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TO ADVERTISERS.

For the benefit of Advertisers, a copy of this journal is mailed each week to persons mentioned in the CONTRACT RECORD reports as intending to build, with a request to consult our advertisement pages and write advertisers for material, machinery, etc.

To Mr. Frank Darling, the retiring president of the O. A. A., is due the credit of having delivered at the opening of the recent annual convention, a highly practical address. It may safely be said that to the majority of the members of the Association, who recognize in Mr. Darling the possessor of high artistic attainments, the intensely practical character of his remarks came as a complete surprise. There was no disappointment on this score, however, as every one felt that the address was full of valuable suggestion and sound logic, befitting the occasion. Mr. Darling largely devoted his remarks to showing the reasonableness of the amendments which the Association are seeking to have made to the Ontario Architects' Act. He undoubtedly presents a strong case, and one which clearly has justice as its foundation. We desire to emphasize two or three points which the members of the Legislature and others interested should keep clearly in mind. 1st. The desired amendments to the Architects' Act would not prevent any person from preparing plans for and carrying out the construction of buildings as at present. The only restriction would be in the use of the title "Architect." No unqualified person would be permitted to call himself an "Architect," although he might, under a different title, perform the work of an architect. This restriction is desired in order that those who invest their capital in new buildings may know who are qualified to design and erect the same in a manner that will not involve risk of financial loss to the owner and injury to health or loss of life to the occupants. It is compulsory on the surveyor who lays out the site of a new building that he shall give proof of his qualifications; how much greater the necessity for such proof in the case of the man into whose hands are entrusted capital, health, and even life itself? 2nd. As every person at present practising architecture in Canada would be given three months in which to register under the Act, without being required to give proof of qualification, no injury or injustice could result to them. 3rd. Those who are seeking to have the Act amended have nothing in view beyond a desire to safeguard the public interest, and elevate the standard of architectural practice in this country. As the benefits of the legislation would not be felt to any extent for twenty-five or thirty years, it is clear that the practising architects of the present day can expect to derive no personal advantage therefrom. 4th. The School of Architecture established by the government in connection with the School of Practical Science,

Toronto, in recognition of the need for the more thorough education of architectural students, must fail of its object, unless it is made compulsory that students shall pass qualifying examinations. In view of these and other equally good reasons which could be advanced, it is hoped that the amendments to the Ontario Architects' Act, which have been petitioned for, will be granted at the present session of the Legislature.

The O. A. A.
Convention.

THERE was less business than usual transacted at the Annual Convention of the Ontario Association of Architects, but the papers were rather more interesting than usual, and, what is more important than all, there was more evidence of fellowship among the members attending the meetings. In particular the portion of the programme devoted to criticism of each other's current work, exhibited by means of the stereopticon, was definite and instructive, and both given and received in a frank and friendly spirit. It is this spirit which is one of the best products of the Association as far as concerns the architects. Inventive workmen, such as artists and architects, require constant association and interchange of ideas to keep up the germinating warmth of thought that must be at the back of progress, without which Art is dead. Until the Association was formed the architects of Ontario, even in the cities, worked alone. It would be hard to return now to the old state of affairs; nor would it be easy to estimate how much architecture in Ontario will owe to the Association for this one gain only. Any comment upon the recent convention would be incomplete without a reference to the liberal assistance to the Association of all connected with the School of Practical Science, beginning with the Minister of Education. Mr. Ross has always shown himself to be a Minister of Education in the widest sense of the term, and the formal vote of thanks to him at the close of each convention is offered not only in return for his permission to use a room of the School for that convention, but is at the bottom an acknowledgement of his promotion or countenance of many ways in which the School has extended its assistance to architects as well as to students of architecture. Professor Galbraith, the principal of the School, not only watches over the association of his teaching staff with the practising body, but gives valuable time in acting as Chairman of the Board of Examiners of the Association, and organizing a scientific method of examination. Mr. Wright, the Lecturer in Architecture, is the familiar friend of the Association, and his unwearying energy and dauntless enthusiasm have done more for it than a mere enumeration of his services would express. The annual conventions in particular owe much not only to his assistance, but to his suggestions. A distinguishing feature of the conventions is the facility of illustration afforded by the electric light stereopticon of the School and the valuable collection of photographic slides of architectural subjects made by Mr. Wright and his assistant, Mr. Keele, for the use of the architectural department of the School. Some of the photographs were taken by Mr. Keele during a visit to England in the last vacation, and are valuable not only as excellent photographs but as having a subject matter chosen by an instructor in architecture. It seems to us not only a good thing for the Association to work thus in harmony with the School, but it must also be a good thing for the staff of the School. There

is danger to all professional work in its withdrawal from active life and dealing with theoretical matters only. The college professor too often becomes dry if not inactive in the course of time. To this tendency an association such as now exists between the instructors at the School of Practical Science and the practical part of the profession is a wholesome corrective.

BUILDERS' EXCHANGE.

THE annual meeting of the Toronto Builders' Exchange was held on Monday, Jan. 20th, at their rooms, No. 8 Victoria street. The following members were present: Messrs. Oakley & Holmes, James Crang, Wm. Booth, John Vick, D. Williams, J. Bedford, H. Lucas, T. Cannon & Son, John C. Goddard, William Christie, John Connolly, A. Burnett, Wm. Pears, Jas. Pears, Wickett Bros., Wm. Tasker, John Maloney, Henry & Bottomley, J. J. Blain, Thos. Murray, James Isaac, Thomson Bros., Wm. McGuire, Geo. Wright, J. Knox, John Aldridge, John M. Gander, R. Chalkley, Wm. Stewart, Wm. Harris.

The election of officers for 1896 resulted as follows: President, John Aldridge; first vice-president, T. Cannon, jr.; second vice-president, John Vick; treasurer, David Williams.

The following directors were elected: William Booth, John Wickett, James Crang, John M. Gander, George Henry. The auditors are Messrs. Fred Holmes and George Clay.

The reports of the directors and auditors were presented and adopted, and votes of thanks tendered to the retiring officers. It was resolved to hold the usual annual excursion next summer, a committee being appointed to make the necessary arrangements.

LEGAL.

A CASE of interest to architects came before Judge Morson at Toronto recently, in which Mr. Hynes sued the Roman Catholic Separate School Board for \$60,000, commission for plans furnished for a school building on Earl street. It appears Mr. Hynes was employed to draw plans for a four-roomed building, and that he submitted them when ready to the Sites and Buildings Committee, but that they were dissatisfied. He explained that he could do no better, as the appropriation was limited to \$4,500. He understood that he was then authorized to make sketches for a more expensive building, and he accordingly did so for one to cost \$6,000, which were submitted to the Archbishop for his approval, and he asked 1 per cent., the regular commission on this amount. After hearing the evidence Judge Morson held that the Building Committee had not authorized the second plans, and as Mr. Hynes had been paid \$112.50 for the first plans, judgment was given in favor of the Board.

BRITISH COLUMBIA PARLIAMENT BUILDINGS.

THE exterior stone work of the main portion of the new parliament buildings at Victoria, B. C., has been completed, the last stone having been laid with great eclat a few weeks ago. The contractors, Messrs. McGregor and Jeeves, invited the members of the government and some others to be present. The Union Jack was hoisted and congratulatory speeches made. Both the architect and contractors are commended for the energy displayed and the character of the work. The last stone was laid on the dome, which towers eleven feet. Above it will be a copper covering fifty two feet high.

Among the new industries which appear to have come very rapidly to the front is The Mica Boiler Covering Co. They have recently completed covering all the steam pipes in the Simpson Departmental Store, Toronto, and have also in hand large contracts for the Ontario Government. Last week they were awarded the contract for steam pipe covering for the Halifax Street Ry. Co., besides obtaining considerable orders in Montreal, and in consequence are compelled to run a night shift to keep pace with their orders.

ONTARIO ASSOCIATION OF ARCHITECTS.

PROCEEDINGS OF THE FIFTH ANNUAL CONVENTION.

The Fifth Annual Convention of the Ontario Association of Architects, was held in the School of Practical Science, Toronto, on January 14th and 15th.

The President, Mr. Darling, having called the Convention to order at 2 p.m., the Registrar read the minutes of the last Annual Meeting, which on motion duly seconded, were confirmed and signed by the President.

PRESIDENT'S ADDRESS.

The President then read his annual address, as follows:—

It is with pleasure, gentlemen, I welcome you to the fifth annual convention of the Ontario Association of Architects. The past year has not been greatly fraught with matters either of great importance or of much interest to the welfare of this Association.

We have had a quiet year, and I cannot, I am afraid, bring before you anything either very fresh or very novel, as it is my intention to deal almost entirely with the question of legislation.

We are, as yet, but a young institution, struggling for recognition and a livelihood; the latter I feel assured of, if the former can be managed, and managed it must be, and can be, if only we will all do our duty—each of us and all of us.

We are nearer the goal of our hopes now, I firmly believe, than we have yet been, but the prize will not be won without a strong and desperate effort. It is the last spurt in any struggle which requires the greatest exertion and determination in order to achieve victory.

We have it in us to win if we but choose to put forth all our strength. It behooves us, therefore, to make up our minds with grim determination to struggle and fight to the last. There is no need to despair. It wants nothing but a steady, persistent and united effort, and the battle will be ours.

Talking it over, however, between ourselves, in our offices, when we happen to meet in the streets or elsewhere, or reading papers and making speeches in yearly conventions, will not bring about the results desired. I wish it would. It's easy. Talk is cheap and there is plenty of it, but unfortunately it is work that is wanted—not talk—steady, persistent work.

Whenever you can get hold of a member of the Legislature, see that do not neglect the opportunity, but seize the chance, and explain to him as clearly and definitely as you can what it is we are asking for, remove his apprehensions, which you will find are many, and do all in your power to make him understand the matter properly.

It has been found by those members of the Association who have done some work about the Legislative Buildings, in the way of interviewing members, that the greatest opposition to the Act arises either from ignorance, indifference, or from very serious misapprehension of our intentions. It was found, also, that in the great majority of cases, after our views had been clearly set forth and explained, that the opposition was removed or at any rate, very greatly lessened.

I am safe, I think, in saying that the work which has been done for the last few years in making the members of the Legislature familiar with our aims, seems to be gradually bringing about a favorable feeling on our behalf. Neither on the part of Reformers, Conservatives or Patrons do we meet with any definite opposition. Such as does exist is individual, and does not represent the united action of any party. It does not, indeed, appear to be regarded by anyone as being a party measure in any sense.

The Government refuse to introduce the Bill as a measure of their own, but that, we have reason to believe, is from motives of policy, and not because they have any objection to the Bill itself. Mr. Haycock, the leader of the Patron party, was most kind, showed much interest in the matter, and was extremely desirous of being thoroughly informed on the subject, and in the end expressed himself as having no objection to the Act as amended. Mr. Howland, also, gave us much valuable assistance, and very kindly took charge of the matter in the House.

After consultation with him, Mr. Haycock and others, the Council came to the conclusion that, in order to remove as far as possible any chances of defeat, and to bring the provisions of the Act into harmony with the expressed wishes of various members of the Legislature with whom the matter had been at different times discussed, it would be wiser that the fixing of the amounts of the various fees should be left to the decision of the Lieut.-Governor-in-Council, and not in the hands of the Council of the Association. It is presumed, of course, that suggestions as to the amounts of the various fees will be permitted to be made by the Council of the Association, the Government only interfering if, in their judgment, the amounts appear excessive. We need fear no difficulty, however, on this score, if we prove to the Government that the fees are such only as are necessary to allow the Council to properly carry on the work of the Association.

It is really difficult to see what objection can be urged against the Bill in the shape it now is.

Practically all we ask for is—that the Government shall take some steps to assist us in raising the standard of education which it will be necessary for persons to possess who in the future desire to assume the title of "Architect."

It has resolved itself into an educational matter pure and simple, and not, as it was at one time feared by some people, a

sort of scheme by which we could make the practice of Architecture what is called a "close profession."

The Act does not preclude anyone either now, or in the future, from carrying on, as at present, the whole business of an Architect. A man will be able to make plans and sell them, design houses and build them, or do anything else he wishes in the way of ordinary architectural practice. He may charge for his services exactly as he does now, five per cent., or less, or more as he himself may deem such services to be worth. He will have the same facilities for collecting these fees (in the courts if necessary) as he at present enjoys—the only difference being that he will not be able to take or use the title "Architect" in any way or shape whatever. He may call himself by any other name he chooses, and may designate his business by any title it may please him to invent, but from the use of the word "Architect" he will be debarred entirely. And this only because he so elects. There are no hindrances placed in his way should he desire to enroll himself in our ranks.

If on the one hand he decides that he will follow the practice of his profession calling himself a "Designer," "A Plan Maker," or anything else, other than an Architect, well and good, no man will say him nay. It is entirely his own business and we may suppose he knows his own business best.

If on the other hand he wishes to use the more honourable title, all he has to do (if he be practising at the time the Act goes into force) is to send in his name and register as a member of the Association.

The Act says, "Any person now practising the profession of Architecture within this province may become a member of the Association by causing his name to be registered with the Registrar of the Association within three months of the coming into force of this Act and by paying to the Registrar such fee as may be made payable in that behalf subject to the proviso hereinafter contained."

Certainly no one can say that any difficulties are created; no man's rights, interests, or privileges are interfered with. If a man does not choose to register it is his own lookout. He can still continue to carry on his business, he can still charge his usual fees, and he can still collect them, all just as usual, only he cannot call himself an "Architect."

No difficulty will however arise from this source for I am proud to say that our Association practically numbers among its members every person following the profession of Architecture in the province of Ontario; if there are any whose names do not appear upon the roll it is owing to inadvertence of some sort and not because of any hostility to the proposed measure.

I am glad to state that we have had no dissensions within our ranks. Almost to a man the whole profession is in favour of the Bill.

It must not be forgotten that the present benefits (should the Bill pass) will be small, so small indeed as to appear almost insignificant. It is to the future we must look if we wish to see the results we hope for. Don't let any of us run away with the idea that just as soon as this Act comes into force something wonderful is going to take place. Nothing will happen at all. Business will be neither better nor worse. We will have just as much bother and just as much worry as ever. Work will be no more plentiful than it is at present and it will be no easier to get. It will be just as difficult to collect our fees as it is now. The modest man who only charges three per cent. will not suddenly find that he is going to have five per cent. thrust upon him. Not at all. These things will always be; they are not to be remedied by the passing of Acts. We will have only the consciousness, and it will be a very pleasant consciousness, that at last we belong to a profession which has some real and proper standing of its own, and that it lies with us to see, that in the time to come when the public find a man calling himself an Architect, they may know that he belongs to an honorable and recognized profession, and that he has acquired the right to wear the title by education, by reading, by work, by application and study, and finally by successfully passing such examinations as will be at any rate, some guarantee to the world at large that he is properly qualified to practice, and is learned in the science of the profession he has undertaken to follow.

I say science designedly, for it is that side of the education of an Architect which these examinations will go furthest to foster, and which, moreover, is most necessary for the safe guarding of life and limb. I put little, if any stress on the artistic side. For the cultivation of that, by means of examinations I have personally no faith whatever. You will never make an artist of a man, who has not had born into him the divine gift of artistic and creative power, by putting him through examinations from now till the day of judgment, and no Acts of all the Parliaments and Legislatures in Christendom will give it to him. You can teach him, however, to put up buildings that will not fall down. You can teach him the science of construction, the property and strength of materials, their proper application and use, the principles and theory of sanitary science, of plumbing, heating, ventilation, and many other kindred matters, and you can so direct his reading and his study that when he is able finally to pass his examinations successfully and attains the right to assume the title of "Architect" and commence the practice of his profession the public may feel justified in considering that they will be safe in entrusting the expenditure of their money into his hands.

It is to this end it seems to me that these examinations should lead, that we should strive to turn out thoroughly educated well qualified practical men, learned in all that pertains to good safe scientific building construction in all its varied branches, for this is the point upon which the public want to be assured of most, and the one about which they are the least competent to judge. If we

can help them in this, the passage of the Act will be more than justified.

The whole benefit of the Act (if passed) will accrue both to the profession of Architecture, as well as to the general public, in the future (and by no means in the immediate future)—not in the present.

It is framed almost entirely in the interests of the young men who are just now entering, and who will continue to enter the ranks of the profession. It is to insist that they shall educate themselves thoroughly and properly for the work they shall eventually be called upon to carry out, and to induce them to take advantage of the various means of study which are so reasonably and liberally offered to them. They can enter the office of some member of the Association in the ordinary way, serving a certain number of years under indentures, or they may graduate from the School of Science (curtailing by so doing the period of office work) but all shall be required to offer themselves for examinations to be held from time to time and pass each and all of them successfully before being permitted to register and practice under the title of Architect.

The Government has only recently established a chair of Architecture at the School of Practical Science. The Association can help greatly in making this Department a success and I can say without a doubt that we are most anxious and most desirous of assisting it by every means in our power. As things are at present, however, it is easy to see that there is little to tempt the ordinary young man to spend the time and money necessary to take the course if, at the end of it, he will occupy in the eyes of the public no better position in the profession to which it leads than that of any other youth who may have passed a year or two wandering from one office to another, or a builder's foreman who aspires to dub himself a professional man, or an auctioneer, or an undertaker, or anybody else who chooses to stick up his shingle and call himself an Architect.

It is only the very exceptional student who will avail himself of the great advantages of the School, and as the supply of exceptional young men is limited in all walks of life, the number of students at the School (if things remain as they are) will necessarily be much curtailed.

The Government must surely wish to see the School succeed—else what on earth was the use of their spending the money wherewith to start it, but if young men are to be induced to enter it at all it must be clearly shewn that it is to their advantage, (and by advantage I do not mean merely the advantage which a man gains over his fellows by means of a more thorough education) but it must be shewn also that the profession which they intend entering (and to which the course they are taking at the School is merely a stepping stone) carries with it a title which will give them a definite standing in the community—that it is a profession which can only be entered by men who have devoted much care, time and attention to their education and to the acquiring of that special knowledge necessary to the satisfactory practice of their calling. I say most unhesitatingly that the Government will discover that these young men having taken the time, and having gone through the labour and exertion of preparing themselves for the necessary examinations, and having passed them successfully, will expect, and very properly, and very naturally, expect, that they will find themselves in a somewhat different position, in that profession, for the practise of which they have spent so much labour and time in preparing themselves, from that occupied by a man who may have given himself no further trouble than having a sign painted.

We follow the shorter road rather than the longer as a rule. The public does not concern itself greatly as to the manner of education previously followed by men who have hung out a sign in hopes of attracting business. Anyone or everyone can, at present, if he so choose, call himself an Architect, and there exists no means by which the public can know whether he derived the title by working through the School of Architecture or by working through a saw-mill—it's all one to them, until something happens, and then the whole profession suffers.

The thing is ridiculous and absurd, and neither the profession nor the School can possibly be the success they might be until things are altered.

