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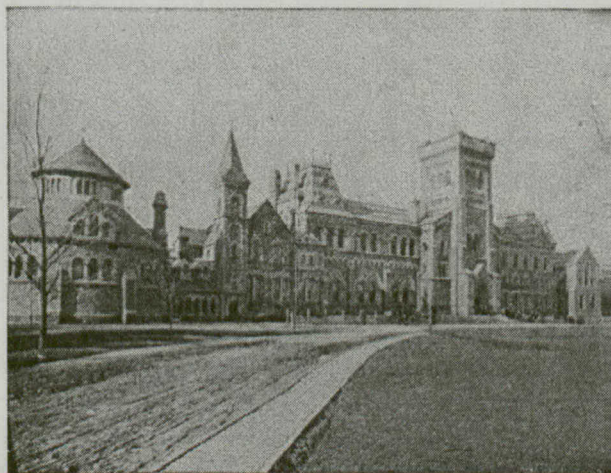
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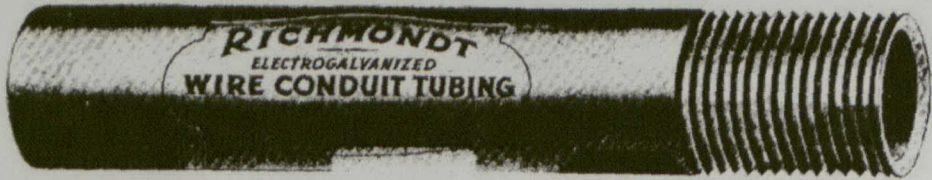
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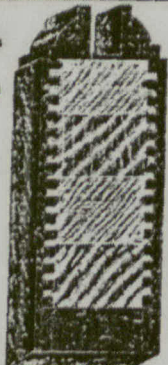
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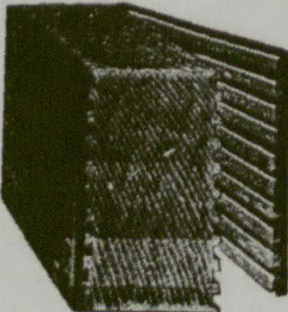
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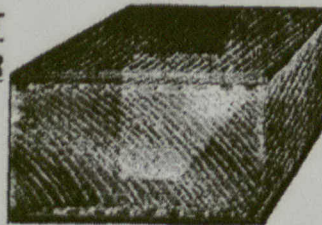


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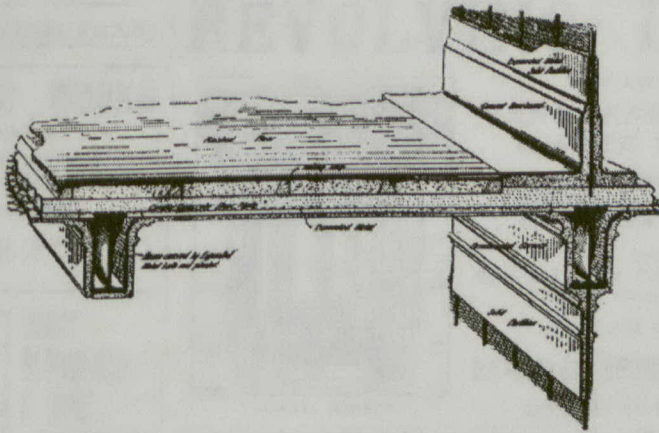
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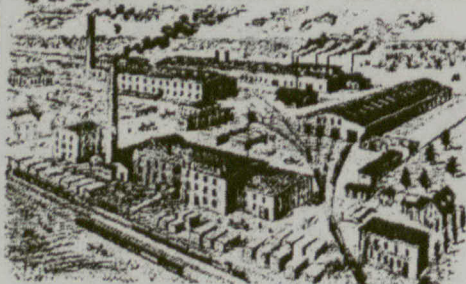
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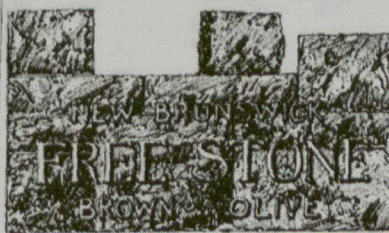
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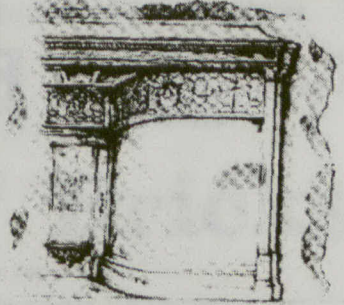
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House, Poplar Plains Road, Toronto.—Gregg & Gregg, Architects.
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ADDITIONAL ILLUSTRATIONS IN ARCHITECTS' EDITION.

Design for Church in Devonshire.—A. H. Skipworth, Architect.
Church at Abbeydale, Sharrow, Sheffield, Eng.—A. H. Skipworth, Architect.

ILLUSTRATIONS IN TEXT.

Plan of Grounds showing Buildings under construction for the Louisiana Purchase Exposition, St. Louis, Mo.
People's Bank of New Brunswick, Fredericton, N. B.

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Government Building Designs by Competition.

It is gratifying to learn that the system recently inaugurated in the United States of procuring designs for government buildings by limited competition among architects of the first rank in private practice, has proved entirely successful. So satisfactory have been its results that it is proposed for the future to include in such competitions public buildings of less importance and cost than those to which the Tarnsey Act was originally intended to apply. With such a precedent before them the Federal and Provincial Governments of Canada should adopt the system in this country. The result would be that Canadian architects would be stimulated to put forth their best efforts, and variety and interest would be imparted to government buildings throughout the country, such as many of the existing ones do not possess. Again, the influence of a number of well designed public buildings scattered throughout the length and breadth of the Dominion would react beneficially upon the general architecture of the country. Why do not the Architectural Associations of Ontario and Quebec earnestly take up this matter and persistently press home upon government the advantages of the competitive system.

Municipal Art Commissions.

The Art Commission of the city of New York is a pronounced success and a lesson to other cities. During the past year they gave an opinion (not always favourable) upon fifty-five sets of plans for

different structures; and, as the President of the Commission says in his report, the plans disapproved have been amended or perfected so as to "show a marked improvement, concurred in as such by the original designers." The Commission's principal power is only the power of veto; but that is final, and, as designers do not want to run up against it and be turned back to amend their drawings, the consequence is (to quote the President again) that "greater care is being taken in the preparation of designs than ever has been the case." In other words the old idea is upset—that anything will do for the city; that it is not design that counts but pull. All this is the work of ten gentlemen whose services on this commission cost the city nothing. It surely is worth the while of other cities to get an art commission appointed without delay. Sodom and Gomorrah are not the only cities that ten righteous men could save. No doubt the dread of putting so much power in any one's hands has hitherto been deterrent; but the evidence of New York's experience goes to show that this fear is groundless; that human nature tends to rise to what is expected of it; and that an art commission in whom trust is really reposed will be really trustworthy. The New York Art Commission has the confidence of the community. When the commission declined to allow the old Tweed County Court House to be extended to within a few feet of the City Hall, and so ruin the City Hall Park, public comment was "if we had had the Art Commission earlier we should never have had such a monstrosity as the County

Court House at all." The Commission is a power in the city. Simply by exercising its veto, it kept the committee for the Soldiers' and Sailors' Monument marching about for a site, disapproving of one after another, until the present admirable site on Riverside Drive was found. It has kept numberless unsuitable structures from being erected in the Plaza, to the injury of Central Park. The Commission works. When shall we see something of the sort in Canada? Here is the composition of the Art Commission of New York: The Mayor; three permanent officials, viz.: the Presidents of the Public Library, of the Metropolitan Museum of Art and of the Brooklyn Institute of Arts and Sciences; three representatives of the three professions of architecture, painting and sculpture; and three gentlemen specified to be not members of any profession of the fine arts. We have at least half a dozen cities in Canada in which a similar body could be selected without difficulty.

The Basing Unit in Concrete.

Mr. Charles M. Crawford, of the Hartford (Conn.) Paving and Construction Co., in a paper, which was read before the Connecticut Society of Civil Engineers, and published in a recent number of the *Engineering Record*, demonstrates the importance of more accurate definition than is usually given of the basing unit in cement concrete. Mr. Crawford cites the specification for an important public improvement in the State of New York. This specification reads:—the "concrete . . . will be proportioned:—one part by volume of Portland cement; eight parts of volume of aggregate of stone, gravel and sand." The question is, how is the volume of the unit of Portland cement to be measured—in the barrel or out of the barrel? A barrel of cement is the usual unit of volume; but a barrel of cement has two volumes—one in the barrel and one out of the barrel.

Mr. Crawford quotes test measurements of barrels, in which Portland cement of different brands had been packed, as ranging from 3.24 to 3.59 cubic feet; but the volume of the cement, when loose, is greater. Tests made for himself established the weight of a cubic foot of Atlas Portland cement, loose, at 91.27 lbs., making a barrel (380 lbs) equal 4.16 cubic feet. Here is a difference which has a serious bearing upon the question of cost.

Take the smaller measurement. If the "one part by volume of Portland cement" be taken as 3.25 cubic feet, the aggregate will be eight times as much, or 26 cubic feet. Of this 40 per cent., or 10.4 cubic feet (which is about the proportion of the voids), will be sand and 60 per cent., or 15.6 cubic feet will be stone; and the mixture will make about 16 cubic feet of concrete.

If the larger measurement, 4.16 cubic feet, be taken for the barrel of Portland cement;—there will be 33.28 cubic feet of aggregate, composed of 13.31 cubic feet of sand and 19.97 cubic feet of stone; and the mixture will make about 21 cubic feet of concrete

The cost of these two operations—with cement \$1.50 a barrel, sand 60 cents a cubic yard, and stone \$1.50 a cubic yard—will, in the first instance, be \$4.37 a cubic

yard, without labour, and, in the second, \$3.74; a difference of 63 cents a cubic yard. We have made the calculation from prices said to have been in force when the work for the specification in question was let. As cement has since gone up in price, the difference now would be even greater. But taking 63 cents as a possible difference in the cost per cubic yard:—as the work covered by the specification in question amounted to about 90,000 cubic yards of concrete, the sum involved in a difference of opinion as to the volume of the basing unit would be, as Mr. Crawford says, "worth considering."

P. Q. A. A. Scholarship.

It is rather remarkable that the well endowed and equipped department of architecture at McGill University should still lack students in spite of the fact that examination is the only way to the practice of architecture in that province. The Province of Quebec Association of Architects have considered it incumbent on them in order to make the benefit of the architectural course felt, to create a scholarship both entitling and compelling the winner of it to take the full four years' course at McGill University. This is no doubt a move that will in time effect its object. The first student who wins the scholarship and takes the course will of course be snapped up by a good office, and then it will begin to become apparent to the rest that something has happened which makes the architectural course desirable. If immediate advancement comes to two or three students who have taken the course, it will become a necessity. A distant view of himself either the better or the worse for having or not having a good professional education it is not easy to bring before the mind of a young man, but he can see immediate consequences; and it ought not take long to fill the architectural lecture rooms of McGill with students, if it is once demonstrated that to have passed the course gives the student an immediate success that can be measured in terms of dollars and cents as well as of opportunity.

A further proposition was made, as an additional suggestion, in the same report of the Educational Committee of the P. Q. A. A.:—that "some (members) might see their way to make arrangements with students in their offices so that for the help given by such students outside of the regular season and hours of a college course, the employer might pay the fees of such course." This in common with the rest of the report was adopted and "the Council instructed to take steps to give effect thereto," but this is a proposition that requires careful handling lest it do more harm than good.

The thing to be borne in mind, in offering inducements to architectural students to do their studying thoroughly, is that the inducements must be inducements to work, to take the profession seriously; not inducements to enter the profession as the softest thing going; and it is a question—if education is provided, for the mere consideration of filling out the year in an architect's office (which the student would do anyway if he were obliged, for want of this kind offer, to get his training entirely in an architect's office)—it is a question whether the profession of architecture in the Province of Quebec will not have

the greatest claims to popularity with an undesirable class; that class of young men who, with a sort of general capacity in some degree but with no decided bent, are ready to be attracted by incidental attractions in any of the professions. If electrical engineering continues to require a long apprenticeship under the orders of mechanics, while architecture offers a university education free of charge, the usefulness of electrical engineering as a limbo for the vaguely aspiring sons of vaguely aspiring parents, who would otherwise aim at architecture, will be gone; architecture will excel in popularity but its chances as an art will be proportionately diminished.

