, it should be in a way to enable the student to fully realize his problem on paper by also modeling it out in clay — my idea being that while at present we begin where others left off, instruction in architectural design should begin farther back and as simply and directly as possible.

Now that sense which arranges, relates and unites the elements of an architectural design is largely a decorative one. Be it the arrangement of the spots of color in a picture, the masses or the voids and solids of a building, or the grouping of several buildings, the arrangement of windows within elevations, of moldings about openings, or the panels of a door, the members of a cornice, the design of a mantel-piece, or of a chair or a vase, that sense *which directs an arrangement of elements at once pleasing and practical, and which idealizes a mere element of service and use into one of beauty* — this sense is largely a decorative one. All artists are continually seeking for harmonious and pleasing arrangement, organization or composition.

The artist-artisan does on a small scale what the architect does on a more extended one, only he does it so very much better, one reason being that he can more easily and fully grasp his problem in all its bearings of use, material and appearance and thus can produce a consistent result. I have in mind a noted American worker in glass whose works may be found in many foreign museums, who developed a new beauty in this material, and, having given it many novel and beautiful forms, wrought in it a decoration fully suited to the character of the material and the forms. Very few of our architects could do, or aim to do, this, having neither time themselves nor helpers who have the ability to so study their designs.

That in the attainment of this end in the architectural training of today everywhere there is something wanting has been claimed by many; it is also maintained that one of the greatest faults lies in the drill in the Orders and in classic architecture. Up to the present time it can not be said, however, that suggestions for strengthening the present methods of teaching design in the architectural schools have been of a very practical nature.

In such instruction the student's first lessons should undoubtedly be the most carefully thought out, as these will always either help or retard his development and largely determine the character of his future work.

In a paper read before the Chicago Architectural Club, March 4, 1901, I stated that, rather than be taught to memorize and use a series of highly idealized forms, or the Orders, and from them and their use learning principles of design, I believed he should at once, upon entering the architectural school, be given exercises which will develop and clearly illustrate the fundamental, universal principles of design — thus enabling him for himself to recognize their presence under different conditions in all great works.

Having an appreciation of these principles he could almost himself study the history of architecture and of ornament, and be depended upon for an intelligent use of historic forms when such forms are required.

Various new ideas that have appeared during the past few years, and which are now producing excellent results with children in grade schools and with professional art students in decorative and pictorial composition, would form the starting point, as comparatively little knowledge of drawing is required. I refer to the excellent work being done by Messrs. Ross and Dow. It would be found, too, that with such work as a beginning, the student would willingly study free-hand drawing to train eye and hand, in order to attain facility in representing his ideas.

Exercises based upon such ideas would naturally be of the most simple kind and would begin with something fully within the student's comprehension; he could thus from the very beginning be doing creative work, exercise his ingenuity and become sensitive and alert to beauty in its simplest forms.

The student would then begin by making simple decorative arrangements of straight and curved lines, then of lines and areas or spots of different values within given spaces, finally adding color.

The next step would be to have these spots or spaces designed or originated by him and by conventionalizing well-known local flower or plant forms, preparing the way for ornament having national characteristics as well as leading to a study of the beauty of nature.

Then would follow the design of simple objects whose use could be entirely understood by students as well as the nature of the material to be employed, as in a piece of pottery, a stone seat, or a bookcase, and also thus the forms that may be possible in that material, for further illustration of the materials and processes, visiting places where such objects are made.

In some cases, as in a vase or a door-knocker, the design should be carried out on a small scale in clay for a *full sense of its form,* and through this sense of touch and consequent understanding of form it will later be possible, by making, on a small scale, clay models of some of his building problems, to bring the student to a real conceptive power of solid form combinations and appearances.

I believe such exercises could profitably be pursued during the first year, and continued after that parallel with the larger problems in planning and design.

In this manner many of the elements of a building could successively be taken up and an intimate and necessary knowledge gained of the artistic possibilities of many of the materials employed in architectural construction.

Through pure and applied design then, I believe the young student will most easily and most quickly develop an appreciation of composition or arrangement, and be better prepared for the study of architectural design.

Crude at first, such designs would soon grow in strength and significance, and the student enjoying his personal mastery and solution of the problems would work with ever-increasing love and interest — really launched in creative work, discovering that within each problem lies its solution, that proportion is not fixed but relative in its nature — lead him to a true understanding of established forms and a much greater respect for their use, and above all help him to *work with a fuller consciousness and realization of the completed or carried-out appearance of his design,* thus better preparing him for a mastery of his art.

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*Paper read at Third Annual Convention of the Architectural League of America, at Philadelphia, in Houston Hall, University of Pennsylvania, May 24, 1901.

SHOULD THE STUDY OF ARCHITECTURAL DESIGN AND THE HISTORIC STYLES FOLLOW AND BE BASED UPON A KNOWLEDGE OF PURE DESIGN?*

BY ROBERT C. SPENCER, JR.

(PRESIDENT OF THE CHICAGO ARCHITECTURAL CLUB.)

THE question before us is one which vitally concerns architect, student and teacher alike. Not altogether clear, or exact, perhaps, in its wording, but clear enough, I think, to us all for the purposes of discussion. Of "pure design" or abstract design we can not readily conceive apart from some medium of expressions as a means, or apart from beauty as end to be attained.

But with certain universal principles of design we are all more or less familiar, and we can readily conceive of the existence of others yet unknown but vaguely felt by us apart from any concrete application through any specific medium. Many of us are also familiar with these abstract exercises in design based on these principles which may be practiced in various media and which are employed chiefly as yet by certain teachers and masters in the field of decorative art to whom design inspired by these principles and ideas without reference to any special use is for lack of a better name known as pure design.

It is, therefore, to these principles and their study in relation first to beautiful design in general, then to the design of beautiful buildings in particular that our discussion today must be confined if we would be of some direct helpful service to the cause of architectural education. I am not attempting here to show, and I

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*Paper read before the Third Annual Convention of the Architectural League of America, at Philadelphia, May 24, 1901.

do not believe, that a general knowledge of principles, such as one man can impart to another, or which can be learned by cold-blooded routine study, will enable an architect to employ them in the reasoning department of his mental laboratory with any certainty of creating beautiful buildings.

In the case of an individual without that inborn creative instinct which seeks expression in line, form, color and material, the best education, the most thorough intellectual knowledge of abstract principles, coupled with the highest reasoning powers, will not alone enable him to do what the untaught savage, imbued with the beauty-creating spirit does apparently by intuition, through the unconscious and instructive guidance of imagination by these eternal laws. There is a certain intuitive power in some minds which might be called the electromotive force of the inventive and creative faculties. Whether this force can be intensified and developed we scarcely know. But we have faith and hope that while youth lasts it can be fanned into a divine flame. We do know, however, that in many minds this force is there though not manifest, simply waiting to flash forth as the arc of dazzling light leaps between the carbon points when the switch is thrown and the subtle, but powerful, current is liberated. How best to free this force, how to guide it, and how to supply its deficiency by certain knowledge of broad principles and established truths, is the real problem which confronts the parents and teachers of our future architects.

The parents first. The schools alone can not make architects, nor can the kindergartens which so beautifully lead into the schools more than begin the work. The parent must realize fully his responsibility to the child for its right guidance physically, mentally and spiritually from the cradle. Example and precept at home are more than schools and formulæ. And since one of man's highest and purest delights is in the expression of the spirit through creative effort, the education of every child should look from the beginning to the evolution of an individual, intelligent and creative personality, gifted with a reasonable mastery of at least one medium of expression.

Whether that one medium of expression is to be music, literature, painting, sculpture or architecture will be best determined by the free choice and natural bent of the individual. Our architectural schools will then no longer be hampered by sons who have been *sent*. Their places will be more than filled by those who *come*. Among the many who now crowd these schools, but few are led thither by a genuine enthusiasm for art. The heads of the schools, therefore, protest that their function, in large measure, is to so drill the average student by means of the "orders," the literal following of historic examples and by the suppression of any undue evidences of individuality, that he may become a sane (?) and safe (?) member of an eminently respectable profession.

But in spite of this protest, I know that the schools are not satisfied with a sane, safe and eminently respectable product. They would fain be the nurseries of great masters, and each would, if it could, be the alma mater of the men whose works are to be landmarks in the written history of architecture in America. There is a *feeling* of disquiet and unrest abroad, as well as a *spirit* of disquiet and unrest. We are looking and groping for a knowledge of principles and methods which, when intelligently and earnestly applied by talent to the solution of practical problems in terms of beauty, shall be found as universally sound and vital as are the special applications of these principles and methods to planning as taught by the world's best schools today. The basic principles of design apply to all art and to all of architecture. They can be taught to a child or to an unlettered savage, for they are elemental — they are beautifully simple. It is only in their applications that they appear diverse and assume an apparent and almost paradoxical complexity that bewilders and misleads and makes us doubt in our ignorance or blindness. The artists of all ages have been guided by them, consciously or unconsciously, in their broader aspects. The children of the public schools almost unerringly choose from the crude efforts of their fellows, pinned upon the walls, the *best* in unconscious, inevitable, natural obedience to nature's laws. For their laws are after all natural laws, since they sprang from the same infinite intelligence which created the lily and the mountain crag, and made to multiply upon this little earth millions of marvelous human eyes to see in them *simplicity, unity, strength, repose, harmony, order, rhythm,* and through the more wonderful eyes of the awakened spirit to see the living and tangible expression of infinite Power and infinite Intelligence and infinite Spirit.