We should like above all things to make the young men go through the course of education which is necessary, but we have no means of compelling them. A good deal is done by persuasion and by shewing them the advantages which they will undoubtedly reap in the future. The few who do take the advice and prepare and offer themselves for examination deserve great credit.

But unfortunately the number (at no time as large as it should have been) is growing smaller. They find it irksome and only the enthusiastic ones persevere; the rest become disheartened and drop off. "What is the good," they say, "So-and-So has been studying in an office for a year or two and now he has started up in business for himself, has got several things to do and calls himself a full-fledged Architect. What's the use of my slaving away for four or five years and working up a lot of examinations, when so far as the public can tell there's no difference between us."

It is foolish I admit, but it is not unnatural, and the consequence is that the country is being flooded with a lot of half-educated young men calling themselves Architects who can many of them make pretty drawings and sketches, but who can have never in all their lives done any real good honest hard work in reading up the perhaps somewhat dry, possibly uninteresting, but nevertheless absolutely necessary, practical and scientific side of the education of an Architect, (a side which cannot possibly be neglected without very great, and possibly very serious detriment, to the interests of their future clients.)

This Bill would in a large measure stop all this, as students

would have to work properly at the practical side of their professional education in order to successfully pass their examinations.

If they did not choose to do so, if they were too lazy, too idle, or too incompetent, why then they would drop out and follow some other walk in life. Or should they see fit notwithstanding their failure, still to pursue the practice of Architecture they would be at perfect liberty to do so, there would be nothing to stop them nor would the Act interfere with them in any way, that is so long as they did not presume to use the title "Architect." That honorable appellation would be reserved for such only as have prepared themselves for the responsibilities of the position by a steady course of honest conscientious study, and that is what after a lapse of fifteen or twenty years the title of Architect will come to mean in the eyes of the public, a distinction by which men can tell the difference between one who has been properly and scientifically educated for his calling in life and one who has picked up such knowledge as he may possess at hap-hazard. Surely, gentlemen, this is not asking much at the hands of any Government.

To us of this generation the passing of the Act can make little if indeed any difference, save that as the years go on the young men will come into the arena better equipped, better educated, and therefore more formidable rivals to the older men who had not in their day the advantages now at the hands of the younger ones.

It is the students of to-day and the public of the future who will reap the fruits of our labours. Certainly we who are moving in the matter can be held guiltless of self-seeking, for of any actual personal immediate advantages there are none. Of a truth it may be said that we are sowing where we shall not reap.

All this I am afraid you will say is going over old and familiar ground, and I feel tempted to apologize for taking up so much of your time with it. But I cannot help feeling very seriously that the importance of it to the very life and existence of the Association is so great that it cannot be traversed too often. I want very much to bring it home to all of you that it is absolutely necessary, in order that we may be able to discuss the question thoroughly, that we should have the whole details of this proposed legislation at our finger ends, and be thoroughly conversant with every phase of it. It is the one great thing we must succeed in carrying out if the future work of the Association is to be crowned with success.

There is still time before the House meets for all of us to do something towards familiarizing the members of the Legislature with our aims, and I shall not I am sure appeal in vain to this Association when I ask them to do all they can in that direction.

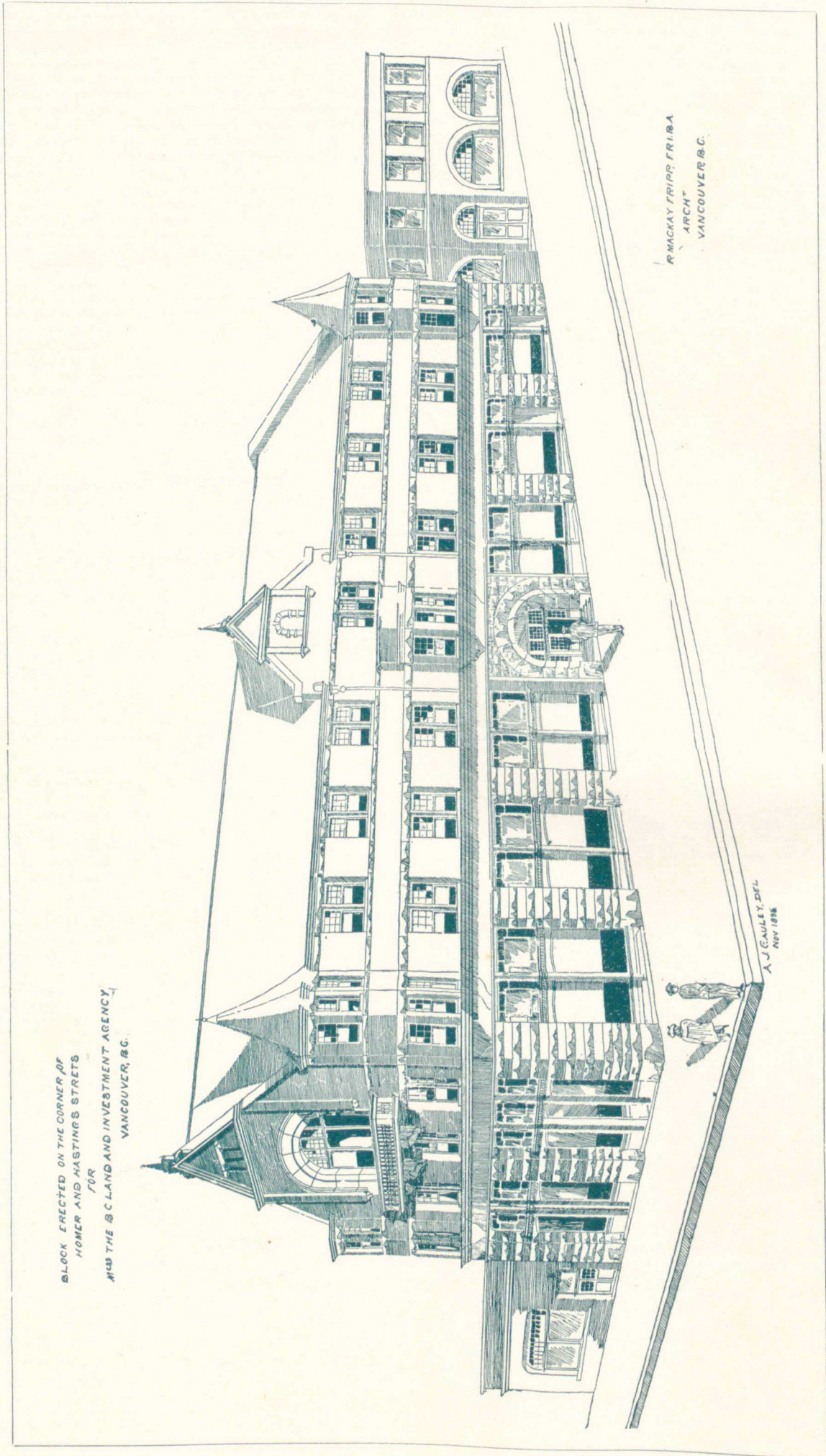
Owing to various circumstances, the Act could not last year be introduced until almost the close of the session and it was felt to be unwise to court a possible defeat by bringing it up at a time when full discussion could not have been given to it or the members of the House made fully conversant with all its details. On the advice therefore of our friends in the House we decided to withdraw it.

It is hoped that this year it will be presented early in the session, but before that occurs it will be necessary for us to see that if possible every member of the Legislature is thoroughly informed personally of the details of the measure. If this is done it is hardly possible to imagine that any active opposition to its passage can be offered.

I have occupied so much of your time with this question of Legislation that I fear to try your patience longer, but I should like to say something about what is usually called the ethics of the profession. We hear a lot about ethics. It is a fine high-sounding term most frequently employed when one Architect thinks another has charged less than the usual five per cent. commission. Then the injured one gets on a pedestal and talks ethics. It sounds well and means nothing. It is a sort of architectural form of swearing, for one hears it most when there has been a row of some sort and this row is almost invariably about money matters of one kind or another. Or the injured man writes to the Council asking what they are going to do about it, for it seems to be thought in some quarters that this Association is a sort of trades union and that everybody belonging to it does and must charge all their clients nothing less than the acknowledged tariff list of fees.

I am afraid also that by some it is considered that the legislation we are seeking will in some mysterious way give to every man the legitimate scale of fees whether he will or no. Anyone indulging in that view is going to be disappointed. The legislation asked for, or any other legislation, will never do that for us. We are going to collect the same fees we have always done; neither more, nor less. The passing or the non-passing of the Act will make no difference whatever in that respect. This Association does not say anywhere that every man belonging to it is bound to charge the full fees, and on that ground nobody can blame any member who is foolish enough (or honest enough as the case may be) to ask less than the tariff allows him. The Council have been asked from time to time questions on this subject and have had complaints made that this member or that member is doing work for less than the usual rates. The Council can do nothing in such matters, nor can they take cognizance of any such complaints. There is a table of fees, certainly, which architects are in the habit generally of following, but that list was in existence long before this Association was formed. Members of this Association can adopt it or not just as they deem fit, but the Council have no power to compel them to do so.

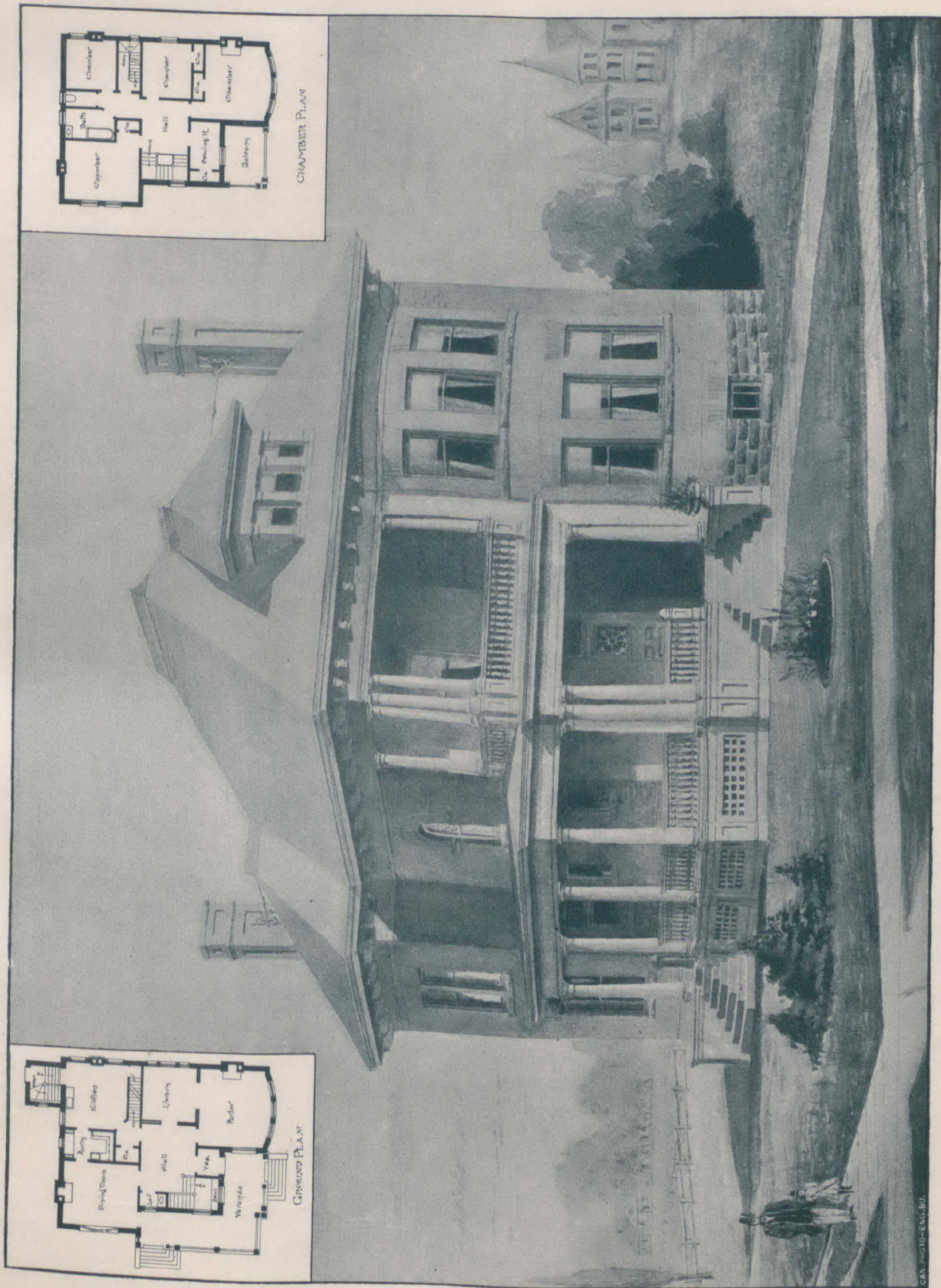
This Association is not a Court of Justice, it is not inaugurated as such nor was it ever intended to be anything of the kind. The council does not sit in order to hear charges brought by one member against another with respect to the fees he asks or as to the manner in which he chooses to conduct his business.



BLOCK ERRECTED ON THE CORNER OF
HOMER AND HASTINGS STRETS
FOR
MRS THE B.C. LAND AND INVESTMENT AGENCY,
VANCOUVER, B.C.

R. MACKAY FRIPP, FRIBA
ARCHT
VANCOUVER, B.C.

A. J. GAULEY, DEL
NOV 1878



PROPOSED RESIDENCE FOR MR. W. H. P. MOORE, ACTON, ONT.

J. A. ELLIS, ARCHITECT, TORONTO.

True, a member can be expelled for gross unprofessional conduct upon a definite charge being laid and the proper method of procedure gone through, but that clause I take it means that the charge must be of such a nature as involves dishonest dealing towards his clients even though it is not actually punishable by law. It was certainly never intended that we were to have power to punish, expel or fine a member simply because he carries on his business in a way, innocent enough perhaps so far as the public is concerned, but which might not commend itself to the members generally as embodying the highest code of ethics.

I cannot, for the life of me, see why there is all this growling and grumbling about other men's fees. A great deal more practice of ethics and much less talk would be better for all of us. If one man chooses to charge his clients three per cent., another two-and-a-half per cent., another four, and another five, why on earth should anyone complain? The men in question evidently think that that is what their respective work is worth. They are the best judges of its value and in that respect they are honest. I do not see, indeed, why a man should not, if he see fit, advertise that he is a three per cent. architect, or a two-and-a-half per cent. man, or a four per cent. man, or anything else he thinks his work is worth; he might put it on his letter paper or on his visiting cards or anywhere else. It is his own business; why should anybody mind, that is, so long and only so long as he charges everybody the same. But the individual this Association ought to mind, and ought to frown down in the severest possible manner, and moreover punish (if a way can be found), is the man who adopts a sliding scale of fees for the same class of work. The man who fixes his scale of fees lower than the recognized tariff and having fixed it sticks to it is not the one most guilty of transgressing the ethics of the profession. He may be foolish, but he is honest. But it is the man, who for the same class of work varies his charges, who gets out of one man five per cent., because he is a decent sort of fellow; out of another three per cent. because he is a hard-fisted chap who always drives a close bargain; out of another, two-and-a-half per cent., because if he charges more somebody else will get the work; who is guilty of the grossest form of unprofessional conduct. The other man errs certainly, but to no serious extent. He may say "It's all very well for so-and-so to charge the full fees for everything he does, but I'm not in that position and can't get them!" Very well, that's his misfortune, possibly his fault, let him lower his scale to four, to three, to what he thinks wise, and subdivide that scale in the same proportion as the usual scale of five per cent. is already subdivided, and having done this let him stick to it; nobody can accuse him, at any rate, of dishonesty.

But the other man is dishonest, dishonest both to the profession and to his clients. For instance, A comes to me and commissions me to build a house for him to cost \$20,000; he is a gentleman and a descent fellow willing to pay properly for what he gets, and so leaves it to my honor to charge him what the work is worth. Consequently I bill him for \$1,000 or five per cent. upon the cost, being the fee I am usually in the habit of charging. Then comes B for whom I do exactly the same work—a house costing \$20,000—but B is a hard fisted man who loves to drive a close bargain and so, by reason of that, and for fear that if I do not come down in my charges he will take his work elsewhere, I agree to do it for three per cent. and send him in a bill for \$600. Unfortunately A and B meet, they talk about their new houses, and in the course of their conversation the matter of my charges comes up, and it is discovered that I have charged A \$400 more than I have charged B, and for identically the same work.

What would A think of me, and what possible explanation could I offer him? Could I feel hurt if he went about complaining that I had swindled him, and could I persuade anybody that my conduct had been that of an honourable man?

It is against this sort of unprofessionalism which we must take the greatest care to guard ourselves. Any conduct on the part of an architect, which, while an offence against his brethren is even more so as regards his clients, must be put a stop to, if the profession of an architect is ever to obtain the honourable position it deserves.

But there is a great deal more in the Ethics of the profession than this everlasting miserable question of money and charges. There is good manners and fair dealing one towards another, consideration of one another's work and one another's feelings. There might be less backbiting and more generosity, more sympathy for each others' failures and less jealousy about one another's successes and more kindness and cordiality all round, but do, for the sake of all that is decent, let us put an end to these perpetual accusations of unfair and unprofessional conduct which are so constantly being bandied about. If there is nothing in the profession except the money we can make out of it, we had better abandon it, break up the Association and take to some other calling for the chances of fortune in the practice of architecture are few and far between.

I have occupied so much of your time with this question of legislation that I can say but little else, indeed I do not know that there is much that need be said. Matters of purely professional interest will be taken up by the various gentlemen who have been kind enough to prepare the papers which will be read to you. Financial matters will be dealt with by the Secretary and Treasurer. I have confined myself almost entirely to the one real vital question which at present most concerns the very existence of this Association.

I thank you gentlemen, for your attention here to-day, and we may now proceed to business.

The reading of the address was received with every

manifestation of approval, and its conclusion was the signal for prolonged and hearty applause.

TREASURER'S REPORT.

Mr. H. B. Gordon then read the report of the Treasurer, as follows:

THE TREASURER IN ACCOUNT WITH THE ONTARIO ASSOCIATION OF ARCHITECTS.

1895		DR.	
Jan'y. 1st	To balance from 1894.....		\$1,780 00
Dec. 31st	Members' Annual Fees.....		214 00
"	Members' Registration Fees.....		30 00
"	Students' Registration Fees.....		18 00
"	Students' Examination Fees.....		19 00
"	Sale of Examination Papers.....		25
"	Interest on Treasurer's Bank Acct., 1895...		56 08
			\$2,117 33

1895		CR.	
Dec. 31st	W. A. Langton, proportion of salary paid in 1895 as Registrar and Librarian.....		\$273 71
"	W. A. Langton, General Disbursements....		28 07
"	Travelling Expenses, Member of Council...		6 50
"	Caretkr. Sch. P.S. re Convention and Exams.		15 00
"	H. Webb, Luncheon for Convention.....		15 00
"	C. H. Mortimer, 1/2 cost reporting Convention		22 50
"	N. R. Butcher, Typewriting.....		12 70
"	Printing Reports and Circulars, etc.....		56 60
"	Printing Examination Papers.....		25 00
"	General Stationery.....		14 10
"	Book added to Library.....		3 35
	Total Disbursements.....		\$ 472 53
"	Balance on hand.....		1,644 80
			\$2,117 33

We have examined the books, vouchers, etc., of the Association, and certify that the above is a correct statement thereof.