The same doubt hangs over the proposition to create a travelling scholarship. As stated in the Educational Committee's report the proposition is that only "regular students" who have graduated and taken their degree in architecture at the university "shall be eligible for the scholarship." That is an excellent proposition; but the motion to adopt gives the Council "power to modify the details with regard to clause 4," which is the clause relating to this scholarship.

It is to be hoped the Council will not attach this scholarship to anything less than a full career in arts and architecture at McGill. Then we shall feel sure not only that it is in the right hands but that the process of getting it is too long—requires too much decision of mind towards this career and too much hard work—to attract triflers. It is attraction that is principally to be feared. The actual winner of a scholarship may be of the right stuff but, unless the scholarship is so hedged by conditions of preliminary service that it colours the prospect with visions of work rather than with visions of foreign travel—for every trained and travelled student the profession gains, we shall have another or possibly more whom the chance of free foreign travel has enticed to desert a career of usefulness to others and profit to himself in "business."

THE EFFECT OF HIGH PRICES ON BUILDING.

Attention is being called to the manner in which the demands of workmen in the building trades coupled with the high prices of materials, is checking building enterprise in Toronto.

Notwithstanding the all-round advance in wages last year, several of the unions have already decided to demand a further substantial increase. The plasterers for example, are asking 45 cents per hour, an advance of 7 cents. It is understood to be the intention of the plumbers to demand 65 cents per hour; the painters have also demanded an advance while at the same time they have voted down the request of the employers to be allowed three instead of two apprentices to each shop, and that the term of apprenticeship be extended.

In view of these demands and the uncertainty as to what the scale of wages will be, contractors feel obliged to protect themselves against loss by a substantial increase in their tenders. This has already resulted in blocking considerable work which, had prices remained about the same as last year, would have gone forward to completion.

The opinion prevails that the point has been reached at which any addition to the cost of either materials or labor will prove to be the last straw which will break the back of many building enterprises. This is a particularly unfortunate condition when money is plentiful, and under favorable circumstances would be largely invested in new buildings.

Investors in buildings must keep in mind the possibility of a return of less prosperous times, when if their buildings have cost too much the shrinkage in values may entail upon them a loss. Thousands of owners found themselves in this position on the collapse of the real estate boom in Toronto several years ago.

Some large commercial undertakings may go on in spite of higher prices, but many smaller ones, especially residences, will be stopped. This means a few large contracts for a few large contractors and employment for a few hundred workmen, leaving idle a much larger number of both masters and mechanics.

Workmen give as a reason why they should have more pay that the cost of living, including rents, has greatly advanced. They apparently do not see that this advance is largely due to their constant and ever increasing demands for more wages and shorter hours, and that as they comprise the bulk of the consuming class, they are themselves called on to bear the heaviest part of the burden. This was clearly demonstrated by the recent coal strike, the effects of which were felt most severely by mechanics and laborers. This strike has probably permanently increased the price of coal in this country. In the case of articles of general consumption such as fuel, the use of which cannot be dispensed with, the future policy of the producing companies will probably be to cease fighting against higher prices in behalf of the consumers from whom they get no thanks, and to accede to all demands of their workmen and charge up the extra cost to the consumer. Who is the consumer? In seven cases out of ten he is the wage earner, the man who is least able to bear the added burden.

In the case of the building industry, the conditions are somewhat different, but the result is much the same. People are not obliged to build expensive residences—they can live in the old ones, take rooms in an apartment house or an hotel, or adopt other modes of living which are at least less expensive and freer from care than the management of a modern house. So it happens that when prices of materials and labor reach a certain point, building enterprise slackens, the demand for materials falls off and the mechanic in the building trades and in the factory is thrown out of employment. All of which goes to show that it is possible to kill the goose that lays the golden egg, and also that to do so is a very short-sighted and unwise proceeding.

In joining parts of metal and glass by means of plaster of Paris, a serious source of trouble (according to "Werkstatt") is the tendency of the plaster to set and harden before a proper cementation has been attained. This can be easily prevented by adding to the water with which the plaster is mixed 6 per cent. of alcohol. Then sufficient time will be allowed for cementing before complete hardening occurs. Too much alcohol must not be used, otherwise the plaster will not harden.



[COLOGNE CATHEDRAL.

BY THE WAY.

In the opinion^{of} the Irish Builder Chubb's new patent front-door latch, with very small key, is an extremely handy, up-to-date idea. The Club man who may have occasion to use the very small key has yet to be heard from.

x x x

Towns like individuals frequently refuse or neglect to profit by experience. A case in point is the town of Liverpool, Nova Scotia, which, although fire swept only seven years ago, has again been almost wiped out of existence by fire.

x x x

A prominent bank president of Hartford was having his house repainted recently. To him entered a caller, who said:—"Do you know that your house is being painted by non-union men?" "Yes," was the answer, "I took particular pains to find them. Get out!" That is all the story, except that the house is painted.

x x x

Colonel Butler, a former Sessions Judge in Burma, and retired, happened to be an artist and has painted some very pretty scenery as well as birds and flowers in the Japanese style on the walls of the Maubin Court House in Lower Burma. It forms says Indian Engineering, a pleasing contrast to the generality of such buildings, though we fear the minds of accused persons committed to the Sessions are too much occupied with other thoughts to appreciate pictures, however artistically they may be depicted.

x x x

A British contemporary tells a good story of an old lady passing by the scene of the demolition of the famous old Newgate Prison in London the other day, when she espied the contractor's enormous steam crane. Appealing to a wily crossing sweeper, said she, "Can you tell me my good man what is that for?" "That 'laidy,' says the wily one, "that is the famous gallows you must have often heard of. Aye, 'laidy,' many's the sickening sight I've often witnessed on that 'ere 'gallis'—take away yer appetite for breakfast—'twould," and as he wiped his eye and pocketed the two-pence, reflected that it was well earned.

x x x

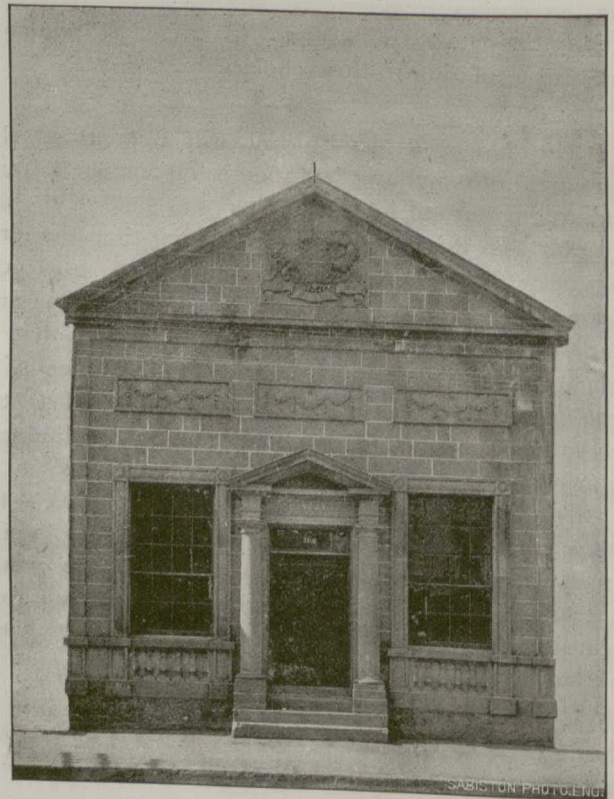
A curious action at law is said to be pending in connection with what is known as "The flat Iron Building" on Broadway, New York. The owner of a store opposite this building is said to have brought legal action to compel the owners to reimburse him for the breaking of his plate glass windows by currents of wind alleged to have been deflected from the slanting walls of the "flat iron." The plaintiff alleges that pedestrians have been thrown to the sidewalk by the wind while passing this building, and that in consequence they now avoid the locality. He proposes to secure

the testimony of such persons as well as of architects and other experts in support of his claim.

THE EDUCATION OF APPRENTICES.

A series of lectures to masons' apprentices were given last winter by members of the Illinois chapter of architects, and were so successful that it has been decided to continue them during the present winter. The master masons and the masons' union have arranged an apprentice system under which each apprentice receives three months' schooling each year, during which time he is obliged to attend school and also receives his pay from his employer.

The Inland Architect states that the city of Chicago has also arranged school-rooms and teachers for their special use, and their studies not only comprise elementary branches, but follow such technical lines as will best serve them in their work. It is encouraging to note that of the apprentices who attended school last



PEOPLE'S BANK OF NEW BRUNSWICK, FREDERICTON, N. B.

winter not one seemed indifferent, and many attended the night as well as the day classes, and all were enthusiastic and diligent. This has all been accomplished by the unselfish work of a few men who wish to aid in the elevation of the workman and the improvement of his work, and shows what can be accomplished in every trade, and how gladly such aid is accepted by the young mechanic who wishes to succeed in mastering his trade.

The Engineering Record states that the lettering of titles and important legends on drawings is expedited in the drafting rooms of the Bureau of Filtration, Philadelphia, by the use of standard letter sheets about 11x14 inches in size upon which are printed five standard alphabets and sets of numerals in plain Gothic type. These sheets also contain words most frequently occurring in titles and other places printed in the size of letter most frequently used for them. In this way a great deal of time usually spent in spacing is saved, for the draughtsman can slip one of the standard letter sheets under his tracing and copy the words needed.

ARCHITECTURE AS A SOCIAL ART.*

Prof. Shortt : Mr. Chairman and Gentlemen : I come before an architectural organization with a great deal of diffidence, because I cannot say that I am even an amateur in architecture, but simply a much interested reader on architectural subjects, and much given to the observation of buildings and other products of architecture, and of the allied arts. I had written out my paper, but from the nature of the questions with which I wished to deal, and which were mainly suggestive, I thought it was rather too stiff, and looked altogether too important for the matters I had to bring up; I wish, therefore, the members present to understand that what I am throwing out is simply a series of suggestions with reference to some problems which have presented themselves to my mind. In considering the subject of architecture as a social art, the question arose, Whence came this art? What forces have determined its growth and what is its significance for the public at the present time? You will see, therefore, that the line which I am to take is not one which concerns itself with the technical aspect of architecture, but rather with its relation to the people. Each art has its special votaries who understand its details, its principles, and so on; but these arts, and architecture above all others, have a special significance for the public. Therefore, the question arises, how did the public come to be interested in architecture, and what is its significance for them?

Now, in this respect it seems to me that architecture, in common with several other arts, is not on the basis of most of the sciences, and particularly not on the basis of a science such as mathematics. The determination of the artistic or proper features of architecture are not to be worked out as we work out the fact that the three interior angles of a triangle are equal to two right angles. When we have discovered that proposition we have discovered something that was eternally true and will be true for all times. When we have discovered a principle in art, it does not necessarily rest upon the same basis, for it may be modified very greatly as time goes on; and the problem, therefore, which I have set before myself, and on which I wish to make some suggestions is, Whence arose this feature of architecture, and what is its significance? It seems to me that here we are face to face with a problem that is incident to the beginning of human interests. What were those beginnings? They were connected with the fact that man had to make his own way on this earth, that is, they are connected with the struggle for existence.