Working through the inspired intelligence of man, as through a marvelous instrument, this same infinite Spirit manifests itself through toil and struggle in the works of men which they and their fellows have deemed beautiful. How are we, as instruments, to become responsive to the touch of the Master, producing sweet tones and harmonies, not jarring noise and hopeless discord?

Are we to do this by denying his laws and their existence? By applying them here and casting them stubbornly aside there? By declaring them to be so contradictory as to annul each other? Putting aside any question of faith in a reverence for an infinite intelligence, disregarding even the beautiful and unerring working of natural law throughout the universe, can we close our eyes and ears to nature and to the precepts and discoveries of the students of beauty in nature in this scientific age, which is preëminently an "Age of Reason?"

Do we fear that the temple dedicated to Art is about to be profaned by the steel-shod foot of Science? Why then this doubting — this looking askance — this timid shrinking at the thought of beauty, understood and approached, not through science, but in the light of the knowledge which science, by her sane and searching methods, has already given, and of which she stands ready to give more to those who earnestly seek?

These are generalities — but generalities must precede particulars. The cloud must precede the infinitude of rain drops.

I have already mentioned some of the most universal principles underlying the arts. With just a little sound knowledge of these principles, and just a little appreciation of the possibilities of pure design, the student under right guidance is prepared to study architectural design and the history of architecture, as well as the specialized study of material and structure, bringing to bear upon each of these the test of universal laws in so far as he has already been able to grasp them, and guided by wise and stimulating instruction, learning of the application of these principles, as exemplified in the great historic monuments, and of their misuse as exemplified in the decadent periods of our art. In short, the study of architectural history may be made simply one phase of the study of those principles upon which all good architecture is based, be it the architecture of Egypt or the architecture of America in the twentieth century. As for "the orders," instead of making them a fetish to be bowed down to and blindly worshiped, as having some mysterious intrinsic qualities of proportion which make them to a degree applicable and bodily transferable to any building, they should be honestly given their due place in the study of architectural history and art, and no more. If they are beautiful and universally applicable to anything, from a circular Roman temple to the base of a twenty-story modern office-building, depend upon it the young man trained in pure design will appreciate these facts, regardless of time-honored tradition and with no further teaching; to him "the orders" will speak for themselves. But he will consider them first but as details of *buildings*, which are of far more significance than their structural and decorative *parts*. He will understand that an "order" can not be studied intelligently apart from the structure or type of structure to which it originally belonged. To him, column, entablature and pediment will be primarily nothing more than simple structural elements, to be cast aside where the structural requirements can better be met by other means.

He will build naturally, be it on paper, in the solid clay, or in materials. He will build simply, honestly and reasonably. Obedient to the laws of unity and harmony, his decorative details will be as natural an outgrowth of structure and of use as the flower springing lightly from the stem is an outgrowth of the plant, and so in sympathy with the whole that the melody of simple, beautiful structure is made rich harmony. He will not be content to remain in practical ignorance of the modern materials, tools and processes, which should be his media of expression. On the contrary, once acquainted with the possibilities opened up to him by the study of pure design he will not rest until he knows thoroughly, by intimate and long study and use, the material side of his art. The failures and successes which others have made in the past in the use of materials and tools will be studied by him in the light of the great fundamental laws.

He will not abuse materials nor unduly force them. He will appreciate the natural beauty of simple, beautiful surfaces, colors and textures and let them alone. He will know how to seize and put to his own use the inimitable effects of nature which we call "accidentals."

All this, and more, if he be taught principles first, last and all the time. And once a beginning has been made he may in large measure be his own teacher, seeking for evidence of The Law everywhere in nature, in art and in life, and making law always the final test of his work. I believe that we are fast coming to a parting of the ways. There is a vast army of children in the schools, who, as the men and women of tomorrow, will demand something more than the dry husks of an imitative or interpretative architecture. They will see the radical difference between the artisan architect who skilfully reproduces the works of other periods and the artist who creates *for his own time — for his own people — for himself*. The common-school education of our cities, with kindergarten training, drawing and nature-study in the lower grades, and manual training and more drawing in the higher, is developing in our children an appreciation of beauty and developing their powers of independent thought and analysis. Let us hope that the artists who spring from their ranks may be trained to meet the real needs of their times. The study of pure design as a means of strengthening creative power, of developing an appreciation and understanding of the principles of line, form and color, of light and shade, rhythm, balance and organization should be made an important and primary feature of every school of architecture. Of its value to the individual I have the most direct personal knowledge. In closing, and before we enter together upon a discussion of this vital question, I urge you all from the bottom of my heart to seek with us in a broad, optimistic, hopeful and scientific spirit — the spirit of the true artist — for a better knowledge and appreciation of these laws which govern all successful creative effort. You can not deny their existence or their power.

Architects in America must feel pride in the statement that one of the most eminent architects in England recently declared that in the near future no European architect's education would be considered complete without a visit to America and a study of the latest building developments in the United States.

ARCHITECTURAL EDUCATION.

PRELIMINARY to obtaining matter for discussion at the convention upon the subject of architectural education, the Committee on Education, John Watrous Case, of Detroit, chairman; Prof. James M. White, of the University of Illinois, secretary, and Albert Kelsey, of Philadelphia, formulated the following questions, and sought to secure papers upon the subjects. The more important of the answers received are printed.

QUESTIONS BY COMMITTEE ON EDUCATION, AS CONDENSED AND AMENDED BY THE EXECUTIVE BOARD.

(1a) What should be expected of a graduate from an architectural school when he begins office work?

(b) What should the schools leave for the offices to teach?

(2) Is it advisable that the architectural student devote the time necessary to obtain a so-called classical education as a foundation for refined culture and taste, or can the same refinement be gained by studies more closely allied to architecture?

(3a) How much mathematical and engineering training should an architect have?

(b) Should design and construction be separated so as to train specialists in each of these lines?

(4) Should schools' study of architectural design be limited to monumental problems?

(5a) Should architectural design and study of historic styles follow and be based upon a knowledge of pure design?

(b) How can pure design be best studied?

(6) To what extent and by what methods should an architect acquire a knowledge of the art industries allied to architecture?

ARCHITECTURAL EDUCATION.*

BY JULIUS F. HARDER.

SHOULD architectural design and the study of historic styles follow and be based upon a knowledge of pure design? How can pure design be best studied?

No reason can exist why general study of any art or science should be restricted to any branch or division of it, and, more particularly, not to an unusual and ideal one. Nor is this the case, so far as we know, anywhere, in any school. The remedy, if there be any necessary, would be, that instead of architectural design being limited to monumental problems, it is advisable to limit the school of architectural design in monumental problems in so far as it causes a sacrifice of time and attention necessary to the acquirement of information, not so pleasantly monumental, but absolutely imperative to professional practice.

The "historic styles" should be studied as solutions of the problems which were presented by them in their time. It is a fact that too much stress is laid upon this matter. It is of very secondary importance. It is the most serious blunder of the schools that the "historic styles" are impressed as of primary importance. The schools are the only influence in the architectural life of today which seek to keep these ghosts imbued with artificial life.

Were America free from influence of foreign schools, the conviction is forced home to us that by this time its people would have made more progress in substantial architecture. All in all, the results might not have been better, but, upon the other hand, they could not have been worse or more enslaving and retarding in effect.

This is proven by the universal progress which is recorded in all departments in which "schools" have not existed and consequently have not interfered. The shortcomings, however, are not those of architecture nor of archæology, nor is this an argument against schools, but the art of education itself is only in a formative state, and but recently has itself become progressive and self-reformatory.

We would much prefer to go to the root of the whole matter and discuss the queries: "Of what does architectural education consist? How can it best be imparted to the student? The root answer to both would be: Hereditary disposition on the part of the student; his physical and mental fitness; sympathetic environment. Here we have the school, the system of imparting knowledge, the methods of acquisition, the subject, the materials and the object all combined. The school, the student and the course are but details growing out of this general proposition. The profession of education reaching out to inform itself as to its own functions, looking for light that it may behold the fruition of its own ends, asks itself first of all: "Of what does any kind of education consist? How can the various kinds be imparted to the various individualities of students?

The problem of architectural school education applies equally, although with less force, perhaps, to other educational departments. In the sciences and in law, for instance, definite and absolute quantities and propositions are dealt with, whereas in architectural art we may only say of what it has consisted in the past and admit with more or less reluctance that the materials, the methods and the forms and organization of modern life make the imitation of the real art of the past but the mockery of the present. We testify to lack of knowledge and inspiration, to wrong analysis, to an education which is worse than none at all, by dogmatic insistence that the art triumphs of the past must contain the solution of the new problems of today. It is all very well to make demands upon the schools. The school itself must have opportunity for healthful life, its own disposition, its own environment. The hereditary disposition of the American school must be the spirit of American institutions and American inventiveness and progressiveness. Its environment must be one free from influences beyond its own, of spectres and of shadows. Its equipment must consist of an understanding that there are real, modern problems of architectural necessity to be met with real modern materials as evolved by modern knowledge.

Finally, in order that an art school may create its own atmosphere, fulfill its purpose, contain in itself an inspiration and an incentive to work and study, all the various art branches of the colleges and universities of the country should be detached from other branches of study and be amalgamated in one American art school, thus gaining in scale, volume, influence and effect, through concentration, and through singleness of purpose.

Answering the final question, then, under these conditions only "can pure design be best studied." Given now a buoyant and vigorous American student-body, under the tutelage of independent and progressive men, and who shall say what are the restrictions set upon the American architectural art of the future?

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*Paper read before the third annual convention of the Architectural League of America, in Houston Hall, at Philadelphia, May 24, 1901. Answer to question: "Should school study of Architectural design be limited to monumental problems?" by W. E. Stone, F. S. Lamb and Julius Harder, committee for the Architectural League of New York.