WM. R. GREGG,
M. B. AYLSWORTH.

STATEMENT OF ASSETS AND LIABILITIES, JANUARY 1ST, 1896.

ASSETS.		
Cash in Bank.....		\$1,644 80
Library as per Valuation		
Unpaid Membership Fees:		
1891..... 6 Fees.....	\$ 28 00	
1892..... 16 Fees.....	200 00	
1893..... 43 Fees.....	148 00	
1894..... 69 Fees.....	242 00	
1895..... 98 Fees.....	341 00	
	\$959 00	
Deduct, estimated doubtful.....	256 00	
	703 00	
Library (cost \$232.00), 50 per cent. off..		116 00
		\$2,463 80

LIABILITIES.		
Half Year's Salary, Registrar and Librarian.....	\$ 150 00	
Outstanding Accounts.....	33 60	
Balance.....	\$2,280 20	
	\$2,463 80	

H. B. GORDON, Treasurer.

On motion by Mr. Dick, seconded by Mr. Wickson, the Treasurer's report was received and adopted.

REPORT OF REGISTRAR AND LIBRARIAN.

The following report was then read by the Registrar, Mr. W. A. Langton:

REPORT OF THE REGISTRAR AND LIBRARIAN AT THE ANNUAL MEETING ON JANUARY 14TH, 1896.

MEMBERS.

The Annual Register of members for 1895 contained 133 names. One member has since died. The 132 members remaining on the roll are classified as follows:

CLASS I.—Practising in York County, 5 years and over....	48
" II.—Practising in York County, under 5 years.....	4
" III.—Practising in cities outside of York, 5 y'rs and over	38
" IV.—Practising in cities outside of York, under 5 years	4
" V.—Practising in towns, villages, etc.....	17
" VI.—Civil servants.....	12
" VII.—Not practising in Ontario.....	9
	132

NOTE.—The number of members in Classes II and IV. is variable, and is established by application for the rebate by those who are entitled to it when paying their fees. In the above list the number fixed for these classes is the number of those who have applied for the reduced fee in 1895.

STUDENTS.

Students consist of those called by the Act "existing students" and of new students. Existing students were those who had been articulated before the Act was passed and were required only to pass the final examination of the Association before being allowed to register as Architects. Many of these had already served their time—sometimes a considerable time before—but were still working as draughtsmen. The number of existing students registered in 1895 was 83. The greater part have drifted away to other parts or to other callings, and some are practising architecture without having registered as architects, but there are several still in touch

with the Association. Of these 17 have passed the final examination, 7 subsequently registering as architects, and 1 was admitted to registration as an architect after having passed the examination of the Royal Institute of British Architects.

Of new students the roll is as follows:—

Registered in	1890.....	9
"	" 1891.....	6
"	" 1892.....	11
"	" 1893.....	6
"	" 1894.....	2
"	" 1895.....	2

—36

These students are nearly all in communication with the Association and seem to be following out its curriculum.

The Board of Examiners for 1895 were:

PROFESSOR GALBRAITH, Principal of the School of Practical Science, Chairman; Mr. C. H. C. Wright, Lecturer in Architecture at the School of Practical Science, and the following members of the Association: Messrs. Aylsworth, R. J. Edwards, W. R. Gregg, Helliwell, Symons, Townsend and Wickson.

The examinations held this year were as follows:

	No.	Passed.	Plucked.
First Intermediate.....	3	2	1
Second ".....	7	3	4
Final.....	4	1	3

PROCEEDINGS OF THE COUNCIL.

Pursuant to the action of the Convention with regard to improved Municipal building and fire by-laws, a Committee of Toronto Architects, nominated by the Council, drew up a complete set of building by-laws and submitted them to the Mayor and Council of Toronto.

The proposed exhibition of architectural drawings was held in connection with the exhibition of the Royal Canadian Academy, the drawings being contributed to the Academy exhibition and forming the architectural department of the exhibition.

A competition was instituted for drawings of the students' diploma which at the last Convention it was decided to issue. The drawings submitted in competition were not satisfactory. A skilful draughtsman, who is a student of the Association, subsequently agreed to furnish a drawing and is engaged now in completing it.

The most important work of the Council during the year was the endeavor to procure legislation amending the Act of Incorporation. Some difficulty was found in introducing the bill because of the antipathy which has arisen to giving independent power to corporations, and our bill when at last introduced was too low on the list to come on for debate in that session. It is now, however, ready for introduction on the earliest possible opportunity at the next session. It has been discussed with the party principally opposed to giving uncontrolled power to corporate bodies, and in its present state meets with no opposition from that portion of the House. There seems every reason to believe that the bill is now in a position to meet with a fair hearing, and it has been found hitherto that public men who have had opportunity to give it a fair hearing have agreed that it would be a useful measure.

THE LIBRARY.

There has been one book added to the Library—a necessary text book.

There have been 129 lendings, or 18 more than in 1894.

W. A. LANGTON,
Registrar and Librarian.

On motion by Mr. H. B. Gordon, seconded by Mr. Rastrick, the report was received and adopted.

The President then suggested the discussion of any business arising out of the reports.

Mr. W. R. Gregg inquired as to what had been the result of the action taken by the Committee appointed at the last Convention to communicate with the city authorities in regard to amending the then existing by-laws?

Mr. Gordon stated that several of the gentlemen composing that committee had attended several meetings, and at the cost of no inconsiderable amount of labor had at last succeeded in preparing a complete by-law. In the meantime they had apprised the City Hall authorities that they were engaged upon such a work, and, knowing that preparations were being made for the re-building of some of the edifices destroyed by the disastrous fires which had occurred shortly before, some of them buildings of great extent, and fearing that before they could lay their views in full before the city authorities, permits might be issued for the erection of some of these buildings, without the necessary restrictions which were under discussion, they had submitted an interim communication, presenting those points which the committee regarded as most urgent, and asking the city council to adopt them in the meantime, until they should be supplemented by the complete by-law when the committee completed its labors. The points submitted were discussed by the city committee

on Fire and Light, and to some extent adopted, but at the same time some very vital points were not adopted, evidently because very strong interests were brought to bear in opposition to the object the architects' committee had in view. Those desirous of spending the minimum amount of capital and wishing to erect large buildings with undivided areas, and so on, at the very cheapest rate, had been able to so influence members of the city council that the object of the architects' committee was to a large extent defeated. They did, however, succeed in some points, some amendments that were desirable being made to the by-laws, and although the labors of the committee had not brought forth all the results anticipated, he thought two results had been accomplished. First, they had demonstrated to the members of the city council, the fire underwriters, and others, that the Association of Architects was interested in the matter, and fully alive to the necessity of the changes, and that they had gone to a great deal of trouble in order to present their views in a shape convenient to be legislated upon, and, secondly, the action taken had had the effect of bringing the Association more prominently before the public, and presenting in a very effective and tangible form the benefit to the general public of having such an organization in existence.

Mr. H. Paull said he noted in the minutes that any surplus over the expenditure was to be applied to the purchase of books for the library, and he learned from the report of the Librarian that during the year only one book had been purchased.

Mr. Langton explained that the book purchased was a work which was a necessity, but, as a matter of fact, there had been no surplus to apply to that object.

Mr. Gregg called attention to the fact that a committee had been appointed last year to advocate municipal improvements.

Mr. Langton said that the members of that committee were largely from outside of Toronto, Mr. Dick and Mr. Aylsworth being so far as he was aware, the only city members.

Mr. Dick said he was not able to make any report; he did not remember having received notice of any meetings of the committee in question.

Mr. Langton said he had conversed with Mr. Aylsworth once or twice during the year on the matter, and they had been agreed in believing that the committee could not call a meeting of influential citizens except for an obvious occasion. Their idea was to find some influential person who would become interested in the matter to inaugurate the movement. They had been unable, however, to fix upon any suitable person who would be likely to accept the responsibility.

Mr. W. R. Gregg thought it was very important that this matter should not be lost sight of or allowed to drop, and suggested the retention for the coming year of the same committee, with some additional members, residents of Toronto.

After some further discussion Mr. Gregg moved, seconded by Mr. Townsend, that the said committee be continued for the coming year, with power to add to its numbers. (Carried.)

Mr. Langton said that he had been the mover of the resolution under which this committee was originally created, and that the idea was not that the committee should be expected to accomplish the desired objects within any limited time, but that the objects to be attained were of such a nature that the Association ought to be interested in them, and there ought to be a committee alive ready to act when any favorable opportunity presents itself; which end would be attained by the resolution just passed.

Mr. Rastrick asked if the resolution applied to the members in outside places, that is, could the members in other places add to their numbers.

The President replied that he understood the resolution to practically have that effect.

Mr. H. Paull suggested the advisability of securing the co-operation of the Canadian Institute, the professors of the University, or any other body which might assist in forming a larger committee, which might influence the municipal authorities.

Mr. Gregg said that under the present resolution the committee had full discretionary power to do anything of that sort which they deemed desirable.

The President thought that the committee was not restricted in its line of action, but could deal with any matter that might arise without anything further being said.

Mr. Burke suggested the advisability of tendering the assistance of the Association in improving the Island Park, in the way of giving advice.

Mr. Gregg said there was a point which was lost sight of last year, the rounding of the corners of Queen and Yonge streets. Had the committee been a very active one perhaps both the corners in question might have been rounded instead of only one.

Mr. Burke pointed out that many opportunities for improvement would be lost unless someone took the initiative, as was the case in regard to one of the corners spoken of, where it was only because of the lack of interest to push the matter that the improvement was not made.

Mr. Pearson, reverting to the subject of the committee on improvements in the building by-laws, expressed himself as not quite satisfied with the report made by Mr. Gordon. He himself was left quite in a maze as to what had been done with the by-law submitted, which seemed to have been taken to the City Hall and there pigeon-holed. He would like a little further information as to what had been done in that matter.

Mr. Gordon said the city authorities had adopted parts of the by-law recommended, and had patched up the old by-law. Of course the by-law submitted by the committee was to some extent a reiteration of much that was in the then existing by-law, only put in a clearer and more concise form, and in some instances with increased stringency. He did not think the matter was by any means a dead issue, and as a result of a paper he proposed reading before the Association during its present sessions he hoped to see, not only in Toronto, but also in outside towns and villages, permanent committees appointed for the purpose of having proper municipal by-laws passed.

The President said that probably the matter was lying in statu quo.

Mr. Gordon replied that that was the case to a certain extent; it could not be expected that the suggestions made would be adopted in their entirety, because at the City Hall there were so many other things to be considered.

Mr. Pearson thought that in view of what Mr. Gordon said, it would be better to defer further discussion on the matter until he read the paper referred to.

Mr. Wickson then said that it had occurred to him when listening to the very practical address delivered by the President, that if portions of it could be printed and distributed among the members of the Legislative Assembly, it would provide them in a very concise and lucid form a view of the whole question.

The President replied that the matter of legislation was one on which he felt very strongly, and he desired to have a full discussion in regard to it.

Mr. A. E. Paull, in expressing his concurrence in Mr. Wickson's suggestion, said that the President in his address had dealt with the various matters in a very able and admirable manner, particularly in that part in which he dealt with the advantages of architectural education. If not out of place he would move that copies of the President's address be sent to every member of the Legislature.

Mr. Wickson said that a suggestion just made to him by Mr. Gregg seemed to him a good one, viz: that a resolution be passed by the convention to the effect that in the address in question the President voiced the feeling of the Association. The resolution need not necessarily be sent to the members of the Legislature, but it would be reported in the newspapers, and they would see it there.

The President said that a great deal remained to be done before the matter could be dealt with satisfactorily. The action taken in the future would have to be more systematic. In regard to the proposition made, papers

sent to the members of the Legislature were not often read, because they were overwhelmed with that kind of stuff. The best way of getting at the members was by having them personally interviewed while at their homes by the members of the Association living in their constituencies. This could not be effected unless the members of the Association took an interest in the matter and were willing to exert themselves. The volume of work to be done was not great, but what was to be done was important. When members of the Legislature came down to Toronto during the session they were very busy, and had any number of men trying to get at them in the interests of various legislation, and they had neither the time nor the inclination to talk, and even when they were spoken to they were apt to soon forget all about what they had heard. But in the country an architect, knowing the member for his district, if he could get hold of him for a short time, could do more than could be effected by any amount of work in Toronto. It was the country members of the Association who must be relied on. The city members he felt sure would do all in their power, but as far as the city members of the Legislature were concerned they were favorably disposed to the objects of the Association.

Mr. Wickson suggested that in addition to sending the proposed copies to the members of the Legislature they should also be sent to each member of the Association.

The President assented to that view, and suggested the formation of a small committee for the purpose of distributing this literature. There had appeared in the CANADIAN ARCHITECT AND BUILDER from time to time articles, portions of which would be valuable, and such a committee might arrange the matter.

Mr. Townsend thought that if members of the Association living in the country would address personal letters to the members of the Legislature in their constituencies, enclosing the proposed matter, it would be more effective than if sent from a central committee in Toronto. Country members might also enlist the sympathy and influence of friends outside the profession who had influence with the members of the Legislature. Indeed, he thought there was hardly a member of the Association in the city who had not a friend somewhere outside who might favorably influence some one.

The President thought Mr. Townsend's last suggestion was a very valuable one. If there were no further suggestions he would now proceed to the appointment of the committee.

Mr. Townsend recommended that the President's address be printed and distributed without mutilation; he thought selections from it were not sufficient, but that it should be sent out in full.

Mr. Burke was of the same opinion. The main object was to show that the education of the architect was the legislation aimed at, and he thought the address would form an excellent argument for the desired legislation.

The following paper was then read by Mr. Gwynne:—

SOME HINTS ON THE LEGAL RELATIONS BETWEEN ARCHITECT AND OWNER.

The first question that presents itself for consideration is the form of the contract between architect and client. Should it be reduced to writing? And the answer is, generally speaking, it need not. But there are two cases in which writing is essential. The first is where the services to be rendered are not to be completed within one year from the date of the contract. This is rendered necessary by the Statute of Frauds, an Act passed in the reign of Charles II, which requires many classes of contract to be evidenced by writing, and was passed as the preamble states, "for prevention of many fraudulent practices which are commonly endeavored to be upheld by perjury or subornation of perjury." The only point to be noted under this section of the Act is that the continuance of the services beyond the year must either be expressly provided by the terms of the contract, or be occasioned by necessity by the nature of the work; if it may or may not be performed within the year no writing is required. There is a curious case in the early reports in illustration of this point. The defendant agreed with the plaintiff that he would give him 1,000 guineas on his wedding day, if the plaintiff would give him one guinea now. Two years afterwards the plaintiff married and claimed the 1,000 guineas. The defendant set up that the agreement not being performed within the year, could not be sued on as it was not evidenced by writing. But the judges held that the statute only

applied to agreements which are in their terms incapable of being performed within a year, and that there was nothing in the nature of the case before them to prevent the plaintiff marrying the next day. An architect, therefore, who is retained to superintend work which may be completed within the year, need not concern himself to have his retainer reduced to writing, but if by the terms of his agreement or from the nature of the work, his services are required for more than a year, he will not be able to recover his fees by action, unless the agreement upon which action shall be brought, or some memorandum or note thereof, shall be in writing and signed by the party to be charged therewith, or some other person thereunto by him lawfully authorized.

The other case in which writing is necessary is that of a contract with a corporation. It is a rule of the Common Law that a body corporate is not bound by any contract which is not under its corporate seal. There are two exceptions to this rule which I shall mention for the sake of completeness, although they are not likely to concern architects. Contracts with corporations in trivial matters of daily and pressing urgency need not be in writing or under seal, as for instance, the employment of servants, and secondly, in matters which are necessary and incidental to the express purposes for which incorporation was granted, particularly in the case of trading corporations.

To what extent corporations may plead the absence of a contract under seal, when sued, for work or service which they have ordered and accepted, is still a moot point, and was discussed in the Supreme Court as recently as the year 1891, with a very decided difference of opinion. Suffice it to say that in this province, the leaning, if not the law, is to hold corporations liable in such cases, but in England very eminent judges have expressed a contrary opinion. Under these circumstances it is but a wise precaution, to see in all cases of agreements with corporations, that the contract is reduced to writing and sealed.

But this is not the only question to be considered in making agreements with these bodies. We must enquire also whether the proposed contract comes within the scope of their powers, because if ultra vires, no recovery can be had against them notwithstanding that the contract is in writing and under seal, and the corporation has obtained the benefit of the work or services contracted for. To hold otherwise would be a virtual fraud on the shareholders who have subscribed on the faith of the corporation confining itself to the purposes for which it was created. If a company is incorporated for the manufacture of bicycles, it would be manifestly wrong to suffer its funds to be diverted to the operation of a railway.

In contracts with municipal corporations a still further precaution is necessary, for it has been decided that under the Ontario Municipal Act, contracts which have not been carried out, or to use more technical words, executory contracts, can not be enforced unless a by-law has been passed authorizing the contract, even though the seal has been affixed under a resolution of the Council. It would appear, therefore, to be necessary, when dealing with a municipal corporation, that an architect should not merely see that his agreement is under the corporate seal, but that a by-law has been duly passed authorizing the contract with him.

Before passing from this part of the subject, I shall quote the words of Baron Martin, "Persons dealing with those companies should always bear in mind that such companies are corporations, bodies essentially different from an ordinary partnership or firm, for all purposes of contract, and especially in respect of evidence against them on legal trials, and should insist upon these contracts being by deed under the seal of the company XXXXX. There is no safety or security for anyone dealing with such a body upon any other footing. The same observation also applies in respect of any variation or alteration in a contract which has been made."

These words apply with almost equal force to contracts with individuals, and should be borne in mind by every architect who, whether from delicacy or carelessness, neglects to have the agreement with his client reduced to writing, not merely to avoid lawsuits, but as a safe-guard against the misunderstanding which must almost inevitably arise, where the evidence on which contracts are to be established consists of loose and disconnected conversations between persons who are acting under possibly different assumptions.

These remarks are also a suitable prelude to the next question to be considered, as the difficulties which occur arise almost wholly from a failure to observe this necessary but generally neglected precaution. The question I allude to is, the architect's right to payment for his services, and here the difficulties we meet are great, but they arise not from any doubt as to the rules of law applicable, but from the difficulty of applying the rules to the vague and uncertain terms in which the parties are wont to make their agreements. When we remember that it is an almost daily occurrence to find the most conscientious men giving totally different versions of the same conversation or event, it need be no surprise to us if contracts for services which are to be arrived at from a few casual words, are difficult to ascertain with precision, especially when it is possible that one of the parties may have been quite content to leave his liability to inference, for the possible advantage he may thus subsequently hope to obtain. I refer, of course, only to verbal agreements; where the contract is reduced to writing, it is only a matter of construction. It will be well before proceeding to lay down the rules of law which have been formulated in regard to contracts of the nature of those which we are discussing. They are as follows:—

(1). No payment can be demanded for services rendered without request.