I say the foundations of architecture are associated with the foundations of man's living on the earth. Self-preservation, therefore is the fundamental feature. At first sight it may seem strange that self-preservation should have any connection with architecture, yet the connection is quite real and vital. When we come to consider what it is that has built up mankind, his interests, his senses, and his feelings, what we discover is, that the stimulus has followed two lines:—the seeking of that which is favorable to the race, and the avoiding of that which is unfavorable or destructive. There is a common myth abroad that the beginnings of human interests were individual, that the struggle for existence is the struggle of the individual to

maintain itself. That is not a fact, as can be found by investigations all the way back through man and the animals too. The instincts that are registered in humanity and the animal are instincts for the preservation of the race. Another false conception is that the pleasurable feelings are associated with preservation and the painful feelings with destruction, Now, as a rule, pleasurable feelings are associated with preservation and the maintenance of existence, and many of the painful feelings with destruction, but not all. And I think that none of our secondary interests would be maintained, or would indeed have existed had only the pleasurable feelings been developed. Thus, we find that, going no further back than the savage, when we ask what it is that is registered in primitive man, what is his interest in this, that and the other thing, we find it due to that minute and careful study of nature forced upon him by the avoidance of his enemies and the pursuit of his prey. Thus, the accurate knowledge which the savage acquires from his close study of the bent twig or the crushed leaf, of the trail of the various animals and of all nature's conditions, is the outcome of ages of specialization in which he has had to attain to accurate experience of these before he ever waked to a secondary interest in them. Thus the eye was not formed to see beautiful colors, or fine forms, or anything of that kind; the eye was formed as a concentration of a certain nervous structure in the body for self-preservation; and so with the other organs which in lower animals are simply diffused feeling, but in the higher animals, and in man particularly, are aggregated into special senses with special functions for preservation; but there comes in connection with them the secondary satisfaction in succeeding, and the horror of failure which is associated again with the preservation of the race. Again we notice in the domestic animals as well as in wild animals, that when an animal has not its full capacity drawn upon in the pursuit of prey, in the avoidance of enemies, or in its other functions of life, it simulates the familiar process, and the animal plays at that which is its life-work. And you will notice that the wild animal and the domestic animal not only take pleasure in stimulating joyful feeling, but they alarm and strike terror into each other, taking interest in developing that side as well as the other; thus the comedy and the tragedy of life are remotely born in man and are there before they ever come to a conscious condition at all. But eventually man relates these things to a purpose. He acquires an interest in life that is not merely that of incidentally obeying instincts, but that undertakes to take hold of these and make something of a purpose in life, within the spiritual continuity and unity which is expressed in humanity; that spiritual unity is the one great feature of humanity, not the elements that it unites. The elements that it unites are animal elements, the senses and physical needs. But it is the spiritual unity that gives them meaning, that first of all takes these elementary purposes and moulds them into some connected view of life. Now the first phases of that connected view of life, as we see, are associated with the interest in the secondary features of animal life. It is there that the significance of the arts for human life comes in. How is it that man should come to unify any of the feelings connected with the senses along an artistic line? What is the force behind the expression? Well, it is usually a force connected with awe and fear, rather than with im-

* Paper read at the annual convention of the Ontario Association of Architects held in Toronto January 13th and 14th, 1903.

mediate pleasure. An art whose products are associated with the awesome, the fear-inspiring, emphasizes the threatening aspect of existence which most arrests human attention. That which falls in with our everyday needs, and satisfies these needs, passes unobserved; and thus it is we take more interest in the failures of life than the successes, in a way; therefore, primitive man in his aspiration is more actuated by fear than by pleasure. All primitive religions, also modern savage religions, are connected with the worship of evil spirits much more prominently than with the worship of good spirits. And why? Because man wants to propitiate the evil spirits and escape them, and consequently his first worship is entirely sacrificial. Anything that will appease these spirits is the proper thing, and that is characteristic of all savage and barbaric people in the spiritual line. This feeling is hidden deep in human nature and expresses itself in the child,—you all have had experience, no doubt, of some sort of terrible creature, suggestive of a bear, a tiger, a dragon, or other fearsome thing that is apt to inhabit the dark recesses of an ordinary domestic home, being apt to go upstairs behind you or come out of a closet and attack you. That is simply the unconscious expression of what has been rooted and grounded in the savage nature of man for ages; and the time between savagery and civilization is so short that it can't be got rid of; thus the child reproduces many of the things that its savage ancestor most feared. What is the significance of that for architecture and art in general? It is, that in order to give concrete expression to his feelings, in order to afford these vague beings a definite worship, man undertakes to give form to associations, to construct fetishes and other grotesque objects of worship, which, at first, are of the most vague and uncertain character, but are afterwards given an architectural clothing or housing. Thus, we can find to-day all the phases of this from what goes on in the central tepee, the public and religious tent or structure of the savage, right up to our Government Buildings and cathedral churches. We can find it not only historically up through the ages, but contemporaneously through different peoples at different stages. All these features then, associate themselves with this art, the first effort of the savage to embellish the tent which houses his religion and his politics. The common council house, which is at once the centre of the medicine man's activity and the councillor's oratory, is specially built and ornamented and rendered symbolic. Domestic architecture is a mere reflex from that, but has no great interest in it. This same feature which is the basis of architecture is associated at an early time, in the case of our own institutions and those of the Greeks and Romans, with ancestor worship, and the perpetuation of the idea of immortality. Consequently, the first temples are also, as it were, the first tombs; and the tomb-temples of Egypt, rock-hewn structures, are the beginnings of much of the higher architecture of the country. There is a link here that has been lost to us, because the first structures were usually made of the material at hand, perishable material: wood, clay, brick, and so on, colored and decorated with totems and things of that sort, which express in these grotesque forms the aspirations of the people. Those are swept away or eaten up by the tooth of time. Only when we come to rock-hewn temples or structures carved or built up out of stone

do we get anything that persists through the ages. And, as you architects all know, when you come to examine these structures you find they are reproductions, even the finest Greek temples, of wooden-built structures; structures erected of beams, timber and posts; that is their essential character, but they are in many cases very elaborately modelled and ornamented, raising the simple elements to a higher degree, as it were, by an elaboration of them in a large temple. When you take, therefore, the construction of the Egyptian temple, you find the oldest of them and the most remarkable express above all things mystery and fear rather than beauty. Yet there is a beauty in them, too. There is the obvious aspiration of the human spirit; the feelings of the men who raised these temples are wrought into them, and their interest in nature is also expressed, for though the work be crude in technique, it is exceedingly accurate and living in the spirit of it. That is, they show themselves, before they have got the technique, to be able to appreciate the fine things in nature. Even primitive creations that are dug up, the scratchings of animal forms on bones, shells, and so on, while rude and crude most of them, are essentially accurate with reference to nature, and show that their authors were still very close to nature. I omit, in order to get on, the Assyrian and Babylonian fragments, and come to the Greek temples, which in so many ways resemble the Egyptian, and what do we find there? We find a higher expression; we find less of the fearsome or awesome, less of crude mystery and more of intellectual beauty. Why is that? Because the Greeks in their rapid development had come to understand nature at large more fully than the Egyptians, had come to understand that there was less of the blindly threatening aspect in it, and more that could be understood and appreciated. With a rising sense of beauty the Greek spiritualized his architecture; he turns the Egyptian temple inside out, and instead of clustering all the columns inside to make it dark and mysterious and threatening, he puts them outside and ornaments them, while he expresses in the interior simplicity itself. Altogether the structures expressed a civic and a religious feeling which showed the real core of the civilization of the Greek. Concurrently with these beautiful structures come the other arts which are all the children of architecture. Painting, sculpture and all these things came as accessories of architecture, not as things developed on their own basis and put into architecture. But as civilization advances, becoming more complex, these things come to be separated from architecture, and have an existence of their own. Thus, at a later stage, pictures are not painted merely for mural decoration, but for interest in the subjects separately,—they can be carried about and hung up here and there to be seen; and so with statuary and music, and a good many other things which were all associated with religious and social art. I use these terms religious and social as interchangeable. When we go back to early society we find there is no difference between the religious and the social aspects of it; their politics were religious, and their religions were political. The embellishments of the temples and meeting-places were all connected with this one social structure, because individualism was something that was to be developed at a later stage. Thus, we find that all the great original architecture is social; there is little or nothing that is

original or important in domestic architecture; it is simply the reflex of the ideas that were carried out in a larger scale and in an original degree in the social and religious architecture.

When, however, we come to the Roman we begin to note the separation, the development of a style of architecture that was more domestic and an application to it of original features, as is shown in the Pompeian remains, and that was partly due to the fact that the old Roman religion had gone to decay. The features of individualism creep in and change the character of architecture. The Roman architecture is the first, it seems to me, which shows a wantonness, which no longer expresses the purity of an aspiration. The buildings often lack high character and chastening purpose. Thus, there is the application of ornament merely as ornament. Now, that never was shown before; it was ornament subordinated to the great purpose of the temple or the structure.

The next great movement that I want to touch on in this connection, is the development of architecture through the Christian church. We come back, through the Christian church when it had dropped its individualism, and got to be a unified church, to a great organization with aspirations of a high order. Under the church the Roman Empire again took the lead of civilization, both socially and religiously. There we get a structure that calls forth once more all that is great in man; and once more it finds visible expression in architecture. The domestic habitations at the time of the building of the great cathedrals were poor things, attracting little attention; and the castles and keeps were for strength, and if strength were got, ornament or any higher aspect of architecture was largely neglected. There was indeed a secondary influence coming in afterwards from the religious side, which rendered these feudal keeps and castles more artistic and architectural. But the great cathedrals of Europe once more expressed in themselves thorough appropriateness and great human interest. There you see once more that no sacrifice, no artistic ability, no power that can be suggested, is too great for the realization of this idea; and therefore, they built as well and as nobly as ever they possibly could; but in doing so they were doing just what the primitive savage had done in setting up his council house, in ornamenting it and associating his life with it. But from the time of the great religious structures we come to a condition of things which, as soon as we strike the decay of the religious feeling—not at the Reformation, but before the Reformation—is very mixed once more. Take the Renaissance movement in Italy, and you observe the revival of an interest in art for art's sake, which in the absence of other inspiration is a very dubious standard; thus there were produced some very good things and some quite monstrous things. Again we come back to the suggestion in the decadent Roman architecture. People are ordered to put up buildings by some great civic or church authority, and they are ordered to ornament them in certain ways; not for the glory of God, but for the expression of human magnificence. In that they may run to all sorts of extremes, and thus we have the vagaries that are committed, even though they are checked and corrected by those who have a purer and larger conception of their art. Even amidst the corruption of the period there were those who began to develop standards of art for

themselves, and to look at art as a conscious spiritual expression. However, from that time down, we see all manner of vagaries and all kinds of mixtures for the reason that western civilization was breaking up into self-conscious fragments. The further down we come and the more utilitarian man becomes, the more completely does he get at sixes and sevens in his architecture. The best part of it for a time really comes to be semi-domestic, namely, the mansions of the great feudal lords, now a landed aristocracy, who took a real interest in their feudal domain, and who wished to raise these worthy structures of theirs, great domestic castles and baronial halls in England and France and other places, which would be worthy of their power, of their position in society and the state.

Thus once more we notice that these things are, if I may use the expression, owned of nature. That is largely after all what gives such a marvelous attraction to some of the great country houses in England? It is their complete unity with their setting, with the surroundings, with the character and life of the people at the time, and that is the only true standard, I think, in the end.

I shall have cause to refer to that again, because I think we are coming back to that, and it is one of the hopeful signs of the present; but what I have to notice first is the very mixed era that comes between the great cathedral-building period and the present day, when people's ideas seemed to be so much at sixes and sevens, and the utilitarian spirit prevailed, the spirit which put up a structure to serve a purpose and thought any kind of a building was good enough. Some people, however, had further ideas. They seemed to say to themselves that it would be just as well to ornament that building, to give it a more graceful form, or something of that sort. Thus they came to apply ornament in an external and dead sort of a way to a building erected, with no aspiration that demanded the ornament, or that determined that this kind of ornament can be used and the other kind cannot; or that this atmosphere and this setting demands certain things, and that situation is utterly inconsistent with certain others. And thus we get those monstrosities in architecture where you have no end of work often, and great expense, but extremely little effect, or a negative effect. Coming down to our own country and applying some of these tests, what we find is the development nowadays of the imitative, the merely imitative feature; certain things in this building are admired, and other things in that building are admired, and the party who admires them seems to think it would be a good idea to combine these things together and make a structure of some sort; and thus we get freaks. The dwelling house is frequently designed as a very costly affair, and apparently no thought is given to the situation, the climate, or anything else in the appropriateness of the parts. The result is sometimes congruous, by matter of accident; and sometimes quite incongruous both in its interior and exterior, and in its setting. That was the characteristic feature of much of the architecture of America during the past century, except for people and architects who came over from Europe, and in the first generation produced here and there things that had some feeling and setting.