ARCHITECTURAL EDUCATION.*

BY C. HOWARD WALKER.

THERE are two old oriental proverbs of which I am rather fond. One is, "The strength of the pot begins in the clay"; the other, "To the man with shoes, all the world is covered with leather." My answers are based somewhat on these proverbs.

(a) The object of a school is to produce architects or to train them. The training they receive as draftsmen in a school is only an incidental part; therefore, much the most important part of a graduate's attainments is not called upon for a very considerable time after he has entered an office, and may not be called upon until he starts for himself in his profession. The expectations for attainment from the office when he enters is slight and can be roughly stated as follows: Good draftsmanship, i. e., neatness, speed and knowledge of how to lay out one-eighth, one-quarter and three-quarter scale drawings. Knowledge of combinations of material and construction and how to represent them, especially how materials should be assembled, and their points of junction. Ability to use constructive formulæ from books. Knowledge of the orders of architecture and especially a realizing sense that these orders are so organized that fundamental changes in them produce architectural disease.

(b) Tradition of the office. The adaptation of ways and means. Eternal vigilance with both the contractor and the client. A high standard of integrity. This last might be begun in the schools.

(2) Note my first proverb. It depends upon the individual, since some men can never obtain refinement and others can not be prevented from obtaining it. The classical education is so closely interwoven with many of the studies allied to architecture that either leads to the other. They can not be divorced. It is merely a question of the relation of time to be devoted to each, and that depends upon the man himself. In a general way I should say that an architectural student in the schools needs more direct teaching from instructors on the studies allied to architecture and would depend for his classics on his knowledge of how to use books. If the question implies a knowledge of Latin and Greek, they are not necessary.

(3a) Enough to prevent him from originating absurd combinations of materials and to enable him to comprehend where strains and stresses will occur, at what points to anticipate weakness, and when to economize strength under present conditions. No matter how thoroughly trained as a civil engineer an architect may be, few, if any, have enough constant calculations to make to trust their conclusions as anything more than approximate, and it is almost a duty to have their work gone over by a specialist.

(b) That comes naturally. The man falls into either class by predilection. Both classes should be trained.

(4) No. But the principal stress should be laid on monumental problems. Monumental design gives much that tends to restrain and better ordinary hack work, while hack work gives absolutely nothing valuable to monumental work, unless it be an accommodation of ways and means. First-rate monumental work is as heedful of conditions as is any other, but is devoid of the exaggeration of pettinesses. Teaching in hack work is merely the encouragement of common sense, which should, on general principles, be taken for granted, however lacking a large proportion of the students may be in it. I suppose this question is aimed at the teaching of small-house designing, etc., and should say that very little of it was necessary in the schools. The office supplies it.

(5a) I see no reason why "pure" design, by which I understand the study of proportioning construction, solids and voids, devoid of ornament and dependent upon construction requirements and materials should not be carried on together. Every style was naked before it was clothed, and the transitions are instructive. The student who is brought up on a knowledge of a disposition of masses needs as much training in beautifying these masses as the student who has a knowledge of styles needs in adapting the styles. It is somewhat as if Sandow tried to make his own clothes, or a fop tried to make himself look like Sandow. Certainly the

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*Paper read before the third annual convention of the Architectural League of America, in Houston Hall, at Philadelphia, May 24, 1901.

constructive organism is the more important, but with students, analytical, subtle study of proportions is a late achievement, not an early one, and while the first year in school may have teaching in simple construction proportions, little of value can be expected in the results, and if a knowledge of the styles and appreciation of the delights of cultured, *soigné*, accomplished work by the best men of all times is held back from the student, he is lacking stimulus, encouragement and much of the joy of architecture. I see no reason why the two things can not be taught together to the benefit of both.

(b) By comparison of problems, the determining qualities of pure design affect both the reason and the eye. The reason, inasmuch as they must appear stable and must not violate the laws of gravity and consequently must have symmetry. The eye, as they must be agreeable to it. Each person can judge as to how far the reason is satisfied, but there will be a vast difference of opinion in regard to the usual merit. A discrimination in this respect can only be cultivated by constant comparisons, which can be obtained through problems. As architecture deals with solids, I am not at all sure that models would not be of great value, for while accomplished architects comprehend, or think they do, what the effect of masses will be as indicated on plans and elevations, the student is completely at sea on the subject. It is the most difficult thing to get him to think in the third dimension.

(6) This hits at the old idea that crops up now and then that an architectural student should be a competent bricklayer, should wipe plumbing joints, lay matched floors, forge joint bolts, etc., in order to know how they should be done. If he wants to, let him. The kind of a man who wants to either has a deal of time on his hands or will never get beyond those details. Business is carried on (no matter how many lapses there may be) on the fundamental principle that good work and honesty are necessary for success; if it were not, there would be no good work; and the architect who spends a large part of his energies in making himself a searching committee for minor defects is bound to be in hot water all the time and get no better result, nor as good, as the one who insists upon the employment of men of reputation and insists that his specifications be followed. The harping critic immediately asks, "How does he know his specifications are followed?" He knows by the training he gets in a good office, by his constant connection with good work, and by his knowledge that any firm of reputation can not afford to do bad work. No amount of time devoted to craftsmanship of his own hands will give him any more than an occasional advantage over the student who has devoted himself to the greater things in his profession, and this last student will whip him hands down in many other things. I notice the question says "art industries." Perhaps I have misconstrued it. It mentions decoration in all materials, and if wood and stone carving, etc., are implied, the more he can learn about these the better; the schools should teach something in regard to them, and if he is an artist he can not keep his hands away from them, schools or no schools.

ARCHITECTURAL EDUCATION.*

BY WILLIAM RAE FOR THE ARCHITECTURAL EIGHTEEN CLUB.

AN architect should have as much mathematical and engineering training as will enable him to solve, by means of formulæ derived from the experimental research of scientific experts, every problem the erection of a modern building may involve in the safe and economical use of the materials of its construction, including steel construction, heating, lighting, ventilation and sanitation.

In considering this question we have borne in mind the difference between education and merely a knowledge of the expedients of modern practice, for these expedients vary so much in different localities and change from time to time, so many men devising their own and ever learning fresh ones, that we think no rule may be laid down concerning them.

The use of formulæ and tables thus derived we think one of the most justifiable expedients of modern practice.

The architect's work is the harmonious association of all the crafts, which harmony can only be considered complete when the possibilities of each craft in relation to the whole is perfectly developed, and to do this, a knowledge of the nature and functions of every material used is necessary.

Design and construction should not be separated so as to train specialists in each of these lines, because a specialist is one who, in addition to the ordinary knowledge of his craft, acquires a special knowledge of one line, not one who has acquired a knowledge of one line only of the general knowledge of his craft.

Design in architecture is surely, as seen in the study of the highest design — the human figure — constructing beautifully. Certainly the most intellectual part of the esthetic satisfaction derived from the contemplation of the human figure comes from the perception of the harmonious grace of its constructional requirements.

Could we imagine a figure built up of compression members covered with tension members and concealed beneath a coat of ornament?

What we understand by architectural design has to be based upon the use of some material. To what material shall we limit it? Stone and wood only? We do not know what the material of the future may be; there may be no stone or wood. Times change and we must change with them.

If to build with steel construction is engineering only, then to cover this construction with an architecturally ornamental plaster is decoration only.

Though the expedients of modern practice may involve the use of specialists, we must consider it as an expedient only. The architect is the opposite of a specialist.

ARCHITECTURAL EDUCATION.*

BY J. W. CASE.

ON entering an office after pursuing a course of study in an architectural school, the student should be prepared to execute simple office work under the direction of an older man, so that he will be of immediate use and value in an architect's office. Besides this, he should understand all the general principles of all branches of an architect's practice so that he may quickly learn the office methods of applying this fundamental knowledge.

The school should teach general principles; the office should teach the technical application of these general principles.

In a four years' course of architecture there can be no time for specialties. The time is all too short to cover the general knowledge required in all the different branches of an architect's practice.

The student should not find that an excessive amount of his school time has been taken up in studying monumental problems, whereas in his entire future practice he may never have a monumental problem to solve.

He should not find that an excessive amount of his time has been occupied by historical research, taking in consideration of those principles which would enable him to design architectural forms suited to his own surroundings, and making of him an archæologist, capable of reproducing historical forms, but unable to design new forms suited to his own atmosphere, material and indigenous conditions.

He should not find that an excessive amount of his time has been occupied in perfecting methods of making pictures, which his defective knowledge of constructional forms renders him incapable of constructing.

He should not find that he has given so much time to the study of applied mechanics and its application to architectural engineering that he is deficient in artistic qualities.

When a student enters an office he very often finds that his study has been biased by one or another of the above points of view, and also that he has not made an adequate study of the arts and crafts; or, in other words, that he does not know anything about the artistic uses of building materials.

The superior knowledge of the artistic possibilities of building materials marks the greatest epochs in architectural history. It is the basic principle, the vital and essential quality of Grecian and Gothic architecture.

The artistic chisel, feeling the firm and homogeneous pentellic marble, brought forth those subtle curving forms and refinement of proportions which constitute the greatness of Grecian architecture.

The character of building material forced the architect to invent the arch and the vault and buttress, and atmospheric conditions produced Gothic masses silhouetted against the sky.

The Japanese carver studies the grain of his wood, and from its twistings evolves the creatures of his imagination.

What does the American architect know of the artistic possibilities of building material, or wish to know!