(2). If a person employs the services of another, without mention of payment, in matters for which payment is ordinarily expected, he impliedly undertakes to pay a reasonable sum.

(3). Where something is to be done as a condition precedent to a completed contract, no contractual rights or obligations arise until the condition is fulfilled.

(4). No claim can be based on services offered by way of tender, and no obligation arises on a call for services of a like nature.

These propositions you will say are sufficiently obvious, and as general propositions they no doubt are. The difficulty lies in their application. First, no payment can be demanded for services rendered without request. An architect calls on a gentleman who he hears contemplates building, and asks if he may prepare plans for him. The architect spends much time and trouble, and has special interviews with his client, who suggests alterations and evinces the interest usually shown in work done at one's expense; but on submitting the completed work, the architect learns to his chagrin, that his expected client has abandoned the idea of building. The latter swears that he had no idea that he was incurring liability, and the architect is equally emphatic that he had no intention of working for nothing. Under these facts, it is left to the jury to say whether there is a contract or whether it was a gratuitous offer of his services on the part of the architect without any request, and if they conclude it is the latter, no payment can be recovered. Architects would do well to remember that juries are apt to hold the views of the general public in regard to sketches and plans, that they are run off without any cost of time, thought, or trouble, and are of so small account in the eyes of their makers, that if not used, they do not expect to be paid for them, a view for which architects have in some measure themselves to blame, by reason of their readiness to tender their services in much the same manner as I have attempted to show. How then, is this danger to be avoided, a danger which is peculiarly incident to requests for plans? Simply by giving your client to understand that he is incurring liability. Leave nothing to inference and take nothing for granted.

The second proposition which I have laid down is, "If a person employs the services of another, without mention of payment, in matters for which payment is ordinarily expected, he impliedly undertakes to pay a reasonable sum."

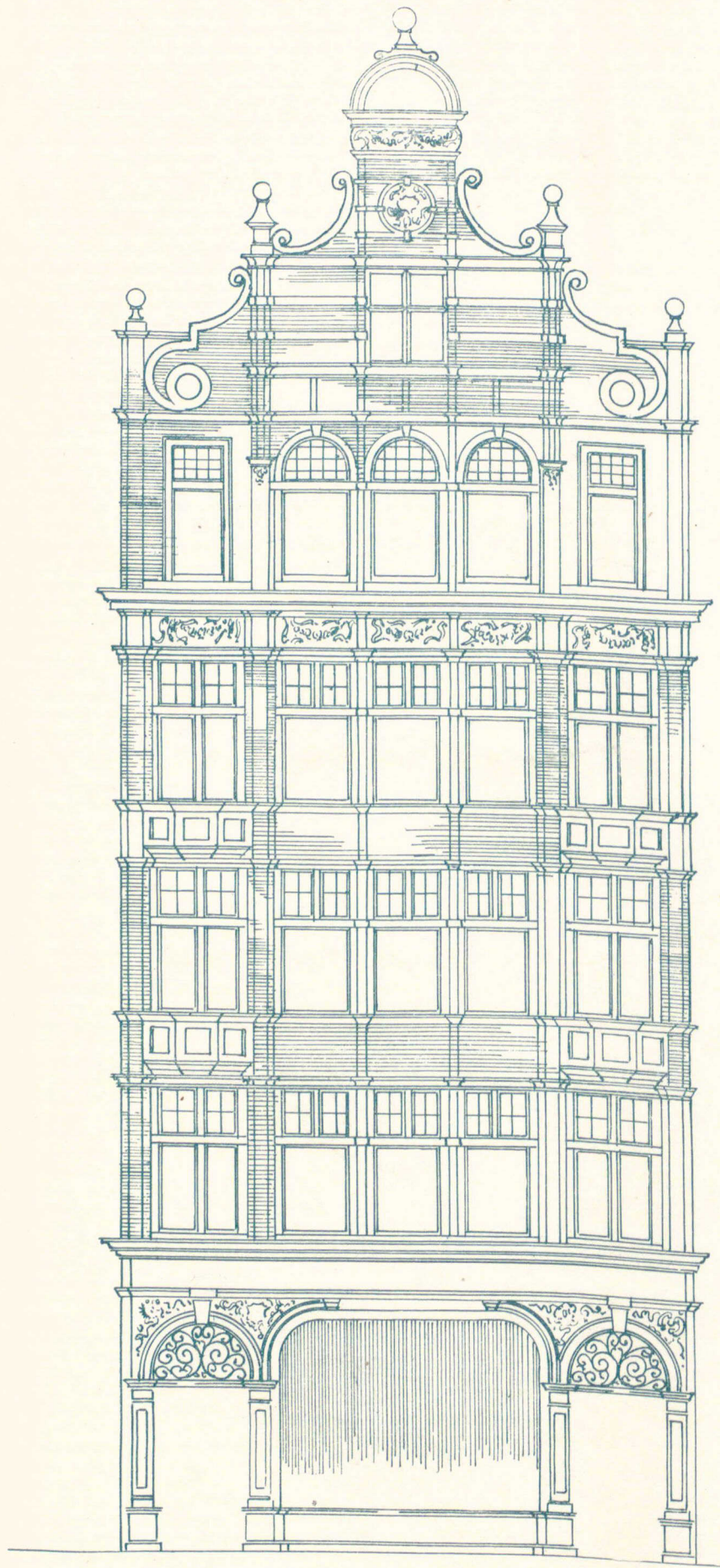
The only point here which needs comment is the meaning to be attached to reasonable sum. This expression means neither 7% nor 5%, nor any other percentage, but such a sum as a jury can be induced to think the work reasonably worth. Of course other architects may be called as experts, to give evidence as to the charges usually made for the work in question, but no custom could be proved, that a certain percentage of the contract price of the building is the sum payable for the plans and another percentage for superintending. It may not be amiss to insert here a few words of caution on the question of customs, because I know that many of the architect's most cherished contentions are based on alleged customs. It is an undeniable rule that a custom or usage becomes a part of every contract, whether verbal or written, to which it is applicable, unless expressly excluded by the terms of the agreement. But a custom must be both certain and reasonable, and an unacknowledged one is by no means easy of proof. In cases of doubt it is a far safer plan to express the terms which are sought to be relied on as a custom, rather than to rely on what laymen are often apt to call customs, where no custom is. As was said on one occasion by Lord Denman, "What can be more difficult than to ascertain, as a matter of fact, such a prevalence of what is called a custom of trade, as to justify a verdict that it forms part of every contract."

My third proposition is, "Where something is to be done as a condition precedent to a completed contract, no contractual rights or obligations arise until the condition is fulfilled." The difficulty here is again one of application; the whole point to determine being, do the words used amount to a condition precedent. The chief, if not the only application of the rule, of interest to Architects, arises where plans are called for, to be submitted for the approval of the owner. This is a matter of every day occurrence; in fact all plans are submitted for approval, but if the approval is a condition precedent, there can be no recovery without the approval, no matter how unreasonable the refusal may be, provided it is based on an exercise of judgment, and not the outcome of mere caprice. But if, on the other hand, there is an order for plans, although subject to the owner's approval, (in the sense that you can not compel him to build a house of which he does not approve the plan and design), in this case the owner will have to pay a proper sum for the work and services, even if he reject the plans, provided they are such as a reasonable man ought to accept upon the instructions given.

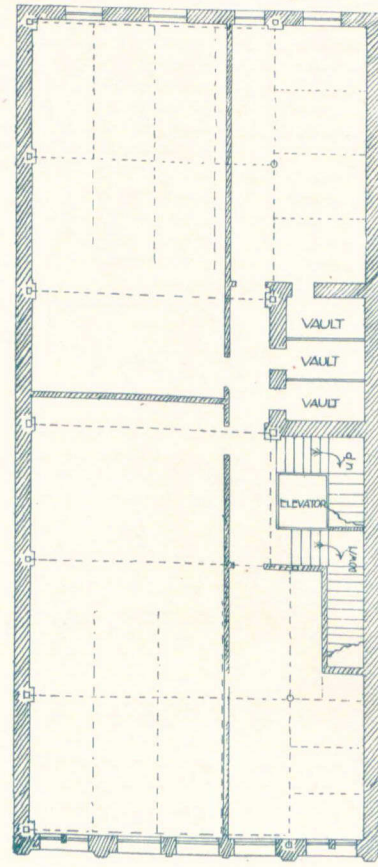
In the case which establishes this rule, the wording of the agreement was that the architect should prepare "the necessary probationary drawings for the approval of the committee of visitors," and this was held to mean drawings which shall be approved of by the Committee, and that the plans were not to be paid for unless approved of so as to become useful and available to the county.

If, therefore, trusting to your own ability to please and to your client's honor, you enter into an agreement to supply probationary drawings which shall be approved of by him, you may have all your work for nothing if you fail, and are liable to be dismissed if you do not succeed in a reasonable time. It must, however, be added that doubtful expressions will not be construed as conditions precedent, and the onus will be on the defendant to establish it. The ordinary instructions, therefore, for plans, will not come within the rule, but rather within the second rule, that where work is done at the request of another, if no mention is made of payment, he impliedly undertakes to pay a reasonable sum. There is an American case which aptly illustrates both the point we are discussing and the question of remuneration.

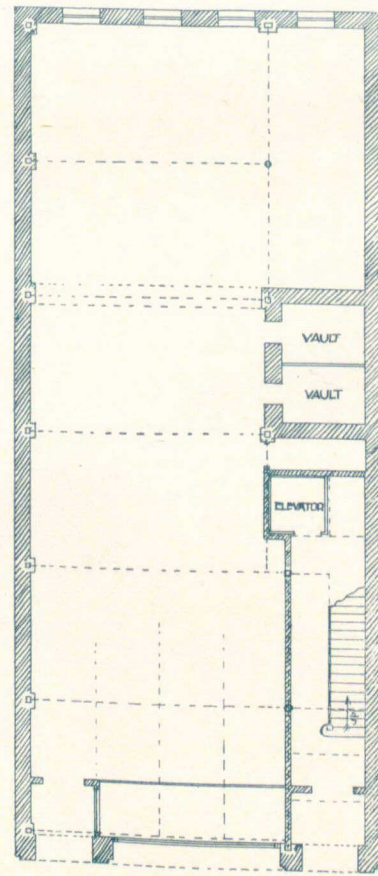
The plaintiffs sued for \$170 being 1% of their own estimates. I quote the following expressions from the judgment: "Plaintiffs'



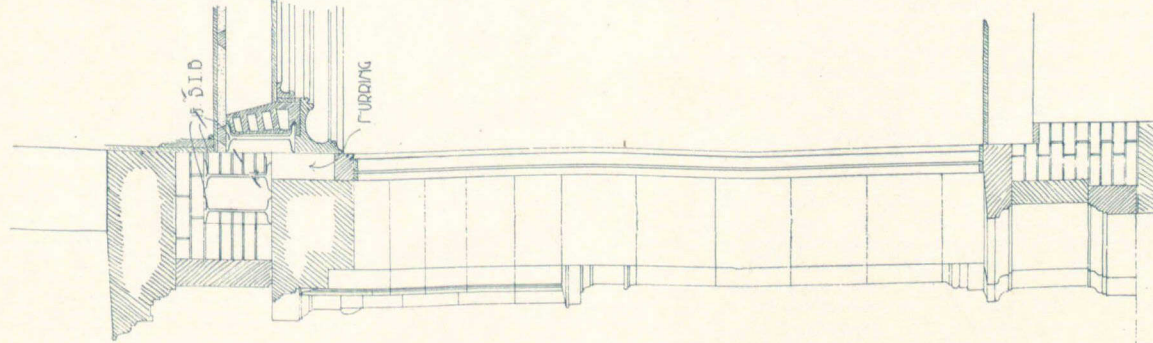
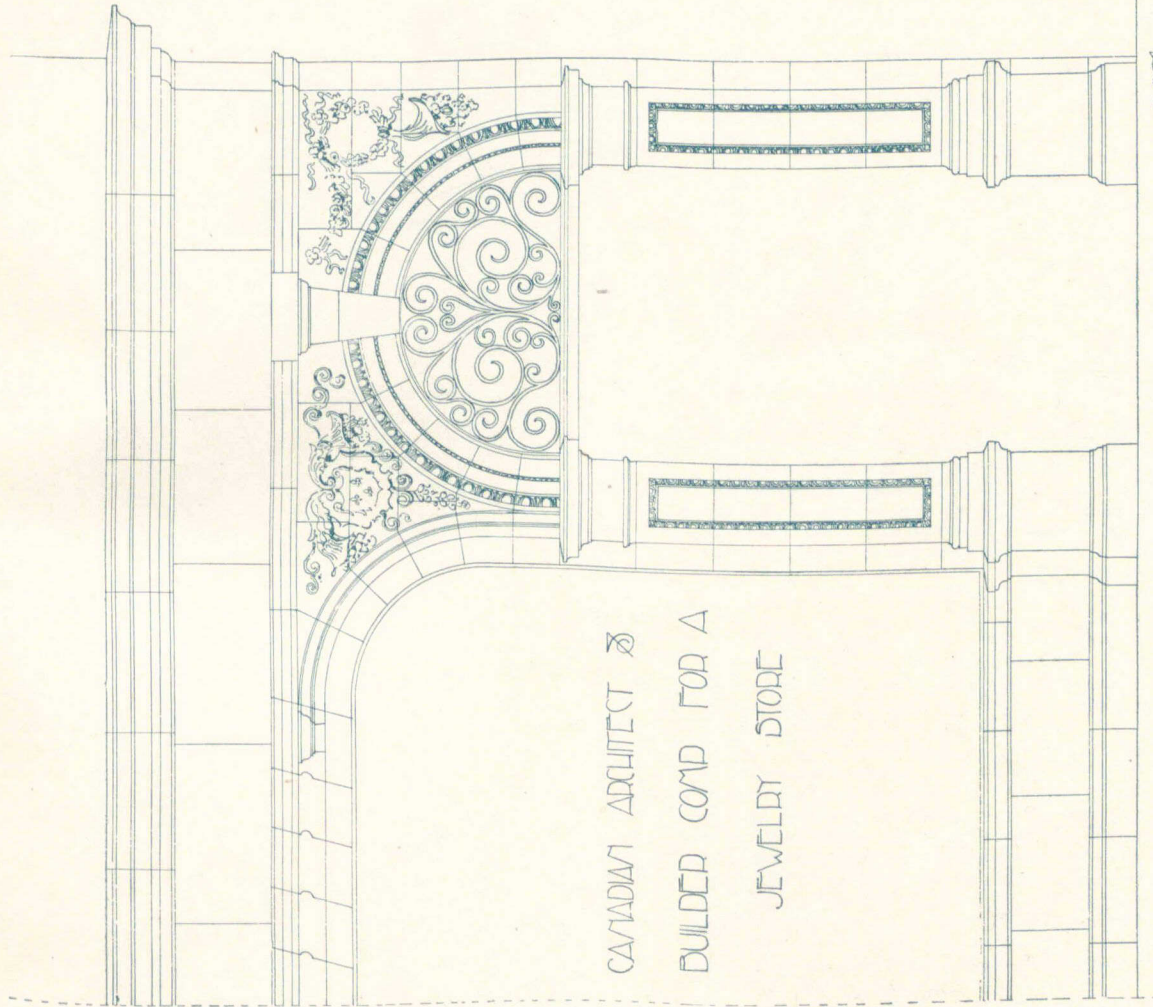
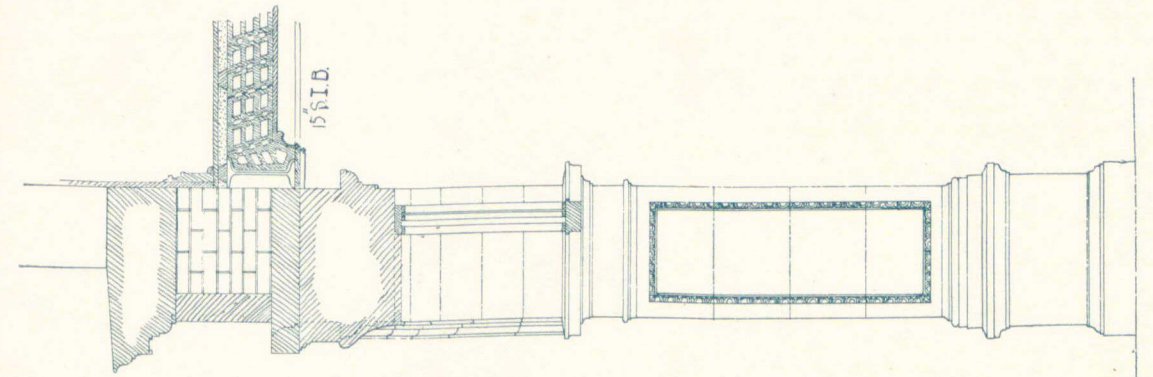
FRONT ELEVATION



FIRST FLOOR PLAN



GROUND FLOOR PLAN



DESIGN BY ARRIVUS

CANADIAN ARCHITECT &
BUILDER COMP FOR A
JEWELRY STORE

"C. A. & B." COMPETITION FOR A RETAIL JEWELRY STORE.
DESIGN SUBMITTED BY "ARRIVUS," (MR. ELMER H. RUSSELL, TORONTO), AWARDED THIRD POSITION.

theory seems to have been that by employing an architect to make drawings which are not finally determined on, and asking his opinion of probable cost, the employer is bound to pay a percentage on a building such as the architect sees fit to figure out, and at a price which he puts upon its probable cost."

This seems to us an idea which has no foundation in law or common sense and unless such a basis of compensation was specially agreed on, it cannot be allowed.

There is some reason for claiming that if a man is employed to make preliminary sketches, to enable a landowner to determine what sort of building he may profitably erect, in what style and of what material it should be built, he should not do the work without reward, provided such is the understanding. If, however, as the defendant here claimed, the architect volunteered his services with the chances of future employment, it would be different. But it cannot be held that in either case, such preliminary work can be measured by estimates of the cost of the architect's projected building. The only claim plaintiffs could have would be for such time as was actually spent in their work, with the fair understanding that they should be paid for so much as they did, or with such circumstances as would compel defendant to the duty of so understanding; but no custom of architects can be received to fix it on any such basis as is here set up.

It is worthy of note that the judge in this case apparently thought that it was the duty of the architect to see that his client had a fair understanding that the architect expected to be paid or that the facts must be such as to compel him so to understand.

As to the fourth proposition that I have laid down, namely, "That no claim can be based on services offered by way of tender, nor does any obligation arise on a call for services of a like nature," little more need be said than to illustrate my meaning. If an architect offers, even though at the request of the owner, to prepare drawings on the chance of obtaining the work of superintending the proposed building he can maintain no action for payment unless his plans are used. This is quite apart from the question of approval. In fact, although quite satisfied with the drawings the owner may abandon the idea of building without incurring liability, and a public advertisement for drawings of such a nature imposes no obligation to accept any.