I have been very much struck with that in Ontario. In going about the Province I have come across houses with grounds attached where there

was clearly some attention paid to the location and the surroundings to make life harmonious within and without. And when one comes to enquire why this was done, and why it has gone to delapidation since, one commonly finds that it was due to somebody who came out from the old country, quite frequently with no architectural ideas at all in the technical sense, but having been brought up amidst beautiful surroundings, having their appropriateness ingrained in them, wished to reproduce in some measure a similar setting in their surroundings here. But the second generation, not having been brought up in the same atmosphere, fell away from the old standards and allowed the place to go into decay. Many of these picturesque old places are decayed up and down America as well as Canada; and it is only recently that our architects have been waking up to the fact that there is something in appropriate combination. Now, out of that I wish to draw the further fact, which is so important in the social aspect of our subject, that architecture of all the arts is the most constantly educative, and it is educative in the very best and highest way, namely, in the way in which the savage was educated. Architecture is a constant presence, and when good it develops taste and appropriateness in the minds that respond to it, without any effort, simply because they come daily in contact with it. Let the mind be situated in any other region, and it will have no such aspirations, as is shown in this very fact of the first generation being interested in realizing the ideas which they unconsciously received in a better surrounding, and the second generation neglecting them altogether. Later on we come to the development of wealth. Go out into the country and find a man who has made money as a farmer, and who decides to put up a house. When he looks about his farm for a location for that new house where does he put it? You can find by going through the country. He looks through the farm and says, "It would be a pity to spoil that field, it is a good wheat field; it would be a pity to spoil this other field, it is good pasture; but there is a rocky waste piece that has never produced anything; if I put my house on that it won't destroy any of the farm." He puts his house on the most miserable place on the farm, and that is commonly the end of it. If he goes any farther, he will, perhaps, put in a tree or two, one hedge of evergreens, beginning half-way back on the house, and coming down to the gate, and he may not even trim them. Now such a man has traveled away from contact with nature, he has been in a region in which the utilitarian factor alone has been dominating his soul; he has none of the spontaneous aspirations of the first men; he has none of their vivid religious fervor and feeling, but he is dominated by what will distinguish him among his fellows, and his house is a visible emblem of it.

Architecture must be social in the end, and even in a region where a man puts up a house such as I speak of, his wealthy neighbors catch the idea and they put up houses like it and treat them in the same way. Go up and down country roads and you will see the same type reproduced over and over again. It is difficult for the architects, and I am sure you sympathize with yourselves in that, to get a man to see that there is more in architecture than merely displaying his money, and keeping a kind of Holy of Holies, as some of them look upon it, in the front of the house which the owner enters on Sunday, when

he gets his best clothes on. He goes in there and sits down in a stiff attitude, quite uncomfortable, passing a day there, because you have to occupy the room somehow, and Sunday is the most appropriate day for occupying it. That is partly what has dominated this country, but we seem to be coming to a better era, and it seems to come of the development of a wider interest among the architects themselves, and a wider interest in the builders. We notice it in the developments in the United States, particularly in the New England States, in the great movement towards the improvement of public buildings, in the formation of guilds of civic art, and the education of public opinion. There is a return to the feeling that after all there is something more in life than mere living. There is the association of a higher aspiration and of the fitting clothing of the ideals, and the educative feature that comes along with them. Thus, I think, we are on the turn, and it seems to me we should emphasize it. I am very thankful to find that the architects are banding themselves together, and are working towards public standards, that they are beginning to criticize professionally certain structures that are put up, and to impress on governments and millionaires, and other people who have money to spend, that it is necessary, not merely to build, but to build well; and by the appropriateness of the setting to get the buildings to be, as I said, owned of nature. Take the bridges of Britain, those stone structures, and see how finely nature takes hold of them; clothes and adopts them, making them some of the most beautiful features in the landscape; also how impossible it is for her to take hold of certain structures, and how she holds back from them. There is a feeling which I would just like to touch on a little before I close. Why is it that the savage and the civilized man alike—anyone, indeed, who has a spark in him that responds to nature—recoils in horror from a burnt region? Is there anything so desolate as a wooded region swept by fire? Yet why is it that the burnt region should not be as attractive as the most fertile and green? Why is it that tumbled rocks, caused by earthquakes, will give us quite a picturesque feature? We say that the latter is beautiful, and picturesque, while the other is desolate and horrible. Why is it? It is that there is registered in our nature, as a result of our contact with outer nature through ages, the notion of what is normal and natural, as distinguished from what is abnormal and unnatural. When the fire-swept region is grown up again, when the fallen trees have been covered by the mosses—because fallen trees, merely as fallen trees, are not objectionable to the view, and especially when moss-grown—then it is attractive once more, because again owned of nature. Our interest in nature, therefore, and our feeling for it, should be the artistic test. It is, after all, the ultimate standard in beauty, in appropriateness, in form and all that. Why is it that one line is beautiful and another line not? There is no explanation in philosophy or mathematics for that but there is an explanation in the appropriateness of the curves to nature, whence man derived his appreciation. Therefore, I say nothing in architecture, whether in civic beauty, or in the development of domestic architecture through the country, will live or give satisfaction permanently, as some of the ancient structures do, except it be owned of nature; that is, in perfect harmony with these primary conditions.

But in making it harmonious with nature, it will not do simply to imitate the past. There is no use in our imitating the temple of the Greek, or the temple of the Egyptian or the Assyrian. Why? Because we have not their point of view; we have not their special aspirations, we have passed that stage long ago, and we might as well say that the cathedral-building Christians should have taken the Egyptian type, or that the Egyptians should have developed the Christian type. No. Both these things are perfectly splendid in their way, because they properly express the aspirations and feelings of the people at the time; and there is no architecture that will stand, it seems to me, that does not do that. We have, to-day, surely enough life and vigor and high aspiration to find their own appropriate clothing and setting so that they will, on the one hand, be the expression of civic and social interest, and on the other hand, be owned of nature. I know of no direction in which our wealthy men, our millionaires and so on, can more wisely spend their money, if they have to spend it on themselves, than in building fine mansions. That is what redeems Britain from being a very commonplace country in many ways, with a horrible climate nearly half the year, and yet great men putting their wealth into the state-ly, beautiful country houses, with their surrounding parks, have redeemed the country and educated the people. The mansion of the wealthy man is not merely for him; it may educate the people, it may raise their standards. It may ameliorate the ideas of life in a thousand ways, for all the community as well as for the owner; even as regards the interior of it, for there our English relatives set us an example, too, because they have freely opened their treasures and their interiors to the public; that is, to people who can appreciate them and derive benefit from them. And it seems to me that it is the duty as well as the privilege of our modern architects to direct the architectural movement in America, and to give us something that will be at once social and the embodiment of aspirations, and hence educative as well. And so it is proper that architecture should once more associate with itself in a perfectly normal and natural way all the other arts that were so long divorced from it; mural decoration, and statuary, and all these things shall come in once more and be harmoniously developed. (Applause).

DISCUSSION.

Mr. Symons: Mr. President and Gentlemen,—It was only from my desire to hear some discussion on Professor Shortt's able lecture that I could be prevailed upon to say a few words this afternoon. Prof. Shortt has taken us back to the time when art was an unconscious element, a mere protoplasm, a microbe. I do wish that there was something that could not be traced back to that blessed microbe; we are always face to face with these fearsome quantities, and now, if you please, our beloved calling has been traced back to such weird ancestry! Some of you may remember the words of Sir Joshua Reynolds—"the end of all art is to make an impression on the feelings and imaginations." There is no doubt that the first call upon architecture, its first duty, was simply to house the body; simply to form such a protection for the services of life, or as might provide for bare necessity. These requirements were met, and during the process other necessities became apparent, those which Prof. Shortt has mentioned

namely the natural instinct for the beautiful, the true, the awful and the sublime; these had likewise to be satisfied; and it is in the development and satisfying of these nobler attributes of our nature that architecture finds its outlet. And as he said, as soon as a man has amassed wealth he endeavors to build himself a home that shall not only be the home of a wealthy man, but shall express his feelings and aspirations; and the means he has acquired enable him to satisfy his taste for what is beautiful and true. And the same thing may be said of a city. As soon as a city becomes prosperous the citizens endeavor to see how they can make it beautiful. We hear very little about beautifying our city, opening up squares, avenues or parks in hard times or in times of growth; but in prosperity, when we begin to feel that it can be afforded, we commence to look beyond the mere animal and gratify the desires of our higher nature. Have we not a perfect example of that growth without intense individualism, which Prof. Shortt so rightly upholds—and which was referred to by our President this morning when he said that we do not want the intensely individual in architecture—have we not that spirit beautifully shown in the history of Venice? In Mrs. Oliphant's book, "The Makers of Venice," she writes: "Where are her authors? Where are her sculptors? Where are her great men? Where are her poets? You cannot find them; you meet them nowhere. Instead of the man who made her what she is, we find everywhere the great Venice herself, the center of all their aspirations, the mistress of their affections; enacing themselves, thinking of nothing but her glory." It seems to me that what is so degrading in our own profession is the absurd endeavor to be intensely individual—individual in design, individual in attacking the great problems of the age, individual in every portion of our calling. How seldom it is that we call in the aid of a sculptor, of a decorator, or the aid of a landscape gardener when we are endeavoring to plan large schemes. No, we think so much of our individual power; we can do it all ourselves; and are we in consequence very far on in the life that Prof. Shortt has outlined to us? I am afraid we are not. We should aim to lose our individuality in the love of our profession, of our city and of our country. We have in our midst monuments that are grotesque in themselves and exemplify what I am speaking of; we have beautiful bits of sculpturing with badly designed bases; we have interiors designed without any relation whatever to intended decoration. I think the note that I would take from both Prof. Shortt's lecture and the remarks of our own President to-day, is this: To endeavor as architects and as a professional body to lose ourselves in the endeavor to benefit the city, the country, architecture and art. How can we best accomplish this? Sir Joshua Reynolds was looked upon as a great planner, as a great worker, perhaps more than as a great aesthetic in his art, and he sums up the cause of all his greatness in his last lecture before the Institute in saying: "If we are determined to excel as individuals or collectively, men must go to their work whether willing or unwilling, morning, noon and night, and they will find it to be no play, but on the contrary, very hard labor." I know we have a problem ahead of us to benefit ourselves and others by this losing of ourselves, and it is not play, it is hard work. I have much pleasure, Mr. President, in moving a hearty vote of thanks

to Prof. Shortt for his lecture. Personally I feel that it has cut out much new ground, and I am only able to make a few remarks that will open discussion by people here who are more fully able to lead them than I. (Applause.)

The President: We shall be glad to hear not only from members of the Association, but from visitors who have come to hear Prof. Shortt. It is not really necessary to have a formal motion in order to express our thanks to Professor Shortt, but as we have one we must have a seconder. Will Mr. Price, of Philadelphia, second the motion?

Mr. Price: I do not like to take up any time, as I shall take up some later on, but I desire to say that I have been extremely impressed by Prof. Shortt's address, though it did not bring to me the same message that it brought to Mr. Symons. It seems to me that we have drifted towards the time when the development of the interest of the individual becomes the highest good for the individual and for the crowd as well; art itself will lose that microbe sting when we understand that it is our best means of individual development; that art does not mean, as Sir Joshua Reynolds said—I cannot quote the words—something to be looked at or something to give great pleasure essentially, but a means of expression; and by expression and through expression a means of creation, because if you come to analyze civilization—at least modern civilization—it will appear, I think, that the essential part is development by the individual and through the individual; and if you come to examine the means by which development comes you will find that there are very few; in fact, that they narrow down practically to one thing (as far as I have been able to analyze it), and that is to create new work. It seems to me the man who goes to college, or goes through any other course of preparation or study, gets development only, even there, as he takes those principles and remakes them for himself, as he becomes a constructive thinker; and my plea is for the greatest possible expression of self in our work, not only the expression of self in our work, but the expression of our co-laborers in architecture; because we are not the whole thing in architecture by any means. If architecture existed only on paper then we should be it; but architecture does not exist, as architecture, on paper, but in the concrete; and only as we can push along our own development—that does not mean a development that fights with everyone else's development, because if it is really the best sort it is an aid to everyone else's development and I would push our own development to its extreme—then we should become the best social architects and do the best social architectural work. And only as we help our co-laborers in the work of architecture to express themselves in their work can we hope to have the best results in architecture. (Applause.)