The student who is expected to understand all the fundamental principles of an architect's future practice will study the subject from three general points of view. As an artist, he will study drawing in charcoal, pencil, pen, brush with color, modeling in clay, terra-cotta, cement, metal castings, carving in stone and wood. Designing, both applied color and form, and imbued colored material, stained glass, wrought iron, intarsia, etc. Ornament, historical and creative, based on native flora and fauna.

Architectural design, not only monumental problems, but artistic solutions of practical problems.

History of art, architecture, sculpture and painting as the development of principles.

Building materials, development of their artistic possibilities.

As a construction, the student will understand the general principles of building materials; of wood, masonry and steel constructions and their superintendence.

Laboratory work should supplement the abstract consideration of building materials. The student should pursue courses of shop work in carpentry, masonry, metal, and spend considerable time in watching building operations.

It might be advised, before allowing an architect to practice, to require him to pass a certain amount of time as clerk of works; the gain to himself, to his client and to the future of American architecture would be enormous.

As a business man, the student should study specifications, contracts and civil law relating to building contracts and operation.

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*Paper read before the third annual convention of the Architectural League of America, in Houston Hall, at Philadelphia, May 24, 1901. Answer to questions: "How much mathematical and engineering training should an architect have?" "Should design and construction be separated so as to train specialists in each of these lines?"

*Paper read before the third annual convention of the Architectural League of America, in Houston Hall, at Philadelphia, May 24, 1901. Answer to questions: "What should the schools leave for the office to teach?" and "What should be expected of a graduate from an architectural school when he begins office work?" for the committee of the Detroit Architectural Club.

The school should teach all the fundamental principles which will control the architect in his practice.

The office should teach the practical methods of applying these fundamental principles.

The time of the student should not be taken up in perfecting the practical application of any of these studies of rendering; too much time is taken up in learning to make perfectly graded washes.

Beautifully rendered drawings are an important factor in competitions, but are properly the work of a specialist.

The study of mental instructions should embody principles and methods, and leave abstruse mathematical calculation to the specialist. The application of applied mechanics is the work of a specialist. Post-graduate courses should be arranged to meet the requirements of specialists. The school must form and direct the artistic tendencies of the student, and to that end, the study of classical problems in architectural design is advisable, but the study of design should not be restricted to ideal, classic or monumental subjects.

A majority, or more, of the students of architectural schools will devote their entire efforts in their practice to solving the requirements of ordinary commercial and domestic problems, and will never have an opportunity to design a monumental structure; students, therefore, should be instructed in the fundamental principles of the problems on which their entire future life will be passed.

They should understand the desirable arrangements and the conditions to be avoided in designing houses, commercial structures, churches, municipal buildings, schools, theaters, libraries, etc.

Their instruction should show them how to satisfy the practical conditions of ordinary problems in an esthetic manner.

How can the solution of these practical problems be left for the office to teach, for it is generally conceded that the office solution of these problems is unsatisfactory.

For this end, the student must know building materials, how to use them practically and especially how to develop their esthetic possibilities. He should understand and sympathize with the arts and crafts and receive instruction in modeling, carving, stained glass, wrought iron, etc., not to the extent of manual dexterity, but to gain a knowledge of esthetic possibilities in using materials.

The most essential requirement of an architectural education is cultivation of the artistic creative faculty.

The creative faculty, the art instinct, the artistic imagination, is the most valuable and most essential quality that the architect can have or acquire; it is the essential element in all great art. To awaken and develop this faculty is the greatest opportunity of the architectural school.

ARCHITECTURAL EDUCATION.

BY PROF. DENMAN W. ROSS AND PROF. ARTHUR W. DOW.

NOT being able in the time allowed by the committee to prepare the requested paper, the writers expressed themselves in letters to the secretary of the convention, as follows. Speaking upon the general subject of pure design, Professor Ross says:

> I believe that the study of pure design should be preliminary to the study of art in its various and specific applications. Pure design, its principles and its educational value, is much too large a subject to be treated briefly in a single lecture. People know very little of pure design, much less of its possibilities. Design, as it is commonly understood, is to serve the purpose of decoration or ornament by the various arts and crafts. The teaching of design means teaching "Historic Ornament," the practice of design means following historic precedents and adapting them to modern requirements. It means doing what the public knows, understands, appreciates, wants. Design is the glass of fashion, the handmaid of commerce. In three words, it is not a fine art, as it should be. The creative imagination has very little to do with it.
>
> The finer ideals of life are very far removed from it. Righteousness, purity, beauty, it knows them not! But it is very difficult to persuade people of this. The conception of pure design they will not understand or appreciate. When you show them examples of pure design, considering them for the sake of balance, harmony, the principles of design, instead of looking at them as illustrations of order, as revelations of beauty, they are almost sure to ask "What are they good for?" "Are they intended for wall-paper or silk?" Pure design appeals to the eye just as music appeals to the ear. They might as well ask if a piece of music is for a dance or a funeral. No, I can not undertake to give any description of pure design and its possibilities; to diffuse its principles and to show its methods, to demonstrate its educational value except in a course covering some weeks. It is too large a subject to be embraced in a single lecture, especially as the subject is so little understood. To say that I believe in the study and practice of pure design as a foundation or as an introduction to the practice of the more specific forms of art, would not be worth while. Belief does not count; nothing counts but scientific demonstration.

Professor Dow answers question No. 5 very briefly, but to the point, thus:

> (a) Yes. (b) Pure design can best be studied by a series of progressive exercises or problems involving creative effort. It should be a study of the principles of fine art, using the best examples of the past as illustrations. Such a course in pure design for the development of appreciation and creative ability would be common to several of the arts. A special course in architectural design would grow out of it naturally.

THE Philadelphia *Inquirer*, in speaking of the meeting of the Architectural League, says: "The architect has again become an artist. His activities are no longer limited within the scope of sordid and common-place utilitarianism. He has learned to reconcile the demands of comfort and of use to the exigencies of art and beauty, and there are no more striking and convincing witnesses to our advance in civilization during the past quarter of a century than the monuments which he has reared."

THIRD ANNUAL CONVENTION OF THE ARCHITECTURAL LEAGUE OF AMERICA.

THE third annual convention of the Architectural League of America, which was held at Philadelphia May 23, 24 and 25, was certainly a most successful one, and all those who, in spite of an unusually busy season in architectural work, were yet able to attend, felt fully repaid for their effort and time, and returned to their homes with increased enthusiasm for the work of the League, feeling better acquainted and more closely in touch with their coworkers in other cities, and with a deeper regard for the members and friends of the T-Square Club of Philadelphia, upon whose excellent preparations the success of the convention so largely was due. Seventeen architectural societies were represented by about fifty delegates, as follows:

DELEGATES TO THE CONVENTION.

Cleveland Architectural Club — George M. Andrews, Herman Kregelius, William R. Watterson, Abraham Garfield, Fred Streibinger.

Chicago Architectural Club — Joseph C. Llewellyn, R. C. Spencer, Emil Lorch.

Cincinnati Chapter, American Institute of Architects — G. M. Anderson.

Detroit Architectural Club — Francis E. Swales.

The Architectural League of New York — H. K. Bush-Brown, Walter T. Owen, Julius F. Harder, William E. Stone, F. S. Lamb, Mr. Caffin, F. L. Elwell, John M. Carrère.

Pittsburg Architectural Club — Benjamin R. Stevens.

Pittsburg Chapter, American Institute of Architects — C. T. Ingham.

St. Louis Architectural Club — William B. Ittner, M. Russel, Ernest Helfenstellar, M. J. Brueggeman.

The Architectural Eighteen Club, of Toronto, Canada — J. P. Hynes, William Rae.

Washington (D. C.) Architectural Club — Percy Ash, Nathan Weith.

The Architectural Club of the University of Illinois — Prof. N. A. Wells, Prof. J. M. White.

Memphis Architectural Club — M. H. Furbinger.

Milwaukee Architectural Club — Elmer Grey.

Toledo Architectural Club — Lawrence S. Bellman.

Boston — C. H. Blackall, Sylvester Baxter.

Philadelphia T-Square Club — Walter Cope, Frederick M. Mann, David Knickerbacker Boyd, George Bispham Page, William C. Hays, Adin B. Lacey, Walter Smedley, Arthur H. Brockie, Louis L. Calvert, Charles L. Hillman, Albert Kelsey.