How fine the dividing line sometimes is between an order for work and a mere tender may be seen from a case in Lower Canada in which the architect succeeded. Drawings were invited for a church, not to exceed a fixed sum, on the condition that the unsuccessful competitors should receive a certain premium, but the architect whose plans were selected was to receive no premium, but to obtain the work of superintending the building. The plaintiff's plans were approved, but it subsequently appeared that they did not comply with the conditions and were rejected. This would appear to some as near as possible to a case of tender in the hope of being retained if the plans were approved, but the court held that the architect was entitled to recover and allowed him one per cent. of the limited cost of the proposed building.

I fear I have dwelt on this subject of contract or no contract so long as to be tedious. I shall dismiss it with this one remark: although the general proposition that a man is entitled to be paid for his services is admitted, there seems to be an inclination to regard architects' drawings as always tentative offers in the absence of definite evidence to the contrary, thus throwing the onus on him of establishing a contract, as shown by the American case which I have cited.

It is a relief to leave the shifting sands in which we have been endeavouring to pick our steps. Where the parties themselves were not quite sure of their intentions, and have left so much to inference, a lawyer's conclusion on a case submitted to him is likely to be preceded by a series of "ifs"—if your contract means so-and-so, then this is the law; if your agreement were otherwise, then the law is otherwise; and if a law suit follows and there is, (as is sure to be the case), a conflict of evidence, the verdict satisfies no one, and judge, jury, and lawyers all fall into the same condemnation. Be advised, therefore, and do not fail, either from feelings of delicacy or from confidence in your own powers to give satisfaction or in your employers honour, to have the terms of your agreement reduced to writing; and if the nature of the case is such as to render a formal agreement unnecessary or ill-judged, at any rate write your client a letter, setting forth your understanding of the arrangement, and if he acquiesces, you have a written agreement; and if he does not expressly do so, his silence will be strong evidence of his approval.

There is another point in the making of these contracts in regard to which architects would do well to be wary, I mean in assuming the duty of drawing the contracts between owner and contractors. There is no authority on the subject, but it may safely be assumed that it is no part of the architect's duty, and I am confident that no such custom should be proved. If, therefore, the architect undertakes to draw the contract, whether by or without the request of his client, he assumes work for which he is not paid, unless by special agreement that he should be paid extra. While, however, it is true that in so doing without payment he assumes no great responsibility, being liable probably only for gross negligence, yet if he be paid for it he will be bound to exercise reasonable skill and will be held to a strict account, and that too for work which is not within his province. And it must not be forgotten that the contention that he has not been paid for drawing the contracts would probably be met by the conclusive answer that having undertaken the work, payment is included in the fees.

If, however, at the request of your client, who may be unwilling to incur the expense of employing a solicitor, you agree to draw the contracts, allow me to offer a practical suggestion—see that the contractor reads and understands his contract, otherwise you

may find yourself in the unenviable position of being obliged to act as the task master of an unscrupulous man who has no compunction in holding an unfortunate contractor to harsh conditions which he has probably signed without reading. A good instance of this sort of thing is to be found in the case of Jones v. St. John's College, Oxford. In that case the builders undertook to erect and complete a building by a certain fixed day and to execute such alterations as the clerk of the works might order within the time limited for the completion of the contract unless an extension of time were allowed, and in default to pay a fixed sum per day. The builders neglected to obtain an extension. The clerk of the works ordered alterations which it was impossible to complete within the time agreed, in fact the work was not finished until some time after. The owners insisted on the exactions of their penalties, and the unhappy builder was mulcted in a large sum.

I come now to a question which has always been a sore point with architects. Where plans have been prepared, and the architect's fees paid, but the architect is not retained to superintend the building; in the absence of agreement, to whom do the plans belong? This precise point has never been expressly decided. The architect says they are his, and relies upon an alleged custom among architects, that in the absence of other agreement the plans remain the property of the architect. Where the building goes on and is completed under the same architect, little if any difficulty is likely to occur in practice, as the architect gets his full remuneration. The trouble arises when the client by claiming the plans without building, is in effect getting the benefit of the architect's work and knowledge for a much smaller fee than the latter would demand if he had anticipated the result. However, it seems from a case decided in England some years ago, as if the architect's view is not likely to be taken when the question comes up for decision. In the case I refer to, the owner after the completion of the plans determined not to go on with the building, and asked the architect to send in his account and the plans. He refused, however, to give up the plans, setting up an alleged custom among architects, that in the event of an employment of the architect being stopped, he was entitled to be paid for the plans and to retain them. The learned judges in discussing whether such a usage would be reasonable, even supposing it was properly proved, used some pretty strong language; one of them said that: "It appeared contrary to reason, good sense and justice, that in the event of a contract being put an end to, the architect should retain the plan for which he was entitled to be paid; it would require at least a clearly expressed stipulation in the contract to enable him to do so. The defendant was perfectly justified in refusing to pay until he had the plans. The execution of and the plans themselves formed the work and labor for which he charged the defendant, who was entitled to them if he had to pay for them."

Another judge was even stronger. In his opinion the usage contended for was impossible; he could not help saying that it was perfectly suicidal; so soon as it was brought into being it cut its throat with its own absurdity. "In all common sense," he exclaims, "a man is entitled to what he is compelled to pay for." Before usage could be insisted on, it must be proved to be one well known to prevail. It required the most rigid proof that it actually existed.

I have cited this case somewhat at length, by way of illustrating what I have already said as to the difficulty of proving an alleged custom, and also to show the strong leaning of the Court against this custom in particular; and although, as you will notice, this case does not actually decide the point as to the ownership of the plans, it must be admitted that it trenches very strongly on the architect's position. What it does actually decide is that when an architect agrees to prepare plans and to superintend the erection of a building for which he is to receive a certain percentage in respect of the plans and a certain percentage for the superintendence, if the owner, not having bound himself to build, abandons his intention after the preparation of the plans, the architect cannot recover his charges for the plans without delivering them to his client. Whether the latter can subsequently use them, and in so doing employ another architect, was not decided. To do so would probably have been a violation of his agreement to employ the plaintiff, for which he would be liable in damages. As far as we can judge from the report, he had entirely abandoned the idea of building. But I do not think that the judges meant so to restrict the effect of their judgment. If so, why the indignation at the architect's contention? If they thought that all the defendant was entitled to was the barren possession of the plans, the emphatic language with which they denounce the architect's refusal to grant so useless a privilege was out of place. They seem to have been clearly of the opinion that the defendant had bought the plans out and out. Perhaps if the architect had been able to put aside the agreement and sue for a quantum meruit, as it is called, that is to say, for a reasonable amount for the time and trouble spent in the preparation of the plans, the result might have been different. However this may be, the broad proposition asserted by architects, that in no case do the plans become the property of the client, seems untenable. It has the appearance of an artificial endeavor to get over a difficulty to which they are liable from the very nature of the case. No doubt it is a hardship that your work should be used by others than those who pay for it, or for other purposes than you originally intended, but it is a hardship to which other professions are also liable. If I employ a celebrated painter to execute an order for me, it would be absurd to contend that the only right I possess in the picture is the right of enjoyment. The truth is that the painter is surrounded by the natural protection arising from the fact that the painting is his production and his only, and no copy can be the same thing. But a copy of an architect's plans are quite as effectual as the original, and being deprived of this natural defence, he is driven to assert a claim which in the other case is admitted to be absurd. Nor is the illustration weakened by the fact that the Legislature has seen fit to afford further protection to pictures and other such works of art, by copyright. This merely serves to show that the hardship which is admitted to exist can only be remedied by legislation, and not by the assertion of a custom, which is apt to ignore the fact that

in protecting its exponents, it in some cases works a correlative injustice to the other party by giving him absolutely nothing for a very fair fee. However, there is no reason why this should ever be more than a theoretical difficulty, if architects were to take the precaution of inserting in their contracts a provision that in any event, the property in the plans remains theirs.

Before leaving the subject of the plans, I may mention that it has been decided that the employer does not guarantee to the contractor the feasibility of the architect's drawings, and in a case where the contract provided that certain caissons to be used in the building of piers, were to be made of the materials and in the form shown by the drawing, it was found that the proposed method was unworkable, and another plan had to be adopted, and although the contractor was put to a good deal of extra expense, he failed in an action against the employer to recover the amount. He would have been equally unsuccessful in an action against the architect, because of the want of privacy between them, and the suit would have been dismissed without coming to a hearing. The rule is that no action for a wrong can be maintained, unless the wrong complained of arise out of a contract or from the violation of a duty.

The extreme limit of this doctrine will appear from a case which has the appearance of working great hardship, if not of doing a real injustice. A person who proposed advancing money on a loan by way of mortgage on a building, wrote to the firm of valuers employed by the owner, telling them of his intention and asking their opinion on the value of the buildings, and the advisability of the loan. The valuers, by gross carelessness, gave too large a value, and the mortgagee suffered a loss in consequence. It was held that he could not recover against the appraiser. It will be noticed that there was no contract between them; the defendants had merely given a gratuitous opinion, on which the mortgagee might act or not, as he pleased, and that there was no duty imposed by law on the defendants to show any degree of care towards the plaintiff, as long as they avoided actual fraud. Applying this rule to the architect's specifications, it follows that a builder cannot obtain redress, should he suffer loss by relying upon them; he must satisfy himself before tendering of their feasibility.

I have left as the last question for discussion, what is perhaps the most interesting of all, namely, the owner's right of action against the architect for negligence. Until lately the views of the public and of the profession have diverged on this question, quite as emphatically as on the right to the plans, but recent decisions in the United States have happily set the architect's position on a better footing.

The lay view may be stated somewhat as follows: An architect is retained to see that the builder carries out his work properly, and if the builder scamps his work or makes a mistake, the architect must pay for it, because this is what he is retained for; in other words, that the architect guarantees the competence and good faith of the builder and his men.

The architect on the other hand submits that even if perfect accuracy were possible, to insure this he would have to be in constant attendance at the building, and even in two or more parts of it at the same time, and that the remuneration he receives would be no compensation even for the less difficult of these tasks.

The layman's view, it will be noticed, assumes that any imperfection is conclusive evidence of negligence, while the architect says, "I admit my liability for negligence, but it must be brought home to me on the facts of each particular case."

The difference between these two views is fundamental, as will presently appear. In the English cases we have very little to help us on this point, perhaps because the architects there are better advised than to bring the actions which are common enough in the States and in this Province, or perhaps because English architects are more careful. The general proposition which the law lays down is this: Every professional man guarantees that he possesses a reasonable degree of skill in his profession, and that any work entrusted to him will be carried out with reasonable care, and he is liable in damages if he fails to display such skill and care, and loss ensues to his client. The utmost skill attainable is not required of him, but only a reasonable amount, and this will differ according to circumstances. If I employ a village architect whose highest flight has, to my knowledge, been the village inn, to build a concert hall, I cannot complain if the acoustic arrangements are defective.

But in the matter we are now discussing, the question of liability generally depends, not so much on the degree of skill displayed, as on the care shown, or, rather, absence of care, that is to say, negligence.

In one of the American cases to which I have referred, the contract with the mason provided that he should lay out his work himself. When the wood was nearly completed the sills of the front first-storey windows were found to be set $2\frac{3}{4}$ inches higher from the floor than those of the rear windows on the same storey, although they were intended to be on the same level. When the finish was put in, the trim of the windows cut into the plaster cornice, injuring the appearance of the room. In a suit by the architect to recover his charges it was referred to a referee, who found on the evidence that the plaintiff had bestowed as much personal attendance upon the building as was necessary, and that the variations mentioned were not caused by carelessness, negligence or inattention on his part. This decision was reversed by the Superior Court, but restored by the Court of Appeals. The Court said, It, (the defect), arose from the masons not having accurately conformed to the specification and plans. Was the plaintiff responsible for the fault of the masons? The plaintiff agreed to make plans, sections, elevations, and specifications, and to superintend the progress of the building to be erected. It was not his duty to do the work. I do not think it was the duty of the plaintiff to measure the joists or timber of which the different storeys were to be constructed, and to determine by actual measurement that the ceiling of the first story had an elevation of 13 feet, and the second had an elevation of 11 feet, or to measure the thickness or depth of the brick or stone walls. The defendant however contends that the obligation of the plaintiff to superintend the progress of the building bound him to discover and correct the error committed by the mechanics. The plaintiff did assume the superintendence of the erection of the building, and must meet the obligations of his contract. The plaintiff came from day to day to superintend the progress of the work, and while thus superintending was he bound to have ascertained that the window sills in the front parlor were $2\frac{3}{4}$ inches higher from the floor than was authorized by the plan? He, (the referee) found that the

plaintiff had bestowed as much personal attention on the building as was necessary, and that the variations mentioned were not caused by carelessness, negligence, or inattention on his part. I do not find it necessary to differ with him."

I take the liberty of quoting from the judgment in another New York case, in which the question is discussed if possible with even greater clearness than the last.

"The learned counsel would not claim," says the judgment, "that an architect is bound to spend all his time at a building that is going up under his professional care, so that no fraud or negligence can be committed by any of the contractors. The counsel would not contend that the architect is an insurer of the perfection of the mason work, the carpenter work, the plumbing, etc. He is bound only to exercise reasonable care, and to use reasonable powers of observation and detection in the supervision of the structure. When therefore it appears that the architect has made frequent visits to the building, and in a general way has performed the duties called for by the custom of the profession; the mere fact, for instance, that inferior bricks have been used in places, does not establish as matter of law that he has not entirely performed his contract. He might have directed at one of his visits that portion of the plumbing work he packed in wool. Upon his next return to the building, it might have been covered with brickwork in the progress of the building. If he had enquired whether the wool packing had been attended to and had received an affirmative answer from the plumber and the bricklayer, I am of opinion that his duty as an architect in the matter of the required protection of the said pipes from the weather, would have been ended. Yet under these very circumstances, the packing might have been intentionally or carelessly omitted, in fraud upon the architect and owner, and could it still be claimed that the architect had not fully performed his work? The learned counsel for the appellant is in effect asking us to hold that the defects of the character above named, establish as a matter of law, that the plaintiffs have not fully performed their agreement. An architect is no more a mere overseer or foreman or watchman than he is a guarantee of a flawless building; and the only question that can arise in a case where general performance of duty is shewn, is whether, considering all the circumstances and peculiar facts involved, he has or has not been guilty of negligence. This is a question of fact, and not of law.

It is perhaps necessary to add that in this case the architect had not given his final certificate, and left the building with this manifest defect in it. He had, in fact, refused to give the contractor a certificate, and the owner had settled with the latter in spite of this. But the judges refused to base their decision on this ground. They treated it as a question of negligence or no negligence on the part of the architect, but you will notice that from the peculiar facts of the case, the point for their decision was this, Did the failure of the architect to detect the error at the time it was made establish negligence? The referee had found no negligence, and the Court refused to differ with him, thus treating the alleged negligence as a question of fact and not as an inference of law.

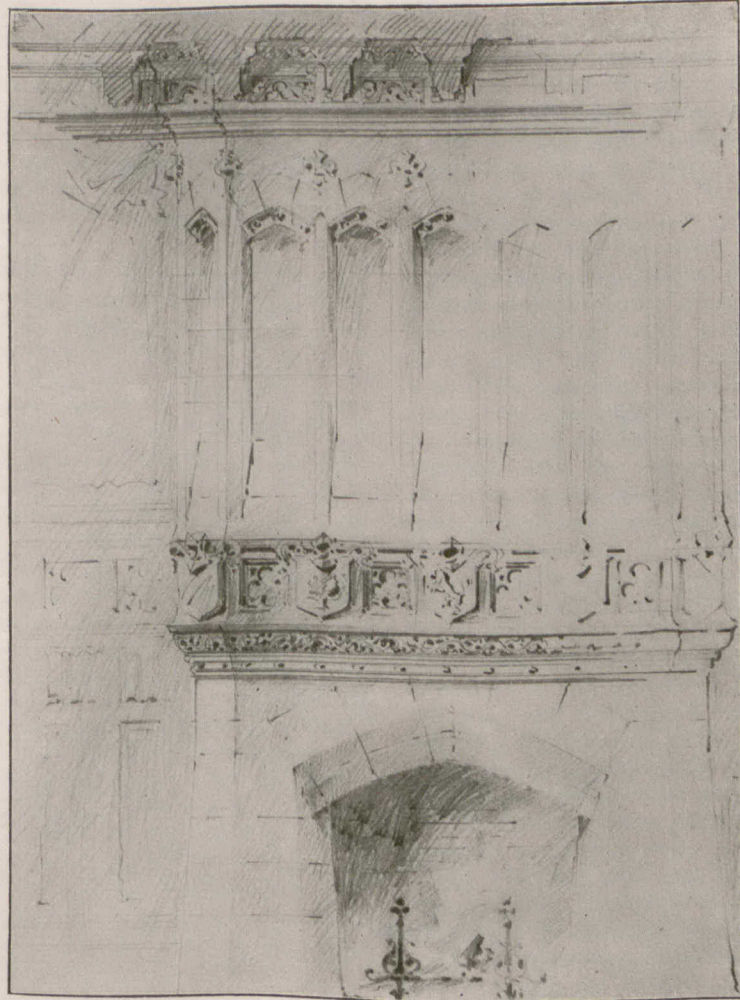
Let us consider now how the architect's liability for negligence has been dealt with in this province.

I find a case referred to in the October number of the CANADIAN ARCHITECT AND BUILDER. The plaintiff, who was obliged to sue for his fees, had been employed to superintend the erection of an hotel in a country village. The defendant set up that there was a defect in the building for which the architect was responsible. The defect complained of was a slight sinking of the floor in the centre of the building, and showing in one of the principal rooms and the main hall. The amount that the floor was out of level was one-thirteenth of an inch to the foot one way, and about one-sixth of an inch across. No plaster was cracked, no doors bound, and no inconvenience of any sort was occasioned. From the report of the case, it does not appear that evidence was adduced to show that the architect had been sedulous in his attendance at the building, nor does any evidence appear to have been offered to prove the contrary, but it was shown that the architect had himself levelled the ground floor joists when they were laid, and left them true and level. The judge, in summing up the evidence, said that undoubtedly there was a defect in the building, and he gave judgment for the plaintiff with costs, less a sum which it had been shown it would require to raise the floor and make it level.

Here we have a case in which the judge was evidently imbued with the idea that wherever a defect occurs, the architect must pay for it. That is to say, in direct violation of the principle laid down in the cases which I have cited, he regarded the mere existence of a defect as conclusive proof of the architect's negligence. Assuming the case has been accurately reported, one would think in the absence of evidence showing that the failure of the architect to discover the error was due to his want of skill or neglect of duty, and no such evidence appears to have been offered; that he had faithfully discharged his duty in levelling the joists himself, and seeing that they were true and level. If architects are to be held to so strict an account as this, their only safety will lie in employing a clerk to be in constant attendance at the works, and putting the charges up accordingly.