The President: The thing that struck me particularly in Professor Shortt's address is this unsolvable problem—how is it that the untutored savage is capable of creating art and the untutored hayseed is not? They seem to be in the same position. Architectural art after all is but the simplest expression of the pure emotion which the creator feels in what he is doing; if it is a house that he wants to create, his creation has the domestic feeling; if it is a fortress, he emphasizes (for

very good reasons) the strength of the fortress; if he is an Egyptian and wants to create a temple, it naturally takes the form of the emotions which he feels in his religion, and a long interior, more and more thickly columned, ends at last in the mysterious chamber where resides his god; if he is a Greek his religion requires but a little statue chamber, and he decorates the exterior of the building for his own aesthetic gratification. When he becomes a Christian architect, we find his plan and the whole expression of the building (as exemplified by the Gothic cathedral) expresses exaltation—the uplifting of the Christian mind. Architecture, then, is merely the expression of an emotion which a man feels when he desires the building which he proceeds to erect or the work which he proceeds to make. How is it that the man is not nowadays able to feel these emotions truly? To me it is a problem without solution. Perhaps Professor Shortt can give one. But there is this that seems to come out of it: that the modern architect cannot do too much to cultivate his mind. It seems to be the cultivated mind only which is able to express the emotion which results in a work of art. We have lost the simple feeling; we are not in touch with nature as men used to be and we can only get back to it. I fancy, by further development, not merely by education—at least not merely by information; it is of no avail for a man to have architectural draughtsmanship at his fingers' ends if he has not a mind that can use it to good purpose. The question is one of capacity for ideas: he has got to be in a position to feel what architecture indicates. He can only do that by not so much informing his mind as by cultivating it; he has got to have the capacity for feeling the right emotion, and this seems to be only possible to a man of truly cultured mind. The direct lesson which I think we may have from it is that we need not be at all afraid of cultivating our minds, for the more we do so the better we are able to appreciate the simplest problem that is set before us. (Applause.) I have great pleasure in presenting to Prof. Shortt the thanks of the Association.

Prof. Shortt: In acknowledging the vote of thanks, it seems to me that there is after all an essential harmony in what has been said. That while this is certainly an age in which the social development is to be expressed in the individual, we have to work out our social aspirations through the cultivation and development of the individual; and it is certainly, as Mr. Price said, by the creative factor. He struck a very true note there, to my mind; it is only creation that is great. Imitation is only a preparation for creation; it is only a cultivation of ourselves; creation is the great thing, and the man who is educated—at college or anywhere—and does not get to the creative stage, is a failure no matter how beautifully he can imitate this, that or the other. And with reference to the point dropped by the President. Why is it that the hayseed has not got that which the primitive savage has? It seems to me that it is explained by much of the tendency of our life, of this utilitarian spirit, to get us out of touch with the natural conditions. There is no reason in the world surely why the log houses of Canada should not have been as artistic as the log houses of Switzerland, or of Russia, or of many other countries that represent a race not nearly so well

developed as the people who built those log houses in Canada. It is simply due to the fact that a great many of them had lost the appreciation for the occasion; they thought that in having to build their houses of logs they had something that was utterly impossible of decoration or art expression of any kind; hence the ordinary log cabin house of Canada gives no creative expression. It is a mere box to cover the person from the weather; whereas this very material in dozens of other countries gets a perfectly beautiful expression; and in simpler and humbler form, many of them, than our log houses. It is that feature that the President indicated, which we have to work against; and to get ourselves back to the point of view of a large realization of where we stand and how we are to express it. Thank you, gentlemen. (Applause.)

Mr. Price: I should like to offer one other explanation of why the farmer's house is different from the savage's house, and that is, the savage builds his own house and the farmer does not. The farmer hires one of us to do it for him; and, while it might express him, it does not. I think the proof of this is found in the fact that the farmer's outbuildings and his barns are generally better than his house; they are at least picturesque; and what is more, they are built appropriately, which his house is not. You will find the only real timbering work we do is done in our barns, and our farmers do it for us. It seems to me we might even yet go to the farmer.

THE IONIC VOLUTE.

Discussing this question at a meeting of the R. I. B. A., Dr. F. C. Penrose said the origin of the volute had been sought for in Assyria, Egypt, and elsewhere. He derived it from Greece itself, as the scheme he would explain enabled the exact figure of any true Greek example to be reproduced. In archaic Greek work, and particularly in the decorations of the Mycenaean period, one constantly found the form of scroll in which every convolution of the spiral followed the first at equal intervals. This decorative scroll had no doubt been formed mechanically, as could easily be done by unwinding a string from a cylinder, forming a figure known as the involute of the circle. The question presented itself, How could a spiral having the character of the ammonite be produced? If the operator drew upon wood—or some other suitable material—the involute scroll, such as he had been accustomed to, and by shallow carving or otherwise raised the edges a little so as to form a helix and allow a string to be wound around those edges, and then unwound over a flat surface having a marker at the extremity of the string, he would produce the expanding spiral he was in search of. It did not give correctly the figure of the ammonite, but it had all the requisites of proportional expansion and perfect variation of curvature at every point, and coincided perfectly with Greek volutes.

The author gave two examples from Ephesus—the first from the archaic temple of Diana. In all later examples known to the author the two central convolutions of the spiral, or nearly so, were interrupted and concealed by the circle which formed the eye of the volute. In this case, however, the curve which would be evolved from the helix was allowed to extend from the central origin of the volute up to its junction with the abacus. By drawing a straight line through the central origin to the circumference on both sides, a calculation could be made to find a helix on the involute principle and this, when worked out, would be found to agree not only with given points on the circumference, but to correspond with the inner convolu-

tions also and could therefore be extended to the whole of the volute. This correspondence clearly showed that the method of the involute spiral was that which was used by the architect employed by Cræsus. The volute of the later temple at Ephesus, the second example, had almost the same curvature, the only difference being in the surface moulding and the circular eye which occupied its centre. In the majority of the examples known to the author the eye of the volute was a separate piece from the main mass of the capital, and was formed by some kind of boss of marble or metal inserted into a circular hole prepared for it, centred very nearly on the place of the pivot of the helix, and always of sufficient diameter to receive it. Such an arrangement would have had obvious convenience for fixing the helix.

The volutes in all the examples in Asia Minor were probably described by means of helices similar to that mentioned above. But the Athenians demanded greater variety than that spiral so used could supply, and gave to their volutes additional expansion in the exterior convolution; still, however, working so by means of the involute form, but differently treated. This applies to the Propylæa, to the three orders of different size in the Erechtheum and to the temple of Nike. It was also used in the temple on the Hyssus, recorded by Stuart; and in the provincial temple at Bassæ. With the exception of this variation in the exterior convolution in Athenian structures, the same general scheme seems to have been employed in all true Greek examples, and the only liberty of choice given to the designers lay in the proportioning of the width of the volute to the upper diameter of the column and in that of the interval between the convolutions of the generating helix, in the size of the eye compared with that of the volute.—Architects' Magazine.

SOME SUGGESTIONS FOR YOUNG ARCHITECTS

Under this title Mr. A. A. Symon, President of the Dundee Institute of Architecture, Science and Art, in a recent inaugural address said that most lads who entered the profession did not do so for the purpose of making money. If anyone was foolish enough to harbor ideas of that sort he would not be very long in being disillusioned. Entry into an architect's office involved much hard work, but the prospect was not such as should discourage any young man. An apprentice's first duty was to keep his eyes open. He should be ever on the alert, and ready to improve his time, for deficient powers of observation always resulted in failure. They should never be afraid of displaying their ignorance. They were all learning, and it seemed to him so many things went to make up an architect's education that it would be impossible to acquire them all in a lifetime. He deprecated the present-day system of young men making football and recreation the business of existence. He advocated at this stage of an architect's career the closest attention to study, and counselled the younger members of the profession to avail themselves fully of the classes at their disposal. On completion of his apprenticeship an architect should seek employment in some other large centre, and there watch the methods of other people. When he suggested this course, however, he did not mean that they should remain away. There were as good opportunities at home as in other large centres. He advised every member to gain some practical knowledge of materials, as such would prove of great value in his professional life.

The London Lancet tells of a peculiar "disease" that has attacked the glass in the windows in York Cathedral. The glass has become finely perforated and have lost their transparency. In fact they seem to have lost all the properties usually associated with glass. The Lancet also discusses the power of water and articles of food to dissolve glass and the prospects of consequent diseases.

INTERNATIONAL FIRE PREVENTION CONGRESS.

This Congress, convened by the British Fire Prevention Committee, is to be held in London, July 7th to 18th next.

The Congress will sit in General Congress and also in Sectional Congress. There will be six sections as follows:—I. Building Construction and Equipment; II. Electrical Safeguards and Protection from Lightning; III. Legislation and Administration; IV. Fire Survey and Fire Brigade Patrols; V. Insurance and Fire Losses; VI. Standards and Tests for Materials.

The primary objects of the Congress, among others are as follows:—

I. To discuss the practice of building construction and the application of building materials from a fire preventative point of view; to compare the practice in different countries, and to inquire into the latest materials and systems of construction available, as also the latest inventions for the general equipment of buildings.

II. To discuss the equipment of buildings particularly in relation to the application of electric power and electric light, and to receive the views of electrical engineers and fire brigade officers as to the origin and prevention of electrical fires, including fires caused by lightning.

III. To discuss the legislative enactments in force in cities and districts, particularly in respect to the limitations of area or cubical contents for warehouse buildings and workshops, and the means of separating and uniting such buildings, also the means of escape in case of fire; further, to consider particularly the regulations governing the construction and control of theatres and places of public resort, and the provision of staircases and means of escape for the audience and employees; as also the regulations governing the construction of dwelling-houses and houses let in tenements, and the amount of fire-resistance to be provided and the means of escape in case of fire.

IV. To discuss the best means of watching or inspecting buildings and plant exposed to fire risks without due inconveni-

ence to owners and occupiers, the practice of fire brigades in this direction, and the experience of the various fire patrol systems.

V. To discuss the practice of insurance against fire; to ascertain the systems adopted in various countries; the risks insured against; the regulations and requirements of the national, municipal, public and private insurance corporations, and to inquire into the systems of mutual insurance, the precautions taken against incendiarism, the statistical record of fire losses, and the preparation of uniform fire maps and plans.

VI. To discuss the best means of recording the causes and effect of fires, and tabulating the results, so that a basis for comparison may be obtained and standards compiled for various degrees of fire resistance required in different buildings and suited for various materials; to discuss the best methods of testing materials and recording the facts of such tests for the information of those engaged in the construction, use and protection of buildings from fire.

The Parkin & Somerville, Elevator Co., whose announcement appears on front cover of this number have recently commenced the manufacture at Hamilton, Ont., of elevators for all purposes, and have successfully carried out a number of contracts in this line.

Mr. Edmund M. Wheelwright, the well-known architect of Boston, recently delivered an interesting lecture illustrated by lantern slides in the Art Gallery, Montreal, on "Bridges." The lecturer traced the history of bridge construction from the time of the Romans, and pleaded that greater attention should be paid here as in Europe to artistic effect in bridges.

The richly decorated west front of the cathedral at Exeter, England, is to be remodeled in the interests of safety, the seven centuries old wall having shown signs of collapse. As much of the statuary as possible will be retained in the remodeled wall, and the remainder will be carefully copied and restored. The famous cathedral was begun in 1280 and completed in 1371, the west front being finished last.

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ADVERTISEMENTS.

Prices for advertisements sent promptly on application. Orders for advertisements should reach the office of publication not later than the 12th, and changes of advertisements not later than the 5th day of the month.

EDITOR'S ANNOUNCEMENTS.

Contributions of value to the persons in whose interest this journal is published are cordially invited. Subscribers are also requested to forward newspaper clippings or written items of interest from their respective localities.

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BUSINESS NOTE.

The Frink system of reflectors is the best for lighting pictures in galleries and private houses and is coming more and more into use. The Frink Company have recently completed the installation of their reflectors in the American Art Galleries New York, also in the new galleries of the Drexel Institute in Philadelphia and have just finished putting them in the delivery room of the Boston Library for the purpose of lighting Mr. Abbey's "Holy Grail" decorations.

THE DECORATION OF CEILINGS.