The delegates were welcomed by the president of the T-Square Club of Philadelphia, George Bispham Page, and the response, by Joseph C. Llewellyn, of the Chicago Architectural Club, was as follows:

> Gentlemen of the Convention of the Architectural League of America: Coming together for this, our third annual convention, it is fitting that a brief outline of the aims and objects of the association and of the administration for the past year should be given at this time.
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> As you know, the organization of the Architectural League of America was effected at Cleveland two years ago, and for the first year the work was carried forward under a temporary organization. The work of the first year as well as the proceedings of the convention of last June, at which a permanent organization was effected, are set forth in the printed report, copies of which can be had here today.
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> Following the close of the last convention, your president, in conjunction with the Executive Committee of the Chicago Architectural Club, in accord with the constitution, chose the Executive Board for the League for the ensuing year. The Executive Board proceeded at once to select the standing committees provided for. It was the belief of your president that, while the Executive Board of the League is chosen from among the members of the club to which he belongs, or from club meetings' prescribed radius, the work of the League could be shared in by all members with advantage to themselves and to the League. Accordingly, the different standing committees were assigned to various clubs members of the League.
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> The work of the Educational Committee has been mapped out with a view to obtaining a broad discussion of the subject and a possible development of some special lines along which the work of the coming year may be carried forward. There is undoubtedly an opportunity for discussion and good work along this line, mapped out by the Educational Committee, not necessarily in opposition to established schools, but supplemental thereto. This discussion may only succeed in adding a few more years to the thousand or more that "architects and critics have been beating the air," as the *American Architect* puts it, but it has been deemed worth the time by your Educational Committee and Executive Board.
>
> The Architectural League of America will be doing a good work if it only succeeds in renewing interest in the question and stirring the schools and older organizations to renewed effort.
>
> I firmly believe that there is improvement to be had and that there will be improvement in the training to be had in the architectural schools. I believe the schools are alive to this need and will gladly do what they can to increase the efficiency and value of their teaching. I trust I am not blind to the difficulties which beset the instructors of the schools. Much is expected of them, and the men in their classes are of different temperaments and capabilities. A young man enters school with the expectation of leaving at four years later prepared to enter the practice of the profession. In many cases the young man had no knowledge of building operations except that afforded by a small country town. Some of our architectural schools are located in small cities or towns and others in process of organization will be so located. The chances are that many of the graduates of such schools will have finished their four years' course without any real conception of what their chosen profession really comprehends. The awakening comes some day, and the school is criticized. How best to meet and remedy the condition is a real and difficult problem and one for the schools to solve.
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> To give the student a proper conception of the profession he is studying, to lead his thinking and study along rational lines, avoiding vagaries, to give him a comprehensive knowledge of the important principles of building; to teach that a new and original design is not necessarily good, neither that a building good in one place and under certain conditions, is necessarily good in another place and under different conditions; in short, to teach how to design and build so as to fully meet the needs for which the building is erected in a rational and modest way, all are problems not easy, but which the architectural schools are expected to solve.
>
> The young men of the school should know that at best his four years'

course is but preparatory for the study and hard work to come after, a work in many ways very different from that done in the years of school work.

There are many graduates of the schools in the Leagues who should be able to discuss this question with profit, and I trust that we shall hear from them, and we shall have a good discussion of the report of the Educational Committee and papers which will be read at this meeting.

No one can deny the appropriateness of the League entering into this discussion, for the Architectural Club of today is largely educational in its objects and methods. The topics of discussion of the various gatherings are largely topics relating to questions of design and construction of buildings. Coming from different offices, the members are apt to differ as to the correct solution of any problem, and from the discussion much of value is to be gained. It is here that the club is of great service to the men from the schools. With no hard and fast conditions in the requirement for membership in the club, the practicing architect and the men of the offices meet upon the same footing and the association can not be otherwise than of advantage to the young men in the first years of office work and of his practice. The spirit of helpfulness is evident in the club. As an instance, I may cite an occurrence in the scholarship competition of the Chicago Club the past winter. Three of the original competitors were in the same office. These three men blocked out their schemes and completed the first two or three of the competition side by side, mutually criticizing each other's work. Later, one of these three took his drawings to another office, and there worked side by side with a fourth competitor. Three of these four men were in the final competition, and it only remains to be said that in scheme, elevation, etc., they were totally dissimilar. All showed evidence of hard study and pruning, and I have no doubt each competitor benefited largely by the criticism of his coworkers.

The spirit of the club is that of friendliness and helpfulness to the young men, and the membership of the clubs is recruited from the young men of the offices and younger practitioners. The club retains also many members who have entered practice and are busy in their own work for the advantages of club associations, and are not all on one side.

The older members reap a benefit from association with the younger men full of enthusiasm and aspiration.

President Peabody, in his address to the American Institute, recognizes the value of such association and says the architect who lasts at all lasts young. I am glad to quote President Peabody. His words explain in great measure the esteem in which he is held by those who as young men in his office have been under his influence and training.

As another element of value to the young men in the club, I may mention the association with men not engaged in the practice of architecture but who are actually engaged in allied arts and crafts.

I fully believe in a most cordial and friendly association with the men of the allied arts. I am willing to accord to them no small share of the progress made in our profession. It is to their hard and painstaking work that the realization of many of the plans and wishes of the architects are made possible. I believe that the architect of the country can give to these men their due share of credit without any loss to their own professional standing.

The architectural club is founded on broad lines, and it was the thought of the founders of the Architectural League of America to found an association of clubs which should be just as broad and previous and helpful to the clubs composing it as the club is to the individual.

The activities of the League manifest themselves in those of its various members. Two years ago the prominent subject of discussion was that of municipal improvement. Considerable interest has been aroused in this matter and societies organized for its promotion, the initiative being taken in many cases by the architectural clubs members of the League. Other clubs, not members, following the example, have taken up the same subject, and in some cases the agitation and discussion aroused by the clubs has resulted in needed improvements in various cities. There is plenty of work in this field for all architectural and improvement societies, and the League, through its members and committee will gladly coöperate with any and all societies to secure any needed improvement. This is but one of the activities of the League. This year the educational question has received attention also, but we claim no work as belonging exclusively to us.

The League stands ready to recognize good work accomplished by any organization. We are glad to congratulate the Institute on the successful outcome of its efforts in the passage of the Tarsney act, and have been especially pleased with the spirit in which Secretary Gage has carried out the provisions of the law. There is plenty to do and room for all. The League is awake and will find its own field, and if in the exercise of its various activities it is jostled by any other organizations, it will good naturedly catch step and keep up the march.

Active, vigorous organizations with objects similar to those of the League and working for their accomplishment in a legitimate way, can not be other than helpful and beneficial to their members and to the profession and community at large.

For the afternoon of the first day a boat-ride had been arranged, and a trip of two hours down the Delaware river brought the delegates to Newcastle, one of the quaintest little places imaginable, whose general appearance is in many ways suggestive of some of the French towns in northern France. Here in the ramshackly old prison stands a primitive pillory and a whipping post, to which latter one of the most vigorous delegates was promptly fastened and thereupon duly photographed and chastised. Near by, in a little churchyard with varied monuments meandering about it, stands a little church, a mere handful of bricks, of such naïve and simple charm that one of the Philadelphia delegates remarked that he owed the League a great debt, for only through the convention had he been brought to this beautiful architectural bit. Newcastle also contains many fine old houses, some of which, like those in lovely Germantown, are yet owned and inhabited by descendants of the original owners, and to these houses we found ready access and to see sermons on the power of simplicity and "quiet"; indeed, the splendid old works in the East sound a chord of singular restfulness, and are especially refreshing and inspiring to those architects who come from newer cities, where the modern or recent spirits artistic have done their worst to gratify the whims of a new community.

On the second day the delegates were the guests of the members of the faculty of the University of Pennsylvania, and there were heartily welcomed by Prof. Warren P. Laird, of the School of Architecture, and later addressed by the provost of the university, Mr. C. C. Harrison. At noon luncheon was served in the library of the architectural department, this excellent department being afterward visited under the leadership of Professor Laird. Later, and accompanied by Messrs. Cope, Day and Eyre, the delegates also visited the new dormitory buildings, the museum and the other very interesting structures lately added to the university group.

On the evening of May 24 the T-Square Club entertained the delegates at the club's rooms, and up in the loft of that funny little shack on Lyndall alley was enacted one of the most amusing of plays architectural. It was called "De Bumps and Buonarotti," by the well-known author, Herbert C. Wise, under the management of Messrs. Edward J. Swindellini and J. J. Harris, Jr., and acted by the members of the T-Square Club. Here was found Louis G. DeBumps, an active, hustling, sportful modern, in partnership with Michael Angelo Buonarotti, one whose intensely artistic nature shrank from the profane touch of business. In the office was blended the "atmosphere of modern America with that of XV.-century Rome," and with most telling effect. Here the saving, practical client and the contractor writhed beneath the withering glance of the remorseless and extravagant architect; the "well-connected" apprentice dreamed of the esthetics of architecture, and the draftsmen and the office-boy became busy when the steps of the "firm" were heard approaching. Between the acts there were songs, solos and ensembles, among which latter that classic by Oscar Enders "Stoffa di Italiano," was easily a favorite, while Colesberry's monologues and songs were in constant demand. Not the least successful feature of this entertainment was the decoration of the proscenium arch of the stage. Mr. Nicola D'Ascenzo had there devised a most ingenious arabesque of large and small pretzels against a background of green and red pieces of paper, the general effect of which would have done credit to Mr. L. C. Sullivan.

The papers read before the different sessions of the convention were as follows: "The Schools and the League," by Prof. Warren P. Laird, of the University of Pennsylvania; "Report of the Committee on Education," by Prof. James M. White, of the University of Illinois; "Some Considerations Upon the Study of Architectural Design," by Emil Lorch, of the Chicago Architectural Club; "Should the Study of Architectural Design and the Historic Styles Follow and Be Based Upon the Knowledge of Pure Design," by Robert Spencer, of the Chicago Architectural Club; "Mysticism in Architecture," by Claude Fayette Bragdon, of Rochester, New York; "Report of National Committee Upon Municipal Improvement," by H. K. Bush-Brown, of New York; "Our Civic Duty," by Fred S. Lamb, of New York; "The Relation of Color to Form in Architectural Design," by Prof. Newton A. Wells, of the University of Illinois; "The Architectural Scheme of the Buffalo Exposition," by John M. Carrère, of New York (read by David Knickerbacker Boyd); "Spanish Renaissance in the New World," by Sylvester Baxter, of Boston; "The Revival of Christian Art," by John T. Comes, of Pittsburg; "Preparing for the St. Louis Exposition," by William B. Ittner, of St. Louis; "The Present Aims of the Office of Supervising Architect," by James Knox Taylor, of Washington.