If in an action by a surgeon to recover his fees, he were met with the defence that the operation which he had performed had left an unsightly scar, it would be rather a startling conclusion, if the judge without any evidence of negligent or improper treatment, were to lay down the proposition, that as the scar undoubtedly existed, the surgeon must reduce his charges as compensation to the defendant.

But on the other hand, it must not be forgotten that a judgment in a decided case is only of authority for the precise point there decided, and that while the principle laid down by the American cases to which I have referred, seems to be sound and to establish all that architects need reasonably ask, it would be very dangerous to act on the illustration given in one of them, as a rule of practice. I refer to the judge's opinion in the case put by him of the pipes which required to be packed in wool. There are times no doubt in the erection of a building, where the architect's attendance is required to be more frequent than at others, especially where work is being done which can be speedily covered, and it may well be that a jury would be justified in finding negligence, in spite of the most careful enquiries on the part of the architect to ascertain the truth, if at such times work were improperly done during his absence and covered; and again the defect might be so great and the neglect so



TORONTO SKETCH CLUB COMPETITION FOR MANTEL.
DESIGN BY T. R. JOHNSTON, AWARDED FIRST POSITION.

TORONTO SKETCH CLUB COMPETITION
THE LODGE "ENTRANCE" TO A PARK.
BY 'GAP'.



TORONTO SKETCH CLUB COMPETITION.
DESIGN BY W. PERCY OVER, AWARDED FIRST POSITION.

gross as to justify an immediate finding of negligence which could not be upset by any amount of evidence of careful attention to his duties on the part of the architect. But if the principle laid down in the State of New York finds acceptance in Ontario, architects have the satisfaction of knowing that their liability for negligence will in future depend on the facts of each particular case as established by the evidence, and not on any preconceived idea of his duties in the minds either of judges or juries.

At the conclusion of the paper the President expressed the pleasure and satisfaction he had had in listening to it, and tendered the thanks of the Association to Mr. Gwynne.

Mr. Dick, in seconding the vote of thanks, said that Mr. Gwynne's paper was a very valuable contribution to the literature of the Convention, and when published in the CANADIAN ARCHITECT AND BUILDER would enable architects to avoid many of the pit-falls and snares to which they were exposed. While listening to it he had been impressed with the idea that the life of the architect, like that of Gilbert & Sullivan's policeman, "was not a happy one," because he was always exposed to two fires, the client on the one hand and the contractor on the other. There seemed to be a good deal of uncertainty in the law, and in many cases the decisions seemed to hinge a great deal on who was the judge. There was a certain amount of consolation for the architect in the paper, however, in regard to his liability for defects in workmanship, or for careless, slovenly or scamped work. In regard to the question of the ownership of plans, it seemed to him that where a proprietor paid a recognized fee of two-and-a-half per cent. he was fairly entitled to the plans. He thought it was fair and right that architects should retain copies of plans for their own future reference, but where a client paid the two-and-a-half per cent. which was recognized as the value of preparing plans, he thought it was not unreasonable that they should become his property, especially where he abandoned the idea of building. Of course if the architect believed he was going to be employed to superintend the work at the full commission, and then the owner, under the impression that he could get the superintending done cheaper, should say, "I will pay you for the plans," it would be a rather shabby thing on the part of the employer, though he did not know that morally the architect had very much ground for complaint as long as he got his fair proportion. These commissions, while purely arbitrary, were after all a very fair way of arriving at the value of certain services.

Mr. Langton said he was glad to think that the general drift of Mr. Gwynne's advice to architects was hopeful; that the trouble which was sometimes encountered in settling with clients, and at times, when driven to the last resort, in obtaining a verdict from a jury, could be obviated by taking a little pains in the first instance to give a clear understanding of what the architect expected to receive. In regard to the ownership of plans, it had always seemed to him that the owner had a right to plans, but there ought to be some means of preventing him from regarding the plans as his property to be used again, as for instance, where a design has been supplied for one house and the proprietor subsequently puts up a row. He thought some rights ought to be reserved to the architect in his plans, although no doubt the owner had a right to receive that for which he had paid.

Mr. Burke said that architects when settling up with clients were frequently met by a request that now the building is finished he will hand over the plans. He thought experience dictated the handing over of the plans, because an architect might leave the country, and in a year or two if the plans were wanted they could not be obtained.

Mr. Baker thought the plans without the specifications did not amount to much, as they would not be very intelligible to a builder without the details.

Mr. Dick related an instance where there was a stoppage of the drains in a house, and when the owner who possessed plans was asked where they were she did not know. He thought that was the usual state of affairs. He had understood Mr. Gwynne to say that a proprietor did not guarantee the infallibility of the plans to the

contractor, and he would like to know how far that principle applied, because in some instances it might work rather a hardship on the contractor. Suppose a foundation wall was designed too thin to carry the wall above it, would that be a case in which the owner of the building might call upon the contractor?

Mr. Gordon said the question of responsibility was a very broad one, and there was one aspect of it which might be mentioned. There might be points in connection with the drainage or other details which might be covered up, and on which the architect might certify, and the whole transaction be closed as far as the proprietor and contractor were concerned. A year or two after something might transpire which would disclose to the owner for the first time, and also to the architect, that there had been crooked or negligent work on the contractor's part, and the point might be raised that it was the duty of the architect to have investigated. As they all knew, the responsibility of an architect was by no means ended when he was paid his account. The case he had supposed was not at all a fanciful one; he thought there was no architect in the room who was not cognizant of such cases. He did not know of any instance in which an architect had actually been sued, but they had been threatened, and it certainly appeared as if they were open to proceedings. It had always appeared to him that there must be some way of wording the final settlement between proprietor and contractor which would, at least to some extent, protect the architect against these unforeseen contingencies, and he thought it was time very close attention was given to the form of both progress and final certificates in order to attain that end.

Mr. Wickson said that in some forms of contract it was specially stated that the final certificate did not exonerate the contractor from liability.

Mr. Gordon suggested that in the meantime the contractor might have failed in business.

The President then put the motion for a vote of thanks, which was carried very heartily.

Mr. Gwynne, in acknowledging the vote of thanks, said that with regard to the last point raised, it must be borne in mind that no general proposition of law could be laid down, each case always depending on its own state of facts, but if as in the supposed case a defect subsequently appeared, it became simply a question of whether such defect was due to the architect's negligence; and the greater the length of the period between the erection of the building and the discovery of the latent defect the greater the difficulty in showing that it was due to negligence, and the more difficult would it be to succeed against the architect.

Mr. Helliwell said that before the subject was dropped there was another point he would like to raise, that was the difference between the duties of an architect and a clerk of the works. In the erection of larger buildings it was usual to employ a clerk of the works who spent his entire time on the building. The supervision of such a man must manifestly extend further into the minor details than that of the architect. He thought if the distinction between the duties of an architect and those of the clerk of the works was more sharply brought out it would prove beneficial to all concerned. It ought to be clearly understood that the architect was only responsible for the general supervision of the work.

Mr. Townsend said he had adopted a course which he thought quite covered the whole question of the ownership of the plans, remuneration and many other points, that was to send his clients a copy of the little pamphlet containing a schedule of fees and other conditions of service and ask them to read it over, as being the terms under which he would act.

The President said he had done the same thing, and in one instance a client had signed the pamphlet.

Mr. Pearson said he would like to refer to the clause in the contract providing for the payment of a penalty by the contractor for the non-completion of work by a specified time. He believed that it was held that to succeed under that the owner had to show actual damage sustained by reason of not having the building at

the stated time. In conversation with the solicitor for one of the railways, that gentleman had suggested as a better way of arranging it that the builder should receive a certain sum if the building was erected at a certain date, if not completed by a certain later date also specified, a smaller sum, thus reducing the amount to be received by him as the time was prolonged. He would like to hear a little discussion on that point.

Mr. Wickson wished to know to what extent an architect was supposed to keep track of this matter. If a client goes to the architect and inquires whose fault it is that the work is behind, the architect may say it is none of his business to know. To whom can the client look? It was his own practice to keep a diary, making note of the progress of the various works almost every day, and he had given a client who made such inquiries a copy of that as nearly as he could. The client afterwards told him it was the most non-committal letter he ever got, but he did not know that he had a right to give him even that information. It was always a very awkward matter to say just who was behind.

The President said he thought the best way was to leave the drawing up of the contracts in the hands of lawyers, because the architect had quite enough responsibility without that.

Mr. Baker had found the bonus system to work well, generally resulting in getting the work through in good time.

Mr. Burke said the difficulty was where there were different contractors for the various trades to locate the blame for delays; he had found it almost impossible to do it.

Mr. Langton said an architect very often found himself bound to carry out what was really an injustice. Where a man had a time contract to carry through, and he was thrown out of his arrangements by delay on the part of those who had preceded him he could no longer do it for the same money, and might very justly say, "I cannot afford to do this work as quickly now as I could before."

Mr. Wickson said he had mentioned that very point to a client, and the client's reply was, "The man should not have been such a fool as to sign the contract."

Mr. Wickson's resolution regarding the printing and distribution of the President's address was then carried, after which the meeting adjourned until Wednesday morning.

SECOND DAY.

The proceedings of the Convention were resumed at 11 o'clock, by Mr. W. A. Langton reading some "Notes of an Architectural Tour in England and France."

Mr. Langton's paper which was illustrated in a very interesting and instructive manner by stereopticon views of the examples referred to, was received with much interest, and called forth very hearty expressions of approval.

Mr. Townsend opened the discussion by saying that he thought the lesson inculcated by Mr. Langton's address was, that there should be on the part of the architect less striving after originality in order to show what he could do, more common sense building and less architecture. He thought that applied more to residence designs than anything else. The speaker had told them what probably many of them had noticed, that in London and Paris the best work was that which was simply the outcome of an intelligent appreciation of and supplying of what was needed in each case. For instance, the building by Mr. Norman Shaw which had been illustrated was simply a square building which, while preserving good proportions throughout, placed the rooms and windows where the proprietor wanted them. Other buildings in which a great effort at display was attempted they had been told were not successful, and he thought that would always be found the case.

Mr. A. E. Paull expressed his gratification at the manner in which Mr. Langton had handled his subject,

and suggested that if on a future holiday trip Mr. Langton could visit Vienna, where he thought greater strides had been made than in either London or Paris during the last generation, and at a future meeting of the Association give them the results of his observations there in a similar form, it would be highly instructive and beneficial. It was said that Vienna had more valuable architecture than any other capital in Europe. He had very great pleasure in proposing a vote of thanks to Mr. Langton for his very valuable contribution.

Mr. Townsend, in seconding Mr. Paull's motion, remarked that the members of the Association ought to endeavour to impress the lesson of Mr. Langton's paper upon their clients in residence work; he thought if they could be induced to take into consideration the value of the court it would have a very beneficial effect.

The President, in closing the discussion, said one of the principal lessons to be learned was the cultivation of a feeling of restraint among designers, and a sense that every other man had some rights which ought to be respected. It would be impossible to have a street satisfactory from an architectural point of view if every man insisted upon building as if his was the only house upon that street. New York was said to possess some fearful examples of the disregard of this principle; charming residences were found standing between two monstrosities. Abroad the cornice lines and the main lines were run as far as possible in accord with those on either side of them. He was aware that the problem was surrounded by very great difficulties, but at least an effort should be made in the desired direction. Mr. Langton had said that what most impressed him in Paris was the prevailing color. Owing to that feature the individual house was lost sight of, it was the whole street that gave the impression. Here it was unfortunately the case that even where two buildings side by side were being erected at the same time men would not take the trouble to inspect each other's work, or find out what the other man was going to do. He advocated the casting away of all little, petty jealousies, and a united effort to promote a more uniform style of building.

The vote of thanks to Mr. Langton was then carried unanimously.

A paper was then read by Mr. Andrew Bell, of Almonte, on "Building Stones of Eastern Ontario."

Mr. Bell's paper was followed by an adjournment to an adjoining room, where samples of the various kinds of stone were inspected, and conversation indulged in by the members regarding them in relation to Mr. Bell's address.

Mr. W. R. Gregg, seconded by Mr. Belcher, moved a vote of thanks to Mr. Bell, which was carried.

The Convention then adjourned for luncheon, which was served in the building.

AFTERNOON SESSION.

In the afternoon the first number of the Agenda was a paper by Professor Ellis, on "The Chemistry of Paints."

Professor Ellis's contribution was not committed to writing, but he spoke as follows:—

"Being practical men, the members of this Association will expect me to treat of the practical rather than the aesthetic side of this subject, which, however, is one that lends itself readily to treatment from either point of view, because paints are decorative and protective. It is from the protective point of view I am going to speak. Of course, when you change your point of view, the whole subject in this respect is entirely changed, because from the decorative point of view the pigment is everything, while from the protective standpoint the oil is everything, and the pigment is of no importance except in so far as it hastens or retards the process of drying.

It will of course be understood that my remarks must of necessity be of a general character. The use of paints as a protective arises in this way. The cause of decay we will speak of (because we know it is to timber that paint is most commonly applied) is the growth of mushrooms in the timber. Now, we know that when a man wants to grow mushrooms he first

obtains a mushroom spore, and then selects a warm, damp spot in a cellar, out of the light, and provides a bed of decaying organic material and there sows his mushroom spore. He maintains a moderately warm temperature, and then the mushrooms will grow and multiply. Now we know that decaying wood is nothing but a decaying mushroom bed, we know it decays because the mushroom spores get into various lodging places in it, and there develop, and in the act of so growing disintegrate and destroy the wood. Therefore, in order to preserve wood from decay, all we have to do is to prevent the mushrooms from growing in it. Of course I do not mean edible mushrooms, but plants, whether large or small, of the same botanical nature as the mushroom which grow and are propagated in the same way, by means of minute spores.

If you take an ordinary mushroom and lay it on a piece of paper when it is ripe, an impalpable powder will drop from it on to the paper. These are the mushroom spores. These, when submitted to suitable conditions, warmth, moisture and, preferably, darkness, will grow. In fact the requisite conditions are very much the same as required to germinate grain. Therefore the first thing to be done in order to preserve timber is to exclude these spores, and if you succeed in doing so it will not rot or decay. I will assume that the spores are not in the wood when it is cut. That being the case, if it can be completely covered in such a manner as to prevent these minute particles or spores from gaining access to it, then it will be preserved indefinitely from rot. If the spores are in the wood when cut they can be destroyed by exposure to a sufficiently high temperature, and then the entrance of other spores can be prevented in the way I have already stated. The spores may also be killed by applying anything that will poison them, and various antiseptic solutions have that effect. The spores have a very considerable resistance to deleterious agents; they may be frozen, dried up, and so on, and still will come to life again, but they can be destroyed by heat and by many antiseptic solutions, such as corrosive sublimate, creosote, etc.

In order to protect wood, if it can be covered over with a substance which does not afford nourishment for these spores, and which they cannot penetrate, it may be preserved. Now oils and fats have long been regarded as preservative, in this way. It is found that oils vary very much with regard to their behaviour when spread in a film over any surface. Some oils are practically unchanged, others become changed into a hard, somewhat elastic, insoluble substance something like India rubber or leather. These oils are known as drying oils, and of these drying oils the one which shows those characteristics in the most marked degree is linseed oil, while olive oil may be taken as an example of the other class. Here is some olive oil and some linseed oil which have been spread on pieces of glass and exposed to the air at a temperature not far removed from that of boiling water. That temperature was adopted simply to accelerate the drying process, the result is better obtained by exposing them to the ordinary temperature. You will notice in these specimens that the olive oil is unchanged, it is just exactly as it was when placed on the glass, while the linseed oil has become a hard and firm film or coating on the glass. That is the way in which drying oils behave, and it is that which gives them their value as protectives. Oils when fresh are very soluble in ether, for example, but after drying, the drying oils become insoluble in ether, while the non-drying oils have their solubility unchanged, so that the nature of the oil is profoundly affected by the drying process. The film is elastic, and resists moisture, and therefore anything which is coated over with this film cannot be effected by moisture.

Now I pointed out that drying up would not destroy the mushroom spores, but so long as they are kept dry they will not grow, so even if they are present in the wood they will not grow so long as they are kept dried up. This film therefore serves a double purpose; it forms a waterproof coating for the wood, and prevents the entry of the spores from without. Of course if the wood is moist when the paint is put on, it will keep it

moist, but if the wood is dry it will keep it dry.

Now, what I propose to discuss is, what is it that causes this difference in the behaviour of drying and non-drying oils, so far as they are known to science, which is only in part. The first point is that the change is due to oxidation; the drying oils oxidize when exposed to the air, while the non-drying oils do not. This can be shown in various ways. For instance, if they are kept at an ordinary temperature for some days in thin films like this, these drying oils increase in weight, and the others do not. You know that certain oils when exposed on a large surface to the air will combine with the oxygen of the air so vigorously that they catch fire. For this reason it is well known that greasy cotton waste frequently becomes a dangerous element. The reason for that is that the cotton waste is saturated with it and a very large surface exposed to the air, and the oxidation produces heat which ultimately sets fire to the oil. Drying oils are very much more likely to ignite under these conditions than non-drying oils. Experimentalists have found that by taking cotton waste and soaking with non-drying oil, and heating it to a little below boiling water it may be made to take fire in an hour, while drying oil would not take fire under those circumstances until after being very much longer exposed to the heat. It has also been found that this oxidation of oils can be hastened by blowing air through them, and it is by raising the temperature. For instance, if oil is heated to 130° C and a current of air passed through it, it undergoes changes which make it dry much more quickly. In what is called "boiling" oil, oil is heated to 130° C and over, and a certain portion of the oil is decomposed, and the resulting product will dry very much more quickly than raw oil. Then, again, it is known that certain substances when they are mixed with oil, either during the boiling or afterwards, have the property of hastening the drying very much. These substances are called dryers. Some of these substances are black oxide of manganese, red lead, litharge, oxide of lead, these assist very much in drying the oil. Oxide of manganese is well known to be a substance which gives off oxygen very readily, and red lead also gives up oxygen."

Professor Ellis then, using the blackboard, gave a number of chemical formulæ illustrating the action of the various drying substances in connection with oil.

Proceeding, he said, "Now it is a well known fact drying in paints depends not only on the oils, but the different colors exercise considerable effect upon the oil. Of course it is easy to see how red or white lead would hasten the drying process, because we have seen how that it is effected with the oil. White lead is known to dry well, and it probably undergoes some similar change, and it probably forms the same kind of oxide that red lead does. I asked Mr. Elliott the other day to give me a list of the colors that dried well. The quick drying ones are yellow ochre, chrome green, zinc white, white lead and sienna. The slow drying colors are lamp black, madder, prussian blue, lakes, carmine, and with these latter Mr. Elliott told me it was necessary to add dryers in order to make them dry. The colors which dry well are almost all mineral oxides, while those that dry slowly are organic compounds. They have a tendency in chemical reaction to take away the oxygen, and therefore it appears that these colors hinder the oxidation in that way, while mineral colors assist them."