An authority upon the subject of interior decoration has expressed the opinion that if only one part of a room be decorated, that part should be the ceiling. He says:—"Nothing appears to me more strange than that our ceilings, which can be properly seen, are often white, while the walls, which are always in part hidden, and even the floor on which we tread, should have color and pattern applied to them; and of this I am certain, that, considered from a decorative point of view, our ordinary treatment is wrong."

A ceiling may be an object of great beauty, and it can be seen as a whole, therefore in many public buildings the decoration of the ceiling might be very advantageous.

If a ceiling be quite flat and without raised mouldings or ornaments, all decorations placed upon it must be flat also, and must not represent fictitious relief, for no shaded ornament can be satisfactory when placed as the decoration of a flat architectural surface.

Many circumstances tend to determine the nature of the decoration to be applied to a ceiling; thus, if a ceiling be structurally divided into square panels, the character of the ornament is thereby restricted, and should these panels be large it would probably be desirable that each be filled with similar ornamentation; while if they are small, three or four different patterns may be employed, if arranged in some orderly or regular manner.

On the Continent, and to some extent in this country, ceilings have been painted with large pictures, covering the whole or a portion of the surface; but this is quite a wrong method, for a picture of such a kind could only be seen the right way up, from one point in the room; from all others it would be viewed upside down, or from one side or corner.

But apart from this, a ceiling being flat surface, all decoration upon it should be flat also. In many of the French ceilings the picture is painted in such a position as to be seen properly only by a person standing with his back to the fire.

The Egyptians decorated their ceilings, so did the Greeks, the Byzantines, the Moors, and the peoples of the Middle Ages, and the ceilings were by no means always of a light colour. It is remarkable that so few of our public buildings contain rooms with well decorated ceilings, but there have been more executed during the last few years, and there appears to be a tendency for their adoption in connection with modern buildings.

Architects and building owners should be interested in the announcement on page i of this issue of the Smith-Warren Co., of New York. The company manufacture the "Smith" system of metal window frames and sashes for holding wired glass. These windows have proved to be an efficient protection against fire and are accepted by the Underwriters in lieu of fire shutters. All moveable sashes, whether sliding or swinging close auto-

matically at 155 degrees of heat. The sliding sashes are also made for cleaning from inside of building. As a means of reducing the fire risk and thereby lowering cost of insurance these windows are worthy of consideration and trial.



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PERSONAL.

Mr. J. Greenfield, architect, has removed his offices to Room No. 24, Canada Block, Winnipeg.

Mr. Thos. Kennedy, after an absence of three years in the Northwest, has returned to Barrie, Ont., and resumed his architectural practice.

Mr. A. W. Peene, architect, has recently filled the position of superintendent of the Hamilton Art School, pending the appointment of a permanent superintendent.

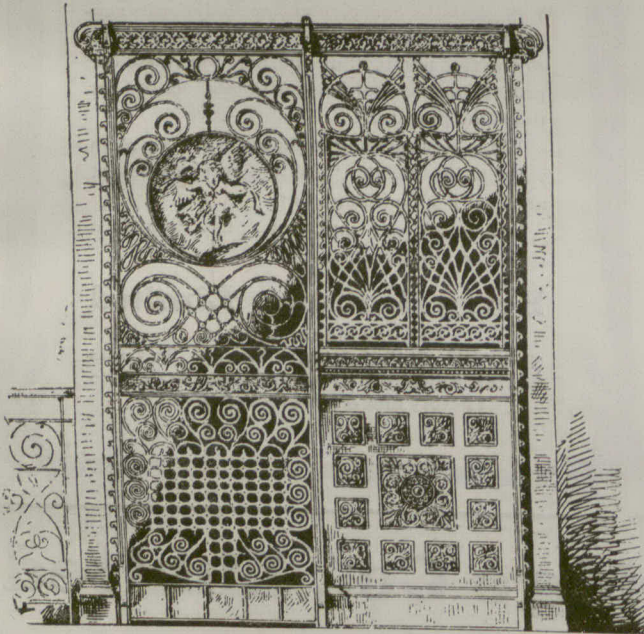
Mr. Ebenezer North, a prominent contractor, and one of the oldest residents of London, Ont., died unexpectedly of heart disease in that city on the 14th inst. The deceased was born in Lincolnshire, Eng., seventy years ago.

Mr. A. J. Cooke, architect, of Montreal, died at his residence at St. Lambert, on Feb. 23rd, from hemorrhage of the lungs. Mr. Cooke was a Londoner by birth and was apprenticed there by Mr. Andrew T. Taylor, F.R.I.B.A., coming out to that gentlemen's Montreal office in 1883. For some six years he was with Mr. McLea Walbank and then started in practice for himself. He was well-known, especially in Westmount, where he built upwards of one hundred houses.

An artistically printed booklet referring to the manufacture and uses of Portland cement has been published by the Canadian Portland Cement Co., Limited. It contains numerous illustrations of works in which the company's material was employed.

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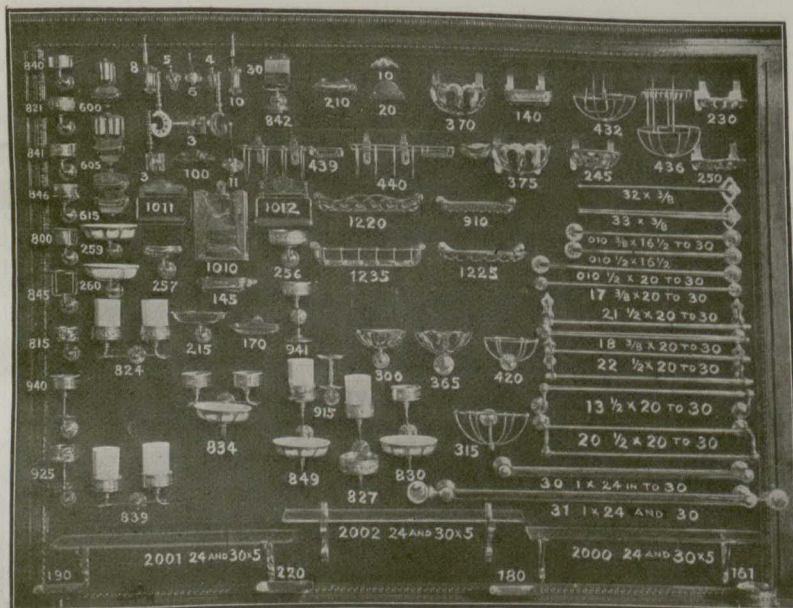


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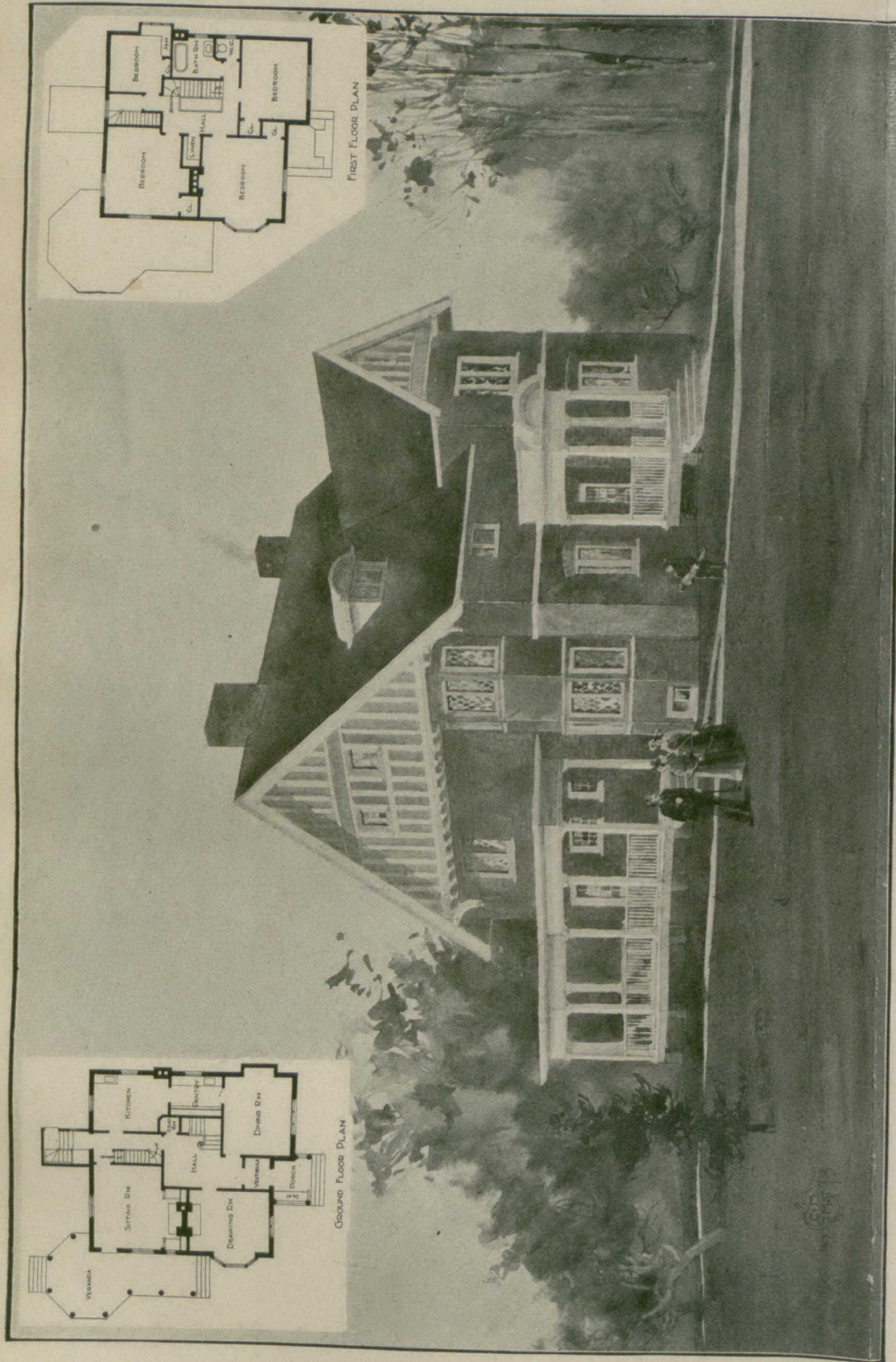
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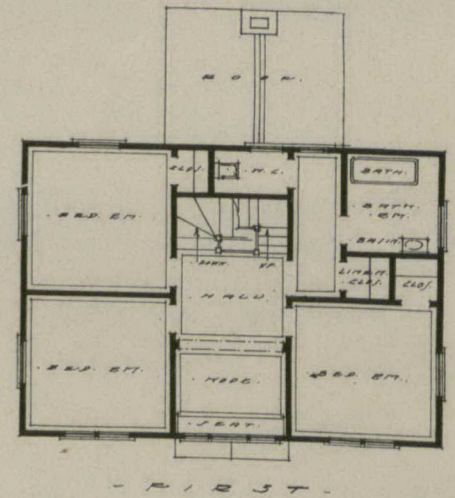
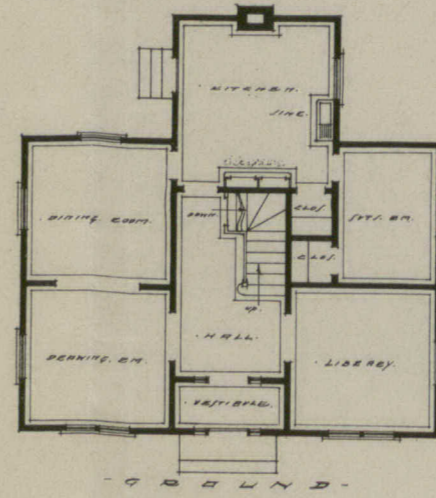
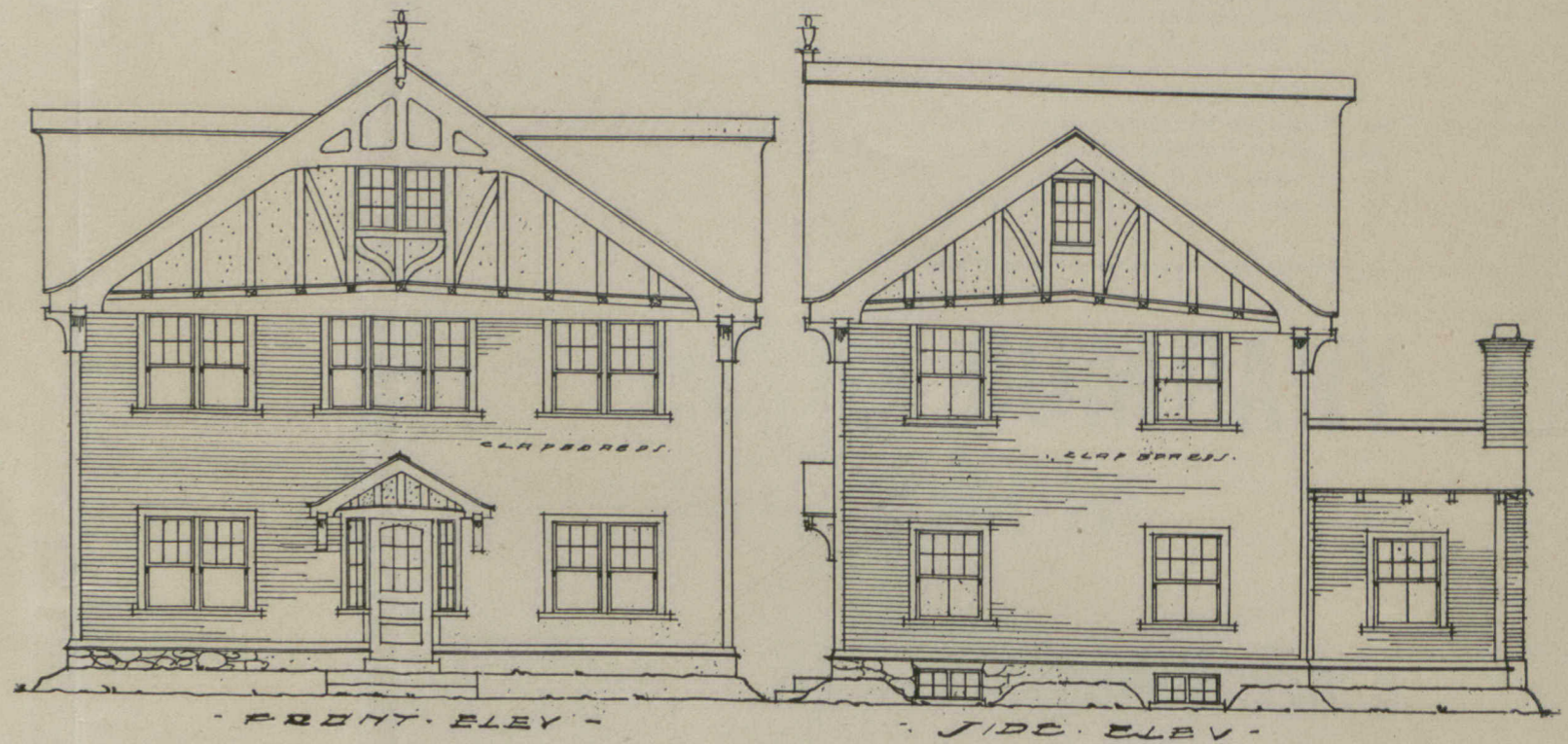
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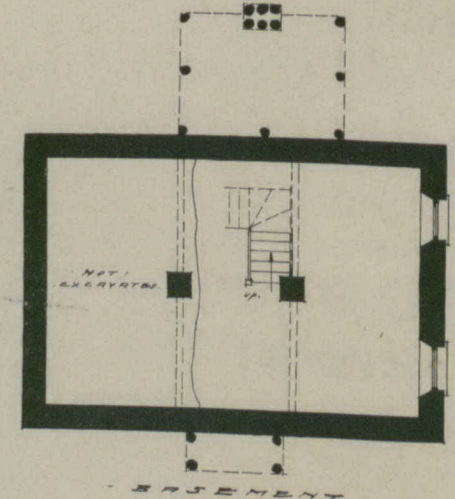
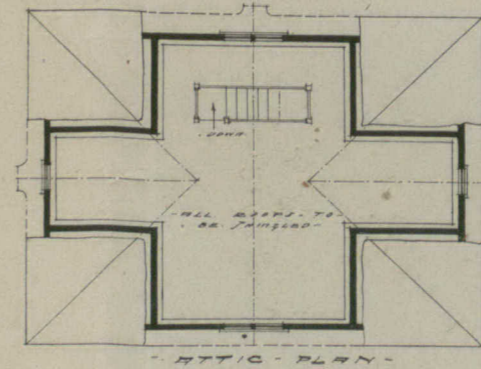