On Saturday evening, in Horticultural Hall, for the dinner tendered to the delegates by the T-Square Club, the convention assembled for the last time, and here many of the ideas of the convention found their happiest and most brilliant expression. It seemed singularly appropriate that Mr. Frank Miles Day should in this place be the toastmaster, and after his cordial address and the response by the new and old president, Mr. J. C. Llewellyn, the other speakers followed, the addresses being interspersed with music from the orchestra and by songs. The toasts were responded to as follows: "Intellectual Honesty in Architectural Design," by Charles F. Caffin, of New York; a toast by J. P. Hynes, of Toronto; "Progress," by Cass Gilbert, of New York; "An Architectural Tribute to George Washington," by Edwin F. Naulty; a toast by Charles H. Blackall, of Boston; "Fraternity," by Albert Kelsey, of Philadelphia.

Joseph C. Llewellyn, of the Chicago Architectural Club, was reëlected president, and since the adjournment of the convention the following officers and committees have been elected by the president and the executive officers of the Chicago Architectural Club to serve the ensuing year:

President, Joseph C. Llewellyn; vice-president, Richard E. Schmidt; corresponding secretary, Emil Lorch; recording secretary, Hugh M. G. Garden; treasurer, August C. Wilmanns; member of executive board, Robert C. Spencer, Jr., all of Chicago; member of executive board, Prof. Newton A. Wells, of Urbana, Illinois. The next convention will be held at Toronto, Canada.

PAINTS IN ARCHITECTURE.

CRACKING AND PEELING.

FOR many years past the impression has prevailed among painters and others that zinc white causes paint to crack and peel. Recently I quoted this dictum to a prominent paint manufacturer and later to the head of a large German zinc company. The paint manufacturer turned on me with an emphatic contradiction. Said he, "For every case in which paints containing zinc white and only pure linseed oil have cracked or peeled, I will pay you a thousand dollars, if you will agree to get some one else to agree to pay me a like amount for every case I can show you the like defects in paints containing no zinc. It is water and not zinc that makes combination paints crack — unless it be, as I am often inclined to think,"— and here he named a pigment upon which painters have been persuaded to believe the art of good painting rests.

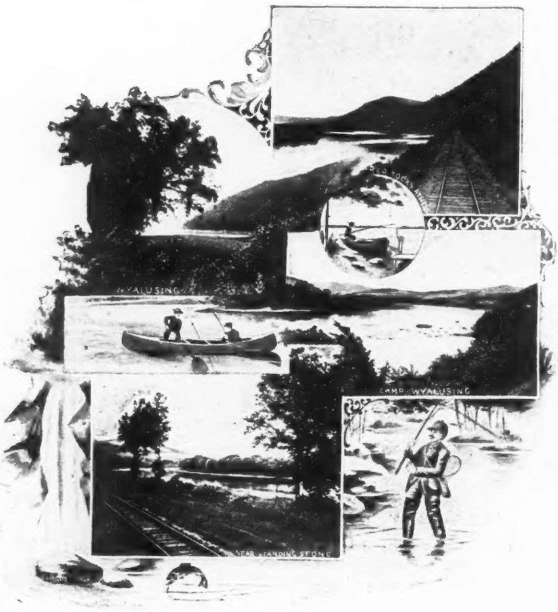
The German responded in a like manner. "Don't you believe it," said he, "in my country we use more zinc white than anything else — pure zinc white, too, and no combinations, and I never heard of this cracking before I came to America. When you get down to straight zinc you will have no cracking and you will not have any chalking either."

I simply quote these opinions as suggestive. My own experimental work has corroborated them; but I am not prepared to put them forth in this form as established facts. Certainly, however, if more body could be given to straight zinc it would be the ideal paint in every respect, as it is now in many respects.

Charles Jourdain.

NATURE'S COUNTERPART OF THE PAN-AMERICAN.

IN these days when it seems as though a real renaissance had begun to throw its charms and its difficulties upon the thoughts of all art, and pure design is adopted as its shibboleth it is fortunate that a comparison can be drawn between natural and constructed forms of beauty. It was while trying to gain an equilibrium of sense and mind upon being suddenly confronted with the at first somewhat bewildering masses of form and color at the Pan-American Exposition, that the first visit to the likewise impressive masses of rock, pine trees and water that is known as the Georgian Bay country in Canada was recalled.



THE MUSKOKA LAKE REGION.

FISHING ON THE CHICOUTIMI.

At first but a suggestion, this grew to a definite comparison as near as creative work can be compared with the ephemeral constructions of man. In order that this suggestion may be followed up, and if not in this relation particularly, but in all phases of art the influence of rugged nature upon the constructive or applied arts may be felt, the summer vacation should be planned so that each may be visited. The route to the Pan-American Exposition is also the route to nature's show place, the eastern shores of the Georgian Bay. There are no gigantic cliffs or deep defiles that distort perspective and destroy the effectiveness of detail as a New York or Chicago "skyscraper" would destroy the harmony of form and color of the exposition, but as that superb example of grouping in festal form and line has grown under Mr. Carrère's direction, so the rocks and trees and waters are there arranged by nature's landscape architect. It was probably not with this in view, though it serves the purpose well, that the Grand Trunk Railway System have arranged special schedules for visiting the exposition and returning by way of that wonderland, the Muskoka district, and Georgian Bay. They are so near Buffalo, and the train service is so complete, that the slight additional expense is in no degree equal to the benefit to be derived by completing the impressions received at the exposition with those that always stand for the best, as they are nature's handiwork unspoiled by the hand of man.

ASSOCIATION NOTES.

CHICAGO ARCHITECTURAL CLUB.

The following officers were elected by the Chicago Architectural Club on May 6: President, Robert C. Spencer, Jr.; first vice-president, Emil Lorch; second vice-president, E. Charles Hemmings; secretary, I. H. Phillips; treasurer, Adolph F. Bernhard; members of the Executive Committee, Robert E. Bourke, Thomas E. Tallmadge.

DETROIT ARCHITECTURAL CLUB.

The following officers and committees were elected for the ensuing year by the Detroit Architectural Club recently: President, Francis S. Swales; vice-president, C. F. J. Barnes; secretary, Dalton R. Wells; treasurer, John Fraunfelder; librarian, C. R. Green. Directors — George H. Ropes, Cheri Bandelbaum, Adolph Eisen. Exhibition Committee — F. A. Smales, J. A. Gillard, George H. Ropes. House Committee —J. Traunfelder, F. C. Baldwin, H. A. Odell. Entertainment Committee —John A. Gellard, J. R. McEchim. Publicity Committee —Adolph Eisen, J. A. Gillard, W. F. Scott. Class Committee — Cheri Mandelbaum, G. H. Ropes, C. F. J. Barnes.

OMAHA BUILDERS' CLUB.

The building contractors of Omaha, Nebraska, have organized a Builders' Club, to be composed exclusively of contractors who are engaged in the construction of buildings. The club was organized with a membership of forty, and the following is a list of its officers for the year 1901; President, Fred H. Hoye; vice-president, Charles W. Partridge; treasurer, J. E. Merriam; secretary, W. S. Wedge. Directors — J. J. Hanighen, J. H. Jones, B. Kunkel, R. B. Anderson, A. A. Newman, Herman Gurske. The object of the organization is to bring together into closer relations those engaged in the building trades of the city as contractors. The associations represented in the club are: Plumbing, brick, carpenter, gravel and slate roofing contractors, plasterers, sheet-metal workers and painters and electrical workers. At the meetings of the club, which will be held on the second and fourth Saturdays of each month, matters relating to the trades will be discussed and steps taken to improve the condition of the contractors. Should any labor trouble arise with any branch of the club, the matter will be referred to the arbitration committee, and the club will act as a unit on its decision. In this respect the club will be similar to the Building and Trades Council of the labor union. The arbitration committee and board of directors are composed of a member from each branch of the trades represented in the club. Each branch of the club has one night set apart for its separate organization meeting, when matters pertaining to its individual affairs can be discussed.

OUR ILLUSTRATIONS.

Design for house. F. R. Comstock, architect.

Park Pavilion, Denver, Colorado. W. E. Fisher, architect.

Bush Memorial building, Chicago. J. E. O. Pridmore, architect.

Residence, Charles Fach, St. Louis. Weber & Groves, architects.

Residence, Albert Lambert, St. Louis. Weber & Groves, architects.

Residence, C. N. Steny, Los Angeles, California. Dennis & Farwell, architects.

High-school building, Chicago. W. B. Mundie, architect for Board of Education.

Public school building, Chicago. W. B. Mundie, architect for Board of Education.

Interior Details, United States Postoffice and Customhouse, Chicago. Henry Ives Cobb, architect. Color sketches by F. W. Fitzpatrick. The finest marbles, mosaics and mural paintings are contemplated.

Photogravure Plate: Library, Orange, New Jersey. McKim, Mead & White, architects; Brower & Albro, associate architects.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Church, New York city. W. A. Potter, architect.

Residence, New York city. Carrère & Hastings, architects.