The President inquired if color were no object, would oil alone be better?

Prof. Ellis replied that it would not.

The President further inquired whether if a mixture is to be made, red lead was the best thing to use with the oil.

Professor Ellis said that probably some substance mixed with the oil would make a better covering than the oil alone, but he was not prepared to say that red lead was the best substance, because it was desirable that the substance used when once dry should be as unchangeable as possible, and lead was certainly not such a substance. Oxides of iron, such as ochre, were

very unchangeable, a priori he would say they would be very good materials to mix with oil.

Mr. A. F. Paull inquired if Prof. Ellis could recommend anything for the prevention of dry rot better than corrosive sublimate.

Prof. Ellis answered that so far as he knew corrosive sublimate was the best thing to use to destroy the spores. Of course paint did not destroy the spores, but merely assisted in keeping them out, and as soon as it cracked they could enter through the cracks.

Mr. Gregg, following up the question put by the President, asked whether the same objection that had been spoken of as to red lead existed when the red lead was used for priming—for which it had always been understood to be a good substance—and two or three coats of another color applied afterwards.

Prof. Ellis answered that he thought it did not; he had only mentioned the objection to red lead because it was more liable to change, and was not so permanent as other colors.

Mr. Dick said that in the earlier part of his lecture Prof. Ellis had made some very practical remarks in regard to the properties of timber. An illustration in connection with this occurred to his mind, and no doubt others present had met with the same thing in the course of their work—in the case of a warehouse, for example, where a row of columns was run through the length of the building and a beam resting from column to column, just resting upon each column. The difficulty to be contended with was, that this beam was a little unsightly if left in its natural condition, while, on the other hand, if painted, it was well known what consequences might be expected. Generally speaking in a not very long time rot would be found somewhere in that beam. He presumed from the warmth of the building and the natural moisture not being dried out of the timber, this mushroom growth spoken of by Dr. Ellis set in. He supposed the spores must have been present in the wood in the first place. He had often himself, and he supposed others had done the same thing, left beams just as they were, unpainted, for a year or two, until they were thoroughly dry, and then had them painted. It had occurred to him that it might be a good thing to leave such a beam unpainted for a year or two, enveloping it in the meantime in cotton batting, until it has become thoroughly well seasoned. The effect of the cotton wool, he thought, would be to filter the air that reached the beam and retain a great many of the spores in the cotton. It would be worth trying as an experiment he thought. Whether the rot was caused by the mushrooms spoken of by Dr. Ellis, or some other organisms, he did not know, but the fact was undoubtedly that in every case where beams were painted the rot sooner or later made its appearance.

Mr. A. F. Paull asked Mr. Dick if he thought that such a beam as would be required to sustain a number of joists in the way suggested, if left in its natural state for two or three years, would then be sufficiently seasoned to admit of its being painted with safety? Professor Barlow, whose works were published, and who had made experiments with regard to the seasoning of timber extending over fifteen or sixteen years, had discovered that at the end of that period the seasoning process was still going on. If Prof. Barlow was right the prevailing opinion was that wood became sufficiently seasoned after two or three years to make it prudent to apply paint was wrong.

Mr. Dick thought practical experience had demonstrated that in most cases two or three years was a sufficiently long period for the beam to get seasoned in, but Mr. Paull was quite right in saying that wood scarcely ever ceased from the process of seasoning. He knew of a case where an old deal table which had been in use for some twenty years in a building insufficiently warmed by the ordinary stoves had been moved into a new building heated by steam, and it had not been there very long before one day it went off like a pistol shot, cracking its entire length.

The President related an instance which occurred in England, in which some old beams taken out of a church were sawn up for another purpose, and they afterwards

both warped and cracked, and if anything might be expected to be thoroughly seasoned certainly those beams might have been.

Mr. Belcher remembered a case where an old hardwood floor was taken up, the boards re-dressed, the joints shot, and the floor re-laid, the joints being cramped up perfectly tight, the boards dowed together and everything left perfectly tight. About two months after it was found that one might almost put a penny piece between the joints of the boards in places. He attributed this to the fact that the old flooring had been left out of doors for a short time during the process of the work, which occupied about two weeks, and had absorbed moisture. The floor he had no doubt was at least two hundred years old.

Mr. Townsend said one of the great difficulties architects had to contend with was that of not being able to get what they specified, particularly in the matter of oil. He understood from what Dr. Ellis had said that the value of paints depended almost entirely on the quality of the oil used, and if Dr. Ellis could give some rapidly applied test, by which, without any deep knowledge of chemistry, an architect could ascertain what was a good sample of oil, he would be conferring a great favor on the members of the Association and the profession at large. Another matter which he had been perplexed about was the presence of turpentine in paint, as to whether it had a deleterious effect.

Prof. Ellis said he could not give the desired assistance in regard to testing oil, but unfortunately the testing of oils was one of the most troublesome things a chemist had to do. Of course anyone accustomed to oil would be able to tell by its physical properties, and could form a very fair idea, but the chemical tests of oils were among the most awkward and troublesome things he had to handle. In regard to turpentine, he did not know of its having any injurious effect except as a diluent. Of course from a practical standpoint he knew less about these matters than his hearers, but what he understood was that the turpentine when it evaporated left the oil behind it in a kind of crystalline residue, leaving the paint in a form similar to the figures of salts left on a piece of glass when a solution is allowed to dry off. The term "crystalline" he did not of course use in its strict sense, and it was misleading, because oil is so very much removed from being anything like crystalline in its structure.

Mr. Langton asked if he was right in understanding that the fungi referred to could do no harm except where in addition to being damp it was also dark.

Prof. Ellis said they grew better in the dark.

Mr. Langton inquired if they would be likely to grow in a room such as that in which the convention was being held?

Prof. Ellis said they would in the centre of the timber.

Mr. Langton said that as the only object in painting wood above the cellar is to keep it from being affected by variations of dampness and dryness which make it warp and crack in an unsightly manner, in places where a few cracks are of no consequence as in the timber of a church roof, the best thing would be to avoid filling, and use water colours merely to disguise the discoloration of age, because otherwise one might be keeping in the dampness which produced the growth of the fungi.

Prof. Ellis said that as a general statement that was no doubt right. Spores would grow where it was damp, they would not grow where it was dry. The application of oil paints constituted a waterproofing, and if there was dampness in the wood before it was painted the painting would have the effect of retaining it there, but if the wood was dry and the coating remained impervious, it would keep dampness out.

Mr. Power said he thought a very good test of oil was to place a sample on a sheet of glass and leave it in a room at a temperature of about 68; if it formed a film, or dried in about twenty four hours it might be regarded as fairly good, and one might judge of its deterioration in quality by the time it took longer than that to dry. Another point was that an oil in which you had to put much turpentine was not a good oil. The older

the oil, the longer it had been allowed to stand, the more turpentine would be required to make it workable. The only object of turpentine was to make the paint flow, and where an excess of it was necessary for that purpose it was deleterious to the paint. He would like to know if Prof. Ellis would recommend ochre and oil as priming, the ochre to take the place of the commonly used red lead.

Mr. Aylsworth said he had gathered from what Prof. Ellis had said that ochre would be better than anything else for priming. In regard to the seasoning of timber his opinion was that kiln drying opened the pores of the wood more than the ordinary seasoning, and that when taken out of a kiln and put in a building it absorbed moisture. He believed this might be obviated if it were possible to lay floors in rooms already finished and warm. He knew of one instance where that had been done, and the floor was tight. Of course that was not practicable in the case of putting in flooring in a new building, where it would absorb moisture. He had heard carpenters say that they had made floors from green lumber cramped up tight, and that they would not open up as much as when made of kiln dried lumber.

Mr. Pearson asked if the pigment in paint did not assist as a preservative? In regard to the use of turpentine in paint, he had always had the impression that it produced blistering.

Prof. Ellis, replying to the questions which had been asked, said that what he had suggested was that there was more chemical union with red lead than with ochre, which caused it to dry faster, but which was the best paint he would not undertake to say. In regard to the blistering of paint, that was probably produced by the evaporation of the turpentine. In regard to the matter which had been discussed about the shrinkage of wood, especially the instance where the timbers had been taken from an old church and sawed up, he would suggest the possibility that wood which had been dry for a number of years was in a condition of strain, and when cut up yielded to it. He thought it probable that the effects referred to were due to some such cause as that rather than from any further change in the drying of the wood.

Mr. Gordon said he was sure all had been greatly interested and instructed by Prof. Ellis's address and the resulting discussion, and moved a vote of thanks to Prof. Ellis.

Mr. Dick had great pleasure in seconding the motion, which was carried.

Professor Wright then gave a talk on the Aspect Compass, illustrated by examples and diagrams, which excited much interest, and for which a vote of thanks was tendered him.

Mr. H. B. Gordon then read the following paper:—

MUNICIPAL BUILDING LAWS.

The necessity for wise municipal building laws, efficiently administered, is evident to all who take an intelligent interest in building operations. Unfortunately, the enactment of such laws is generally delayed until gross evils are so multiplied that their efficiency is greatly impaired unless they can be made retroactive. Usually nothing in the way of sanitary supervision is attempted until long after a system of sewerage and water service has been in operation. Meanwhile many property owners ignorantly or unwittingly install in their buildings much that forms an unsanitary menace to the occupants and their neighbours. Generally, not until a severe fire has swept the central portion of some town, does it occur to its ruling authorities that some sort of building restrictions would be a general benefit. Possibly not till after the collapse of some building and the consequent loss of life, is the public conscience so awakened as to enact that the greed of speculators and the ignorance of architectural tyros must be subordinated to the safety of the people.

Very rarely, if ever, does the aesthetic sense of the voting public or their representatives, run the extravagant length of deciding that the nonarchitectural monstrosities proposed for the adornment of their streets,

might be the better of a little intelligent revision by a competent public officer.

It therefore rests very largely with the members of this profession to impress upon the public the necessity for such laws; to urge their adoption in all our towns and villages; to seek their improvement where now existing; to loyally respect their requirements; and cordially co-operate in their enforcement.

Architects should remember that their natural desire for a free hand for themselves necessarily implies a free hand also for the speculator and jerry builder. Desirable building restrictions will not in any way hamper the operations of a true architect. The existence of wholesome regulations should be of great help to the profession in dealing with niggardly or unscrupulous clients. And no true man should want to override or set aside a law for the general good.

The scope of municipal building laws may be roughly divided into four branches, viz.:

- 1st, The safe constructional requirements.
- 2nd, The necessary sanitary restrictions.
- 3rd, Provisions against the spread of fire.
- 4th, Public aesthetic problems.

Some portions of such laws should be universal throughout the province; others must necessarily be determined by local conditions. A law or laws compelling the adoption of some of the general principles of safe construction should be provincial and general. The size and character of foundations to buildings, and the weights with which various soils may safely be loaded, is as applicable to the village as the metropolis. The thickness of walls in relation to their height and the weight of floors to be carried, is as necessary for the safety of life in the mill in the country as in the warehouse in the city. The safe load that may be imposed upon a beam or a joist does not vary with its urban or suburban position. The support to a superincumbent shop front is as important a problem in the village street as it is elsewhere. Indeed the necessity for some clearly defined building laws for small municipalities appears to be even more urgent than for larger places. In the former, the work is generally planned by those who lack theoretical knowledge of the strength of materials and the equilibrium of forces.

Fortunately there is a growing tendency in the smaller places towards the employment of trained men in the designing of their more important structures. But who that has observed the waste of materials on the one hand and the perilous experiments of skimping on the other, can fail to foresee the advantages of some plain general enactments that will guide and control all building.

Such a general law might well include the following, viz.: A statement of the safe sustaining power per sq. ft. of the various kinds of soil; an outline of the correct method of forming footings; a description of what must form the necessary kind of foundation walls, piers or posts under the various classes of buildings; the thickness and character of external and sustaining walls and piers; the strength of floor joists and beams; the sizes, kind and position of posts and beams carrying floors or walls; needful provision against wind pressure on high roofs, and other items of general safe provision; regulations for the repair or removal of dangerous buildings; general tables stating authoritatively the compressive and transverse strength of the commoner building materials; and the factors of safety to be adopted in their use.

There might also be a general classification of buildings according to their purpose and use, with special requirements adapted to each class; for example, churches and places of public amusement should be required to have ample provision for exit, and the stairs and passages proportioned to the audience. The floors of mills, stores and warehouses should be proportioned to carry much heavier loads than other structures. Provision against vibration in factories should be demanded. Regulations for the size and position of stairs in hotels and factories should be provided. Also general conditions to be observed in all buildings of certain classes that exceed a minimum height.

These suggested points, as well as others, might well be embodied in some general law; but pending such, it is clearly the duty of each municipality to protect the public by such reasonable restrictions. In addition to such general requirements each town or city may need special enactments for the public safety, such as regulation of the construction of light areas and their protection; points to be observed in utilizing the vault space under public sidewalks; the disposal of water from roofs; the protection of elevator shafts, and many other points.

Under the head of sanitary restrictions some laws might be made of general application to the entire province; while a more stringent law should be applicable to those municipalities having public sewerage and water supply.

A foul cesspit contiguous to a dwelling and but shortly removed from a well that supplies drinking water is a menace to health in the scattered village as well as in the more thickly peopled town. Unconsciously back venting a cesspool by a badly constructed drain from a country house, is quite as likely to produce diphtheria as an untrapped connection from a town residence to the street sewer. A filthy pan closet in a country hotel is quite as objectionable as its town cousin in a more pretentious hostelry. The abolition of privy pits and the substitution of a more sanitary contrivance is vastly more important in the village street where domestic water is drawn from the adjacent well, than in the more closely built town with its public waterworks.

In municipalities that are inaugurating a public water supply and sewerage system, the necessity is very urgent for the immediate enactment of sanitary building laws. Citizens who in their united capacity spend tens of thousands of dollars to provide such public conveniences should see to it that the benefits thus obtained are not neutralized by unsanitary drains and plumbing, and that their last state is not worse than the first. Nearly every town has its tinsmith plumber who proceeds to nullify the benefits of public sewers and water supply by ventilating the public sewer into the houses of his confiding patrons.

The general requirements of a sanitary building by-law are so well known as scarcely to require notice here: the correct alignment and trapping of all drains and soil pipes; the provisions for ventilating pipes and for preventing syphoning of traps; the material and character of all pipes used and the method of making joints; the class of fixtures allowed; the provisions for the efficient inspection of all parts and for the testing of the whole system. These and other points are well known to the practising architect and the city plumber. But alas, how limited is the knowledge and experience of the tinsmith plumber aforesaid, and his confiding patron; and how great the need for some explicit law to guide the one and protect the other.

Under the heading of "Provisions against the spread of fire," there is also much that might be of general enactment. It is surely as important for the country homestead to have a certain thickness of brickwork around its smoke flues and the chimney tops carried well up above the adjoining gables as it is for the town or city house. Negligence in the one case will likely result in the total destruction of the home, while in the other, a timely visit from the neighbouring fire engine may extinguish the blaze before much damage is done. One can hardly understand how a village or small town that spends thousands of dollars in the equipment and maintenance of a fire brigade, does not make the first effort to prevent the recurrence of serious fire risks by passing a suitable building law. Nor is the action of the authorities of larger places much more intelligent. We have the example of a large city, after very destructive and repeated fires, neglecting the advice of a committee of architects who pointed out at length the amendments of the law necessary to check a recurrence of the disasters.

The amount of money lost by fires in one year in Ontario, is enormous, and much of that loss is attributable to negligent and unscientific building operations. The unthinking may pass this over by remarking that the insurance companies pay the most of the loss, and

that an occasional fire is necessary to keep up the peoples' interest in insuring. They forget that the insuring public have to pay the whole, and that insurance rates bear at least some proportion to the risks run and the loss sustained.

Some look to the insurance companies, to demand better building regulations, and no doubt they might do much in this direction. Their action in making their rates bear some relation to the efficiency of the fire brigade and fire extinguishing apparatus of a town, has quickened the movements of many a Council. Were the same pressure brought to bear in insisting on the enactment of rigid building by-laws, many a town councillor would awake to his duty in this respect. Some who have given this subject much thought, advise that the insurance companies classify buildings more definitely, and rate them more distinguishingly in regard to the material and manner of their construction.

The movement is in this direction and it is helpful to the architect as well as his enterprising client. But the usefulness of such a distinction is much curtailed by the character of surrounding buildings which may have been put up regardless of the fire risks they contain.

A general law for the whole province might cover such matters as: the manner of building chimneys, hearths and fireplaces; the location, protection, and isolation of steam boilers, furnaces, forges, etc.; the insulation of hot pipes, the proper disposition and insulation of electric wires; the isolation of buildings containing extra hazardous contents; special regulations concerning the construction of theatres and other places of public amusement. And it would be well to have the erection of all hotels over a certain height, no matter where built, subject to some clearly defined rules of construction for the prevention or slow spreading of fire. It seems only reasonable, that everywhere, those who wish to build within a certain limit of the boundary of their property, should be under some restrictions, so as to prevent them creating a serious fire risk to endanger their neighbours' property. In towns and villages as well as in cities there should be some limitation as to the class of buildings allowed on the more thickly built streets.

Each city and town will require much more in their by-laws regarding fire protection.

The local conditions will largely determine whether the division of a town into zones in which the restrictions are graded, is desirable or not. The majority of important American cities make no distinction. As a tentative measure it is probably desirable in our young and scattered municipalities.

The central business and crowded part of a town requires more stringent regulation than the outlying districts. All parts however should be under some governing regulations, as it is foolish for any town to have a zone in which people can do as they like in the matter of building.

Some limit should be placed on the external use of wood, and the size and location of wooden sheds and stables should be regulated.

It will be found that even in the residential parts of a town, a fairly stringent building law will work for the ultimate advantage of the locality. "Brick buildings only," is not a severe restriction when their continued preservation is considered.

The kind of roof covering that may be used is an essential matter. The rapid spread of fires is largely attributable to the inflammable nature of the surrounding roofs. Wooden dormers and cornices are another prolific source of danger, and their construction and covering should be restricted or regulated. The size and description of party walls and of parapets above roofs are questions for necessary legislation, as many a serious fire has been checked by efficient walls.

The structure of stairs and their surroundings should be safeguarded with wise restrictions, not only to prevent the rapid extension of fire, but also for the safety of life.

The enclosing walls of elevator shafts are deserving of much more attention than they usually receive in building laws.

Special restrictions are desirable for all buildings over a certain height, so that they may not prove towering fire giants, to spread brands of destruction in every direction. It is regarded by many as only right, that all buildings over a certain height should be built as fire-proof as modern conditions will allow.

In defining the special requirements for the different classes of buildings, it is desirable to have a classification with accompanying definition clearly setting forth what is intended by buildings of a certain class.

The following six fold division is suggested :

1st. Public building class, including all places of public assembly, that have audience rooms capable of seating more than a certain limited number.