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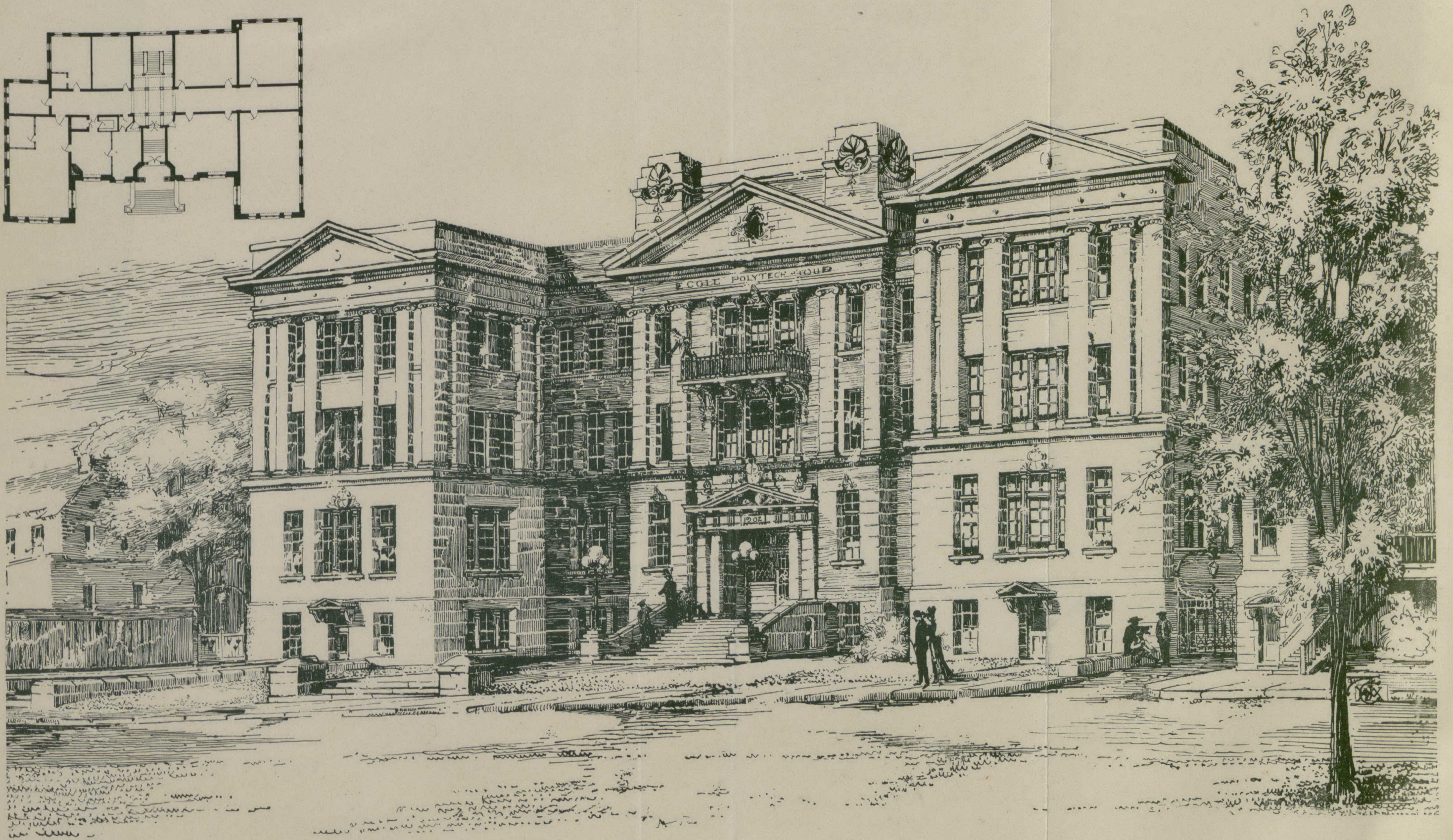
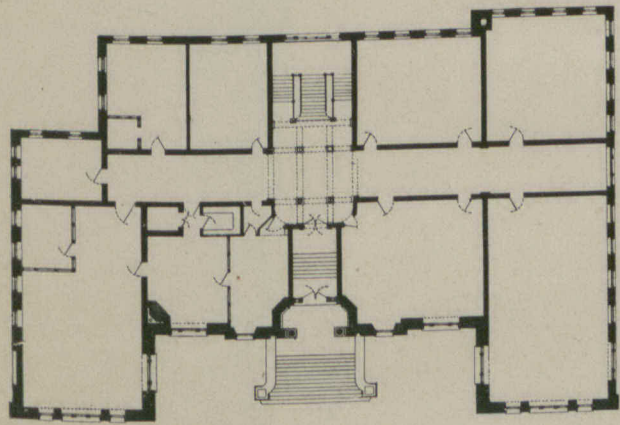