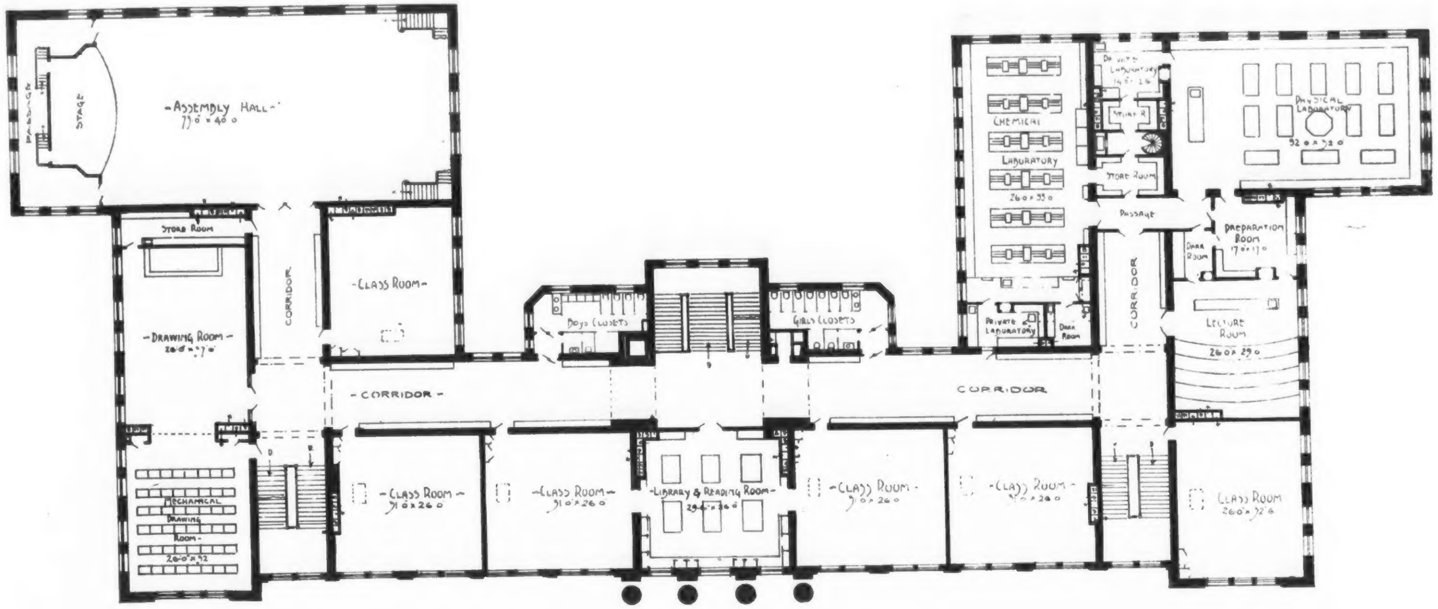
Apartment House, New York city. Janes & Leo, architects.

Church of Christ, New York city. F. R. Comstock, architect.

Transit building, New York city. Charles A. Rich, architect.

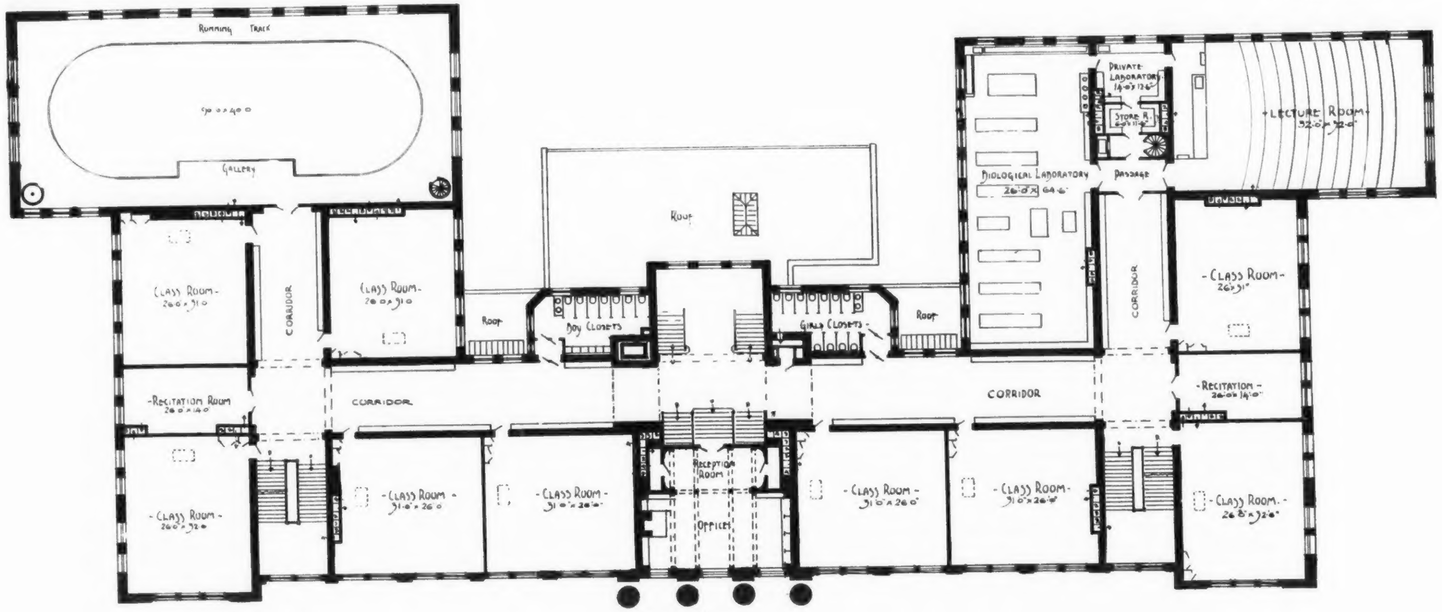
Residence, W. B. Holland, New York city. McKim, Mead & White, architects.

Residence, Mrs. E. G. Fabbre, New York city. Haydel & Shepard, architects.

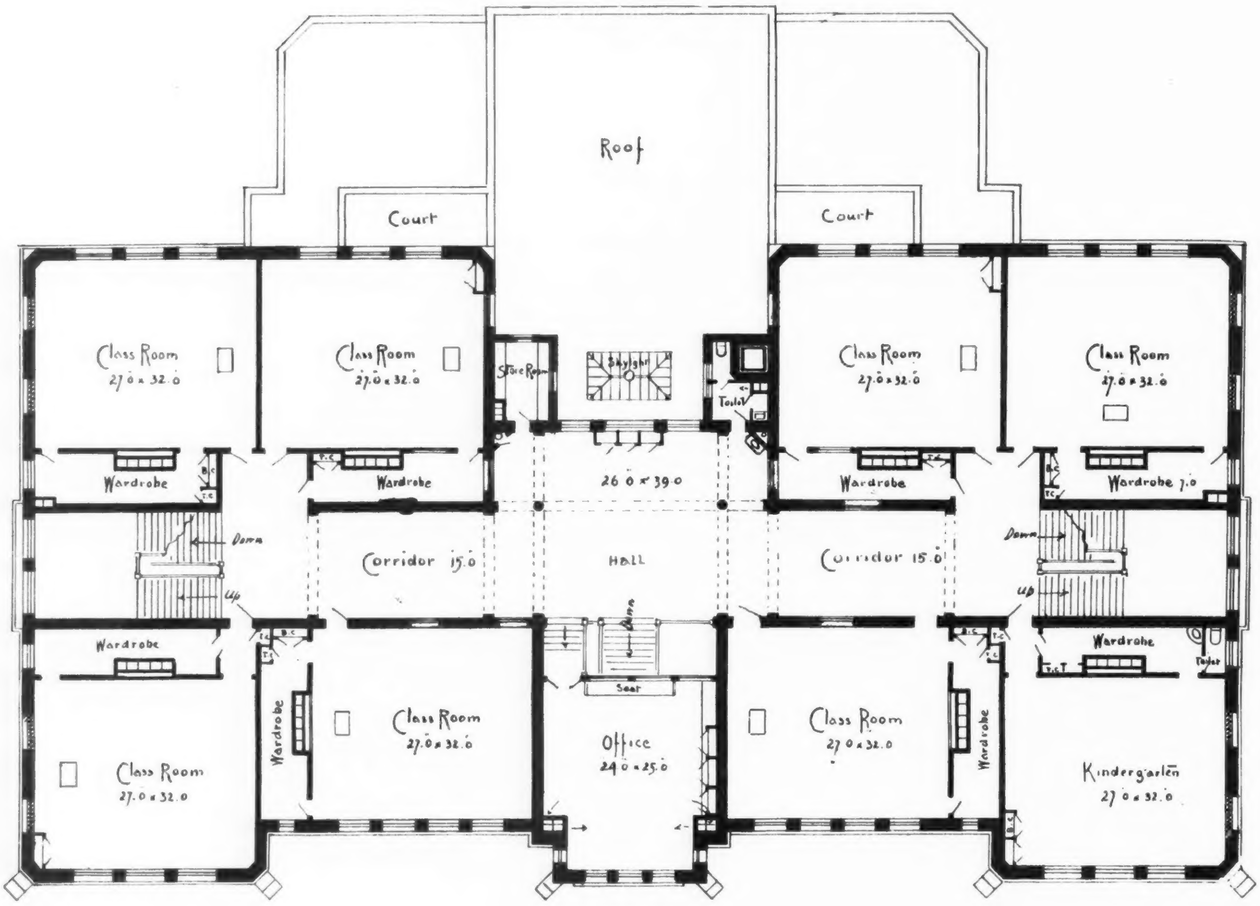


-Second-Floor-Plan-

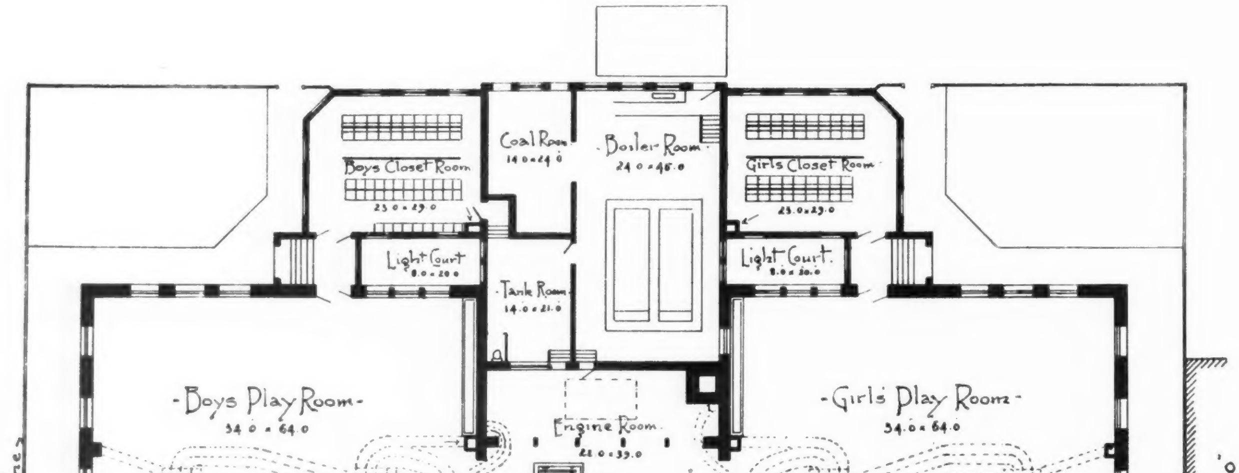
Job No. 111
Scale 1/16 in. = 1 ft.