2nd. Hotel class, including hospitals, asylums, and lodging houses accommodating more than a certain number.

3rd. The Manufactory class.

4th. The Warehouse class.

5th. The Office Building class.

6th. The Dwelling House class.

It will occur to all that structures of the public building class require special regulations for their construction and maintenance, that the audiences may be protected in case of fire and panic.

Buildings of the manufactory class, as well as the hotel class, should have stairways protected from rapid firing, and suitable fire escapes easily accessible.

The restriction of the undivided floor area of warehouses and factories is a wise measure, provided that exception is made in favor of buildings constructed on so called fire proof or slow burning principles.

Building by-laws should contain clauses dealing with the question of repairs or alterations to existing buildings. These should state the percentage of value of allowable repairs to old structures that do not comply with the by-laws; and the basis of valuation from which this percentage is to be determined.

By-laws can only be made definite and explicit by containing a glossary of the terms used throughout their enactments. The importance of this is evident to all who have had to interpret building laws.

How essential it is to have a clear statement of the datum line from which the height of walls or buildings is to be measured, to know just what is intended by first story, and what is a basement and what a cellar; to be sure that your idea of the maximum or minimum height of a story will not conflict with that of the official administering the law; to know what is meant by bearing wall, division wall, party wall and partition wall; to solve the seemingly simple question of what constitutes a mansard roof; to have settled without cavil, what is mortar? what is cement mortar, and what is cement? and even to be informed which ton is meant when such weight is mentioned.

It is when we consider the last or aesthetic side of building laws, that debatable ground is fully entered. Here unartistic democracy puts down its foot and forbids further restriction.

The abstract aesthetic question of having the fronts of all houses in a line at a certain distance from the street, arouses no enthusiasm. But let a concrete case arise where some selfish men obtrude their buildings so far forward as to thrust their neighbours into obscurity, and those who suffer are likely to be interested in a proposed remedy.

The public may not appreciate the beauty of curtailing the height of buildings to some proportion to the width of the street upon which they are built; yet they might apprehend the justice of not allowing some men to completely overshadow the light and air of their neighbours.

If people will tolerate unsightly projections of signs, oriels and cornices, so long as it is merely an aesthetic question, possibly they may protest that space belonging to the public is occupied by private parties.

Ordinarily men do not care to be tied to a building line or allow some of their property to be regarded as a boulevard, but who that has visited Washington and

other cities, where such regulations are in force, can help being impressed by the result.

It is only by comparison with what has been done elsewhere, that we can educate the general public to a sense of the needs at home.

What would have been the result if each of the architects of the Chicago World's Fair buildings had been allowed to work his own sweet will without a concerted action or critical oversight, may be left to the imagination. What they did accomplish under wise restrictions as to height of cornice line and general style of design, the Court of Honor bore witness.

Possibly we may never reach the aesthetic status of some continental cities where the street front architecture on important boulevards is subject to the approval of a public official; but the enactment of some effective, if less stringent by-law in this direction, should be the desire of all lovers of architecture.

A building by-law would not be complete without some regulations to be observed during the erection of buildings, such as, the proportion of the public street that may be occupied by building materials; the protection and convenience of the passing public by covers and sidewalks; the height and manner of scaffolds abutting on the streets; the protection of open areas and excavations; the erection of temporary sheds, engines, etc.

Any by-law, however complete, will be a comparative failure without efficient administration. So secure this a really first-class man must be appointed as inspector of buildings. Only such should be appointed to this important position to protect the lives and property of the people and oversee so much that tells for the safety, comfort and enjoyment of the masses. To get the right man in the right place is often a difficult matter when the reach of aldermanic influence is at work. The one who is really competent will not seek the office. The position ought to seek him.

Some one ought to be appointed, who besides a practical experience in the supervision of buildings is competent to make the necessary examinations, calculations and decisions both theoretical and practical in all matters pertaining to the by-laws. He should be a man incorruptibly above reproach, and while courteous to all, firm and just in administering the spirit of the law. Such a man should have discretionary power to modify the provisions of the by-law where there are practical difficulties in the way of carrying out the exact letter of the law, so long as the spirit of the law is observed, the safety of the public secured and substantial justice done. His duties should include the examination of the plans and specifications of all proposed buildings, to determine if the contemplated work is in accordance with the building by-laws; the granting of permits for the execution of such work; the examination as often as practicable of all buildings in course of erection; the examination of all buildings reported as dangerous; and the prosecution of all who infringe the by-laws.

A permit should in all cases precede building operations, and to obtain it a copy of both plans and specifications should be filed.

The specification is necessary to inform the inspector of the character of material and the method of construction. The filing of both plans and specifications is essential for reference as the work proceeds. By the sun print process copies of the plans may easily be supplied. Architects should not grumble at such extra trouble, as they will doubtless find that such requirements tend towards their being more frequently employed.

The foregoing suggested points, together with much that naturally accompanies them, when properly amplified, clearly stated and systematically arranged, should form the basis of municipal building laws.

They may serve to point out the desirability of enacting building laws in small towns and even villages. They may suggest some necessary amendments to existing by-laws in other places, and may convey some ideas favourable to the passing of a provincial act.

If their perusal stimulates the members of this Association to active efforts for the improvement of building

regulations, this short paper will have served a useful purpose.

Prof. Wright at the conclusion of the paper said that while this paper is intended to deal mainly with the fire by-laws, in the early part a reference is made to a factor of safety which should be extended, especially with regard to wood, as there are apparently conflicting ideas before the profession. On the one hand we have a factor of safety of two regarded as sufficient, and so long as the views of the author are observed fully it is perfectly safe, but if this factor is applied to the results of the determinations of the modulus of rupture from other sources it is not safe. This might be explained in this way—on the one hand we have a low modulus of rupture with a low factor of safety, giving the same working fibre stress as the higher modulus with the higher factor. This low modulus of rupture above referred to has been obtained by basing conclusions on the results of experiments which are generally rejected.

Again, it is well before using the results of any experimental research to observe fully the method under which such determinations have been conducted. For instance, after an elaborate set of experiments Prof. J. B. Johnson has established a relation between the percentage of moisture in a beam and its strength. So that having given the strength of a beam and its percentage of moisture it is possible to calculate what its strength would be with any other percentage of moisture. You will find these results and others equally valuable published under the direction of B. E. Furnow, by the U. S. Department of Agriculture Division of Forestry. These results, you will find, are very extensive and reliable and are the most advanced determinations of modern scientific research.

I should like to say a few words on that much vexed question of Portland cement. At the outset let me say that most architects and too many engineers draw up elaborate specifications regarding Portland cement and accept the material from the manufacturer without any examination as to its qualities whatever. Now from the very nature of the process of manufacture this material is liable to very great fluctuations, and for that reason alone it requires careful watching to say nothing of the danger proceeding from middlemen who are willing to doctor the cement for a few paltry dollars. I have examined within the last year several large shipments which were absolutely worthless—simply so much sand, or worse still, containing a large proportion of lime. These shipments of course were condemned, but you may feel sure they found their way into work where no examinations were made. Now I suppose the reason this neglect of testing is so general is because you have been led to believe a laboratory with a full equipment a necessity. While this may be true as far as a thorough knowledge of the material is concerned, yet you may *find out a great deal in a very simple manner. If you would mix a small quantity of cement with water and after it is set place it in hot water at a temperature of 110° F.—if at the end of 48 hours it remains solid, adheres to the glass and keeps a sharp edge, you may feel fairly sure that it will not go to pieces on the work. With a small pair of scales and a fine sieve you could easily determine the fineness of the grinding. A cement which would not fail on glass in hot water and was fine, leaving only a small residue, might with safety be regarded as a fairly good cement. If in conjunction with this you determined its tensile strength you would be quite safe in your opinion.*

The discussion of Mr. Gordon's paper was then proceeded with.

Mr. Gordon suggested that a resolution should be passed something to the effect, "That this Association, being impressed with the desirability of having some general building law applicable to the whole province, and also local and municipal building laws for each town and city, resolves that a standing committee of five members of this Association be appointed by this convention, with instructions to formulate a general enactment of such desirable building laws, and that the committee correspond with architects and others of kindred

professions in the various towns and cities to secure such co-operation as is possible for attaining this object." He begged to move that resolution, and thought it very desirable that the project should be attempted.

Mr. Burke seconded the motion.

Mr. Dick pointed out that while there was danger, on the one hand, in allowing too much latitude, leaving people to do as they choose, and incurring thereby danger both constructive and sanitary, yet, on the other hand, there was danger of going too far in the direction of paternal legislation, by making the building laws deal so much with detail that they would almost take the place of a building hand-book, and put it in the power of people to say that where so much was determined by law there was no necessity for skilled architects. Of course all knew that building by-laws, or any other kind of laws, would never make architects in the true sense of the word. If building by-laws were made more strict than was absolutely necessary it had a tendency to deter people from building, because building was done generally as an investment, and if the cost of building was made excessive so that the returns from a building would not pay interest, capital would be chary of going into building operations.

Mr. Power quite agreed with all Mr. Dick had said, especially that the matter of legislation in that line might be overdone.

Mr. Gordon explained that he quite agreed that it was necessary to act with caution and discretion in regard to this matter. But at the same time he thought the Association ought to take the initiative in devising some active means of remedying the evils which existed. There were municipalities in which people were alive to these evils, and were endeavoring to cope with them, and who ought to be assisted in their endeavours. These people did not know just how to proceed, and had not the knowledge to enable them to grapple successfully with this problem, and there ought to be some committee to whom they could apply, and therefore he wished to see this committee appointed. It was the duty of the Association to educate public opinion in these matters, and that could be best done by appointing a good strong committee to exercise their judgment in regard to the matter. He thought such a committee would have enough common sense to avoid the evils which had been mentioned, and to know that the same law which was applicable to Toronto would not be adapted for some little village or town.

Mr. Dick stated that he did not for a moment intend to raise any opposition to the appointment of such a committee, on the contrary he was prepared to vote for the adoption of Mr. Gordon's resolution.

Mr. Power also stated that he did not for a moment question the correctness of what Mr. Gordon had said, and he was in the same position as Mr. Dick.

The President did not think there was any danger of any such legislation as that suggested being carried too far, for the most they could hope for would be that a very small portion of their recommendations might be adopted. How far we should go, he thought, might safely be left to the committee appointed.

The resolution was then carried.

The election of the members of the Council was then proceeded with, and resulted in the election of Messrs. Burke and Lennox, of Toronto, and Mr. Power, of Kingston, as the three new members of the Council.

Mr. Langton then moved that the thanks of the Association be tendered the Hon. the Minister of Education, for permitting the use of the School of Practical Science in which to hold the convention, and to Professors Galbraith, Wright and Ellis, for their very kind assistance in making the convention a success.

Mr. Burke having seconded the motion, the President tendered the thanks of the Association to those of the gentlemen named who were in the room, stating that if half the members of the Association would help as heartily as those gentlemen had done, especially Prof. Wright, the conventions would be even a greater success than they had already been.

The convention then adjourned.

FLYING SHORES AND BUTTRESSES.

[COMMUNICATED.]

THE present condition of the architectural profession may be briefly and prosaically stated thus: It comprises all those men who design and superintend buildings and a large number of others whose business consists in the ordinary transactions with reference to house property and valuations. In fact, the field is so varied and extensive, as though the knowledge necessary to befit an architect was only of secondary importance, and left the holder of this title ample time for study and the practice of other businesses and professions that are in a measure connected with it, that we find many styling themselves architects, valuers, civil engineers, sanitary and ventilating engineers, etc. Architecture is a profession that can hold its own without the support of all these flying shores and buttresses. It has always appeared to us to be a feeble method to adopt to strengthen their position and to ensnare the unwary client with these high sounding and empty titles.

Upon what ground do these men lay claim to these titles? There is no law in the land to prevent a tinker claiming that he is a ventilating engineer as far as that goes, but an architect, if he is an architect, has made a study of it, and is supposed to have some knowledge of these branches of the building trade with which he has to deal. "Ye cannot serve God and mammon." If a man is an architect he is but a poor civil engineer, and vice versa. Surely if a man wants to employ an architect, he will go to an architect—if a civil engineer, to a civil engineer—not to a weak admixture of both.

Apart from the time and study necessary to obtain any degree of competency in either profession, art in architecture and art in engineering, although they are both ultimately striving for the same goal, have each to make concessions one to the other before the happy combination may be reached; and this result will never be obtained by these half-masters of both and master of none.

There are monopolists in commercial life, and some of these monopolists have proved successful, but we fear these aping professional monopolists will fall to the ground between so many stools.

There is one other buttress that occurs to us, that these professional monopolists have overlooked; Why not Architect and Solicitor? There would be just as much sense in assuming this as in assuming the others, for in the practice of the profession legal difficulties sometimes occur—questions of boundaries, of ancient lights, rights of way, of conditions of contract, and of many other kinds possible present themselves. We make no question but that this buttress would also have been seized upon had it not been that the law is a close profession.

What are the duties of an architect, that these gifted individuals have mastered and found time to study and make themselves expert in other professions? In judgment he is expected to be a better mason than a man who has spent all his life in working stone, a better carpenter than a man who has handled lumber all his days, a better plumber, a better plasterer, a better painter, a better glazier, etc., than anybody who has devoted his life to any one of these particular trades. This is only a small part of what the public looks for and expects from an architect. He might be proficient in all these branches and yet be no architect at all, for his primary business as an architect is not merely to know, but to place, to invent, to adapt, to be incessantly conquering fresh difficulties, not by lavish outlay, but economically, gracefully, and in a refined manner. That these architectural difficulties are conquered in this way is the exception rather than the rule when we take into consideration what an architect is expected to know. To-day he is called upon to build a bank and he must make himself familiar with every detail of the banking business; next week he must make himself perfect in all the knowledge pertaining to tanning, and a month later he must enter heart and soul into the manufacture of bicycles. All this he has to do, not as a barrister has to do it, just far enough and deep enough to talk about it plausibly to convince a judge and jury, but in a way

that will stand the test of practice and of fact. His bank must be arranged so that every facility is offered to clerks and public on the most economic principles; his tannery must be capable of turning out real leather, and his bicycle factory arranged with all the latest improvements with no waste of space or labour. Then the man who builds churches or private houses has not only the practical questions of convenience to deal with, but the whole world of architecture as an art besides. When he is familiar with all trades, expert at all sorts of planning and arrangement, he is next expected to add to all this knowledge and all this skill as much artistic faculty as would by itself make the fortune of a painter and sculptor. For this artistic faculty a liberal public never dreams of paying him. It generally offers him the same percentage for building churches as for building cow-sheds, and cannot repress its astonishment when its churches are not built with the perfection it desires. It is also an imperative necessity that the style he adopt for his building should be that which every spectator prefers, since anyone who is not pleased will assuredly lay the fault on the architect's want of ability rather than on his own want of judgment.

The conduct of the works is equally simple, as all that is required of him is that he should be able to answer at once every question that is addressed to him and to decide definitely there and then the best mode of procedure. In his supervision of a building, all that is needed is that he should be omnipresent. Every one who is employed feels that it is the architect's business to watch him, and if he can scamp a bit of work without detection it is on the architect the real shame and disgrace of it all will be. The architect ought to have been here and everywhere at once, and then such things could not have happened. Still the architect's duties are not yet ended. The builder's accounts still remain to be made up. Every item which he did not foresee before the agreement was signed rises up against him as an accusing extra; every detail which he revised and re-revised to make it more perfect does the same; every day which he spent at his own cost improving points of planning and construction, does the same; and now instead of being thanked for his care and thought, he is blamed for having kept the building back and running up a bill of extras. These extras must now be gone into in detail, all the deductions and additions measured up in the manner of measurement peculiar to each trade, and the architect must know to the fraction of a cent the value of each particular item, and these claims must be finally adjusted to the satisfaction of the client and contractor.

Time and space fail us to enlarge on the multifarious duties imposed on the architect, but the foregoing remarks will enable us to form some idea. As was before stated there is sufficient ground to cover in the field of architecture without monopolizing an expert knowledge with other businesses that have an indirect connection with architecture.

What argument could prove a stronger incentive to the profession at large, than this, to put forth every effort to obtain the passing of the Act when the word Architect shall have a recognized standing. Then all these flying shores and buttresses that have been found necessary to bolster up the profession may be dispensed with. The course of study then prescribed will embrace those branches of the building trade in so far as they are necessary to an architect in the exercise of his profession, and it will be then only after several years of hard work and close application and an applied test that one can assume the honorable title of Architect, and there will be no further need of this arrogating of empty titles which every Tom, Dick and Harry can assume.

The annual meeting of the Standard Drain Pipe Co., of St. Johns, Que., was held on the 13th inst. Mayor Trotter was re-elected president and Capt. Coursol, vice-president.

The Prismatic Glass Co., of Toronto, are manufacturing a new and meritorious article for pavement lights, extension sky lights, illuminating ornamental windows, etc., particulars of which will be found in our advertisement pages. The Company have recently sold 5,000 pieces of double prism sidewalk lights, amounting to five tons of glass, for use in the new Ogilvie Building, Montreal.

FIRE RESISTING STRUCTURES.

THE destruction of the Manhattan Bank building in New York has directed attention to a weakness in the steel skeleton structure, and has shaken faith in the fire resisting qualities of such buildings. A late fire in Chicago, in which two similar buildings were demolished, has further called attention to the matter. It is established that in such buildings, even if the material will not burn, it will warp with the heat to such an extent as to bring them down, and that although the iron work may be covered with a fire resisting material absolute protection is not guaranteed. In the case of the Manhattan bank building it should be stated, however, that the floor beams were not completely covered with the fire-resistant, the lower edge being flush and only protected by the plaster finish. The building was erected

some years ago and previous to the passage of the regulations on this point now in force.

As a result largely of their experience at these two fires, Chiefs Bonner and Sweeney, of the New York and Chicago fire departments, have declared these tall skyscrapers to be huge fire traps, especially when their contents run largely to inflammable materials. They pronounce in favour of buildings of brick and yellow pine. In such the fire burns more slowly, and there is better chance of saving the contents. The opinions of such men should carry much weight. It seems probable that the insurance companies will advance the rate on such buildings, in which event the greater premium will be a serious tax on their income and increase the expense of tenants, making that class of building much less desirable as an investment.



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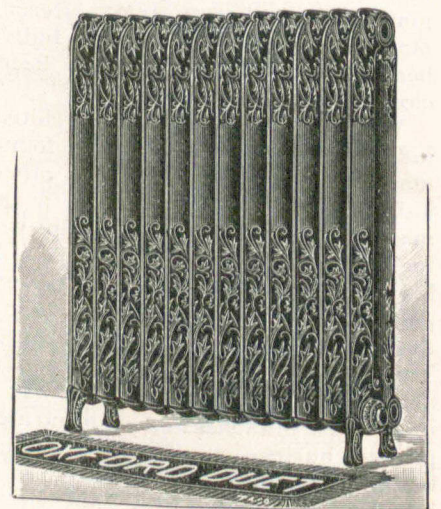
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