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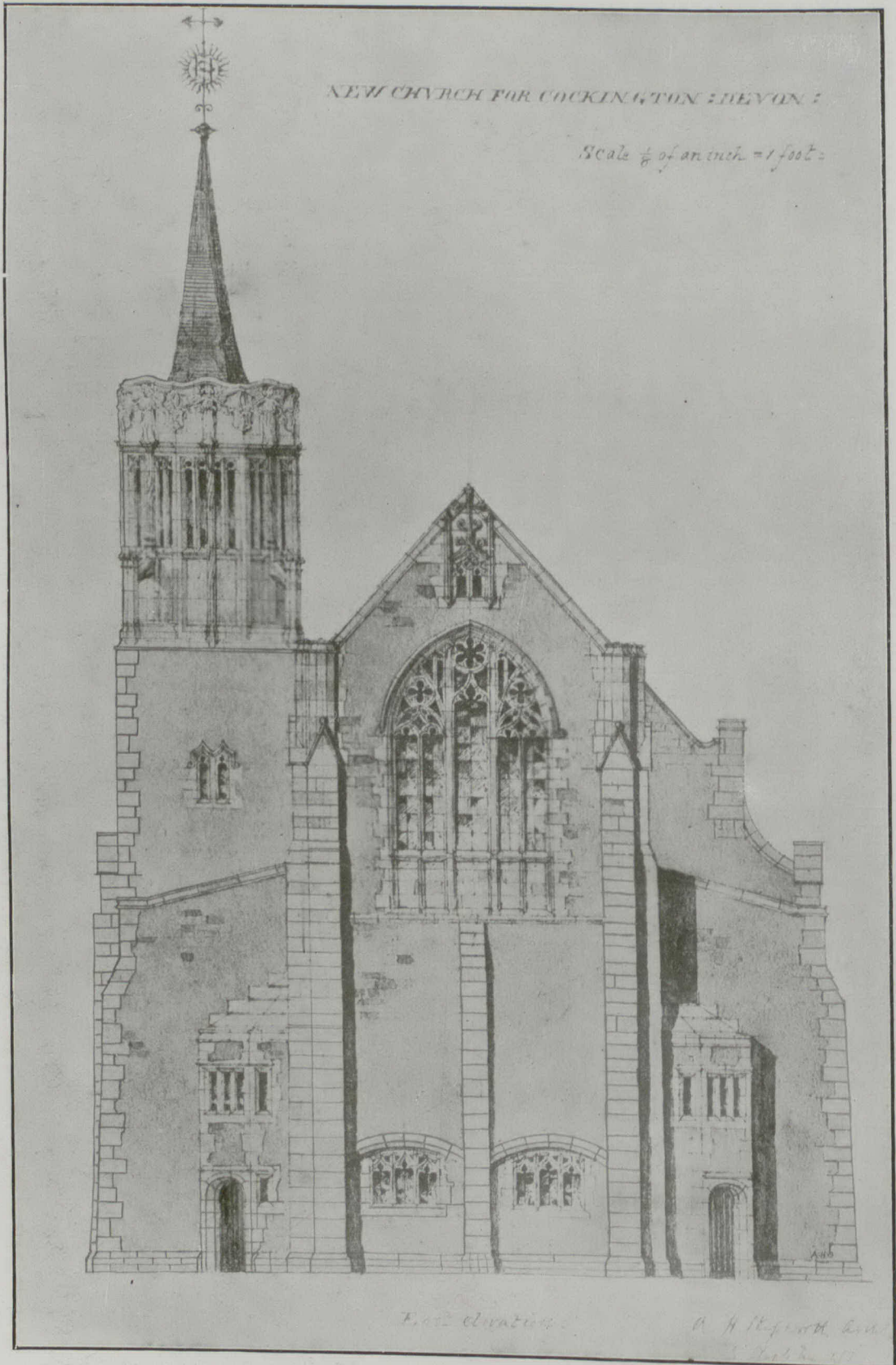
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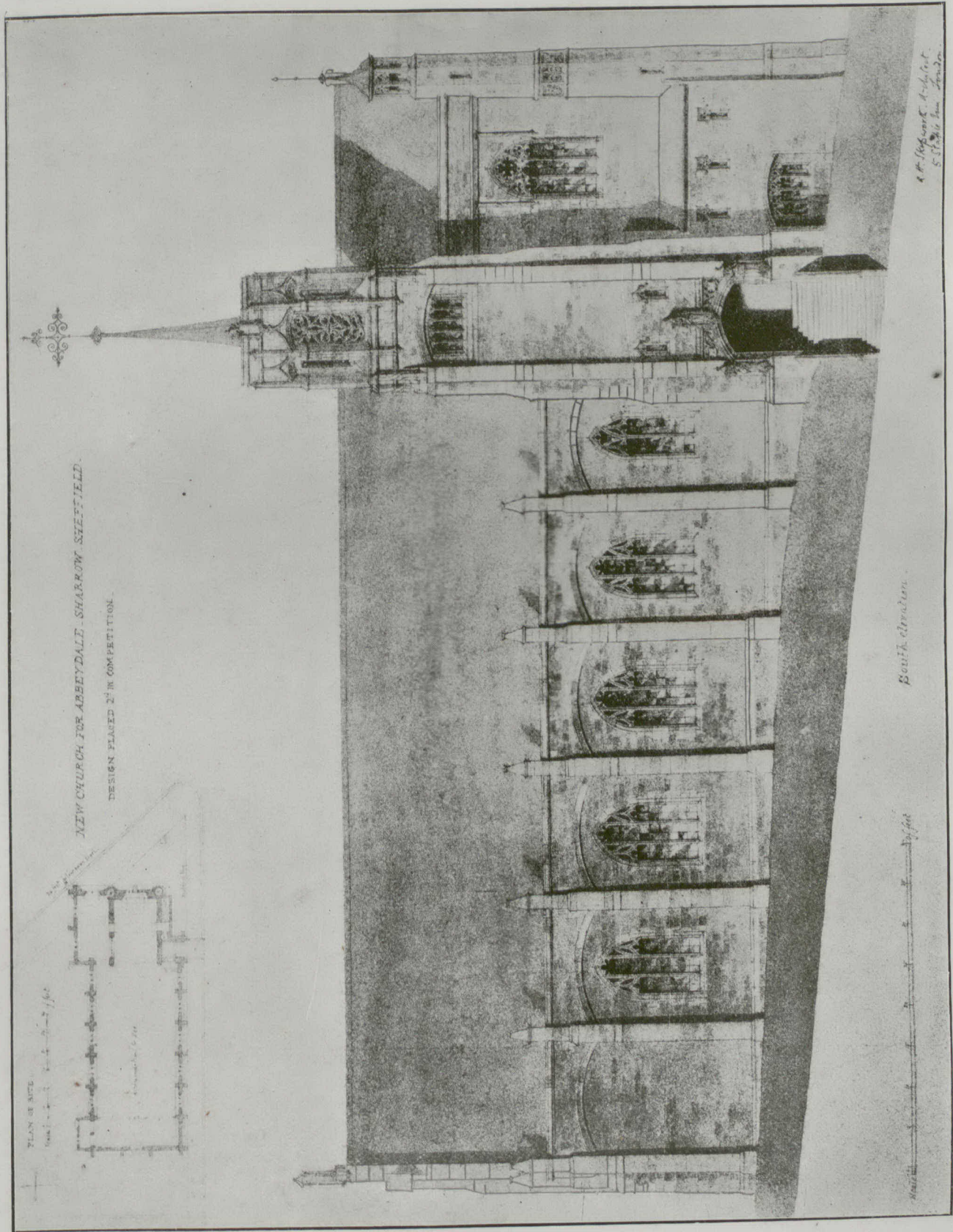
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A. H. SKIPWORTH, ARCHITECT

LEGAL.

On December 19th last, a British jury without leaving the box, decided that the Taff Vale Railway Company were entitled to damages against the Amalgamated Society of Railway Servants for losses sustained by reason of the action of members of the society in connection with the strike of the company's employees in 1900. This decision makes trade organizations legally responsible for damages arising out of the conduct of their members. The next step should be to compel the incorporation of such organizations so that their funds would be liable for payment of damages for which they might be held by the courts to be justly liable.

NOTES.

The Brickmakers' Association of Hamilton have announced that the price of new bricks will be \$7 per thousand, or \$2 below the price of last year's stock.

A new and useful clause in the recently revised building regulations of Paris, provides that any shutter, blind or sunshade placed not more than 10 feet above the pavement must either be within the body of the wall or must not open outward. There are also minute regulations concerning verandahs, awnings, sun-blinds, outside lamps, cornices and signs.

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NOTES.

The Toronto Master Plumbers' Association held a banquet at McConkey's restaurant on the evening of the 20th inst. Mr. Fred Armstrong, chairman, aided by a strong committee had the matter in hand.

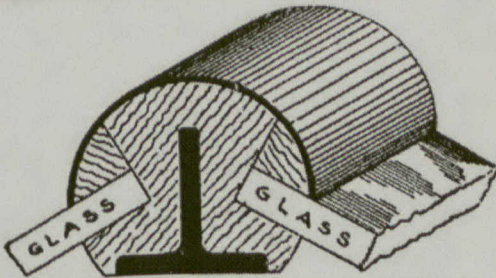
The plumbing by-law of Ottawa is undergoing revision at the hands of representatives of the City Council, the Master and Journeymen Plumbers' Associations, W. C. Edey, architect, and S. J. Davis, builder.

Mr. Wm. Most, Eccles Hall, Staffordshire, Eng., has recently given to the Church of St. James the Apostle in Montreal a pulpit of Caen Stone, artistic in design, as a memorial of the donor's grandfather, the late William Workman, ex-Mayor.

Capt. Maunsell, assistant engineer and architect of the Militia Department, at Ottawa, is at present on a tour of inspection of armories in leading cities in the United States, with a view of

determining the most serviceable description of building and arrangement for armories in this country.

A novel idea in building has been carried out by Messrs. Carrere and Hastings, the architects of the new building now being erected on the site of the disused reservoir in Bryant Park for the New York Public Library. This is the erection of a portion of the main front in plaster, in the full size of the original. While architects are accustomed to execute the most elaborate work from drawings, and models are employed for sculptural and ornamental details, it is seldom that so large and costly a model is made as in this case, where an entire bay, with windows, inclosing columns and roof balustrade, has been built up in full size on a portion of the actual site. The model is supported in position by the scaffolding for the actual building and the framework of the derricks from which the masonry and bricks will be lifted into position.



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NOTES.

The annual meeting of the Toronto Guild of Civic Art was held in Toronto last month, when the following officers were elected: President, Col. Fellatt; Vice-Presidents, Prof. James Mavor and R. V. Ellis; Treasurer, James Bain, jun.; Secretary, A. H. Campbell, jun.

The question is being seriously discussed in Athens of recon-

structing the ancient Temple of Erechtheus, in Athens. The "Asty" states that most of the broken fragments of the entablature lie littered about the ground, together with great slabs of marble, which, if replaced in position, would again give visitors some idea of the beauty of the temple as it originally stood. The Archaeological Society of Athens has voted 20,000 drachmas for the work.

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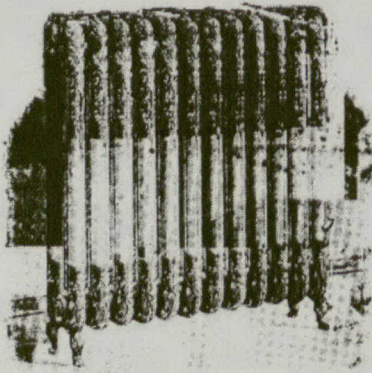
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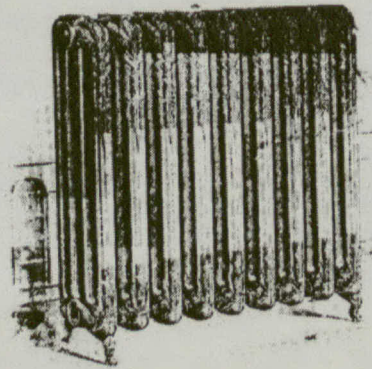
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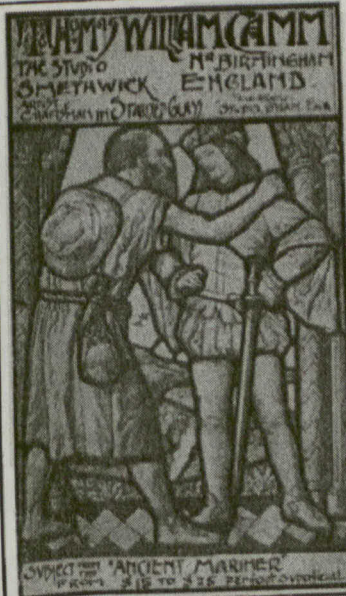
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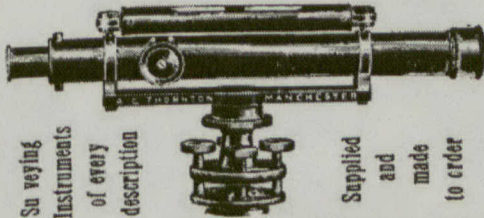
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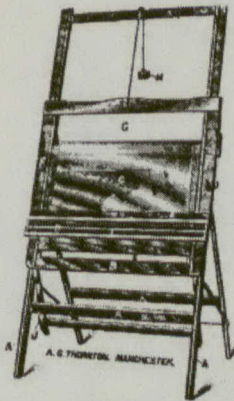
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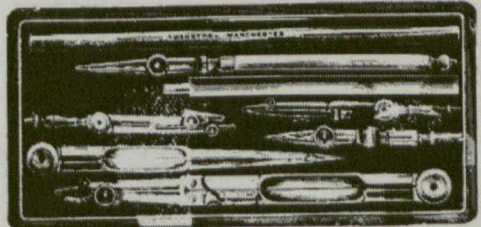
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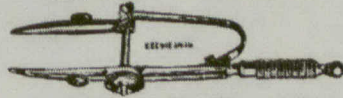
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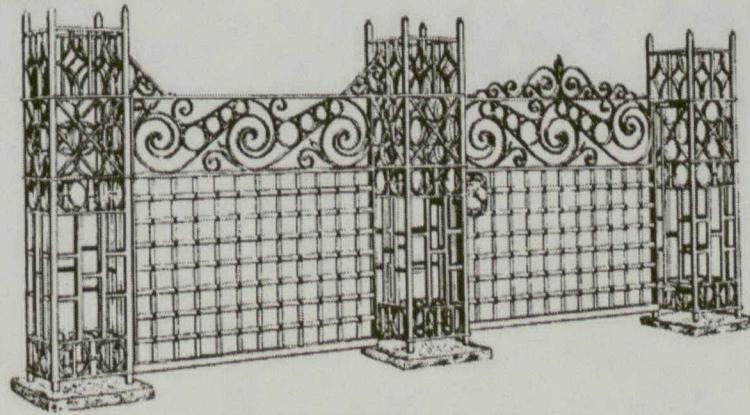
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