-First-Floor-Plan-



FIRST FLOOR PLAN.



BASEMENT PLAN.

PLANS, PUBLIC SCHOOL BUILDING, CHICAGO.

W. B. MUNDIE, ARCHITECT FOR BOARD OF EDUCATION.

DESIGN FOR HOUSE.

F. R. COMSTOCK, ARCHITECT, NEW YORK CITY.

PARK PAVILION, DENVER, COLO.

W. E. FISHER, ARCHITECT.

IN THE POSTOFFICE CORRIDOR.

IN THE FIRST FLOOR CORRIDOR.

IN ONE OF THE SIXTH FLOOR COURTS.

MAIN DOOR, COURT OF APPEALS.

INTERIOR DETAILS, U. S. POSTOFFICE AND CUSTOMHOUSE, CHICAGO.

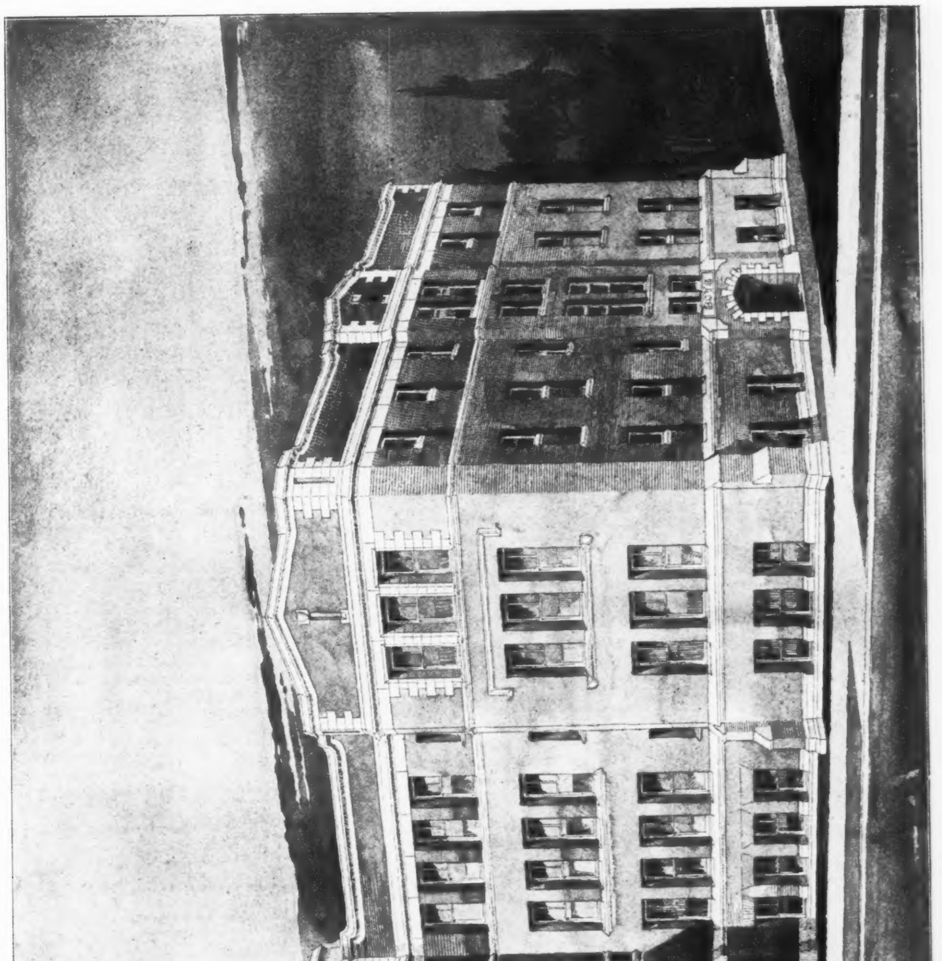
HENRY IVES COBB, ARCHITECT.

BUSH MEMORIAL BUILDING, CHICAGO.

J. E. O. PRIDMORE, ARCHITECT.

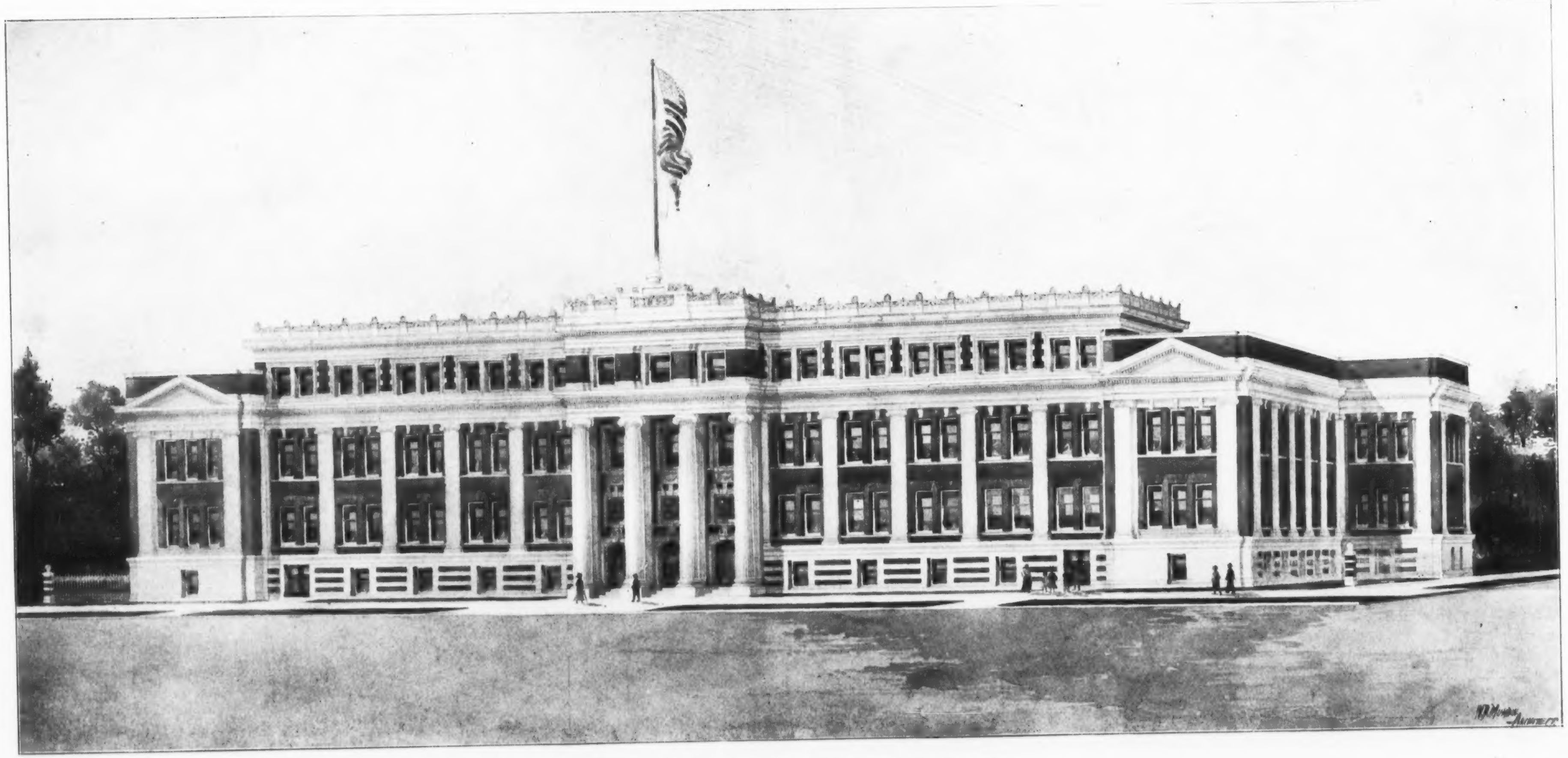
HOUSE FOR ALBERT LAMBERT, ST. LOUIS, MO.

WEBER & GROVES, ARCHITECTS.



PUBLIC SCHOOL BUILDING, CHICAGO.

W. B. Mundie, Architect for Board of Education.



HIGH SCHOOL BUILDING, CHICAGO.

W. B. MUNDIE, ARCHITECT FOR BOARD OF EDUCATION.

Negative by F D. Hampson, St. Louis.

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